



Gregory J. Nickels, Mayor

Seattle Department of Transportation

Grace Crunican, Director

May 12, 2009

To: Recipients of Mercer Corridor FONSI
From: Angela Brady, Project Manager
Subject: Mercer Corridor Project Finding of No Significant Impact

A Finding of No Significant Impacts (FONSI) has been issued on the Mercer Corridor Improvements Project. The FONSI, issued by the Federal Highway Administration in cooperation with the Washington State Department of Transportation and the City of Seattle, is based on the analysis presented in the Environmental Assessment released on December 30, 2008, and on input from the public and agencies. We appreciate all of the input received during the formal comment period. Our responses to those comments are included in the FONSI.

The Mercer Corridor project would replace the existing Mercer/Valley couplet in the South Lake Union neighborhood with a widened two-way Mercer Street and a narrowed two-way Valley Street. The widened Mercer Street would have three lanes in each direction, with widened sidewalks, on-street parking, and a landscaped median. The street would be widened primarily to the north. Mercer Street would become the main east-west route through the South Lake Union area. Valley Street would be narrowed to a two-lane street with sidewalks, bicycle lanes, and on-street parking. The project would also include improvements to the north-south streets within the project area, including Fairview, Boren, Terry, Westlake, and Ninth Avenues. Street crossings throughout the project area would be improved.

The FONSI and other project materials are available online at:
http://www.seattle.gov/Transportation/ppmp_mercer.htm.

If you have any questions, please contact me. Thank you for your interest in the Mercer Corridor project.

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Mercer Corridor Improvements Project



Finding of No Significant Impact

May 2009



MERCER CORRIDOR IMPROVEMENTS PROJECT SEATTLE, WASHINGTON

Finding of No Significant Impact

**By the U.S. Department of Transportation,
Federal Highway Administration, Washington Division**

The Federal Highway Administration (FHWA) has determined, in accordance with 23 CFR 771.121, that the proposed project will have no significant impact on the environment.

This Finding of No Significant Impact (FONSI) is based on the Environmental Assessment (EA) (incorporated by reference) and other documents and attachments, as itemized in this FONSI. These documents have been independently evaluated by the FHWA and are determined to accurately discuss the project purpose, need, environmental issues, impacts of the proposed project, and appropriate mitigation measures. The review provided sufficient evidence and analysis for determining that an environmental impact statement (EIS) is not required.

FHWA takes full responsibility for the accuracy, scope, and content of the EA, as modified by this FONSI and the referenced documents.

5/12/09

Date of Approval



Brian Hasselbach
Northwest Region Area Engineer
Federal Highway Administration



Persons with disabilities may request this information be prepared and supplied in alternative formats by calling Angela Brady, the Project Manager, at (206) 684-3115. Persons who are deaf or hard of hearing may call the City's TTY Line, (206) 615-0467.

Civil Rights Act of 1964, Title VI Statement to the Public

Seattle Department of Transportation hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, nation origin, disability, or age, be excluded from the participation in, be denied benefits of, or be otherwise subjected to discrimination under any program or activity for which SDOT receives federal financial assistance. Persons wishing information may call the City of Seattle Office of Civil Rights, (206) 684-4500.

Si necesita informacion acerca del proyecto de mejoras del Corredor de la calle Mercer en espanol, marque el (206) 684-7623 y oprima el cero para dejar un mensaje.

A Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

TABLE OF CONTENTS

Acronyms and Abbreviations	v
Description of Proposed Action.....	1
EA Coordination and Comments	9
Determination and Findings	11
National Environmental Policy Act Finding	11
Air Quality Conformity Statement.....	12
Floodplain Finding.....	12
Surface Water and Water Quality Finding	12
Endangered Species Act Finding.....	13
Magnuson-Stevens Fishery Conservation and Management Finding	14
Farmland Finding.....	14
Wetland Finding.....	15
Section 106 Finding	15
Section 4(f) Finding.....	16
Environmental Justice Finding	18
Noise Finding.....	18
Hazardous Materials Finding	19
Attachment 1: Comments and Responses	A1-1
Attachment 2: Notices.....	A2-1
Attachment 3: FONSI Distribution List	A3-1
Attachment 4: Mitigation Commitment List	A4-1
Attachment 5: Errata to Environmental Assessment and Discipline Reports.....	A5-1
Attachment 6: Final Section 4(f) Evaluation.....	A6-1
Exhibits	
Exhibit 1. The Project.....	2
Exhibit 2. Mercer and Valley Street Cross-sections.....	3
Exhibit 3. Proposed Interim Design with Eastbound Broad Street Tie-in at Mercer and Eighth....	6
Exhibit 4. Optional Interim Design with Eastbound Broad Street Tie-in at Mercer and Ninth	6

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ACRONYMS AND ABBREVIATIONS

	A
AAI	all appropriate inquiries
ADA	Americans with Disabilities Act
	B
BMPs	best management practices
	C
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
	D
DNS	Determination of Nonsignificance
DPD	Seattle Department of Planning and Development
	E
EA	environmental assessment
EFH	essential fish habitat
EIS	environmental impact statement
ESA	Endangered Species Act
	F
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
	H
HABS	Historic American Buildings Survey
	I
I-5	Interstate 5
	M
MDNS	Mitigated Determination of Nonsignificance
MOA	memorandum of agreement
	N
NAC	noise abatement criterion
NEPA	National Environmental Policy Act
NOAA Fisheries	National Marine Fisheries Service
	P
PFMC	Pacific Fishery Management Council
PM ₁₀	particulate matter less than 10 microns

S

SDOT Seattle Department of Transportation

SEPA State Environmental Policy Act

T

TMP Traffic Management Plan

U

USC United States Code

USDOT U.S. Department of Transportation

USFWS U.S. Fish and Wildlife Service

W

WSDOT Washington State Department of Transportation

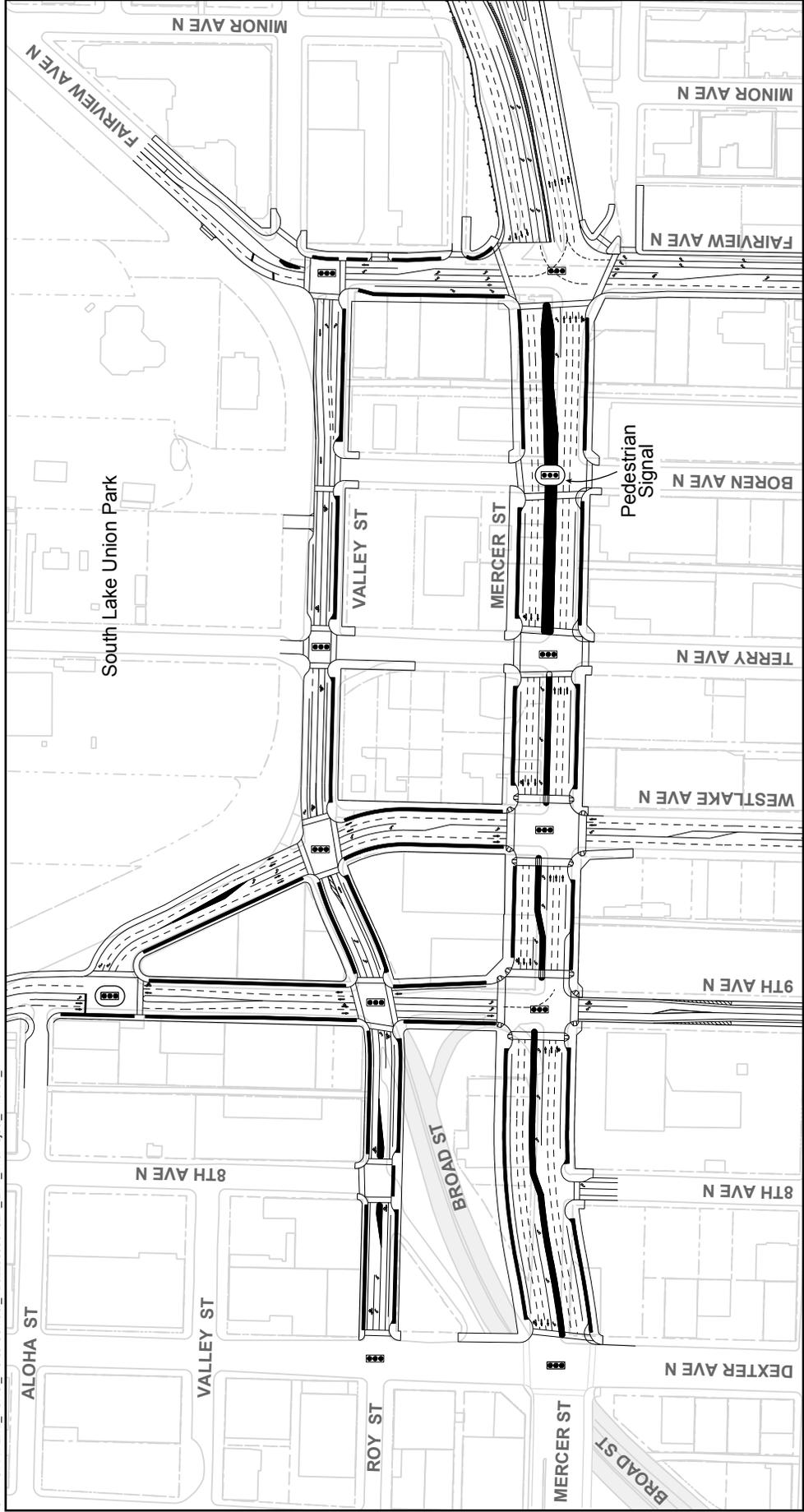
Description of Proposed Action

The Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), and the Seattle Department of Transportation (SDOT) issued an environmental assessment (EA) for the Mercer Corridor Improvements Project on December 30, 2008. The project provides a more direct connection for travel to and through South Lake Union; improves local safety, access, and circulation within South Lake Union for motor vehicles, bicycles, and pedestrians; and accommodates economic growth and neighborhood livability for the South Lake Union urban center consistent with the City of Seattle Comprehensive Plan, the South Lake Union Neighborhood Plan, and the South Lake Union Park Plan.

The project replaces the existing Mercer/Valley couplet with a widened two-way Mercer Street, providing more direct access to and from I-5 (Exhibit 1). 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 with a new signalized crossing at the Ninth Avenue North/Westlake Avenue North intersection. Mercer Street would be widened primarily to the north.

Mercer Street Improvements

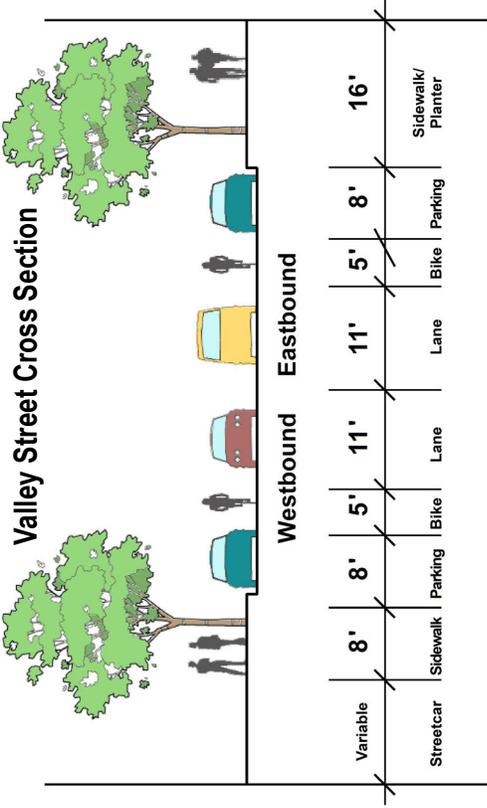
The two-way Mercer Street would be a boulevard with a landscaped median, left-turn lanes, parking, and sidewalks (Exhibit 2). The street would be widened primarily to the north to accommodate the new westbound travel lanes, median, parking lanes, and wider sidewalks.



LEGEND

-  Broad Street Removed
-  Alaskan Way Viaduct and Seawall Replacement Project
-  Planting Strips and Median
-  Existing Signalized Intersection
-  New Signalized Intersection
-  NORTH
-  0 100 200 Feet

Exhibit 1
The Project
 MERCER CORRIDOR
 IMPROVEMENTS PROJECT



Mercer Street Cross Section Looking East Between 9th and Boren

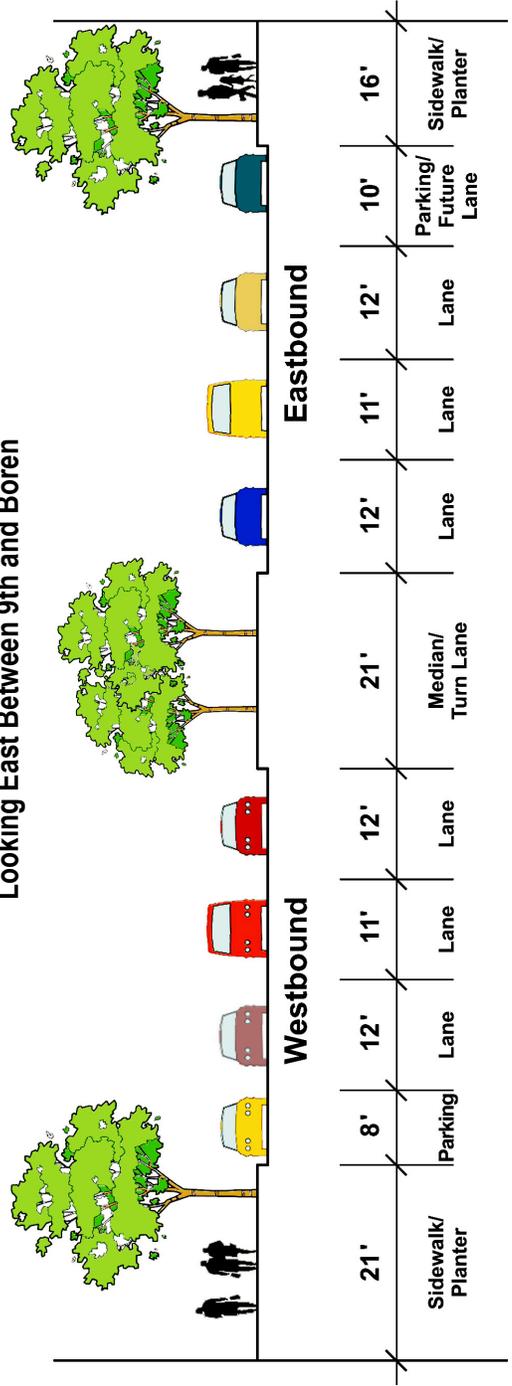


Exhibit 2
**Mercer and Valley Street
 Cross Sections**
 MERCER CORRIDOR
 IMPROVEMENTS PROJECT

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.

The sidewalks along Mercer Street would be widened to accommodate anticipated pedestrian activity associated with a high-density urban neighborhood. Sidewalk widths currently range from 9.5 feet to 21 feet. With the project, 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. The streetscape would incorporate visually unifying design features including trees and street lights. 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. Widening west of Dexter and removal of Broad Street are planned to occur as part of the proposed Alaskan Way Viaduct and Seawall

Replacement Project. 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 3 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 4 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.

Valley Street Improvements

Valley Street would be designed to be sensitive to its location adjacent to South Lake Union Park. Because most traffic would now be traveling on 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).

The bike lanes would be 5 feet wide and extend west from Fairview Avenue to connect to existing bike lanes on Dexter Avenue North. Current sidewalk widths on Valley Street range from 10.5 feet to 12 feet; some segments have no sidewalk. The project would widen the sidewalk on the south side of the street 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 would create more convenient, safe pedestrian access to South Lake Union Park. The streetscape would incorporate visually unifying design features including trees and street lights.

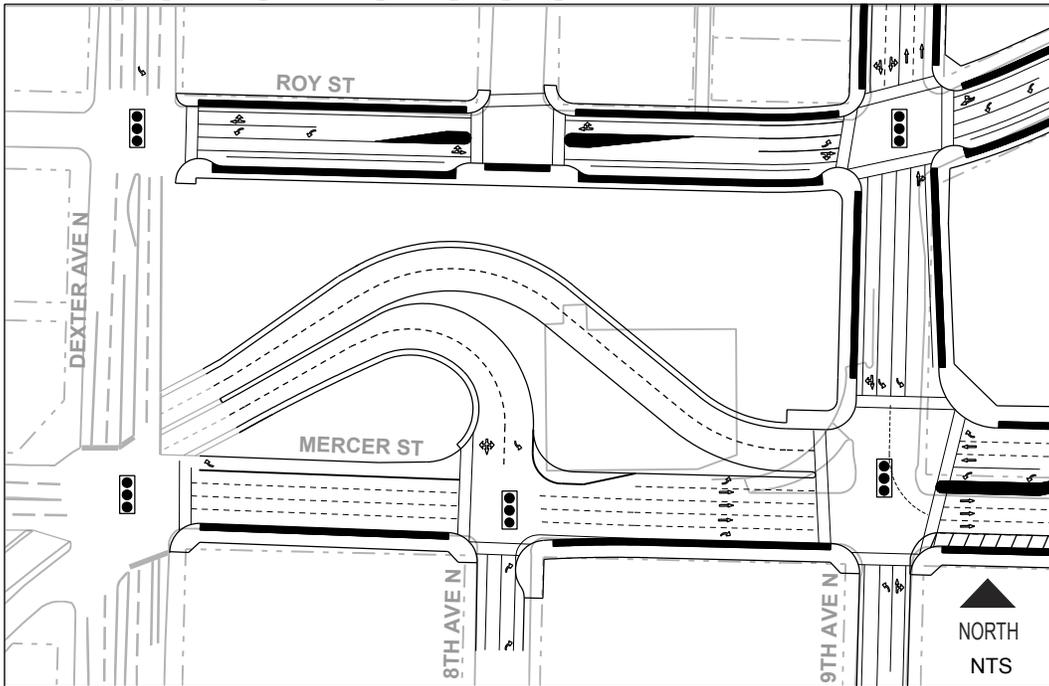


Exhibit 3
**Proposed Interim Design with Eastbound
Broad Street Tie-in at Mercer and Eighth**

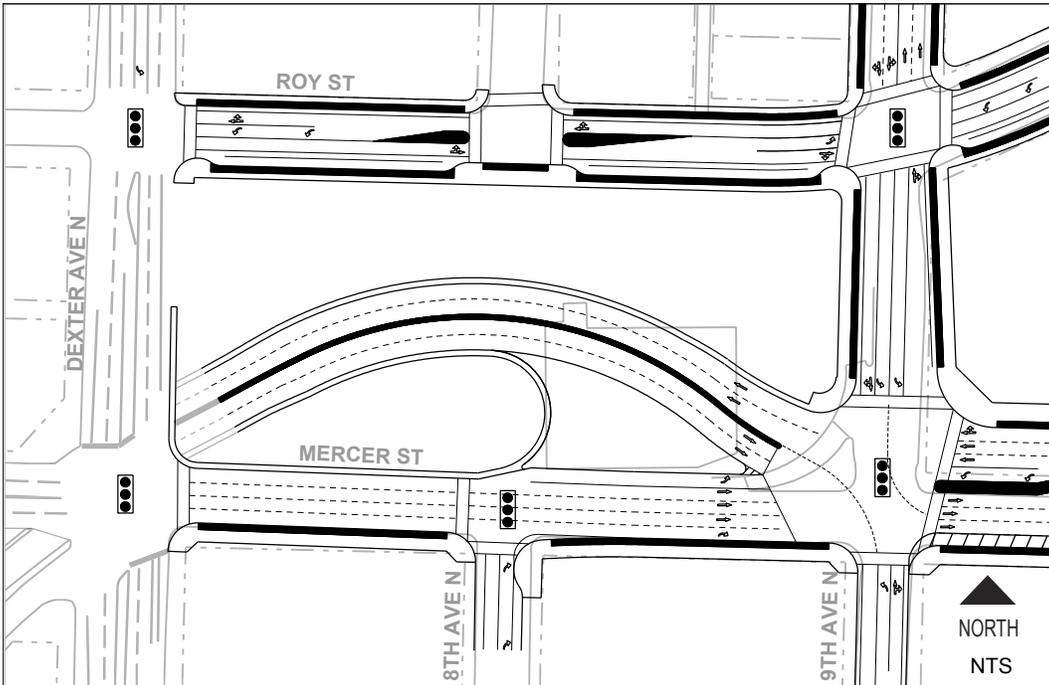


Exhibit 4
**Optional Interim Design with Eastbound
Broad Street Tie-in at Mercer and Ninth**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

Other Improvements

At the eastern end of the project, the I-5 on- and off-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. The existing configuration that provides an eastbound Mercer Street connection across Fairview Avenue to Eastlake Avenue would remain.

Currently, westbound truck traffic from I-5 is routed along Valley Street. With the project, this truck traffic would be routed on the new two-way Mercer Street. The intersection at Mercer Street and Ninth 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 Ninth Avenue North and Westlake Avenue North. Westlake Avenue North and Ninth Avenue North between Broad Street and the intersection of Westlake Avenue North and Ninth Avenue North would be converted from one-way streets to two-way streets to improve local access.

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EA Coordination and Comments

Seattle Department of Transportation held a public hearing in an open house format for the project EA on January 13, 2009. The hearing was held in Seattle, Washington, following the public release of the EA on December 30, 2008. At the meeting, SDOT requested that spoken comments be provided to a court reporter and written comments be provided on comment forms. SDOT also requested that written comments be postmarked or received via email by February 13, 2009.

The Notice of Availability of the EA was advertised in the following newspapers:

- *Daily Journal of Commerce* (December 30, 2008)
- *Queen Anne & Magnolia News* (December 31, 2008)

The public hearing was also advertised through the following means:

- Press release to media contacts sent on December 30, 2008
- Requests to local publications to run community calendar announcements
- Posting on the project Web site
- Posting on the Washington State Department of Transportation calendar
- Mailing a project newsletter to approximately 8,500 addresses within the study area and to all individuals and organizations who had previously expressed interest in the project during community briefings and stakeholder meetings, and from comments mailed to the project team.

- Display advertisements in the *Seattle Times*, *Seattle P-I*, *Queen Anne News*, and *La Voz* (translated into Spanish).
- Emailing invitations to approximately 200 individuals and organizations

SDOT provided the EA document directly to the following agencies and organizations:

- Elected officials, tribal governments, and city administrators for jurisdictions within the project area;
- Regulatory agencies, cooperating agencies, and all other agencies that have expressed interest in the project; and
- Downtown and Queen Anne Seattle Public Libraries.

The EA was also available to the public on SDOT's website.

A total of 55 people attended the January 13, 2009, public hearing. During the comment period, which ran from December 30, 2008, through February 13, 2009, the following comments on the EA were submitted:

- One individual provided spoken comments during the public hearing, and these comments were recorded by a court reporter and prepared as a transcript.
- Twelve individuals provided written comments during the public hearing.
- Seven individuals and organizations e-mailed their comments on the EA to Angela Brady, Project Manager, Seattle Department of Transportation.
- Six agencies or organizations provided written comments to SDOT as letters.

Public and agency comments primarily focused on traffic and stormwater considerations. The comments are shown in Attachment 1 along with SDOT's responses to issues raised.

Determination and Findings

National Environmental Policy Act Finding

The Federal Highway Administration serves as lead agency under the National Environmental Policy Act (NEPA) for the project. SDOT prepared an EA in compliance with NEPA, 42 United States Code (USC) Section 4321 et seq.; FHWA regulations, 23 Code of Federal Regulations (CFR) Part 771; and the Washington State Environmental Policy Act (SEPA). The EA discusses the potential effects of the project so that FHWA can determine whether significant adverse impacts (Council on Environmental Quality [CEQ] 1508.27) are probable. If such a determination were made, an environmental impact statement (EIS) would have to be prepared.

SDOT has incorporated environmental considerations into its study of the project and has conducted evaluations of the project's potential environmental impacts. FHWA and WSDOT reviewed the EA prior to issuing the document in December 2008. The EA found that the project's construction and operation will not cause any significant adverse environmental impacts that will not be mitigated. This finding applies to all applicable environmental elements.

After carefully considering the EA, its supporting documents, and the public comments and responses, FHWA finds under 23 CFR 771.121 that the proposed project, with the mitigation to which SDOT has committed, will not have any significant adverse impacts on the environment. The record provides sufficient evidence and analysis for determination that an EIS is not required.

Air Quality Conformity Statement

The Puget Sound Regional Council has modeled the impacts of this project on regional carbon monoxide emissions. This project, as well as all others in the Council's Transportation Improvement Program and Regional Transportation Plan, conforms to the State Implementation Plan at the regional level. The U.S. Environmental Protection Agency has approved the current State Implementation Plan for this area. The FHWA has approved the Council's Transportation Improvement Program conformity analysis. This project conforms to the State Implementation Plan and to federal and state Clean Air Act requirements.

Floodplain Finding

Because there are no floodplains in the project vicinity or in locations that could be indirectly affected by the project, the project will not affect any floodplain.

Surface Water and Water Quality Finding

The proposed project would decrease the total impervious surface in the study area by approximately 0.5 acre. This reduction is attributed to the proposed vegetated medians and sidewalk planting strips in areas that are currently paved, and narrowing Valley Street. Much of the project drains to the existing combined sewer system, which flows to the previously completed Denny Way /Lake Union Combined Sewer Overflow improvements, which removed combined sewer overflows from the project area into South Lake Union. The Mercer Street project's impervious surface reductions, detention improvements on Westlake Avenue North, and rain garden (also known as wet median) on Mercer Street to infiltrate stormwater will reduce flow rates to the combined sewer system. This reduction of impervious surface, in combination with proposed stormwater detention, would reduce the amount of runoff draining to the City's combined sewer system, thus improving its capacity. Therefore, there should be no combined sewer overflow events associated with the project. Although the project increases impervious surfaces

in areas draining to Lake Union, the proposed stormwater treatment would reduce the amount of pollutants draining to the lake, which will have a beneficial effect on water quality. Lake Union/Ship Canal is identified by Washington Department of Ecology as a “Flow Control Exempt Receiving Water” due to the capacity of its very large surface area and volume (*Stormwater Management Manual for Western Washington*, Volume 1, section 2.5.7). In addition, City of Seattle Drainage Code 22.800, Volume 3, section 1.4, is consistent with this designation and also identifies Lake Union as a “designated receiving water” where detention is not required for direct discharges. Since runoff proposed for the project to the lake satisfies these State and City requirements, detention of project runoff to Lake Union is not proposed.

Endangered Species Act Finding

WSDOT served as the lead agency for the Endangered Species Act (ESA) Section 7 consultation on behalf of FHWA pursuant to 50 CFR 402.07. Current information was obtained from the websites of the National Marine Fisheries Service (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS), the agencies responsible for administering ESA, to determine the presence or absence of listed and proposed threatened or endangered species and of designated and proposed critical habitat in the study area. The project team also conducted an onsite field review of the study area 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.

The list of species 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*), Puget Sound steelhead (*O. mykiss*), and Coastal/Puget Sound bull trout (*Salvelinus confluentus*). The remainder of the species listed was automatically given a no effect determination based on lack of suitable habitat and/or lack of occurrence in the project vicinity. 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.

Magnuson-Stevens Fishery Conservation and Management Finding

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. The ESA Section 7 consultation and Letter of No Effect for this project examined the question of stormwater runoff from the project site and concluded that no fish habitats, including Essential Fish Habitat or habitat designated as critical under the ESA, would be adversely affected by project construction or operation.

Farmland Finding

Suitable soils and active farming do not occur within the project vicinity or in locations that would be indirectly affected by the project. Therefore, the Farmlands Protection Policy Act of 1981 (7 USC 4201-4209) and other applicable state and

federal farmlands protection policies, orders, and guidance do not apply to the proposed project.

Wetland Finding

Because wetlands are not present in the project vicinity or in locations that would be indirectly affected by the project, the project will not affect wetlands.

Section 106 of the National Historic Preservation Act Finding

The project would require displacement of the historic McKay Pacific Building at 601 Westlake Avenue North. It would also have an adverse effect on the setting of the adjacent historic McKay Ford-Lincoln Building at 609 Westlake Avenue North, although that building would retain its NRHP eligibility. Mitigation for these adverse effects has been addressed through a memorandum of agreement (MOA) in accordance with the Advisory Council on Historic Preservation regulations (36 CFR, Part 800). The MOA was amended on April 27, 2009, to provide clarification of the adverse effects and consistency with the Section 4(f) analysis. The MOA includes recordation measures consistent with Level II Historic American Buildings Survey (HABS) documentation, 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 to record general and distinctive attributes.
- c) Digital copies of historic photographs, building plans, and "as-builts."
- d) Utilization of LiDAR technology to scan the exterior surfaces of the McKay buildings.

In addition, an interpretive display will be designed and developed to 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. The interpretive display will be open to the public and designed in compliance with the requirements of the Americans with Disabilities Act. Also, SDOT will dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle as part of the City of Seattle's Historic Resources Survey and Inventory. The data will be made available in appropriate formats to both the City of Seattle and the state Department of Archaeology and Historic Preservation databases.

Surface reconnaissance and subsurface testing did not detect any archaeological sites within the area of potential effects. Project excavation is expected to extend up to 18 feet below the ground surface. Most project construction would occur in areas covered by approximately 25 feet of historical fill. Prehistoric archaeological resources beneath the historical fill, if present, would not be encountered. However, historic archaeological resources could be present within this fill layer. Construction at the eastern and western ends of the project would occur in areas outside the limits of the historical fill. Due to the extent of previous disturbance associated with building, roadway, and utility construction in this highly developed urban area, the probability of recovering archaeological resources outside of historical fill areas during construction is considered to be low. An Unanticipated Discovery Plan has been prepared to address potential archaeological discoveries made during construction.

Section 4(f) Finding

The project team determined that U.S. Department of Transportation (USDOT) Act of 1966 Section 4(f) resources are present in the study area and included that evaluation as part of the EA. Section 4(f) resources include public assets such as parks, recreation areas, wildlife and waterfowl refuges, and historic properties, including historic buildings and archaeological sites. The historic McKay Pacific Building at 601 Westlake Avenue North was identified as a Section 4(f)

historic resource. This building would be removed under the Proposed Action. 23 CFR Part 774 mandates that no Section 4(f) property may be used unless it is determined that there is no feasible and prudent avoidance alternative to the use of the property, and the action includes all possible planning to minimize harm to the property. If a Section 4(f) resource cannot be avoided and must be used, mitigation is necessary. For historic sites, this usually entails measures that have been designed to preserve the historic integrity of the site and that have been agreed upon, in accordance with the Advisory Council on Historic Preservations regulations (36 CFR, Part 800), by FHWA, SHPO, and other consulting parties identified under Section 106. It should be noted that Section 106 of the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act, and NEPA are separate legal requirements, but compliance with these requirements is being coordinated so that all legal obligations are met in a corresponding manner.

All possible planning to minimize harm to the McKay Pacific Building at 601 Westlake Avenue North has been considered. Specific details to carry out mitigation for the use of the historic McKay Pacific Building at 601 Westlake are included as stipulations in a MOA that was crafted through the Section 106 consultation process under 36 CFR Part 800, as described above under *Section 106 of the National Historic Preservation Act Finding*. The MOA provides for mitigation for both McKay buildings (601 and 609 Westlake Avenue North), as both have been determined to experience an adverse effect under Section 106.

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 project construction, all work in the area of the discovery shall cease and SDOT shall follow the procedures of the approved Unanticipated Discovery Plan.

Environmental Justice Finding

The project would result in a series of benefits that would accrue to the general traveling public and surrounding neighborhoods, 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 will have no disproportionate effects on minority or low-income populations.

Noise Finding

Under existing conditions, the noise abatement criterion (NAC) is exceeded at four of the five Category B (residential/park uses) locations modeled. In 2030, with the project, the NAC is exceeded at three of the five Category B locations, and at two Category C (commercial uses) locations modeled. In 2030, without the project, the NAC is exceeded at all five Category B locations. We evaluated the effectiveness of noise walls but found that given the urban nature of the area, noise barriers were not reasonable and feasible at any of the locations where noise levels would exceed the NAC. Note that although the absolute NAC has been approached or exceeded in several locations, no locations are anticipated to experience a substantial increase (defined by WSDOT as 10 dBA over existing noise levels). The 1- to 3-dBa change in noise levels is

in the “not perceptible to barely perceptible” range of a human’s ability to distinguish a change.

Hazardous Materials Finding

An analysis of the site conditions in the study area indicates that hazardous materials are present on 34 properties adjacent to or within proposed right-of-way of the project. Eight of these properties could potentially be acquired to construct the project. Building demolition debris, including asbestos and lead-based paint wastes, may be generated at these properties. Other properties have the potential to expose construction workers to petroleum-contaminated soils and groundwater during excavation and soil removal activities for construction of the project. Underground storage tanks also may be encountered within the right-of-way acquisition area. Preconstruction investigation and testing would be needed to determine the locations and quantities of these hazardous materials so that they can be appropriately abated prior to demolition. SDOT would follow all appropriate regulations should any contamination be encountered during construction.

Excavation in the western portion of the project limits could encounter woodwaste fill and possible releases of methane gas. In areas where sawdust and methane gas are encountered, a health and safety plan would be developed that would include procedures to monitor for vapor releases and prevent fires from potential methane ignition.

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Attachment 1: Comments and Responses

Attachment 1: Comments and Responses

In this attachment, we present comments submitted to the Seattle Department of Transportation (SDOT) on the Environmental Assessment (EA) for the Mercer Corridor Improvements Project (the project), and our response to each comment. We received spoken comments (recorded during the January 13, 2009, hearing and public open house and presented here as a transcript) and written comments submitted via comment form, email, and letter. Each of the 26 comment documents is presented in its entirety in the order shown in the index on the next page. The comment documents are presented with numbers in the margins denoting individual comments. Our corresponding responses to the numbered comments follow each page of the public hearing transcript, comment forms, emails, and letters.

Changes to the text of the EA and discipline reports are shown in the Errata (Attachment 5 to this FONSI). Changes to EA Chapter 7, Environmental Commitment List, are shown in the Mitigation Commitment List (Attachment 4 to this FONSI).

Index to Comments and Responses

Recorded Testimony at Public Hearing:

Beverly Harrington, January 13, 2009

Comment Forms from Public Hearing:

Ann Bassetti, January 13, 2009

Patrick Bond, Manager TAP Plastics, January 13, 2009

Phillip Fujii, January 13, 2009

Beverly Harrington, January 13, 2009

Tom Lavaris, January 13, 2009

Mark Stoner, January 13, 2009

Linda Stoner, January 13, 2009

Richard Tait, January 13, 2009

Unsigned (3), January 13, 2009

Paul Urla, January 13, 2009

E-mail Comments:

Gene Mullins, January 9, 2009

Mike Peringer, January 12, 2009

Jeremy Brown, January 23, 2009

John W. Southall, January 29, 2009

Albert Berger, February 12, 2009

Karen Lucht, February 12, 2009

Chuck Ayers, Cascade Bicycle Club, February 13, 2009

Letter Comments:

Jim Muck, U.S. Fish and Wildlife Service and National Marine Fisheries Service, January 16, 2009

John Coney and Jean Sundborg, The Uptown Alliance, February 10, 2009

Gary Kriedt, King County Metro Transit, February 12, 2009

Dan Burke, Port of Seattle, February 13, 2009

Lisa Quinn, Feet First, February 13, 2009

Willie R. Taylor, U.S. Department of the Interior, February 19, 2009

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MERCER CORRIDOR PROJECT ENVIRONMENTAL ASSESSMENT
PUBLIC COMMENTS

January 13, 2009
4:00 p.m.

South Lake Union Armory

Seattle, Washington

William McLaughlin, Court Reporter
CCR 3128

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I N D E X O F S P E A K E R S

1. Beverly Harrington, 500 Aloha St. #401
Seattle, WA 98109

S T A T E M E N T O F B E V E R L Y H A R R I N G T O N

I'd like to know why the landscaping project doesn't
include evergreen trees. On the diagram, it looks like
most of the trees are deciduous. And I just think that if
it was a combination, it would have a better impact on the
environment year round.

[Public hearing concluded at 7:00 p.m.]

1

Response to Beverly Harrington:

1. Deciduous trees are preferred in the street right-of-way because they maximize the amount of light in the winter and they provide shade in the summer. In addition, they have better survival rates in urban, arterial environments, and they form a good boulevard canopy cover. They are also more adaptable to selective pruning for maintenance concerns. There is one location where evergreens will be planted, and that is along the WSDOT ramp, where there is the room and space.

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mercercorridorproject

1-13-09

Please provide your comments on the Environmental Assessment

Comment Form

• My route is: ^{south on} Westlake North → east on Mercer → south on I-90. Traffic flow at commute hours is horrible! too many lights (both on Westlake/9th & on Mercer) — or they are badly timed. **1**

• The worst intersection is Mercer & 9th. So much traffic comes from the west, that the ^{Mercer} section from Westlake to 9th is full by the time our light changes. One or two cars can turn left ~~per~~ per light. **2**

• Now that 9th was made 2-way, we cannot get into left-hand lane & make a "free left" during spaces of oncoming Mercer traffic... which used to help. **3**

Name Ann Bassetti

Address 2420 Westlake N. #15/Seattle 98109

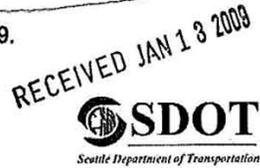
Email anngenewa@yahoo.com

over →

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov Fax: (206) 615-1237



Response to Ann Bassetti, page 1:

1. Comment noted. As part of this project, traffic from the north on Westlake will have improved access to Mercer Street via both Ninth and Westlake avenues. Additionally, the signal timings will be optimized.
2. See response to comment #1. This project includes the following elements that will help manage the traffic at Mercer Street and Ninth Avenue North: two southbound left-turn lanes from Ninth to Mercer, new southbound lanes and left-turn lane on Westlake Avenue North, and elimination of weaving traffic from eastbound Broad Street, which conflicts with southbound traffic on Ninth Avenue North.
3. Comment noted. The change mentioned concerning Ninth Avenue North was made separate from this project. Southbound left turns can be made onto Mercer from both Westlake and Ninth avenues.

- Tap closed
- 4 We used to turn Left on Valley & then R at little access street by West Marine... which gave a "free left" & was faster. That was eliminated by the street car.
 - 5 It is usually 1 light faster to turn Left on Valley, R on Westlake, L onto Mercer (with L-turn light).
 - 6 Bottomline, I encourage you to examine the volume of traffic coming from Westlake North, going towards freeway.

Fold here

Please place stamp here

Seattle Municipal Tower
Mercer Corridor Project
700 Fifth Avenue
PO Box 34996
Seattle, WA 98124-4996

- 7 Another source of traffic feeding into Westlake N. are cars coming off Aurora, down Dexter, then either straight to Mercer, or down to Westlake N. (by the Marriott).
- 8 Although it looks very pretty (& much better!) I'm dubious that a 6-lane Mercer will be a pedestrian-friendly boulevard. Seems like there will be way too much noise & hubbub.
- 9 As a member of Westlake N. parking citizens workgroup - we remain very concerned about increased parking pressures, especially with removal of Armour parking lot & lot over on Westlake North.

Thanks —

Response to Ann Bassetti, page 2:

4. Comment noted.

5. Comment noted.

6. Existing and projected future volumes coming from Westlake and Ninth avenues were included in the analysis. One of the travel paths examined was from Westlake to the freeway (shown in Exhibit 3-40 as “EB –Westlake to I-5). This traffic movement is shown in some cases to have longer travel times with the project than without the project.

7. Comment noted.

8. Pedestrian improvements are planned for both Valley and Mercer streets. On-street parking, curb bulbs, and medians along with wide sidewalks will enhance the pedestrian environment on Mercer. Much narrower roadway, parking, landscaping, wide sidewalks, and lower traffic volumes will enhance the environment for pedestrians on Valley Street.

9. Comment noted. Parking was evaluated and a net increase in on-street parking is anticipated as a result of the project due to the on-street parking being provided on both Valley and Mercer streets with the project.

mercercorridorproject

Please provide your comments on the Environmental Assessment

OVERALL THE STAFF WAS EXTREMELY

COURTEOUS AND INFORMATIVE. I FEEL

CONFIDENT THAT THIS PROJECT WILL HELP

TO STIMULATE LOCAL BUSINESS WHILE

MINIMIZING DISRUPTION TO LOCAL MERCHANTS

DURING VARIOUS STAGES OF CONSTRUCTION.

MY MAIN CONCERN IS COMMUNICATION

WITH CITY OFFICIALS AS WELL AS

PROPER NOTIFICATION OF ANY INCONVENIENCE

THAT THIS MAY CAUSE TO BUSINESS

AND RETAIL SHOPPERS.

