

FINAL ENVIRONMENTAL IMPACT STATEMENT
AND FINAL SECTION 4(f) AND 6(f) EVALUATIONS
SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM

MAY 2011

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Recreation Discipline Report Addendum and Errata

**SR 520, I-5 to Medina:
Bridge Replacement and HOV Project
Final Environmental Impact Statement
and Final Section 4(f) and 6(f) Evaluations**

**Recreation Discipline Report
Addendum and Errata**



Prepared for
Washington State Department of Transportation
Federal Highway Administration

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Acronyms and Abbreviations

Arboretum	Washington Park Arboretum
ADA	Americans With Disabilities Act
BMP	best management practice
DNR	(City of Seattle) Department of Natural Resources
EIS	Environmental Impact Statement
ESSB	Engrossed Substitute Senate Bill
HOV	high-occupancy vehicle
I-5	Interstate 5
MOHAI	Museum of History and Industry
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
SDEIS	Supplemental Draft Environmental Impact Statement
SR	State Route
UW	University of Washington
WAC	Waterfront Activities Center
WSDOT	Washington State Department of Transportation



Introduction

What is the purpose of this addendum?

This addendum to the 2009 Recreation Discipline Report (Washington State Department of Transportation [WSDOT] 2009a), which was prepared as part of the *State Route (SR) 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-occupancy Vehicle (HOV) Project Supplemental Draft Environmental Impact Statement and Section 4(f)/6(f) Evaluation (SDEIS)* (WSDOT 2010a), presents the environmental effects of the Preferred Alternative for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project; compares its effects to those of design options A, K, and L discussed in the SDEIS, and reflects additional analyses that resulted from the public and agency comments received on the SDEIS. These analyses are shown in the context of the Preferred Alternative.

The information contained in the 2009 Recreation Discipline Report on affected environment and project effects is still pertinent to the Preferred Alternative and its effects, except where this addendum specifically updates it. Text updated to reflect the Preferred Alternative has been cross-referenced using the page numbers contained within the 2009 Recreation Discipline Report. Where an addendum exhibit updates or adds new data or different likely effects on an exhibit contained in the discipline report, the exhibit name is followed by “(Update to Exhibit # of the 2009 Discipline Report).”

Project design and construction information used to analyze potential effects of the Preferred Alternative on recreation is included in the Description of Alternatives Discipline Report Addendum (WSDOT 2011a) and the Construction Techniques and Activities Discipline Report Addendum and Errata (WSDOT 2011b).

An errata sheet is attached to this addendum (Attachment 1) to show revisions and clarifications to the 2009 Recreation Discipline Report that do not constitute new findings or analysis.

What key issues were identified in the public and agency comments on the SDEIS?

Key recreation-related topics identified in public and agency comments were:

- Construction effects from noise, visual quality changes, dust, traffic, and parking
- Specific effects on recreational boating and associated facilities from construction
- Use of open space on new lids as parks
- Characterization and treatment of Lake Washington Boulevard as a park boulevard
- Retention of shoreline access at the Montlake Playfield



- Construction and operational effects on the Washington Park Arboretum (Arboretum) and its plant collection and consistency with the Arboretum Master Plan (City of Seattle et al. 2001)
- Bicycle and pedestrian connectivity and trail access

The errata sheet in Attachment 1 presents revisions to the 2009 Recreation Discipline Report that respond to public and agency comments. Other topics are addressed in this addendum as applicable.

What are the key points of this addendum?

Effects During Construction

- The Preferred Alternative does not have any effects to recreation resources east of Lake Washington, the same all SDEIS options.
- During construction, the Preferred Alternative would have the same likely effects as Option A to recreational use of Lake Washington and associated water bodies. WSDOT would provide mitigation for those effects, including working with affected yacht clubs and owners of private moorage in the study area to minimize effects on moorage and maintain access for boats to the extent possible.
- As shown in Exhibit 1, the Preferred Alternative would acquire a larger amount of temporary construction easement in park and recreation resources, compared to Option A (7.6 acres of parkland needed as opposed to 6.1 acres for Option A). However, these areas would be restored after construction is complete.
- Noise, air quality, visual quality, and transportation effects of the Preferred Alternative on recreation resources would be similar to those of Option A.

Exhibit 1. Construction-related Direct Effects on Recreation Resources per Option (Update to Exhibit 2 of the 2009 Discipline Report)

Option	Total Acres
Preferred Alternative	7.6
Option A	6.1
Option K	9.1
Option L	7.2

Effects During Operation

Effects during operation are as follows:

- As with SDEIS Option A, the Preferred Alternative would have no operational effects on Eastside recreation resources.
- As shown in Exhibit 2, the Preferred Alternative would acquire less right-of-way acquisitions in park and recreation resources than Option A (see Exhibit 2). Operational effects have been



- reduced through design refinements following the SDEIS, in response to agency and community feedback and ongoing coordination with stakeholders.
- Aside from overall park impacts, the Preferred Alternative would result in a net gain of Section 6(f)-protected recreational space after construction is complete, because a replacement site on the north shore of Portage Bay would be developed as a new park site under the requirements of Section 6(f) of the Land and Water Conservation Act. The new site is 3.9 acres; development of this site would provide a total of 1.3 acres of new parkland, after accounting for the permanent conversion under Section 6(f). The Section 6(f) Environmental Evaluation (WSDOT 2011c) provides information on that new site.
- Similar to the SDEIS design options, trail connectivity would improve under the Preferred Alternative, with the addition of a regional bicycle-pedestrian path across the Lake Washington Floating Bridge. The Preferred Alternative would further enhance bicycle-pedestrian connectivity through inclusion of a larger Montlake lid, allowing for improved access from north of SR 520 to the Arboretum and from south of SR 520 to recreational facilities at the University of Washington (UW).
- As with Option A, the Preferred Alternative would offer no negative permanent effects on recreational boating. Adequate clearance for recreational boats would be maintained underneath and around all bridge structures.

Exhibit 2. Permanent Park Acquisition for Preferred Alternative Compared to SDEIS Options (Update to Exhibit 1 of the 2009 Discipline Report)

Option	Total Acres
Preferred Alternative	6.3
Option A	6.9
Option K	8.5
Option L	7.5

Note: Acreages of effects do not include utility and stormwater easements, which have no effect aboveground

What is the SR 520, I-5 to Medina: Bridge Replacement and HOV Project?

The SR 520, I-5 to Medina: Bridge Replacement and HOV Project would widen the SR 520 corridor to six lanes from I-5 in Seattle to Evergreen Point Road in Medina, and would restripe and reconfigure the lanes in the corridor from Evergreen Point Road to 92nd Avenue NE in Yarrow Point. It would replace the vulnerable Evergreen Point Bridge (including the west and east approach structures) and Portage Bay Bridge, as well as the existing local street bridges across SR 520. The project would complete the regional HOV lane system across SR 520, as called for in regional and local transportation plans.

What is the Preferred Alternative?

The new SR 520 corridor would be six lanes wide (two 11-foot-wide outer general-purpose lanes and one 12-foot-wide inside HOV lane in each direction), with 4-foot-wide inside shoulders and 10-foot-

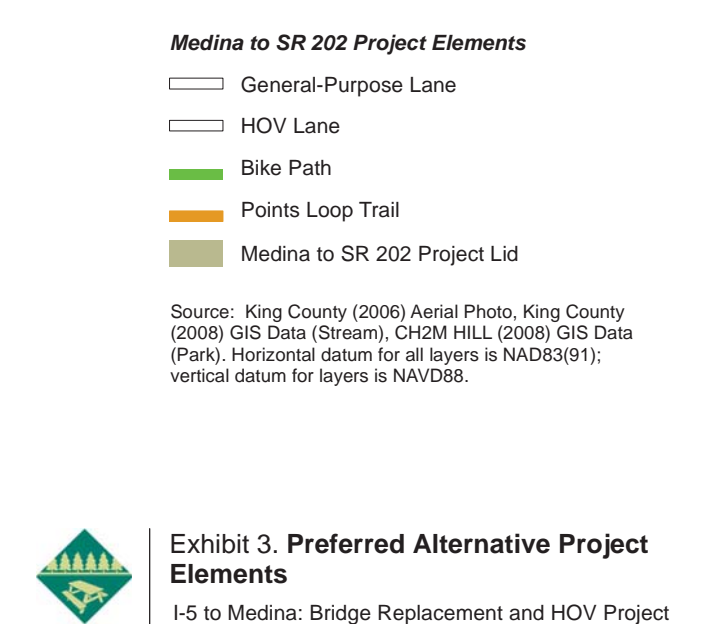
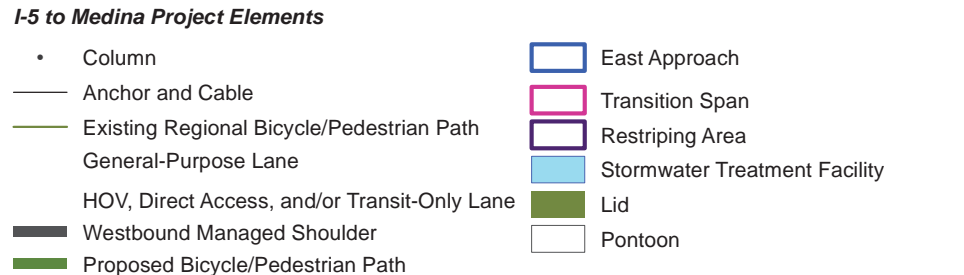
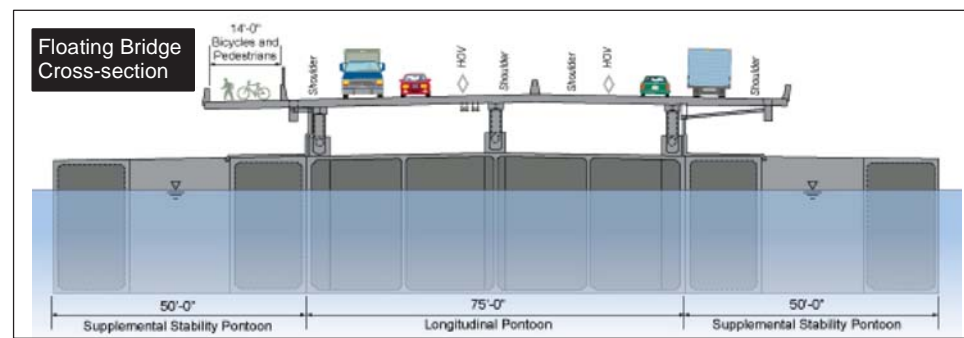
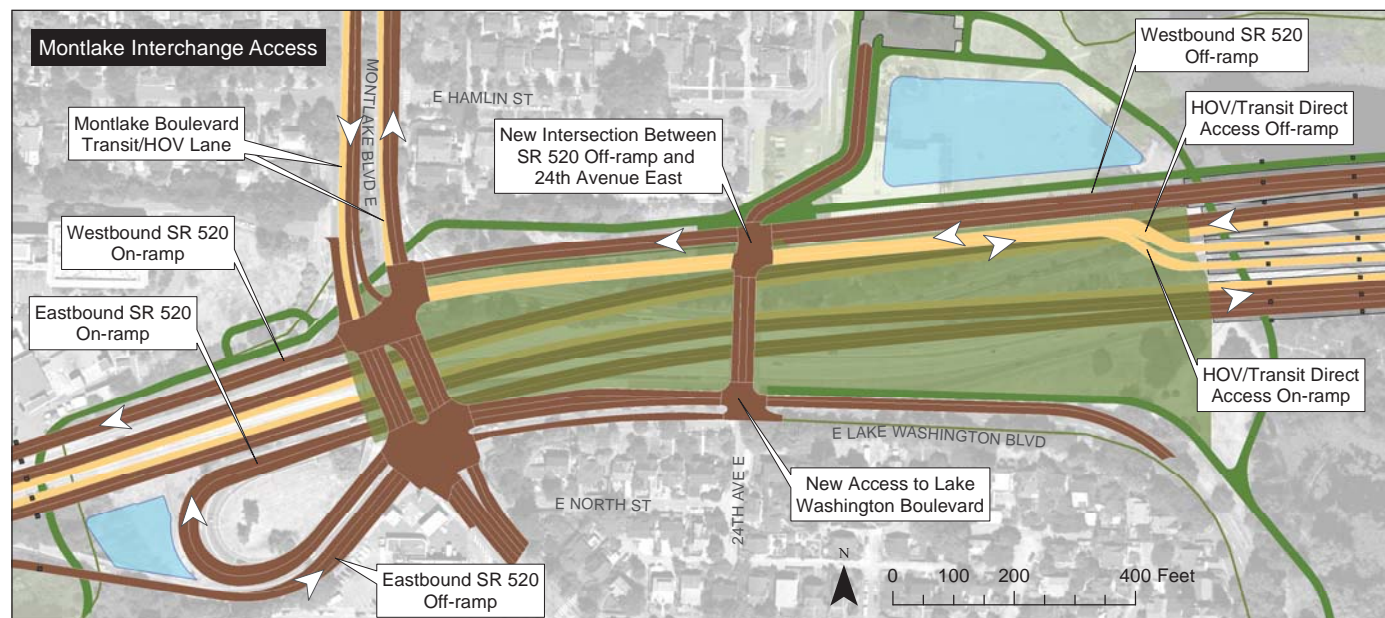
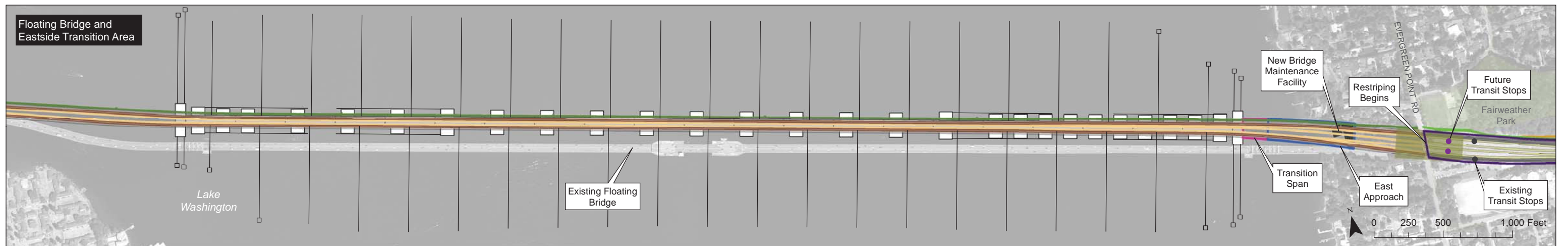
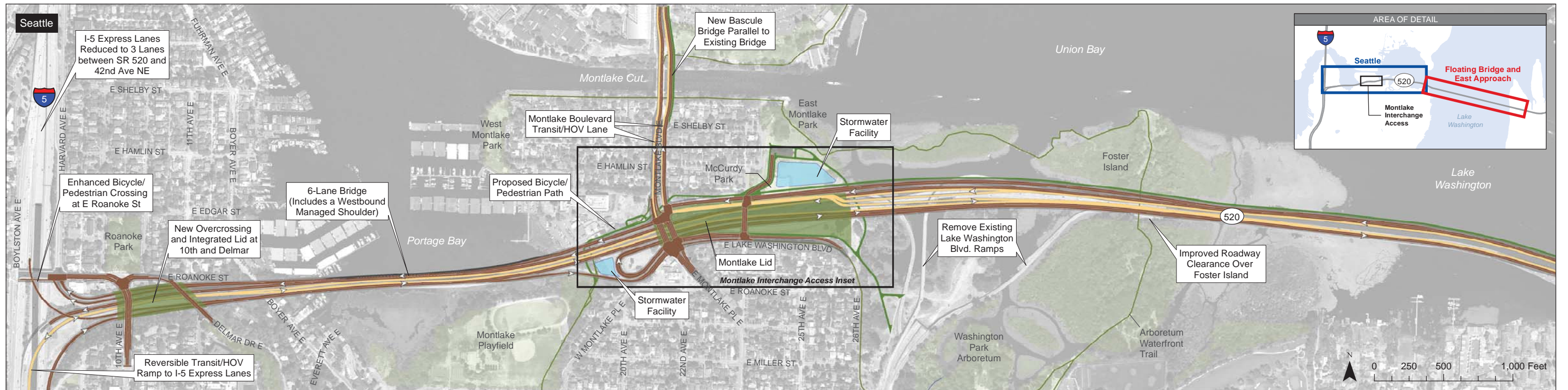


