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

Visual Quality and Aesthetics Discipline Report Addendum and Errata

Washington State Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

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

Visual Quality and Aesthetics Discipline Report Addendum and Errata

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Washington State Department of Transportation

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Acronyms and Abbreviations

ATM	active traffic management
BMP	best management practice
EIS	environmental impact statement
FHWA	Federal Highway Administration
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
WSDOT	Washington State Department of Transportation

Introduction

What is the purpose of this addendum?

This addendum to the Visual Quality and Aesthetics Discipline Report (WSDOT 2009), which was prepared in support of the Supplemental Draft Environmental Impact Statement (SDEIS; WSDOT 2010), presents the design of the Preferred Alternative and compares it to the design Options A, K, and L evaluated in the SDEIS. The information contained in the Visual Quality and Aesthetics Discipline Report remains relevant to the discussion of the Preferred Alternative. For more information about how the Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) worked with tribes, regulatory agencies, and the public to develop the Preferred Alternative design, please see the Range of Alternatives Discipline Report Addendum and Errata (2011c).

The information contained in the 2009 Visual Quality and Aesthetics Discipline Report on the affected environment and project effects is pertinent to the Preferred Alternative except where this addendum specifically revises it. Text updated to reflect the Preferred Alternative has been cross-referenced using the page numbers within the 2009 Visual Quality and Aesthetics Discipline Report. Where an addendum exhibit updates or adds new data and/or different potential effects to an exhibit contained in the 2009 discipline report, the exhibit name is followed by "(Update 17 to Exhibit # of the 2009 Discipline Report)."

Project design and construction information used to analyze potential effects of the Preferred Alternative on visual quality and aesthetics 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 Visual Quality and Aesthetics 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 visual quality and aesthetics concerns identified in public comments were as follows:

- Construction effects on the visual quality of neighborhoods and parks
- Changes to visual quality due to the removal or addition of structures
- Loss of vegetation and/or views

What are the key points of this addendum?

Factors related to the Preferred Alternative that would affect visual quality and aesthetics are summarized in the bullets below. Construction and operation effects of the Preferred Alternative would be similar to those of SDEIS Option A and are discussed in detail in the Potential Effects section of this addendum.

Effects during Construction

The following aspects of the project construction would reduce visual quality:

- Views of temporary work and detour bridges, construction of the new roadway, bridges, lids (very wide bridges that can support landscaping), and walls, and related equipment including haul trucks, cranes, and barges and demolition and removal of the old roadway and bridges
- Excavation or grading outside of the existing roadway
- Removal of vegetation
- Temporary erosion and sedimentation control measures
- Stockpiling and staging areas for materials and equipment
- Temporary traffic or construction signage
- Temporary retaining or screening walls and security fencing
- Potential increase in light and glare, especially for work performed at night
- Presence of dust from grading and construction activities
- Increase in traffic congestion and temporary changes in access and detours.
- Localized increases in duration and frequency of traffic congestion.

Effects during Operation

- Lids over State Route (SR) 520 between 10th Avenue East and Delmar Drive East, and between Montlake Boulevard and the East Montlake shoreline would hide the roadway and provide landscaped connections between the communities on either side of SR 520.
- A planted median along the center of the Portage Bay Bridge would screen views of the lanes on the other side of the median, which would make the bridge appear narrower near the viewer.

- An enhanced bicycle/pedestrian crossing adjacent to the existing East Roanoke Street bridge over Interstate 5 (I-5) would change the appearance of the structure, particularly as viewed from the south.
- A new bascule bridge parallel to and east of the existing historic bridge over the Montlake Cut would alter the setting of the historic bridge.
- Views westward from East Montlake Park, particularly views of the historic bridge, would be changed by the presence of the new bascule bridge.
- The bridge over Foster Island would be slightly higher than the bridge in Option A, making it more visible but opening up additional space for trail users.
- The addition of active traffic management (ATM) equipment would add to the overhead visual clutter of existing highway lighting and signage.

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

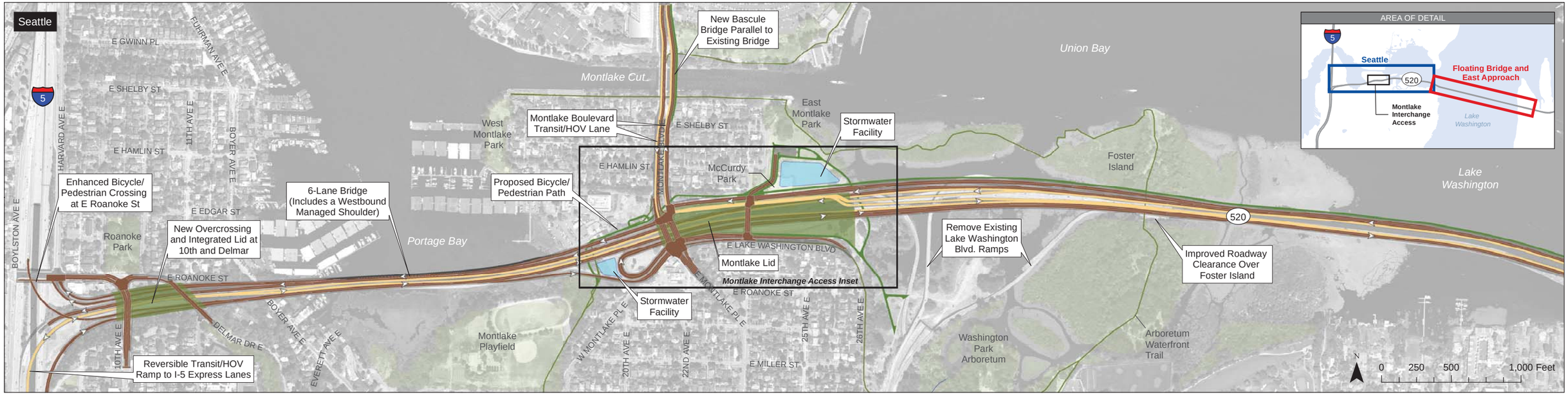
The SR 520, I-5 to Medina: Bridge Replacement and HOV Project would widen the SR 520 corridor to six lanes from I-5 in Seattle to Evergreen Point Road in Medina, and would restripe and reconfigure the lanes in the corridor from Evergreen Point Road to 92nd Avenue NE in Yarrow Point. It would replace 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 high-occupancy vehicle (HOV) lane system across SR 520, as called for in regional and local transportation plans.

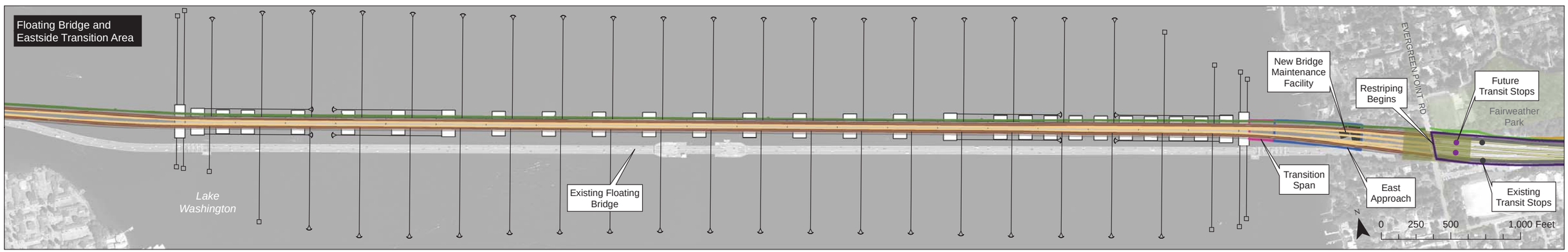
What is the Preferred Alternative?