Name PATRICK BOND / MANAGER TAP PLASTICS

Address 710 9TH AVE N. SEATTLE, WA 98107

E-mail GOODEN1644@YAHOO.COM

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237

RECEIVED JAN 13 2009



Comments form

1

2

Response to Patrick Bond, page 1:

1. Comment noted.

2. As noted in the Environmental Commitment List (Chapter 7 of the EA and Attachment 4 to this FONSI), public outreach will be performed to inform motorists, residents, and businesses of construction activities. The public will be informed that businesses are open during construction and encouraged to continue patronage. This will be accomplished with informational signs, radio announcements, and website postings. Intelligent transportation system tools can also be deployed to maximize system use during construction. Currently, CCTV cameras are used along the corridor. Other strategies that could be used include variable message signs and advanced signal timing coordination.

mercercorridorproject

Please provide your comments on the Environmental Assessment

o WITH THE GOVERNOR'S DECISION ~~BY~~ ADOPTING
 THE DEEP BORE TUNNEL AS THE PREFERRED
 ALASKAN WAY VIADUCT ALTERNATIVE, THERE'S
 A GREATER NEED FOR GREATER NUMBER OF
 EAST-WEST STREET AND CROSSINGS AT
 AURORA. ^{NORTH PORTAL} ^{to CA + SLM} ^(TRAFFIC NUMBERS)
 NEEDS TO BE IDENTIFIED.

Comment form

RECEIVED JAN 13 2009

Name Phillip Fujii
 Address 505- 5TH AVE NO, SUITE 900, SEATTLE, WA
 E-mail phil@evulcan.com 98104

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov Fax: (206) 615-1237



Response to Phillip Fujii:

1. Comment noted. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal.

mercercorridorproject

Please provide your comments on the Environmental Assessment

Comment form

Most of the landscaping
on Valley & Mercer seem
only to include deciduous
trees. Why? Why not more
evergreens to ensure year-round
greenness

1

RECEIVED JAN 13 2009

Name Beverly Harrington
Address 500 Aloha St #401
E-mail har1site@aol.com

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237



Response to Beverly Harrington:

1. Deciduous trees are preferred in the street right-of-way because they maximize the amount of light in the winter and they provide shade in the summer. In addition, they have better survival rates in urban, arterial environments, and they form a good boulevard canopy cover. They are also more adaptable to selective pruning for maintenance concerns. There is one location where evergreens will be planted, and that is along the WSDOT ramp, where there is the room and space.

mercercorridorproject

Please provide your comments on the Environmental Assessment

There are 3 major concerns by all businesses in the South Lake Union Area.

1) Easy perceived access into the area from I-5, downtown and East Lake. (ie Fairview & Valley) **1**

2) Staging for all construction & workers. The idea to take over the Public Lot for this purpose doesn't work (Between Boren & Terry). This is the only real parking left for employees that work in the area. **2**

3) During the entire process a Media/PR campaign must go along with it. Letting the public know that access is easy. **3**

Name Tom Lavaris (Exec. V.P. Operations - Schwartz Brothers Restaurants)

Address 325 - 118th Ave SE - Suite 106 Bell. Ws. 98005

E-mail Havaris@Schwartz-bros.com

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237



Comment form

Response to Tom Lavaris:

1. Comment noted. The project will improve access to the area from I-5 by eliminating the circuitous travel route for westbound traffic.
2. Comment noted. The property owner currently has a Master Use Permit (MUP) calling for the lot to be used for construction worker parking associated with new developments in the area; thus the parking is expected to be lost whether or not the Mercer project uses the lot for staging. This condition was issued as part of the MUP due to local citizen and business concerns about contractors working on adjacent construction projects taking limited on-street parking.
3. As noted in the Environmental Commitment List (Chapter 7 of the EA and Attachment 4 to this FONSI), public outreach will be performed to inform motorists, residents and businesses of construction activities. The public will be informed that businesses are open during construction and encouraged to continue patronage. This will be accomplished with informational signs, radio announcements, and website postings. Intelligent transportation system tools can also be deployed to maximize system use during construction. Currently, CCTV cameras are used along the corridor. Other strategies that could be used include variable message signs and advanced signal timing coordination.

mercercorridorproject

Please provide your comments on the Environmental Assessment

I really like this project as it's shown on the boards.

I think it will improve pedestrian use and transit, as

well as improve the general appeal of South Lake

Union immeasurably. My only suggestion would be

to really push for the future lowering of Aurora,

so that we could have a larger, two way bridge

over Aurora at Mercer, and additional bridges at

Roy and possibly Republican. That would really

connect South Lake Union w/ Seattle Center,

especially for pedestrians.

Comment form

Name MARK STONER

Address 4701 36TH AVE NE

E-mail mark.stoner@gmail.com

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All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237



Response to Mark Stoner:

1. Comment noted.
2. Comment noted. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel, including improvements to the street network at the north tunnel portal.

mercercorridorproject

Please provide your comments on the Environmental Assessment

Comment form

Fantastic —
we love it —

1

RECEIVED JAN 13 2009

Name Linda Stoner

Address 1121 Dexter Ave. N.

E-mail Linda@stonerarch.com

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov Fax: (206) 615-1237



Response to Linda Stoner:

1. Comment noted.

mercercorridorproject

Please provide your comments on the Environmental Assessment

OVERALL I VERY MUCH LIKE THIS PROJECT — 1
AND IT IS NOT BEFORE TIME.

Comment form

ONE OBSERVATION RE MERCER STREET. I AM NOT ENTHUSIASTIC ABOUT ON-STREET-PARKING, ESPECIALLY WHERE AN ADDITIONAL LANE WILL BE USEFUL — AS IT SURELY WILL BE. ON-STREET PARKING INVOLVES 2 CARS STOPPING IN THE NEXT LANE TO REVERSE IN, DOORS OPENING ETC — TRAFFIC HAZARDS (SIGNIFICANT) AND ADDS TO CONGESTION. IN ADDITION — PEDESTRIAN SAFETY. THE SIDEWALK TREES SEPARATE PEOPLE FROM CARS AND MAKE ANYONE PLANNING TO JAYWALK VERY VISIBLE. PARKED CARS HIDE THEM.

Name RICHARD TAIT

Address 3312-81ST PLACE SE, MERKER IS, 98040

E-mail RDT98040@YAHOO.COM

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237

RECEIVED JAN 13 2009



Response to Richard Tait:

1. Comment noted.
2. Comment noted. On-street parking spaces will be dimensionally longer than typical, which will help reduce the effects of parking maneuvers on adjacent traffic. Further, SDOT Parking Management will be able to limit potential impacts to through-traffic by controlling parking restrictions as necessary. For example, SDOT could restrict on-street parking during a.m. and p.m. rush-hour traffic or could designate as long-term parking only (as opposed to high-turnover parking), if needed. On-street parking can enhance safety by serving as a buffer between traffic and pedestrians on the sidewalk. Curb bulbs at intersections will make pedestrians visible to traffic and shorten their crossing distance.

mercercorridorproject

Please provide your comments on the Environmental Assessment

Comment form

- With the new deep bored tunnel solution, it would be important to ensure that the tunnel comes out after Harrison St ¹ and so that there can be additional East-West street grid connections.

- ~~Mer~~ 2-way Mercer will be even more critical in providing East-West connections from I-5 to Elliott w/ more vehicles coming out of the tunnel. We need 2-way Mercer through the entire corridor. ²

Name _____
Address _____
E-mail _____

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You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov Fax: (206) 615-1237



Response to Unsigned #1:

1. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal.
2. Comment noted. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including two-way Mercer between Dexter and Elliott.

mercercorridorproject

Please provide your comments on the Environmental Assessment

Just a suggestion for now -
please put updated drawings
& const. schedules on the web
& use e-mail notification to
inform businesses & residents
about current activities.

1

RECEIVED JAN 13 2009

Comment form

Name _____

Address _____

E-mail _____

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237



Response to Unsigned #2:

1. Comment noted. The City will continue to put updated information on the project's Web site located at: <http://www.seattle.gov/transportation/mercercorridor.htm>.

The Seattle Department of Transportation hosts a number of e-mail alert lists for those interested in information about our various construction projects, as well as projects in the planning stages. You can sign up for as many of these e-mail alert lists as you like. The Greater Downtown Seattle List currently covers the South Lake Union area. Follow this link to the web page where you can subscribe or unsubscribe to the Greater Downtown Seattle e-mail alert list:

http://www.seattle.gov/transportation/alert_down.htm

mercercorridorproject

Please provide your comments on the Environmental Assessment

Comment form

There is no point in
 commenting - You have
 already made up your
 mind. It's a good thing
 developers make good money
 they will be the only ones living
 in Seattle in the future.

1

RECEIVED JAN 13 2009

Name _____

Address _____

E-mail _____

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237



Response to Unsigned #3:

1. Comment noted. The project team conducted extensive public outreach during the development of the project design and environmental review, including scoping meetings, public meetings, interviews with local businesses, and workshops with various stakeholders, including citizens, business owners, and people who haul freight through the area. Information obtained during this outreach was incorporated into the project design. The final decision on the project is not made until the completion of the environmental review process.

mercercorridorproject

Please provide your comments on the Environmental Assessment

Comment form

1. Removal of overhead power lines / telephone poles in project area should be included. **1**

2. In general, the project analysis fails to assess the effects on neighboring areas other than South Lake Union. Lower Queen Anne in particular will be greatly affected, as will Queen Anne traffic access to and from I-5. **2**

3. Greater study needs to be done regarding proposed changes to Mercer west of Dexter; and how these tie into this project. **3**

Name Paul URLA

Address 212 Ward St Seattle 98109

E-mail Sydneydreaming@comcast.net

All comments must be received or postmarked by February 13, 2009.

You may also send comments via email or fax:

Email: MercerEA@Seattle.Gov

Fax: (206) 615-1237

RECEIVED JAN 13 2009



Response to Paul Urla:

1. Undergrounding utilities is included in the project design.
2. Comment noted. Travel patterns and travel times were evaluated for a number of paths through the area, including travel times to and from the north Seattle Center area (i.e., the lower Queen Anne neighborhood). Access to southeast Queen Anne improves with this project as vehicles from I-5 will only need to travel through four intersections to access Broad Street instead of five intersections like today.
3. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including two-way Mercer between Dexter and Elliott.

Comments Received via Email

Gene Mullins, January 9, 2009

From: 2151M [2151M@comcast.net]
Sent: Friday, January 09, 2009 8:24 AM
To: MercerEA@seattle.gov
Subject: mercer corridor project comment
January 9, 2009

Re: Public Comment on the Mercer Corridor Project Environmental Assessment

As a Magnolia resident who uses the Mercer corridor regularly, I strongly feel this plan should be scraped. **1** No money should be spent on a plan that decreases travel time through the corridor. Congestion is bad in that area now and will, of course, only get worse in the future. Reduce congestion in the corridor, or don't waste taxpayers' money.

Sincerely,

Gene Mullins

Response to Gene Mullins:

1. Comment noted. The project provides some travel time benefits and creates more logical, less circuitous travel paths. In addition, the project improves local access and circulation for cars, trucks, pedestrians, and bicyclists.

Mike Peringer, January 12, 2009

From: Mike Peringer [mike@processheating.com]

Sent: Monday, January 12, 2009 2:07 PM

To: mercerEA@seattle.gov

Subject: Mercer two way comment

1 To put an intersection complete with stoplights on Aurora is the stupidest thing I've ever heard of. Of the 110,000 cars and trucks using Hwy. 99, the viaduct daily, 75% also use 99 north of the tunnel. Can you even imagine the congestion if a stoplight is there at Valley?! And the 110,000 doesn't consider those who simply go to and from downtown exits.

Also, the elimination of Dexter between Mercer and Valley is equally stupid, forcing drivers to use 9th as the only alternate.

Doesn't make sense.

Thinks of the users for a change.

Mike Peringer

292 7449

Response to Mike Peringer:

1. The limits for this project are from the I-5 ramps to Dexter Avenue North and do not include Aurora Avenue North. Traffic signals are not planned on Aurora as part of this project. There are no changes planned on Dexter under this project; it will remain open between Mercer Street and Valley Street.

Jeremy Brown, January 23, 2009

>>> Jeremy Brown <parllaxinhibitor@yahoo.com> 1/23/2009 9:43 PM >>>
Please do NOT continue with the 2-way Mercer plan. It is flawed and is
1 nothing more than a city beautification project. If this is the same plan as was presented a few months ago at the town meeting, there are some significant oversights that the Seattle Department of Transportation is trying to sneak past the city.

The SDoT plan is to close Broad St at Republican and 6th. Unfortunately, that part of Broad is below grade which means that it
2 will actually close Broad from 9th to 5th Ave. Broad is also the main thoroughfare for off-freeway traffic. With the 2-way Mercer plan, only three blocks will be modified, leaving all the traffic that leaves the freeway to take Westlake Ave. If any of that traffic was going to the Seattle Center, they'd be forced to clog up Denny Way. Denny is already clogged with SR-99 traffic, both on and off. This is not a solution, it is a worsening of current conditions.

SDoT's plan also shows that traffic will be able to cross SR-99 at Roy St. There is NO crossing at Roy. When Mercer and Broad cross SR-99,
3 they both go under it. What is the plan for Roy? This has not been publicized or clarified.

The proposed corridor "improvements" claim that this will improve Ballard and Interbay connection to I-5, but that is also not clarified,
4 explained, or detailed in the 2-way Mercer plan. It is only mentioned that this is going to be necessary. When and at what cost?

Furthermore, Mercer at Elliot, is a narrow 2-lane road that has sharp turns and steep inclines that trucks cannot safely navigate. What is
5 the plan for Elliot? Why is it part of a 2-way Mercer plan since Mercer is 2-way there anyway?

The Mercer Mess is a combination of factors. Most notably is the freeway itself. Because the onramps are on opposite sides of the the freeway from the I-90 and SR-520 exit lanes, traffic is clogged on the
6 freeway, which in turn clogs Mercer and Fairview. If federal money is necessary, it should be used to fix the 40 year old error the federal government made by putting those exits on the "inside" of the freeway. If you want to get from Key Arena to Bellevue, not matter whether you choose 520 or I-90, you're going to contribute to the mess.

Light timing is another annoying factor in the Mercer Mess. One of the best ways to fix this would be to build over/underpasses where the streets Dexter, 9th, Westlake, Terry, and Boren Aves cross Mercer.
7 Mercer cannot cross over Dexter since it's rising from going under SR-99. Dexter, however, can rise above Mercer.

The most effective solution to this mess would be to dig Mercer below grade from SR-99 to Fairview. There is great public concern with building yet another viaduct, but that would be an above ground, and
8 possibly less expensive version of the same idea. There has also been concern about building another freeway through what is arguably a residential area. However, the tough decision should be made to prepare the people for a Ballard freeway concept.

Blocking Broad without fully understanding where the off-freeway traffic will go is foolish and nearsighted. Do not rush in to this pretty 2-way Mercer plan that Paul Allen's Vulcan organizations are pushing. Many local companies and citizen groups have voiced their
9 opposition to this plan, so unless there has been some major headway on these issues that have not been made public since October, this does not appear to be a sound transit plan.

Jeremy Brown

Seattle Resident and Regular Driver through the Mercer Mess

Response to Jeremy Brown

1. Comment noted.
2. Broad Street will not be closed with this project. Two-way Mercer will connect directly to Broad Street west of Ninth Avenue North, providing a direct westbound route from I-5 to Broad Street. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal. Proposed north portal area improvements include new connections across Aurora, two-way Mercer across Aurora, and elimination of Broad Street between Harrison Street and Ninth Avenue North. A similar configuration was assumed for the year 2030 No Action Alternative for the Mercer Corridor Environmental Assessment.
3. There is no planned crossing of SR 99 at Roy Street under this or other projects. Access to and from SR 99 is still expected to be accommodated at Roy Street for right turns off and on.
4. The project provides a direct route from I-5 to Broad Street west of Ninth Avenue North, eliminating circuitous routing, and weaving that now occurs on the I-5 off-ramp and current route via Fairview Avenue North and Valley Street. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including two-way Mercer from Dexter to First Avenue West. With these improvements, the Mercer Corridor Project would connect directly to two-way Mercer at Dexter, providing a direct westbound route from I-5 to Elliott for travel to Interbay.
5. Comment noted. Improvements at Mercer and Elliott are not part of this project.
6. Comment noted. Some benefits to ramp weaving and queuing are expected with the two-way Mercer due to the ability for westbound traffic to continue straight rather than turn. This project will not otherwise change the ramps or I-5.
7. Alternatives considered included grade separation. These were rejected for reasons noted in the EA. Operational analysis results reflect signal timing in the field and what has been designed with this project.
8. Alternatives considered included grade separation. These were rejected for reasons noted in the EA.
9. Comment noted. Broad Street will not be closed or blocked with this project. The EA includes updated traffic analysis (see Exhibit 3-40).

John W. Southall, January 29, 2009

-----Original Message-----

From: Jack Southall [<mailto:south946@earthlink.net>]

Sent: Thursday, January 29, 2009 11:27 AM

To: mercerEA@seattle.gov

Subject: Mercer Corridor Projects Comments

General Mercer Corridor Projects Comment:

1 The Mercer Corridor project does not improve access to SE Queen Anne for its residents. We often have to wait through 3 traffic light cycles going north on 5th Ave N. at Mercer. The Gates Foundation location will make traffic conditions worse for us and I believe that they should mitigate this situation.

Specific Mercer Corridor Projects Comments:

Two Way Mercer

- 2**
1. Improves appearance and safety
 2. Maintains current traffic throughput
 3. The future extension to will makes traffic congestion worse at 5th and Mercer

Valley

- 3**
1. Should retain 4 lanes and connect to Roy Street
 2. 4 lanes would reduce congestion at 5th and Mercer
 3. 4 lanes would increase traffic throughput

John W. Southall

1231 5th Ave. N.

Seattle Wash.

98109

Response to John W. Southall

1. Comment noted. Access to southeast Queen Anne improves with this project as vehicles from I-5 will only need to travel through four intersections to access Broad Street instead of five intersections as today. This project does not include changes to Mercer or other streets west of Dexter Avenue North, and does not affect traffic operations at Fifth Avenue North and Mercer Street. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including two-way Mercer from Dexter to First Avenue West. With those improvements, the Mercer Corridor Project would connect directly to two-way Mercer at Dexter, providing a direct westbound route from I-5 to Queen Anne. The Gates Foundation is not a part of this project, but that land use was assumed in the future analysis.

2.1 The project design will improve the appearance of Mercer and Valley streets. The design will also improve safety for traffic, pedestrians, and bicyclists as described in the EA.

2.2 The traffic analysis included an assessment of vehicle through-put (see Addendum to Transportation Discipline Report, November 2008). Overall through-put in the corridor would decrease by 2 percent in the p.m. peak hour with the project.

2.3 Comment noted. The future extension of Mercer referred to in the comment is a separate project and will undergo a separate environmental analysis. It was part of the assumed No Action network for the year 2030 analysis.

3. Alternatives considered included a similar extension of Valley Street (as Roy Street) under Aurora Avenue. These were rejected for reasons noted in the EA.

Albert J. Berger, February 12, 2009

From: Albert J Berger [berger@u.washington.edu]

Sent: Thursday, February 12, 2009 10:11 AM

To: MercerEA@seattle.gov

Subject: Comment on the Mercer Project

I am very concerned that the reduction in lanes on Mercer going east to I-5 will lead to more congestion and delays. Currently at many times of the day there are substantial delays going to I-5 when using Mercer....how does reducing lanes make things better? It will make it much worse....also almost all people who are going to I-5 are NOT looking for public transportation instead of using the interstate. I hope you will rethink this project. For example eliminate the proposed parking on Mercer and dedicate another lane to travel to and from I-5! Mercer is a key road for accessing I-5 for Queen Anne, Belltown, and Magnolia!

1

Thank you,

Albert Berger

2621 2nd Ave.

#1805

Seattle, WA 98121

Response to Albert J. Berger

1. Comment noted. The analysis includes options for three and four eastbound lanes. While eastbound travel times would be slightly lower with four lanes compared to three, eastbound travel times under both options would improve compared to the No Action Alternative. Using the right-hand lane as a travel lane instead of providing parking with curb bulbs at intersections also increases the crossing distance for pedestrians, and improving pedestrian safety and mobility is also a need that this project is addressing.

Karen Lucht, February 12, 2009

From: Karen Lucht [karen.lucht@comcast.net]

Sent: Thursday, February 12, 2009 12:10 PM

To: MercerEA@seattle.gov

Subject: MercerCorridorFeedback

I think the city needs to go back to the drawing board on plans to fix the Mercer Mess.

Reducing eastbound lanes from the current 4 lanes down to 3 lanes will only make travel times worse. It has taken 20 minutes for me to drive from QFC to Dexter at 2:30 on a weekday afternoon. **1** Allowing for parking along Mercer will back up traffic as people attempt (and fail) to parallel park. This corridor needs to be focused on moving traffic on and off I5, not parking, pretty trees, and bike lanes.

Karen Lucht

Response to Karen Lucht

1. Comments noted. The analysis includes options for three and four eastbound lanes. While eastbound travel times would be slightly lower with four lanes compared to three, eastbound travel times under both options would improve compared to the No Action Alternative. Using the right-hand lane as a travel lane instead of providing parking with curb bulbs at intersections also increases the crossing distance for pedestrians, and improving pedestrian safety and mobility is also a need that this project is addressing.

Chuck Ayers, Cascade Bicycle Club, February 13, 2009

Friday, February 13, 2009 4:35 PM

Angela Brady, Project Manager
Seattle Department of Transportation
Via e-mail: MercerEA@seattle.gov

On behalf of Cascade Bicycle Club, and more than 10,000 members, we would like to issue our support for the Seattle Department of Transportation's Mitigated Determination of Non-Significance, in addition to our support for moving toward implementation of the Mercer Corridor project. It is our firm belief that the proposal to reconfigure and reconstruct Mercer and Valley Streets is one of the most important major capital projects on the City's docket for nonmotorized transportation. For far too long Mercer, Valley and Aurora (SR99) have imposed obstacles to travel by foot and bicycle. They stand as nearly impenetrable barriers before tens of thousands of residents who would prefer to travel by means other than the private automobile. The improved designs will provide the much needed east-connections for non-motorized modes through South Lake Union.

1

We would also like to take this opportunity to express our position on the overarching implications of this project, which may or may not be beyond the scope of the present Environmental Review.

As a designated urban center and a LEED-ND neighborhood, South Lake Union has been targeted to support the influx of over 16,000 additional jobs and nearly 20,000 new residents. The number of transportation trips that will be generated through these figures is staggering. According to the current non-motorized mode split in the region, at least 15 percent of these trips could be comprised of bicycle and walking trips, which would significantly alleviate the pressures on the neighborhood via single occupant vehicle trips.

However, in order to support the potential for bicycle and pedestrian trips to serve as a viable transportation mode in South Lake Union, this project's reach must go beyond Mercer and Valley Streets, to ensure the maximum number of street grid crossings are made throughout the neighborhood, and over Aurora.

In moving forward with the Mercer/Valley project, recognition of the capability and reach that this project has to shape the future face of South Lake Union must be explicit through continued planning efforts and designs. It goes without saying that we are no longer living in the era of defining our neighborhoods by the automobile. We strongly encourage that the City not to lose sight of these considerations and not lose sight of their vision to establish South Lake Union as one of the most sustainable neighborhoods in the country.

Thank you for your attention to our concerns, and we look forward to working with you to reclaim South Lake Union as a place for people.

Sincerely,
Chuck Ayers
Executive Director
Cascade Bicycle Club
206.523.9495
www.cascade.org

Response to Chuck Ayers, Cascade Bicycle Club

1. Comment noted. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal. Proposed north portal area improvements include new connections across Aurora, two-way Mercer across Aurora, and elimination of Broad Street between Harrison Street and Ninth Avenue North.

Comments Received via Letter

Jim Muck, U.S. Fish and Wildlife Service and National Marine Fisheries Service,
January 16, 2009 Page 1

January 16, 2009

Angela Brady
Project Manager
Mercer Corridor Improvements Project
Seattle Department of Transportation

Ms. Brady,

Thank you for the opportunity to review and provide comments on the Mercer Corridor Improvements Project – NEPA Environmental Assessment (EA). The following are comments for the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (jointly the Services).

1 The Services reviewed the EA for impacts to fish and wildlife, especially to the listed species, Chinook salmon, steelhead, and bull trout that occur in Lake Union. As the proposed action does not have any in-water construction, the potential impacts to listed species will result from stormwater runoff. The EA describes stormwater runoff, but does not thoroughly address potential impacts to listed fish species. The EA states that most of the surface runoff drains to the combined sewer system where it is treated and discharged to Puget Sound. However, there is little to no discussion or analysis on combined sewer overflow (CSO) outfall events during heavy storm events.

2 The EA states that the project will result in a decrease in 0.7 acres of impervious surface (Page 3-37) and this decrease and/or installation of detention would benefit the existing system's capacity by reducing flow rates from the area (Page 3-39). However, the Services were unable to find the total acres within the project area. The Services estimated that the project area is approximately 45 acres in size (this included all land within the project area as it is unknown where runoff from buildings, parking lots, etc. drain). The reduction of 0.7 acres results in a 1.6% decrease in impervious surface. This reduction will result in very little change to the amount of water entering the combined sewer and therefore, CSO outfall events during storms.

3 Combined sewer overflow outfall events result in discharges of both untreated sewer and surface stormwater runoff. These events result in increased sediment and contaminants to enter surface waters, in this case Lake Union. This does not only influence nearby outfalls, but also all outfalls from the project area to the treatment plant. Stormwater that enters the combined system at the project location may cause the combined system to reach capacity and therefore cause CSO outfall events further down the system.

4 Contaminated sediments near CSO outfalls can cause bioaccumulation of toxic chemicals in macroinvertebrates that are prey species for juvenile salmonids. High copper and zinc concentrations that discharge directly into Lake Union during CSO outfall events can have direct impacts to listed species.

Response to Jim Muck, USFWS and NMFS:

1. A discussion on combined sewer overflow (CSO) outfall events during storm events is included in response #3 below.

2. Since the Mercer Street project will construct new planter strips and medians in a heavily paved area, the impervious surface area will be reduced relative to existing conditions. An updated table below summarizes the changes in impervious surface area for each “collector” sewer pipe, and for Lake Union. Project-wide, impervious surface is estimated to be reduced by approximately 2 to 3 percent. Impervious surface area (and associated flows) draining to the combined sewer system will reduce from approximately 17.0 acres to 16.2 acres, a decrease of 4.7 percent. Therefore, the proposed project should not increase flows to the combined sewer system. This area tabulation is for project-related areas inside the City right-of-way, but not on private property. This likely explains the larger area estimated by the Services.

Existing vs. Redeveloped Impervious Area within the Project Limits (acres)								
Discharge Location	Existing Site Conditions^a				Redeveloped Site Conditions^a			
	Impervious	Pervious	Total	% Imp.	Imp.	Pervious	Total	% Imp.
9th Avenue Collector	2.31	0.04	2.35	98.1%	0.61	0.00	0.61	100.0%
Terry Avenue Collector	10.38	1.92	12.31	84.4%	10.21	2.07	12.28	83.2%
Westlake Avenue Collector	4.34	0.69	5.03	86.3%	5.37	0.45	5.82	92.3%
Lake Union	2.24	1.02	3.26	68.6%	2.59	1.59	4.17	61.9%
Total Project Area	19.27	3.68	22.95	84.0%	18.78	4.10	22.89	82.1%
^a Existing and proposed areas may vary due to rounding and calculation methods.								

3. Much of the project drains to the existing combined sewer system, which flows to the previously completed Denny Way /Lake Union CSO improvements, which removed combined sewer overflows from the project area into South Lake Union. The facility has two basic modes of operation:

a) During rainstorms, the facility will direct combined stormwater and sanitary sewer flows into the new Mercer Street wastewater storage tunnel. That is expected to happen about 50 times a year. After each storm subsides, the CSO control facility will pump the stored flows from the Mercer Street tunnel to the Elliott Bay interceptor, a sewer trunk leading to the West Point Treatment Plant.

b) During larger storms, about 10 to 20 times a year, the Mercer Street tunnel will fill completely. When that happens, the CSO control facility will automatically begin to treat the stored flows and pump them to the new CSO outfall at Myrtle Edwards Park. Treatment includes screening out floatable materials, disinfection, and dechlorination. Operation of the facility after the storm will be the same as described above.

Additional information on this system is available at:

<http://www.kingcounty.gov/environment/wtd/Construction/Seattle/Completed/DennyWayCSO/Facility.aspx>

The Mercer Street project’s impervious surface reductions, detention improvements on Westlake Avenue North, and rain garden (aka wet median) on Mercer Street to infiltrate stormwater will reduce flow rates to the combined sewer system. Therefore, there should be no CSO events associated with the project.

4. See response #3 above.

- 5** The Services recommend that an analysis be conducted on CSO outfall events resulting from the project on impacts to listed species in Lake Union and the Lake Washington Ship Canal. The EA does state that stormwater detention would be provided for discharges to satisfy the current City code to prevent increased flows to the downstream conveyance system. A similar analysis is also needed for stormwater runoff from the locations on the east and west sides of the project that drains directly to Lake Union.
- 6**

The project should incorporate low impact development and other means to reduce stormwater runoff as much as possible to reduce impacts to listed species in Lake Union and the Lake Washington Ship Canal. Once construction is complete for this project, it is difficult to go back and install necessary measures to help reduce stormwater runoff. All possible measures should be included in this project.

- 7**
- 8** Page 1-5, second bullet states that an estimated 8,000 to 10,000 additional households are expected in the South Lake Union Urban Center. The analysis for potential impacts to listed species needs to include future growth in the area. Exhibit 3-13 on Page 3-39 needs to include future growth and impacts to surface waters. Page 4-5 begins to address this issue.

9 Page 3-39, Exhibit 3-13, the Services recommend that an analysis on pollutant loading be expressed in surface runoff in units of mg/L during runoff events for each contaminant. This helps provide an accurate analysis to listed fish species.

- 10** Section 3.12 Fish, Wildlife, and Vegetation. The section does not describe the discussion on CSO outfall events described above. In addition, an analysis on future growth is needed. Page 4-5 begins to address this issue.

Thank you for the opportunity to comment on the Mercer Corridor Improvements Project EA. If you have any questions, please contact me at 206-526-4740 or jim.muck@noaa.gov.

Jim

Jim Muck
U.S. Fish and Wildlife Service
National Marine Fisheries Service
7600 Sandpoint Way NE
Seattle, WA 98115
Phone: 206/526-4740
Fax: 206/526-4746

Response to Jim Muck, USFWS and NMFS:

5. Since CSO outfalls from the project site do not occur in Lake Union, this analysis wasn't included.

6. Runoff from approximately 0.35 acre of new (and treated) impervious surface is tributary to Lake Union. Lake Union/Ship Canal is identified by Washington Department of Ecology as a "Flow Control Exempt Receiving Water" due to the capacity of its very large surface area and volume (*Stormwater Management Manual for Western Washington*, Volume 1, section 2.5.7). In addition, City of Seattle Drainage Code 22.800, Volume 3, section 1.4, is consistent with this designation and also identifies Lake Union as a "designated receiving water" where detention is not required for direct discharges. Since runoff proposed for the project to the lake satisfies these State and City requirements, detention of project runoff to Lake Union is not proposed.

7. "LID"-type improvements have been included in the project. The following water quality improvements are proposed:

- Rain gardens along Westlake Avenue North between Valley Street and Ninth Avenue North. These "Green Infrastructure Technologies" features consist of shallow depressions that infiltrate the runoff through amended soils and vegetation. These features will treat roadway pavement and sidewalk runoff from Ninth Avenue North and Westlake Avenue North before discharging to Lake Union via the existing storm drain outfall from Broad Street.
- Raingarden/wet median improvements mentioned in response # 3.
- A biofiltration swale located along the north side of the WSDOT off-ramp. The swale will treat pavement runoff from the westbound roadway that is tributary to a separate storm drain to Lake Union.

8. The City of Seattle Department of Planning and Development is responsible for developing regulations that govern the use of land in Seattle's South Lake Union urban center. DPD has worked with the South Lake Union neighborhood to update the South Lake Union neighborhood plan. The new neighborhood plan builds on goals for neighborhood character, transportation, and parks and open space, and adds sustainable development and housing goals. The updated plan helps to make South Lake Union ready for future growth. As part of this process, land use planners have also worked with other staff in DPD's City Planning section to protect sensitive natural areas, promote good urban design, ensure an adequate infrastructure to accommodate growth, and lessen the impact of new development on existing neighborhoods and City systems. DPD has the broad responsibility for balancing the health of the physical environment, economic prosperity, and quality of life through their programs that govern development on Seattle's approximately 100 miles of shorelines, and that protect streams, wildlife habitat, wetlands, and steep slopes,

The cumulative effects analysis for this project looked at effects of past, present, and future actions with the goal of determining if this proposed project will, in combination with other projects, lead to environmental change. If a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact. By practicing avoidance, minimization, and mitigation, this project is not expected to contribute to a negative adverse cumulative effect.

9. The pollutant analysis was conducted in units of lb/year, the methodology in effect at the time the EA was prepared. An estimation of pre-project and post-project pollutant concentrations using WSDOT's methodology was also prepared for the Biological Assessment. Results are shown on the table below.

Project Total	TSS (mg/L)	Total Zinc (µg/L)	Dissolved Zinc (µg/L)	Total Copper (µg/L)	Dissolved Copper (µg/L)
Pollutant concentration for runoff pre-project	93.0	174.0	62.0	31.0	7.6
Pollutant concentration for runoff post-project	21.1	62.8	33.0	11.1	5.4
Net change in pollutant concentration between pre- and post-project conditions	-71.9	-111.2	-29.0	-19.9	-2.2
Percent change	-77%	-64%	-47%	-64%	-28%

10. See response to comments #3 and #8 above.

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John Coney and Jean Sundborg, The Uptown Alliance, February 10, 2009

THE UPTOWN ALLIANCE

The Civic Organization for the Uptown Urban Center

February 10, 2009

Angela Brady
Seattle Department of Transportation
P.O. Box 34996
Seattle, WA 98124

Dear Ms. Brady,

Members of the Queen Anne Uptown Alliance appreciate the opportunity to comment on the Mercer Corridor Improvement's Project NEPA Environment Assessment. The Uptown Alliance has operated since 1999 with a goal of promoting a sustainable, livable urban center and to review plans and help implement desirable projects for the betterment of the community.

The Uptown Alliance has recently organized the Uptown Alliance Planning and Transportation Committee (UAPTC) which will focus on key planning and transportation efforts in the community. At their first meeting, the Committee supported sending a comment letter on the Mercer Project Environmental Assessment.

Overall, the Uptown Alliance is supportive of the Two-Way Mercer Improvement's Project as long as the ultimate two-way corridor extends all the way from I-5 westward to Elliott Avenue and includes additional crossings of Aurora to reconnect the neighborhood roadway grid. The proposed project, commonly referred to as "Mercer East" is limited between I-5 and Dexter Avenue, plus the narrowing of Valley Street. Without other improvements in the overall traffic system, the Uptown Alliance does not see value in this as a stand alone project. We do, however, see Mercer East as a good start to beginning the broader project. **1**

Several members of our organization have been involved in the recently completed Viaduct Stakeholder's Committee and the ongoing Mercer Corridor Stakeholder's Committee. The Uptown Alliance supports the recommendations that came out of Mercer Corridor Stakeholder's Committee. Additionally, Each Scenario evaluated in the Viaduct Stakeholder's Committee included a two-way Mercer Corridor between I-5 and Elliott and at least one additional crossing of Aurora. In the Bored Tunnel Alternative, it seemed likely that at least two additional crossings of Aurora between Denny and Harrison Streets, if not three, might be possible. The reconnection of the grid across Aurora will create new east/west connections that will take the pressure off both the Mercer and Denny corridors and help improve travel to, from and through the Uptown and South Lake Union neighborhoods. **2**

While we have faith that the City, State and County will move ahead with a Viaduct option that will complement an improved grid for the broader Mercer "corridor", we believe that certain triggers should be identified before specific construction is completed in the first phase on the Two-Way Mercer East project. Most importantly, we believe that at least one new Aurora crossing should be in place before Mercer Street is narrowed to three lanes in the eastbound direction between 9th Avenue and I-5. Once a new crossing is available, the curb lane for eastbound Mercer can be constructed as a parking strip with curb bulbs as currently designed. **3**

While we are friendly to the Two-Way Mercer project, we are interested in upcoming information and analysis of how Bored Tunnel traffic may impact the two-way Mercer Corridor. We're anxious to have input into the planning, environmental and design work associated with the ongoing Two-Way Mercer West evaluation with a special interest in how cars, trucks and buses, bikes and pedestrians fare on the narrow Mercer Place Hill between Mercer Street and Elliott Avenue. **4**

Again, thanks for the opportunity to comment and we welcome any questions.

Sincerely,

John Coney, Co-President

Jean Sundborg, Co-President

160 Roy Street, Seattle, WA 98109

Response to John Coney and Jean Sundborg, The Uptown Alliance

1. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal. Proposed north portal area improvements include new connections across Aurora, two-way Mercer across Aurora, and elimination of Broad Street between Harrison Street and Ninth Avenue North.
2. Comment noted. Additional crossings over Aurora are being evaluated as part of the Alaskan Way Viaduct Replacement Project.
3. Comment noted. The analysis includes options for three and four eastbound lanes. While eastbound travel times would be slightly lower with four lanes compared to three, eastbound travel times under both options would improve compared to the No Action Alternative. Using the right-hand lane as a travel lane instead of providing parking with curb bulbs at intersections also increases the crossing distance for pedestrians, and improving pedestrian safety and mobility is also a need that this project is addressing.
4. Comment noted. Effects of the bored tunnel on the proposed two-way Mercer will be evaluated as part of the Alaskan Way Viaduct Replacement Project. The preliminary analysis completed for Alaskan Way Viaduct replacement scenarios found no change in projected volumes on Mercer Street between I-5 and Dexter Avenue North both among the replacement scenarios (including the bored tunnel scenario) and compared to a scenario with the existing Alaskan Way Viaduct.



King County
Department of Transportation
Transit Division
201 South Jackson Street, M/S KSC-TR-0431
Seattle, WA 98104-3856

February 12, 2009

Angela Brady, Project Manager
Seattle Department of Transportation
PO Box 34996
Seattle, WA 98124-4996

Mercer Corridor Improvements Project Environmental Assessment

Dear Ms. Brady:

King County Metro Transit staff reviewed the Mercer Corridor Improvements Project Environmental Assessment and we have the following comments.

During construction, Route 70 will be negatively impacted at the intersection of Mercer Street and Fairview Avenue North. To mitigate, flaggers could provide priority to Route 70 coaches. During construction on the east side of Fairview Avenue when only one northbound lane is available to traffic, the farside stop on Fairview Avenue at Harrison Street could be shifted to the nearside to improve transit operations. **1**

Section 3.7 Social, Pg. 3-56: Pedestrian, bicycle and transit facilities; last paragraph: Metro Transit route list needs updating; should include routes 17, 26, 28, 30, 70, 71, 72, 73, 83 and 98 (streetcar). Pg. 3-61; What measures are proposed to avoid or minimize effects during construction? Sixth bullet: Add transit to the list of agencies that need to be notified about construction schedules, closures and detours. **2**

Section 3.13 Transportation, Pg. 3-108: How would traffic be affected during construction of the project? Please note the following: Reroutes on Eastlake Avenue utilizing diesel coaches can take place only on weekends since route 70 service terminates at 7:30PM along Fairview Avenue on weekdays. The second bullet refers to trolley pole and overhead line relocations; this is not an applicable option if the relocations are intended for an alternate route **3**

Streetcar service should not be interrupted during construction; a detour route which works for transit should be provided for any weekend road closures-on Fairview Avenue. Please ensure that the construction contractor provides the requested advance notification to Metro on the construction schedule, planned street closures and any disruption to transit service and bus stops. This information is provided at the following web address: <http://www.kingcounty.gov/transportation/kcdot/MetroTransit/Construction.aspx> **4**

Roadway work on the Mercer Project along Fairview which requires the removal of overhead trolley wire can only begin after route 70 trolleys have been dieselized by Metro Transit (by October 2, 2010). If construction on Fairview Avenue is delayed, then the City will need to confirm with the County about the availability of diesel coaches for route 70 service. **5**

Response to Gary Kriedt, King County Metro Transit

1. Traffic operations during construction and measures to maintain bus service will be coordinated with King County Metro. This coordination role will be included in contract documents.
2. The Metro Transit route list has been updated in the EA as requested. Metro Transit has been added to the list of agencies that need to be notified.
3. The mitigation commitments (see Attachment 4) have been amplified to include the following specific measures to minimize effects during construction:
 - a) Construction staging plans are being developed with review from SDOT, King County Metro, and WSDOT, and will be included in contract documents providing requirements for road closures, number of lanes required, and detour routes.
 - b) The contract documents will require coordination with King County Metro during construction, including working near trolley and streetcar overhead wires.
4. Streetcar impacts are to be minimized. Weekend transit detours will use Eastlake Avenue. Construction notification guidelines will be included in the contract documents. Route 70 operational needs will also be noted.
5. The contract documents will advise the contractor that the Route 70 vehicles will not be switched to diesel coaches until October 2, 2010. At that time it will take an additional 2 weeks to remove the overhead electrical system. If the project is delayed, SDOT will coordinate with King County Metro with regard to Route 70 operations.