wide outside shoulders across the floating bridge. The typical roadway cross-section across the floating bridge would be approximately 116 feet wide, compared to the existing width of 60 feet. In response to community interests expressed during public review of the January 2010 SDEIS, the SR 520 corridor between I-5 and the Montlake interchange would operate as a boulevard or parkway with a posted speed limit of 45 miles per hour and median planting across the Portage Bay Bridge. To support the boulevard concept, the width of the inside shoulders in this section of SR 520 would be narrowed from 4 feet to 2 feet, and the width of the outside shoulders would be reduced from 10 feet to 8 feet. Exhibit 3 highlights the major components of the Preferred Alternative.

The Preferred Alternative would include the following elements:

- An enhanced bicycle/pedestrian crossing adjacent to the East Roanoke Street bridge over I-5
- Reversible transit/HOV ramp to the I-5 express lanes, southbound in the morning and northbound in the evening
- New overcrossings and an integrated lid at 10th Avenue East and Delmar Drive East
- A six-lane Portage Bay Bridge with a 14-foot-wide westbound managed shoulder that would be used as an auxiliary lane during peak commute hours
- An improved urban interchange at Montlake Boulevard integrated with a 1,400-foot-long lid configured for transit, pedestrian, and community connectivity
- A new bascule bridge across the Montlake Cut that provides additional capacity for transit/HOV, bicycles, and pedestrians
- Improved bridge clearance over Foster Island and the Arboretum Waterfront Trail
- A new west approach bridge configured to be compatible with future high-capacity transit (including light rail)
- A new floating bridge with two general-purpose lanes, and one HOV lane in each direction
- A new 14-foot-wide bicycle/pedestrian path with scenic pull-outs along the north side of the new Evergreen Point Bridge (west approach, floating span, and east approach), connecting regional trails on both sides of Lake Washington
- A new bridge maintenance facility and dock located underneath the east approach of the Evergreen Point Bridge
- Re-striped and reconfigured roadway between the east approach and 92nd Avenue NE, tying in to improvements made by the SR 520, Medina to SR 202: Eastside Transit and HOV Project





- Design features that would also provide noise reduction including reduced speed limit on Portage Bay Bridge, 4-foot concrete traffic barriers, and noise absorptive materials applied to the inside of the 4-foot traffic barriers and lid portals. Quieter concrete pavement would also be used for the new SR 520 main line, and noise walls where recommended by the noise analysis and approved by affected property owners would be included in the design
- Basic and enhanced stormwater treatment facilities

Exhibit 4 summarizes the Preferred Alternative design compared to the existing corridor elements, and compares the Preferred Alternative to design options A, K, and L as described in the SDEIS. For a more detailed description of the Preferred Alternative, see the Description of Alternatives Discipline Report Addendum (WSDOT 2011a).

Exhibit 4. Preferred Alternative and Comparison to SDEIS Options

Geographic Area	Preferred Alternative	Comparison to SDEIS Options A, K, and L
I-5/Roanoke Area	The SR 520 and I-5 interchange ramps would be reconstructed with generally the same ramp configuration as the ramps for the existing interchange. A new reversible transit/HOV ramp would connect with the I-5 express lanes.	Similar to all options presented in the SDEIS. Instead of a lid over I-5 at Roanoke Street, the Preferred Alternative would include an enhanced bicycle/pedestrian path adjacent to the existing Roanoke Street Bridge.
Portage Bay Area	The Portage Bay Bridge would be replaced with a wider and, in some locations, higher structure with six travel lanes and a 14-foot-wide westbound managed shoulder.	Similar in width to Options K and L, similar in operation to Option A. Shoulders are narrower than described in SDEIS (2-foot-wide inside shoulders, 8-foot-wide outside shoulder on eastbound lanes), posted speed would be reduced to 45 mph, and median plantings would be provided to create a boulevard-like design.
Montlake Area	The Montlake interchange would remain in a similar location as today. A new bascule bridge would be constructed over the Montlake Cut. A 1,400-foot-long lid would be constructed between Montlake Boulevard and the Lake Washington shoreline. The bridge would include direct-access ramps to and from the Eastside. Access would be provided to Lake Washington Boulevard via a new intersection at 24th Avenue East.	Interchange location similar to Option A. Lid would be approximately 75 feet longer than previously described for Option A, and would be a complete lid over top of the SR 520 main line, which would require ventilation and other fire, life, and safety systems. Transit connections would be provided on the lid to facilitate access between neighborhoods and the Eastside. Montlake Boulevard would be restriped for two general-purpose lanes and one HOV lane in each direction between SR 520 and the Montlake Cut.
West Approach Area	The west approach bridge would be replaced with wider and higher structures, maintaining a constant profile rising from the shoreline at Montlake out to the west transition span. Bridge structures would be compatible with potential future light rail through the corridor.	Bridge profile most similar to Option L, and slightly steeper; structure types similar to Options A and L. The gap between the eastbound and westbound structures would be wider than previously described to accommodate light rail in the future.



Exhibit 4. Preferred Alternative and Comparison to SDEIS Options

Geographic Area	Preferred Alternative	Comparison to SDEIS Options A, K, and L
Floating Bridge Area	A new floating span would be located approximately 190 feet north of the existing bridge at the west end and 160 feet north of the existing bridge at the east end. The floating bridge would be approximately 20 feet above the water surface at midspan (about 10 to 12 feet higher than the existing bridge deck).	Similar to design described in the SDEIS. The bridge would be approximately 10 feet lower than described in the SDEIS, and most of the roadway deck support would be constructed of steel trusses instead of concrete columns.
Eastside Transition Area	A new east approach to the floating bridge, and a new SR 520 roadway would be constructed between the floating bridge and Evergreen Point Road.	Same as described in the SDEIS.

When will the project be built?

Construction for the SR 520, I-5 to Medina project is planned to begin in 2012, after project permits and approvals are received. To maintain traffic flow in the corridor, the project would be built in stages. Major construction in the corridor is expected to be complete in 2018. The most vulnerable structures (the Evergreen Point Bridge including the west and east approaches, and Portage Bay Bridge) would be built in the first stages of construction, followed by the less vulnerable components (Montlake and I-5 interchanges). Exhibit 5 provides an overview of the anticipated construction stages and durations identified for the SR 520, I-5 to Medina project.

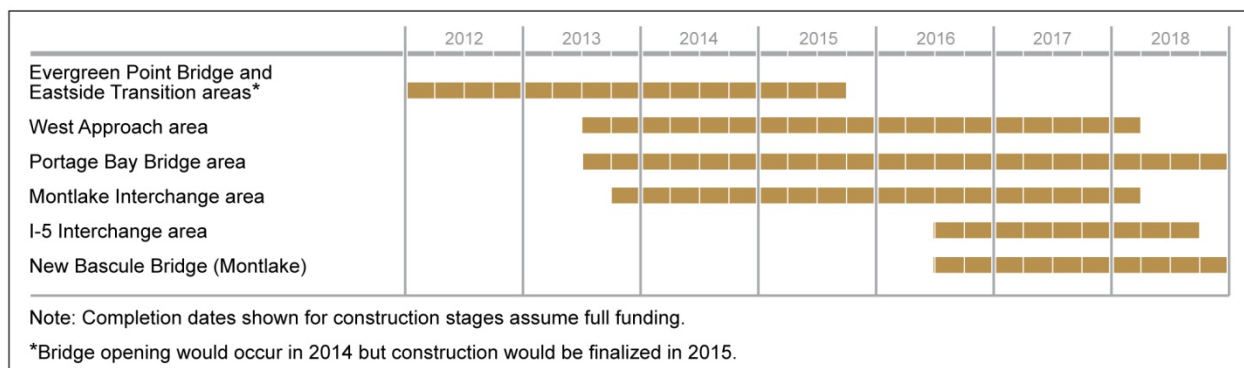


Exhibit 5. Preferred Alternative Construction Stages and Durations

A Phased Implementation scenario was discussed in the SDEIS as a possible delivery strategy to complete the SR 520, I-5 to Medina project in phases over an extended period. FHWA and WSDOT continue to evaluate the possibility of phased construction of the corridor should full project funding not be available by 2012. Current committed funding is sufficient to construct the floating portion of the Evergreen Point Bridge, as well as the new east approach and a connection to the



existing west approach. The Final Environmental Impact Statement (EIS) discusses the potential for the floating bridge and these east and west “landings” to be built as the first phase of the SR 520, I-5 to Medina project. This differs from the SDEIS Phased Implementation scenario, which included the west approach and the Portage Bay Bridge in the first construction phase. Chapters 5.15 and 6.16 of the Final EIS summarize the effects for this construction phase. Therefore, this discipline report addendum addresses only the effects anticipated as a result of the updated construction schedule.

Are pontoons being constructed for this project?

WSDOT has completed planning and permitting for a new facility that will build and store the 33 pontoons needed to replace the existing capacity of the floating portion of the Evergreen Point Bridge in the event of a catastrophic failure. If the bridge does not fail before its planned replacement, WSDOT would use the 33 pontoons constructed and stored as part of the SR 520 Pontoon Construction Project in the SR 520, I-5 to Medina project. An additional 44 pontoons would be needed to complete the new 6-lane floating bridge planned for the SR 520, I-5 to Medina project. The additional pontoons would be constructed at Concrete Technology Corporation in the Port of Tacoma, and if available, at the new pontoon construction facility located on the shores of Grays Harbor in Aberdeen, Washington. Final construction locations will be identified at the discretion of the contractor. For additional information about project construction schedules and pontoon construction, launch, and transport, please see the Construction Techniques and Activities Discipline Report Addendum and Errata (WSDOT 2011b).

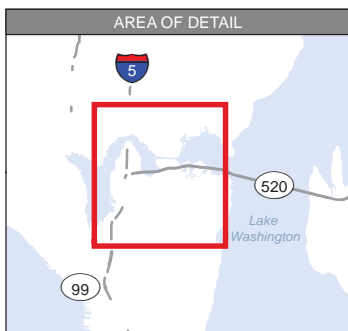
Affected Environment

The affected environment discussion on pages 19 through 37 of the Recreation Discipline Report has been updated since preparation of the SDEIS to include a more robust discussion of recreational boating and to clarify some of the information previously presented regarding parks in Seattle. The sections below note specific pages or sections of the discipline report to which the material in this addendum provides updates.

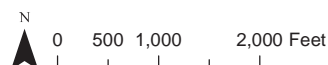
How was the information collected?

Information regarding the affected environment was collected for recreational boating using the same methodology discussed on pages 19 and 20 of the 2009 Recreation Discipline Report (WSDOT 2009a). This addendum incorporates information regarding recreational facilities and activities within 500 feet of the project footprint, both on land and in water. Exhibit 6 provides the locations of the recreation sites discussed in this document.





- Recreation Site
- Existing Regional Bicycle/Pedestrian Path
- Parks within Study Area
- Seattle Park



Source: King County (2005) GIS Data (Stream and Street), King County (2007) GIS Data (Waterbody), CH2M HILL (2008) GIS Data (Park, Trail and Recreation Site). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 6. Recreation Resources in the Study Area (Update to Exhibit 12 of the 2009 Discipline Report)

I-5 to Medina: Bridge Replacement and HOV Project

What are the existing recreation resources and their characteristics?

Exhibit 7 lists the recreation resources for which effects are addressed in this addendum. It includes all of the information provided by Exhibit 11 of the Recreation Discipline Report, but it has been updated for accuracy and clarity. The resources in the table are grouped by geographic area with their size, type, function, and amenities noted. For a full description of all recreation resources in the study area, please see the 2009 Recreation Discipline Report (WSDOT 2009a).

