Constructive Use Analysis

Analysis Group 1

All of the historic properties in Analysis Group 1 in the APE are located on potential haul routes along Eastlake Avenue, Roosevelt Way NE, NE 45th Street, 7th Street NE, and I-5. See Exhibit 3 for the potential haul routes and Exhibit 2a for the historic properties in Group 1. There are two historic bridges in this grouping; these are discussed separately because their significant features and attributes are unique to transportation facilities and, as such, they are considered differently under Section 4(f).

Performance Bicycles, 4501 Roosevelt Way NE (Property Identification Number [ID] 268)

Property Description

The building at 4501 Roosevelt Way NE in the University District was originally the Eldridge Buick Company, then University Chevrolet, and now it is Performance Bicycles (photo at right). The 1926 building is eligible for listing in the NRHP under Criterion A for its association with the early automobile industry in Seattle during the 1920s. It was designed and built by local architects Schack, Young and Myers. It is eligible under Criterion C because it embodies the distinctive characteristics of the Spanish Colonial Revival style and is the work of master architects (Sodt 2001; see also see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

Performance Bicycles (ID 268), 4501 Roosevelt Way Northeast

The building was built for Eldridge Buick Company and was purchased by J.E. Blume in 1935 as the new home of the University Chevrolet Company (University Motors). Schack, Young and Myers was a well known Seattle firm of architects and engineers who designed many commercial buildings in the 1920s. The firm designed several other buildings in the University District, including the Theta Xi Fraternity House, the Gelb Building on University Way, and the University Baptist Church on 12th Avenue NE. Most designs by Schack, Young and Myers were in the academic eclectic style (Sodt 2001; see also see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

The Performance Bicycles building is a large one-story structure in the Spanish Colonial Revival style. Decorative rounded pediments and red tile, typical of the style, characterize the roofline. Decorative brackets support the cornice, and a floriated frieze decorated with

medallions lines the building below the cornice. Spiral engaged columns with classical capitals divide the storefront windowpanes. Transom windows have been painted over, but they remain intact. The building retains sufficient integrity to convey its significance under Criteria A and C.

Preferred Alternative Impacts

Construction haul routes for the Preferred Alternative would expose historic properties along the route to temporary increases in truck traffic volume, with accompanying potential for increases in fugitive dust, vehicle emissions, and noise. As discussed in the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to the Final EIS, the Preferred Alternative would temporarily diminish the integrity of feeling and setting of historic properties along potential construction haul routes. Construction materials would be transported to and from the construction work areas by trucks and barges. Barges would provide access to offshore work areas. Trucks would travel over identified haul routes through Seattle and Medina to SR 520, I-5, and I-405.

The integrity of setting and feeling of the Performance Bicycles building would be intermittently affected by the haul trucks passing the building on NE 45th Street. The property would maintain integrity of materials, design, and workmanship, and would retain the ability to demonstrate its architectural significance under Criterion C. The building would maintain integrity of location and association and would continue to convey its significance under Criterion A.

The significant architectural attributes and features of the Performance Bicycles building and its association with the early automobile industry would not be substantially diminished by the haul route traffic passing along NE 45th Street. Therefore, the project would not have a constructive use of this historic property. As there is not a constructive use of the Performance Bicycles building under Section 4(f) and it is the representative property of Analysis Group 1 (excluding the bridges), the other properties in this group would also not experience a constructive use from the haul route impacts or from any other aspect of the proposed project.

Historic Bridges

Lake Washington Ship Canal Bridge (I-5 Bridge) (ID 600)

Begun in 1958, the Lake Washington Ship Canal Bridge (the I-5 span) is eligible for listing in the NRHP under Criterion A for its association with bridge-building in Washington in the 1950s. The bridge is also eligible under Criterion C for its type, period, materials, and method of construction. In addition, it is noteworthy for its association with the historic Seattle freeway project, as well as the long history of the Ship Canal. For its exceptional engineering and role in local transportation development, the Lake Washington Ship Canal Bridge meets the threshold established by Criterion Consideration G for properties not yet 50 years of age (Oscar 2001).

The 4,429-foot-long bridge carries north- and southbound traffic on I-5 over the Lake Washington Ship Canal between North Capitol Hill and the University area. The significant

engineering features of the bridge are its double-deck spans, including nine reinforced concrete box girder spans, and five steel truss spans, providing an innovative approach to handling peak traffic loads with reversible lanes. The steel truss spans are the only steel double-deck bridge spans in Washington (Oscar 2001).

University Bridge (ID 601)

The University Bridge at Eastlake Avenue NE over the Ship Canal is listed in the NRHP under Criterion A for its significant role in the social, economic, and industrial development of the region and under Criterion C for its architectural design. The University Bridge was one of several movable spans constructed between 1915 and 1920 and designed as part of Seattle's Lake Washington Ship Canal, which influenced the industrial, social and economic growth of Seattle and the region. They are double-leaf, trunnion bascule bridges and are the earliest examples in Washington State of this type of bridge (Soderberg 1980a).

Construction began first on the University Bridge at Eastlake Avenue. The bridge was built to replace two temporary timber draw spans. The 291-foot structure, which has a 218-foot movable bascule span, was completed in 1919. The massive concrete substructure is 20 feet thick, 65 feet high, and 40 feet wide. The foundation rests directly on firm material on one side of the channel. However, on the other side of the channel, it was necessary to drive deep pile foundations in order to support the bridge. Booker, Kiehl, and Whipple were the contractors for the substructure, and the United States Steel Products Company was the contractor for the superstructure. (Soderberg 1980a).