We would like to encourage SDOT to work with King County Metro Transit's Market Development Group in efforts to shift trip-making behavior during the 2 1/2 years of construction. We recommend that SDOT consider setting aside 1% of the project for incentives, promotions, and outreach activities. **6**

Please note that in Appendix I, the passage on transit service needs updating. Route 30, formerly Route 74 Local, provides an east-west connection between SLU and Uptown via Broad and Mercer streets. It has a base headway of 30 minutes. In SLU, it serves bus stops on Westlake and 9th Avenues North. Also, Transit service *can* use the Mercer Street I-5 ramps as they are now configured. Large vehicles can make all the relevant turning movements. Mercer Street provides connections with both the general-purpose lanes and the reversible lanes. Transit has not used the Mercer Street ramps for other reasons, primarily due to the opportunity cost or running time impacts of using them on travel time to other markets outside SLU. **7**

Thank you for the opportunity to comment on this proposal.

Sincerely,



Gary Kriedt
Senior Environmental Planner

Response to Gary Kriedt, King County Metro Transit

6. Comment noted. SDOT is willing to work with KC Metro with respect to outreach efforts.

7. Comment noted. The passage on transit service (page xii of Appendix I) states that service from I-5 is not provided because efficient access and linkages are not provided. This reflects the operating costs and running time constraints described in your letter. Additionally, Metro Route 74 is described in Section 4.5 (page 4-6) of Appendix I, which states this service is the only local east-west route that travels on Mercer Street. Since the publication of the appendix, the route number has changed but the service is correctly described as it operated then.



February 13, 2009

Ms. Angela Brady
Seattle Department of Transportation
P.O. Box 34996
Seattle, WA 98124

Dear Ms. Brady:

The Port of Seattle (Port) would like to thank you for the opportunity to comment on the **Mercer Corridor Improvements Project's NEPA Environment Assessment** and on the project's **SEPA Mitigated Determination of Nonsignificance (MDNS)**. The Port is very interested in both the Mercer Corridor Improvements Project (Mercer East) and the related Alaskan Way Viaduct Program (Viaduct/Tunnel), which impacts the Mercer Corridor. We recognize that work needs to be completed on the Mercer Corridor (Corridor) before the Viaduct can be removed, thus making it a critical east/west connector for access to the Waterfront, Terminal 91, Interbay and Ballard, especially during Viaduct/Tunnel construction.

The most critical concerns for the Port of Seattle on the Mercer East project, in both the short and long term, include:

- Maintain existing or improving levels of freight mobility through:
 - Completion of a viable freight corridor connecting I-5 to Ballard/Interbay along Mercer Street
 - Clearly designated and functional truck street(s) to replace the connection provided by the segment of Broad Street that will be eliminated
 - Retain the existing eastbound capacity until an additional grade separated crossing of Aurora Avenue is in place. For example, consider delaying implementation of the south side parking lane on Mercer Street between Ninth and Fairview Avenues.
 - Access to T-91 and Port facilities in NW Seattle
 - Access to the North end of the Central Waterfront (Piers 66 and 69)
- Reconnect the neighborhood grid network, especially across Aurora Avenue
- Understand the impacts of the proposed Viaduct/Tunnel on Mercer Street traffic

Maintain Freight Mobility

The Port has participated in the Mercer East project for many years. As a member of the ongoing Mercer Corridor Stakeholder Committee, we closely followed the recently completed Alaskan Way Viaduct Stakeholders Committee work. The Viaduct process made several assumptions about the future Corridor, including that it would be two-way from I-5 to Elliott Avenue West (Elliott) and that there would be one or more east/west crossings of Aurora Avenue.

1

P.O. Box 1209
Seattle, WA 98111-1209
USA



Tele: (206) 728-3000
Fax: (206) 728-3252
www.portseattle.org

Response to Dan Burke, Port of Seattle

1. Comment noted. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal. Proposed north portal area improvements include new connections across Aurora, two-way Mercer across Aurora, and elimination of Broad Street between Harrison Street and Ninth Avenue North. Plans to complete the two-way Mercer west of Dexter will be evaluated under a separate project.

Ms. Angela Bmdy
Page 2

Overall, the Port is supportive of the Mercer East project as a first step to a full corridor. However, we believe that the ultimate two-way corridor must extend all the way from I-5 westward to Elliott Avenue.

1
(contin.)

The Port continues to support the 28 recommendations that came out of Mercer Corridor Stakeholders' Committee on September 28th, 2006. The recommendations most critical to the Port's operations include:

- A-1: Implement two-way operations on Mercer Street from I-5 to Elliott Avenue
- A-2: Construct all project elements in a sequence that will minimize the overall disruption of the neighborhood
- A-3: Maintain truck streets through the corridor
- B-3: Delay curb bulb installation on south side of Mercer Street until Aurora Avenue crossings are in place.

2

The Mercer Corridor Stakeholder Committee recommendations were impressive because they came from a broad base of the affected area and were unanimously agreed upon. The recommendations included discussion of staging projects to make sure that certain elements were in place before other activities should begin. This was especially clear when it came to parking on the south side of Mercer Street between Ninth and Fairview Avenues. The freight community was very concerned about p.m. peak-hour travel time on Mercer Street based on data that was in the 2006 transportation environmental analysis. With the Mercer East project, the eastbound travel lanes are proposed to be reduced from four-lanes to three, with a negative impact on the intersections of Ninth and Westlake Avenues at Mercer Street. Stakeholders were concerned that there would be no capacity on Mercer Street when attempting to make eastbound turns from Ninth or Westlake Avenues.

3

Table 3-39 shows that eastbound Mercer Street p.m. peak-hour travel time is nearly 8-minutes longer in 2010 with a three-lane alignment versus a four-lane alignment. Even in an updated analysis using VISSIM, the added delay is still almost three minutes longer. Travel delays shown on Exhibit 3-41 show little difference in travel time delay between 2010 and 2030 for eastbound Mercer Street; however, there are assumptions for the full two-way corridor and additional Aurora Avenue crossings by 2030.

4

We believe this shows that the Corridor's eastbound section should remain four-lanes from Ninth to Fairview Avenues, and only converted to parking when one or more Aurora Avenue crossings have been implemented. We have heard City staff say that staging this step would be difficult to design and implement. We request a more detailed discussion of this staging problem.

5

The Port would also like to see a clear designation of truck streets proposed by the City that would replace the removed Broad Street route. The report identifies Mercer Street being a designated truck street from I-5 to Ninth Avenue, but there is no such designation west of Ninth Avenue. The Port would also like to understand how freight and other vehicles which now use Valley to Broad Streets would be expected to access the Central Waterfront for access to Pier

6

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Response to Dan Burke, Port of Seattle

2. Comment noted.

3. Since 2006, an updated traffic analysis has been provided in the EA (Exhibit 3-40). The analysis includes options for three and four eastbound lanes. While eastbound travel times would be slightly lower with four lanes compared to three, eastbound travel times under both options would improve compared to the No Action Alternative. Using the right-hand lane as a travel lane instead of providing parking with curb bulbs at intersections also increases the crossing distance for pedestrians, and improving pedestrian safety and mobility is also a need that this project is addressing. Signal progression has been evaluated through VISSIM to optimize travel from not only Mercer through but from the Westlake and Ninth cross streets.

4. Exhibits 3-39 and 3-41 utilize Synchro software while the updated traffic analysis in Exhibit 3-40 utilizes VISSIM software. Exhibit 3-40 suggests a 3-minute improvement from the north side of Seattle Center to I-5, a 1.5-minute improvement from the south side of Seattle Center to I-5, and a 2.5-minute increase in travel time from Westlake to I-5.

5. Comment noted. Refer to the Comment 4 response above for travel time information. Building Mercer with four eastbound lanes initially and then installing curb bulbs at a later date would require a re-build of the entire south half (eastbound lanes) of the street to accommodate different grading and associated drainage requirements, as well as other urban and sustainable design features included with the three-lane option.

6. The connection to Broad Street will remain in place with this project. The Alaskan Way Viaduct Replacement Project will address changes to truck and other traffic patterns that result from changes in connections across Aurora Avenue North, including elimination of Broad Street.

Ms. Angela Brady
Page 3

66/Bell Harbor International Conference Center, the cruise ship facility, and Pier 69/Victoria Clipper. It's important to better understand the expected routes and how travel times are expected to change due to the project.

6
(contin.)

Reconnect the grid

The Corridor must also include at least one additional crossing of SR99 to help reconnect the neighborhood's roadway grid, and preferably more. The Mercer East project is a first phase of a much broader project, and it is limited to improvements between I-5 and Dexter Avenue on Mercer Street, plus the narrowing of Valley Street. Without other improvements along the full corridor, or the reconnection of east/west streets across Aurora Avenue; the Port does not see transportation value in this as a stand-alone project. We do, however, see Mercer East as a good start to beginning the broader project.

7

Viaduct/Bored Tunnel Impacts

An additional long-term Port concern is the impact of the Viaduct/Tunnel program on the traffic volumes across the Corridor. The Viaduct/Tunnel may prove a good alternative for traffic ultimately destined for Interbay, Magnolia, Ballard and other locations in Northwest Seattle, however, this EA analysis predated the selection of the Bored Tunnel Hybrid, so no such analysis is included.

8

While we trust that the City, State and County will move ahead with a Viaduct/Tunnel option that will complement an improved grid for the broader Mercer Corridor, we believe that certain triggers should be identified before specific construction is completed in the first phase of the Mercer East project. Most importantly, we believe that at least one new Aurora Avenue crossing, such as Thomas Street or Harrison Street, should be in place before Mercer Street is narrowed to three-lanes in the eastbound direction between Ninth Avenue and I-5. Once a new crossing is available, it appears that the curb lane for eastbound Mercer Street can be converted as a parking strip with curb bulbs as currently designed. We would also like to understand the impact that parking will have on eastbound Mercer Street traffic as vehicles maneuver to park during peak hours. We think this has a potential to create a safety and operational problems.

9

10

Again, thanks for the opportunity to comment and we welcome any questions.

Sincerely,



Dan Burke
Project Lead Planner
Regional Transportation Planning
Port of Seattle
206-728-3376

P.O. Box 1209
Seattle, WA 98111-1209
USA



Tele: (206) 728-3000
Fax: (206) 728-3252
www.portseattle.org

Response to Dan Burke, Port of Seattle

7. The State, County, and City departments of transportation are working together through the Alaskan Way Viaduct Replacement Project to design and implement the bored tunnel and related projects, including improvements to the street network at the north tunnel portal. Proposed north portal area improvements include new connections across Aurora, two-way Mercer across Aurora, and elimination of Broad Street between Harrison Street and Ninth Avenue North.

8. Effects of the bored tunnel on the two-way Mercer are being evaluated as part of the Alaskan Way Viaduct and Seawall Replacement Project. The preliminary analysis completed for Alaskan Way Viaduct replacement scenarios found no change in projected volumes on Mercer Street between I-5 and Dexter Avenue North both among the replacement scenarios (including the bored tunnel scenario) and compared to a scenario with the existing Alaskan Way Viaduct.

9. Comment noted. See responses to comments 4 and 5 above for travel time information and staging information related to three versus four eastbound lanes.

10. Parking maneuvers are reflected in the updated traffic analysis results using VISSIM, which indicate improved or no change to eastbound travel times through the corridor.



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Safe Routes to School*

314 1st Avenue South
Seattle, WA 98104
206.652.2310 ph
206.381.1631 fx
www.feetfirst.info

February 13, 2009

City of Seattle
Attn: Angela Brady
Seattle Municipal Tower
700 5th Avenue
PO Box 34996
Seattle, WA 98124-4996

RE: Environmental Assessment for the Mercer Corridor

Dear Ms. Brady:

Feet First supports that the Mercer Project is designed as a complete street giving space and infrastructure considerations to public transit users, bicyclists and pedestrians. Further, we support the project provide adequate amenities to help activate the public space along the street corridor. 1

However, after review of the Environmental Assessment for the Mercer Corridor, the project has not been designed to meet changing transportation needs, but instead designed for current use. The SEPA specifically cites improving regional vehicle access as a benefit to air impacts in section B2-a "The project would provide more direct access from I-5 to South Lake Union and neighborhoods to the north and west for regional traffic, and would reduce the potential for backups onto I-5 from the I-5 off ramps at Mercer".

Though the Mercer Corridor Project is providing amenities and space for non-motorized users, this project remains aimed at impacting automobile capacity and traffic congestion. For example, the project is widening the I-5 on ramp, adding vehicle lanes, and improving local vehicle circulation at multiple intersections. 2

These aspects of the project do not:

1. Provide greater access or relieving congestion for transit;
2. Plan for changing transportation habits; and
3. Encourage more local and less regional trips within the South Lake Union area.



Response to Lisa Quinn, Feet First

1. Comment noted.
2. Comment noted. The proposed project is designed to meet multiple objectives. Some of the major project elements, such as providing a more direct westbound route through the neighborhood, result in benefits for all modes. This project will improve access for transit by improving the sidewalk grid and increasing opportunities for pedestrians to safely cross streets in the project area. Traffic signals will be designed to provide priority for transit vehicles.

Feet First concludes and recommends the following changes after review of the Environmental Assessment for the Mercer Corridor:

- The project should provide prioritization of signals for the existing streetcar and proposed future streetcars. **3**
- Design is for relatively shallow turning radii (especially at: Mercer and 9th; Mercer and Westlake; north end of Mercer and Terry; and Mercer and Fairview) **4**
- The sidewalks along the south side of Mercer are too narrow. They should be 12 feet minimum (even at tree pits) for a street of this size and capacity. **5**
- The design does not improve non-motorized access around the intersection of Mercer and Fairview. The project does not fix the zig-zag necessary to cross Mercer on the east side of Fairview. Additionally, the crosswalks across Fairview are long and without any pedestrian refuge. It appears the 4 lanes southbound of Fairview just north of this intersection is a grandiose proposition. **6**
- The level of traffic on Mercer (and potentially Valley) would negatively impact the walking. Though the project expresses that it will be creating a pleasing pedestrian environment, the project is pressing the pedestrian features too close to a high vehicle throughput (upwards to 5,800 vehicles per hour on Mercer Street). **7**
- Though the project is currently designed as a complete street, these types of features are often the first to disappear during tight budgets or as projects go over budget. These need to be seen as crucial components of the project that cannot be chipped off. **8**
- Because of uncertainties about the future of the Alaskan Way Viaduct, the west side of the project cannot yet be planned. This project needs to be malleable to guarantee a healthy east-west corridor regardless of the varied possibilities of the Alaskan Way Viaduct. **9**

Thank you for the opportunity to comment on the Environmental Assessment for the Mercer Corridor. Should you have additional questions about the information provided, please contact me directly by calling 206-652-2310 or emailing lisa@feetfirst.info.

Sincerely yours,



Lisa Quinn
Executive Director

Response to Lisa Quinn, Feet First

3. Comment noted. The new signals will have the ability to provide priority to transit vehicles. Decisions on whether or not to provide priority and at what level will be based on observed conditions when the project is operational and will balance the needs of all modes.
4. Curb return radii were established based on turning movements of required design vehicles and balanced with the goal of minimizing crossing distance for pedestrians. Each corner was looked at separately for vehicle movements and safe pedestrian crossings.
5. Widths on the south side of Mercer Street, from face of curb to back of sidewalk, are generally 16 feet with typically a 10-foot concrete sidewalk. Curb bulbs at intersections provide additional width to accommodate higher pedestrian volumes waiting to cross the roadway. Bulbs could also be provided at mid-block locations to accommodate street trees, resulting in greater pedestrian space.
6. A crosswalk within WSDOT right-of-way on the east side of the Mercer/Fairview intersection does not currently exist and is not proposed for this project. A crosswalk is proposed on the north side of this intersection where there is none now due to the high volume of traffic turning right from I-5.
7. Pedestrian improvements are planned for both Valley and Mercer streets. On-street parking and wider sidewalks with a planting strip will provide a buffer between pedestrians and vehicles on Mercer. A much narrower roadway with slower traffic, parking, landscaping, and wide sidewalks will enhance the environment for pedestrians on Valley Street.
8. Comment noted.
9. Comment noted.



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240



FEB 19 2009

9043.1
PEP/NRM

ER 09/56

Ms. Angela Brady
Project Manager
Seattle Department of Transportation
P.O. Box 34996
Seattle, WA 98124-4996
Fax: (206) 615-0899-
Email: MercerEA@seattle.gov

Dear Ms. Brady:

The Department of the Interior (Department) has reviewed the Environmental Assessment (EA) for the **Mercer Corridor Improvements Project, Seattle, Washington**. The Project will replace the existing Mercer/Valley couplet with a widened two-way Mercer Street and a narrowed two-way Valley Street. The Department offers the following comments:

Section 4(f) Comments

Under Section 4(f) of the Department of Transportation Act, a Federal transportation project may not "use" publicly-owned parks open to the public, publicly-owned wildlife refuges, or historic sites, unless there is no prudent and feasible alternative, and all possible planning for mitigation has occurred.

The project does not appear to impact any parks protected by Section 4(f). **1**

The Department defers to the State Historic Preservation Officer for any assessment of historic impacts and any required mitigation.

Section 6(f) of the Land and Water Conservation Fund Act

There do not appear to be any impacts to parks protected by Section 6(f) of the Land and Water Conservation Fund Act. **2**

Fish and Wildlife Resources

In a letter dated January 16, 2009, Mr. Jim Muck of the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), provided comments to you regarding fish and wildlife concerns. These comments are repeated below. **3**

Response to Willie R. Taylor, U.S. Department of the Interior, Page 1

Note: This letter was received after the end of the comment period. We have included the letter and responses to Mr. Taylor's comments due to the Department of the Interior's responsibilities concerning Section 4(f) regulations.

1. Comment noted.
2. Comment noted.
3. See responses to comments from Jim Muck, USFWS and NMFS.

FWS and NMFS reviewed the EA for impacts to fish and wildlife, especially to the listed species, Chinook salmon, steelhead, and bull trout that occur in Lake Union. As the proposed action does not have any in-water construction, the potential impacts to listed species will result from stormwater runoff. The EA describes stormwater runoff, but does not thoroughly address potential impacts to listed fish species. The EA states that most of the surface runoff drains to the combined sewer system where it is treated and discharged to Puget Sound. However, there is little or no discussion or analysis on combined sewer overflow (CSO) outfall events during heavy storm events.

The EA states that the project will result in a decrease in 0.7 acres of impervious surface (Page 3-37) and this decrease and/or installation of detention would benefit the existing system's capacity by reducing flow rates from the area (Page 3-39). However, FWS and NMFS were unable to find the total acres within the project area. The FWS and the NMFS estimated that the project area is approximately 45 acres in size (this included all land within the project area as it is unknown where runoff from buildings, parking lots, etc. drain). The reduction of 0.7 acres results in a 1.6 % decrease in impervious surface. This reduction will result in very little change to the amount of water entering the combined sewer and therefore, CSO outfall events during storms.

Combined sewer overflow outfall events result in discharges of both untreated sewer and surface stormwater runoff. These events result in increased sediment and contaminants to enter surface waters, in this case Lake Union. This not only influences nearby outfalls, but also all outfalls from the project area to the treatment plant. Stormwater that enters the combined system at the project location may cause the combined system to reach capacity and therefore cause CSO outfall events further down the system.

Contaminated sediments near CSO outfalls can cause bioaccumulation of toxic chemicals in macroinvertebrates that are prey species for juvenile salmonids. High copper and zinc concentrations that discharge directly into Lake Union during CSO outfall events can have direct impacts to listed species.

FWS and NMFS recommend that an analysis be conducted on CSO outfall events resulting from the project on impacts to listed species in Lake Union and the Lake Washington Ship Canal. The EA does state that stormwater detention would be provided for discharges to satisfy the current City code to prevent increased flows to the downstream conveyance system. A similar analysis is also needed for stormwater runoff from the locations on the east and west sides of the project that drains directly to Lake Union.

The project should incorporate low impact development and other means to reduce stormwater runoff as much as possible to reduce impacts to listed species in Lake Union and the Lake Washington Ship Canal. Once construction is complete for this project, it is difficult to go back and install necessary measures to help reduce stormwater runoff. All possible measures should be included in this project.

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Page 1-5, second bullet states that an estimated 8,000 to 10,000 additional households are expected in the South Lake Union Urban Center. The analysis for potential impacts to listed species needs to include future growth in the area. Exhibit 3-13 on Page 3-39 needs to include future growth and impacts to surface waters. Page 4-5 begins to address this issue.

Page 3-39, Exhibit 3-13, FWS and NMFS recommend that an analysis on pollutant loading be expressed in surface runoff in units of mg/L during runoff events for each contaminant. This helps provide an accurate analysis to listed fish species. Section 3.12 Fish, Wildlife, and Vegetation. The section does not describe the discussion on CSO outfall events described above. In addition, an analysis on future growth is needed. Page 4-5 begins to address this issue.

Water Resources

Under the section titled "How will the completed project affect surface water?" on page 3-39, second paragraph, the text describes anticipated impacts of the completed project on loads of total suspended solids, zinc, and copper that would be delivered to Lake Union, and states that the constituents were chosen based on the availability of data. It would be helpful if other highway-related constituents likely to be of concern, such as petroleum products, were discussed in this section, even if data limitations only allow a qualitative description of those impacts. Petroleum products are listed as a constituent of concern on page 3-37 in the discussion of construction-related impacts, so their inclusion in the section on impacts from the completed project would be particularly appropriate.

4

Contact Information

If you have any questions regarding park comments and issues, please contact:

Ms. Kelly Powell
External Compliance
Reviewer
National Park Service
168 S. Jackson St., 2nd
Floor
Seattle, WA 98104-
2853
(206) 220-4106
kelly_powell@nps.gov

If you have any questions regarding fish and wildlife comments and issues, please contact:

Mr. Jim Muck
U.S. Fish and Wildlife
Service
National Marine
Fisheries
Service
7600 Sandpoint Way NE
Seattle, WA 98115
(206) 526-4740
jim.muck@noaa.gov

If you have any questions regarding comments on water resources, please contact:

Mr. Lloyd Woosley
Chief of the USGS
Environmental Affairs
Program
U.S. Geological Survey
Mail Stop 423
12201 Sunrise Valley
Dr.
Reston, VA 20192
(703) 350-8797
lwoosley@usgs.gov

4. Other highway-related pollutants such as petroleum were not studied in detail. However, it is expected that the new treatment of pollution-generating impervious surfaces with BMPs (rain gardens and bioswales) will result in reductions similar to those studied. The BMPs are designed with native vegetation, amended soils, and catch basins that also trap petroleum-based pollutants.

Thank you for the opportunity to provide these comments.

Sincerely,



Willie R. Taylor
Director, Office of Environmental
Policy and Compliance

**Attachment 2:
Notice of Availability of FONSI and
SEPA Determination of Nonsignificance**

Attachment 2: Notice of Availability of FONSI and SEPA Determination of Nonsignificance

This attachment provides the Notice of Availability of the Finding of No Significant Impact (FONSI) prepared under the National Environmental Policy Act, the Notice of Determination of Nonsignificance (DNS) prepared under State Environmental Policy Act (SEPA) Rules, and information on the publication of these notices.

NOTICE OF AVAILABILITY OF FINDING OF NO SIGNIFICANT IMPACT, MERCER CORRIDOR PROJECT

The Federal Highway Administration (FHWA) will issue the Finding of No Significant Impact (FONSI) on May 12, 2009, for the Mercer Corridor Improvement Project.

This finding is based on the evaluation of the Environmental Assessment (EA) as issued by the Seattle Department of Transportation (SDOT), the FHWA, and the Washington State Department of Transportation (WSDOT) on December 30, 2008, and on public and agency input during the public comment period from December 30, 2008, through February 13, 2009. The public comment period included a public hearing on January 13, 2009.

Description of Proposed Project:

The project is located in the South Lake Union neighborhood of Seattle, King County, on Mercer Street and Valley Street from I-5 Mercer Street ramps (at Fairview Avenue North) to Dexter Ave North. The project proposes to replace the existing Mercer/Valley couplet with a widened two-way Mercer Street and a narrowed two-way Valley Street. The widened Mercer Street would have three lanes in each direction, with widened sidewalks, on-street parking, and a landscaped median with left-turn lanes. Mercer would become the primary east-west route through the South Lake Union area. Valley Street would be narrowed to a two-lane street with sidewalks, bicycle lanes and on-street parking and provide local access to businesses and Lake Union Park. The project would also make improvements to the north-south streets within the project area, including Fairview, Boren, Terry, Westlake, and Ninth Avenues. Crossings throughout the project area would be improved.

Where Can I View the EA and FONSI?

Both the EA and the FONSI can be accessed online at http://www.seattle.gov/transportation/ppmp_mercer.htm. Hard copies of the EA and the FONSI can be purchased for a cost of \$35 for the EA, \$25 for the FONSI, which does not exceed the cost of printing. CD-ROMs are available free of charge.

Both documents may also be reviewed at the following location: Seattle Department of Planning and Development Public Resource Center, 700 Fifth Avenue, Suite 2000, Seattle, WA 98124. They will also be available for review at the Central Branch of the Seattle Public Library, 1000 Fourth Ave, Seattle; the Queen Anne Branch Library, 400 W Garfield St, Seattle; and at the Fremont/Lake Union Neighborhood Service Center and the Queen Anne/Magnolia Neighborhood Service Center.

Who Can I Contact with Questions?

Please contact Angela Brady at 206-684-3115, email MercerEA@seattle.gov, if you have any questions.

Americans with Disabilities Act (ADA) Information:

Persons with disabilities may request this information be prepared and supplied in alternative formats by contacting Angela Brady, Project Manager, at (206) 684-3115. Persons who are deaf or hard of hearing may call the City's TTY Line, (206) 615-0467.

Title VI:

SDOT ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin or sex in the provision of benefits and services resulting from its federally assisted programs and activities. For questions regarding SDOT's Title VI Program, contact the Seattle Office for Civil Rights at (206) 684-4500.

Si necesita informacion acerca del proyecto de mejoras del Corredor de la calle Mercer en espanol, marque el (206) 684-7623 y oprima el cero para dejar un mensaje.

The preceding legal notice was advertised in the following newspapers on the date noted:

Seattle Daily Journal of Commerce, May 15, 2009

Queen Anne and Magnolia News, May 20, 2009

**ADOPTION OF EXISTING ENVIRONMENTAL DOCUMENT
AND
MITIGATED DETERMINATION OF NONSIGNIFICANCE**

Description of current proposal: Replace the existing Mercer/Valley couplet with a widened two-way Mercer Street and a narrowed two-way Valley Street. The widened Mercer Street would have three lanes in each direction, with widened sidewalks, on-street parking, and a landscaped median with left-turn lanes. The street would be widened primarily to the north. Mercer would become the primary east-west route through the South Lake Union area. Valley Street would be narrowed to a two-lane street with sidewalks, bicycle lanes and on-street parking and provide local access to businesses and South Lake Union Park. The project would also make improvements to the north-south streets within the project area, including Fairview, Boren, Terry, Westlake and Ninth Avenues. Street crossings throughout the project area would be improved.

Proponent and agency adopting document: Seattle Department of Transportation (SDOT)

Location of current proposal: The project is located in the South Lake Union neighborhood of Seattle, King County, on Mercer Street and Valley Street from I-5 Mercer Street ramps (at Fairview Avenue N) to Dexter Avenue North.

Title of document being adopted: Mercer Corridor Improvements Project Environmental Assessment (FHWA, WSDOT and SDOT)

Date adopted document was prepared: December 30, 2008

Description of document (or portion) being adopted: The Mercer Corridor Improvements Project Environmental Assessment (EA), prepared by the Federal Highway Administration, Washington State Department of Transportation and the City of Seattle, evaluated the proposal for its potential effects on the natural and built environments. The EA includes numerous technical appendices providing additional detail on impacts of the proposal and mitigation measures. This document was prepared in accordance with the National Environmental Policy Act (NEPA).

The documents are available to be read at: the City of Seattle Department of Planning and Development Public Resource Center, 700 Fifth Avenue, Suite 2000, Seattle, Washington 98124, open 7:30 am – 5:30 pm Monday, Wednesday & Friday, 10:30 am – 5:30 pm Tuesday & Thursday; the Central Branch of the Seattle Public Library, 1000 Fourth Ave, Seattle; and the Queen Anne Branch Library, 400 W Garfield St, Seattle. The documents and technical appendices are also available on-line at the project's website:
http://www.seattle.gov/Transportation/ppmp_mercer.htm.

SDOT has identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decision maker. In addition, a SEPA checklist and a technical memorandum analyzing Greenhouse Gas Emissions have been prepared and are available upon request or at the locations listed above.

SDOT, as lead agency for this proposal, has determined, based on the latest project design and the included mitigation, that the proposal does not have a probable significant adverse impact on the environment. The previously issued Declaration of Significance, issued March 4, 2004, is hereby withdrawn, pursuant to WAC 197-11-360 (4). An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2) (c). This decision was made after review of a completed environmental checklist, the NEPA Environmental Assessment and other information on file with the lead agency. This information is available to the public on request.

This Mitigated DNS is issued under WAC 197-11-340(2) and Seattle Municipal Code (SMC) 25.05.340(B) and 25.05.350; the lead agency will not act on the proposal for 15 days from issuing date of this Mitigated DNS. Comments must be submitted by 5:00 p.m., February 13, 2009.

Issue Date: January 29, 2009

SEPA Responsible official: Grace Crunican

Position/title: Director, Seattle Department of Transportation **Phone:** 206-684-5000

Address: P.O. Box 34996, Seattle, WA 98124-4996

Agency Contact: Angela Brady, Project Manager **Phone:** 206-684-3115

Any interested person may appeal this DNS by submitting a Notice of Appeal and a \$50.00 filing fee to the Office of the Hearing Examiner located at 700 Fifth Ave, Suite 4000, Seattle; mailing address: P.O. Box 94729, Seattle, WA 98124-4729; telephone: (206) 684-0521. The appeal must be filed no later than 5:00 p.m., February 19, 2009. The appellant should be prepared to make specific factual objections. See SMC 25.05.680 B(1)(a)(2) for SEPA appeal procedures.

The preceding legal notice was advertised in the following newspapers on the date noted:

Queen Anne and Magnolia News, January 28, 2009

Seattle Daily Journal of Commerce, January 29, 2009

**Attachment 3:
FONSI Distribution List**

Attachment 3: FONSI Distribution List

To promote good communication and enhance interagency coordination, we acknowledge that this FONSI is a public document and has involved the public, agencies, and tribes in implementing National Environmental Policy Act (NEPA) procedures. The FONSI was sent to the following government agencies, tribes, elected officials, and organizations:

Federal

Advisory Council on Historic Preservation

Army Corps of Engineers

Federal Highway Administration

Federal Transit Administration

Willie R. Taylor, U.S. Department of the Interior

U.S. Environmental Protection Agency

Jim Muck, U.S. Fish & Wildlife Service and National Marine Fisheries Service

State

Puget Sound Partnership

Washington State Department of Archaeology and Historic Preservation

Washington State Department of Ecology

Washington State Department of Fish and Wildlife

Washington State Department of Natural Resources

Washington State Department of Transportation

Tribes

Muckleshoot Tribe

Tulalip Tribes

County/Regional

King County Department of Transportation

Gary Kriedt, King County Metro Transit

King County Public Health

Metropolitan King County Council

Dan Burke, Port of Seattle

Puget Sound Clean Air Agency

Puget Sound Regional Council

City

City of Burien

City of Renton

City of SeaTac

City of Seattle Department of Neighborhoods

City of Seattle Department of Planning & Development

City of Seattle Department of Transportation

City of Shoreline

City of Tukwila

Lake Union/Fremont Neighborhood Service Center

Office of the Mayor

Queen Anne/Magnolia Neighborhood Service Center

Seattle Center

Seattle City Council Members

Seattle City Light

Seattle Fire Department

Seattle Parks Department

Seattle Police Department

Seattle Public Library – Central Library and Queen Anne Branch

Seattle Public Utilities

Business and Neighborhood Organizations

Chuck Ayers, Cascade Bicycle Club

Cascade Neighborhood Council

Cascade Peoples Center

Lisa Quinn, Feet First

Greater Seattle Chamber of Commerce

Historic Seattle Foundation

Magnolia Community Council

Queen Anne Chamber of Commerce
Queen Anne Community Council
South Lake Union Chamber of Commerce
South Lake Union Friends and Neighbors Community Council
John Coney and Jean Sundborg, The Uptown Alliance

Media

Seattle Daily Journal of Commerce
Puget Sound Business Journal
Queen Anne News
Seattle Times
Seattle Weekly

Individuals

Ann Bassetti
Albert Berger
Patrick Bond, Manager TAP Plastics
Jeremy Brown
Phillip Fujii
Beverly Harrington
Tom Lavaris
Karen Lucht
Gene Mullins
Mike Peringer
John W. Southall
Linda Stoner
Mark Stoner
Richard Tait
Paul Urla
Jim Van Valkenburgh, OSP Project Engineer, Global Crossing
Vincent Vergel de Dios, AICP Principal / Urban Design and Planning NBBJ
Larry Woodbury, PEMCO Insurance Co.

**Attachment 4:
Mitigation Commitment List**

Attachment 4: Mitigation Commitment List

This attachment describes project mitigation commitments. The mitigation measures are organized by element of the environment, as presented in the Environmental Assessment (EA). These commitments were included in the EA as Section 7, Environmental Commitment List. Since the issuance of the EA, corrections have been made to these commitments. These corrections serve to clarify or enhance readability and comprehension. Changes are identified using strikethrough and underlining. Each deletion of original text is shown with a line striking through it; new text is indicated by an underline. These minor revisions are incorporated into the EA by reference. These commitments have been adopted as part of the Federal Highway Administration's final decision on the proposed project. They are listed to "assist with agency planning and decision-making" and to "aid an agency's compliance with NEPA when no Environmental Impact Statement is necessary" [40 CFR 1501.3(b) and 1508.9(a)(2)].

Mitigation Commitments

This section describes design and construction practices that SDOT will include to avoid or minimize effects on the built and natural environment during construction and operation of the Mercer Corridor Project.

1. Air Quality

For temporary effects during construction, state law requires construction site owners and/or operators to take reasonable precautions to prevent fugitive dust from becoming airborne. SDOT and its contractors will comply with standard best management practices (BMPs) for controlling fugitive dust at construction sites. Controlling fugitive dust emissions will require the following actions:

- Spray exposed soil with water or other suppressant to reduce emissions of PM₁₀ and deposition of particulate matter.
- Minimize dust emissions during transport of fill material or soil by wetting down or by ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks.
- Promptly clean up spills of transported material on public roads.
- Provide wheel washers to remove particulate matter that would otherwise be carried offsite by construction vehicles to decrease deposition of particulate matter on area roadways.
- Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.
- Minimize odors onsite by covering loads of hot asphalt.
- Emissions from construction equipment and machinery engines would be minimized by the use of equipment kept in good mechanical conditions. SDOT will encourage contractors to use newer construction equipment or equipment with add-on emission controls.

2. Noise

The following measures will be used to minimize noise effects during construction:

- Whenever possible, operation of heavy equipment and other noisy procedures will be limited to non-sleeping hours.
- Seattle Department of Planning and Development (DPD) will require hospital grade mufflers and silencers for diesel-powered heavy equipment.
- DPD will require broadband ambient backup alarms for all vehicles required to use backup alarms.
- Idling of power equipment will be minimized.

- The Contractor will comply with City of Seattle noise regulations. The project will also request a ~~temporary~~ noise variance from DPD should nighttime construction be planned, and will abide by all conditions stated in the variance.

3. Cultural and Archaeological Resources

The following measures will be implemented to protect cultural and archaeological resources:

- An archaeologist will carefully review the 60 percent design drawings to confirm proposed construction would not likely penetrate through the fill layer(s) and encounter native ground surfaces.
- Construction contractors will follow the approved Unanticipated Discovery Plan~~An archaeologist will prepare an inadvertent discovery plan for the project that construction contractors will follow.~~
- During construction, an archaeologist will conduct archaeological monitoring for work taking place beyond the limits of the historic fill.
- The historic McKay buildings at 601 and 609 Westlake Avenue North will be recorded consistent with Level II HABS documentation.
- An interpretive display to convey information regarding the architectural and historical significance of the McKay buildings and their context within the history of Seattle's South Lake Union neighborhood will be designed, developed, and installed.
- SDOT will dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle as part of the City of Seattle's Historic Resources Survey and Inventory.

4. Hazardous Materials

To mitigate the risk of long-term liability associated with the purchase of a potentially contaminated property, the City of Seattle (City) will perform "all appropriate inquiries" (AAI) under Section 101(35)(B)(ii) and (iii) of the Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA) and as specified in 40 CFR 312 prior to property acquisition. If the AAI and subsequent site investigation identify actual soil and/or groundwater contamination, several mitigation measures will be implemented during construction and operation to avoid or reduce adverse effects:

- Building demolition debris, asbestos, and lead based paint will be properly abated prior to demolition.
- To mitigate the effects of encountering contaminated soil during construction, the City will require the construction contractor to prepare a hazardous materials contingency plan and to be familiar with the Washington State Department of Ecology's *Guidance for Remediation of Petroleum Contaminated Soils* (Washington Department of Ecology 1995). Construction techniques that minimize disturbance to the subsurface and prevent the transport of possible contaminants to uncontaminated areas should be implemented. These techniques should address dewatering activities, site grading and excavation, installation of light standards, stormwater pollution prevention, and spill prevention.
- If dewatering is needed, the contractor will be required to develop and submit a dewatering plan that addresses the potential for encountering contaminated groundwater, including treatment and disposal of any contaminated groundwater.
- Excavation at western end of project limits could encounter wood waste fill and methane gas. A health and safety plan will be developed for the project that includes procedures to monitor for vapor releases and prevent fires from potential methane ignition during project construction.
- An area-wide plan to remove any non-operational underground storage tanks that are encountered during construction excavation will be prepared.
- Contractors will prepare a Spill Prevention, Control, and Countermeasure Plan prior to commencing work.

5. Surface Water Quality

The Mercer Corridor Improvements Project must meet the erosion and sediment control requirements of the City drainage code as well as the state NPDES regulations. The following measures will be implemented:

- A stormwater pollution prevention plan will be prepared following the requirements of the General Permit for Stormwater Discharges Associated with Construction Activities.
- Erosion control BMPs will be used to reduce the erosion potential during project construction.
- The project would incorporate stormwater flow control facilities that meet City requirements where needed to prevent increases in flow rates to downstream conveyance systems.
- Treatment BMPs will meet the requirements of the City's Stormwater, Grading and Drainage Control Code for facilities on city streets, and the Highway Runoff Manual (WSDOT 2006) for facilities in WSDOT right of way.

6. Land Use

The City will work with business groups, neighborhood associations, and property owners to minimize short-term construction-related effects to businesses. They will be notified of any planned closures or service disruptions. When feasible, impacts will be kept to a minimum by scheduling lane closures outside of peak travel demand periods, such as during commute hours and Seattle Center special events. Construction activities will be coordinated with other projects and services within the project area, such as Metro Transit, to avoid conflicts.

7. Social

The proposed project will include a number of measures to avoid or minimize the negative effects of construction on the South Lake Union neighborhood:

- Provide contact information (via the project website and newsletters) to allow area residents to voice concerns or receive information about the project by telephone, fax, or

Internet. Informational materials will have text in Spanish as to how to obtain project information in Spanish.

- Minimize temporary road closures and ensure that detour routes are well signed. Pedestrian detours will comply with the Americans with Disabilities Act (ADA).
- Provide residents and local businesses advance notification of the project schedule, potential detours, and changes in any of the pedestrian, bicyclist, or transit routes.
- Coordinate construction schedules with South Lake Union Park event times to avoid sensitive time periods to the extent practical.
- Provide signage for detour routes and avoid closing access to recreational facilities.
- Coordinate with fire, emergency medical, and police service providers before construction to provide construction schedules and any planned closures or detours.
- Provide for fire, emergency medical, and police vehicle travel in the project area during construction to ensure that access is not blocked and response times are affected as little as possible.
- Develop a utility relocation plan during final design.

Mitigation during operation will include all new traffic signals being equipped with emergency vehicle pre-emption.

8. Economics and Relocation

Measures to mitigate potential adverse effects will include the following:

- SDOT will provide public information about construction activities. The public will be informed that businesses are open during construction and encouraged to continue patronage.
- SDOT will install temporary signage to inform drivers that access to businesses during construction is temporarily changed or restricted.

- SDOT will coordinate with affected business owners to develop strategies to maintain access to businesses during construction.
- SDOT will 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 in 1987.
- The project will provide mitigation for businesses affected by partial right-of-way acquisitions, which may include reconstruction of buildings or modification of parking or loading areas.

9. Visual Quality

Measures to minimize visual effects during construction will include:

- Allowing businesses to remain open until construction begins or removing buildings as soon as they are vacated to reduce the potential of creating an abandoned, unmaintained appearance.
- Employing BMPs to reduce dust and to keep the area well maintained during construction.
- Keeping one side of Mercer and Valley streets usable for pedestrians and bicyclists to the extent possible.
- Limit the hours of evening construction when possible, to minimize the adverse effects of construction lighting.

10. Transportation

The following traffic control measures will be implemented:

- Necessary road or driveway closures will be outlined in the contractor's Traffic Management Plan (TMP) and approved by the City. The TMP would detail any detours, signing plans, and duration/timing of required closures.