Exhibit 7. Summary Information about Recreation Resources in the Recreation Study Area (Update to Exhibit 11 of the 2009 Discipline Report)

Park ID No.	Name/Location	Approximate Size or Length	Facility Type and/or Function	Ownership/ Management	Site Features and Characteristics
1	Rogers Playground Eastlake Avenue East and East Roanoke Street	1.9 acres	Neighborhood park	City of Seattle and Seattle Parks and Recreation	Tennis courts, ball field, restrooms
2	Roanoke Park 950 East Roanoke Street	2.2 acres	Neighborhood park	City of Seattle and Seattle Parks and Recreation	Basketball court, play area, picnic tables, trails
3	Bagley Viewpoint 2548 Delmar Drive East	0.1 acre	Viewpoint park	City of Seattle and Seattle Parks and Recreation	View of Portage Bay, off- street parking
4	Interlaken Park 2451 Delmar Drive East	51.7 acres	Regional park	City of Seattle and Seattle Parks and Recreation	Woods, trails
5	Montlake Playfield 1618 East Calhoun Street	27 acres	Neighborhood park	City of Seattle and Seattle Parks and Recreation	Play areas, trails, picnic tables, tennis courts, community center
6	Queen City Yacht Club 2608 Boyer Avenue East	9.2 acres	Privately operated marina, members only	Private	Moorage, clubhouse
7	Seattle Yacht Club 1807 East Hamlin Street	1.3 acres	Privately operated marina, members only	Private	Moorage, clubhouse
8	Bill Dawson Trail From Montlake Boulevard to East Calhoun Street	1,750 feet	Bike and pedestrian trail	WSDOT, City of Seattle, NOAA, Seattle Parks and Recreation, and Seattle Department of Transportation	Multiuse pathway
9	McCurdy Park 2720 East Lake Washington Boulevard	1.4 acres	Neighborhood park	City of Seattle and Seattle Parks and Recreation	Open space and southern half of MOHAI building



Exhibit 7. Summary Information about Recreation Resources in the Recreation Study Area (Update to Exhibit 11 of the 2009 Discipline Report)

Park ID No.	Name/Location	Approximate Size or Length	Facility Type and/or Function	Ownership/ Management	Site Features and Characteristics
10	East Montlake Park 2802 East Park Drive	8.8 acres	Neighborhood waterfront park	City of Seattle and Seattle Parks and Recreation and the Arboretum Foundation	Waterfront access, totem pole, hand-carried boat launch, northern half of MOHAI building, parking, access to Ship Canal Waterside Trail and Arboretum Waterfront Trail.
11	Ship Canal Waterside Trail	1,200 feet	Trail	City of Seattle and UW	Waterfront pedestrian trail
12	UW Open Space, Northeast shore of the Montlake Cut and Union Bay	3 acres	Open space, picnic facilities, climbing wall, East Campus Bicycle Trail (the portion within the recreation study area)	UW	As noted in Facility Type and/or Function plus WAC with docks, UW Canoe House
13	East Campus Bicycle Route	2,900 feet	Trail	UW	Multi-use pathway
14	Burke-Gilman Trail West of Montlake Boulevard in the study area	12.5 miles	Bike and pedestrian trail	City of Seattle, UW, and Seattle Parks and Recreation	Multi-use pathway connecting to regional system
15	Husky Stadium	18	Intercollegiate facility	UW	Stadium and associated parking
16	Lake Washington Boulevard (Olmsted Boulevard) from NE Madison Street to NE Pacific Street	2 miles	Park boulevard/ Collector arterial	City of Seattle and Seattle Department of Transportation	Mature trees and landscaping, on-street bike path
17	Arboretum Waterfront Trail	0.5 mile	Trail	City of Seattle and UW	Waterfront pedestrian trail
18	Washington Park Arboretum 2300 Arboretum Drive	230 acres	Regional park and botanical garden	City of Seattle, UW, and DNR	Arboretum collection, Japanese garden, visitor center, Foster Island, Marsh Island, Arboretum Waterfront and other trails, benches, views
21	Lake Washington and associated water bodies	Not applicable	Water body	DNR	Recreational boating and viewing

Note: Wetherill Nature Preserve and Hunts Point Park originally appeared in this exhibit in the 2009 Discipline Report, but were deleted, as they are outside of the recreation study area.

DNR = City of Seattle Department of Natural Resources

MOHAI = Museum of History and Industry

NOAA = National Oceanic and Atmospheric Administration

WAC = Waterfront Activities Center



Private Recreational Facilities

Private Boat Moorage

There are 15 moorage slips associated with the Bayshore Condominium, south of the Portage Bay Bridge within the recreation study area.

Queen City Yacht Club

Established in the early 1900s and moved to its current location in 1934, Queen City Yacht Club is a members-only clubhouse with paved parking and moorage space for 229 power and sailboats extending east into Portage Bay. The facility is located at 2608 Boyer Avenue East, just north of the Portage Bay Bridge and a portion of the facility's dock space is underneath the aerial right-of-way of the Portage Bay Bridge. The facility offers organized cruises, dinners, sailing classes, and other special events for members. Some of the special events relate to and occur during the weeks surrounding the opening day of boating season.

Seattle Yacht Club

The Seattle Yacht Club was established in 1892. The facility, located since 1920 at 1807 East Hamlin Street, includes a clubhouse with paved parking and moorage for 271 motor and sail boats extending to the west into Portage Bay. The club sponsors organize events such as powerboat cruises, sailing and marine safety classes, sailboat races (regattas) and the traditional opening day ceremonies. As with the Queen City Yacht Club, there are also special events occurring during the weeks surrounding the opening day of boating season.

Olmsted Boulevard– Lake Washington Boulevard

Historically, Lake Washington Boulevard was part of a roadway designed within the Olmsted Plan for Seattle Parks, Boulevards, and Playgrounds. The roadway from the Arboretum to UW was specifically laid out in preparation for the Alaska-Yukon-Pacific Exposition, and it was completed in 1909 (Final Cultural Resources Assessment and Discipline Report, WSDOT 2011d). The historic roadway now encompasses Lake Washington Boulevard from its intersection with East Madison Street to its curve at SR 520 and onto Montlake Boulevard, where it takes that road's name and heads north across the Montlake Cut, ending at NE Pacific Street. Lake Washington Boulevard provides an opportunity for motorists and bicyclists traveling through the Arboretum to enjoy the Arboretum experience. The Visual Quality and Aesthetics Discipline Report Addendum and Errata (WSDOT 2011e) describes the viewing experience for motorists and bicyclists along this route.

This boulevard area is distinguished by planting strips that contain mature trees and landscaping. The planting strip on the current Montlake Boulevard is approximately 550 feet long and is located between the SR 520 interchange and East Shelby Street. Another planting strip is located between the SR 520 Montlake Boulevard interchange and the western boundary of the Arboretum.

The City of Seattle maintains this route, which has also been classified as a major arterial. The Washington Park Arboretum Master Plan (City of Seattle et al. 2001) includes goals to better manage



arterial traffic on Lake Washington Boulevard to improve the Arboretum experience as well as pedestrian movements across the roadway. The Transportation Discipline Report (WSDOT 2009b) and Final Transportation Discipline Report (WSDOT 2011f) provide information on traffic and operations on the roadway. The Department of Archeological and Historic Resources has designated the Park Boulevard as a contributing element to the National Register of Historic Places- (NRHP-) eligible Montlake Historic District, and as individually eligible listing in the NRHP (see the Final Cultural Resources Assessment and Discipline Report [WSDOT 2011d] for additional information).

Lake Washington and Associated Waterways

Recreational boating activities occur throughout the year on Lake Washington, the Montlake Cut, Portage Bay, and Union Bay, although those activities increase during the spring and summer months. As a means to enjoy the aquatic environment, recreational boating takes different forms, including the use of motorized and non-motorized craft for activities such as sightseeing, bird watching, water skiing, fishing, or exercise. Types of watercraft commonly used on these water bodies include sailboats, motor boats, kayaks, and canoes. Paddleboats are also rented and used on Union Bay. Lake Washington and associated water bodies, including Lake Union, are navigable waterways, and a number of private and public marinas, yacht clubs, docks, and boat launch facilities exist on these waterways near SR 520. The following sections provide more detail on the boating resources and common boating activities within 500 feet of the Preferred Alternative. Exhibit 6 shows the location of the resources described below.

Special events also take place on Lake Washington that can be viewed from a boat on the lake or from the shoreline. Regularly occurring events on the lake include:

- Opening day of boating season, held annually in early May. Spectators congregate at sites along the Portage Bay and Union Bay shorelines and along the banks of the Montlake Cut, as well as on the Montlake Bridge when it is not open to vehicle traffic during the events. Boaters gather and moor in Portage Bay, Union Bay, and Lake Washington to watch the events, which include a boat parade and the Windermere Cup international rowing competition.
- Seafair, occurring annually in August. The event includes many activities that are not boating-related (such as parades and footraces). On the water, hydroplane races occur on Lake Washington, in addition to special events, such as wakeboard competitions. Boaters gather and moor on Lake Washington for the events associated with Seafair.

Union Bay

Within the study area, boats may dock at a few different locations. From the UW Open Space site, the Waterfront Activities Center (WAC) rents canoes, kayaks, and paddle boats and has docks for launching and receiving both motorized and non-motorized watercraft. The UW Canoe House, just to the south of the WAC, is the hub for UW crew rowing activities, with both organized events and individual recreation opportunities. East Montlake Park also has shoreline area that is accessible for hand-carried boat launches and landings. The Arboretum has four locations where non-motorized



watercraft may dock, but has signed and is managing these sites so that launching boats is not permitted in order to help restore and protect the shoreline.

Non-motorized boaters use the area of Union Bay between East Montlake Park and the Arboretum for paddling and wildlife viewing. The Ecosystems Discipline Report Addendum and Errata (WSDOT 2011g) provides details on the types of wildlife, birds, and fish that may be part of the recreation experience from the water. Non-motorized boats can also travel into northern Union Bay into Lake Washington or through the Montlake Cut and farther west. Motor and sailboats moored in Union Bay would head to Lake Washington or to the Montlake Cut to reach Lake Union or Puget Sound.

Portage Bay

Of the four boat launch locations on Portage Bay, three are geared toward motor and sail boats. Both the Queen City Yacht Club and the Seattle Yacht Club provide moorage for motor and sail boats. As mentioned above, private docks of the Bayshore Condominiums on the southwest shoreline provide moorage for 15 motor and sailboats. The docks would allow for launching and landing hand-carried boats, as well. The shoreline of the Montlake Playfield at the south end of the Bay, although not designated and maintained as a boat dock, is an accessible and popular hand-carried boat launch and landing spot.

Non-motorized boaters on Portage Bay use the study area around SR 520 for paddling and wildlife viewing. Hand-carried boats launched from the study area may also travel around the rest of the bay, through the Montlake Cut to Union Bay or Lake Washington, or west toward Lake Union or beyond. Motor and sailboats moored in Portage Bay could be heading to or from Lake Union, to Puget Sound, or to the Montlake Cut to reach Union Bay or Lake Washington.

Lake Washington

Review of aerial maps shows that private docks associated with homes along the North Madison Park shoreline provide moorage for an estimated 30 motorized or sail boats. Smaller, hand-carried boats may also launch from these shoreline areas and docks. The larger boats that dock in this area require access to specific channels with adequate water depth in order to access their docks.

Smaller vessels and non-motorized watercraft launching from these private docks or traveling into Lake Washington from the west may use the shallower water around the shore of Lake Washington for wildlife viewing and bird watching, especially around Marsh Island and Foster Island at the Arboretum. They may also head around or across the lake. Both small and large boats (motorized and non-motorized) travel through the lake to make their way to various destinations.

Ship Canal Waterside Trail

The Ship Canal Waterside Trail runs along the south side of the Montlake Cut. This pedestrian trail extends eastward from the City's West Montlake Park to the Montlake Bridge and then crosses Montlake Boulevard. The trail continues into East Montlake Park, where it ends at a viewing platform on the waterfront. At this point, the trail connects to the Arboretum Waterfront Trail. The



Ship Canal Waterside trail was constructed in 1970 and was designated a National Recreation Trail in 1971.

Seattle Parks and Recreation maintains the 1,200-foot-long trail. People use the shoreline area along the trail for viewing wildlife. A variety of plants and animals can be seen along the footpath at the observation deck. Popular year-round activities along the Ship Canal Waterside Trail include sightseeing, fishing, and jogging.

Arboretum Waterfront Trail

The Arboretum Waterfront Trail is a half-mile trail that begins near the Graham Visitors Center in the Arboretum, travels out onto Foster Island, and meanders on a series of floating piers and structures through the marsh land that connects Foster and Marsh Islands, to East Montlake Park. There, the trail continues north through East Montlake Park to connect with the Ship Canal Waterside Trail.

Raised observation platforms through the marshy areas in the north end of the Arboretum and northwest toward East Montlake Park provide views of the various wetlands around the islands, and wildlife viewing along the trail is a popular activity. The trail also has views of Union Bay and the Ship Canal, Lake Washington, and Husky Stadium. The trail's connection to the Ship Canal Waterside Trail creates a continuous trail from the Arboretum to the Montlake Bridge and then to West Montlake Park.

Potential Effects

The discussion below supplements the Recreation Discipline Report, which compared the potential effects of the No Build Alternative and Options A, K, and L on pages 40 through 72 (WSDOT 2009a). This Addendum compares the effects of the Preferred Alternative with Options A, K, and L, using project design and construction information for the Preferred Alternative.

What were the methods used to evaluate the potential effects, and have they changed since the SDEIS?

The methods used to evaluate the potential effects of the Preferred Alternative were the same methods used to evaluate Options A, K, and L, using the footprint of the Preferred Alternative. The Recreation Discipline Report (pages 39 and 40) provides a detailed discussion of the methodology.

How would construction of the Preferred Alternative affect recreation?

This section updates the description of construction effects found on pages 40 through 60 of the Recreation Discipline Report (WSDOT 2009a) and discusses how the effects of the Preferred Alternative would compare to the effects evaluated in the SDEIS. To update the information



presented in the 2009 Recreation Discipline Report, private facilities within the study area have been added to the discussion of effects. Also, in cases where recreation resources were discussed in the text of the 2009 Recreation Discipline Report but acreage effects were not summarized in the related exhibits, those resources have been added to Exhibits 8 and 15 of this Addendum for clarity.