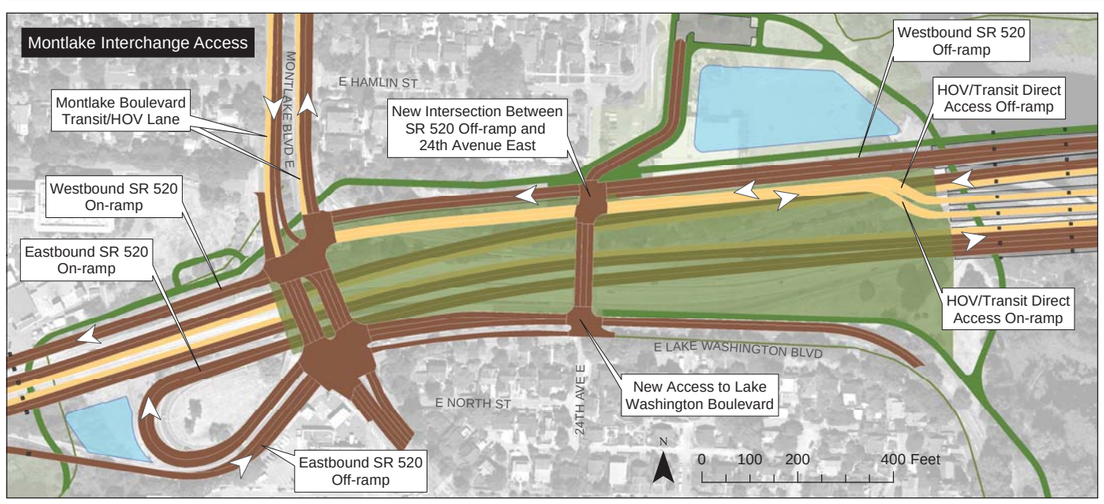
The new SR 520 corridor would be six lanes wide (two 11-foot-wide outer general-purpose lanes and one 12-foot-wide inside HOV lane in each direction), with 4-foot-wide inside shoulders and 10-foot-wide outside shoulders across the floating bridge. The typical roadway cross-section across the floating 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 1 highlights the major components of the Preferred Alternative.

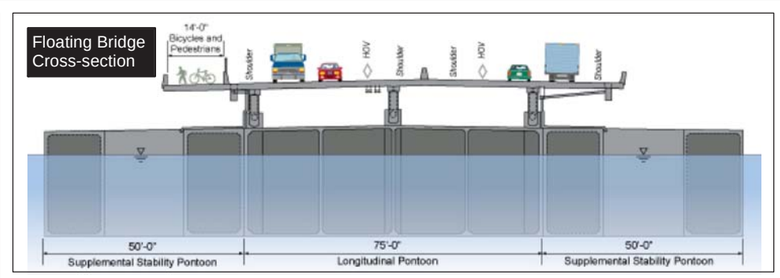
The Preferred Alternative would include the following elements:

- 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









I-5 to Medina Project Elements

- Column
- Anchor and Cable
- Existing Regional Bicycle/Pedestrian Path
- General-Purpose Lane
- HOV, Direct Access, and/or Transit-Only Lane
- Westbound Managed Shoulder
- Proposed Bicycle/Pedestrian Path
- East Approach
- Transition Span
- Restriping Area
- Stormwater Treatment Facility
- Lid
- Pontoon

Medina to SR 202 Project Elements

- General-Purpose Lane
- HOV Lane
- Bike Path
- Points Loop Trail
- Medina to SR 202 Project Lid

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

Exhibit 1. **Preferred Alternative Project Elements**

I-5 to Medina: Bridge Replacement and HOV Project

Exhibit 2 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 2. 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.
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 the 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 3 provides an overview of the anticipated construction stages and durations identified for the SR 520, I-5 to Medina project.

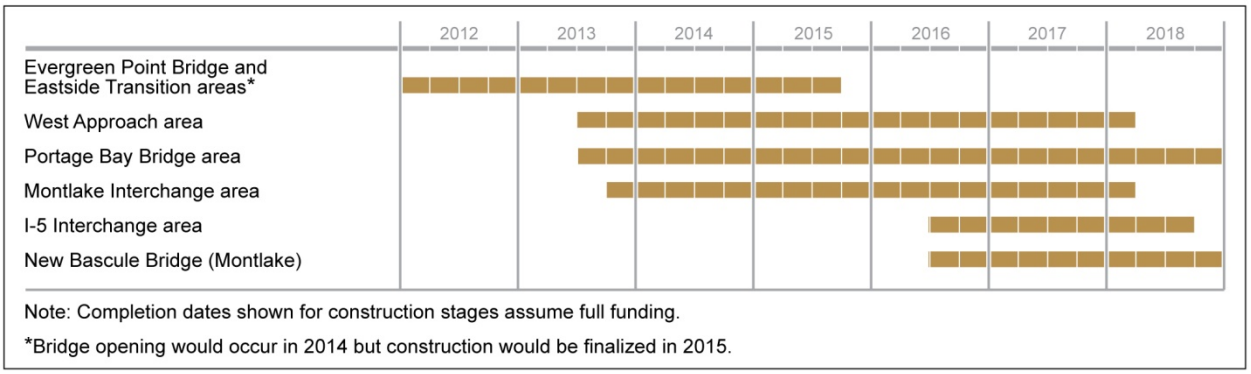


Exhibit 3. Preferred Alternative Construction Stages and Durations

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 as part of 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 Visual Quality and Aesthetics Discipline Report (WSDOT 2009) provides a detailed discussion of the affected environment (see pages 21 through 48).

Potential Effects

The discussion below supplements the Visual Quality and Aesthetics Discipline Report and discloses the effects of the Preferred Alternative, comparing it with the SDEIS options using new text and new or updated exhibits where appropriate.

How would construction of the Preferred Alternative affect visual quality and aesthetics?

Most construction effects on visual quality and aesthetics would be similar to or the same as those described for Option A in the 2009 Visual Quality and Aesthetics Discipline Report (see pages 50 through 61). Design differences between SDEIS Option A and the Preferred Alternative that would affect visual quality during construction include having a pedestrian bridge on the south side of Roanoke Street instead of the I-5 lid and extending the Montlake lid eastward from 24th Avenue East to the shoreline.

I-5 Area

Changes to visual quality and aesthetics due to project construction activities in the I-5 area would be lower than those expected for SDEIS Option A because the I-5 lid would not be built. The pedestrian bridge of the Preferred Alternative would be about 30 feet wide and would require much less time, activity, and equipment to construct than the 500-foot-long I-5 lid. In this portion of the Portage Bay/Roanoke neighborhood, construction effects on views and visual character would therefore be less than those of Option A.

Viewers affected would be the same groups discussed in the SDEIS, primarily motorists on SR 520, residents with homes adjacent to I-5 and SR 520, and recreational users at Roanoke Park.

Portage Bay Area

Changes to visual quality and aesthetics due to project construction activities in the Portage Bay area would be similar to those from SDEIS Option A. As with Option A, the greatest change to visual quality from the Preferred Alternative would result from construction of the new Portage Bay Bridge, including the presence of construction work bridges and heavy equipment on both sides of the bridge. The presence of trucks and potentially barges to haul demolition and construction materials would intensify these effects.

Construction equipment and activities would be visible in varying degrees from most line-of-sight locations around Portage Bay. Temporary changes to visual character and quality would be high for views from or near the Portage Bay Bridge and moderate from the north part of the bay. Changes in the quality of views from distant viewpoints such as from the Lake Washington Ship Canal Bridge, or oblique views such as from West Montlake Park, would be low or barely noticeable.

Viewers affected would be the same groups discussed in the SDEIS and include motorists on SR 520, residents of houseboats or homes near the bridge approaches, park users at Montlake Playfield, and boaters at the Queen City and Seattle Yacht Clubs.

Montlake Area

Changes to visual quality and aesthetics due to project construction activities in the Montlake area would be similar to those from SDEIS Option A, except at the National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center campus and near the Montlake Boulevard crossing of the Montlake Cut. Visual effects at the NOAA campus would be much less than SDEIS Option A because none of the NOAA buildings would be removed.

Preparation for and construction of the new bascule bridge across the Montlake Cut would remove two single-family homes, the same as for Option A, and would leave a parcel of land between the remaining home and Montlake Boulevard that could be planted as a buffer. The area south of East Hamlin Street known as the Canal Reserve would be cleared of vegetation and neighborhood structures for use in construction staging.

Construction activities would clutter all views for varying durations, substantially reducing visual quality during these times because of the proximity of the activities to residences and local streets. Equipment and activities would be visible from homes along Montlake Boulevard and Lake Washington Boulevard, the NOAA campus, portions of the University of Washington southeast campus, and other surface streets near SR 520. See the Construction Techniques and Aesthetics Discipline Report Addendum and Errata (WSDOT 2011b) for more information on the duration of construction in specific locations.

Viewers affected would be the same groups discussed in the SDEIS and include motorists on SR 520, travelers on Montlake Boulevard, NOAA staff, and residents of homes facing East Montlake Park and SR 520.

West Approach Area

Changes to visual quality and aesthetics due to project construction activities in the west approach area would be the same as those for Option A. Demolition and removal of the existing Lake Washington ramps would be visible from the Arboretum shoreline and wetlands; however, this would be an increasingly positive visual change. Mature vegetation along SR 520 on Foster Island would be removed to the same extent as for Option A. Construction activities would degrade all nearby views for varying durations, substantially reducing visual quality during these times because of the proximity of the activities to residences and recreation resources. Construction activities would have a low to moderate effect on distant views. See the Construction Techniques and Aesthetics Discipline Report Addendum and Errata (WSDOT 2011b) for more information on the duration of construction in specific locations.