- To minimize congestion and emergency response effects, lane closures will be scheduled outside of the peak travel demand periods when feasible.
- The contractor will maintain ADA-accessible pedestrian paths and design pedestrian detours in their TMP. Pedestrian paths along the roadway lanes would be separated from vehicular traffic with a barrier.
- Construction activities will be coordinated with other projects and services within the study area, such as Metro Transit, to minimize disruptions.
- Construction staging plans are being developed with review from SDOT, King County Metro, and WSDOT, and will be included in contract documents providing requirements for road closures, number of lanes required, and detour routes.
- The contract documents will require coordination with King County Metro during construction, including working near trolley and streetcar overhead wires.
- Public outreach communications will inform motorists of construction activities. These may include informational and variable message signs, radio announcements and website postings. Existing closed circuit cameras in the corridor will allow SDOT staff opportunities to monitor and adjust traffic control for various conditions during construction (e.g., special events).

**Attachment 5:
Errata to Environmental Assessment
and Discipline Reports**

Attachment 5: Errata to Environmental Assessment and Discipline Reports

The following corrections apply to the environmental assessment for the Mercer Corridor Project, issued on December 30, 2008. These corrections serve to clarify, update, or enhance the readability of the EA. Because they alter neither the analysis nor the conclusion of No Significant Impact, there is no requirement to issue a revised EA. Changes to the EA are identified by chapter, page number, and paragraph. Each deletion of original text is shown with a line striking through it; new text is indicated by an underline. These minor revisions to the EA are incorporated into the EA by reference.

Executive Summary

Page viii, Noise paragraph

Text is revised as follows:

Noise - The noise abatement criterion (NAC) for residential uses is exceeded at ~~two-of-the-five~~ residential locations modeled under existing conditions and under the No Build and Build Alternatives.

Page xii, Surface Water Quality paragraph

Text is revised as follows:

Surface Water Quality – The proposed project would decrease the total impervious surface in the study area by approximately 0.70.5 acres.

Page xiv, Exhibit S-1, Surface Water Quality row, Build Alternative column

Text is revised as follows:

The project would decrease impervious surface in the study area by approximately 0.70.5 acres.

Chapter 3

Page 3-37, last paragraph, last sentence

Text is revised as follows:

Total impervious surface would decrease by approximately 0.70.5 acre, compared to existing conditions.

Page 3-56, fourth paragraph

Text is revised as follows:

Transit is provided on each of the north/south arterial streets in the study area. Routes on these streets include 17, 26, 28, 30, and 70, 71, 72, 73, 83, and 98.

Page 3-61, sixth bullet

Text is revised as follows:

- Coordinating with fire, emergency medical, ~~and~~ police, and transit service providers before construction to provide construction schedules and any planned closures or detours; work with them to establish alternative detour routes if necessary.

Page 3-100, first complete paragraph

Text is revised as follows:

After the Mercer Corridor Improvements Project is constructed, total impervious surface would decrease by approximately 0.70.5 acre, compared to existing conditions.

**Attachment 6:
Final Section 4(f) Evaluation**

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

Section 4(f) Evaluation

Prepared for

**Seattle Department of
Transportation**

Prepared by

CH2MHILL

April 2009

Table of Contents

Summary	vii
What is the proposed project?	vii
What are the key points of this evaluation?	vii
Acronyms and Abbreviations Used in This Report	xi
1. Introduction to Section 4(f)	1-1
1.1 What is Section 4(f)?.....	1-1
1.2 What are Section 4(f) resources?	1-2
1.3 What constitutes a use of Section 4(f) resources?.....	1-2
1.4 When would a constructive use occur?	1-3
1.5 When does a constructive use not occur?.....	1-3
1.6 When does a temporary occupancy not constitute a use of a Section 4(f) resource?.....	1-4
1.7 What are feasible and prudent avoidance alternatives?.....	1-5
1.8 What coordination was conducted with other agencies?.....	1-6
2. The Proposed Action (Preliminary Preferred Alternative).....	2-1
2.1 Mercer Street Improvements	2-3
2.2 Valley Street Improvements.....	2-7
2.3 Other Improvements.....	2-7
3. Section 4(f) Properties Associated with this Project	3-1
3.1 McKay Pacific Automobile Dealership Building - 601 Westlake Avenue North (#1 in Exhibit 3-1).....	3-1
3.2 McKay Ford-Lincoln Automobile Dealership Building – 609 Westlake Avenue North (#2 in Exhibit 3-1).....	3-3
3.3 Ford Assembly Plant Building/ Craftsman Press/Shurgard - 1155 Valley Street/700 Fairview Avenue North (#3 in Exhibit 3-1).....	3-4
3.4 Seattle Department of Parks and Recreation Maintenance Shops – 800 Aloha/802-04 Roy Street (#4 in Exhibit 3-1)	3-5
3.5 Washington State Department of Game – 509 Fairview Avenue North (#5 in Exhibit 3-1)	3-6
3.6 South Lake Union Park (#6 in Exhibit 3-1)	3-7
4. Project Use of the Section 4(f) Properties	4-1
5. Feasible and Prudent Alternatives to Avoid Use of the Section 4(f) Properties	5-1
5.1 What avoidance options were considered but rejected?.....	5-1

6. Measures to Minimize Harm to the Section 4(f) Properties.....	6-1
7. Proposed Measures to Mitigate for Unavoidable Use of Section 4(f) Property	7-1
8. Coordination.....	8-1
9. Conclusion.....	9-1
10. References	10-1

Appendices

A	Correspondence with Local Officials with Jurisdiction
B	National Register of Historic Places Registration Form for William O. McKay Buildings
C	Technical Memorandum Design and Safety Assessment of Avoidance Options
D	The Ford McKay and Pacific McKay Buildings Current State and Reconstruction Analysis
E	Memorandum of Agreement

Exhibits

S-1	Mercer Corridor Project Location
2-1	Proposed Action
2-2	Mercer and Valley Street Cross Sections
2-3	Proposed Interim Design with Eastbound Broad Street Tie-in at Mercer and Eighth
2-4	Optional Interim Design with Eastbound Broad Street Tie-in at Mercer and Ninth
3-1	Area of Potential Effect
4-1	Effects of the Proposed Action on the McKay Pacific Building
4-2	Proposed Action and Section 4(f) Resources
4-3	Effect of the Proposed Action on South Lake Union Park
5-1	Avoidance Options Considered but Rejected
5-2	Reduced Section Shift to South
5-3	Effects of the Avoidance Alternative on the UW Medical Research Campus
5-4	Effects of the Avoidance Alternative on the Interurban Exchange Building
5-5	Properties Affected by the Avoidance Alternative
5-6	Components of Additional Cost of Avoidance Alternative

Photos

- 3-1 McKay Pacific Building at 601 Westlake Avenue North
- 3-2 McKay Ford-Lincoln Building at 609 Westlake Avenue North
- 3-3 Shurgard Building at 1155 Valley Street
- 3-4 Seattle Department of Parks and Recreation Maintenance Shops at 800 Aloha/802-04 Roy Street
- 3-5 Washington State Department of Game at 509 Fairview Avenue North
- 3-6 South Lake Union Park

Summary

What is the proposed project?

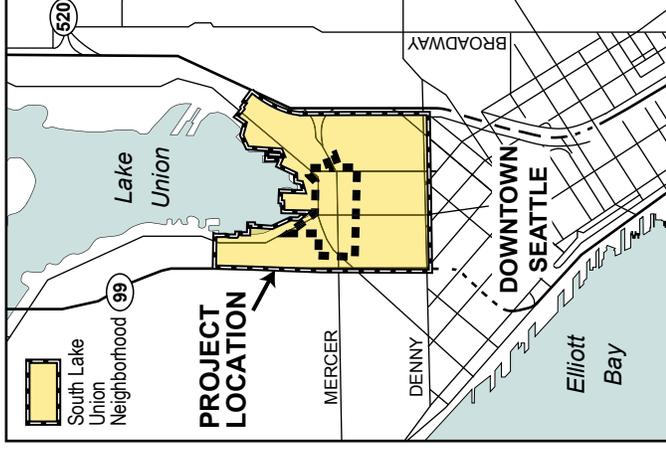
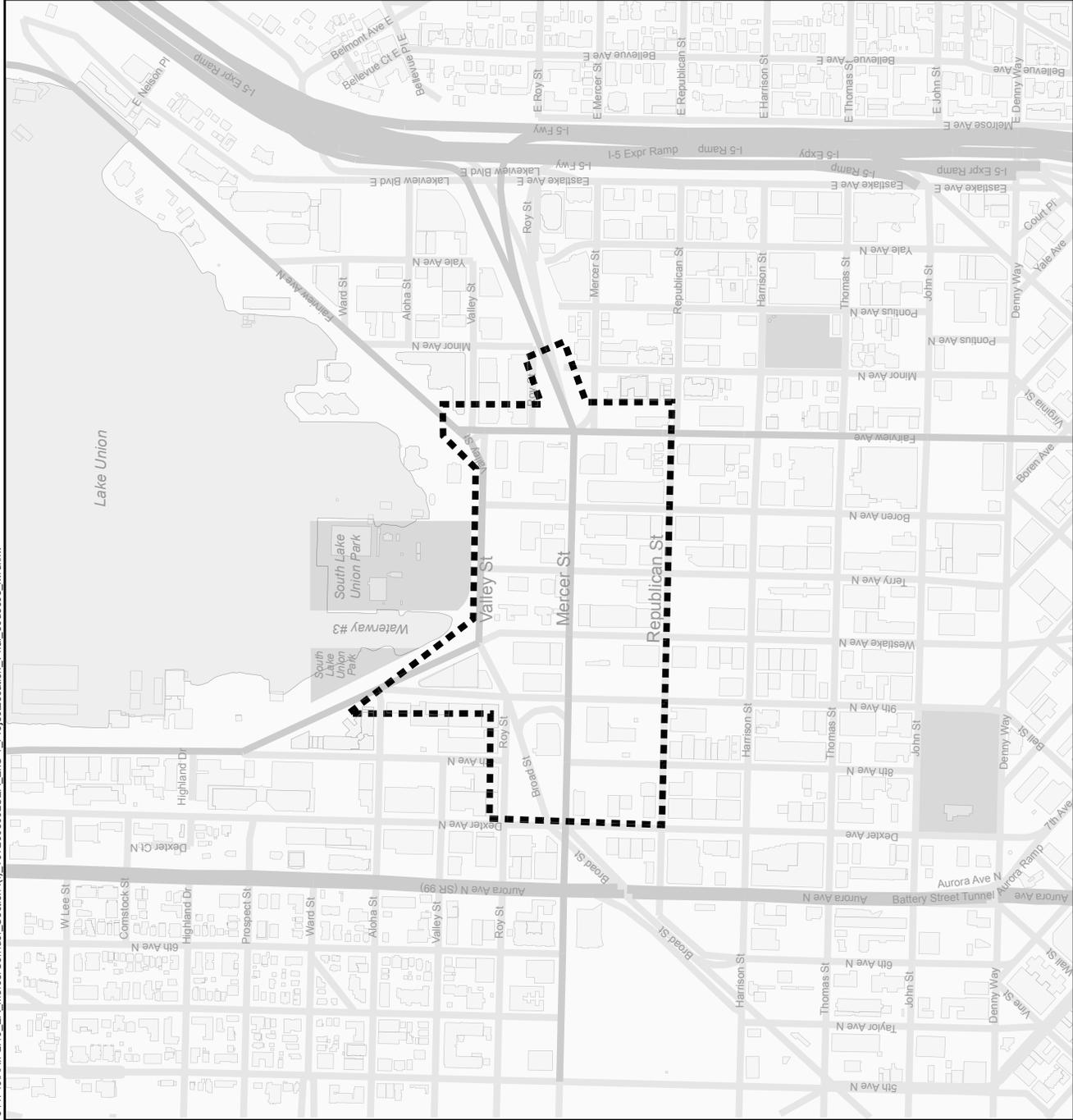
The City of Seattle, in cooperation with the Federal Highway Administration, proposes to make improvements to the Mercer Corridor, which includes Mercer and Valley streets, in the South Lake Union neighborhood of Seattle (Exhibit S-1). In the project area, these streets serve as the main connection between Interstate 5 (I-5), the South Lake Union neighborhood, and neighborhoods to the north and west. 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. The purpose of the project is to improve local circulation to businesses and residences in the area and to provide for more direct movement of traffic and freight through the corridor.

The Proposed Action 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. Valley Street would be narrowed to a two-lane street with bicycle lanes in each direction and parking. Pedestrian and bicycle circulation would be improved by providing additional crossings of Mercer and Valley streets.

What are the key points of this evaluation?

There is one publicly-owned park (South Lake Union Park) and five properties (the McKay Pacific building, the McKay Ford-Lincoln building, the Shurgard buildings, the Seattle Department of Parks and Recreation Maintenance Shops, and the Washington State Department of Game) in the project area that are eligible for listing in the National Register of Historic Places and that are protected under Section 4(f) regulations. (See the subsection *What is Section 4(f)?* in Section 1 for a more detailed description of those regulations.)

Of these six resources, the only property that would experience a direct effect, or “use” as defined by Section 4(f) regulations, as a result of the Proposed Action would be the McKay Pacific Building at 601 Westlake Avenue North. This building would be removed to accommodate additional traffic lanes along Mercer Street. (See the subsection *What Constitutes a Use of Section 4(f) Resources?* in Section 1 for a more detailed discussion of “use.”)



LEGEND



Project Limits



NORTH



Exhibit S-1

Mercer Corridor Project Location
MERCER CORRIDOR
IMPROVEMENTS PROJECT

There are no feasible and prudent alternatives that would avoid the McKay Pacific Building at 601 Westlake. (See the subsection *What are feasible and prudent avoidance alternatives?* in Section 1.7 for a more detailed discussion of what constitutes a feasible and prudent alternative.)

Mitigation for the unavoidable use of the Section 4(f) property has been agreed on by the consulting parties through the Section 106 process and is detailed in the Memorandum of Agreement, included as Appendix E. Mitigation entails recordation of the historic McKay Pacific building at 601 Westlake Avenue North consistent with Level II Historic American Buildings Survey documentation. In addition, an interpretive display on the history of the building will be designed and developed, and SDOT will dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle.

Acronyms and Abbreviations Used in This Report

AASHTO	American Association of State Highway and Transportation Officials
APE	Area of Potential Effect
AWV	Alaskan Way Viaduct
COS	City of Seattle
CHPO	City of Seattle Historic Preservation Officer
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibels
FHWA	Federal Highway Administration
HABS	Historic American Buildings Survey
MOA	Memorandum of Agreement
NAC	Noise Abatement Criteria
NHS	National Highway System
NRHP	National Register of Historic Places
SDOT	Seattle Department of Transportation
SHPO	State Historic Preservation Officer
SLU	South Lake Union
SRP	Seawall Replacement Project
UW	University of Washington
WSHR	Washington State Heritage Register

1. Introduction to Section 4(f)

1.1 What is Section 4(f)?

Section 4(f) of the Department of Transportation Act of 1966 (49 USC Section 303) prohibits the Federal Highway Administration (FHWA) from approving a project or program that uses land from a significant publicly-owned park or recreation area, wildlife or waterfowl refuge, or historic site unless:

There is no feasible and prudent alternative to the use of the land.

The project includes all possible planning to minimize harm to the property.

If a feasible and prudent alternative that avoids such use is identified, that alternative must be selected. If there is not a feasible and prudent alternative that avoids such use, then measures must be identified and incorporated that minimize harm to the property that would result from the proposed project.

If any resources protected by Section 4(f) are used by a project, a Section 4(f) Evaluation must be prepared. The Section 4(f) Evaluation includes:

- A description of affected resources,
- A discussion of the specific uses(s) of the resources,
- Identification and evaluation of location/design alternatives that avoid such uses,
- Potential measures to minimize harm resulting from unavoidable effects to Section 4(f) resources, and
- A record of coordination efforts with the local officials having jurisdiction over or administering the resources.

This Section 4(f) Evaluation is based on the guidance contained within the *FHWA Section 4(f) Policy Paper* issued March 1, 2005; FHWA's *Technical Advisory, Guidance for Preparing and Processing of Environmental and Section 4(f) Documents, T6640.8A*; and the *WSDOT Environmental Procedures Manual*, as well as the regulation in Title 23 of the Code of Federal Regulations (CFR), Part 774 (referred to as Section 4(f)).

1.2 What are Section 4(f) resources?

This Section 4(f) Evaluation identified one publicly-owned park (South Lake Union Park) and five historic properties (McKay Pacific building, McKay Ford-Lincoln building, Shurgard buildings, Seattle Department of Parks and Recreation Maintenance Shops, and Washington State Department of Game) in the project area. No designated wildlife or waterfowl refuges were identified in the project area.

In accordance with 23 CFR Part 774, public parks and recreation areas are considered Section 4(f) resources if they:

- Are considered to be “significant” by the federal, state, or local official having jurisdiction over the facility;
- Are intended for public recreational purposes and function as such; and
- Are open and available for use by all members of the public.

Historic sites are considered Section 4(f) resources if, in consultation with the State Historic Preservation Officer (SHPO) and appropriate local officials, they are identified as properties of local, state, or national significance as determined by the federal, state, or local officials having jurisdiction over the site, including properties in or eligible for the National Register of Historic Places (NRHP) or the Washington State Heritage Register (WSHR).

1.3 What constitutes a use of Section 4(f) resources?

In accordance with 23 CFR Parts 774.11, 774.13, and 774.17, use of Section 4(f) resources occurs when:

- Land is permanently incorporated into a transportation facility (in other words, the land is acquired to accommodate proposed improvements);
- There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes; or

What are the Criteria for Listing in the NRHP?

To qualify for listing in the NRHP, a property must have historic significance and integrity and be at least 50 years old. Certain properties are exempt from the 50-year rule if they possess exceptional importance. Historic significance in American history, architecture, archeology, engineering, and culture may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association. A property must demonstrate significance in at least one of the following areas:

- A Association with events that have made a significant contribution to the broad patterns of our history; or
- B Association with the lives of persons significant in our past; or
- C Embodiment of the distinctive characteristics of a type, period, or method of construction or representative of the work of a master, or possessing high artistic value, or representative of a significant and distinguishable entity whose components may lack individual distinction; or
- D Yielding, or likely to yield, information important in prehistory or history.

Historic significance is the importance of a property to a community, state, or the nation. In addition to the above criteria, significance is defined by the area of history in which the property made important contributions and by the period of time when these contributions were made (National Register Bulletin 16).

- Proximity effects are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired and diminished (commonly referred to as a "constructive use").

1.4 When would a constructive use occur?

In accordance with 23 CFR Part 774.15(e), a constructive use would occur when:

- The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive resource, such as enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance, or enjoyment of an urban park where serenity and quiet are significant attributes;
- The proximity of the proposed project substantially impairs aesthetic features or attributes of the resource, where such features or attributes are considered important contributing elements to the value of the resource, such as the location of a roadway that obstructs or eliminates the primary views of an architecturally significant historic building, or substantially detracts from the setting of a park or historic site that derives its value in substantial part due to its setting;
- The project results in a restriction on access which substantially diminishes the utility of the resource; or
- The vibration impact from construction or operation of the project substantially impairs the use of the resource.

In all instances, a "substantial impairment" of the resource is necessary for a constructive use to occur; an adverse effect or considerable change to a resource resulting from a proximity effect is not sufficient to cause a constructive use.

1.5 When does a constructive use not occur?

In accordance with 23 CFR Part 774.15(f), a constructive use does not occur when:

- In consultation with the SHPO, in compliance with Section 106 of the National Historic Preservation Act, it is agreed that the proximity impacts of the proposed action on a National Register listed or eligible historic site result in a finding of "no historic properties affected" or "no adverse effect;"

- The projected traffic noise levels of the proposed project do not exceed the FHWA noise abatement criterion as contained in Table 1 of 23 CFR Part 772;
- The projected noise levels exceed the relevant threshold in 23 CFR Part 772 because of high existing noise, but the increase in the projected noise levels with the project is barely perceptible (3 dBA or less), when compared to projected noise levels without the project;
- There are proximity impacts, but a governmental agency's right-of-way acquisition, an applicant's adoption of project location, or FHWA's approval of a final environmental document established the location for a proposed project before the designation, establishment, or change in the significance of the resource;
- There are effects, but the proposed project and the resource are concurrently planned or developed;
- Overall (combined) proximity impacts caused by the proposed project do not substantially impair the activities, features, or attributes that qualify a resource for protection under Section 4(f);
- Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;
- Change in accessibility will not substantially diminish the utilization of the resource; or
- Vibration levels from project construction are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the resource.

1.6 When does a temporary occupancy not constitute a use of a Section 4(f) resource?

Temporary occupancy of Section 4(f) resources during construction may or may not constitute a use of land. In accordance with 23 CFR Part 774.13 (d), it would not be a use if the following conditions are satisfied:

- The duration is temporary (i.e., less than the time needed for construction of the project) and there is no change in ownership of the land.
- The scope of the work is minor (i.e., both the nature and the magnitude of the changes to the resource are minimal).

- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource on either a temporary or permanent basis.
- The land being used will be fully restored (i.e., the resource must be restored to a condition which is at least as good as that which existed prior to the project).
- There must be documented agreement by the appropriate official having jurisdiction over the resource regarding the above conditions.

1.7 What are feasible and prudent avoidance alternatives?

In analyzing alternatives that avoid the use of Section 4(f) resources, the regulation and guidance documents require that each avoidance alternative be evaluated in terms of whether they are *feasible* and *prudent*. In accordance with 23 CFR Part 774.17, “A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource.... An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.” An alternative is not prudent if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- It results in unacceptable safety or operational problems;
- After reasonable mitigation, it still causes severe social, economic, or environmental impacts, severe disruption to established communities, severe disproportional impacts to minority or low-income populations, or severe impacts to environmental resources protected under other federal statutes;
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors; or
- There is an accumulation of the above factors that, while individually minor, collectively cause unique problems or impacts of extraordinary magnitude.

1.8 What coordination was conducted with other agencies?

Because only one potential Section 4(f) resource (the historic McKay Pacific Building at 601 Westlake Avenue North) would be used as defined by Section 4(f) regulations, formal coordination was focused on the officials of those agencies owning or administering the protected resource. The SHPO at the Department of Archaeology and Historic Preservation (DAHP) and the City of Seattle Historic Preservation Officer (CHPO) were consulted regarding the historic properties, the Area of Potential Effect (APE), and potential mitigation measures. The CHPO and SHPO participated in field visits to the project area. A letter from the CHPO regarding the eligibility of the McKay Pacific Building for listing as a Seattle Landmark property is included in Appendix A.

2. The Proposed Action

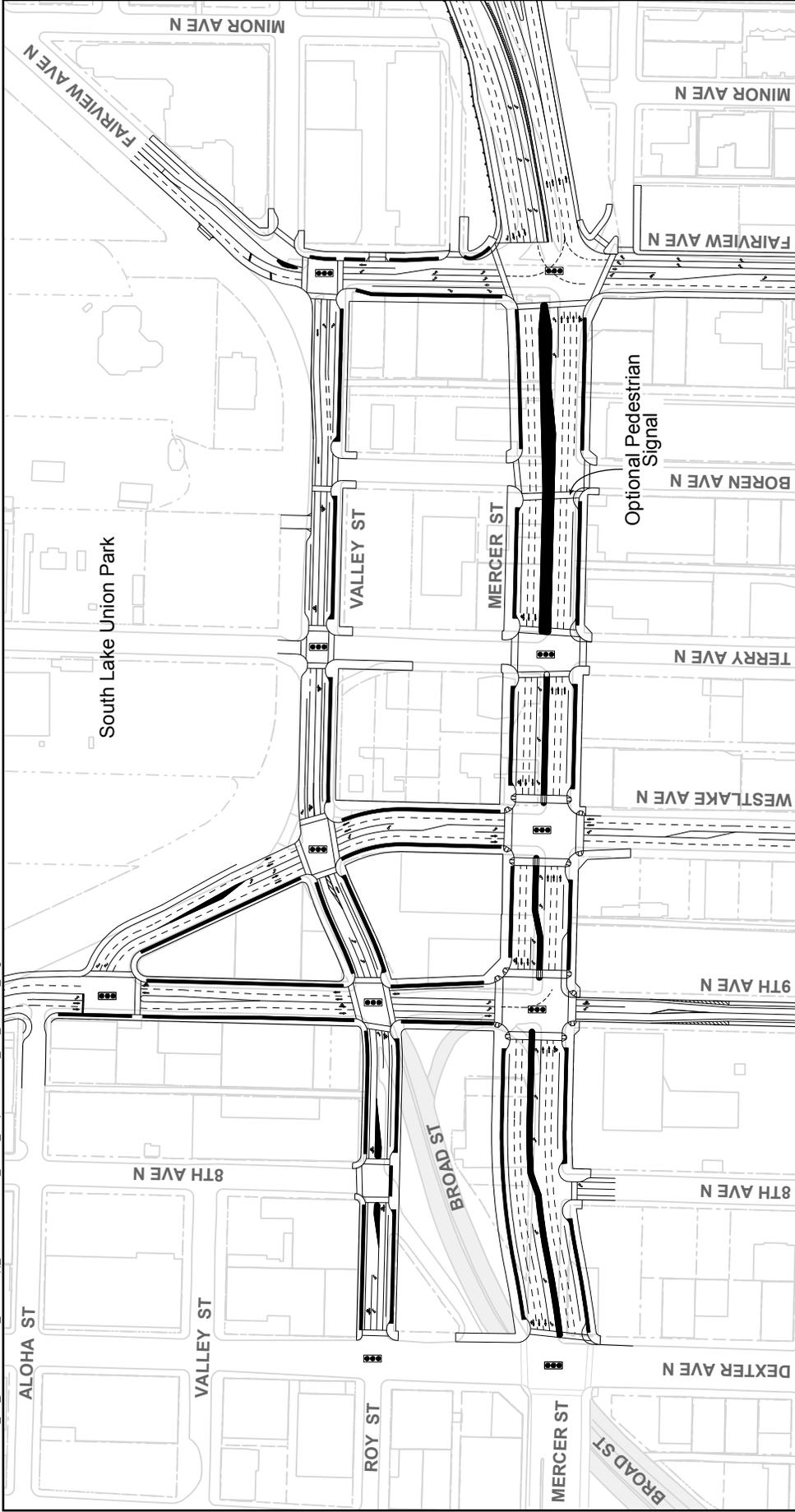
The City of Seattle, in cooperation with the Federal Highway Administration, proposes to make improvements to the Mercer Corridor, which includes Mercer and Valley streets, in the South Lake Union neighborhood of Seattle (Exhibit S-1). In the project area, these streets serve as the main connection between Interstate 5 (I-5), the South Lake Union Neighborhood, and neighborhoods to the north and west. 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 movement of traffic and freight through the corridor. These improvements will accommodate planned development in the area, including the new South Lake Union Park. The improvements will also provide more direct access from I-5 to the area and to neighborhoods to the north and west. The project will also improve vehicular, pedestrian, and bicycle safety within and through the project area.

The conceptual design for Mercer and Valley Streets was developed with broad public involvement and support through the South Lake Union Transportation Study. These improvements will improve local access and circulation for all modes, while maintaining Mercer Street's function as a principal arterial and major truck street. They will provide an environment that supports Seattle's Urban Village land use strategy and make walking, biking and transit viable and preferable transportation choices. These actions are consistent with South Lake Union's designation as an urban center – a high-density, mixed-use neighborhood, with increased jobs, housing, and supporting services and strong connections to the regional transportation system.

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.

The Proposed Action 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 2-1).

For instance, in the westbound direction, vehicles would not have to perform the immediate right onto Fairview and then left onto Valley to access Broad Street. Likewise, key areas heading to I-5 would also have improved access. For instance, from Eastlake, vehicles would be able to use Fairview Avenue to access I-5 instead of Terry Avenue.



LEGEND

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



Exhibit 2-1

Proposed Action
MERCER CORRIDOR
IMPROVEMENTS PROJECT

Eastbound traveling vehicles along Broad Street would also see a less circuitous route as vehicles directly connect to Mercer Street instead of having to weave through Ninth Avenue traffic as under current conditions.

Valley Street would be narrowed to a two-lane street with bicycle lanes in each direction and parking. Pedestrian and bicycle circulation and safety throughout the South Lake Union neighborhood would be improved by removing barriers, such as turn prohibitions and pedestrian crossing restrictions, caused by the existing couplet and providing additional crossings of Mercer and Valley streets.

2.1 Mercer Street Improvements

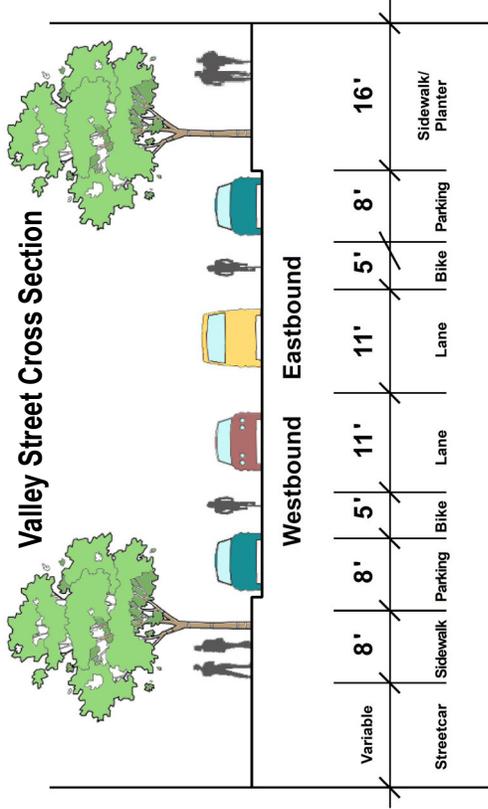
The two-way Mercer Street would be a boulevard with a landscaped median, left-turn lanes, parking, and sidewalks (Exhibit 2-2). The City and community vision for Mercer Street is a prominent gateway to the growing South Lake Union neighborhood and other destinations in the north downtown area. The project serves traffic demand that converges in this area from a number of neighborhoods, business districts, and industrial centers to access I-5. In addition, it also must serve as the front door to, and provide improved access to, the South Lake Union neighborhood itself, as new and higher-density uses develop along the corridor.

Mercer Street would be widened primarily to the north to accommodate the new westbound travel lanes, a 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 facilitate the movement of freight from I-5 to the Ballard/Interbay Manufacturing and Industrial Center. Currently, westbound traffic from I-5 is routed along Fairview Avenue and Valley Street. With the Proposed Action, this traffic would be routed directly onto the new two-way Mercer Street.

The 21-foot landscaped median will enhance pedestrian safety, while also providing 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 who are unable to cross the entire street in one traffic signal phase. The median also serves to visually break up the wide street and provide sufficient space for large trees, landscaping and other features that will help create the gateway to South Lake Union.

Parking lanes on each side of the street will support retail uses that prefer visible, convenient parking. Parking also provides a safety buffer between pedestrians and the three lanes of traffic. On the south side of the street, the parking lane would be 10 feet wide to provide the flexibility to add an eastbound lane for autos or transit if future conditions are different than anticipated or if future priorities change.

Valley Street Cross Section



Mercer Street Cross Section Looking East Between 9th and Boren

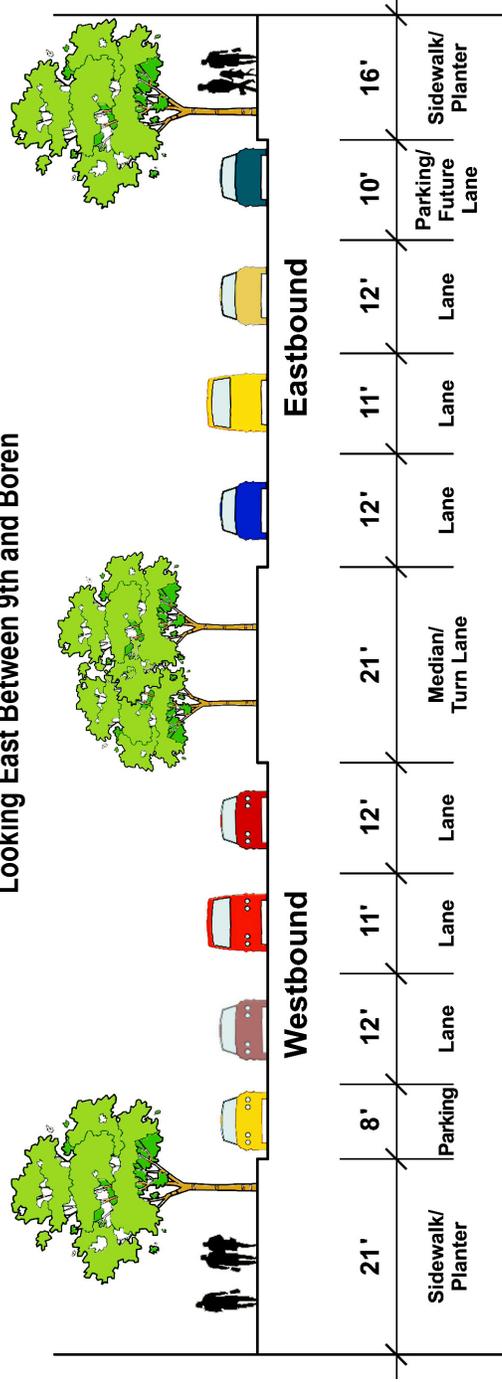


Exhibit 2-2

**Mercer and Valley Street
Cross Sections**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

Adding the lane would require re-stripping the eastbound lanes in order to meet AASHTO guidelines for lane widths.

In addition, the potential for an additional lane of capacity could be considered during construction of the Alaskan Way Viaduct Replacement. To manage traffic during construction of the Alaskan Way Viaduct Replacement, a measure under consideration is to remove parking to add capacity (during the construction period) on a number of arterial streets within the downtown area and surrounding neighborhoods. Mercer Street would be a candidate street for such a measure.

Wide sidewalks will accommodate the anticipated pedestrian activity associated with a high-density urban neighborhood. Sidewalks would be 16 feet wide on the south side and 21 feet on the north side, including a landscaped safety buffer. The 16-foot sidewalk width would provide a 10-foot walkway for pedestrians and a six-foot buffer and planting area for street trees.

A minimum of ten feet is needed to support the anticipated pedestrian volumes associated with high density residential, retail, and other commercial uses, as well as a regional park. Wider sidewalks (21 feet) are proposed for the north side of the street to allow for additional space along the building frontage for window-shopping and possible sidewalk cafes. This side of the street is likely to have even higher pedestrian volumes and retail activity than the south side because the blocks on the north side are adjacent to South Lake Union Park and retail uses fronting Valley Street, and there is a potential for housing on these blocks.

A new traffic signal at Terry Street would provide an additional safe crossing opportunity 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 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 2-3 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 2-4 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.

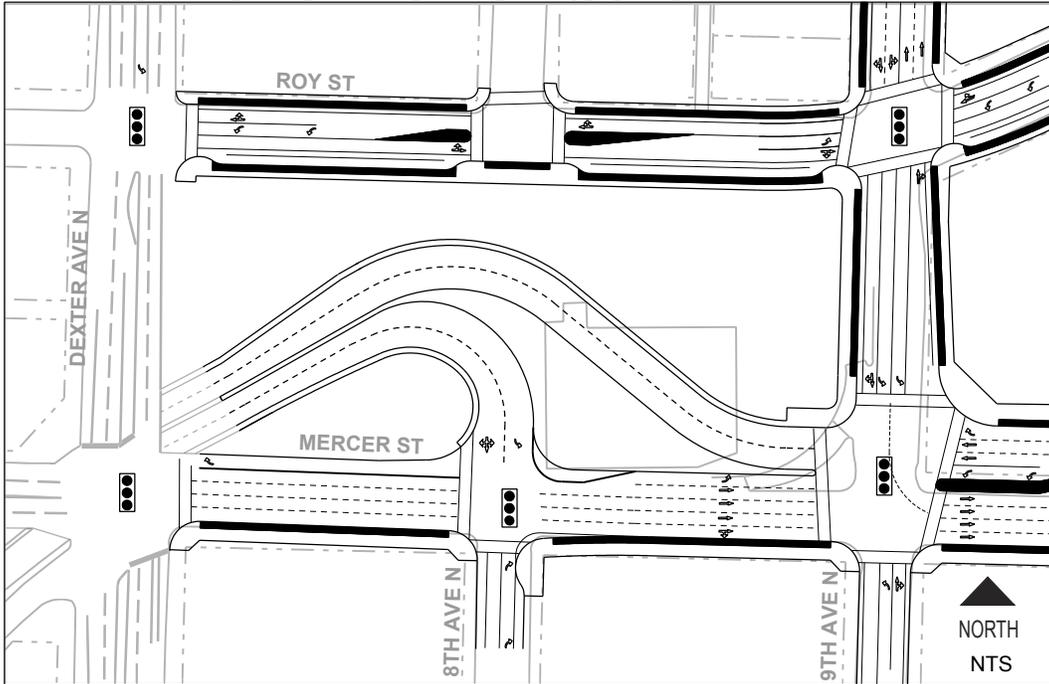


Exhibit 2-3
**Proposed Interim Design with Eastbound
Broad Street Tie-in at Mercer and Eighth**

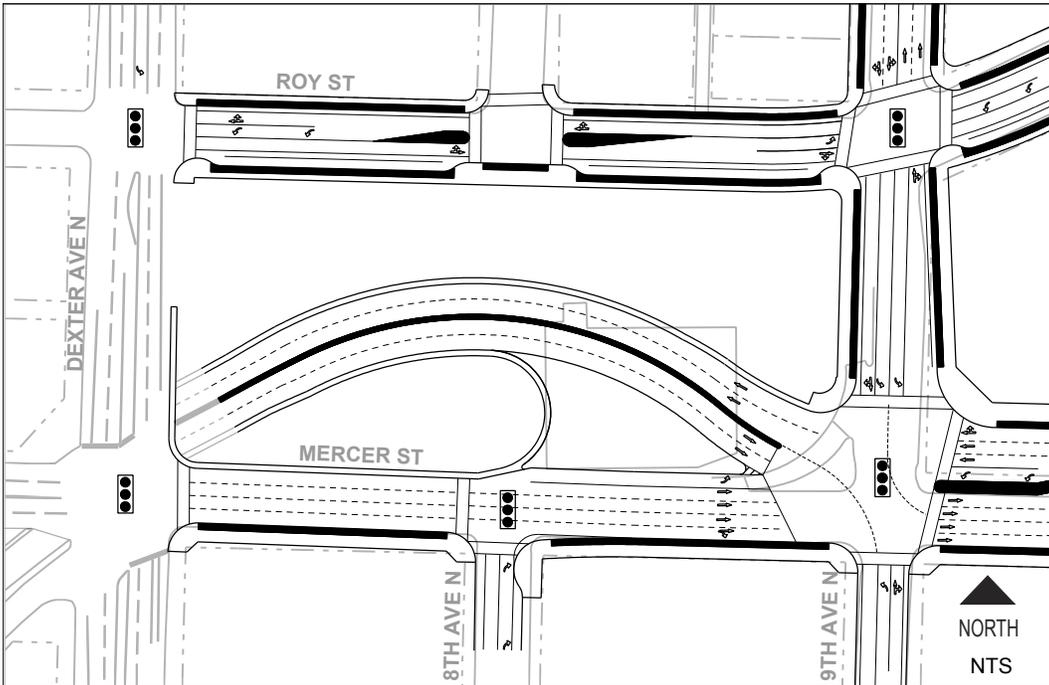


Exhibit 2-4
**Optional Interim Design with Eastbound
Broad Street Tie-in at Mercer and Ninth**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

2.2 Valley Street Improvements

Valley Street would be redesigned 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 2-2). 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. A new 8-foot sidewalk would be built along the north side of the street. Eight feet is considered sufficient here because pedestrians would have several walkway options to traverse the park through this area. 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.

2.3 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 proposed improvements, this truck traffic would be routed on the new two-way Mercer Street. The intersection at Mercer Street and Ninth 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 Ninth Avenue North and Westlake Avenue North. Westlake Avenue North (between Mercer and Valley Streets) and Ninth Avenue North (between Mercer Street and Westlake Avenue North) would be converted from one-way streets to two-way streets to improve local access.

Turns at Mercer Street intersections of Fairview, Boren and Terry Avenues would also accommodate trucks. At the Mercer/Fairview intersection, all turns would accommodate 75-foot-long tractor trailer trucks (WB 67) as well. At the Mercer/Boren intersection, turns to the south would accommodate 45-foot-long tractor trailer trucks (WB 40), and turns to the north would accommodate single unit trucks. Similarly, at the Mercer/Terry intersection, turns to the south would accommodate 45-foot-long tractor trailer trucks, and turns to the north would accommodate single unit trucks. The basis of design is *Seattle Right-of-Way Improvements Manual*, 2005, Section 4.8.3 (SDOT 2005).

3. Section 4(f) Properties Associated with this Project

This section describes the park and historic properties that are within or adjacent to the proposed project area, and that are protected under Section 4(f) regulations. Exhibit 3-1 shows the locations of these properties. During the course of conducting the technical analysis for this project, we determined that no designated wildlife or waterfowl refuges would be affected. No known or recorded archaeological sites are in the project area. Surface reconnaissance and subsurface testing did not detect any archaeological sites. Each historic and park property within the APE is described below in terms of its character, value to the community, and what makes it a Section 4(f) protected resource.