Exhibit 8. Construction Effects on Recreation Resources (Update to Exhibit 14 of the 2009 Discipline Report)

	Resource	Approximate Resource Size (acres unless otherwise noted)	Area Affected by Construction			
			Preferred Alternative	Option A	Option K	Option L
1	Rogers Playground	1.9	0	0	0	0
2	Roanoke Park	2.2	0	0	0	0
3	Bagley Viewpoint ^a	0.1	0.1	0.1	0.1	0.1
4	Interlaken Park	51.7	0	0	0	0
5	Montlake Playfield	27	3.2	2.0	1.0	0.8
6	Queen City Yacht Club ^b	9.2	0	0	0	0
7	Seattle Yacht Club	1.3	0	0	0	0
8	Bill Dawson Trail	1,750 feet	Approx. 700 feet	Approx. 800 feet	Approx. 1,400 feet	Approx. 1,600 feet
9	McCurdy Park ^{a,c}	1.4	1.4	1.4	1.4	1.4
10	East Montlake Park	8.8	1.2	1.1	0.4	1.1
11	Ship Canal Waterside Trail	1,200 feet	<0.1	<0.1	0	0.1
12	UW Open Space ^c	3.0	1.2	1.2	0.8	1.4
13	East Campus Bicycle Route	2,900 feet	0.1	0.1	0.1	0.1
14	Burke-Gilman Trail	12.5 miles	0	0	0	0
15	Husky Stadium	18	0	0	0	0
16	Arboretum Waterfront Trail	0.5 mile	0	0	0	0
17	Washington Park Arboretum	230	1.8	1.8	5.2	2.3
18	Lake Washington and Associated Water Bodies ^d	Not calculated	Not calculated	Not calculated	Not calculated	Not calculated
Total Effects Parks		--	7.6	6.1	9.1	7.2

Note: Highlighted rows show resources where the area of effects for the Preferred Alternative differs from Option A of the SDEIS.

^a This area of park would also be permanently acquired, and therefore is also listed under operational effects in Exhibit 18.

^b Land acreage only – does not reflect in-water area.

^c Error in reporting size of facility corrected here.

^d In-water acreage would vary according to contractor operations; it was not calculated.

The types of construction effects that would occur are the same as those described for the SDEIS options. Construction of the Preferred Alternative would require the demolition of existing



roadways, bridges, and ramps; use of portions of pedestrian and bicycle trails; and use of park and recreation facilities, along with construction of the new facilities. Construction effects to recreation would be generated by permanent closure of portions of parks starting during construction, the creation of staging areas within and near parks, use of arterial streets for potential haul routes, use of water bodies for construction work bridges, and likely use of waterways to barge materials to and from worksites. These activities would generate noise, vibration, and dust depending on equipment used, would involve traffic detours that could affect ease of access to parks (although the access points to parks would not change), and would change some views since construction and demolition work at most locations would be highly visible.

In all cases, these construction effects would be abated and mitigated to the degree possible. The Air Quality, Noise, Transportation, and Visual Quality and Aesthetics Discipline Report Addenda and Errata (WSDOT 2011h, WSDOT 2011i, WSDOT 2011f, and WSDOT 2011e) discuss available measures that could be used to avoid and minimize those types of effects, as well as potential mitigation. Effects related to recreation facilities that are also Section 106 resources (for example, the Arboretum and Lake Washington Boulevard) would be resolved through the stipulations provided in the project's Programmatic Agreement and through the associated community construction management plan, which is included in the Programmatic Agreement by reference; and through the Arboretum Mitigation Plan (WSDOT 2010b). Effects related to dust from construction are discussed in the Air Quality Discipline Report (WSDOT 2009c). The effects would be mitigated by using WSDOT's best management practices (BMPs), such as limiting areas of unworked open earth at construction sites, wetting open areas of soil when unworked for periods of time, using modified construction entrances to reduce tracking of soil onto streets, and loading and/or covering haul trucks as appropriate. Effects related to noise could be reduced by measures such as limiting, to the extent practicable, the use of jackhammers, concrete breakers, saws, and other forms of demolition to daytime hours with more stringent restrictions on weekends, or installing temporary or portable acoustic barriers around stationary construction noise sources and along the sides of the temporary bridge structures. Effects to traffic could be abated by using detailed traffic management plans and carefully marked detours, coordinating with emergency service providers to ensure access at all times, and tailoring special event traffic management plans to consider project construction congestion, including transit priority and special event shuttle services. Visual and aesthetic effects could be managed during construction by using construction screening where feasible.

The effects on recreational resources from construction of the Preferred Alternative would generally be similar to those for Option A. The effects of the Preferred Alternative on bicycle and pedestrian facilities are discussed further in the Final Transportation Discipline Report (WSDOT 2011f). Exhibit 8 shows acreages of temporary construction effects, as well as those areas that would be permanently acquired. (Permanent acquisition acreages are also shown in Exhibit 15). The highlighted rows in Exhibit 8 denote a difference in the effect to the Preferred Alternative, compared to Option A. Exhibit 8 shows the acreage of park resources that would be directly affected by construction of the Preferred Alternative in comparison to the effects described for the SDEIS design options. Exhibits 9 through 14 show those effects on recreational facilities by geographic area.



I-5 Area

Rogers Playground

As with Option A, the closest construction to Rogers Playground would occur at the intersection of Boylston Avenue East and East Roanoke Street (Exhibit 9). Construction in the I-5 area, associated with the I-5 bicycle and pedestrian crossing and included as part of the Preferred Alternative, would take approximately 26 months to complete. The improvements at I-5 for the SDEIS options would be of equal duration, but would be a more intensive effort than the improvements for the Preferred Alternative. The I-5 lid, included as part of the SDEIS options, would also take approximately 26 months to build.

For the Preferred Alternative and all SDEIS options, Boylston Avenue East could be used as a potential secondary haul truck route. This haul route would be used intermittently for the duration of construction, which would last approximately 26 months in the I-5 area. On most days, there would be no noticeable difference in traffic volumes from existing conditions as a result of using the roadway for hauling. During peak periods, the volume of truck trips per day would be comparable to Option A (60 to 240 truck trips per day intermittently with the Preferred Alternative). The Transportation Discipline Report (WSDOT 2009b) provides information on haul trip volumes. The Construction Techniques and Activities Discipline Report (WSDOT 2009d) provides a more complete discussion about haul truck trips and a description of project staging and likely timing.

Effects of construction on views and background noise levels at the playground would be minor. Noise, visual, and dust effects that would otherwise occur at Rogers Playground would be blocked by the TOPS School buildings located between the playground and the construction area, and by the street trees located along both East Louisa Street and East Roanoke Street. There would be no change in vehicular or bicycle/pedestrian access to the playground or to on-street parking nearby during construction.

Roanoke Park

As with all SDEIS options, no construction activities would occur within the park under the Preferred Alternative (Exhibit 9). The effects on Roanoke Park from construction of the Preferred Alternative would be similar to the SDEIS options. As with Option A, construction would occur directly adjacent to the site on East Roanoke Street, and would be related to the realignment of the East Roanoke Street/10th Avenue East/East Delmar Avenue intersection, and the 10th and Delmar lid work. The duration of activities at these two locations involving earth movement or use of heavy equipment would be approximately 26 months, about the same as was anticipated for the SDEIS options. A potential secondary haul route is still proposed along East Roanoke Street and it would be in use for approximately 26 months, the same length of time as under Option A.

If construction effects were unmanaged, they would generate dust that might travel to the park. Noise and vibration from the work on East Roanoke Street, construction of the 10th and Delmar lid, and the pedestrian/bicycle crossing of I-5 would be noticeable to park users. There would be a



visible effect to park users because they would be able to see ongoing construction at these locations from within the park, and would also see haul trucks on East Roanoke Street. Bicycle and pedestrian access to the park from East Roanoke Street would not be limited during construction because the sidewalk along the north side of the street would remain open. None of the access points along the park's perimeter or the on-street parking around the park would be disturbed by construction.

Bagley Viewpoint

Similar to the SDEIS options, the entire Bagley Viewpoint site would be permanently acquired to provide right-of-way for the 10th and Delmar lid (Exhibit 9). The site would be purchased and used for project access and staging at the start of construction, during which time it would be fenced and inaccessible to the public, for approximately 26 months. Because the new lid would be considered a transportation facility under WSDOT ownership, the existing viewpoint area could not be returned to use as a City of Seattle park. However, a different but similar viewpoint would be provided as a part of the 10th Avenue East/Delmar Drive East lid, and the existing viewpoint area would be integrated into the new lid structure.

Interlaken Park

Since Option A was described in the SDEIS, WSDOT has refined the construction limits so that no construction easements would be required in Interlaken Park (Exhibit 9). The work on curbs and sidewalks that was discussed in the 2009 Recreation Discipline Report would all be within road right-of-way. Unlike Option A, the Preferred Alternative would not involve the temporary closure of Delmar Drive East and would not require a detour route that would have affected park access. Accordingly, the bicycle and pedestrian detours discussed in the 2009 Recreation Discipline Report (WSDOT 2009a) would not be necessary. A potential secondary haul route along Delmar Drive East alongside the park would still likely be used.

Under the Preferred Alternative, there would be no curb cuts at park driveways or any other on-the-ground effects in the park itself. Interlaken Park would not be likely to experience effects associated with construction of the 10th and Delmar lid, as the closest that this portion of construction would now come to the park (other than the potential haul route) would be approximately 100 feet away to the north. Park users would likely hear some noise from construction of the 10th and Delmar lid for approximately 26 months and noise from pile-driving at the work bridges along the Portage Bay Bridge for approximately 14 months. Use of Delmar Drive East as a potential haul route would not likely produce traffic, noise, or dust that would affect users of Interlaken Park.

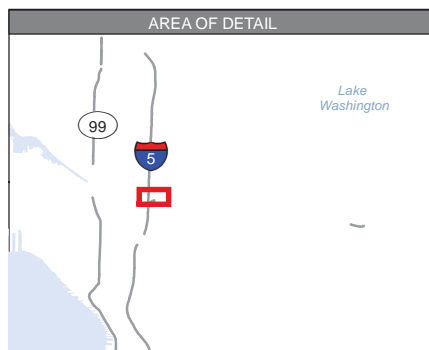
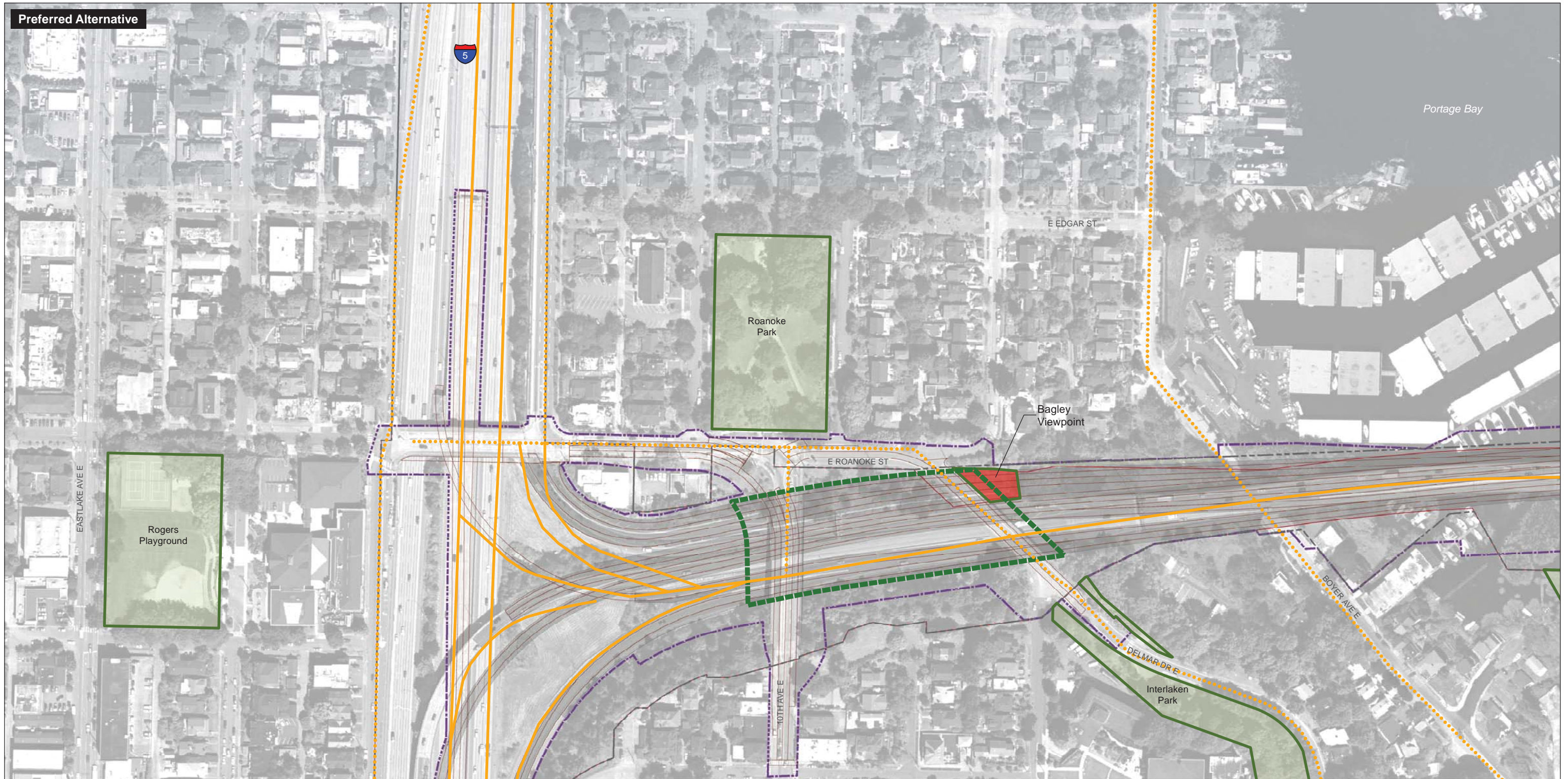
Portage Bay Area

Montlake Playfield

As described for Option A, the Preferred Alternative includes construction work bridges adjacent to the Portage Bay Bridge (Exhibit 10). Within the park, as with Option A, approximately 0.3 acre of construction easement would be needed for the work bridge that would be used to remove and replace the existing Portage Bay Bridge. The work bridge would remain in place to assist with demolition of the existing Portage Bay Bridge and construction of the new bridge over a period of