Viewers affected would be the same groups discussed in the SDEIS, including motorists on SR 520, residents of nearby homes, recreational users at the Washington Park Arboretum, and recreational boaters.

Lake Washington

Under the Preferred Alternative, construction activities for the floating section of the Evergreen Point Bridge would be the same as those discussed in the SDEIS. Construction equipment and activities would have low-level effects on visual quality from most viewpoints in Madison Park, Kirkland, or Laurelhurst because of the bridge's distance from these neighborhoods.

Viewers affected would be the same groups discussed in the SDEIS, including motorists crossing the floating bridge, Medina residents with homes near the east approach, and recreational boaters on Lake Washington.

Eastside Transition Area

Construction activities for the Preferred Alternative in the Eastside transition area would be the same as those discussed in the SDEIS. Viewers affected would be Medina residents with lakeside homes, as construction activities would be visible from their docks and lake frontage. Construction activities would generally not be visible from viewpoints along the highway because of noise walls constructed during the Medina to SR 202: Eastside Transit and HOV project.

How would operation of the Preferred Alternative affect visual quality and aesthetics?

Changes to visual quality and aesthetics due to project operation would be similar to those described for Option A in the 2009 Visual Quality and Aesthetics Discipline Report (see pages 61 through 76). Design differences between SDEIS Option A and the Preferred Alternative that would affect visual quality over the long term include the narrower pedestrian bridge over I-5 on the south side of Roanoke Street in place of Option A's lid, and a longer Montlake lid. The primary effects on visual quality and character from operation of the facility would result from the following:

- Noticeably wider roadway and bridges
- Presence of landscaped lids over SR 520 between 10th Avenue East and Delmar Drive East and at Montlake Boulevard and 24th Avenue East
- Presence of a planted median on the Portage Bay Bridge
- Growth of new and replanted vegetation over time
- Visual experience of driving through lidded highway sections rather than under short bridges
- Visual experience of driving through a corridor with a unified and consistent aesthetic treatment of corridor elements including walls, bridges, light fixtures, signing, and landscaping

Some of the viewpoints were given quantitative numeric ratings for the visual quality parameters of vividness, intactness, and unity. The ratings are provided in the evaluation matrix in Attachment 3. The effects on overall visual quality ratings due to the Preferred Alternative are briefly stated in the sections below. For the definitions of these ratings, please refer to the Visual Quality and Aesthetics Discipline Report (WSDOT 2009).

Visualizations from the SDEIS have been updated to illustrate the Preferred Alternative. The visualizations with the "before" photographs are provided in Attachment 2. Exhibit 4 gives the exhibit number, location, and a brief description of the view for each exhibit. Exhibit 5 provides a map of the visualization viewpoints.

I-5 Area

During operation, the Preferred Alternative would not appreciably change visual quality in the I-5 interchange area. In the Roanoke area, the Preferred Alternative would have visual quality effects similar to those of the SDEIS options. The I-5/Roanoke Street bicycle/pedestrian crossing would not improve the quality of views toward I-5 as the I-5 lid in Option A, K, or L was expected to, but planters on the bicycle/pedestrian crossing would improve its visual character (Exhibit 2-1,

Attachment 2). As with SDEIS Option A, the 10th Avenue East-Delmar Drive East lid would provide a continuous landscape between North Capitol Hill and Roanoke (Exhibit 2-2, Attachment 2). The landscaped lid would create a more substantial and pedestrian-friendly connection between Interlaken Park and Roanoke Park. By reducing the visual presence of SR 520, the landscaped lid would greatly improve the quality of views toward SR 520. The lid could also improve the context of the Roanoke Park Historic District (Exhibit 2-3, Attachment 2). Bagley Viewpoint would be partially restored with the marker and stone placed near their original locations. The panoramic vista toward Lake Washington and the Cascades that Bagley Viewpoint is intended to provide would be recreated as multiple viewpoints from the lid (Exhibit 2-4, Attachment 2).

Exhibit 4. Location and Description of the Visualization Viewpoints

Exhibit Number	Viewpoint Number	Location of Viewpoint	View	Visual Resources
2-1	2	Northeast corner of Harvard Avenue and Roanoke Street	Looking southwest at Roanoke Street Bridge	--
2-2	4	West side of 10th Avenue East Bridge over SR 520 in Roanoke	Looking northeast over SR 520 toward Delmar Drive East	NRHP-Eligible Roanoke Historic District
2-3	3	Near Roanoke Park entrance on Roanoke Street	Looking southeast toward Delmar Drive East	NRHP-Eligible Roanoke Historic District
2-4	5*	Delmar Drive East near Bagley Viewpoint	Looking east from Bagley Viewpoint toward Portage Bay Bridge	Cascade Mountains; Portage Bay; Eastside hills
2-5	9	Boyer Avenue East just south of Portage Bay Bridge	Looking northeast toward Portage Bay Bridge columns	Portage Bay; shoreline
2-6	7	Boyer Avenue East at Queen City Yacht Club	Looking east over the Queen City Yacht Club moorage toward Portage Bay Bridge	Portage Bay
2-7	8	Uphill of Boyer Avenue East just south of SR 520	Looking northeast toward Portage Bay Bridge and Queen City Yacht Club	Portage Bay
2-8	6	Edgar Street and 11th Avenue East	Looking east over Roanoke neighborhood toward Portage Bay Bridge	Portage Bay
2-9	12*	North of Montlake Clubhouse	Looking northwest toward northwest corner of Montlake Playfield and Portage Bay Bridge	Park and shoreline vegetation
2-10	13*	Montlake Playfield track	Looking northeast toward east end of Portage Bay Bridge	Park and shoreline vegetation
2-11	15	NOAA lawn just west of parking lot	Looking southwest from NOAA picnic lawn toward Portage Bay Bridge	Portage Bay; shoreline; Seattle hillside

Exhibit 4. Location and Description of the Visualization Viewpoints

Exhibit Number	Viewpoint Number	Location of Viewpoint	View	Visual Resources
2-12	14	Seattle Yacht Club lawn	Looking southwest toward Portage Bay Bridge	Portage Bay setting
2-13	10	Car heading east on SR 520 Portage Bay Bridge	Looking east from SR 520 roadway toward Montlake and University of Washington	Cascade Mountains, Portage Bay setting
2-14	11	Car heading west on Portage Bay Bridge	Looking west from SR 520 roadway toward Capitol Hill and Roanoke	Portage Bay setting
2-15	16	NOAA parking lot	Looking south toward SR 520 westbound on-ramp and NOAA out-buildings and parking	NOAA research facilities' setting
2-16	17	Midpoint of Montlake Boulevard Bridge over SR 520	Looking west toward Portage Bay Bridge from west side of Montlake Boulevard Bridge	Montlake Playfield trees, bridge, Seattle hillsides
2-17	18	Midpoint of Montlake Boulevard Bridge over SR 520	Looking east toward 24th Avenue East from east side of Montlake Boulevard Bridge	Cascade Mountains
2-18	21	Lake Washington Boulevard at 24th Avenue East	Looking northeast along Lake Washington Boulevard	NRHP-eligible historic district
2-19	20	Lake Washington Boulevard at 24th Avenue East	Looking northeast over SR 520	NRHP-eligible historic district
2-20	19	Lake Washington Boulevard at Montlake Boulevard	Looking east along Lake Washington Boulevard from Montlake Boulevard pedestrian refuge	NRHP-eligible historic district
2-21	22	Canal Reserve	Looking southeast along open space south of Shelby-Hamlin neighborhood	Montlake Historic District and Canal Reserve
2-22	31	Marsh Island Pedestrian Boardwalk	Looking southwest toward SR 520 from pedestrian bridge between MOHAI and Marsh Island	Union Bay marshes and wetlands
2-23	30	University of Washington Waterfront Activities Center	Looking south at Marsh Island and Evergreen Point Bridge through the Arboretum	Union Bay, Arboretum
2-24	23	Montlake Boulevard near Shelby Street East	Looking north along Montlake Boulevard toward historic bascule bridge	NRHP-eligible historic Montlake bascule bridge
2-25	24	Shelby Street East near Montlake Boulevard	Looking north toward Montlake bascule bridge	Montlake Historic District
2-26	25*	Montlake bascule bridge	Looking west along the Montlake Cut from northeast corner of East Montlake Park	Historic Montlake bascule bridge, East Montlake Park