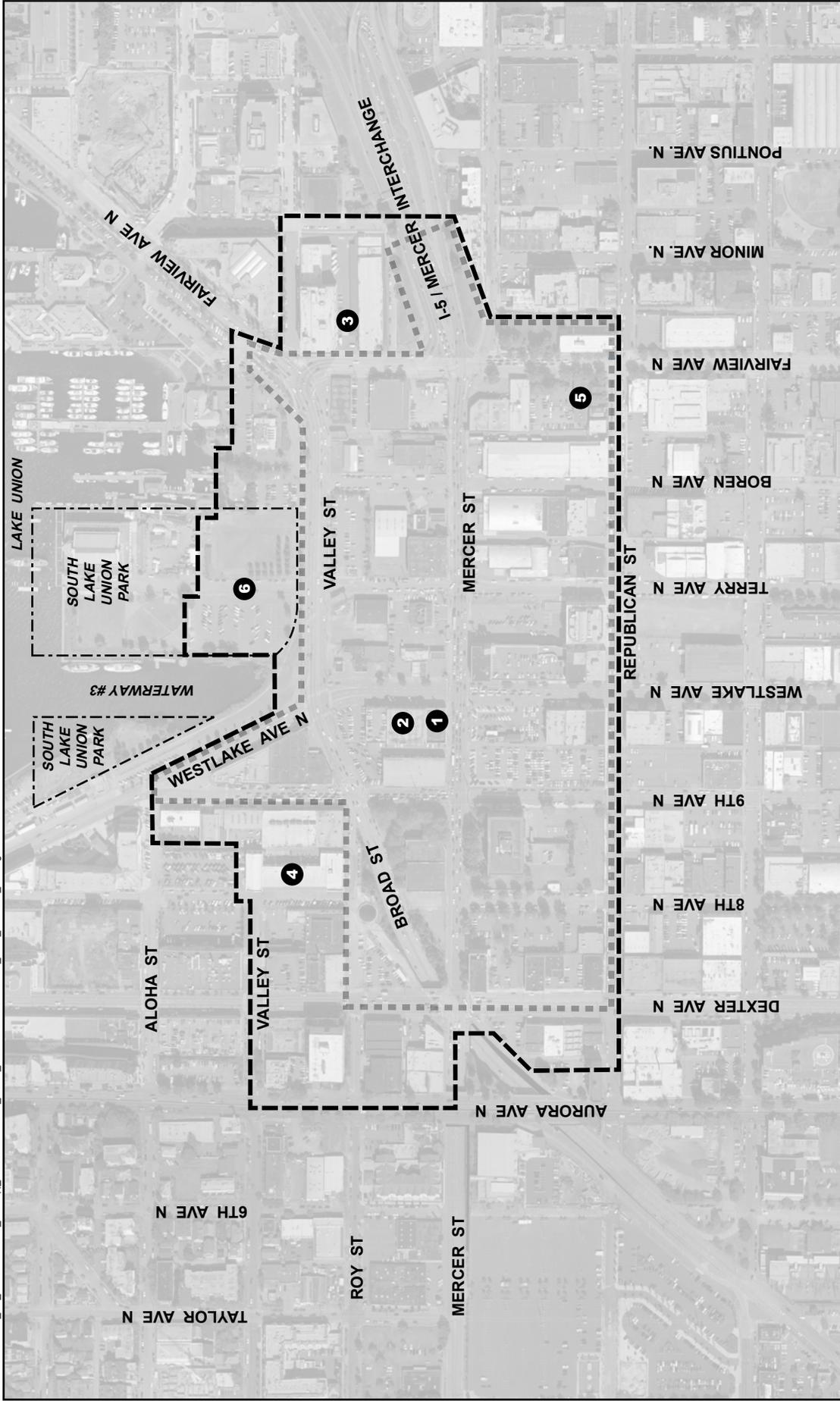
3.1 McKay Pacific Automobile Dealership Building - 601 Westlake Avenue North (#1 in Exhibit 3-1)

The McKay Pacific Building is a one-story building on the corner of Westlake Avenue North and Mercer Street. It was built in 1925 as William O. McKay's sales and service building for Lincoln motorcars. The adjacent building immediately behind it at 600 Ninth Avenue North is an associated garage built in 1945 that has been determined to be not eligible for the NRHP. It is also associated with the building next door at 609 Westlake Avenue North (see Section 3.2 below) and a garage building at 615 Westlake Avenue North. The buildings at 601-615 Westlake Avenue North were designated a Seattle Landmark by the Seattle Landmarks Preservation Board on April 19, 2006, but the 615 Westlake garage was not included in protected features under the Seattle Landmark designation and is not eligible for the NRHP.



Photo 3-1. McKay Pacific Building at 601 Westlake Avenue North

The William O. McKay dealership occupied the McKay Pacific building at 601 Westlake Avenue North and the adjacent building at 609 Westlake Avenue North for many years, and the buildings have continuously served as an automotive dealership.



LEGEND

-  NORTH
-  0 100 200 Feet
-  APE Boundary
-  Park Boundary
-  Project Limits

- 1** McKay Pacific Building, 601 Westlake Ave. N
- 2** McKay Ford-Lincoln Building, 609 Westlake Ave. N
- 3** Shurgard Buildings, 1155 Valley St./ 700 Fairview Ave. N
- 4** Seattle Parks and Recreation Department Maintenance Shops, 800 Aloha/802-04 Roy St.
- 5** Washington State Department of Game, 509 Fairview Ave. N
- 6** South Lake Union Park

The McKay Pacific Building at 601 Westlake Avenue North is an excellent example of an early automotive dealership. It was designed by Harlan Thomas (1870-1953) and Clyde Grainger (1887-1958), and is noteworthy for its ornate terra cotta and as an extant example of an early automobile dealership. The building was determined eligible for the NRHP under the Alaskan Way Viaduct project. Although it has received some alterations (most notably the changing of windows and the addition of modern signs), none of these changes is severe enough to impact the integrity of the building. The building is eligible for the NRHP under criterion C, as a resource "that embodies the distinctive characteristics of a type, period, or method of construction... or that possesses high artistic values..." (National Register Bulletin 15). The building retains a high degree of integrity and presents a clear picture of an early automotive dealership. Further research has determined that the building is also eligible under criterion A, for its association "with events that have made a significant contribution to the broad patterns of our history" (National Register Bulletin 15) due to its representation of the early automotive history of Seattle and the South Lake Union neighborhood. Appendix B contains the NRHP registration form prepared to support this determination at the request of the SHPO.

The McKay Pacific Building currently has structural deficiencies that would require upgrades to preserve and reuse it over the long term (Perbix Bykonen, 2006). It was constructed with a cast-in-place concrete shell on spread footings that provide inadequate structural support. Current design criteria would require piles due to the soft underlying soil. These conditions have led to settling, which in turn has caused the McKay Pacific Building to tilt southwards approximately 8 inches (BOLA Architecture and Planning, 2008). The building continues to move and settle. Soil analysis "indicates a profile of loose soil debris for the upper 10 feet or so of the soil mass beneath Westlake Avenue. Beneath this layer are between 10 and 20 feet of wood debris and sawdust. These softer soil and organic masses, mingled with peat, over-lie a recessional outwash layer of dense sand" (BOLA Architecture and Planning, 2008). This fill material is too soft to provide adequate support for the building.

3.2 McKay Ford-Lincoln Automobile Dealership Building – 609 Westlake Avenue North (#2 in Exhibit 3-1)

This property was constructed in 1922 as the William O. McKay Ford-Lincoln Automobile and Fordson Tractor Dealership. It served as a Ford-Lincoln auto sales and garage building, as well as the Fordson tractor dealership. It was designed by Warren H. Milner and Company. The building is noteworthy for its ornate terra cotta cladding and as an extant example of an early automobile dealership. This building was designated a Seattle Landmark by the Seattle Landmarks Preservation Board under the Alaskan Way Viaduct project on April 19, 2006, along with the building next door at 601 Westlake Avenue North. The adjacent building

at 615 Westlake Avenue North is an associated 1946 garage that has been determined to be not eligible for the NRHP and was not protected under the Seattle Landmark designation.

Although it has received some alterations (most notably the changing of windows and doors, and the addition of modern signs), none of these changes is severe enough to impact the integrity of the building. The building is eligible for the NRHP under criterion C, as a resource "that embodies the distinctive characteristics of a type, period, or method of construction... or that possesses high artistic values..." (National Register Bulletin 15). The building retains a high degree of integrity and presents a clear picture of an early automotive dealership. Further research has determined that the building is also eligible under criterion A, for its association "with events that have made a significant contribution to the broad patterns of our history" (National Register Bulletin 15) due to its representation of the early automotive history of Seattle and the South Lake Union neighborhood. The NRHP registration form prepared to support this determination at the request of the SHPO is contained in Appendix B.



Photo 3-2. McKay Ford-Lincoln Building at 609 Westlake Avenue North

As explained in Section 3.1 above, the soils along Westlake Avenue have been analyzed and determined to be too soft to provide adequate support for the buildings that are there, which has resulted in structural deficiencies, including deficiencies to 609 Westlake Avenue North. This existing condition would require structural upgrades if the building was to be preserved and reused over the long term (Perbix Bykonen, 2006).

3.3 Ford Assembly Plant Building/ Craftsman Press/Shurgard - 1155 Valley Street/700 Fairview Avenue North (#3 in Exhibit 3-1)

The main building on this site, a five-story masonry industrial building built as the first Seattle assembly plant for Ford Motor Company in 1913, is a designated Seattle Landmark. It was designed by noted architect John Graham, Sr. After Ford Motor Company vacated the building, it operated as Fuller Paints and then Craftsman Press, prior to its purchase and rehabilitation for headquarters and a storage facility by Shurgard Storage Center, Inc. (Kreisman, 1999). Sited on a prominent corner near Lake Union, this building is also notable as one of the earliest reinforced

concrete structures in Seattle. It features industrial sash windows and terra cotta trim.

The building immediately to the south of the main building was originally constructed as a warehouse between 1914 and 1917. It was substantially remodeled into a glass plant facility in 1935 by Fuller Paints, again with John Graham, Sr., as architect. It is architecturally similar to the main building, clad in brick with terra cotta details. Originally a train track ran between the two buildings, but it was abandoned in 1995. That area is now incorporated into the Shurgard site.

Both buildings on this property are included in the Seattle landmark designation (Landmarks Preservation Board, 1998). Pending SHPO concurrence, both buildings have been determined eligible for the NRHP under criterion A for their association with innovative manufacturing methods of the automotive industry and as the prototype for the Ford Motor Company's network of regional assembly plants. The main building is also eligible under criterion C as a prime example of a construction type that flourished briefly in the evolution of factory design in the first decades of the twentieth century.



Photo 3-3. Shurgard Building at 1155 Valley Street

3.4 Seattle Department of Parks and Recreation Maintenance Shops – 800 Aloha/802-04 Roy Street (#4 in Exhibit 3-1)

Built in 1926, this large one-story U-shaped commercial building was designed in the Mission Revival style. It was originally a public utilities warehouse for Puget Sound Power and Light. It has a red tile roof and features quoins on either end of the building. The building contains nine vehicle bays. The original multi-paned steel sash windows remain on the north elevation (PBQD, 2004). Previously surveyed in 2004, this building was determined eligible for the NRHP, and SHPO concurred on September 13, 2004 (Holter, 2004).



Photo 3-4. Seattle Department of Parks and Recreation Maintenance Shops at 800 Aloha/802-04 Roy Street

3.5 Washington State Department of Game – 509 Fairview Avenue North (#5 in Exhibit 3-1)

This International Style office building from 1948 has had only minor alterations and is in good condition. It was originally built as the Washington State Department of Game offices and was sold to a private concern in 1983. It was designed by James C. Gardiner and Associates. James Cecil Gardiner (1917 – 1967) was born in San Francisco on June 24, 1917, and was educated at the University of Southern California and the University of Washington. In 1940 he moved to Seattle. From 1940 to 1941 he worked for the firm of McClelland & Jones. During World War II, he worked for the U.S. Navy Bureau of Yards & Docks and for the U.S. Army Corps of Engineers, designing and supervising various bases and depots.



Photo 3-5. Washington State Department of Game at 509 Fairview Avenue North

After the war and upon receiving his architectural license, Gardiner established his own independent practice in Seattle in the fall of 1944. His work ranged from residential to commercial, and his buildings were located from Seattle to Tacoma. The State Department of Game Headquarters may be his most notable project in Seattle. It was featured in *Progressive Architecture* in December 1949.

In 1950 Gardiner moved to the Portland, Oregon, area, opening a new office in Beaverton. In 1951 he joined the Oregon Chapter of the American Institute of Architects. Among his notable works in Oregon are the Beaverton City Hall (1958) and the Forest Grove City Hall (1959). Gardiner died March 13, 1967, at the age of 50.

The building at 509 Fairview Avenue North is a three-story structure, designed and built for the Washington State Department of Game (now the Department of Fish and Wildlife). They occupied it until 1959, when they moved to Olympia. It was designed as a combination office and warehouse, meant to provide separate quarters for the administrative personnel, with a warehouse section to include storage, laboratories, a heating plant, and machine shops. The modern style and materials, including reinforced concrete, quarried stone, aluminum spandrels, and plate glass, conveyed a clean, efficient image for the agency, as well as fulfilling their program needs. After the Department of Game vacated the building in 1959, the property remained under state ownership and was most likely leased as office space until it was sold in 1983. It continues to be used as private offices/commercial use.

The building is not located in a historic district, and current research did not reveal any association with important persons or significant events. The building is not likely to yield information important to history or prehistory. However, it is individually eligible for the NRHP under criterion C for its distinctive characteristics of the International Style, and as a strong representative example of its time period. The building's design emphasizes the openness of the glass and the strong pattern of the metal panels and aluminum framing, highlighting its strong planes and spare modern lines. (Please note that this determination of eligibility is subject to SHPO concurrence.)

3.6 South Lake Union Park (#6 in Exhibit 3-1)

South Lake Union Park is an approximately 12-acre facility at the south end of Lake Union, bordered by Valley Street to the south, Westlake Avenue to the west, and Chandler's Cove marina to the east. This park is considered to be a significant recreation resource by the City of Seattle, and thus is protected under Section 4(f). The park has been created through the successive acquisition by the City of numerous properties since 1984, including the Naval Reserve Armory and surrounding Naval Reserve property, the former City asphalt plant and Evergreen Florist site, and the Center for Wooden Boats along the eastern perimeter. In addition, two other properties have been acquired between Westlake Avenue North and the inlet to the lake known as Waterway #3.



Photo 3-6. South Lake Union Park

The southern of the two lakefront parcels (generally south of the alignment of Aloha Street) was acquired in 1986 using funds from the Land and Water Conservation Fund (LWCF) Act of 1965 (Title 16, USC Section 4601) to increase public access to the waterfront, and thus is protected under Section 6(f) (see Chapter 4, Exhibit 4-2). Section 6(f)(3) of the Act prohibits grant-assisted properties from being converted to other than public outdoor recreation without the identification of replacement property of at least fair market value and of reasonably equivalent usefulness and location.

Current uses of the park include the Center for Wooden Boats, which operates a small museum and offers sailing lessons and boat rentals; moorage of historic vessels by Northwest Seaport, which are used for public education; a summer concert series on the main lawn (former

Naval Reserve property); and special events/meetings at the Armory building.

The South Lake Union (SLU) Park Master Plan, which was created in 1991 and updated in 2000, emphasizes the role of the SLU Park as a neighborhood amenity that also serves as a regional attraction emphasizing Seattle's maritime heritage. The Seattle City Council adopted the Master Plan Update in 2000 and in 2004 adopted a final design.

Under the Park Master Plan, parking, landscaping, and bike and pedestrian pathways are proposed for the southern portion of the park property. The southern boundary of the park is adjacent to the Valley Street right-of-way, but is between 43 and 50 feet from the existing roadway. This area between the roadway and the existing park boundary (SDOT right-of-way) is currently used for a walkway, off-street parking, and landscaping. The South Lake Union Streetcar, currently under construction, will run between the southern edge of the park and Valley Street in this area. The western park boundary (of that portion of the park west of Waterway #3) is adjacent to the Westlake Avenue North right-of-way, but is approximately 90 feet from the existing roadway. The area between the existing roadway and the park boundary is currently used, and will continue to be used, for walkways, landscaping, and off-street parking.

4. Project Use of the Section 4(f) Properties

As previously noted, use of Section 4(f) properties occurs when:

- Land is acquired (direct effect).
- The proximity effects are so severe that the protected activities, features, or attributes of a protected resource are substantially impaired and diminished.
- There is temporary occupancy of land.

Based on these criteria, the Proposed Action would use the following Section 4(f) historic property:

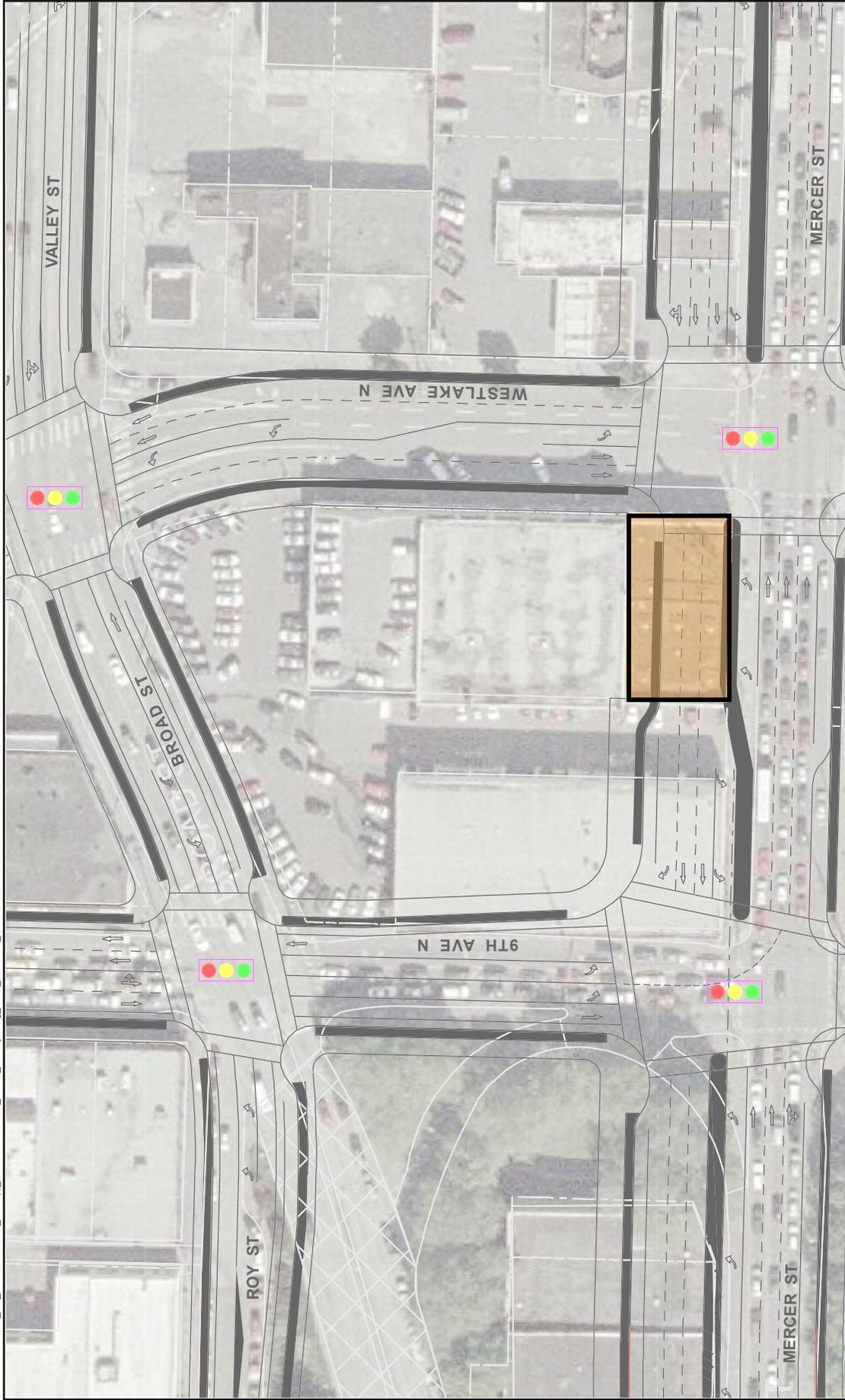
- McKay Pacific Building, 601 Westlake Avenue North

The Proposed Action would have a direct effect on the McKay Pacific Building at 601 Westlake Avenue North, as the building would have to be removed (Exhibit 4-1). Removal of the building would be necessary to accommodate the additional traffic lanes and subsequently wider footprint of the improvements. The building is 17 feet from the existing roadway and directly adjacent to the sidewalk, so any additional lane added to the north of the existing corridor would require removal of the building. Due to the necessary land acquisition, the Proposed Action would use this historic resource under Section 4(f).

Based on these criteria, the Proposed Action would not use the following Section 4(f) historic properties (Exhibit 4-2):

- McKay Ford-Lincoln Building, 609 Westlake Avenue North
- Shurgard Buildings
- City of Seattle Parks and Recreation Maintenance Shops
- Washington State Department of Game
- South Lake Union Park

McKay Ford-Lincoln Building. This building at 609 Westlake Avenue North would experience a change to its setting from the project, and this change has been determined an adverse effect under Section 106. Due to the conjoined nature of the McKay Pacific and McKay Ford-Lincoln buildings, the removal of the buildings at 601 Westlake Avenue North (the McKay Pacific Building) and 600 Ninth Avenue North would



LEGEND

McKay Pacific Building, 601 Westlake Avenue North

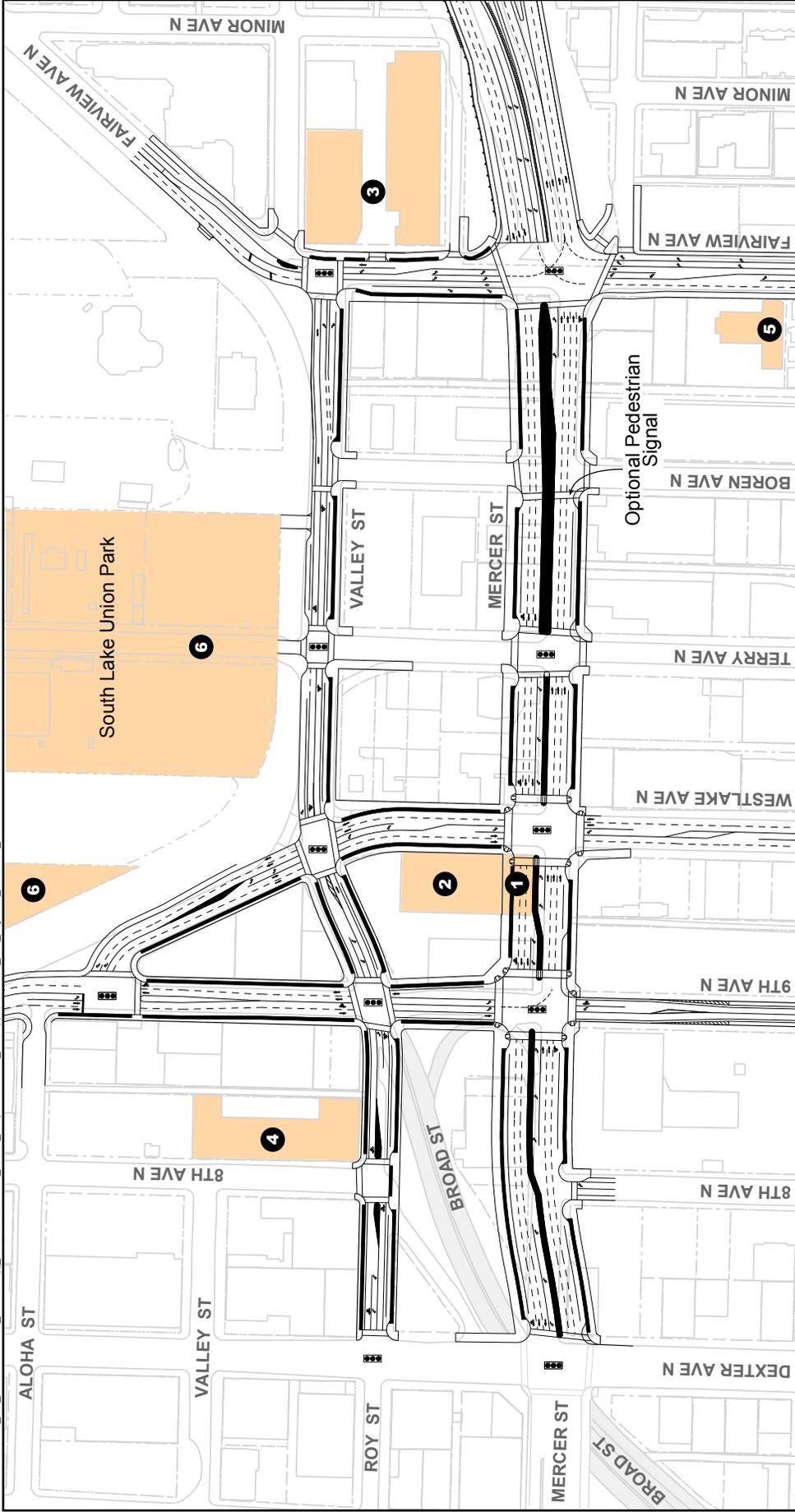
Building Area Within Proposed ROW



Exhibit 4-1

Effects of the Proposed Action on the McKay Pacific Building

MERCER CORRIDOR IMPROVEMENTS PROJECT



LEGEND

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



SECTION 4(f) RESOURCES

- 1** McKay Pacific Building, 601 Westlake Ave. N
- 2** McKay Ford-Lincoln Building, 609 Westlake Ave. N
- 3** Shurgard Buildings, 1155 Valley St./700 Fairview Ave. N
- 4** Seattle Parks and Recreation Department Maintenance Shops, 800 Aloha/802-04 Roy St.
- 5** Washington State Department of Game, 509 Fairview Ave. N
- 6** South Lake Union Park

Exhibit 4-2

Proposed Action and Section 4(f) Resources

MERCER CORRIDOR
IMPROVEMENTS PROJECT

substantially alter the setting of the McKay Ford-Lincoln building on the block and has been determined to be an adverse effect.

Despite the determination of “adverse effect” for the McKay Ford-Lincoln building, it has been determined that the structure will retain its eligibility for the National Register of Historic Places (NRHP). This determination is based on the fact that the McKay Ford-Lincoln Building is the oldest building on the block and was built as a stand-alone structure. Removing the adjacent buildings (601 Westlake and 600 Ninth) would not substantially impair the architectural integrity or the use of the remaining building. The southern wall of the McKay Ford-Lincoln Building at 609 Westlake would be exposed when the McKay Pacific Building at 601 Westlake is removed, and all openings for passage between the two buildings would need to be sealed. This masonry exterior wall may also need cosmetic or weatherproofing work after the removal of the McKay Pacific Building to return it to its original condition. This work would not impair the architectural integrity of the McKay Ford-Lincoln Building. Therefore the aesthetic features or attributes of the resource at 609 Westlake would not be substantially impaired by the changes to its setting.

The significance of the McKay Ford-Lincoln Building at 609 Westlake is partially derived from its association with the early automotive history of Seattle and the South Lake Union neighborhood. It is considered eligible for the NRHP for its distinctive architectural characteristics, and as an extant example of an early automobile dealership that is representative of the automotive history of Seattle and the South Lake Union neighborhood. The removal of the building at 601 Westlake would not impair the ability of the remaining building at 609 Westlake to convey either its architectural attributes or its automotive history. While the setting of the two buildings together presents a stronger picture of this history, 609 Westlake, the original building constructed on the site, can still convey its history and cultural significance if it once again stands alone. Consequently, the structure will retain its eligibility for the NRHP, despite the adverse effect determination under Section 106. The SHPO concurs with this finding, as evidenced by the Memorandum of Agreement found in Appendix E and discussed in Chapter 7.

Without the buffer of the structures at 601 Westlake and 600 Ninth, noise and visual intrusion from Mercer Street are likely to increase at the McKay Ford-Lincoln Building at 609 Westlake. In addition, the Proposed Action would make Mercer Street wider and locate it closer to the building. The Proposed Action includes substantial landscaping along Mercer Street, which would serve to soften the visual impact of the street from the building. The increase in noise is not expected to be substantial, and would not impact the use or enjoyment of the building.

The McKay Ford-Lincoln Building at 609 Westlake would likely experience more vibration and dust during construction of the project than other resources due to the demolition of buildings immediately adjacent to

it. In addition, the building may have limited access during some periods of construction. However, these construction effects would be temporary, and would not be so severe as to cause a substantial impairment to the resource, nor is temporary occupancy of the building anticipated.

None of the anticipated proximity effects or changes in setting described above are likely to be so severe as to substantially impair those significant attributes of the historic resource at 609 Westlake known as the McKay Ford-Lincoln Building, and therefore they would not constitute a constructive use of the resource. Furthermore, while it has been determined that the proposed undertaking will result in an adverse effect to the McKay Ford-Lincoln building, the adverse effect is based on a significant change to the building's setting. The proposed undertaking does not compromise the historical significance of the structure, nor the features and attributes that contribute to the structure's eligibility for the NRHP. Consequently, given that there is no substantial impairment to the McKay Ford-Lincoln building, notwithstanding the adverse effect determination, there is no constructive use, for the purposes of Section 4(f) considerations.

Shurgard Buildings, City of Seattle Parks and Recreation Maintenance Shops, and Washington State Department of Game.

There would be no direct effect to any of these buildings, nor any proximity effects that would be so severe as to constitute a constructive use of the property. Construction effects would be limited to temporary noise associated with construction activities, fugitive dust, possible vibration from some construction activities, and possible limited access during certain periods of construction that may require detours. None of these historic properties would have its access removed. No temporary occupancy of these historic properties is anticipated.

South Lake Union Park. The Proposed Action would not use South Lake Union Park. As shown in Exhibit 4-3, there would be no direct effect on the park. As proposed, Valley Street would be narrowed from four lanes to two lanes, thus reducing the footprint of the roadway. The park's southern boundary between Westlake and Boren avenues is currently 48 to 50 feet north of Valley Street; that distance between the street and the park boundary would increase to an average of approximately 56 feet with the project.

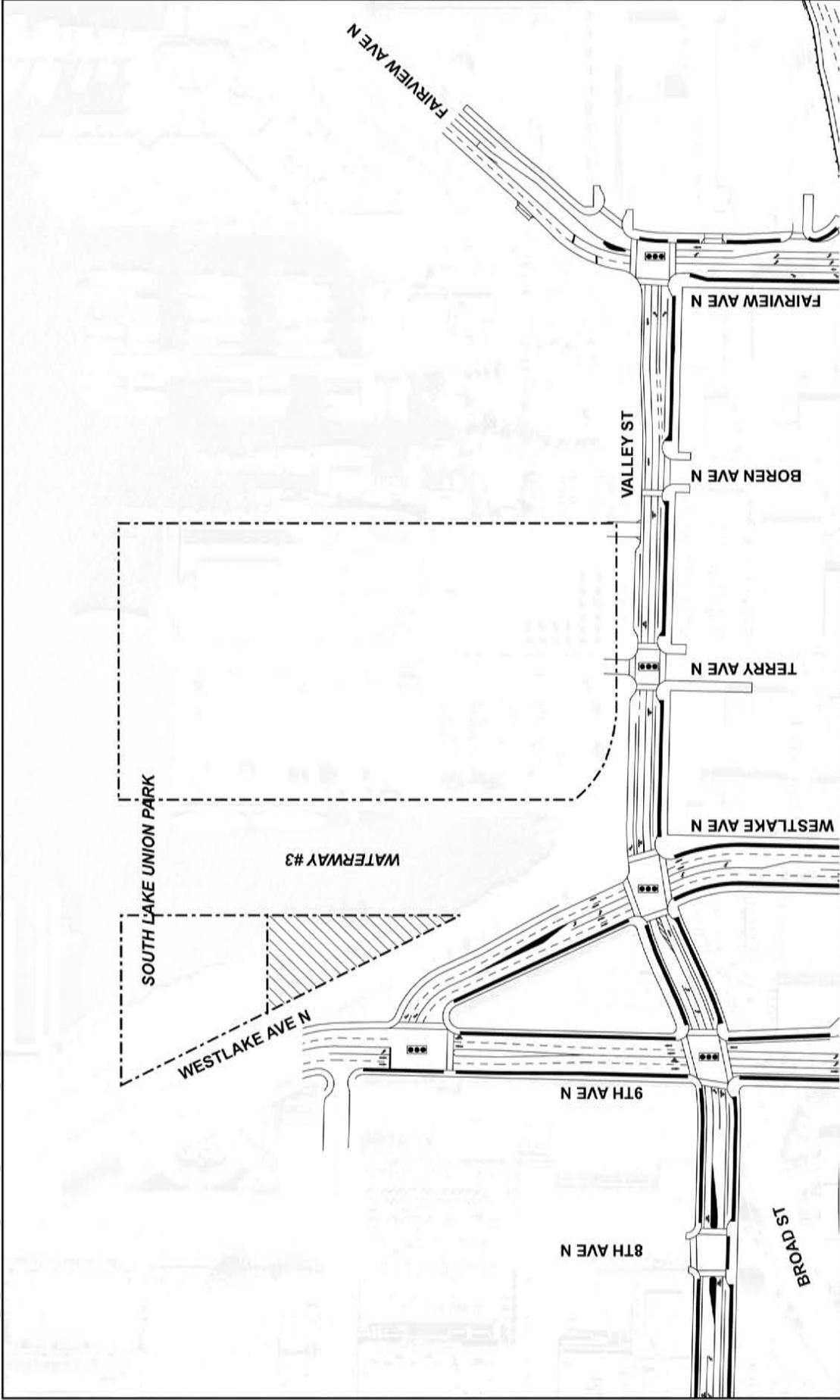


Exhibit 4-3
**Effect of the Proposed Action
on South Lake Union Park**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

Reducing the capacity of the roadway would have the effect of lowering traffic volumes along Valley Street by approximately 50 percent, and as a consequence, lowering traffic noise levels within the park. The FHWA Noise Abatement Criteria (NAC) for Category B land uses (which include parks) is 66 A-weighted decibels (dBA). Current noise levels of 66 to 68 dBA occur at the southern edge of the park (48 to 50 feet from Valley Street) at some locations during the PM peak-hour.

This exceeds FHWA NAC for parks uses. Under 2030 No Build conditions, noise levels would increase to 69 dBA at the southern edge of the park and to 66 dBA 25 feet within the park boundary. With the proposed Valley Street improvements, 2030 PM peak-hour noise levels would decrease to 65 dBA or less at the southern park boundary and farther north inside the park, which is below the FHWA NAC for park uses. Existing and proposed recreational activities, features, or attributes that qualify the park for protection under Section 4(f) are concentrated in the northern half of the park and especially along the waterfront 400 feet from Valley Street. The continued use and enjoyment of these recreational activities would not be impaired by the project. The existing and proposed uses within the southern half of the park closer to Valley Street (parking lots and lawn/landscaped areas) are not noise sensitive and would not be restricted by the project. The planned expansion of landscaping within the park and along its southern and western perimeters would help to further lessen any effect of traffic noise.

The project proposes to improve crosswalks across Valley Street at Fairview, Boren, Terry, and Westlake avenues, which would enhance pedestrian access to the park from the south. In addition, there would be no change in vehicular access to the park from the south. In fact, vehicular access could benefit from the relocation of the major through-traffic movement away from Valley Street.

Proposed improvements along Westlake Avenue North would occur well within the existing street right-of-way and have no direct effect or proximity effects that would constitute a constructive use of the park. The street edge would be approximately 80 feet from the park boundary. Construction effects would be limited to temporary noise, fugitive dust, possible vibration, and possible modified access (but not precluded). No temporary occupancy is anticipated. Because no portion of the park would be directly affected as a result of property acquisition, there would be no need to identify replacement property for property purchased through the Land and Water Conservation Fund.

5. Feasible and Prudent Alternatives to Avoid Use of the Section 4(f) Properties

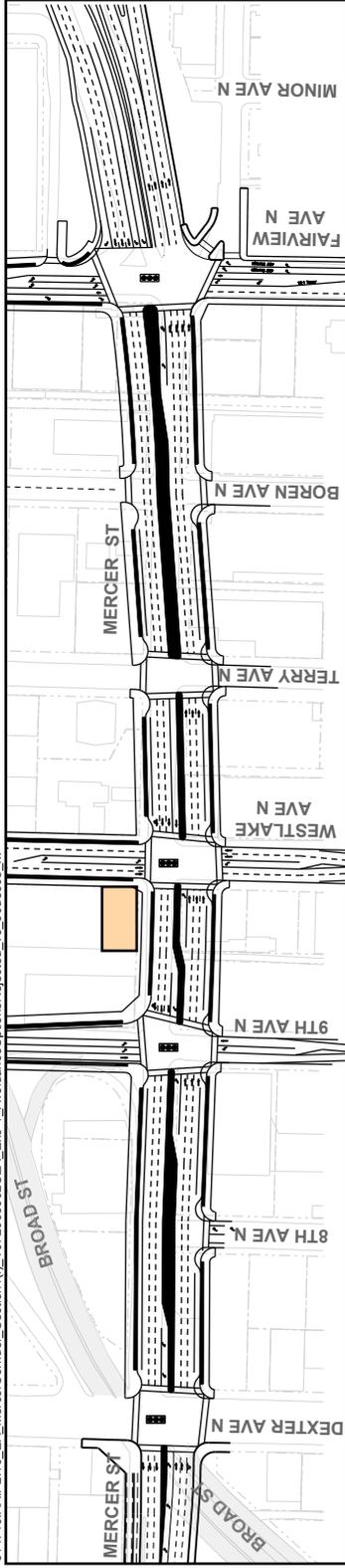
Section 4(f) requires that, if a use is identified to a protected property, an analysis must be performed to identify alternatives that totally avoid the property. If such an avoidance alternative is considered feasible and prudent, it must be selected as the proposed action. As previously noted, a feasible and prudent avoidance alternative does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. An alternative is not feasible if it cannot be built as matter of sound engineering. In accordance with 23 CFR Part 774, an alternative is not prudent if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- It results in unacceptable safety or operational problems;
- After reasonable mitigation, it still causes severe social, economic, or environmental impacts, severe disruption to established communities, severe disproportional impacts to minority or low-income populations, or severe impacts to enviromental resources protected under other federal statutes;
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors; or
- There is an accumulation of factors that, while individually minor, collectively cause unique problems or impacts of extraordinary magnitude.

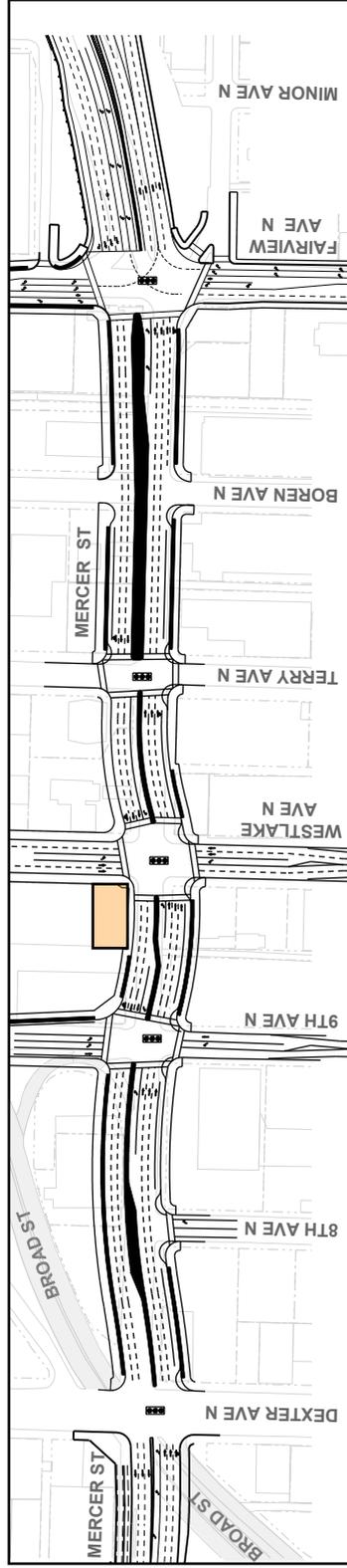
5.1 What avoidance options were considered but rejected?

In an attempt to avoid the use of the McKay Pacific Building at 601 Westlake Avenue North, the project team identified four potential avoidance options. Three of these were rejected from detailed consideration due to fatal flaws in safety or feasibility: Full-Section Widen to South; Reduced Section with Multiple Curves; and Minimum Section Widen to the South (Exhibit 5-1). Appendix C contains a detailed discussion as to why these design options were rejected. A fourth avoidance option, Reduced Section Shifted to the South, is evaluated in Section 5.2.