Preferred Alternative



- Park Effect**
- Area of Permanent Effect
 - Proposed Right-of-way
 - Existing Right-of-way
 - Limits of Construction
 - Proposed Lid
 - Proposed Travel Lane
 - Pavement
- Potential Primary Haul Route (Preferred Alternative and Options A, K, and L)
 - Potential Secondary Haul Route (Preferred Alternative and Options A, K, and L)
 - Park or Recreation Feature

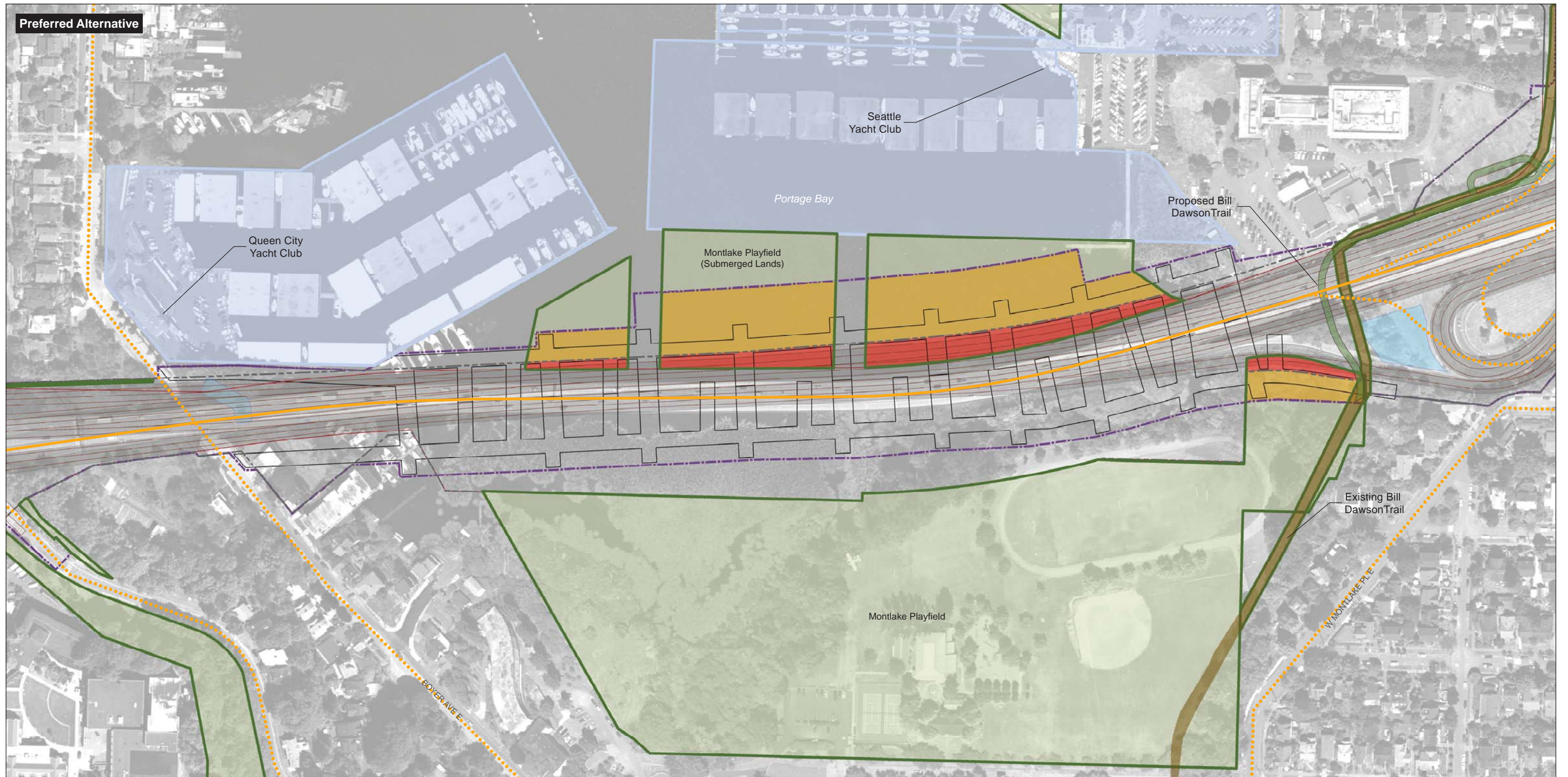


Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails), City of Seattle (2009) GIS Data (Section 6(f) Boundary). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 9. Effects on Recreation Resources in the I-5 Area (Update to Exhibit 15 of the 2009 Discipline Report)
 I-5 to Medina: Bridge Replacement and HOV Project

Preferred Alternative



- Area of Permanent Effect
- Construction Easement
- Proposed Right-of-way
- Existing Right-of-way
- Limits of Construction
- Proposed Travel Lane
- Private Recreational Facility
- Park or Recreation Feature
- Stormwater Facility
- Work Bridge
- Potential Primary Haul Route (Preferred Alternative and Options A, K, and L)
- Potential Secondary Haul Route (Preferred Alternative and Options A, K, and L)
- Proposed Bicycle/Pedestrian Path
- Existing Trail/Bicycle Path
- Pavement



Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails), City of Seattle (2009) GIS Data (Section 6(f) Boundary). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 10. Effects on Recreation Resources in the Portage Bay Area (Update to Exhibit 16 of the 2009 Discipline Report)
I-5 to Medina: Bridge Replacement and HOV Project

approximately 64 months. The work bridge in Montlake Playfield would be built in a construction easement at the northeastern edge of the park property (where there are no developed active use features), and the easement area would be fully restored and returned to park use after construction.

Construction activities near the park would include pile-driving for the construction work bridges alongside the length of the Portage Bay Bridge, demolition of the existing Portage Bay Bridge, and construction of the new Portage Bay Bridge and Montlake Boulevard off-ramp. These activities would generate dust, noise, vibration, and changes to views from the park for the duration of the 64-month period. Pile-driving associated with the work bridges would only occur during a 14-month period. There would be no physical impediment to launching and landing hand-carried boats at the shoreline of the park, although ability to navigate underneath the Portage Bay Bridge and work bridges would be impeded at times during the 64-month construction period for the Portage Bay Bridge. If practicable, work bridges would be designed to generally allow travel underneath, but access beneath the work bridges would be prohibited at times in order to ensure public safety; boats would also not be allowed to pass underneath the Portage Bay Bridge during demolition activities. WSDOT would provide advance notification of the boating route closures and would coordinate with the City of Seattle to provide appropriate notice to park users. Notice could be provided as messages on the Seattle Parks and Recreation Website, postings in the park itself, and/or postings on the work bridges.

There would be no change to the park's access points for motor vehicles or to on-street parking. There would be one effect to pedestrian and bicycle access to the park. The Bill Dawson Trail (Exhibit 11) would be closed under and north of SR 520 for the approximately 64-month construction period and access from north of SR 520 along this trail to the park would not be possible during that period in this area.

Bill Dawson Trail

During construction of the Preferred Alternative and the SDEIS options,, the segment of the Bill Dawson Trail within the WSDOT right-of-way and north of SR 520 would be closed for about 64 months. Detours for pedestrians and bicyclists who would normally use this trail would be provided using on-street and sidewalk connections to maintain trail connectivity between Montlake Boulevard and Montlake Playfield. The detour would be 1,520 feet longer than the closed portion of the trail and would extend from the Montlake Playfield rejoining the existing trail on Montlake Boulevard NE (Exhibit 10).

Private Recreational Facilities

Private Boat Moorage

During the 64-month construction period for the Portage Bay Bridge, access to and from private moorage at the Bayshore Condominiums along the south end of Portage Bay would be limited. Work bridges would be designed to provide adequate clearance underneath, but at times access beneath the work bridges would not be possible in order to ensure public safety. Boats would also not be allowed to pass underneath the Portage Bay Bridge during demolition activities. WSDOT



would work with private boat owners at the south end of Portage Bay to ensure access or find alternate moorage.

Queen City Yacht Club

A work bridge would be needed on the north side of the Portage Bay Bridge to demolish the existing structure and build the new one (Exhibit 10), and approximately 10 slips on the south side of the south dock underneath the right-of-way would be unavailable for approximately 64 months during that work. Barges would also be used to haul material to the construction site and would be moored underneath the Portage Bay Bridge for some construction activities. Other than loss of access to the south dock slips, there would be no other effects to boat movement around the Queen City Yacht Club. Barges moving into this area would not be a regular occurrence. They would not be moored in locations that affect boat movement to and from the yacht club. As noted earlier, traffic to and from the Queen City Yacht Club on and around opening day of boating season would not be impeded by construction or barge movement and moorage because WSDOT has committed to timing adjacent construction activities to avoid such interference.

Other likely types of effects to the facility would be generation of dust, noise, vibration, and changes to views for a period of up to 64 months. During this period, pile-driving to install the work bridges would be the most intrusive activity, and it would generate noise and vibration for approximately 14 months.

Seattle Yacht Club

There would be no effects to the Seattle Yacht Club's property or its moorage (Exhibit 10). As noted earlier, opening day activities would not be impeded by construction because WSDOT has committed to timing adjacent construction activities to avoid such interference. During the 64 months of Portage Bay Bridge demolition and construction, the Seattle Yacht Club would experience the same dust, noise, vibration, and visual effects discussed for the Queen City Yacht Club.

Montlake Area

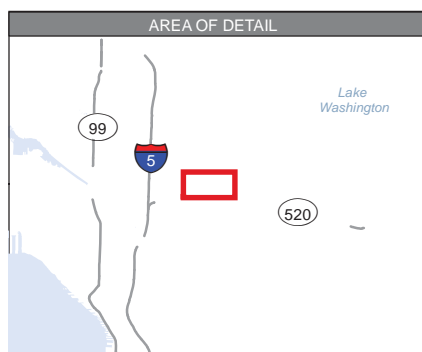
McCurdy Park

As with all SDEIS options, the Preferred Alternative would result in permanent acquisition of all of McCurdy Park for transportation uses, beginning at the start of construction (Exhibit 11). Various onsite construction activities would occur for approximately 63 months. Effects on recreation in the area would be similar to those discussed for East Montlake Park as follows. The future use of the site is discussed in the Operational Effects section.

East Montlake Park

The Preferred Alternative would require the temporary use of approximately 1.2 acres of land, to support construction staging and construction of the stormwater treatment facility. The temporary construction easements required under SDEIS Options A and L are essentially equivalent to that of the Preferred Alternative. During construction, the areas of the park not closed to the public would





- | | |
|----------------------------|--|
| Park Effect | — Potential Primary Haul Route (Preferred Alternative and Options A, K, and L) |
| ■ Area of Permanent Effect | ⋯ Potential Secondary Haul Route (Preferred Alternative and Options A, K, and L) |
| ■ Underground Easement | — Existing Trail/Bicycle Path |
| ■ Construction easement | — Proposed Bicycle/Pedestrian Path |
| — Proposed Right-of-way | — Work Bridge |
| — Existing Right-of-way | ■ Lid |
| — Limits of Construction | ■ Park or Recreation Feature |
| — Proposed Travel Lane | ■ Stormwater Facility |



Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 11. Effects on Recreation Resources in the Montlake Area (Update to Exhibit 18 of the 2009 Discipline Report)

I-5 to Medina: Bridge Replacement and HOV Project

continue to provide access to adjacent Lake Washington the Montlake Cut, and the Ship Canal Waterside Trail. Some onsite parking would be retained during most of the construction phase. The kayak and canoe launch point on the Lake Washington shoreline would be periodically inaccessible, but would remain open for the majority of the construction period. As with SDEIS Option A, a short segment of the Ship Canal Waterside Trail near Montlake Boulevard would be periodically closed for safety reasons during construction of the new bascule bridge. A portion of the Arboretum Waterfront Trail within East Montlake Park would be periodically closed for construction of the new stormwater treatment facility outfall to Union Bay and access to that trail would be affected at times by construction of the new parking lot.

Construction would occur in the park and near the site for up to 63 months, longer than the 45 months described for SDEIS Option A, because of changes to the construction schedule between the west approach and Montlake areas, and because of the larger Montlake lid for the Preferred Alternative.

Trail and park users would experience noise, vibration, and visual quality effects. The effects would depend on the day as well as time of day.

Ship Canal Waterside Trail

Under the Preferred Alternative and Option A, WSDOT proposes to use less than 0.1 acre of the Ship Canal Waterside Trail and surrounding land during construction of the new bascule bridge across the Montlake Cut. Under the Preferred Alternative and all SDEIS options, access to the part of the Ship Canal Waterside Trail west of Montlake Boulevard would still be available during and after construction. Access to the eastern portion of the trail and its connection to the Arboretum Waterfront Trail would be available from East Shelby Street, East Hamlin Street, and East Montlake Park during and after construction.

UW Open Space

Like Option A, the Preferred Alternative would include a new bascule bridge adjacent to and on the east of the existing bascule bridge at Montlake Boulevard. A stormwater treatment bioswale would also be built on the UW Open Space. Approximately 1.2 acres of open space within the western third of the park would be used for construction staging and would be unavailable for recreation for approximately 30 months.

Pedestrian and vehicle access to the WAC and the UW Canoe House on the eastern portion of the UW Open Space would be provided at all times and there would be no effects to boating access to and from the UW Open Space. Some of the vehicle parking that is used for access to the UW Open Space, approximately 10 spaces in Husky Stadium Parking Lot E11, would be used for construction staging and temporarily unavailable, but would be restored after construction. After construction, areas supporting the temporary construction easement would be restored to their current recreation uses. Additionally, a portion of the East Campus Bicycle Route would be unavailable for a short



time as the new bascule bridge is constructed. Access to most of the park would still be available, even with closure of this area during construction.

Construction would generate noise, dust, and changes to the aesthetic component of the UW Open Space during the approximately 30 months of activity on this site. Noise would be noticeable to UW Open Space users as well as recreational bicyclists and pedestrians on Montlake Boulevard. The loudest work would likely occur during construction of the new bascule bridge and roadway paving. Dust is not anticipated to be an issue onsite due to use of appropriate BMPs.