Exhibit 4. Location and Description of the Visualization Viewpoints

Exhibit Number	Viewpoint Number	Location of Viewpoint	View	Visual Resources
2-27	26	Montlake bascule bridge	Looking east along the Montlake Cut toward Union Bay from east side of Montlake bridge	Lake Washington, Cascade Mountains; Union Bay, Montlake Cut
2-28	27	Montlake Triangle	Looking southeast toward Montlake bridge and Mount Rainier	Mount Rainier
2-29	28	Drumheller Fountain	Looking southeast along Rainier Vista toward Montlake Triangle and Mount Rainier	Mount Rainier, Cascade Mountains
2-30	29	Husky Stadium, northeast benches	Looking southeast toward Union Bay and Lake Washington	Mount Rainier, Cascade Mountains, Lake Washington; Arboretum, Union Bay
2-31	32*	Marsh Island Trailhead at MOHAI	Looking east along Marsh Island boardwalk between MOHAI site and Marsh Island	Arboretum, Marsh Island
2-32	35*	Foster Island Trail, south of SR 520	Looking northwest from south branch of Foster Island Trail toward SR 520	Foster Island
2-33	37*	Foster Island Trail, north of SR 520	Looking south from north Foster Island along the trail toward SR 520	Foster Island
2-34	36*	Foster Island Trail Pedestrian Tunnel	Looking northwest at south entrance of Foster Island pedestrian tunnel under SR 520	Foster Island Trail
2-35	38*	Picnic and swimming area on north Foster Island	Looking south from north Foster Island shoreline toward SR 520	North Foster Island in Arboretum
2-36	39*	Observation deck on Foster Island trail	Looking southwest across Foster Island marsh toward Montlake	Arboretum, Foster Island
2-37	33*	Lake Washington Boulevard off-ramps	Looking northeast and east across WSDOT peninsula at Lake Washington ramps	Wetlands, Foster Island, Marsh Island
2-38	34*	WSDOT peninsula north of Arboretum ramps	Looking west across WSDOT peninsula toward Husky Stadium	Arboretum, Foster Island
2-39	40	Edgewater Apartments in north Madison Park	Looking northwest toward SR 520 west approach bridge and Husky Stadium	Lake Washington; Union Bay, Husky Stadium
2-40	41	Webster Point in Laurelhurst	Looking southwest from private dock toward Arboretum bridge	Union Bay

Exhibit 4. Location and Description of the Visualization Viewpoints

Exhibit Number	Viewpoint Number	Location of Viewpoint	View	Visual Resources
2-41	42*	Webster Point in Laurelhurst	Looking southeast across Union Bay toward Madison Park and west approach bridge	Mount Rainier, Lake Washington
2-42	42*	Lynn Street Park in Madison Park	Looking northeast across Lake Washington at Evergreen Point Bridge	Lake Washington, Cascade Mountains, Eastside hills
2-43	43	Midway on west side of Evergreen Point Road (76th Avenue NE) bridge	Looking west across the west part of the Evergreen Point lid at floating bridge and Lake Washington	Lake Washington, Olympic Mountains; Union Bay
2-44	44	Evergreen Point Road NE near park-and-ride	Looking across Evergreen Point Road NE and park-and-ride	

*This is a City of Seattle designated SEPA viewpoint.

NOAA = National Oceanic and Atmospheric Administration
MOHAI = Museum of History and Industry
Arboretum = Washington Park Arboretum

Portage Bay Area

The effect of operating the Preferred Alternative on visual quality and aesthetics in the Portage Bay area would be similar to those from SDEIS Options K and L, which included a narrower cross-section in this area than Option A. The primary changes to visual quality and character would result from the following:

- Design the new Portage Bay Bridge, which could include aesthetic treatments such as haunched girders and false arches on the west end of the bridge
- Planted median on the bridge
- Wider spaces between columns and a higher, wider road deck than the current bridge

Views looking toward the bridge from water or ground level near the west end of the new bridge could be more open because of the bridge's increased height and column spacing (Exhibit 2-5, Attachment 2). The greater width of the new Portage Bay Bridge could block more of a given view from the Queen City Yacht Club (Exhibit 2-6, Attachment 2) and from homes near the bridge, making the bridge more apparent in eastward views (Exhibits 2-7 and 2-8, Attachment 2). Aesthetic treatments, such as haunches or non-structural features, could increase the physical bulk of the bridges and also reduce the openness of views. However, aesthetic treatments like these could add flowing lines and patterns of architectural interest that contribute to context sensitivity and appropriateness.

Views of the Portage Bay Bridge from Montlake Playfield would be similar SDEIS Option A (Exhibits 2-9 and 2-10, Attachment 2) because the eastbound off-ramp is approximately the same distance from the park in both alternatives. The profile of the Portage Bay Bridge under the

Source: King County (2002) Aerial Photo, King County (2005) GIS Data (Streams), CH2M HILL (2008) GIS Data (Park and Trails). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5. **Location Map of Visualization Viewpoints**

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

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Preferred Alternative is slightly modified from that of SDEIS Option A, but the effect on views from the park would be small because shoreline trees provide partial and seasonal screening. On the north side of the bridge, the effect of the Preferred Alternative on views from the NOAA campus and the Seattle Yacht Club would be similar to SDEIS Option K. The greater column spacing and height of the bridge would open up views of water beyond the bridge (Exhibits 2-11 and 2-12, Attachment 2).

The driver's view from the new Portage Bay Bridge would differ from all of the SDEIS options because of the planted median. Small shrubs or grasses could block or obscure sideward views of Portage Bay and its marinas (Exhibits 2-13 and 2-14, Attachment 2), depending on their height, spacing, and density. Eastward views of the Cascade Mountains and Lake Washington would still be panoramic, but the plants would reduce the expansiveness of these views. The 4-foot high concrete traffic barriers proposed for the Preferred Alternatives may also block some views from the bridge, compared to the lower barriers included in the SDEIS options.

The overall visual quality rating of the Preferred Alternative would be comparable to or less than SDEIS Option K's ratings for the Portage Bay area. Vividness and unity would remain high, and intactness could increase for drivers, depending on the design features and details of the bridge.

Montlake Area

Visual quality effects in the Montlake area of operating the Preferred Alternative would be comparable to those of SDEIS Option A in general, but with fewer effects at the NOAA campus. The primary effects on visual quality and character would result from the following:

- New bascule bridge parallel to the historic Montlake Bridge, removing one house
- Bicycle-pedestrian tunnel under Montlake Boulevard with spiral ramp in the southeast corner of the NOAA campus
- Narrower median planter in Montlake Boulevard between SR 520 and East Hamlin Street
- Larger landscaped lid between Montlake Boulevard and the lakeshore
- Restored boulevard plantings on the north side of Lake Washington Boulevard from Montlake Boulevard to the curve in Lake Washington Boulevard
- Removal of Museum of History and Industry (MOHAI) building and parking lot and a portion of East Montlake Park to accommodate stormwater treatment ponds
- Restoration of parking at East Montlake Park and new landscape treatment.

Visual effects at the NOAA Northwest Fisheries Science Center would be less than for Option A and generally comparable to those of SDEIS Option K, with little effect on the visual quality of views from the NOAA campus toward SR 520 (Exhibit 2-11, Attachment 2). As with Option K, no buildings would be removed from the NOAA facility under the Preferred Alternative (Exhibit 2-15, Attachment 2).

The Preferred Alternative would widen SR 520 (Exhibit 2-16, Attachment 2), a portion of Lake Washington Boulevard parallel to SR 520, and Montlake Boulevard near its interchange with SR 520. The overall effect would be positive, because the landscaped lid would improve the quality of views toward the highway (Exhibits 2-17 and 2-18, Attachment 2). The enhanced plantings along Lake Washington Boulevard would be consistent with the character of the historic district (Exhibits 2-19 and 2-20, Attachment 2) and greatly improve views from residences. The conversion of the Canal Reserve space to transportation uses would be similar in effect to that of SDEIS Option A (Exhibit 2-21, Attachment 2) and result in substantial change to views from the Hamlin area.

The Preferred Alternative would have effects on visual character and quality in the MOHAI area similar to those of SDEIS Option K and L (Exhibits 2-22 and 2-23, Attachment 2). The larger lid would require elevated on and off-ramps, which would require tall retaining walls and bridge piers, similar in scale and location to those of Option L. The larger lid may also require ventilation mechanisms (such as fans or exhaust towers) that could be similar in design to Option K's tunnel under the Montlake Cut. If needed, these structures would reduce the quality of views toward and from the highway.