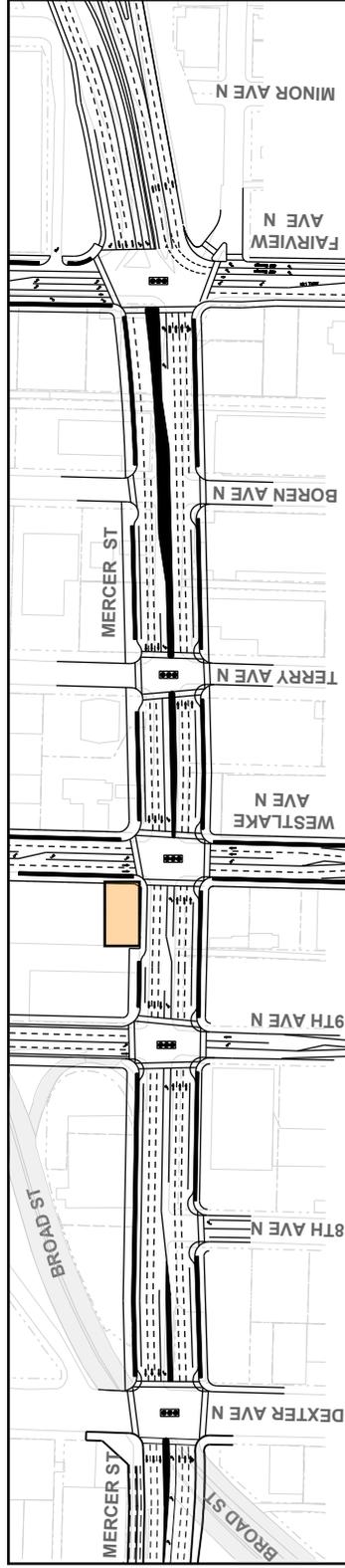
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Full Section Widen to South Option



Reduced Section with Multiple Curves Option



Minimum Section Widen to South Option

LEGEND

- McKay Pacific Building
- Broad Street Removed
- Alaskan Way Viaduct and Seawall Replacement Project
- Planting Strips and Median
- Signalized Intersection
- NORTH
- 0 100 200 Feet

Exhibit 5-1

Avoidance Options Considered but Rejected

MERCER CORRIDOR
IMPROVEMENTS PROJECT

Each of the avoidance options varies only in the alignment of Mercer Street. Proposed improvements to Valley Street, the I-5 ramps, Westlake Avenue North, and Ninth Avenue North would be the same as the Proposed Action. No other Section 4(f) resources would be affected by these alternatives.

5.1.1 Full Section Widen to South Option

Similar to the Proposed Action, the Full Section Widen to South Option implements the City's desired full cross-section for the proposed two-way Mercer Street, but widening would transition from the north side of existing Mercer near Fairview Avenue to the south side at Westlake Avenue North to avoid the historic McKay Pacific Building at 601 Westlake Avenue North (see Exhibit 5-1). Widening to the south would continue west of Ninth Avenue North, directly impacting the UW Research Facility, including the existing Blue Flame Building and buildings under construction. This design option has the highest right-of-way costs (\$64 million) and has significant property impacts. It would encroach on every parcel along the south side of Mercer Street and, because of the tie-in to the existing I-5 ramps, would encroach on five parcels on the north side of the street as well. (The Proposed Action would only encroach on parcels on the north side of the street.) Of particular concern, this design option would likely require acquisition the UW Medical Research Facility and would encroach on the proposed Exchange Building II site – a planned and permitted biomedical research facility. Given the number and type of displacements, it is considered highly unlikely that the City would proceed with such a design or be able to secure the funding needed for its implementation. Considering these factors, and the fact that a variation of the same alternative (Reduced Section Shift to South discussed in Section 5.2) could avoid or minimize many of these adverse effects, this alternative was eliminated from further consideration.

5.1.2 Reduced Section with Multiple Curves Option

The Reduced Section with Multiple Curves Option is designed to avoid the historic McKay Pacific Building at 601 Westlake by shifting the alignment to the south at that location. Elsewhere, the alignment is shifted to the north to avoid or minimize adverse effects to other properties along the south side of Mercer Street (see Exhibit 5-1). At some locations, sidewalk and median widths were reduced from that of the Proposed Action to further reduce effects on the McKay Pacific Building, the UW Medical Center, and the proposed Exchange Building II site. Between Dexter and Terry avenues, parking was eliminated from the north side of the street. The resultant alignment includes three reverse curves along Mercer Street between Dexter and Terry avenues that pose safety and design deficiencies. Mercer Street is designated by the City of Seattle as a principal arterial and a Major Truck Street and must be able to accommodate large trucks. It also is designated as an NHS (National

Highway System) Route; however, it is not a state highway. For this option, lane widths do not meet design standards for the alignment curve radii, and wider lanes and additional right-of-way would be needed. The alignment of this option is constrained at three “pinch-points” located at the UW Medical Building, the historic McKay Pacific Building, and the Interurban Exchange II Building site. 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.

A simulation was performed using Auto Turn software for the design vehicle (WB 67 – a truck with a wheel base of 67 feet between the front and back axles, which is the largest truck expected to use Mercer Street) 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 foot. Truck drivers would have difficulty negotiating this alignment and less experienced drivers could easily encroach further into the adjacent lane. This encroachment would increase the potential of side-swipe crashes and would result in differential operating speed, which would decrease the level of service and increase potential for rear-end crashes.

Other design and safety issues resulting from the multiple curves and pinch points include inadequate stopping sight distance and entering sight distance, and decision sight distance at some locations. To avoid building encroachment for this option, sidewalks were reduced to 8.5 feet in front of the historic McKay Pacific Building and the proposed Interurban Exchange II Building. This is less than both the desired 16-foot width and the City’s 12-foot minimum width for constrained locations. Substandard sidewalk widths in conjunction with other noted deficiencies with this option further increase the risk of pedestrian-related collisions and a less desirable pedestrian environment.

Considering Mercer’s NHS designation, Major Truck Street classification, and high vehicle and truck volumes, this option was rejected from further consideration for design and safety considerations.

5.1.3 Minimum Section Widen to South Option

The Minimum Section Widen to South Option applies the minimum design standards for arterial streets to illustrate the absolute minimum width possible, if only considering auto and truck traffic (see Exhibit 5-1). Widening would transition from the north side of existing Mercer near Fairview Avenue North to the south side at Westlake Avenue North to avoid the historic McKay Pacific Building at 601 Westlake. In general, sidewalk widths would meet 6-foot minimum required by WSDOT. West of Westlake Avenue North, sidewalks in front of the McKay Pacific Building (north side) and the UW Medical Research Facilities (south side) would be 6 feet wide with no landscaping/safety buffer. Parking would not be included on the south side of Mercer Street nor on north side of the street in front of the McKay Pacific Building. There would be no median

or pedestrian refuge in the middle of Mercer Street west of Westlake Avenue North.

The most significant design and safety issue of this option is not having a center median. A median provides a pedestrian refuge at crosswalks, and prevents severe vehicle conflicts by separating opposing lanes of traffic. The Minimum Section Option has no center median between Eighth and Westlake avenues and results in three crosswalks without pedestrian refuges. The proposed width of Mercer Street at these locations is approximately 82 feet. Therefore, without a median it does not meet the Institute of Transportation Engineers guidance recommending pedestrian refuges for crosswalks longer than 60 feet. Providing more traffic signal green time for pedestrians crossing Mercer Street would be required to reduce the risk of slower pedestrians getting stranded in traffic lanes if a median is not provided. This in turn would degrade vehicle levels of service and progression for vehicles traveling on Mercer Street.

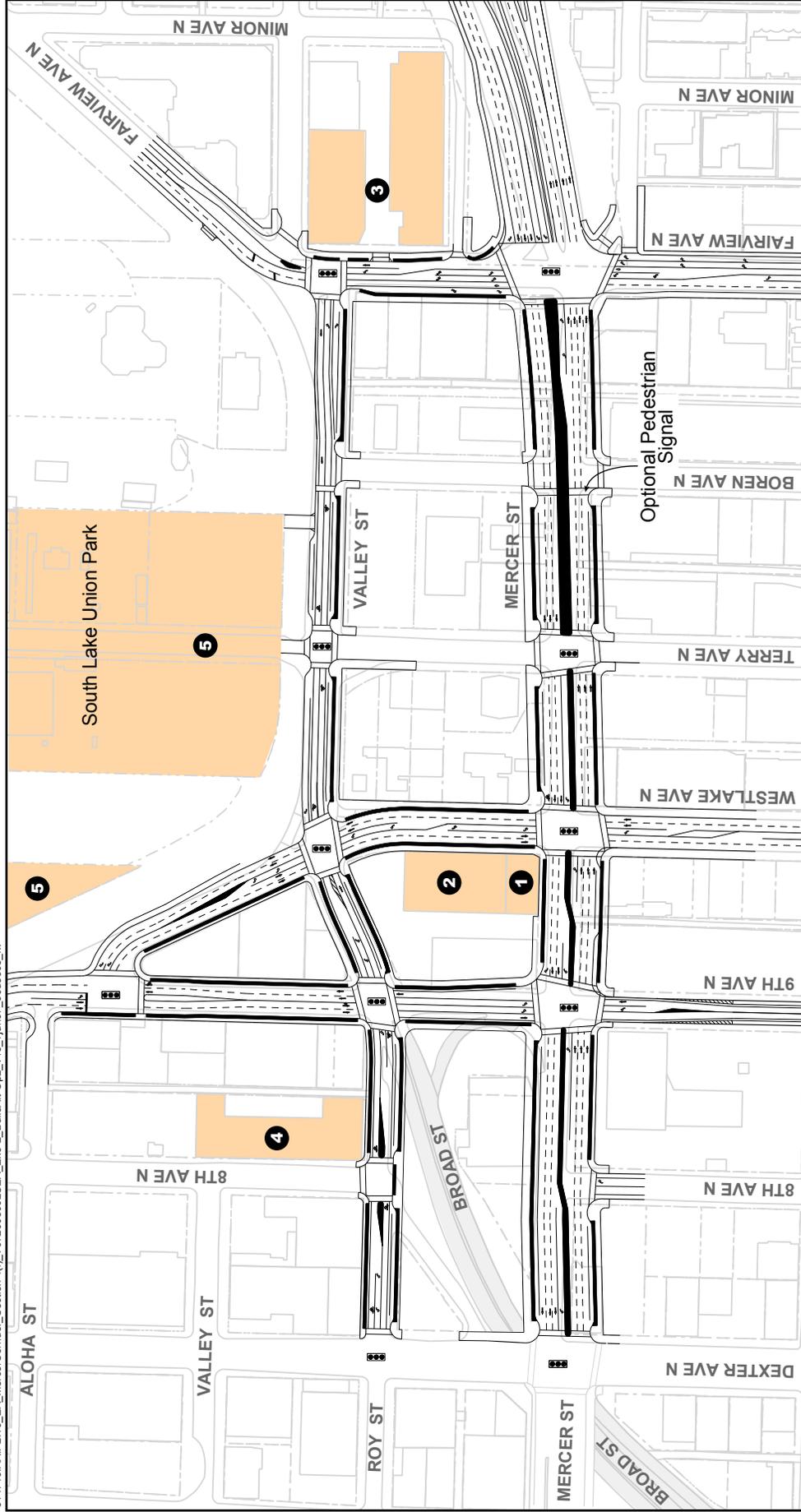
Elimination of the median considerably increases the crash risk of high-severity vehicular (head-on) and pedestrian-vehicular collisions. Eliminating the center median between Eighth and Westlake avenues also introduces a different roadway cross-section (no median) for a short two block segment of the corridor, which creates varying conditions for drivers to perceive and respond to.

This option includes 6-foot-wide sidewalks, which is WSDOT's minimum standard for arterial streets. This width is considered insufficient for high pedestrian volume streets, such as Mercer Street (Appendix C). Considering the traffic characteristics, surrounding urban land use, and guidance and research, this option was rejected from further consideration for safety and design considerations.

Although addition of a median to this option would improve pedestrian safety, it would encroach 9 feet into the UW Phase 2 building and 18 feet into the planned Exchange 2 Building, and have insufficient sidewalk widths for expected pedestrian volumes. Therefore, the Minimum Section with Median was rejected from further consideration.

5.2 Are there feasible and prudent avoidance alternatives?

The Reduced Section Shift to South Option represented another option of the Proposed Action. This option generally implements the City's desired cross-section for the new two-way Mercer, but reduces sidewalk widths, median width, and parking to avoid the historic McKay Pacific Building at 601 Westlake Avenue North (Exhibit 5-2). Widening would transition from the north side of the existing Mercer Street near Fairview Avenue North to the south side at Westlake Avenue North to avoid the historic McKay Pacific Building. The sidewalk width on the north side of Mercer Street between Westlake and Ninth Avenues would be reduced from 21 feet to 12 feet, and parking would be eliminated.



LEGEND

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



SECTION 4(f) RESOURCES

- 1** McKay Pacific Building, 601 Westlake Ave. N
- 2** McKay Ford-Lincoln Building, 609 Westlake Ave. N
- 3** Shurgard Buildings, 1155 Valley St./ 700 Fairview Ave. N
- 4** Seattle Parks and Recreation Department/Maintenance Shops, 800 Aloha/802-04 Roy St.
- 5** South Lake Union Park

Exhibit 5-2

Reduced Section Shift to South

MERCER CORRIDOR
IMPROVEMENTS PROJECT

On the south side of the street between Eight Avenue North and Westlake Avenue North, the median width (not including left-turn lanes) would be reduced from 10 feet to 8 feet, the sidewalk would be reduced from 16 feet to 12 feet, and parking would be eliminated. These reduced sidewalk and median widths in this section reflect the minimum width that would be acceptable in a high-density urban environment, and is less than what the City views as needed given the overall context of this developing neighborhood. The sidewalk on the south side of Mercer Street between Ninth and Eighth Avenues would also be 12 feet and there would be no parking.

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

Although this alternative avoids the Blue Flame Building (UW Medical Center), it would move the street much closer to that building and encroach upon the utility vault located in front of the Blue Flame Building as well as the Phase II building that is under construction.

5.2.1 Evaluation of Feasibility

The Reduced Section Shift to the South Option was evaluated for consistency with design standards and operations objectives. This design option meets roadway design standards, and vehicle traffic operations would be the same as for the Proposed Action.

However, the elimination of parking on the south side of Mercer Street at some locations for the Reduced Section Shift to South Option precludes potential use of the parking lane as an additional travel lane. Having the flexibility to eliminate parking and add a fourth travel lane preserves the option for future unforeseen needs or for near-term added traffic capacity during construction of the Alaskan Way Viaduct Replacement.

Therefore, this design option is considered a feasible avoidance alternative in that it can be designed and built to operate both efficiently and safely. Because of this, an evaluation of prudence was conducted for this design option in the following section.

5.2.2 Evaluation of Prudence

As previously noted, determining whether a feasible avoidance alternative is also prudent is based on an evaluation of numerous factors. The following evaluation focuses on all but one of those factors; Unacceptable Safety or Operational Problems is addressed under the discussion of purpose and need. It was concluded that the “Reduced Section Shift to the South” avoidance alternative is not a prudent avoidance alternative. Below is a brief summary of why this avoidance alternative is not considered prudent; a much more complete discussion of each of the evaluation factors is presented in the subsequent pages.

It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.

Adverse effects on existing and planned biomedical research facilities would diminish the attractiveness of the area to other research operations and weaken the City's ability to fully achieve the project purpose to accommodate planned development in the South Lake Union neighborhood. Reduced sidewalk and median widths inhibit pedestrian circulation and reduce pedestrian safety. Loss of on-street parking removes the safety and comfort buffer between pedestrians and arterial traffic. These differences will weaken the City's vision of a livable and walkable South Lake Union neighborhood.

It has unique problems or unusual factors. The City's vision for South Lake Union is to develop a mixed-use neighborhood with a strong emphasis on growth in biomedical/biotechnical research facilities. The UW's South Lake Union Medical Campus is the cornerstone of this planned development. Adverse effects on the UW Research Facility and the planned Interurban Exchange Campus would compromise the current investment in these properties, their continued operation at this location, and the UW's role in attracting future development. This option would also not support the vision of creating a boulevard/ gateway along the Mercer Corridor.

It would result in severe economic or other environmental impacts.

Adverse effects on existing and planned development would be a detriment to job creation (both direct and spin-off) and other local economic benefits. It would impact four more properties than the Proposed Action, resulting in a greater environmental impact from four more demolitions.

It would cause severe disruption to established communities. This option would require acquisition of property on both sides of Mercer Street which would require complex construction staging and a longer construction period. The longer construction period would result in adverse and undesirable disruption to both the immediate project area and the larger Seattle community. The longer construction period would also increase safety risks associated with construction activities.

It results in additional construction costs of an extraordinary magnitude. The costs associated with this option would exceed the costs of the Proposed Action by \$49.1 million, or 43 percent, because of a longer construction schedule, additional right-of-way needed, and required mitigation under other regulations.

There is an accumulation of factors that, while individually minor, collectively cause unique problems or impacts of extraordinary magnitude. If some of the factors described above do not individually have adverse impacts that reach extraordinary magnitude, the accumulation of these factors does reach such levels.

Does it compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need?

The purpose the project is multi-faceted and includes:

- Improving local circulation and access to businesses and residences
- Providing more direct vehicular movements through the corridor
- Improving vehicular, pedestrian, and bicycle safety within and through the project area
- Accommodating planned development in the South Lake Union neighborhood

The South Lake Union neighborhood has been designated as an Urban Center in the 2004 City of Seattle Comprehensive Plan – 10-Year Update. Urban centers are recognized by King County and City of Seattle growth management policies as the highest-density areas in the region. They are intended to create or enhance compact communities by targeting significant shares of growth, services, and facilities within relatively small areas. The South Lake Union Urban Center is projected to have substantial growth in the next 20 years, including 16,000 to 20,000 new jobs, 8,000 to 10,000 new households, and an enhanced South Lake Union Park. The City of Seattle’s vision is to develop a mixed-use neighborhood with a strong emphasis on growth in biotechnology. By providing infrastructural improvements such as the Mercer Corridor Project, it is envisioned that the area will become a desirable place to attract businesses, employees, and residents. As a result of this planned development, pedestrian traffic in the neighborhood will substantially increase.

Circulation, Access and Safety

The Reduced Section Shift to South Option would result in narrower sidewalks and median strips than envisioned under the Proposed Action, as well as a loss of on-street parking. This would inhibit pedestrian circulation along Mercer Street and reduce the size of the pedestrian refuge areas within the median.

The 12-foot sidewalks, which would need to include a planting and safety buffer, would not be sufficient to accommodate the uses and pedestrian volumes anticipated on Mercer Street. Sidewalk uses are anticipated to be heavy and diverse, including high pedestrian volumes; bicycle riders; seating areas; and a zone for street signs, light poles, and other utilities. High pedestrian volumes will be generated from transit stops in the immediate vicinity (bus and streetcar), local attractions such as South Lake Union Park, apartments and condominiums, and office and retail uses. In addition, surges of high pedestrian volumes will be generated by

Seattle Center and South Lake Union Park during early evening, weekend, and holiday events.

The reduced section would be less safe than the Proposed Action due to the substantial decrease in the safety buffer zone. Parking provides a safety buffer between pedestrians and the high traffic volumes of three lanes of through traffic in each direction. The Reduced Section Shift to South eliminates the parking lane (8 feet on the north adjacent to the historic McKay Pacific Building and 10 feet on the south adjacent to the UW facility) and reduces the sidewalk widths (21 feet to 12 feet on the north side and 16 feet to 12 feet on the south side). This effectively reduces the safety buffer by 17 feet on the north and 14 feet on the south as compared to the Proposed Action. This reduced buffer increases the exposure of pedestrians adjacent to this high-volume corridor.

Without parking, a minimum of 4 feet would be needed in the sidewalk area to provide a safety buffer from traffic. This leaves only 8 feet for pedestrians, which is only enough for two people walking abreast or passing one another single-file. That is not adequate for the pedestrian volumes that will be generated by the existing and proposed uses in the area. It also does not promote the City's vision of a livable and walkable South Lake Union neighborhood.

Because there are no bicycle lanes proposed on Mercer Street, it is anticipated that bicyclists will also use the sidewalk. The bicyclists would further crowd out pedestrians on 12-foot sidewalks.

The Reduced Section Shift to South reduces the median from 10 feet wide to 8 feet wide, thereby reducing the pedestrian refuge area of the median by 20 percent (see the memorandum entitled "Safety Issues of 4(f) Option Reduced Section Shift to the South" in Appendix C).

Accommodating Planned Development

A critical feature of the City's vision of the area is a strong emphasis on the growth of biotechnology/biomedical research facilities to complement existing facilities in the area, such as the Fred Hutchinson Cancer Research Center, ZymoGenetics, Battelle, and Seattle Biomedical Research Institute. The University of Washington, which is developing its research campus along the south side of Mercer Street, is considered the most critical component in this vision because of its size, prestige, and ability to attract others to the neighborhood. The UW facility has already attracted several other similar research and development organizations and companies over the last year or two, including Children's Hospital, Rosetta/Merck, and the Seattle Cancer Care Alliance, and the further expansion of the Fred Hutchinson Cancer Research Center and ZymoGenetics; others are expected to create the synergy and collaboration that will enhance innovation, raise productivity, and speed the progress of the research of all involved. The anticipated result will be further increases in research funding, jobs, and other local economic benefits.

The Reduced Section Shift to South Option would, however, adversely affect the very development that is envisioned in the South Lake Union Neighborhood Plan and that the project is intended to accommodate. As will be described in detail under the “Unique Problems or Truly Unusual Factors” and “Severe Social, Economic, or Other Environmental Impacts” tests of prudence below, this avoidance alternative would affect the use of existing facilities, facilities nearing construction, and the potential for future facilities proposed by the UW and others. Specific effects noted below would likely diminish the attractiveness of the area to biotechnology/biomedical research organizations and companies, and would weaken the City’s ability to fully achieve its vision for the area and its ability to achieve the anticipated rewards in terms of job creation and other local economic benefits.

Are there unique problems or unusual factors present?

As noted under the Purpose and Need test of prudence, the Reduced Section Shift to the South Option would adversely affect several existing, near-construction, and proposed biotechnology/ biomedical research facilities intended to be the cornerstone of the economic vision for the South Lake Union neighborhood. Because of its size, prestige, and ability to attract others to the neighborhood, the UW School of Medicine has played a direct role in the creation of 80 spin-off companies during the past 10 years (UW School of Medicine, 2005). The UW South Lake Union Campus has begun to attract similar biotechnology/biomedical research facilities to the area, including the Interurban Exchange Campus, composed of four biotechnical laboratory and administrative office buildings.

The UW conducted a 3-year site selection process that culminated in the \$50 million redevelopment of the 815 Mercer Street Research Building and the formulation of a master plan for the future development of two adjoining parcels to nearly double the current square footage of laboratory space (Emmert and Ramsey, 2005). Three important criteria in the site selection process were:

The requirement for a site of sufficient size to provide a campus-like presence of interrelated buildings of up to 500,000 square feet to be developed over an 8- to 10-year period.

The desired proximity of the campus to other medical facilities such as the University Medical Center, Fred Hutchinson Cancer Research Center, and the Seattle Cancer Care Alliance.

The desired setback from high-volume streets to avoid vibration and noise effects on sensitive equipment and other operations.

Phase 1 of the UW development process was redevelopment of the Blue Flame Building at 815 Mercer Street, located along the south side of the street between Eighth and Ninth Avenues (Exhibit 5-3).

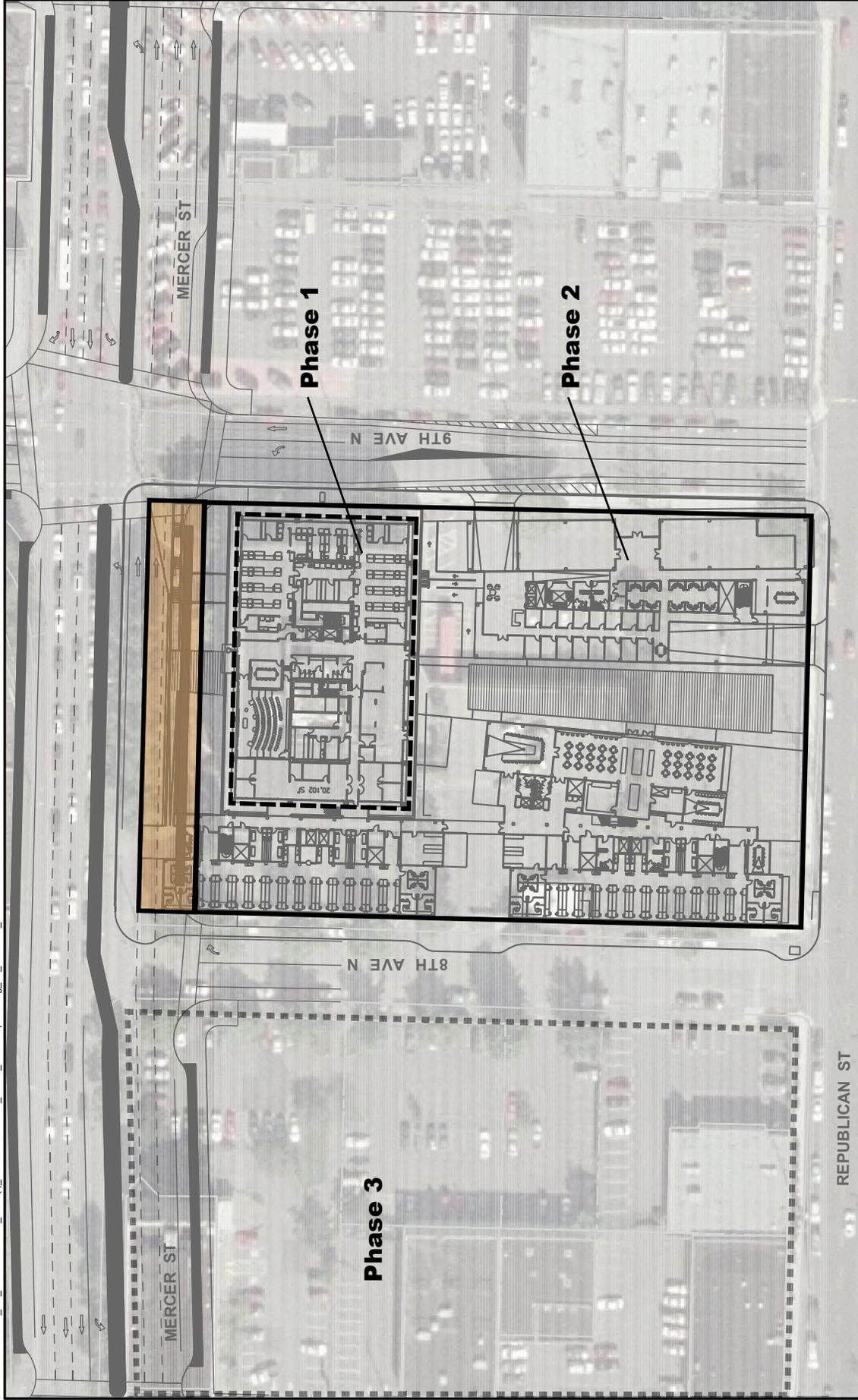


Exhibit 5-3
Effects of the Avoidance Alternative
on the UW Medical Research Campus
MERCER CORRIDOR
IMPROVEMENTS PROJECT

LEGEND

- Phase 1
- Phase 2
- Phase 3
- Building Area Within Proposed ROW

NORTH

0 50 100 Feet

The building was occupied in January 2005 and contains more than 110,000 square feet of new laboratory space (City of Seattle, 2005). The north building face is currently situated approximately 70 feet from the southern curb of Mercer Street, a separation which was crucial in the decision to locate the UW facility at this location (Emmert and Ramsey, 2005). The avoidance alternative would shift the southern curb of the street to within 33 feet of the building façade (and 28 feet from the basement wall). This would require redesign of the building's front entrance to a narrow walkway accessed from the sides of the building (rather than the front), and elimination of the front driveway. The existing buffer strip, including several mature oak trees, would be lost.

As a result of the roadway shift and the loss of the buffer strip, the level of vibration would increase within the building and continued use of sensitive scientific equipment, such as an MRI, mass spectrometers, and microscopes, would be jeopardized. When the UW selected the 815 Mercer Street building, vibration readings were taken inside the building to determine what structural upgrades would be necessary for the use of this equipment. Steel posts interlinking the floors and isolated concrete slabs were included to mitigate the current vibration from Mercer Street (City of Seattle, 2005). With the increase in vibration effects as a result of the avoidance alternative, some sensitive equipment would need to be relocated to the south end of the building (or to another building) to meet the equipment manufacturer's vibration specifications. This would include the MRI which is currently located at the north end of the basement. The UW estimates that the remodeling to accommodate these relocations, as well as the installation of vibration dampening tables for other table-top equipment and adding steel tube columns for each lab bay, would cost approximately \$2.5 million (in 2005 dollars) and would disrupt research currently being conducted at the facility (Coleman, 2005).

As part of the redevelopment of the building, a Seattle City Light transformer vault, an emergency generator vault, and a Puget Sound Energy natural gas meter to serve the building were placed in a new utility vault at the northeast corner of the parcel (southwest corner of Mercer and Ninth). By shifting the roadway south, the Reduced Section Shift to the South Option would require the relocation of the vault to the south side of the building and into the area now under construction for Phase 2 development.

The UW estimates that the costs of that relocation, as well as the cost to provide temporary power to keep the building operational during the relocation process, would be approximately \$1.2 million (in 2005 dollars) if space is available (Coleman, 2005).

Phase 2 of the UW South Lake Union Campus is currently under construction. The new buildings, located on the same block as the 815 Mercer building and to the west and south of that building, add an additional 300,000 square feet of laboratory space. The avoidance

alternative would encroach into the Phase 2 building immediately west of the 815 Mercer building by approximately 40 feet and would displace up to 12,600 square feet of planned laboratory space on five floors. The lost space would need to be constructed elsewhere on or off the campus, and the remaining building would need to be redesigned due to the new floor configuration. During that rebuilding process, other activities in the building would be disrupted and possibly shut down. The cost to demolish the impacted northern portion of the building, renovate the remaining space, and construct the lost space elsewhere is estimated by the UW at approximately \$21.7 million, not including the likely need to lease space elsewhere for the disrupted activities during the projected 2-year rebuilding period (Coleman, 2005).

As noted earlier, the UW South Lake Union Campus has begun to attract similar biotechnology/biomedical research facilities to the area. The Interurban Exchange 2 Building, to be located at the southwest corner of Mercer Street and Terry Avenue North, is fully permitted and construction is expected to begin as soon as a tenant is secured. The avoidance alternative would shift the street south, encroaching into the planned building by as much as 31 feet, resulting in a 12 percent loss of developable space (13,200 square feet) within the planned 4-story building footprint (Exhibit 5-4). If the building is constructed prior to implementation of the Mercer Corridor Improvement Project, there would be additional redevelopment costs that are unknown at this time.

The effects described above represent unique problems or unusual factors to the UW and other biotechnology/biomedical research organizations and companies located along the south side of Mercer Street. These effects compromise the current investment in these properties, their continued operation at this location, and the potential for future development. As previously noted, the UW's presence is critical to attracting biotechnology/biomedical research organizations and companies to South Lake Union, and these effects could diminish the attractiveness of the area to other research operations. As discussed earlier, a feasible and prudent avoidance alternative not only avoids using Section 4(f) property, but also does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource. In this case, a single historic resource, the McKay Pacific Building at 601 Westlake Avenue, would be avoided, but established medical research facilities would suffer costly impacts.

Does it result in severe social, economic, or other environmental impacts?

The UW research activities are the centerpiece of statewide and regional efforts to attract new investment to the community. Working with the Governor's Competitiveness Council and the Puget Sound Regional Council, the Prosperity Partnership (a coalition of over 150 businesses, labor, and governmental and nonprofit organizations) has developed an

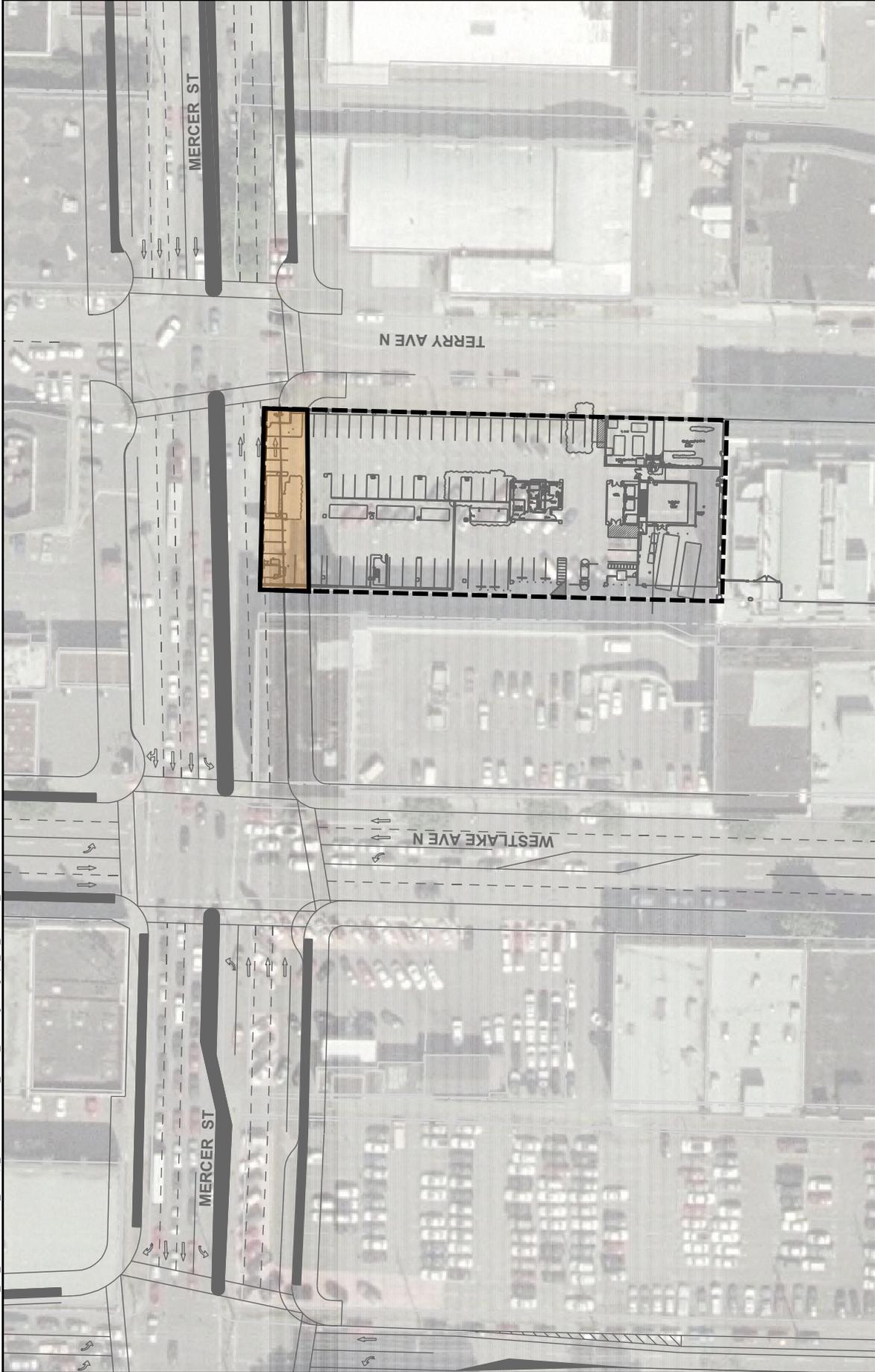


Exhibit 5-4
**Effects of the Avoidance Alternative
on the Interurban Exchange Building**
MERCER CORRIDOR
IMPROVEMENTS PROJECT

LEGEND

-  Interurban Exchange Building
-  Building Area Within Proposed ROW

 NORTH

 0 50 100 Feet

economic strategy to create 100,000 new jobs in the Puget Sound Region (Emmert and Ramsey, 2006.) This work focuses on the development of strong industry clusters, including South Lake Union, with an emphasis on biomedical research.

In addition to and because of the UW's presence, companies that have located or expanded in the South Lake Union area in the past few years include Children's Hospital, Rosetta/Merck, Seattle Cancer Care Alliance, Fred Hutchinson Cancer Research Center, and ZymoGenetics. As previously noted, the Reduced Section Shift to the South Option would adversely affect the UW and other biotechnology/biomedical research organizations and companies located along the south side of Mercer Street.

These effects would, in turn, diminish the attractiveness of the area to other research operations and thus weaken the City's ability to achieve the anticipated rewards in terms of job creation (both direct and spin-off) and other local economic benefits such as increased property tax revenues.

It should be noted that the current development climate along Mercer Street will result in greater impacts under the avoidance alternative than under the Proposed Action. At present, and as noted previously, development is occurring along the south side of the street. The UW has planned a three-phase development of its biomedical research campus west of Ninth Avenue that is expected to directly create 3,103 jobs, and indirectly create 4,034 jobs for supporting services (Coleman, 2005). The Interurban Exchange Building will be built shortly, west of Terry Avenue. These projects are under construction or are approved by the City. As these projects come on-line, there will be mounting pressure to redevelop adjacent properties consistent with the South Lake Union Neighborhood plan.

On the other hand, the north side of Mercer Street is generally owned, or being acquired by, a single developer (City Investors). This developer is waiting to redevelop its properties until after the alignment and footprint of the Mercer Corridor Project, including Mercer Street to the south and Valley Street to the north, have been finalized. The 2001 Purchase and Sale Agreement between the City of Seattle and City Investors required that City Investors submit permit applications for development of the blocks north of Mercer Street between Fairview and Westlake Avenues by 2008; City Ordinance 121892 extended the deadline to 2013 to accommodate the additional time for planning and design of the Mercer Corridor. As a result, impacts along the north side of the street will be limited to underutilized properties that will be redeveloped after, or in coordination with, the Mercer Corridor Project.

Because construction of the Reduced Section Shift to the South Option would affect both sides of Mercer Street, four more properties along the corridor would be impacted than under the Proposed Action. Exhibit 5-5 summarizes the properties affected by the avoidance alternative; the table also includes information on the Proposed Action for comparative

purposes. The full take of the C&R Building would result in the loss of existing jobs along the corridor. Four businesses currently occupy the building, employing a total of 35 permanent workers. A more detailed discussion of the construction of the avoidance alternative is presented in the following "Would it cause severe disruption to established communities?" test of prudence.

Exhibit 5-5. Properties Affected by the Avoidance Alternative

Property	Avoidance Alternative	Proposed Action
Far Fetched Importers	Partial Acquisition	Partial Acquisition
Far Fetched Warehouse	Partial Acquisition	No Effect
Cloud 9 Mattresses and More	Partial Acquisition	Partial Acquisition
Parking Lot (future Interurban Exchange Building)	Partial Acquisition	No Effect
Thriftbook	Partial Acquisition	No Effect
Clements and Rice (C&R) Building	Full Acquisition	No Effect
UW Research Campus	Partial Acquisition	Partial Acquisition
U.S. Bank Building	Full Acquisition	Full Acquisition
Auto Dealership (non-historic service garage)	Full Acquisition	Full Acquisition
Union 76 Station	Partial Acquisition	Partial Acquisition
West Marine	Full Acquisition	Full Acquisition
Shell Station	Full Acquisition	Full Acquisition
Taco Del Mar	Full Acquisition	Full Acquisition
Lincoln Towing	Full Acquisition	Full Acquisition

Note: A full acquisition is property acquisition that requires building demolition and displacement of businesses within the building. A partial acquisition is partial acquisition of a property that, with mitigation, would not result in business displacement.

Source: CH2M HILL Site Reconnaissance, August 2006.

Would it cause severe disruption to established communities?

The Reduced Section Shift to the South Option would extend the construction time, which would increase disruption to area businesses, residents, the traveling public, and other neighborhoods served by the Mercer Corridor. It is estimated that the construction of the Reduced Section Shift to the South Option would take 9 months longer than the Proposed Action (for a total of 39 months), in large part because both sides of Mercer Street would be involved. The new roadway construction would be complicated in that separate sections would be built to the north and south of the existing roadway, followed by redevelopment of the

center section. As these various sections would be completed, traffic would be rerouted from one section to another before completion of the project. The surrounding community would experience 9 additional months of construction-related disruption, including utility relocations and resulting increased lane closures and night-time work, inconvenient and restricted property access to businesses on both sides of Mercer Street, extended periods of traffic detours (including diversions of traffic onto Valley, which would complicate access to South Lake Union Park and cause time loss for the traveling public), slowdown of business activity (including possible reductions in revenues for Seattle Center as patrons forego visits), noise (especially sensitive receptors such as South Lake Union Park), and fugitive dust. Beyond the immediate project area, the longer construction period would result in a longer period of disruption of the substantial traffic flow between I-5 and the Queen Anne, Interbay, Magnolia, and Ballard areas of the city (see the memorandum entitled “Safety Issues of 4(f) Option Reduced Section Shift to the South” in Appendix C).

The longer construction period will increase the length of time that work zone safety issues are of concern. Studies have concluded that work-zone accident rates are approximately 20 percent higher and the severity of those accidents greater when compared to non-work zone areas. This is the result of narrower lane widths, lane restrictions and closures, pedestrian and bicycle access restrictions, reduced sight distance, additional conflict points, and increased traffic control. With the extended construction duration, the corridor will be subject to increased safety risks.