Burke-Gilman Trail

There would be no effects on the footprint of the Burke-Gilman Trail itself. Construction activities involving grading or structural work that would generate noise or dust would be far enough away from this facility (approximately 100 feet at the closest) that these types of construction effects are not likely to occur.

Husky Stadium

There would be no physical effects to the Husky Stadium itself. Like Option A, the Preferred Alternative would have minor effects on event parking at Husky Stadium Lot E12, with approximately 10 spaces of the lot used for the project during construction. Some delays to traffic to and from events may occur as a result of construction; however, WSDOT would work with UW to coordinate construction activities to minimize disruptions on game days and for other special events. There would be no effect to boating traffic to and from events at Husky Stadium as there would be no work bridges near the shoreline area of Union Bay at this location and no impediments to vessel traffic in the vicinity.

West Approach Area

Olmsted Boulevard – Lake Washington Boulevard

Lake Washington Boulevard would be affected by construction activities associated with the Montlake lid. Although there would be no permanent land acquisitions, the planting strips and the median between East Hamlin Street and SR 520 would be removed during construction. This median and the plantings would be replaced once construction was completed. Users of the boulevard would experience noise and dust from construction activities during the 56-month construction period.

Users of the roadway would experience changes in visual quality and traffic effects from detours during construction, although detours would be clearly signed and minimized where possible. The Transportation Discipline Report (WSDOT 2009b) provides information on traffic effects. The Land Use Discipline Report (WSDOT 2009e) and the Social Elements Discipline Report (WSDOT 2009f) provide information on effects to land use and neighborhoods.



Arboretum Waterfront Trail

Under the Preferred Alternative and all SDEIS options, the Arboretum Waterfront Trail would experience brief and intermittent closures, lasting for less than 6 months at a time. More detail is provided in the discussion of the Arboretum as follows.

Washington Park Arboretum

Like the SDEIS options, the Preferred Alternative would remove the existing Lake Washington Boulevard ramps and the unused R.H. Thomson Expressway ramps. Although removal of the ramps would occur entirely on WSDOT property, adjacent areas of the Arboretum would likely be affected by noise and vibration during their demolition. Dust would be generated during demolition activities, but would be controlled by construction BMPs and would not affect visitors to the Arboretum or the Arboretum's vegetation or wildlife. There would be no effects to access to the Arboretum from this demolition work.

Similar to Option A, SR 520 would cross Foster Island within the Arboretum on a pier and span bridge. Construction of the west approach, under the Preferred Alternative, would require a temporary 1.6-acre easement on Foster and Marsh Islands for approximately 58 months to accommodate work bridges needed to demolish existing SR 520 and construct the new roadway (Exhibit 12). Similar to the SDEIS options, installation of the work bridges would temporarily affect the Arboretum Waterfront Trail and there would be temporary closures of the trail during construction to ensure public safety during work bridge construction and demolition of SR 520. Because a trail detour around the SR 520 construction on Foster Island could not be provided during those times, connectivity between the ends of the trail would be temporarily disrupted. However, the closures of the trail would be for less than 6 months and access to the trail would continue to be available from either East Montlake Park or the Arboretum at all times as discussed in the Section 6(f) Environmental Evaluation (WSDOT 2011c). While in place, the work bridges would change the views from the Arboretum. Construction activities including pile-driving would generate noise.

In addition to the construction closures of upland areas at the Arboretum, boat movements would be restricted beneath the Evergreen Point Bridge and the work bridges in areas where the work bridges are being constructed or while demolition of the existing bridge was occurring overhead. Paddling would be allowed in the waterways south of SR 520 during some portions of the construction period, but movement around Foster Island would be interrupted at times to maintain public safety. Access under SR 520 in the west approach area would be restricted for the approximately 59-month duration of construction in this area.

Lake Washington

The Preferred Alternative would likely affect recreational use of Lake Washington for approximately 45 months. Since publication of the SDEIS, construction staging refinements resulted in an update to construction durations for the SDEIS options. The update indicates that Option A would have approximately the same duration of construction effects in this area as the Preferred Alternative



(Construction Techniques and Activities Discipline Report Addendum and Errata, WSDOT 2011b). Pile-driving to install the work bridges, demolition of the existing bridge, and construction of the new bridge would produce noise, visual quality, and navigation effects for recreational boaters.

During demolition of the existing bridge and construction of the new one, a navigation channel through the project area for larger boats would be maintained. The Navigable Waterways Discipline Report Addendum and Errata (WSDOT 2011j) provides more information on the Preferred Alternative's effects on larger vessel movements. WSDOT has done additional work since the SDEIS to ensure that deeper water access for larger boats to and from moorages on Lake Washington would be maintained during construction. For safety reasons, the ability for smaller vessels to travel underneath SR 520 would be affected near the work bridges and over-water construction areas, although access through the Evergreen Point Bridge area would always be available.

Eastside Transition Area

For the Preferred Alternative, as with SDEIS Option A, no construction work would occur in or near any of the Eastside recreation resources in the study area. The nearest construction would be restriping of traffic lanes, which would not be expected to have any effect on the Points Loop Trail or Fairweather Park (Exhibit 13).

How would operation of the project affect recreation?

Permanent effects of the Preferred Alternative on recreation resources would be similar to those described for SDEIS Option A, although the Preferred Alternative would permanently acquire slightly less land from park and recreation resources, compared to Option A. Effects on individual resources are described below. This section compares operational effects from the Preferred Alternative to the effects described in pages 60 through 72 of the 2009 Recreation Discipline Report (WSDOT 2009a). Exhibit 14 summarizes the permanent effects of the Preferred Alternative and SDEIS Options A, K, and L on recreation resources.

I-5 Area

Rogers Playground

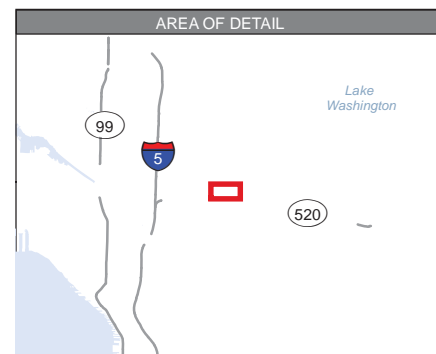
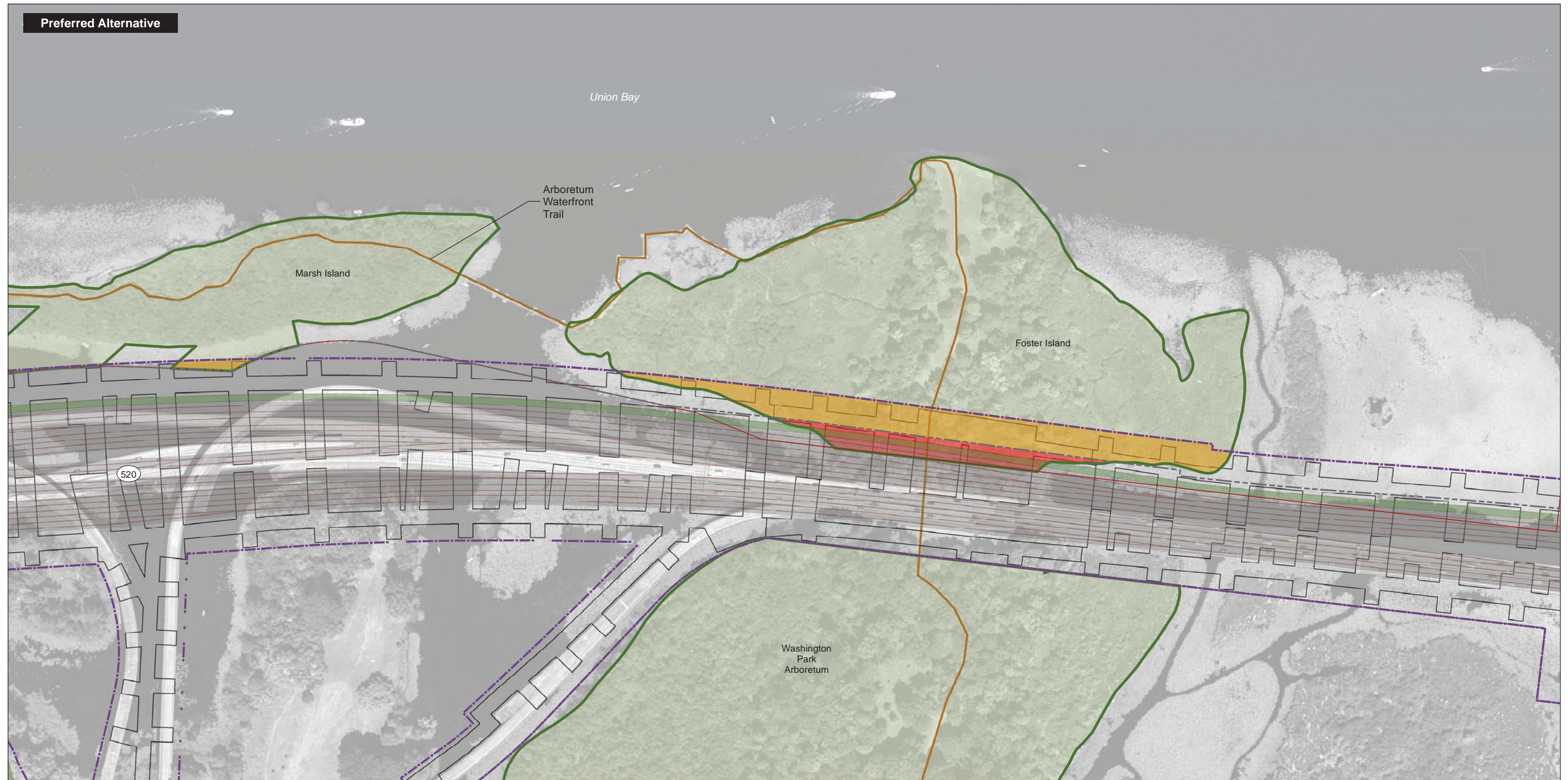
Rogers Playground would experience neither land acquisition nor proximity effects during operation of the Preferred Alternative, the same as with all SDEIS options.

Roanoke Park

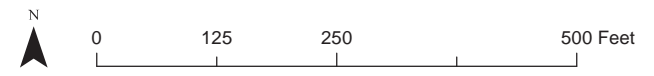
There would be no physical change to Roanoke Park as a result of the Preferred Alternative. The Preferred Alternative would vary from the SDEIS design options in that no lid would be constructed over I-5, so the views from the park toward the west would remain substantially the same as they are currently. The park's setting would still change as a result of the addition of the 10th and Delmar lid. Views from the park toward the south would take in the landscaped lid area stretching uphill across SR 520. The lid would be designed to be compatible with the park and the surrounding historic district and could improve the experience for park users. See the Visual Quality and



Preferred Alternative



- Park Effect**
- Area of Permanent Effect
 - Construction Easement
 - Proposed Right-of-way
 - Existing Right-of-way
 - Limits of Construction
 - Proposed Travel Lane
 - Existing Trail/Bicycle Path
 - Proposed Bicycle/Pedestrian Path
 - Work Bridge
 - Pavement
 - Park or Recreation Feature

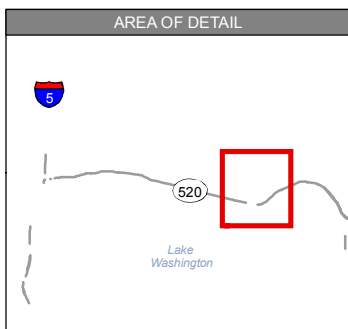


Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails), City of Seattle (2009) GIS Data (Section 6(f) Boundary). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 12. Effects on Recreation Resources in the West Approach (Update to Exhibit 22 of the 2009 Discipline Report)

I-5 to Medina: Bridge Replacement and HOV Project



- - - Existing Regional Bicycle/Pedestrian Path
- Park within Study Area
- Park
- City Limits

Source: City of Bellevue (2005) GIS Data (Trails), City of Bellevue (1999) GIS Data (City Limits), King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 13. Parks and Recreation Facilities in the Eastside Area (Update to Exhibit 13 of the 2009 Discipline Report)

I-5 to Medina: Bridge Replacement and HOV Project



Exhibit 14. Permanent Park Acquisition (Acres) (Update to Exhibit 25 of the 2009 Discipline Report)

Resource	Park Size (acres)	Preferred Alternative	Option A	Option K	Option L
Rogers Playground	1.9	0	0	0	0
Roanoke Park	2.2	0	0	0	0
Bagley Viewpoint	0.1	0.1	0.1	0.1	0.1
Interlaken Park	51.7	0	0	0	0
Montlake Playfield	27	1.2	2	1	0.8
Queen City Yacht Club ^a	9.2	0	0	0	0
Seattle Yacht Club	1.3	0	0	0	0
Bill Dawson Trail	1,750 feet	Approx. 700 feet	Approx. 1,400 feet	0	0
Ship Canal Waterside Trail	1,200 feet	<0.1	<0.1	0	<0.1
McCurdy Park	1.4	1.4	1.4	1.4	1.4
East Montlake Park	8.8	2.8	2.8	5.2	4.3
UW Open Space ^b	3.0	0.2	0.2	0.1	0.5
East Campus Bicycle Route ^b	2,900 feet	<0.1	<0.1	0	<0.1
Burke-Gilman Trail	12.5 miles	0	0	0	0
Husky Stadium	18	0	0	0	0
Arboretum Waterfront Trail	0.5 mile	0	0	0	0
Washington Park Arboretum	230	0.5	0.4	0.7	0.3
Lake Washington and Associated Facilities ^c	Not calculated	Not calculated	Not calculated	Not calculated	Not calculated
Total Effects Parks	--	6.3	6.9	8.5	7.5

Note: Shaded rows are those where the area or permanent park acquisition differs from Option A.

^a Land acreage only – does not reflect in-water area.

^b Acreages of effects do not include utility and stormwater easements, which have no effect aboveground.

^c In-water acreage would vary according to contractor operations; it was not calculated.

Aesthetics Discipline Report Addendum and Errata (WSDOT 2011e) for more information on views. Although no lid is proposed over I-5, the Preferred Alternative does include a bicycle/pedestrian connection alongside the East Roanoke Street Bridge, which would improve bicycle and pedestrian connectivity between the park and areas west of I-5.