Visual quality effects in MOHAI and East Montlake Park would be similar to those of SDEIS Option A. Conversion of the MOHAI parking lot could be a positive visual change for all viewpoints because the character of the pond would be consistent with the open space and shoreline context of the surrounding area. A new parking lot and landscape treatment would restore East Montlake Park functions and establish visual unity with the surrounding area.

On Montlake Boulevard, the Preferred Alternative would have visual effects and affect views comparable to those of Option A, which would remove two houses (Exhibits 2-24 and 2-25, Attachment 2). Views of and from the bascule bridges would be the same as in Option A (Exhibit 2-26 and 2-27 Attachment 2). The Preferred Alternative bascule bridge would not be noticeable to viewers in Rainier Vista or affect the Montlake Boulevard intersection (Exhibits 2-28 and 2-29, Attachment 2). The iconic view from Husky Stadium would be similar to the existing view (Exhibit 2-30, Attachment 2).

Overall vividness, intactness, and unity for the Preferred Alternative would be comparable to SDEIS Option A except for the east end of the Montlake lid. Here, vividness, intactness, and unity would be reduced for all views of the east lid portal because of its prominence and the potential presence of ventilation towers, if needed. The end of the lid would be incompatible in scale, shape, and character with the residential and park-like surroundings.

West Approach Area

The visual quality effects of operating the Preferred Alternative in the west approach area, which includes the northern portion of the Arboretum, would be similar to those from SDEIS Option A. The primary effects on visual quality and character would result from the following:

- Removal of unused ramps from R. H. Thomson Expressway
- Wider roadway
- North-shifted west transition span
- Higher west approach
- Removal of Lake Washington Boulevard ramps

The primary effect on visual quality and character in the west approach area would be due to changed views within park landscapes. The height of the bridge structure for the Preferred Alternative would be comparable in height to Option L (higher than the existing west approach bridge between the shoreline and Foster Island). This would make the bridge more visible to viewers on the Marsh Island boardwalk (Exhibit 2-31, Attachment 2) and Foster Island near the roadway (Exhibits 2-32 and 2-33, Attachment 2). The path beneath SR 520 on Foster Island would offer a more open and perhaps a more pleasant experience than either Option L's or today's underpass, because the Preferred Alternative bridge would span Foster Island on columns (Exhibit 2-34, Attachment 2). Views from near the shoreline of North Foster Island would be slightly changed due to the new bridge (Exhibit 2-35, Attachment 2), but the effect on views toward the facility would be greater from the Arboretum Waterfront Trail near Foster Island (Exhibit 2-36, Attachment 2).

As with Option A, the R. H. Thomson Expressway ramps would be removed in the Preferred Alternative, opening views of park landscapes and water bodies (Exhibits 2-37 and 2-38, Attachment 2) and providing a more natural-appearing character than now exists.

The Preferred Alternative bridge would be comparable in height to Option L, altering views from north Madison Park residences (Exhibits 2-39 and 2-40, Attachment 2). While the bridge would be a more prominent part of views from residences, the view under the west approach bridge would allow more view of the water and landscape beyond the bridge. The west approach structure would be more visible from distant viewpoints (Exhibits 2-41 and 2-42, Attachment 2). The new bridge would not block more of the scenery than the existing bridge, however.

For motorists and transit riders, the west approach bridge would continue to provide panoramic or scenic views to Lake Washington and the Cascades when traveling east, and to the Arboretum when traveling west.

In the near term, overall visual quality ratings for the Preferred Alternative would be lower than existing vividness, intactness, and unity ratings and comparable to those of Option A. In 10 to 20 years, when trees and shrubs will have grown and filled in, overall vividness, intactness, and unity for all views would be similar to or higher than their current high ratings.

Lake Washington

Effects on visual quality and aesthetics from operating the new Evergreen Point Bridge under the Preferred Alternative would be similar to the effects from SDEIS Option A and would result primarily from:

- A different bridge structure
- Roughly the same bridge height and width
- East and west transition spans realigned to the north
- Absence of truss structures at east and west approaches

The overall visual character and quality of views from residences and shorelines south of the Preferred Alternative floating bridge would be similar to those under Option A. Changes in scale and appearance would be noticeable when seen from distant shoreline neighborhoods (Exhibit 2-41 and 2-42, Attachment 2), but they would not diminish the quality of those views. The bridge is an existing visual element and the new floating bridge would not differ sufficiently in width or height from existing conditions to interfere with views of Mount Rainier or Lake Washington and its shorelines. Changes to the quality or character of the views would be slight to moderate, depending on distance and view angle of the viewpoint.

Because the dimensions of the floating bridge in the Preferred Alternative would be similar to those under the SDEIS Options, views for boaters and kayakers on Lake Washington would be similar. The bridge maintenance building might have lower visual effects on views from the Medina shoreline because the maintenance building would be partially buried in the hillside against the abutment and screened with vegetation.

Overall visual quality ratings (vividness, intactness, and unity) for the Lake Washington landscape unit would remain high for distant viewpoints.

Eastside Transition Area

The visual quality effect of the Preferred Alternative in the Eastside transition area would be the same as for all SDEIS Options. The Evergreen Point Road lid, which will produce most of the visible change to this area, will be constructed by the SR 520, Medina to SR 202: Eastside Transit and HOV Project (Exhibit 2-43, Attachment 2). The Preferred Alternative's relocation of the transit station from an interim location west to the Evergreen Point Road lid would not introduce new visual elements because the elevator towers, stairs, and protective walls would already be in place from the SR 520, Medina to SR 202 project (Exhibit 2-44, Attachment 2). Lane restriping and realigned traffic barriers would have no notable effects on visual character or quality.

The contribution of the Preferred Alternative would not change the overall visual quality ratings (vividness, intactness, and unity) for the Eastside transition area from the levels resulting from the Medina to SR 202 project.

Tolling and Active Traffic Management Equipment

As with Option A, ATM equipment introduced by the Preferred Alternative would be a new visual feature in the SR 520 corridor. This equipment would make a small addition to existing overhead facilities such as lighting, wires, and signage, slightly increasing the visual complexity of overhead views.

Would the project create new sources of shadow, glare, or light?

Seattle Areas

Glare, lighting, shade, and shadowing introduced by the Preferred Alternative would be similar to conditions under Option A. Increases in the amount of ambient and direct light in the corridor could result from additional or brighter lighting sources along the highway and access ramps. An increase in the density or brightness of roadway lighting might be needed to meet code requirements for illumination levels. New light standards would be taller (40 feet) than existing (30 feet), but they would include fixtures that shield sideways glare. It is possible that the loss of tall screening trees could create a situation where some residences receive more stray or direct illumination than before project construction.

Over Portage Bay, the wider bridge would create new shadow and shade effects for a few residents with homes immediately north of the Portage Bay Bridge in the Roanoke Park area. The new bascule bridge would increase shadowing over the Montlake Cut.

The use of ATM equipment, which would include variable message signs, would contribute to a small increase in roadway light. The ATM equipment would not contribute substantial additional glare.

Lake Washington

Light and shadow effects would be similar to those of Option A. The east approach would be illuminated to meet safety requirements for the transit ramps. The floating bridge would not be illuminated except for navigation safety lights and lighting on the regional bike and pedestrian path. No new sources of glare would be added because there would be no structures, such as sign gantries or buildings, to which glare sources could be affixed.

Eastside Transition Area

Overhead lighting, shade, and shadowing at the Evergreen Point Road lid would not change from the conditions created under the SR 520, Medina to SR 202 project.

Avoidance and Mitigation

What has been done to avoid or minimize negative effects?

Throughout the design process, WSDOT has taken care to avoid and minimize negative effects on visual quality. The Preferred Alternative has minimized potential effects as described below:

- The width of the new Portage Bay Bridge has been reduced and its alignment shifted slightly southward. This measure eliminated the high-level visual effects at the NOAA Northwest Fisheries Science Center that would have resulted from removal of the research buildings.
- The Montlake interchange has been reconfigured and the lid enlarged to fully cover the SR 520 roadway, and extend east to beyond 24th Avenue East. This change has provided more surface area for landscaping to enhance Lake Washington Boulevard and community connections.

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

Mitigation for Effects of Project Construction

- Communicate regularly to the public during construction to explain the type and duration of construction work occurring near their homes and to describe the effects will be ameliorated.
- Use standard best management practices (BMPs) to reduce or eliminate construction effects on surrounding neighborhoods, such as use of construction screening, standardized work hours, and low-impact construction methods, materials, and tools.