This option would reduce sidewalk and median widths from that of the Proposed Action. The resulting sidewalk widths would not support the pedestrian volumes that the City wants to encourage and that are anticipated to be generated by existing and new uses along the corridor. The sidewalk width on the north side of Mercer Street between Westlake and Ninth Avenues where the historic William O. McKay buildings are located would be reduced from 21 feet to 12 feet and parking would be eliminated. The sidewalk along the historic building is currently 18 feet wide. The sidewalk on the south side of Mercer Street between Ninth and Eighth Avenues would be 12 feet wide compared to 16 feet in the ideal cross-section. The median width (not including left-turn lanes) would be reduced from 10 feet to 8 feet.

In conclusion, the Reduced Section Shift to the South Option would extend the construction time, which would increase disruption to area businesses, residents, the traveling public, and other neighborhoods served by the Mercer Corridor. The longer construction period would result in increased safety risks and adverse and undesirable disruption to both the immediate project area and the larger Seattle community.

Does it have additional construction, maintenance, or operational costs of an extraordinary magnitude?

It is estimated that the costs associated with the Reduced Section Shift to the South Option would exceed the costs of the Proposed Action by \$49.1 million (Exhibit 5-6). Of this \$49.1 million, \$4.5 million is due to the extended time for construction. The additional cost of business disruption is unknown.

This total cost is 43 percent greater than the cost of the Proposed Action, which could reasonably be considered a cost of extraordinary magnitude. As discussed earlier, a feasible and prudent avoidance alternative not only avoids using Section 4(f) property, but also does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In this case, a 43 percent greater cost is a substantial difference, and the economic burden of this greater construction cost could be considered to substantially outweigh the importance of protecting the historic resource.

Exhibit 5-6. Components of Additional Cost of Avoidance Alternative

Component	Cost
Right-of-Way Acquisition	+\$19.0 million ¹
Construction	+\$4.5 million
Mitigation ²	
Existing facilities (UW Phase 1)	+\$3.9 million ³
Facilities under construction (UW Phase 2)	+\$21.7 million
Planned facilities (Interurban Exchange Building)	to be determined if constructed prior to project implementation
Subtotal	+\$25.6 million
Total	+49.1 million

¹ Does not include relocation assistance, which has not been quantified at this stage in project development.

² It is assumed that the cost of retrofitting existing or planned facilities would be included in the Mercer Corridor Project mitigation package.

³ Includes rebuilding the Blue Flame building’s front entrance, relocating utility infrastructure and MRI, and vibration mitigation.

Sources:

Right-of-way costs: <http://www.metrokc.gov/Assessor/eRealProperty.asp>, June 2006.

Construction costs: CH2M HILL, 2006.

UW building mitigation costs: Coleman, 2005.

Is there an accumulation of factors that collectively cause unique problems or have impacts of extraordinary magnitude?

If the factors previously discussed are not individually considered to have impacts that reach extraordinary magnitudes, SDOT believes that the

accumulation of those factors does reach such levels. The following briefly reiterates the key factors associated with the Reduced Section Shift to the South avoidance alternative:

- As noted in the discussions above under *Does it compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need?* and *Are there unique problems or unusual factors present?*, it would adversely affect the UW Medical Facility and, therefore, would diminish the attractiveness of the area to biotechnology/ biomedical research facilities and thus weaken the City's ability to fully achieve its vision for the area and the anticipated rewards in terms of job creation and local economic benefits.
- As noted in the discussions above under *Does it compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need?* and *Are there unique problems or unusual factors present?*, it would have adverse safety impacts, including significantly reducing the safety buffer with the elimination of the parking lanes and sidewalk width reductions, increasing potential conflict between pedestrians and bicyclists with the narrower sidewalk widths, and reducing the median width, resulting in less area to accommodate pedestrians safely.
- As previously discussed under the heading *Are there unique problems or unusual factors present?*, it would compromise the current investment in properties along the south side of Mercer Street, their continued operation at this location, and the potential for future development. In addition to the investment by the UW in the Phase 1 and Phase 2 buildings, investment has been made in the planning, design, and permitting for the Interurban Exchange Building. It would disrupt operations of the UW in the existing Blue Flame Building and the Phase 2 building now under construction. Research would have to be relocated—temporarily and permanently—to accommodate construction.
- As noted in the *Does it result in severe social, economic, or other environmental impacts?* discussion above, because of the current development climate along Mercer Street, it would result in greater impacts than the Proposed Action.
- Also as noted in the *Does it result in severe social, economic, or other environmental impacts?* discussion above, because construction would affect both sides of Mercer Street, it would affect 4 more properties than under the Proposed Action and result in the loss of 35 more jobs.
- As noted in the discussion under *Would it cause severe disruption to established communities?*, a 9-month longer construction period would result in more extensive and undesirable disruption to both the immediate project area and the larger South Lake Union community.

- Under the heading of *Does it have additional construction, operational, or maintenance costs of an extraordinary magnitude?* it was noted that it would exceed the cost of the Proposed Action by \$49.1 million, or a 43 percent increase above the cost of the Proposed Action because of the longer construction schedule, additional right-of-way requirements, and potential mitigation required under other federal regulations.

Based on the discussion above, the Reduced Section Shift to the South Option is not a prudent avoidance alternative. This alternative does not fully meet the project purpose and need; it has unique problems or unusual factors present; it would result in severe economic impacts; it would cause severe disruption to an established community; it has additional construction costs of an extraordinary magnitude; and it has an accumulation of factors that collectively presents unique problems or impacts that reach extraordinary magnitudes.

6. Measures to Minimize Harm to the Section 4(f) Properties

In accordance with 23 CFR Part 774.17, all reasonable measures to minimize harm or mitigate impacts must be included in the project. As noted in the previous section, there is no feasible and prudent alternative to the use of the McKay Pacific Building at 601 Westlake Avenue North. As shown in Exhibit 4-3, removal of the building is necessary to accommodate the additional traffic lanes and the subsequently wider footprint of the improvements. Because the building would be removed, there would be no way to minimize harm to that building. Mitigation for the loss of the McKay Pacific Building at 601 Westlake is discussed in Chapter 7.

7. Proposed Measures to Mitigate for Unavoidable Use of Section 4(f) Property

The historic McKay Pacific Building at 601 Westlake Avenue North would be removed under the Proposed Action, which would incorporate the current site of 601 Westlake. Section 4(f) mandates that all possible planning to minimize harm must occur before a protected resource can be “used.” For historic sites, these measures normally serve to preserve the historic features of the site in accordance with the consultation process under 36 CFR Part 800. It should be noted that Section 106 of the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act, and NEPA are separate legal authorities, but compliance with these authorities is being coordinated so that all legal obligations are met in a corresponding manner.

All reasonable measures to mitigate impacts on the McKay Pacific Building at 601 Westlake Avenue North have been considered. Specific details to carry out mitigation for the use of the historic McKay Pacific Building at 601 Westlake are included as stipulations in a Memorandum of Agreement (MOA) that was crafted through the Section 106 consultation process under 36 CFR Part 800, and is included as Appendix E. This MOA provides for mitigation for both McKay buildings (601 and 609 Westlake Avenue North), as both have been determined to experience an adverse effect under Section 106. The mitigation proposed would entail recordation consistent with Level II Historic American Buildings Survey (HABS) documentation 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 to record general and distinctive attributes.
- c) Digital copies of historic photographs, building plans, and “as-built.”
- d) Utilization of LiDAR technology to scan the exterior surfaces of the McKay buildings.

In addition, an interpretive display will be designed and developed to 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. The interpretive display will be open to the public and designed in compliance with the requirements of the Americans with Disabilities Act. Also, SDOT will

dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle as part of the City of Seattle's Historic Resources Survey and Inventory. The data will be made available in appropriate formats to both the City of Seattle and Department of Archaeology and Historic Preservation databases.

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 removal of the buildings, all work in the area of the discovery shall cease and SDOT shall follow the procedures of the approved Unanticipated Discovery Plan.

8. Coordination

Because only one potential Section 4(f) resource (the historic McKay Pacific Building at 601 Westlake Avenue North) would be used as defined by Section 4(f) regulations, formal coordination was focused on the officials of those agencies owning or administering the protected resource. The SHPO at the Department of Archaeology and Historic Preservation and the City of Seattle Historic Preservation Officer were consulted regarding the historic properties, the Area of Potential Effect, and potential mitigation measures. The CHPO and SHPO participated in field visits to the project area. A letter from the CHPO regarding the eligibility of the McKay Pacific Building for listing as a Seattle Landmark property is included in Appendix A. Coordination with City staff, FHWA (with assistance from WSDOT and SDOT), and the SHPO was ongoing throughout the NEPA process.

The Environmental Assessment and Draft Section 4(f) Report were issued on December 30, 2008. SDOT held a public hearing in an open house format for the project EA on January 13, 2009. The public hearing was also advertised through the following means:

- Press release to media contacts sent on December 30, 2008
- Requests to local publications to run community calendars announcements
- Posting on the project Web site
- Posting on the WSDOT calendar
- Mailing a project newsletter to approximately 8,500 addresses within the study area and to all individuals and organizations on the project database

A total of 55 people attended the public hearing. Public and agency comment themes included traffic and stormwater considerations. The comments are shown in Attachment 1 of the FONSI along with SDOT's responses to issues raised. The U.S. Department of the Interior reviewed the Environmental Assessment and in their letter noted that the project does not appear to impact any parks protected by Section 4(f). They also deferred to the State Historic Preservation Officer for any assessment of historic impacts and any required mitigation. There were no other comments with regard to Section 4(f).

9. Conclusion

There are no feasible and prudent avoidance alternatives to the use of the McKay Pacific Building at 601 Westlake Avenue North. The project team identified four potential avoidance options, but due to fatal flaws in safety or feasibility, three of them were rejected from detailed consideration. The fourth avoidance option, Reduced Section Shifted to the South, was evaluated in detail. After analysis, however, it was concluded that this option is not a prudent avoidance alternative. It does not fully meet the project purpose and need; it has unique problems or unusual factors present; it would result in severe economic impacts; it would cause severe disruption to an established community; it has additional construction costs of an extraordinary magnitude; and it has an accumulation of factors that collectively present unique problems or impacts that reach extraordinary magnitudes.

Because the building would be removed, there would be no way to minimize harm to that building. However, the sidewalk was narrowed from the standard width of 16 feet to 6 feet to avoid displacement of the McKay Ford-Lincoln Building at 609 Westlake Avenue North. Specific details to carry out mitigation for the use of the historic McKay Pacific Building at 601 Westlake are included as stipulations in a Memorandum of Agreement that was crafted through the Section 106 consultation process under 36 CFR Part 800. This MOA provides for mitigation for both McKay buildings (601 and 609 Westlake Avenue North), as both have been determined to experience an adverse effect under Section 106. The mitigation proposed would entail recordation consistent with Level II Historic American Buildings Survey documentation. In addition, an interpretive display on the history of the building will be designed and developed, and SDOT will dedicate funds to the City of Seattle Department of Neighborhoods for survey and inventory work in South Seattle. Despite the determination of “adverse effect” for the McKay Ford-Lincoln building (609 Westlake), it has been determined that the structure will retain its eligibility for the National Register of Historic Places.

Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the Section 4(f) property known as the McKay Pacific Building at 601 Westlake Avenue North and the proposed action includes all possible planning to minimize harm to the property resulting from such use.

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Weeks, Kay D., and Anne E. Grimmer. 1995. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Cultural Resource Stewardship and Partnerships, Heritage Preservation Services, U.S. Department of the Interior, National Park Service. Washington, DC.

APPENDIX A

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



APPENDIX B

**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.)

Signature of commenting official/Title Date

State or Federal agency and bureau

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 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 at 615 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 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 is 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)

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(8-86)

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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

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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 601-609 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 Grainger (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)

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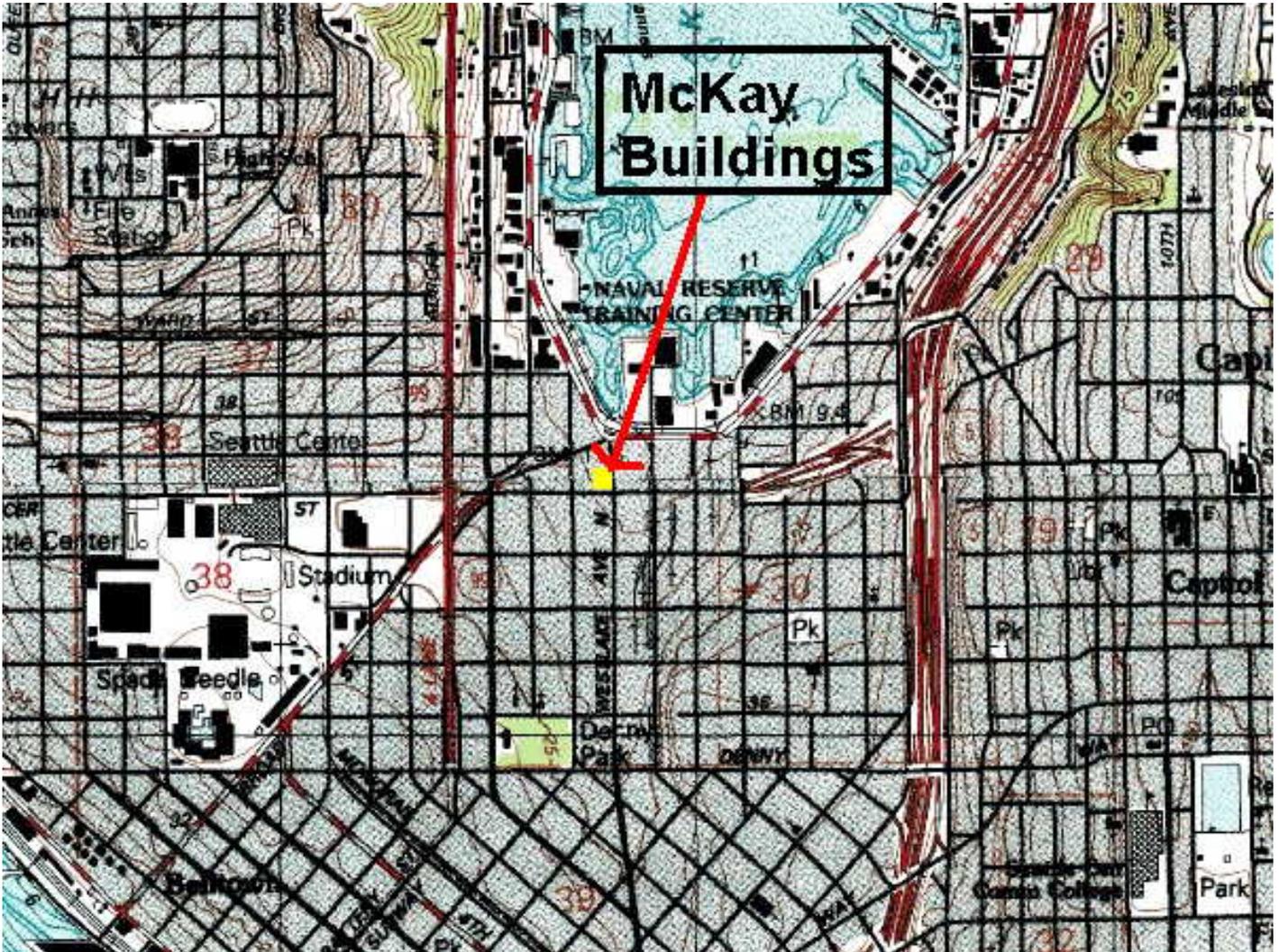
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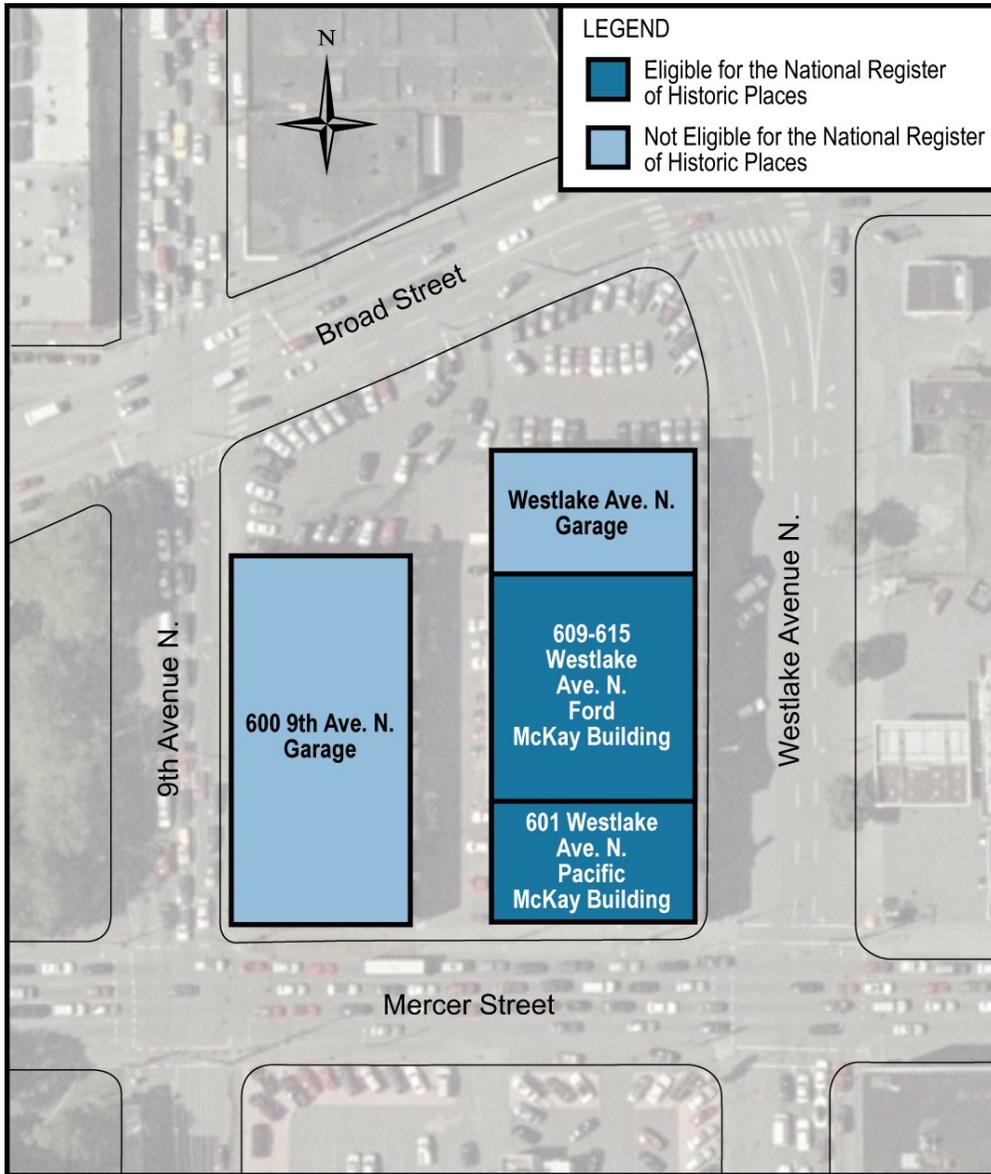
Verbal Boundary Description

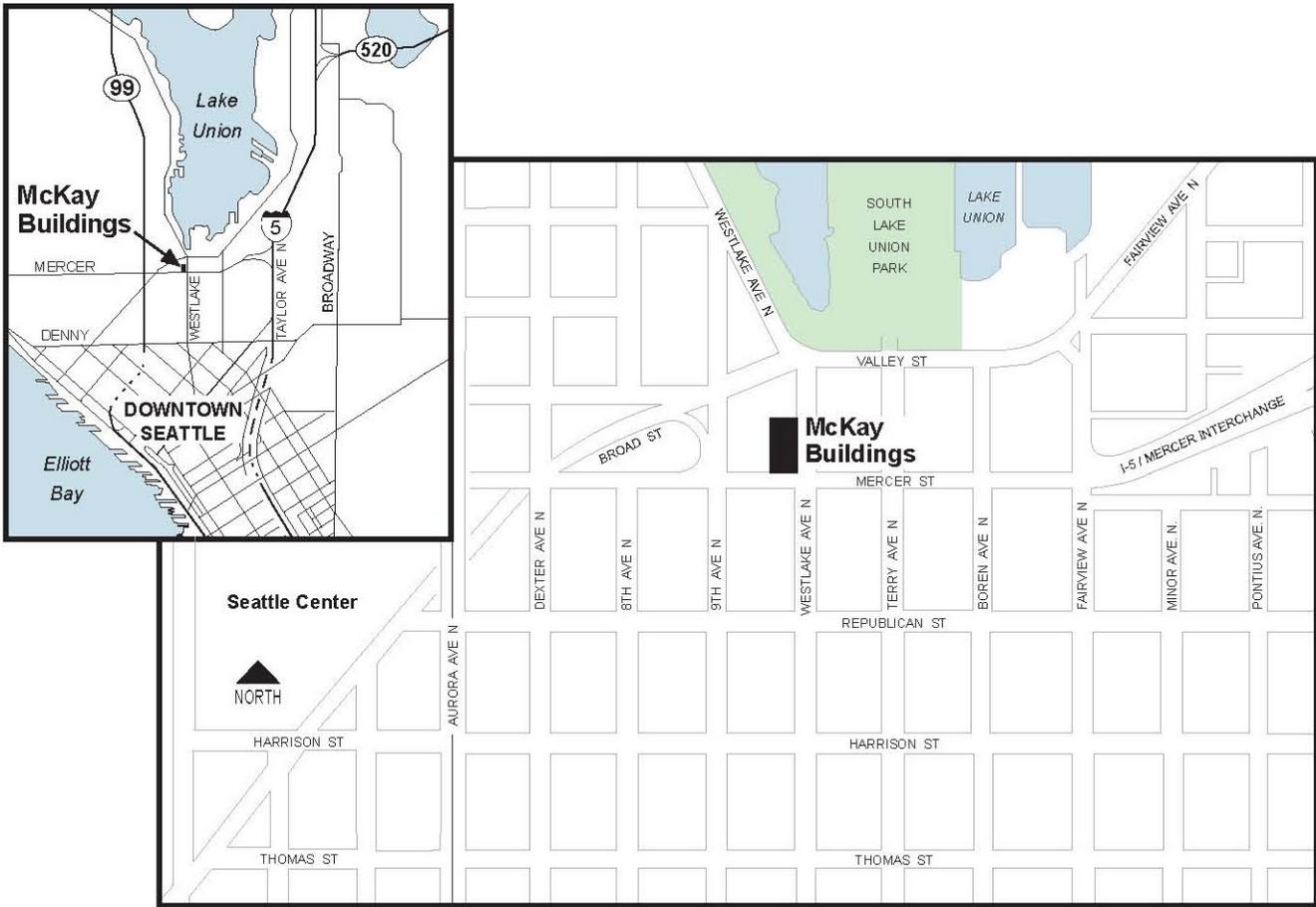
Parcel #4088803385, Lake Union Shorelands Addition, Block 78, All Lots, Section NE 30, T25, R4

Verbal Boundary Justification

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







609 Westlake Avenue North, Ford McKay Building - front façade.



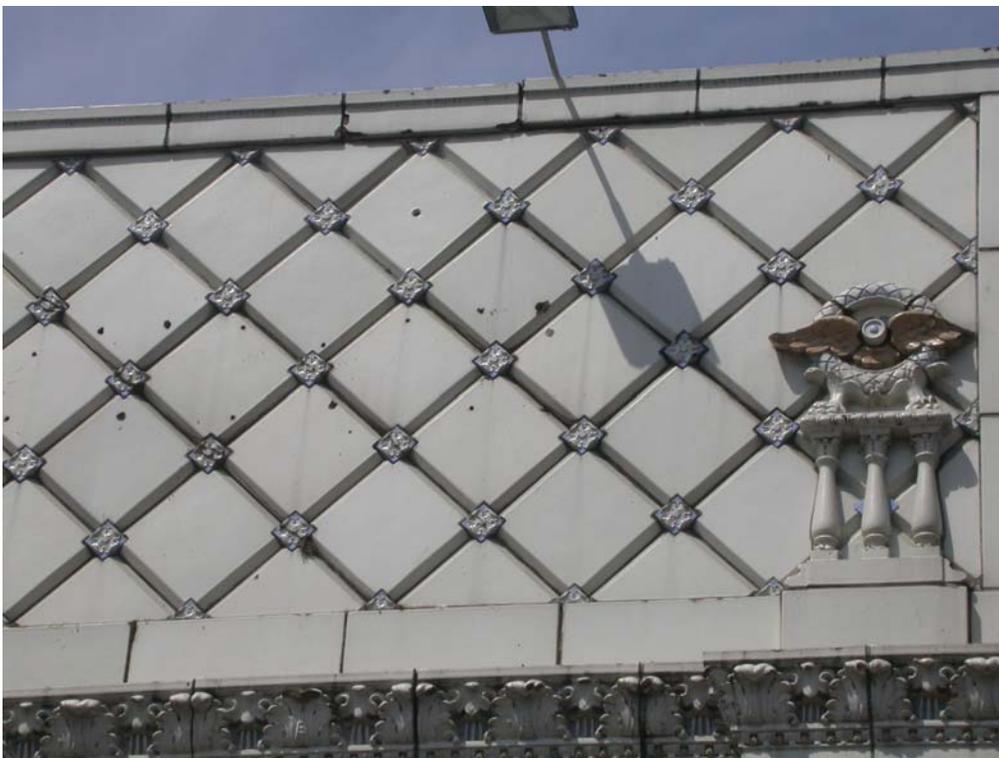
609 Westlake Avenue North, Ford McKay Building - detail on front façade.



609 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 facade. 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.

APPENDIX C

**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
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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

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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

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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.

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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.

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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 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 D

The Ford McKay and Pacific McKay Buildings Current State and Reconstruction Analysis

The Ford McKay and Pacific McKay Buildings Current State and Reconstruction Analysis

May 5, 2008



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The Ford McKay and Pacific McKay Buildings

Current State and Reconstruction Analysis

May 5, 2008

INTRODUCTION

Background

This report presents a technical preservation study of two historic automobile dealership buildings located in the Westlake Corridor of Seattle's South Lake Union neighborhood. The Ford McKay and Pacific McKay Buildings are adjacent structures dating from the 1920s, which together form a single designated Seattle landmark. They are located on the northwest corner of the intersection of Westlake Avenue North and Mercer Street. A major transportation project that would involve widening Mercer Street is planned by the City of Seattle. The property owner, City Investors XX, asked the study team to examine the impact that this proposed widening of the public right-of-way would have on the buildings, and to recommend how the historically significant elements of the buildings might be preserved if the City proceeds with the Mercer Corridor Project.

This report summarizes the buildings' character-defining features and existing conditions and deficiencies, including structural issues and monitoring of ongoing settlement problems. It describes the potential for a combined approach of rehabilitation, restoration, and reconstruction of the historic elements of the buildings; and details specific methods by which the historic terra cotta facade materials and interior showroom materials can be salvaged, stored, and reinstalled on a new structural frame.

Study Team

This study was undertaken with involvement of the following participants:

Vulcan Real Estate: David Nelson, Senior Director; and John Robinson, Underwriting Manager

BOLA Architecture + Planning: Susan Boyle and Rhoda Lawrence, Principals; and Sonja Sokol Fürész, Curtis Bigelow, and Matt Hamel, Project Team

Perbix Bykonen, Structural Engineers: Todd Perbix, Principal

Rafn Company, General Contractor: Steve Stroming, Director of Commercial Projects

Pioneer Masonry Restoration Company: Mike Field, President

Pioneer Waterproofing, Masonry Restoration Contractors: Gary Vonada and Curt Clark

Krazan & Associates, Structural Monitoring: Mark Liebman, Senior Forensic Investigator; and Noah Liebman, Forensic Technician

Brian Allen, Documentary Photographer

(Cover photograph by Brian Allen, October 2007.)

The interdisciplinary design team, led by BOLA Architecture + Planning, is made up of professionals who are recognized in the field of historic preservation.

Susan D. Boyle, a principal with BOLA, has degrees in art history and architecture. She has focused on historic preservation in her professional and civic work. Her experience spans more than two decades and includes planning and design projects involving over 90 buildings listed on the National Register or designated as local landmarks. Susan is a former member and chair of the Seattle Landmarks Preservation Board.

Sonja Sokol Fürész holds an M.A. in Historic Preservation Planning from Cornell University and a B.A. in Art History from Carleton College. She has been with BOLA for four years, working on a range of projects including local landmark and National Register nominations, historic surveys, building condition reports, and federal tax credit applications. Sonja is a former member of the Pioneer Square Preservation Board.

Structural engineer Todd Perbix, a principal at Perbix Bykonen, has a B.A. in Architecture from UC Berkeley in addition to engineering studies at the University of Washington. A registered engineer in both Washington and California, his 30 years of practice in the Northwest includes a wide range of structural design projects including new construction, preservation of older buildings, and building evaluations for public agencies, owners, and lenders.

Mark Liebman is a Senior Forensic Investigator at Krazan & Associates. He holds a B.S. in Applied Physics from Hofstra University. With more than 20 years of experience, his forensic investigation and condition assessments include work on historic and modern structures across the country.

Two well known masonry restoration contractors were involved in the project. Both Pioneer Masonry Restoration Company and Pioneer Waterproofing have extensive experience with brick, stone, and terra cotta buildings, including unreinforced masonry structures. They have worked on projects for federal and local public agencies, major institutions, and private property owners.

TREATMENT APPROACH

Treatment Considerations

According to the Secretary of the Interior's Standards, there are four treatment approaches for historic properties: preservation, rehabilitation, restoration, and reconstruction. The proposed work on the Ford McKay and Pacific McKay Buildings is a combination of three of these approaches. The three selected treatments are defined by the National Park Service (NPS) as follows:

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

The three approaches – rehabilitation, restoration, and reconstruction – have been chosen based on the historical and architectural significance of the buildings, their physical condition, proposed future use as commercial buildings, and intended interpretation. The two buildings are locally significant in representing the early 20th-century automobile industry and as increasingly rare examples of highly decorated, terra cotta-clad commercial structures. Significant settlement of the Pacific McKay Building is impacting its structural and material integrity. The distinctive materials, features, and interior spaces are essentially intact, despite the problems with soil subsidence and settlement.

Additionally, the Mercer Corridor Project will require that these buildings be relocated. In looking at all current circumstances and conditions, the three recommended approaches are clearly justified.

Moving a building is not a preferred preservation approach, but at times it may be the only alternative to demolition. Moving should be undertaken only as a last resort, as it "unavoidably destroys some of the historic fabric and lessens the historic integrity of the building" (Curtis, p. 2). In Seattle, many large mansions were moved from the site of the I-5 freeway in the late 1950s and early 1960s, and house-moving has resurged in recent years.

Planning for the move of a historic building requires an initial analysis of the building to verify it could be moved, followed by planning and design of the move with the selection of the recipient site and of a qualified moving contractor. In 2005, the study team considered the option of moving the two historic buildings and analyzed the building structures to determine if this approach was feasible. Three alternative procedures were considered in planning this project: 1) moving the two buildings separately, each as an intact structure; 2) partial disassembly and move of the primary facade walls and significant interior features, with attachment onto new structural frames; and 3) total disassembly including salvage and reconstruction.

Moving a building intact is considered the optimum approach when it can best preserve original fabric. However, this approach does not appear feasible given the sizes of the Ford and Pacific McKay Building showrooms (33' by 118', and 34.5' by 58.5' respectively) and their structural components, which consist of concrete frames with large window openings, and a slab on grade in the case of the Pacific McKay Building.

Partial disassembly would seem to allow for handling each structure in the largest workable pieces. In this approach, the character-providing interior features would be removed, and the interior of the concrete facades would be braced in sections with shotcrete or temporary steel frames. The pieces would be detached from the slab and moved to a new, similar-sized structural frame and reassembled. The interiors would be reconstructed and salvaged elements reapplied. However, an analysis of the terra cotta facades and underlying concrete frames suggests that this method could result in greater damage to the two buildings than would total disassembly and reconstruction of the components. Furthermore, the character of the building envelopes would be changed in an actual move or partial-disassembly scenario, as the new wall sections would be much thicker due to necessary new framing.

The study team concluded that total disassembly and salvage of the terra cotta and significant exterior elements of both buildings, as well as interior elements of the Pacific McKay showroom, and their installation on a new structure would best serve the preservation goals of the project.

Following industry-accepted preservation practices, a specific sequence of activities has guided the proposed work on the buildings to date. It began with research, identification of historic character-defining features, and exploration and analysis of deficiencies, including non-destructive testing and ongoing monitoring of settlement, followed by recommendations based on the research, identification, and material testing.

Analysis by the structural engineer indicated that structural conditions would require extensive replacement of basement foundation components. (Structural engineer's memos are appended to this document.) In addition, for continued use the building will require upgrading of its systems.

The proposed plan is to maintain and salvage the historic elements of the two buildings, repair those that are damaged, replace those that cannot be repaired, and provide a new stable, structural frame to hold them. In accordance with the NPS Standards for Rehabilitation, new and compatible uses will be identified in the future for the building. Distinctive materials, features, and spatial relationships that characterize the property will be retained, albeit within a new structure. Work needed to stabilize, consolidate, and conserve materials and features will be physically and visually compatible with existing materials, identifiable upon close inspection, and properly documented for future research. Where severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and – where possible – materials. For example, terra cotta that is damaged beyond repair will be replaced with new, matching terra cotta. Replacement of missing features will be substantiated by documentary and physical evidence. Chemical cleaning and other physical treatment will utilize the gentlest means possible, and treatments that cause damage to historic materials will not be used. Non-original elements added to the buildings over time, such as the signage structure on the rooftop will be removed.

In particular, the project will rely on *The Secretary of the Interior's Standards for Reconstruction*, which the NPS cites as follows:

1. *Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.*
2. *Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.*
3. *Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.*
4. *Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.*
5. *A reconstruction will be clearly identified as a contemporary re-creation.*
6. *Designs that were never executed historically will not be constructed.*

The historic elements of the buildings will be reconstructed in a manner consistent with these standards. The newly structured buildings will depict non-surviving portions of a property based on the documentary and physical evidence, which is available. This will permit accurate reconstruction with

minimal conjecture, which is essential to the public understanding of the property. The reconstruction will include measures to preserve remaining historic materials and features, through salvage and reinstallation, and replication of historic spatial relationships. The reconstructed property will recreate the appearance of the non-surviving historic property in materials, design, color, and texture.

In the rehabilitation plan, any necessary new elements such as a linked entry lobby, stairwells, elevator, and restroom will be designed in a compatible but contemporary fashion.

Landmark Status

The Ford McKay and Pacific McKay Buildings, as an assembly, were designated a single landmark by the City of Seattle Landmarks Preservation Board on April 19, 2006. According to the controls and incentives agreement signed by City Investors XX and the City Historic Preservation Officer, Board approval is required for alterations or significant changes to "the exterior of the Pacific McKay Building, the showroom interior of the Pacific McKay Building including the stairs and mezzanine level up to the west wall, the exterior of the Ford McKay Building, and that portion of the site east of the vacated alley but not including the McKay Service Garage building."

Making changes to the protected elements of the buildings requires a Certificate of Approval from the Seattle Landmarks Preservation Board. We anticipate the Landmarks Preservation Board would be interested in the following character-defining features of the two buildings as it reviewed any project:

Ford McKay Building

Exterior:

- Front lot line location as a component of continuous street front commercial strip
- Mid-block siting with few openings and little character on side walls
- Two-story, flat-roofed mass
- Tall parapet, which originally served as a sign band
- Peaked parapet at each end bay
- Rhythm of six bays with large glazed storefront display windows and transoms
- Glazed terra cotta cladding with decorative details especially at second story/parapet (light gray color)
- Recessed entry with angled side display windows (originally with wood storefront doors)

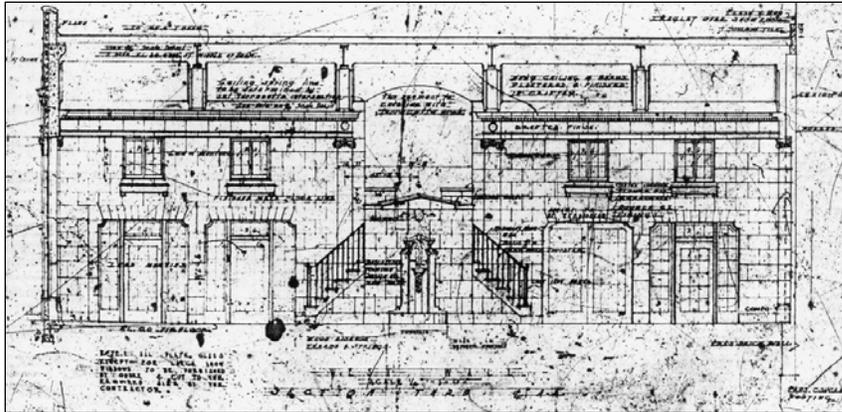
Pacific McKay Building

Exterior:

- Highly visible corner siting on a busy intersection with exposure of two glazed storefronts
- Front lot line location as a component of continuous street front commercial strip
- One-story, flat-roofed mass
- Tall parapet, which originally served as a sign band
- Large glazed storefronts, with uninterrupted plate glass display windows
- Tripartite bay division of east facade, emphasizing central entry
- Glazed, polychrome terra cotta cladding with sculptural and ornate details
- Carved wood entry surround with glazed wood door and leaded windows

Interior:

- Volumetric showroom space with suspended, plaster-finished ceiling
- Showroom designed as "courtyard"
- Decorative plasterwork pilasters and molding
- Central terra cotta fountain and formal stair leading to the mezzanine
- Oak trim at wide windowsills, stairs and balustrade, and interior windows
- Interior casement windows with leaded glass
- Tall marble base
- Patterned terrazzo and marble floor

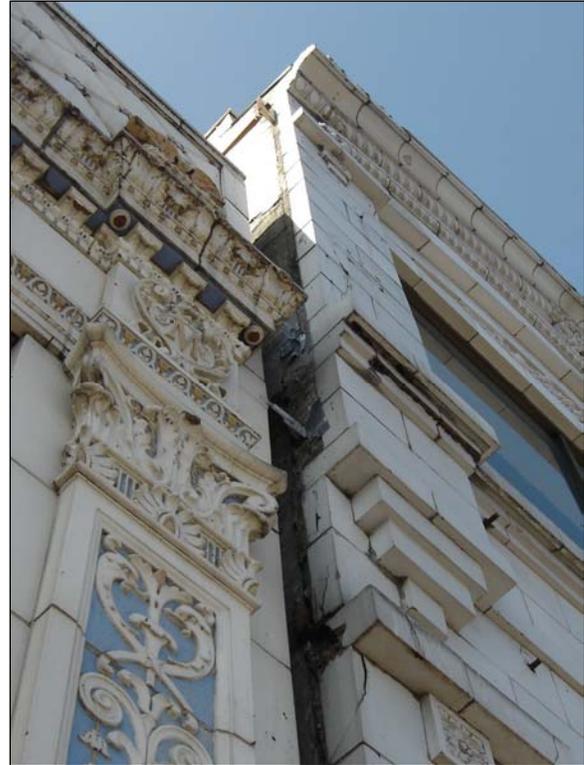


The showroom and mezzanine space of the Pacific McKay Building is a protected feature of the local landmark property. The showroom was designed to give the impression of a courtyard, with a hung, barrel-vault-shaped ceiling, heavy crown molding, ionic pilasters, patterned terrazzo and marble flooring, and a double stairway in front of the west wall. This stair, embellished with a terra cotta 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. 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.

Terra Cotta Cladding

The cladding on the primary east and south facades of the two buildings may be the most significant historic feature. Seattle has a fine heritage of terra cotta buildings that date primarily from the 1890s through the 1920s. Early 20th-century building codes required "fireproof" construction, making terra cotta, like brick, a popular material in Seattle in the post-fire era.

Five types of ornament typically characterized glazed terra cotta: supports (columns and pilasters; bands (friezes, cornices, etc.); panels; diapers (overall patterns); and free ornaments (rosettes, finials, cartouches, etc.). Each type of ornament was applied at a particular place: supports at the building base, cap, and sometimes corners; bands between major horizontal divisions and at the roof line; panels between windows; diaper on the field; and free ornaments as accents at roof line, corners, and intersections of major compositional lines. (Franz Sales Meyer, *A Handbook of Ornament*, London, 1924, cited in Ferriday, p. 27.)



Decorative glazed terra cotta often embodied classical motifs, as evident on the Ford McKay and Pacific McKay Buildings. 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.

Terra cotta units on both the Ford and Pacific McKay Buildings originally were attached to the concrete structures with narrow steel wire ties, except for those at the parapet cap, which are simply mortared in place. The terra cotta appears to be generally in good condition, but temporary removal of several units indicated that steel tie wires may be deteriorated and mortar may be unsound. Some cracks and spalls are evident in the terra cotta units. A significant number of anchorage holes are apparent in the unit faces in the signage bands on the upper portions of both buildings. Some of the cracks and holes have been patched, while others still appear open to the weather.



PRESERVATION DESIGN & TECHNICAL ISSUES

Structural Monitoring and Testing

The owner and the team's architect and structural engineer observed evidence of settlement in 2004 and 2005. This problem was most notable on the east face of the buildings, where there was a separation between the two buildings of up to 8" or 9" in width at the top of the crack. In addition, it was apparent that the entire facade of the Pacific McKay structure was listing, with settlement along the southern perimeter wall of the showroom, evidenced also by a long crack in the wood sill inside the south display windows. Both consultants thought that the settlement was a long-term but stable situation.