Bagley Viewpoint

As with the SDEIS options, the Preferred Alternative would result in complete acquisition of Bagley Viewpoint. A new viewpoint would be located on the 10th Avenue East and Delmar Drive East lid.



The viewpoint would be designed to recreate the original intended panoramic views of Portage Bay and the Cascade Mountains.

Interlaken Park

There would be no change to the footprint of Interlaken Park and no negative effects on the park from operation of the Preferred Alternative, or from the SDEIS options. Enhanced neighborhood connectivity provided by the Preferred Alternative may encourage additional bicycle or pedestrian traffic to visit the site from the Montlake area or elsewhere. More bicycle and pedestrian traffic on area trails would lead to greater access to and use of adjacent parks such as Interlaken. The Final Transportation Discipline Report (WSDOT 2011f) describes the bicycle and pedestrian features of the project, including how the features would improve non-motorized travel in the area.

Portage Bay Area

Montlake Playfield

Under the Preferred Alternative and all SDEIS options, a portion of the playfield's submerged area located to the north of SR 520 would be permanently acquired for right-of-way purposes. Additionally, under the Preferred Alternative there would be a permanent right-of-way acquisition in the northeastern portion of Montlake Playfield. This acquisition would not have any permanent negative effects to the park, because it would be located on the park's periphery, adjacent to existing right-of-way, and in an area not integral to the existing recreation facilities. Views of the Portage Bay Bridge from Montlake Playfield would change since the Preferred Alternative would include a bridge designed to be context-sensitive and compatible with its surroundings, and this change is expected to be positive. The Visual Quality and Aesthetics Discipline Report Addendum and Errata (WSDOT 2011e) provides more information about visual effects of the Portage Bay Bridge to this site. As with the SDEIS options, noise from traffic on the Portage Bay Bridge would be less than under existing conditions or the No Build Alternative. Noise levels would not be reduced as much as under Option A with noise walls because design measures included for the Preferred Alternative, including the 4-foot tall concrete traffic barriers with sound absorptive materials, would reduce noise levels in this area. The results of the noise analysis indicate that noise walls are not recommended. The Noise Discipline Report Addendum and Errata (WSDOT 2011i) provides information on anticipated noise levels along the corridor. There would be no change to access or launch and landing of small boats along the shoreline of Portage Bay at this location.

Bill Dawson Trail

As with Option A, the Preferred Alternative would replace the Bill Dawson Trail at its current location underneath SR 520 at the close of construction, with a small realignment to accommodate the new structure and a stormwater pond (Exhibit 10). The trail would be designed to meet appropriate standards for width. The trail would also meet Americans with Disabilities Act (ADA) slope and accessibility requirements, including at the access point to the Montlake lid north of SR 520. The trail would continue to provide a north-south pedestrian and bicycle connection underneath SR 520 from Montlake Playfield to the Montlake Boulevard area.



Private Recreation Facilities

Private Boat Moorage

All access to private moorage at the south end of Portage Bay would be restored after construction. Boats would be able to move freely underneath the new Portage Bay Bridge.

Queen City Yacht Club and Seattle Yacht Club

Operation of the Preferred Alternative would not result in any negative effects on the yacht clubs. Similar to under SDEIS Option A, after construction the physical space available for moorage would not be altered by the Preferred Alternative. Improvements to SR 520 and the Montlake interchange would have a positive effect on traffic flow and access to the Seattle Yacht Club. Other features of the Preferred Alternative on SR 520, such as the 4-foot-tall concrete traffic barriers with noise absorptive materials, quieter concrete pavement, and the 45-mile per hour speed limit between I-5 and the Montlake lid, would help to reduce operational noise from the roadway. Stormwater treatment discussed in the Water Resources Discipline Report (WSDOT 2009g) would improve the quality of runoff entering Portage Bay near of the yacht clubs. As noted for Montlake Playfield, context-sensitive design of the new Portage Bay Bridge is expected to provide a positive visual experience for boaters and event attendees.

Montlake Area

McCurdy Park

Under the Preferred Alternative and all SDEIS options, McCurdy Park would be permanently acquired for WSDOT right-of-way. The Museum of History and Industry (MOHAI) facility that straddles the property line between McCurdy and East Montlake Parks would be moved to a new location. The 1.4-acre park would be incorporated into the larger lid design, including a widened roadway and a portion of a new pedestrian/bicycle trail that would pass southward underneath SR 520 to create a loop with the Arboretum Waterfront Trail and the Ship Canal Waterside Trail.

East Montlake Park

Under the Preferred Alternative and SDEIS Option A, 2.8 acres of East Montlake Park would be permanently acquired. The acquired area would support a new stormwater treatment facility and a new parking lot with approximately 30 paved parking spaces. Currently, SR 520 cannot be seen from areas within East Montlake Park because the view to the south is blocked by the MOHAI building and trees in McCurdy Park. Upon project completion, screening vegetation that was removed from McCurdy Park would be reestablished wherever possible to provide as much visual buffer as possible between East Montlake Park and SR 520. However, SR 520 would travel underneath the Montlake lid through this area, with the wall of the lid structure visible from East Montlake Park. Landscaping on top of the Montlake lid will not screen the lid wall from East Montlake Park views. The use of trees to entirely screen the roadway and lid wall will not be possible because of the location of the planned onsite stormwater pond. The stormwater treatment facility will be directly adjacent to the lid structure and trees cannot be planted in or around the pond. The new stormwater treatment facility would be compatible with the remaining East



Montlake Park and the pond area would be landscaped. Despite these visual effects, removal of the existing large parking area and landscaping of the final site would contribute to a more natural onsite appearance and a positive visual effect for park users. Full access to the Ship Canal Waterside Trail and the Arboretum Waterfront Trail would also be restored after construction, with the new pedestrian/bicycle trail creating new north/south connectivity. The nonmotorized boat launch of East Montlake Park would remain in place, and would be accessed from the new parking lot.

Ship Canal Waterside Trail

The Preferred Alternative, and Options A and L would permanently acquire less than 0.1 acre of the Ship Canal Waterside Trail, to support a new bascule bridge over the Montlake Cut. Despite this acquisition, access from the acquired segment, to the eastern and western portions of the trail, would remain viable. After construction, a connection from the Ship Canal Waterside Trail to the new bascule bridge would be provided, similar to the current stairs up to the existing bridge and Montlake Boulevard. Exhibit 15 shows the future trail connectivity for the Preferred Alternative.

UW Open Space

As with Option A, the Preferred Alternative would widen Montlake Boulevard from SR 520 to Pacific Street, with minor modifications to the intersection of Montlake Boulevard and Pacific Street. This work would require permanent acquisition of approximately 0.2 acre of the UW Open Space for the new bascule bridge and widened roadway. A new stormwater bioswale would be operational on the site as shown on Exhibit 11, and that area would be removed from recreation use. The bioswale would be a natural-appearing feature that would create a positive visual effect onsite. There would be no change in access to the site or parking availability. The visual effects to the UW Open Space from the presence of the new bascule bridge across the Montlake Cut would be the same as described for Option A. Most users on the site are likely to notice minimal, if any, changes to the site related to noise or visual quality from the widened roadway. Landscaping would be provided along Montlake Boulevard to enhance the UW Open Space site and create a visual buffer between the UW Open Space and the roadway.

Burke-Gilman Trail

As with all SDEIS options, there would be no direct adverse effects on the Burke-Gilman Trail from operation of the Preferred Alternative. Potential for regional trail connectivity to and from the Burke-Gilman Trail would be improved by the project's non-motorized components.

Husky Stadium

As with all SDEIS options, there would be no negative operational effects on the stadium or parking facilities. Parking spaces affected during construction would be restored for use at the sites and traffic conditions for vehicles accessing Husky Stadium would improve over existing conditions as discussed in the Transportation Discipline Report (WSDOT 2009b).



West Approach Area

Olmsted Boulevard – Lake Washington Boulevard

The Transportation Discipline Report (WSDOT 2009b) provides information on how traffic operations on Lake Washington Boulevard would be altered by the Preferred Alternative. The roadway through the Arboretum would operate similarly to the way it would under Option A with similar traffic volumes and driving experience. The roadway between the intersection of Montlake Boulevard and 24th Avenue East would be modified as part of the local roadway reconfiguration with the Montlake lid.

Washington Park Arboretum

The Preferred Alternative and all SDEIS options would change a portion of the Arboretum, located on Foster Island, from recreation to transportation right-of-way. The Arboretum Waterfront Trail, partially located within the Arboretum, would not experience permanent effects from the Preferred Alternative or Options A and L.

The effects of the Preferred Alternative to recreation at the Arboretum are similar to those of Option A in a number of ways. For example:

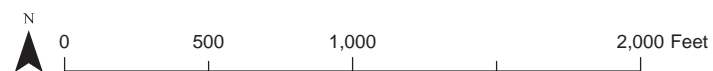
- The wider spacing of the new Evergreen Point Bridge support columns from the current configuration through the west approach area would contribute to a positive visual change from existing conditions.
- The existing unused R.H. Thomson Expressway ramps would be removed, which would further open views for park users and eliminate some columns that currently impede boat access.
- The Arboretum Waterfront Trail currently crosses under SR 520 in a low and narrow pedestrian underpass with 11 feet of vertical clearance that many trail users find unpleasant and uncomfortable. Option A would have crossed Foster Island through the Arboretum with a 15- to 18-foot-tall bridge, improving the user experience by opening views at ground level. The Preferred Alternative would provide for a bridge ranging from 16 to 20 feet across Foster Island.
- For non-motorized boats, the same designated landing points would be available at the Arboretum as today.



Preferred Alternative



- Pedestrian Only Path
- Shared Use Trail
- Proposed Bicycle/Pedestrian Path
- ⋯ Bicycle Lane
- - - Non-Arterial Street (Commonly Used by Bicyclists)
- Arterial Street (Commonly Used by Bicyclists)
- Lid or Landscape Feature
- Park and/or Recreation Resource
- Pavement



Source: King County (2005) GIS Data (Streets), King County (2007) GIS Data (Water Bodies), SPU and SDOT (2008) GIS Data (Trails), and CH2M HILL (2008) GIS Data (Park). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 15. Future Trail Connectivity for the Preferred Alternative (Update to Exhibit 29 of the 2009 Discipline Report)

I-5 to Medina: Bridge Replacement and HOV Project

Exhibit 16 shows that the amount of land to be acquired at the Arboretum from the Preferred Alternative and all SDEIS options.

Since publication of the SDEIS, WSDOT engaged in coordination with Arboretum stakeholders under Engrossed Substitute Senate Bill (ESSB) 6392 to develop refinements to design for the Preferred Alternative and to ensure that operation of the SR 520 project would not negatively affect the Arboretum. The design refinements led to the following differences in recreation effects between Option A and Preferred Alternative.

Exhibit 16. Washington Park Arboretum Acquisitions (Update to Exhibit 27 of the 2009 Discipline Report)

Option	Acquisitions (acres)
Preferred Alternative	0.5
Option A	0.4
Option K	0.6
Option L	0.3

- The experience for small boats around the Arboretum (with the higher bridge) would be improved from both existing conditions and Option A. The new bridge would allow more light to penetrate underneath the bridge and contribute to a more open feeling with better views.
- A number of noise reduction strategies were designed into the Preferred Alternative, which would reduce noise levels from existing levels and further enhance the user experience in both the immediate vicinity of SR 520 and other portions of the Arboretum.
- WSDOT would provide financial contributions to the Arboretum for improvements to features such as the North Entry, multi-use trail, Arboretum Creek wetlands, Azalea Way Pond, interpretive and way-finding signs in the north portion of the park, aesthetic enhancements at Foster Island crossing, and support for traffic calming implementation.

Lake Washington

As with Option A, both large and small recreational vessels would be able to travel underneath the Evergreen Point Bridge using the 70-foot-height-clearance navigation channel provided at the east side of the lake. If under 41 feet, vessels would also be able to travel underneath the west transition span of the west approach (Navigable Waterways Discipline Report Addendum and Errata [WSDOT 2011j]). The Montlake Cut would provide the same access to and from Lake Washington that it does today, with the same restrictions for vessel height and bridge openings that currently exist. Hand-carried boat access to the water and ability to travel about Lake Washington would be unchanged and small boats would have the same launch and landing sites as today. The floating bridge will be designed in a context-sensitive manner, providing a positive visual experience for boaters.

Eastside Transition Area

There would be no right-of-way acquisition in Eastside recreation resources in the study area for this project. There would be no changes to uses of these parks for recreation as a result of the project.



Mitigation

What has been done to avoid or minimize negative effects to recreation?

Construction

The project construction footprint, including staging areas, has been kept to the minimum area needed, which would help avoid negative effects to any property, including recreation resources. In addition, the following measures have been or would be implemented to avoid or minimize recreation effects during construction.

- BMPs, including those already developed and used as a matter of policy by WSDOT, would be implemented to protect recreation resources from construction-related effects such as dust, vibration, noise, light and glare, and accidental damage from construction equipment. See the Construction Techniques and Activities and Noise Discipline Reports (WSDOT 2009d and WSDOT 2009h) for more specific avoidance and minimization possibilities.
- At East Montlake Park, some parking would remain available during most of the construction period to provide access to the boat launch area.
- Detours would be provided for trails and bicycle routes to temporarily route traffic around construction sites to minimize trail closures. Trails would be kept open as often as safely possible and simultaneous closures of alternate trails and paths would be avoided.
- Detour routes and traffic control measures would be implemented to provide access to UW recreational activities. Construction closures of roads would be timed to minimize effects on large events.
- Construction activities, including barge traffic and moorage, would be timed to avoid recreational boating events the week before and week after opening day of boating season.
- WSDOT, the City of Seattle, UW, and other appropriate regulatory agencies and stakeholders will evaluate the potential for determining the best methods for protecting specimen trees and important vegetation in the Arboretum.

Operation

As discussed on page 73 of the Recreation Discipline Report (WSDOT 2009a), care has been taken throughout the project development process to first avoid and then minimize adverse effects where possible. Because of the density of development in the project vicinity, the narrow existing highway right-of-way, and the fact that the original highway bisected several parklands, effects on parks could not be totally avoided, but permanent acquisition has been reduced compared to all SDEIS



options. After publication of the SDEIS, WSDOT added a number of design refinements intended to further address effects to recreation of the project's operation. Those features of the Preferred Alternative include a slightly higher bridge profile through Union Bay and across Foster Island, and a larger Montlake lid than described in Option A. These types of features may reduce traffic noise near the Arboretum and provide greater connectivity for north and south trail users and City of Seattle parks.