Mitigation for Effects of Project Operation

- Establish and follow design guidelines developed in accordance with standards for state and local jurisdictions, including visual quality or aesthetic standards for the SR 520 corridor. The guidelines and standards would present ways to ensure visual unity and consistency throughout the corridor. These would include defining the appearance and style of built elements, such as lighting, railings, sign bridges, structures, and walls. The guidelines would also discuss the placement of publicly funded art in the corridor right-of-way, including the process for selection and location of any art in cooperation with municipal and county jurisdictions and art organizations.
- Revegetate areas where natural habitat, vegetation, or neighborhood tree screens have been removed. These areas are around the 10th Avenue and Delmar Drive lid; through Montlake,

in particular at the NOAA Northwest Fisheries Science Center, East Montlake Park, and the Arboretum; and the SR 520 corridor within the Eastside landscape unit. Plantings could use larger trees and shrubs than are typically used, in order to quickly re-establish park landscapes and tree screens. Revegetation plans would include plant establishment activities to ensure that trees and plants are well established.

- Follow the guidelines of the *Roadside Classification Plan* to blend the project into the adjacent land uses, while creating a unified experience for the roadway user. Refer also to the Seattle Department of Transportation's Streetscape Design Guidelines in the Seattle Right-of-Way Improvement Manual and implement where applicable (City of Seattle 2009).
- Establish landscaping that would be compatible with the character of the existing vegetation, especially along Lake Washington Boulevard, Montlake Boulevard, and through the Washington Park Arboretum, East Montlake Park, Ship Canal Waterside Trail, Arboretum Waterfront Trail, Montlake Playfield, and Interlaken Park/Delmar Drive East.
- Establish aesthetic guidelines to ensure the design of structures is aesthetically compatible with the surrounding land and waterscapes in scale and architectural style, and unified in appearance.
- Design lid landscapes to reconnect divided communities and provide a consistent and/or continuous visual connection across the SR 520 roadway. Landscape the lids to ensure a unified visual appearance appropriate to the surrounding landscape, including the use of appropriate plant materials, hardscape, and site furnishings that contribute to visual coherence and aesthetics.
- Include the original Bagley Viewpoint Park marker and stone in the new site for the park.

Specific mitigation measures are presented below, contingent on project approvals and implementation. It will not be feasible to delineate all mitigation options until engineering design is further advanced.

Seattle Areas

The MOHAI site and the remaining portions of McCurdy and East Montlake parks will be redesigned in cooperation with the Seattle Parks Department. Grass and trees in the south Shelby-Hamlin area would be replaced with trees and screening vegetation to soften the appearance of the new lidwall. Mature and/or larger size trees, shrubs, vines, and groundcovers for replacement or enhancement would be selected in consultation with Seattle Parks and Recreation. Plantings will be irrigated and monitored until established.

The Canal Reserve area in the Shelby-Hamlin neighborhood will be screened from the regional bike path by a fence or vegetation or a combination of both, depending on available space.

WSDOT will prepare revegetation plans for Foster Island and the R. H. Thomson ramp area in coordination with the City of Seattle Parks and Recreation Department and University of

Washington. The pedestrian passage under the Evergreen Point Bridge is of particular interest because of the clearance between the Evergreen Point Bridge and Foster Island. The increased and undesirable visibility of SR 520 may be partially offset by the unobstructed visual connections now possible between both parts of the island because of the bridge's height. Park users would have clear sightlines and views as they pass under SR 520, which would improve feelings of safety.

Lake Washington

Design guidelines will be established to ensure that the architectural style of the new structures presents a unified visual appearance.

Eastside Transition Area

Screening vegetation to be removed for construction of the east approach connection to the Medina to SR 202 project will be replaced with new plantings to screen views of SR 520.

What negative effects would remain after mitigation?

The Preferred Alternative would include structures that are notably different in scale and/or character from their surroundings. If these differences cannot be screened or buffered in some way, they would result in the following negative effects:

- The wider Evergreen Point Bridge would be closer to some homes, backyards, and private docks on the north side of the east approach.
- The driver's experience of traveling through lidded tunnels in Roanoke and Montlake would be very different from and less pleasant than passing under short bridges in an open, shallow canyon. Lidded tunnels have been part of the Seattle driving experience since the I-90 and SR 520 corridor lids were completed. However, the canyons at Roanoke and Montlake allowed views of sky and distant panoramas, while lidded tunnels enclose and tightly channel motorists' views forward.
- If needed, ventilation structures for the Montlake lid could be prominent and could be difficult to screen from some viewpoints.
- In the short term, concrete structures would be more noticeable because of the brightness of new concrete compared to old structures. In time, the new materials will darken and this will lessen the visibility of all of the bridges and the east portal of the Montlake lid.
- Because of its height, the new bridge over Foster Island would not blend into the surrounding woods as the existing bridge does.
- North Madison Park views would be changed because the west approach bridge would be higher. Views at water level would be more open, but for some views, the Laurelhurst shoreline would be blocked.

References

The following list of references adds to those listed in the 2009 Visual Quality and Aesthetics Discipline Report.

City of Seattle. 2009. Seattle Right-of-Way Improvement Manual. Available at: http://www.cityofseattle.net/transportation/rowmanual/manual/.

Washington State Department of Transportation and (WSDOT). 2009. *Visual Quality and Aesthetics Discipline Report*. SR 520, I-5 to Medina Bridge Replacement and HOV Project. Supplemental Draft Environmental Impact Statement and Section 4(f)/6(f) Evaluation. SR 520 Bridge Replacement and HOV Program. WSDOT, Olympia, WA. December 2009.

WSDOT. 2010. *SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement and Section 4(f)/6(f) Evaluation*. SR 520 Bridge Replacement and HOV Program. WSDOT, Olympia, WA. January 2010.

WSDOT. 2011a. *Description of Alternatives Discipline Report Addendum*. SR 520, I-5 to Medina: Bridge Replacement and HOV Project. WSDOT, Olympia, WA.

WSDOT. 2011b. *Construction Techniques and Activities Discipline Report Addendum and Errata*. SR 520, I-5 to Medina: Bridge Replacement and HOV Project. WSDOT, Olympia, WA.

WSDOT. 2011c. *Range of Alternatives Discipline Report Addendum and Errata*. SR 520, I-5 to Medina: Bridge Replacement and HOV Project. WSDOT, Olympia, WA.

Attachment 1

Errata

Attachment 1
Visual Quality and Aesthetics Discipline Report Errata

The following table presents corrections and clarifications to the 2009 Visual Quality and Aesthetics Discipline Report. 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
4	• 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 of the Muckleshoot Tribe, which has ~~tribal nations that have~~ historically used the area's aquatic resources and has~~have~~ treaty rights for their protection and use
33	Fourth full paragraph- The roofed docks of the Queen City Yacht Club at Boyer Avenue interfere with ground-level views.	The roofed docks of the Queen City Yacht Club at Boyer Avenue interfere with ground-level views because the roofs block sight lines. The blockage is greater for viewpoints slightly above roof level, such as from Boyer Avenue or nearby residences, because the entire roof system is visible.
34	The Montlake landscape unit is a mixed-use area that also includes a historic district overlay. The landscape unit includes Montlake residential neighborhoods on either side of Montlake Boulevard, the National Oceanic and Atmospheric Administration (NOAA), the Shelby-Hamlin neighborhood and the Museum of History and Industry (MOHAI), the Montlake Cut, and the University of Washington lower southeast campus.	The Montlake landscape unit is a mixed use area that also includes a historic district overlay. The landscape unit includes Montlake residential neighborhoods on either side of SR 520 and Montlake Boulevard, the National Oceanic and Atmospheric Administration (NOAA), the Shelby-Hamlin neighborhood and the Museum of History and Industry (MOHAI), the Montlake Cut, and the University of Washington lower southeast campus.