In early 2007, it was observed that settlement continued to occur. The top width of the separation between the two buildings on the east facade appeared to have increased, and settlement along the south perimeter wall resulted in a full vertical crack in the glazing in the west display window on the south facade. (The glazing was subsequently replaced.) The interior sill crack appeared longer, and several new cracks were noted in the granite base on the east facade. In August 2007, at the recommendation of the team's architect, the owner commissioned Krazan & Associates to undertake a monitoring program and survey of subgrade conditions to determine the extent of settlement problems. Krazan, a specialist in non-destructive testing techniques, initiated the work in mid-August, and to date has provided the owner with five sequential reports.

Krazan installed 16 crack monitors and four tilt meters. They also scanned the grade along the perimeter east and south walls of the Pacific McKay building using ground-penetrating radar equipment. The scanning results, along with tilt meter and crack monitor readings, document measurable, though slight, increases in the separation between the two buildings. This suggests that settlement may be ongoing.

As noted in the structural engineer's report appended to this document, the original design drawings for this building indicated pile foundations. Unlike the Ford McKay Building, which has a basement and pilings, the Pacific McKay may have been constructed with a conventional foundation, including a slab on grade with footings under columns. The structure of the Pacific McKay is essentially a concrete box, and settlement along its south wall appears to cause the entire structure to tilt.

The subgrade conditions, as documented by Krazan, appear to confirm other information and assumptions about the site. According to historic maps and photos, the property was once below the level of Lake Union or was along its southwest shoreline near outflow from a creek bed that ran generally along the route of Westlake. This area was filled in the late 19th and early 20th century with sawdust from nearby lumber mills and other materials. Ongoing building settlement may be due to subsidence of unstable soils from below foundations or footings. The specific source of settlement cannot be known, but the potential problem warrants further monitoring.

Increased settlement will impact the soundness of the building's historic terra cotta cladding. If there is differential settlement, more cracking will occur. In addition, water infiltration into the exterior walls could result in spalling of the terra cotta, as well as further deterioration of the terra cotta units and joints under adverse weather conditions. Thus, periodic visual inspection of the terra cotta is recommended.

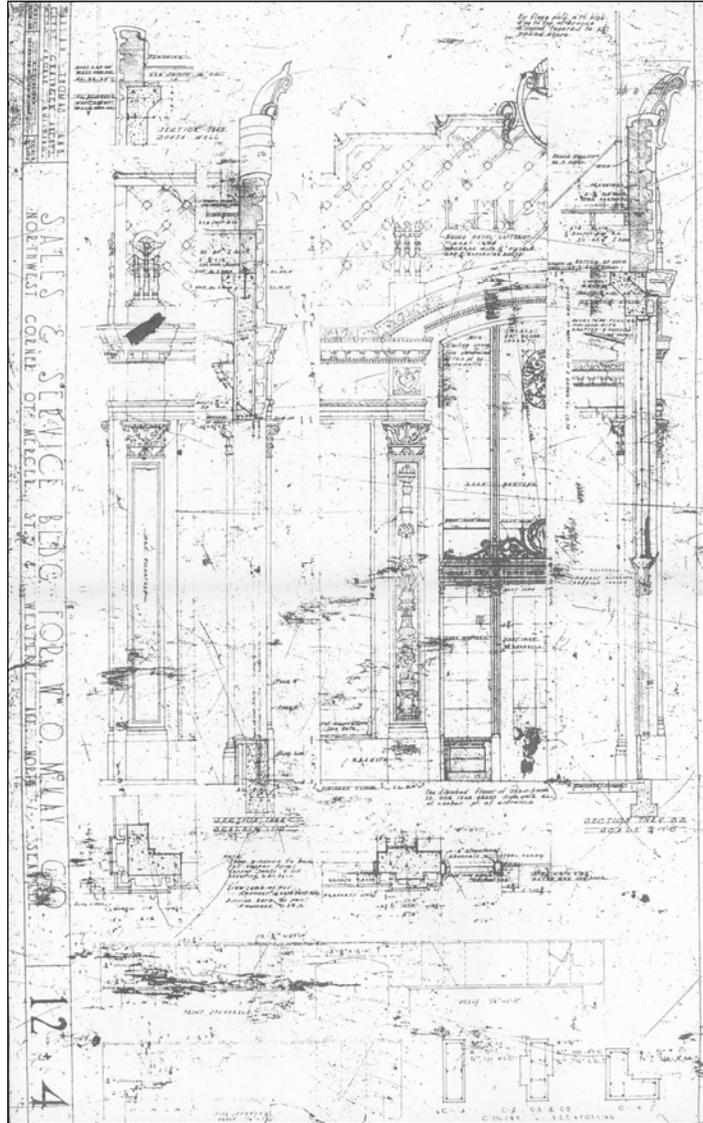
Steps in the Proposed Reconstruction

Planning the Terra Cotta Salvage Work

The proposed preservation approach entails removal and salvage of the terra cotta cladding from the Ford McKay and Pacific McKay Buildings; and the main entry door surround and transom, granite base, and interior showroom elements of the Pacific McKay Building.

Preparation for the work must include documentation of the components to be salvaged. BOLA has commissioned large-format photographs of the building elevations that can provide the basis for elevation drawings, to be used for labeling each piece of terra cotta. The configuration and appearance of the entire original facades, and the location of each terra cotta unit, will be documented in this way. Labeling will also enable the contractor to pack pieces for storage in an arrangement that corresponds with the sequence in which they would be unpacked and erected on a future structure.

Two beneficial aspects of the existing site conditions are that complete removal of the terra cotta from a facade is an easier process than detaching a few individual pieces at a time, and that working on an unoccupied building is simpler than on an occupied building. Ideally, an interior space on-site will be used as a work space in which to clean the terra cotta as it is removed from the buildings and prepare it for packing and storage. This is preferable to removing it from the site, cleaning and repairing elsewhere, and then packing and moving it again to storage.



Technical Specifications and Contractor Qualifications

For the proposed project to be successful, it is critical that the physical salvage work be undertaken by skilled craftspeople and a specialty masonry contractor with sufficient similar experience on historic, terra

cotta-clad buildings. Preliminary planning and exploratory work on the buildings to date has been undertaken by two such companies: Pioneer Waterproofing of Portland and Pioneer Masonry of Seattle.

To assure that the masonry contractor will have the correct qualifications, we recommend that the following information be required as part of any bid, and that the owner's representative review the provided information:

1. The contractor should cite a minimum of five similar projects involving the removal and reinstallation of terra cotta from a historic building; provide a description of the cited work, its schedule, and construction cost; and provide name and contact information for the owner or architect.
2. The contractor should identify the names of all field personnel to be assigned to the project and provide information detailing their involvement in similar projects, citing the individual's specific responsibilities. No changes in personnel should be allowed during the work without written approval from the owner's representative.

The salvage work should be in accordance with bid documents, including technical specifications, provided by a preservation architect. Field tests should be performed before the work begins, to demonstrate the level of care that will be undertaken by the workers on the job, with on-site observation and acceptance by the owner's representative.

Replacement terra cotta shall be identified by the contractor and approved by the owner's representative and the preservation architect. Shop drawings and submission of material samples will be required for any replacement units to assure adequate color match. Furthermore, the terra cotta supplier should be required to provide adequate information to assure that it is qualified to provide the material and meet the project schedule.

A similar approach will be required of the specialty contractor providing the new terrazzo. The floor pattern will be carefully documented before other work is undertaken, and its pattern and colors identified in detailed drawings. Samples of the existing material will be sent for laboratory testing to identify the aggregate matrix and stone composition of both the terrazzo and the marble strips. The new terrazzo floor may have some additional joints or screeds as necessary to allow for adequate expansion and contraction and minimize cracking.

Removal, Salvage, and Storage of Terra Cotta

In 2005, the study team undertook preliminary investigations to determine underlying conditions and to verify that material could be carefully removed without damaging it. Gary Vonada and Curt Clark of Pioneer Waterproofing, of Portland, performed this work and evaluated conditions. In 2007, the preservation architect consulted with Mike Field of Pioneer Masonry, of Seattle, who described the recommended process for removal, salvage, and proper storage of the terra cotta veneer from the two buildings as follows:



1. Based on the photographs and drawings provided in the planning stage, the masonry restoration contractor will identify and label each piece of terra cotta on the drawings. The unique

- identification number for each piece will be based on location and possibly shape or placement as well.
2. If necessary, the exterior of the buildings will be lightly pressure washed before disassembly begins. Terra cotta will be stripped off the buildings from the top down – starting at the parapet and working down the face of the building to the base. The use of a scissor lift is ideal for this work; a scaffold will be used if the sidewalk cannot be closed. The contractor will remove the terra cotta pieces by carefully cutting out joints and then ties. Terra cotta will be removed by hand.
 3. As they are removed from the building frame, the pieces of terra cotta will be cleaned, labeled, repaired if necessary, and prepared for packing.
 4. During the salvage process, the terra cotta will be carefully inspected. Patching and conservation of the original terra cotta pieces will be performed wherever possible. Terra cotta pieces that are damaged beyond repair and will require replacement will be identified. Where it is necessary to procure replacement terra cotta, color matching and molding will be undertaken by a terra cotta manufacturer. The process of obtaining replacement terra cotta can take months; therefore it should be initiated as soon as new pieces needed are identified.
 5. The terra cotta pieces, once cleaned, prepared, and labeled, will be packed for storage. Flat pallets (4' x 4' x 2'+) or crates (4' x 4' x 4'+) can be used, depending on the space available for storage. The terra cotta should be arranged on the pallets (or in the crates) sequentially based on the anticipated order of erection. (They should not be simply packed with as many pieces as possible wherever they will fit.) The terra cotta pieces will be protected with foam or padding between the units, and shrink-wrapped for stabilization if placed on pallets. (The wrapping is for stabilization only – the material should not be sealed.) Containers must be numbered and contents listed.
 6. Pallets cannot be stacked, whereas crates could be stacked two-high. For the terra cotta from the Ford McKay and Pacific McKay Buildings, 3,000-4,000 square feet of floor area will be needed for storage if pallets are used; 1,500-2,000 square feet if crates are used. Storage should be in a secure, covered location, where the material is protected from weather.



Salvage of Interior Elements and Finishes

The proposed work will salvage the historic interior elements of the Pacific McKay showroom, including the west wall office doors, windows, transoms, and window boxes; stair treads and risers; wood trim; and terra cotta fountain. Because of the potential hazardous material content of the "Craftex" plaster, we are planning to replicate, rather than salvage, the decorative plaster. Molds will be taken of the decorative plaster molding and pilasters for use in reconstructing these original features. The new space will

dimensionally match the historic showroom volume and will have the same barrel-shaped ceiling. The existing original terrazzo and marble floor will be documented and sampled so that the new floor can be provided to match the existing pattern, stone matrix, size, and colors.

New Frame and Reinstallation of Salvage Material

The new structure, which will be part of a larger building, will be designed and constructed to replicate the thickness and dimensional detail of the existing building. Stainless steel or copper anchor ties will be embedded to fasten to the terra cotta as it is reinstalled. Mortar will be applied to match the original in color, texture, tooling, hardness, and joint width on each building. Special attention will be paid to sky-facing joints, and these may receive additional detailing.

In addition to the original terra cotta, the new structure will contain the salvaged leaded glass and transom and decorative wood header on the Pacific McKay Building. Other display windows on both buildings will be new, code-compliant double glass units on metal frames. At the second floor of the Ford McKay Building, double-glazed steel sash windows will be provided, detailed to match the historic industrial steel sash, which has been removed and replaced. At the main floor of the Ford McKay Building, new wood-framed transoms will be provided over the display windows. In a restoration effort, the new windows will match the original ones, rather than the current replacement units.

Examples and Case Studies of Terra Cotta Removal and Reinstallation

The Winch Building, Victoria, BC

The Winch Building (1912), near the center of downtown in Victoria, BC, serves as an example of a completed project that involved a process similar to that proposed for the Ford McKay and Pacific McKay buildings. This mid-block, two-story building was clad with glazed terra cotta, including decorative detailing around the entrance and a large cornice. A new development was planned that called for demolition of four historic buildings, including the Winch Building. A compromise between the developer and the City and concerned citizens resulted in the plan to remove, salvage, repair, and restore the terra cotta cladding, and then reinstall it in the original configuration on a new structure.

After consideration of several approaches for removing the terra cotta, dismantlement of the facade by single units was recommended as the best way to prevent damage to the terra cotta. As each terra cotta unit was removed using saws and small pneumatic hammers, it was labeled and its location marked on a record drawing. The terra cotta was packed onto pallets, taken to a mason's storage yard, and then cleaned and repaired at the restoration contractor's shop.

While at the storage yard, one example of each of 35 different terra cotta shapes was measured and documented, and a section profile generated. Condition of the units and locations of existing anchor holes was also established, and a scope of work for repair and reinstallation was developed, from which specifications could be prepared. The terra cotta units were also cleaned with a gentle two-part cleaning system.

In this project, the new structure onto which the terra cotta was installed was concrete. As a result, a masonry backup wall that duplicated the system of the original structure was attached to the exterior of the new concrete wall. The project was completed in 1990. (All information on the Winch Building project is from the Slaton & Morden article.)

Vance Building, Seattle

The Joseph Vance Building (1929) is a terra cotta-clad building in downtown Seattle. In 1996, the building owner hired a contractor to remove the entire terra cotta facade because of concerns about its stability after a piece had fallen off. By the time the contractor had removed a section of terra cotta at the upper northwest corner, the costs had gotten so high that the owner reconsidered the project and chose to restore the terra cotta facade. At that point, the building owner hired Pioneer Masonry to restore and stabilize the balance of the facade. Pioneer completed the stabilization and restoration work, but after they ordered the new terra cotta to replace the northwest corner, the owner decided to halt that portion of the work. Because Pioneer was well into the procurement process of the terra cotta, they proceeded to have the terra cotta delivered, and it was stored in crates for ten years. A new owner bought the building in 2006 and subsequently hired Pioneer Masonry to complete the work in the summer of 2007.

This example illustrates that when necessary and if done properly, terra cotta can be stored for an extended period of time without detriment to the material. (Project information from Mike Field, Pioneer Masonry.)

Roosevelt High School, Seattle

On the Roosevelt High School (1922), a designated Seattle landmark, a brick and terra cotta section of the facade approximately 40' by 60' was removed. These original materials were labeled, prepared, and stored, and the remaining portion of the structure at that location was demolished. Subsequently, a new portion of the frame was constructed, and original masonry was reapplied to the new structure in its original configuration. (Project information from Mike Field, Pioneer Masonry.)

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memorandum

Date: 5/5/08
To: Vulcan, Inc.
505 Fifth Ave. S., Suite 900
Seattle WA 98104
fax: 342-3000
Attn: John Robinson
From: Todd Perbix

Project: Pacific McKay & Ford
McKay Bldgs.
Project #: BWA022
Copy to: Susan Boyle, BOLA

Re: Overview of current structural information

The purpose of this memo is to provide a general review of the current condition of the Pacific McKay and Ford McKay Buildings based on our site visits and document reviews as summarized in our memo of January 23, 2006, along with five reports monitoring tilt and settlement measurements made by Krazan & Associates from September 13, 2007 through April 7, 2008.

To summarize our opinion based on our own work and a review of the Krazan measurements, it is our impression that the structure of the Pacific McKay Building is currently both fragile physically and continuing to settle and move laterally. It is unclear at this point whether or not this movement is consistent over time, or associated with recent movement of the surrounding soils. Nonetheless, the structure is experiencing a rate of movement consistent with its historical pattern of settlement and can be expected to experience continued damage to its façade and interior floor supported elements over time, regardless of unusual circumstances, such as earthquakes.

Project Description: Pacific McKay Building

The Pacific McKay Building is located at the northwest corner of Westlake and Mercer. It is the southernmost of the two historic buildings on the site, and was constructed in 1925 as an automobile dealership. The designers for the structure were well-known Seattle architects of the era, Harlan Thomas and Clyde Grainger. (The portion of the building to the west of the showroom appears to have been an earlier brick structure which has now been extensively altered. That portion of the building is not a part of the structure described in this memorandum.)

The building is a single-story structure with a mezzanine located along the westernmost portion of the structure. It is constructed of a cast-in-place concrete shell and spread footings with wood-framed mezzanines and roof.

There are several steel beams, which support the wooden roof structure. A portion of the exterior walls above the roof beams appears to be masonry.

The first floor of the structure is cast-in-place concrete with a terrazzo floor. The most obvious architectural feature of the structure is its ornate terra cotta cladding and infill wood window frames located along the Westlake Avenue North and Mercer Street façades. These elements, in particular the terra cotta, are attached directly to the concrete and masonry wall beneath them with wire ties. Consequently, as the concrete building frame moves as a result of settlement and other loads, the terra cotta cladding must move with it; translating any damage through both elements.

The substrate of the building, as documented in Figure 2, "Site Conceptual Model and Cross Section" (attached), prepared by Urban Redevelopment, Inc. for City Investors Property at South Lake Union indicates a profile of loose soil debris for the upper 10 feet or so of the soil mass beneath Westlake Avenue, immediately east of the building. Beneath this layer are between 10 and 20 feet of wood debris and sawdust. These softer soil and organic masses, mingled with peat, over-lie a recessional outwash layer of dense sand.

As indicated above, the structure is supported on spread footings. These are clearly shown in the original drawings. Under current design criteria, the structure would require piles due to the very soft and compressible underlying 20 feet or so of soil. Consequently, the settlement noted over many years in the Pacific McKay Building is understandable, and consistent with the geotechnical information derived from Westlake Avenue. Total settlements in the southeast corner of the structure is approximately 8 inches.

The Krazan reports 1 through 5 are based on measurements in the Pacific McKay Building and do not address the Ford McKay Building immediately to the north. These results indicate that over the approximate 7 to 8 months of measurement, the structure is continuing to move consistent with its historical trend downward in the southeast corner, and separating at the top of the wall at the juncture between the Pacific McKay and Ford McKay Buildings. Smaller settlements were noted along the western edge of the building.

Ford McKay Building

The Ford McKay Building was built in 1922 and is located immediately to the north of the Pacific McKay Building along Westlake Avenue North. It is a 2-story structure with a basement, and is considerably larger than its neighbor. It is also a more conventional timber-framed post-and-beam building, with an exterior concrete wall. The 1922 construction drawings clearly shown pile support for the structure. As a consequence, this building is more stable and is experiencing much less settlement than the Pacific McKay Building.

The structure is open and available for inspection, due to the use of its upper floor as a parking structure. Consequently, the condition of the structure is largely determined by this use, rather than by any of the extensive shifting of

substrate soils noted in the Pacific McKay Building. Its condition is, therefore, relatively good from a structural standpoint, with considerable wear and tear associated with its auto repair and storage use over the years.

Summary of Site Condition

Recent readings by Krazan & Associates indicate movement continuing on the Pacific McKay site, in a manner consistent with its historical movement. The Pacific McKay Building continues to move both downward in general, and at a consistently higher rate in the southeastern corner. This can be most readily visualized by observing the building along its eastern façade and noting in particular the downward tilt to the south and the increasing separation from bottom to top of the joint between the Pacific McKay and Ford McKay Buildings.

While monitoring of the Ford McKay Building has not been completed over this similar course of time, there is no visual or measured information regarding extraordinary settlement of this building in general, and no continuing evidence of ongoing settlement.

As noted in the earlier portions of this memorandum, the Ford McKay structure is both relatively stable and a reasonably conventional form of construction. Its principal face, the east elevation, while terra cotta clad, does not evidence any significant damage attributable to settlement. This façade is also considerably less ornate than the Pacific McKay Building façades.

On the other hand, the Pacific McKay Building, in addition to its high settlement rate to date and continuing settlement, is a relatively fragile, open-bay structure clad with terra cotta over cast-in-place concrete. Because there are no stabilizing lateral elements along either the Westlake or Mercer façades, settlement can lead to racking of the structure, which can, and has, damaged the jointing between the terra cotta pieces.

In this case, lateral strengthening elements designed to resist earthquake and wind loads would also have been helpful in resisting racking due to the high rate of settlement. Since no such elements exist along the two principal terra cotta faces, it appears that extensive and often undetermined damage in the form of cracks, and potential separation of the terra cotta from the underlying concrete substrate, have occurred and are likely to continue.

It should be noted that in the Pacific McKay Building, the building settlement noted in the exterior frame is also readily evident in the terrazzo floor. This settlement can be seen by merely walking the floor, and is consistent with the movement noted on the exterior of the structure.

Project Scenarios

In our memorandum of January 23, 2006, we discussed the three possible scenarios for the Pacific McKay Building:

- Scenario 1: Maintain the buildings in place, with seismic retrofit and structural reconditioning

- Scenario 2: Relocation of the buildings 67 feet to the north in response to widening of Mercer Street
- Scenario 3: Maintain the buildings in place without upgrading

It is our understanding that the present intent is to move the structure. Consequently, this memorandum will discuss only Scenario 2.

In discussing the relocation of the structures on a site immediately to the north with a similar orientation, the two obvious options include the lifting and moving of the structure as a whole, or dismantling the structure, maintaining the significant features of the building, and rebuilding them on a new structure.

It is our opinion that the structure would be extremely difficult to lift due to its large foundation elements and easily racked exterior walls. If lifted as a whole, its open box-like structure and wide openings, combined with its relatively slender and flexible spandrel beams, could lead to additional damage to the historic features of the building.

The structure is founded presently on cast-in-place concrete foundations. These footings would be difficult to undermine and lift, but this action would be necessary to preserve the upper structure for the moving process. Founding the structure on an adjacent site would require preparation of a pile foundation and slab on grade at depths sufficient to allow the original footings to be placed upon the new foundation. As a result, the new structure, if the building is moved as a whole, would consist of a pile foundation constructed at a variety of depths consistent with the existing foundations. The entire building would be moved into place and leveled between the rough bottoms of the existing footings and the top of the new foundation. It would not be possible, in our opinion, to preserve the terrazzo floor in this case.

The preferred scenario, from a structural perspective, is to dismantle and carefully catalog those features of the building to be reused. The exterior terra cotta elements would be separated from the structure by both loosening the bond and separating the wire ties, as well as removing by conventional methods the more sensitive features of the façades, including the windows. Some elements of the terra cotta façade are, or may be, broken and could be repaired. Any elements which are irretrievably shattered could be reconstructed.

This method would allow the construction of an appropriate foundation on the adjacent site, supported on piles. Historic elements would be placed in the same manner and arrangement as in the existing building. It is our opinion that in this scenario the slab on grade with the terrazzo floor would also be subject to either considerable damage, or may be incapable of being preserved.

With respect to the Ford McKay Building located on the northern site, this structure is much larger, heavier, and attached to a foundation system supported on piles. Consequently, lifting this structure is both a more

arduous task, and also subject to the inherent difficulties of severing piles prior to lifting, as well as removing piles after lifting and moving, such that a new foundation system may be installed. These piles would also obstruct the foundation replacement in either of the two scenarios discussed for the Pacific McKay Building, which would be moved more or less onto the Ford McKay Building site.

Consequently, moving the Ford McKay Building would require a similar, if somewhat more difficult, application of techniques if moved as a whole to the north.

The historic features of this structure are limited to the eastern façade. Consequently, it is clear that cataloguing the removal of the exterior façade elements designated as worthy of preservation would be clearly a more safe and feasible method, since it would not involve movement of the entire building.

The alternate method available for the movement of the Ford McKay Building, which falls between these two scenarios, is to sever the façade from the remainder of the building and move it as a body to the north. This scenario would involve considerable difficulties, such as those noted in the paragraph above, regarding movement of the building in general, in that severing of the piles and removal of the piles would be complex. In addition, a stable temporary framework would need to be applied to either the rear or the front of the façade to facilitate its movement.

Conclusion

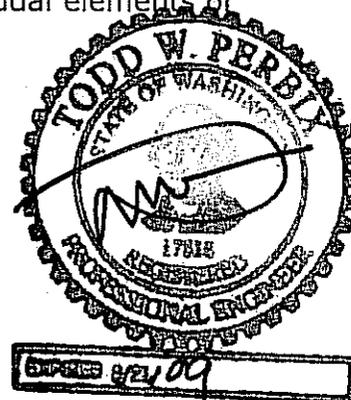
It is our opinion based on the evidence gathered over several years, including both observation and documentation of the structure, and supplemented by Krazan & Associates' recent monitoring of the building, that the scenario likely to result in the best outcome for the façades, in terms of safety and accuracy, as well as the method most likely to result in the least damage to the architecturally significant portions of the Pacific McKay and Ford McKay Buildings, would be the dismantling and cataloguing option for both façades, and their reconstruction on a new, stabilized, pile-supported structure designed specifically for reinstallation.

This method would have the additional significant benefit of providing a new structure behind the existing façade elements stabilized for both vertical and lateral movement. In contrast, a relocated existing structure is capable of neither vertical nor lateral support in and of itself, and would require significant modification to the interior spaces in order to provide for adequate resistance to these loads under current Codes. Essentially, current Code conformance can only be achieved by the relocation of individual elements of the structure, as opposed to the structure as a whole.

Please feel free to call if you have any additional questions.

End of Memorandum

TWP/cvz





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memorandum

Date: 1/23/06
To: Vulcan
505 Fifth Ave. S, Suite 900
Seattle WA 98104
fax: 342-3000
Attn: Scott Lien

From: Todd Perbix
Project: Pacific McKay & Ford McKay Bldgs.
Project #: BWA022
Copy to:

Re: Overview of structures and prospects for relocation

The purpose of this memo is to provide a brief overview of the condition of the Pacific McKay and Ford McKay Buildings, located between 601 and 607 Westlake Avenue North in Seattle. In addition, this memo will discuss the prospects for rehabilitating and relocating these structures to new sites approximately 67 feet north of their present location. These scenarios will be compared with the prospects for the buildings if unaltered.

This work is based on our evaluation of the structures' existing construction type, the seismic capabilities of that type of construction, and the condition of the structures' as they stand today. The buildings are located at the corner of Westlake and Mercer on soft soil sites, which complicates both the prospect of retrofitting the structures in place and of moving them to a new location north of their present site.

Pacific McKay Building

The Pacific McKay Building is located on the southern of the two sites. It is a single-story structure with a mezzanine and was constructed as a cast-in-place, concrete box with wood frame mezzanine and roof construction. There are several steel beams which support the roof structure and the exterior wall above the roof beams are masonry. The first floor is a concrete slab-on-grade with a terrazzo floor. The exterior walls along the Mercer and Westlake elevations are clad with an ornate terra cotta façade, which is attached directly to the concrete and masonry wall beneath it by wire ties. The older building to the west of the terra cotta façade may be demolished.

The Pacific McKay Building is founded on spread footings, as indicated by drawings discovered during the course of this investigation. The site does not have the capacity to support even a single story structure like this, due to the soft soils beneath it. Soils explorations across the street indicate that the area is underlain by

loose lake sediment and wood chips, likely the result of an early use of the site, and that both sites are located over areas formerly part of Lake Union.

Significant settlement, tending towards the southeast, of up to 8 inches can easily be noted in both the slab-on-grade and the exterior terra cotta wall.

Ford McKay Building

The Ford McKay Building is a more conventional heavy timber structure, with two full floors and a basement. Much of the upper structure is open and available for inspection. Consequently, the portion of the building above the foundations can be assessed by direct observation.

Some of the original 1922-era drawings were available for this building. It appears to be founded, unlike the Pacific McKay Building, on piles. Settlement is, therefore, less than in the Pacific McKay Building. Settlement, therefore, does not appear to be the problem in this structure.

Project Scenarios

This memorandum contemplates two possible scenarios for the rehabilitation of the buildings: The first is the restoration of those historic parts of these structures in place, while the second involves relocating the structures approximately 67 feet to the north, along the north-south line of Westlake Avenue North. A third scenario discusses maintaining the buildings in their current location without upgrading while continuing their current use.

Scenario 1: Maintain Buildings in Place

To maintain the historic portions of the Pacific McKay Building, the structure will require leveling. This is a significant undertaking, requiring the installation of new piles and grade beams within the existing structure and the consequent demolition of the terrazzo floor along the west, south and east façades. Once these new supporting structures are in place there is still a high risk of damage to the structure during the jacking process and additional repairs may be required. After the building is successfully leveled, the remainder of the seismic mitigation includes relatively straightforward and common set of seismic mitigation methods and condition improvements. The extent of required improvements is described below.

The seismic restoration and structural reconditioning of the Pacific McKay Building would therefore likely be composed of the following elements: addition of plywood sheathing over the entire roof structure (this assumes a new roof for the building); addition of a number of out-of-plane anchors connecting the roof structure to the exterior walls along the west, south and east façades (including parapet braces); installation of a reinforced concrete moment frame approximately 12 inches in thickness on the inside of the south and east elevations; and installation of auger-cast or steel pipe piles against all of the exterior elevations to act as both permanent support, and temporary support for the attempt to re-level the façade. This work

would have to be completed from the interior of the structure, including low headroom pile installation, and there is considerable risk of damage to the permanent structure by leveling so extreme a settlement.

A number of discussions with masonry specialists (Puget Sound Masonry of Seattle, and Pioneer Waterproofing of Portland) have indicated that the preferred method of leveling, while minimizing potential damage to the delicate terra cotta on these elevations, would involve removing substantial parts of this terra cotta to storage and reinstalling them at the completion of the leveling process.

As an alternative to the installation of piles along the inside face of the exterior walls and jacking in place, the exterior east and south walls may also be entirely dismantled. In this scenario, the exterior terra cotta cladding may be carefully removed and the concrete wall beneath it demolished to allow the centering and installation of piles under a new concrete wall, which would then have the existing terra cotta reattached to it. This alternative, while technically less problematic, requires the complete removal and rebuilding of these façades.

The seismic restoration of the Ford McKay Building is a relatively simple matter, common to many heavy timber buildings in Seattle. Roof and anchor ties would be required around the perimeter of the second floor and roof structures, as well as improvements (by the addition of plywood) to both the second floor and roof diaphragms.

It is likely that the east-west running party walls of the Ford McKay Building are sufficient to withstand any earthquake forces that may be imposed upon them. However, the north-south running walls, in particular along the east façade, provide very little lateral support for the structure. Consequently, it is likely that a reinforced concrete shear wall or steel brace system would be required along the east elevation, and perhaps the west elevation. This system would require a new concrete foundation and piles immediately adjacent to the existing inside perimeter of the building. These improvements would also require delicate construction within the space, and would thicken or visually alter the elevation.

Scenario 2: Relocation of the Buildings 67 Feet to the North

The relocation of both the Pacific McKay and Ford McKay Buildings is premised on preserving only those portions of the structure deemed historically significant.

In the Pacific McKay Building, the exterior façade along the south and east elevations, as well as many features of its window system, would be preserved, as would many of the interior wood frame elements which make up the mezzanine and the shape and size of the showroom floor.

In the Ford McKay Building, the eastern façade would be preserved, as would the shape and volume of the showroom and display rooms immediately adjacent to the eastern façade. Very little in the way of structural restoration is assumed for the interior of the Ford McKay Building. As a result, the existing north and south party walls of the existing building would not necessarily be rebuilt as lateral support.

Terra cotta and other cladding materials, as well as the significant interior elements, would be cataloged and stored offsite during the construction of the new structure to the north. The interior spatial dimensions would be fully documented. Any other original elements worthy of preservation would also be removed and cataloged at this time.

A new structure would be constructed on the same block about 67 feet north of the present buildings' location as part of a new architectural design. The entire project, including the historic east and south façades, would have a pile foundation selected by a geotechnical engineer. Since the arrangement of the foundations would be free of existing building obstructions, the piles can be designed to concentrically support the east and south façades, thus reducing the eccentricities and costs of some of the restoration techniques proposed for maintaining the buildings in place.

Once the new foundation of piles and grade beams are installed, a Code-conforming, concrete wall on the east and south elevations of both buildings can be installed. The terra cotta, stored offsite, would then be replaced in its original position on the façade. Cladding materials and other preserved interior elements may also be reinstalled to recreate the historic volumes, but the interior structures supporting them would be entirely new.

The reconstruction scenario on a different site offers the advantage of being able to provide for and accomplish the new foundation systems in their most efficient locations. This could reduce the cost and difficulty of this installation.

Scenario 3: Maintain buildings in place without upgrading

Maintaining the buildings in place and continuing their current use without upgrading raises different issues from those discussed above since no construction or movement of the buildings is proposed. The issues discussed here include the prospects for additional settlement, the future integrity of the structures, possible response to severe earthquakes, and the remaining lifespan of those components.

As noted, the Pacific McKay Building has experienced significant settlement to the southeast. This settlement appears to be of long standing. The Ford McKay Building has, on the other hand, experienced little settlement by comparison. The structural components of both buildings available for review above grade have experienced normal wear and tear. No dangerous structural damage was noted in either building.

The Pacific McKay Building will experience very slow additional settlement. A change in conditions, such as an earthquake, a change in subterranean water levels, or construction nearby that vibrates the soil or alters supporting soil conditions below the present foundation level, would result in additional settlement in the Pacific McKay Building and possibly the Ford McKay. We should note that the foundations of the Pacific McKay appear to be relatively near grade.

A condition of concern is the terra-cotta cladding on both buildings. While not strictly a part of the structure, these elements could pose a safety hazard at almost any

time due the unknown extent of tie deterioration. This is particularly true of the Pacific McKay Building.

Both buildings have significant seismic deficiencies and may be severely damaged in large earthquakes. The settlement of the Pacific McKay Building, and the long spans characterizing its interior, make damage to this building even more likely. We would rate the risk of significant damage to these structures in a moderate to severe earthquake as high without appropriate upgrading.

Conclusion

Regardless of which scenario is chosen (maintain the buildings in place, or relocate them), it is necessary in the long term to structurally stabilize both buildings. In the case of the Pacific McKay Building, this involves difficult installation of pilings and leveling of the building if it remains in place, or replacement on a new structure if relocated. In any case, it is recommended that the terra cotta be removed and cataloged prior to this construction work in order to protect it.

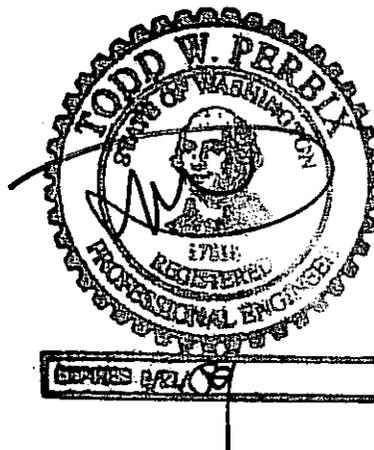
At first sight, the restoration and reconditioning of the Pacific McKay and Ford McKay Buildings (if restoration is selected) in their current locations may seem the simplest and least expensive conclusion. We believe, however, that it may be preferable to reconstitute the buildings, since limited portions of the exterior elevations and significant interior spaces would be preserved. Reconstitution of the historic materials on a new site may be more cost effective in the context of new structures filling the remainder of the block.

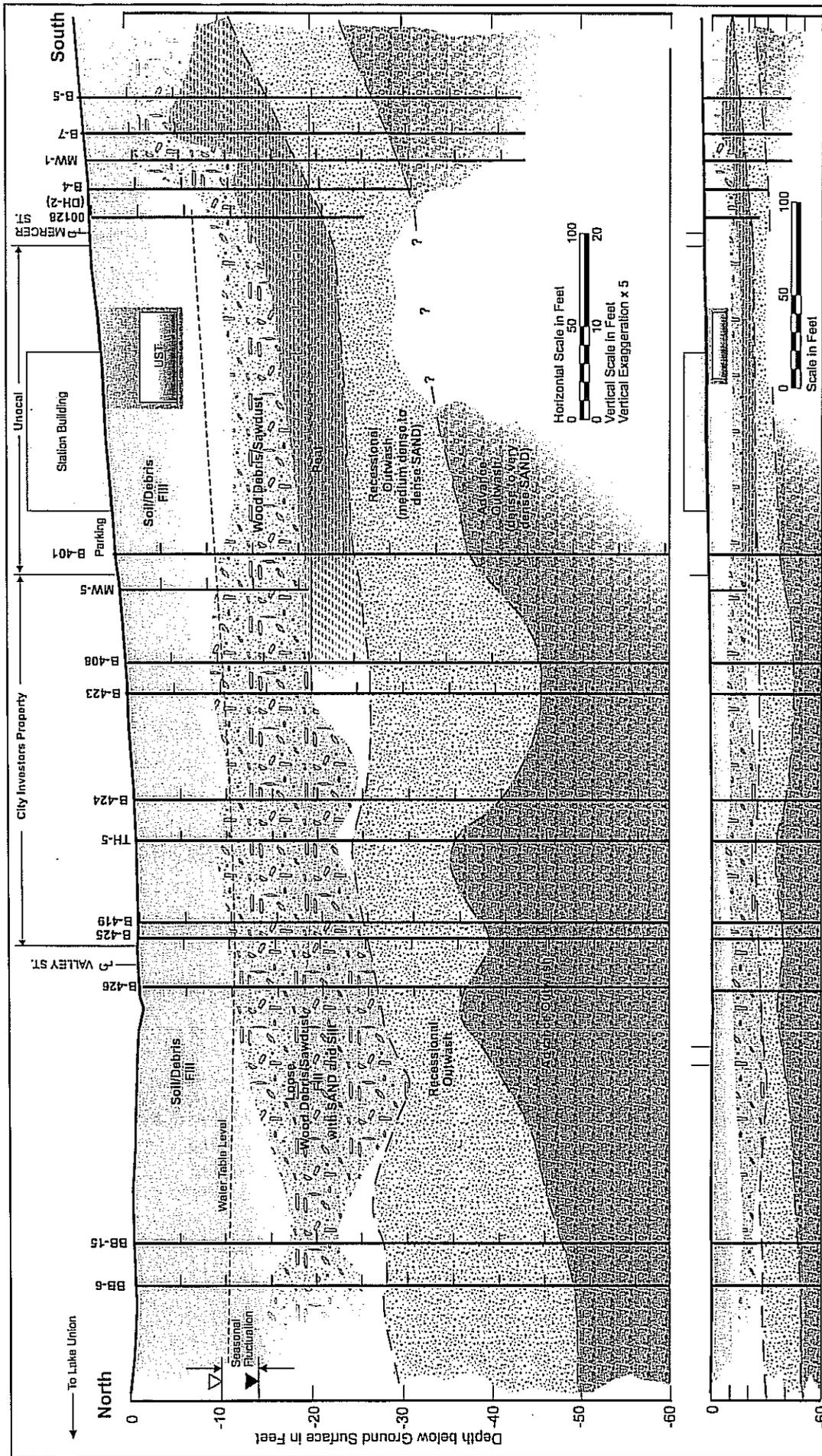
Our work has not included any cost estimating for the scenarios discussed above. However, reports from the masonry contractors working with the team indicate that the removal of the most delicate of these historic features, the terra cotta, is relatively simple and could be completed with a minimum of breakage and thus recasting of in-kind repair units could be minimized.

We hope this memo answers your questions regarding the reconditioning and restructuring of the Pacific McKay and Ford McKay Buildings, or their possible relocation. Please feel free to call if you have any additional questions.

End of Memo

TWP/cvz





APPENDIX E

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-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 to the McKay Pacific building at 601 Westlake Avenue North is caused by the widening of Mercer Street into the site now occupied by the building; and

WHEREAS, while the McKay Ford-Lincoln building at 609 Westlake Avenue North will not be demolished as a result of this undertaking, an adverse effect will result to this structure due to the loss of the McKay Pacific building and the conjoined nature of the two structures in supporting each building's respective eligibility for the NRHP; 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 McKay Pacific building 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 of the McKay Pacific building, within the context of a larger development on the block, will result in the McKay Pacific building no longer being eligible for listing in the NRHP; and

WHEREAS, while the proposed undertaking will result in an adverse effect to the McKay Ford-Lincoln building, the structure will remain 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.”
 - d) Utilization of LiDAR technology to scan the exterior surfaces of the McKay buildings.

- 3) 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.
- 4) 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 Pacific building's 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 both 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.

- 5) 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 data will be made available in appropriate formats to both the City of Seattle and Department of Archaeology and Historic Preservation (DAHP) databases.
- 6) Stipulation 2 must be completed prior to the start of construction affecting the McKay buildings. Stipulation 3 applies during the Mercer Corridor construction process. Stipulation 4 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 5 must be initiated within one year of the start of demolition of the McKay Pacific building 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@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 deBoer, 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: 206-684-1115
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: 04/27/09
Daniel M. Mathis, Division Administrator

Washington State Historic Preservation Officer
By: *[Signature]* Date: 4/22/09
Allyson Brooks, State Historic Preservation Officer

INVITED SIGNATORIES

Washington State Department of Transportation
By: *[Signature]* Date: 22 April 2009
[Signature] Kathleen Davis, Director, Highways & Local Programs

Seattle Department of Transportation and the City of Seattle
By: *Grace Crunican* Date: 22 April 2009
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	or
State Historic Preservation Officer	Matthew Sterner
360-586-3066	Transportation Archaeologist
Allyson.Brooks@dahp.wa.gov	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