WSDOT also coordinated with a workgroup established under ESSB 6392 to identify (1) traffic calming measures that could be employed on Lake Washington Boulevard and (2) other features to help manage traffic with the Arboretum. The measures identified by the ESSB 6392 workgroup are discussed in Chapter 2 of the Final EIS.

After publication of the SDEIS, WSDOT also continued to work with the City of Seattle and UW through the Section 4(f) and Section 6(f) coordination processes to further reduce the effects to parks. The Section 6(f) Environmental Evaluation (WSDOT 2011c) and Section 4(f) Evaluation (WSDOT 2011k) provide more information on those coordination processes and findings.

The Noise Discipline Report Addendum and Errata presents additional noise analysis completed for the Preferred Alternative (WSDOT 2011i). As a result of that analysis and as described in Chapter 2 of the Final EIS, a number of design features were added to the Preferred Alternative design that may reduce noise effects during operation such as:

- Use of 4-foot tall concrete traffic barriers coated with noise absorptive materials along the mainline SR 520 from I-5 to Lake Washington
- A larger Montlake lid
- Encapsulating bridge expansion joints and applying noise absorptive materials to lid portals
- A higher vertical profile for the west approach from the shoreline at Montlake through Union Bay, across Foster Island, and out towards the floating bridge

What would be done to mitigate negative effects that could not be avoided or minimized?

Construction Mitigation

For the Preferred Alternative, WSDOT would implement the same types of mitigation measures identified for the SDEIS options, most of which are discussed in the Mitigation Section, pages 74-75 of the 2009 Recreation Discipline Report (WSDOT 2009a).

- Construction would require periodic closures of the Arboretum Waterfront Trail at the Arboretum as well as the Arboretum Waterfront Trail access at East Montlake Park. Construction would be coordinated to avoid simultaneous closures of these two locations and to maintain access to the trail from at least one direction.



- Where practicable, access for boats moored in South Portage Bay would be maintained under the Portage Bay Bridge work bridges and the existing bridge when possible. If access and traffic could not be maintained, WSDOT would work with boat owners in South Portage Bay to find temporary alternate moorage. Passage for small boats would be maintained through the same areas, except when not possible because overhead work or demolition of the existing bridge structure would not allow for safe passage.
- Mitigation measures regarding public notice, which are included in the Navigable Waterways Discipline Report Addendum and Errata (WSDOT 2011j), apply to recreational boating and would assist in preventing or mitigating effects to boating.
- Planting strips along Lake Washington Boulevard and Montlake Boulevard would be restored.

Operational Mitigation

- Section 6(f) mitigation funding would be provided by WSDOT to UW and the City of Seattle on the agreed-upon schedule, to develop the selected Section 6(f) replacement site on Portage Bay. The site would provide a non-motorized boat launch and landing opportunity on Portage Bay.
- Areas that were used for construction within parks would be regraded, landscaped, and returned to usable condition, although the vegetation would not be as mature as has previously existed at the time of replanting.
- The Bagley Viewpoint would be replaced on the 10th and Delmar lid.
- Through the design of the Preferred Alternative, the link between the Bill Dawson Trail and the Ship Canal Waterside Trail will be re-established through the Arboretum Waterfront Trail, thus adding connectivity to the larger trail system.
- Through the interagency coordination resulting from the ESSB 6392 workgroup process and the subsequent Arboretum Mitigation Plan (WSDOT 2010b), WSDOT has identified a variety of mitigation measures that would mitigate impacts to the Arboretum. These measures include: funding aesthetic-enhancing and general improvements on Foster Island; wetland restoration within the Arboretum at Arboretum Creek and in Azalea Way Pond; and potential improvements to a multi-use trail and to the north entry of the Arboretum.

What negative effects would remain after mitigation?

Construction would remove mature vegetation that provides a positive visual effect for park and recreation resource users, and permanent structures would encroach on water and mountain views at some locations. All other effects (permanent changes in use of park areas and construction effects related to traffic, noise, vibration, and dust) would be mitigated.



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Attachment 1

Errata

Attachment 1

Recreation Discipline Report Errata

The following table corrects errors and provides clarifications to the Recreation Discipline Report (WSDOT 2009a). Information contained in this table does not change the results or conclusions of any analyses in the 2009 Discipline Report.

Page	Current Text	Corrected Text/Clarification
5	Usual and accustomed fishing areas of tribal nations that have historically used the area's aquatic resources and have treaty rights	Usual and accustomed fishing areas <u>of the Muckleshoot Tribe, which has</u> tribal nations that have historically used the area's aquatic resources and has <u>have</u> treaty rights <u>for their protection and use</u>
27	Section headers: Foster and Marsh Islands and Arboretum Waterfront Trail	Format of text headers is changed to clarify that these are subsections of the Washington Park Arboretum discussion.
25	Bill Dawson Trail (Montlake Bike Path) The Bill Dawson Trail is a designated multi-use pathway that extends under SR 520 between the northeast corner of the Montlake Playfield and the southern edge of the National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center. The trail lies both on NOAA property and within the existing WSDOT SR 520 right-of-way.	The second sentence of the section is revised to read: The trail lies both on NOAA property and <u>entirely</u> within the existing WSDOT SR 520 right-of-way.



Page	Current Text	Corrected Text/Clarification
29	<p>WSDOT Right-of-Way</p> <p>Adjacent to Lake Washington Boulevard is a WSDOT-owned parcel that forms a peninsula extending into Union Bay and is enclosed by the Lake Washington Boulevard ramps. Although the public perceives this land to be part of the Washington Park Arboretum, it is actually part of the existing WSDOT right-of-way for SR 520. The land was originally purchased to build the R.H. Thomson Expressway, proposed in the 1960s but never constructed. The City of Seattle and WSDOT entered into an agreement in 1966 that divided maintenance responsibilities for this area between Seattle and the state (Washington State Highway Commission 1966). The agreement holds that, while the state allows Seattle to use and maintain portions of the property for park purposes, the property remains within WSDOT ownership and must be relinquished within 90 days if WSDOT needs it for transportation purposes.</p> <p>The Seattle Department of Parks and Recreation has improved and maintained the areas near the ramps under the terms of a 1989 agreement with WSDOT. According to the Washington Park Arboretum Master Plan (City of Seattle et al. 2001), the City wishes to enhance the use and appreciation of this area further in conjunction with implementation of the proposed master plan.</p>	<p>The following sentence is added as the last sentence of the subsection: <u>Because the area is right-of-way and not a designated recreation resource, there is no further discussion of it in this discipline report.</u></p>



Page	Current Text	Corrected Text/Clarification
25-26	<p>East Montlake Park was created from land deeded to the City of Seattle for park purposes in the 1909 plat of the Montlake neighborhood. The 7.1-acre park is jointly owned by the Seattle Parks and Recreation Department (western one-third of the park) and the Arboretum Foundation (eastern two-thirds of the park). As the shorelines have changed based on filling, vegetative growth, and the management of the water levels in Lake Washington, these growing shorelines are owned by the Washington Department of Natural Resources.</p>	<p>Last paragraph of page 25 and 1st paragraph of page 26 amended as follows: East Montlake Park was created from land deeded to the City of Seattle for park purposes in the 1909 plat of the Montlake neighborhood. The 7.1<u>4.5.7</u> acre park is jointly owned by the <u>City of Seattle Parks and Recreation Department</u> (western one-third of the park) and the Department of Natural Resources (DNR) (eastern two-thirds of the park). As the shorelines have changed based on filling, vegetative growth, and the management of the water levels in Lake Washington, these growing shorelines are owned by the Washington Department of Natural Resources<u>DNR owns the area that was previously totally submerged (lake levels are now lower and controlled by the Chittenden Locks).</u></p>
26	<p>McCurdy Park is situated between the north side of SR 520 and the southern boundary of East Montlake Park.</p>	<p>1st sentence of Paragraph 2 amended as follows: The <u>1.4 acre</u> McCurdy Park is situated between the north side of SR 520 and the southern boundary of East Montlake Park.</p>
28	<p>The Arboretum Foundation manages fund raising, membership, and volunteer services. Although the City of Seattle owns most of the park, the university owns portions of it, and the Washington Department of Natural Resources owns most of Marsh Island and the northern half of Foster Island.</p>	<p>Paragraph 2, lines 8 - 10 revised as follows: The Arboretum Foundation manages fundraising, membership, and volunteer services. Although the City of Seattle owns most of the park, the University owns portions of it, and the Washington Department of Natural Resources owns most of Marsh Island and the northern half of Foster Island. <u>The Arboretum Foundation also owns a small portion at the south end of Marsh Island.</u></p>
29	<p>Foster Island was purchased in 1917 to be included as a part of Washington Park. The island grew considerably when the opening of the Ship Canal and the Hiram M. Chittenden Locks (Ballard Locks) lowered the water level of Lake Washington by 9 feet. The University of Washington and Seattle Parks and Recreation own portions of Marsh Island, but the bulk of ownership is under the Washington State Department of Natural Resources.</p>	<p>The first full paragraph, line 5, revised as follows: Foster Island was purchased in 1917 to be included as a part of Washington Park. The island grew considerably when the opening of the Ship Canal and the Hiram M. Chittenden Locks (Ballard Locks) lowered the water level of Lake Washington by 9 feet. The University of Washington, the City of and Seattle Parks and Recreation, <u>and the Arboretum Foundation</u> owns portions of Marsh Island, but the bulk of ownership is under the Washington State Department of Natural Resources.</p>



Page	Current Text	Corrected Text/Clarification
29	The original SR 520 project in 1963 divided the island from east to west and dredged through its central portion to create the isthmus over which the highway passes.	1st full paragraph, line 8, revised as follows: The original SR 520 project in 1963 divided the island <u>Foster Island</u> from east to west and dredged through its central portion to create the isthmus over which the highway passes.
30	Section titled: Ship Canal Waterside Trail	Entire section moved to the end of the East Montlake Park subsection as a part of that discussion.
31	Olmsted Boulevards	Title of paragraph 3 corrected as follows: <u>Olmsted Boulevards - Lake Washington Park Boulevard</u>
24	In 1903, the Olmsted Brothers designated Interlaken as a boulevard route. Access from the north is available from Delmar Drive...	Sentence 4, paragraph 2 revised as follows: In 1903, the Olmsted Brothers designated Interlaken Boulevard as a boulevard route vehicle route through the park. Access to Interlaken Park from the north is available from Delmar Drive...
24	The playfield and associated recreation community center were dedicated in 1935.	Sentence 3, last paragraph revised for clarity as follows: The playfield and associated recreation fields and community center were dedicated in 1935.
25	East Montlake and McCurdy Park ...The 7.1-acre park is jointly owned by the Seattle Recreation Department (western one-third of the park) and the Arboretum Foundation (eastern two-thirds of the park). As the shorelines have changed based on filling, vegetative growth, and the management of the water levels in Lake Washington...	Title of section and sentences 3 and 4 revised to read: East Montlake Park ...The park is jointly owned by the City of Seattle (western one-third of the park) and the Washington Department of Natural Resources (DNR) (eastern two-thirds of the park). As the shorelines at the eastern edge of the park have changed based on filling, vegetative growth, and the management of the water levels in Lake Washington...
26	McCurdy Park is situated between...	Title added to second paragraph to create a separate section: McCurdy Park McCurdy Park is situated between...
26	Section on Museum of History and Industry (MOHAI)	Entire section moved to the end of the East Montlake Park Section text (end of paragraph 1, page 26), rather than remaining as a stand-alone section on page 26. Section header deleted. The first sentence of the relocated text revised to read: MOHAI straddles the property line between East Montlake Park and McCurdy Park discussed below.



Page	Current Text	Corrected Text/Clarification
28	Although the City of Seattle owns most of the park, the university owns portions of it, and the Washington Department of Natural Resources owns most of Marsh Island and the northern half of Foster Island.	Sentence 4, Paragraph 2 is revised to read: Although the City of Seattle owns most of the park, the University owns portions of it, DNR owns most of Marsh Island and a portion of Foster Island, and the Arboretum Foundation owns a portion of Marsh Island.
29	The University of Washington and Seattle Parks and Recreation own portions of Marsh Island, but the bulk of ownership is under the Washington State Department of Natural Resources.	Sentence 3 of paragraph 2 is revised to read: The University of Washington and the City of Seattle own portions of Marsh Island, but the bulk of ownership is by DNR.
34	New Section Added	At end of section titled: <i>What are the existing recreational resources and their characteristics?</i> Add a new paragraph/subsection titled: <u>Areas Not Designated for Recreational Use. See Addendum page X for new text.</u>
22	Access is available from both the top of the slope and the bottom. A concrete staircase along the north side of the slope provides additional access, and off-street parking is available.	Section heading is retitled as: Bagley Viewpoint Last two sentences of section are revised to read: Access is available from both the top of the slope and the bottom. A stairway locally known as the Roanoke Steps, consisting of both concrete and wooden steps in places on the north side of SR 520, facilitate access up and down the slope to the viewpoint, and off-street parking is available.
50	Section title: University of Washington Recreational Facilities	Last paragraph, Section title revised to read: University of Washington <u>Open Space Area and Intercollegiate Recreational</u> Facilities.
31	Olmsted Boulevards Both planting strips are contributing elements to the historic designation of the neighborhood and are maintained for aesthetic values and traffic operations by the City of Seattle. (For more information, refer to the Cultural Resources Discipline Report [WSDOT 2011x].)	Text is in error and has been deleted. Both planting strips are contributing elements to the historic designation of the neighborhood and are maintained for aesthetic values and traffic operations by the City of Seattle. (For more information, refer to the Cultural Resources Discipline Report [WSDOT 2009d].)
65	Washington Park Arboretum All options would convert land from the Washington Park Arboretum at Foster Island from recreation use to transportation use.	First sentence of the section is revised to state: All options would <u>change convert some of the land use at</u> from the Washington Park Arboretum at Foster Island from recreation use to transportation. use