Page	Current Text	Corrected Text/Clarification
36	First full paragraph- Architectural styles and structure ages are highly varied. Housing types range from large single-family homes in Laurelhurst to apartment and condominium complexes in north Madison Park. These structures are relatively small in scale compared to the expanse of Union Bay and while they contrast with the surrounding ornamental and native vegetation, they provide a textural and geometric counterpoint to water, sky, and vegetation.	Architectural styles and structure ages are highly varied. Housing types range from large single-family homes in Laurelhurst to apartment and condominium complexes in north Madison Park. These structures are relatively small in scale compared to the expanse of Union Bay and while they contrast with the surrounding ornamental and native vegetation, they provide a textural and geometric counterpoint to water, sky, and vegetation. View orientation is primarily toward Union Bay and views typically include the opposite shorelines.
36	Some of the disused R.H. Thomson Expressway ramps in this area, visible from a number of viewpoints, are used as ad hoc recreational features including a link for runners between MOHAI and the Arboretum.	Some of the ~~disused~~ R.H. Thomson Expressway ramps in this area, visible from a number of viewpoints, are used as ad hoc recreational features including a link for runners between MOHAI and the Arboretum.
49	First full paragraph- The effects of the proposed alternatives on the visual character and quality of a landscape can then be described according to changes in the following: • The proposed width, elevation, and alignment of the roadway or bridge • The proposed addition or removal of structures or vegetation • The degree to which new structures would contrast or blend with the existing landscape	The effects of the proposed alternatives on the visual character and quality of a landscape can then be described ~~according to changes in the~~ in response to the following parameters: • Changes in ~~T~~the proposed width, elevation, and alignment of the roadway or bridge • The proposed addition or removal of structures or changes in vegetation • The degree to which new structures would contrast or blend with the existing landscape
63	The areas under the west end of the bridge would be re-landscaped in a way that would open up views toward the water and along Boyer Avenue.	The areas under the west end of the bridge would be ~~re-landscaped~~treated in a way that would open up views toward the water and along Boyer Avenue.
Attachment 1	Unity category describing Portage Bay Bridge: "Option K high: same as Option A but narrower by xx feet"	Unity category describing Portage Bay Bridge: "Option K high: same as Option A but narrower by approximately 21 feet"

Attachment 2

Visualizations

Existing View

- Roanoke Street East bridge over I-5
- Seward TOPS school, center right

Preferred Alternative

- New pedestrian bridge over I-5 along south side of Roanoke Street

Exhibit 2-1. Northeast corner of Harvard Avenue and Roanoke Street—Viewpoint 2

Looking southwest at Roanoke Street Bridge

Existing View

- 4-lane highway with north- and southbound lanes to I-5
- Mature roadside trees and shrubs
- Delmar Drive East bridge in middle distance
- NOAA campus across Portage Bay
- Husky Stadium roof at horizon line

Preferred Alternative

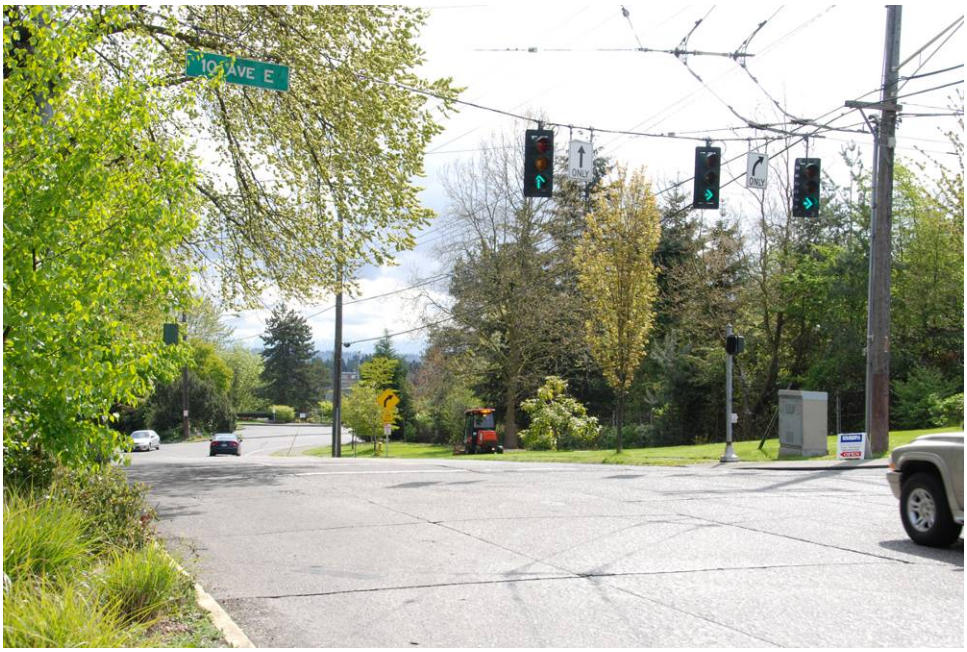
- New landscaped lid between Roanoke and Capitol Hill
- ADA-accessible paths
- Increased view opportunities
- Continuous green connection between Roanoke Park and Interlaken Park

Exhibit 2-2. West side of 10th Avenue East Bridge over SR 520 in Roanoke—Viewpoint 4

Looking northeast over SR 520 toward Delmar Drive East

Existing View

- Street landscape and overhead utilities along Roanoke Street
- Bagley Viewpoint in middle distance (left)
- Mature tree buffer along SR 520 (right center)



Preferred Alternative

- New 10th Avenue East and Roanoke Street intersection
- Preserved edge of Roanoke Park
- New landscaped lid over SR 520

Exhibit 2-3. Near Roanoke Park entrance on Roanoke Street—Viewpoint 3

Looking southeast toward Delmar Drive East

Existing View

- 4-lane bridge and westbound on-ramp
- City of Seattle Scenic Route
- Monotube style signage

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- Reversible HOV and transit lane
- 4 foot high traffic barrier
- ITS gantries

Exhibit 2-4. Delmar Drive East near Bagley Viewpoint—Viewpoint 5 (update to Exhibit 2-4 of the 2009 discipline report)

Looking east from Bagley Viewpoint toward Portage Bay Bridge

Existing View

- 4-lane bridge
- Column spacing at 100 feet on center

Preferred Alternative

- 6-lane bridge with eastbound off-ramp to Montlake
- Wider column spacing
- Bridge re-aligned 40 feet north
- Bridge design and aesthetic treatments to be determined

Exhibit 2-5. Boyer Avenue just south of Portage Bay Bridge—Viewpoint 9 (update to Exhibit 2-6 of the 2009 discipline report)

Looking northeast toward Portage Bay Bridge columns

Existing View

- 4-lane Portage Bay bridge
- Queen City Yacht Club covered docks

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- 4 foot high traffic barriers
- ITS gantries
- Bridge design and aesthetic treatments to be determined

Exhibit 2-6. Boyer Avenue at Queen City Yacht Club—Viewpoint 7 (update to Exhibit 2-9 of the 2009 discipline report)

Looking east over the Queen City Yacht Club moorage toward Portage Bay Bridge

Existing View

- 4-lane Portage Bay Bridge
- Boyer Avenue East in foreground
- Queen City Yacht Club covered docks beyond columns

Preferred Alternative

- 6-lane Portage Bay Bridge
- Bridge design and aesthetic treatments to be determined

Exhibit 2-7. Uphill of Boyer Avenue East just south of SR 520—Viewpoint 8

Looking northeast toward Portage Bay Bridge and Queen City Yacht Club

Existing View

- 4-lane Portage Bay Bridge
- Roanoke neighborhood

Preferred Alternative

- 6-lane Portage Bay Bridge
- Bridge design and aesthetic treatments to be determined

Exhibit 2-8. Edgar Street and 11th Avenue East—Viewpoint 6

Looking east over Roanoke neighborhood toward Portage Bay Bridge

Existing View

- 4-lane Portage Bay Bridge beyond shoreline trees
- Playfield just north of Montlake Clubhouse
- Partial and seasonal screening of Portage Bay Bridge by shoreline trees

Preferred Alternative

- 6-lane Portage Bay Bridge beyond shoreline trees

Exhibit 2-9. North of Montlake Clubhouse—Viewpoint 12

Looking northwest toward northwest corner of Montlake Playfield and Portage Bay Bridge

Existing View

- Eastbound off-ramps and NOAA visible beyond shoreline trees
- Northeast corner of Montlake Playfield
- Partial and seasonal screening of Portage Bay Bridge by shoreline trees

Preferred Alternative

- New eastbound off-ramps visible beyond shoreline trees

Exhibit 2-10. Montlake Playfield track—Viewpoint 13

Looking northeast toward east end of Portage Bay Bridge

Existing View

- 4-lane bridge
- Column spacing at 100 feet on center
- NOAA campus picnic lawn

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- Wider column spacing
- Bridge design and aesthetic treatments to be determined

Exhibit 2-11. NOAA lawn just west of parking lot—Viewpoint 15 (update to Exhibit 2-17 of the 2009 discipline report)

Looking southwest from NOAA picnic lawn toward Portage Bay Bridge

Existing View

- 4-lane Portage Bay bridge in distance
- Seattle Yacht Club marina (middle ground) and lawn

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- 4 foot high traffic barriers
- ITS gantries
- Bridge design and aesthetic treatments to be determined

Exhibit 2-12. Seattle Yacht Club lawn—Viewpoint 14

Looking southwest toward Portage Bay Bridge

Existing View

- 4-lane bridge with median barrier
- Eastbound Montlake Boulevard off-ramp
- City of Seattle Scenic Route
- View of Cascade Mountains to east

Preferred Alternative

- 6-lane bridge with planted center median
- Eastbound Montlake Boulevard off-ramp
- ITS gantries

Exhibit 2-13. Car heading east on SR 520 Portage Bay Bridge—Viewpoint 10 (update to Exhibit 2-14 of the 2009 discipline report)

Looking east from SR 520 roadway toward Montlake and University of Washington

Existing View

- 4-lane bridge
- City of Seattle Scenic Route
- Roanoke residences (right)
- Monotube style signage

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- Planted center median
- ITS gantries
- East portal of 10th Avenue East and Delmar Drive East lid

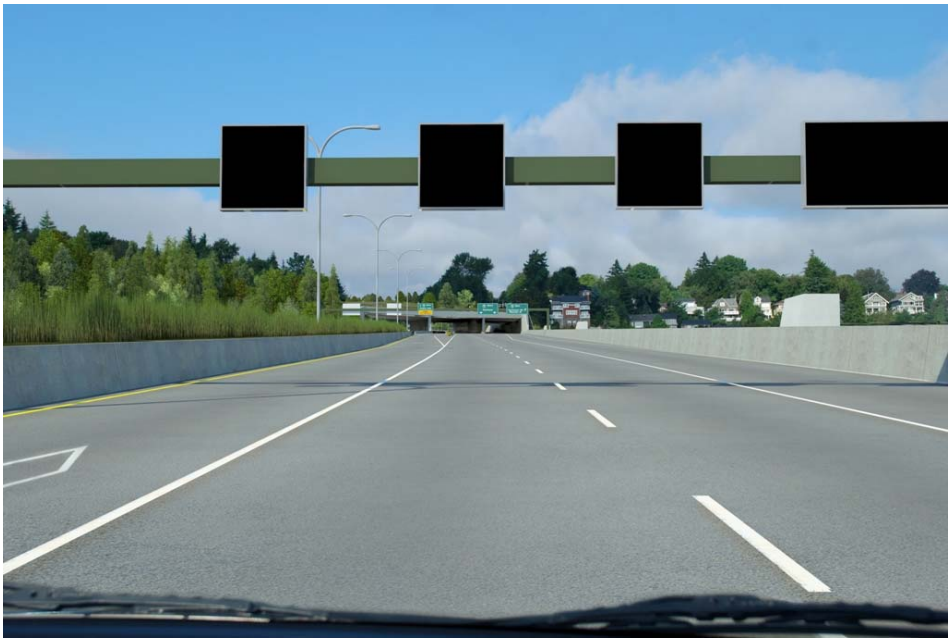


Exhibit 2-14. Car heading west on Portage Bay Bridge—Viewpoint 11 (update to Exhibit 2-15 of the 2009 discipline report)

Looking west from SR 520 roadway toward Capitol Hill and Roanoke from SR 520 roadway

Existing View

- NOAA research buildings and parking lot
- SR 520 westbound on-ramp

Preferred Alternative

- SR 520 westbound on-ramp
- Re-constructed Bill Dawson Trail

Exhibit 2-15. NOAA parking lot—Viewpoint 16 (update to Exhibit 2-7 of the 2009 discipline report)

Looking south toward SR 520 westbound on-ramp and NOAA out-buildings and parking

Existing View

- 4-lanes with eastbound bus lane and east- and westbound on-ramps
- Portage Bay Bridge in distance
- Roanoke and North Capitol Hill in far distance

Preferred Alternative

- 6-lane Portage Bay Bridge
- Direct-access westbound on-ramp
- Eastbound on-ramp
- NOAA research buildings in middle distance (right side)

Exhibit 2-16. Midpoint of Montlake Boulevard Bridge over SR 520—Viewpoint 17 (update to Exhibit 2-8 of the 2009 discipline report)

Looking west toward Portage Bay Bridge from west side of Montlake Boulevard Bridge

Existing View

- 4-lane road width
- Transit-only auxiliary lanes
- Transit stops at highway level
- Eastbound on-ramp
- 24th Avenue bridge in middle distance

Preferred Alternative

- Montlake lid over SR 520
- Transit stops on lid Montlake Boulevard (right, behind trees)

Exhibit 2-17. Midpoint of Montlake Boulevard Bridge over SR 520—Viewpoint 18 (update to Exhibit 2-21 of the 2009 discipline report)

Looking east toward 24th Avenue East from east side of Montlake Boulevard Bridge

Existing View

- Lake Washington Boulevard at entrance to MOHAI
- Established planter along SR 520 side of boulevard (left)
- Mature boulevard landscape on neighborhood side (right)

Preferred Alternative

- Restored and enhanced plantings along Lake Washington Boulevard
- Montlake lid on left

Exhibit 2-18. Lake Washington Boulevard at 24th Avenue East—Viewpoint 21

Looking northeast along Lake Washington Boulevard

Existing View

- 4-lane roadway with transit-only on-ramp
- Unused RH Thompson Expressway ramps in distance
- 20-foot high retaining wall on north side of corridor

Preferred Alternative

- Montlake Boulevard lid with westbound off-ramps (white barrier in middle distance)
- Transit stop on lid (green and yellow bus at far left)

Exhibit 2-19. Lake Washington Boulevard at 24th Avenue East—Viewpoint 20 (update to Exhibit 2-25 of the 2009 discipline report)

Looking northeast over SR 520

Existing View

- West terminus of Lake Washington Boulevard at Montlake Boulevard
- Established planter along north side of the boulevard
- Boulevard landscape on neighborhood side (right)

Preferred Alternative

- Restored and enhanced plantings along Lake Washington Boulevard
- Montlake lid in background

Exhibit 2-20. Lake Washington at Montlake Boulevard—Viewpoint 19

Looking east along Lake Washington Boulevard from Montlake Boulevard pedestrian refuge

Existing View

- Remnant parcel from early canal proposal
- University of Washington property used by neighborhood for gardening and recreation

Preferred Alternative

- Site cleared for construction uses
- SR 520 regional bike-pedestrian path along south edge
- New landscaping would be developed in collaboration with residents.

Exhibit 2-21. Canal Reserve—Viewpoint 22

Looking southeast along Canal Reserve south of Shelby-Hamlin neighborhood

Existing View

- Lake Washington Boulevard off-ramp in front
- Unused RH Thompson Expressway ramps behind
- Lake Washington Boulevard off-ramps at far left
- Mainline lanes at water level
- Shoreline and wetland vegetation

Preferred Alternative

- No ramps to Lake Washington Boulevard
- Westbound general purpose and HOV/transit off-ramps onto lid
- Regional Bike and Pedestrian Path

Exhibit 2-22. Marsh Island Pedestrian Boardwalk—Viewpoint 31 (update to Exhibit 2-30 of the 2009 discipline report)

Looking southwest toward SR 520 from pedestrian bridge between MOHAI and Marsh Island

Existing View

- University of Washington Waterfront Activities Center
- Boat traffic on Union Bay
- Dense shoreline vegetation

Preferred Alternative

- No ramps to Lake Washington Boulevard
- Westbound general purpose and HOV/transit off-ramps onto lid
- East portal of lid extends to shoreline

Exhibit 2-23. University of Washington Waterfront Activities Center—Viewpoint 30

Looking south at Marsh Island and West Approach Bridge through the Arboretum

Existing View

- Montlake bascule bridge over the Montlake Cut
- Montlake Historic District setting
- Mature boulevard landscape

Preferred Alternative

- New bascule bridge and control towers
- New northbound lanes and sidewalk
- Bridge design and aesthetic treatments to be determined with Department of Archaeology and Historic Preservation

Exhibit 2-24. Montlake Boulevard near Shelby Street East—Viewpoint 23

Looking north along Montlake Boulevard toward historic bascule bridge

Existing View

- Shelby Street house (on left) that would be removed for new bascule bridge
- Montlake Historic District setting
- Mature residential landscapes

Preferred Alternative

- View of new bascule bridge and control towers from Shelby Street
- Bridge design and aesthetic treatments to be determined with Department of Archaeology and Historic Preservation

Exhibit 2-25. Shelby Street East near Montlake Boulevard—Viewpoint 24

Looking north toward Montlake Bascule Bridge