Preferred Alternative Impacts

The I-5 Bridge and the University Bridge are included in the APE due to their location on potential construction haul routes; they are both outside the limits of construction and would not be directly affected by the project. See Exhibit 3 for the locations of the potential haul routes.

In general, haul routes would expose historic properties along the route to temporary increases in truck traffic volume, with accompanying potential for increases in fugitive dust, vehicle emissions, and noise. However, these two properties are significant as transportation features and have never served any purpose other than the transport of vehicles. An increase in traffic would not affect the historic integrity of the bridges. No parts of the bridges would be demolished, and there would be no improvements or changes made to these properties as part of this project.

The significant architectural attributes and features of the I-5 Bridge and the University Bridge would not be substantially diminished by the increased traffic from the haul route passing along the bridges. Additionally, the University Bridge's association with the social, economic, and industrial development of the region would not be diminished by the increased use of that bridge. Therefore, the project would not have a constructive use of these historic properties.

Analysis Group 2

All of the historic properties in Analysis Group 2 in the APE are located along potential haul routes on Boyer Avenue East, Fuhrman Avenue East, and Eastlake Avenue East. See Exhibit 2b for the historic properties in Group 2 and Exhibit 3 for the potential haul routes. None of the historic properties are located within the project limits of construction, and none would be directly affected by project activities. Additionally, all the historic properties in this grouping are eligible for listing in the NRHP under Criterion C. The residential property at 2617 Boyer Avenue East is located on a potential haul route and is closest to the more intense construction activity within the project's limits of construction. Exhibits 4 and 5 show views toward the Portage Bay Bridge.

2617 Boyer Avenue East (ID 437)

Property Description

The residential structure at 2617 Boyer Avenue East (see photo at right) is eligible for listing in the NRHP under Criterion C because it embodies the distinctive characteristics of the Craftsman style.

2617 Boyer Avenue East (ID 437)

The building was constructed in 1924 and retains good architectural integrity. It is a two-story single-family residence with a rectangular plan and platform frame construction. It has a medium-pitch, front-gable roof with composition asphalt shingles, wide overhanging eaves, and wood eave brackets. The exterior walls are clad in wood clapboard siding with wood shingles on the second floor. The primary façade is symmetrically divided and three bays wide. The fenestration consists of original wood windows and doors throughout the residence (Hetzel 2010; see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

Preferred Alternative Impacts

Construction haul routes would expose historic properties along the route to temporary increases in truck traffic volume, with accompanying potential for increases in fugitive dust, vehicle emissions, and noise (see Exhibit 2b). As discussed in the Section 106 Technical Report (Elder et al. 2010), the Preferred Alternative would temporarily diminish the integrity of feeling and setting of all historic properties along all construction haul routes.

The house at 2617 Boyer Avenue faces Portage Bay on a bluff near where Boyer Avenue veers to the southeast and passes under SR 520. There are two structures and some mature vegetation between this property and the existing SR 520 corridor. The 10th Avenue/Delmar Drive lid would be located to the southwest of this property. Near 2617 Boyer Avenue East, the Preferred Alternative's noise levels would be less than the existing noise levels at this

Existing View

Preferred Alternative Visualization

Exhibit 4. View from Edgar Street and 11th Avenue East
Looking east over the Roanoke Park neighborhood toward the Portage Bay Bridge.

Existing View

Preferred Alternative Visualization

Exhibit 5. View from Boyer Avenue East at the Queen City Yacht Club
Looking east over the yacht club moorage toward Portage Bay Bridge.

location (for more information, see the Noise Discipline Report Addendum and Errata [Attachment 7 to the Final EIS]).

While construction of the 10th Avenue/Delmar Drive lid would take approximately 26 months, noise and other effects would vary in intensity during that period, depending on which activities were occurring. Increased noise, fugitive dust, and possible vibration from demolishing and removing the 10th Avenue East and Delmar Drive East bridges over SR 520 and constructing the new 10th Avenue/Delmar Drive lid could also have proximal effects on this residential property.

The house at 2617 Boyer Avenue East would be temporarily affected by fugitive dust and possible vibration during demolition and reconstruction of the Portage Bay Bridge and erection of the work bridges, which includes pile driving activities. However, potential dust and vibration are unlikely to alter the integrity of the structure. Glare from nighttime construction lighting also would be experienced intermittently at 2617 Boyer Avenue East due to its proximity to the Portage Bay Bridge and SR 520.

The integrity of setting and feeling of 2617 Boyer Avenue East would be intermittently affected by trucks passing the building on the Boyer Avenue East haul route. The property would maintain integrity of materials, design, location, association, and workmanship, and would retain the ability to demonstrate its architectural significance under Criterion C during construction and during hauling.

Due to the topography, there would be a slight alteration to the setting of the building because of the changes to the Portage Bay Bridge, which is within the viewshed of the property.

The significant attributes and features of 2617 Boyer Avenue East would not be substantially impaired by the haul route traffic passing along Boyer Avenue East or by the proximity to construction on SR 520 and the Portage Bay Bridge. The protected architectural features and attributes of 2617 Boyer Avenue under Criterion C would not be substantially diminished by the temporary alteration of setting and feeling from proximal haul route traffic or the alteration to setting from the new bridge. Therefore, there would be no constructive use of this property from the project.

Since there is not a constructive use of the property at 2617 Boyer Avenue East and it is the representative property of this analysis group, the other properties in this group would also not experience a constructive use from the haul route impacts, the change to the setting, nor from any other aspect of the proposed project.

Analysis Group 3

Analysis Group 3 includes historic properties along the I-5 haul route and potential on-street haul routes: Eastlake Avenue East and Boylston Avenue East on the west side of I-5. See Exhibit 3 for the potential haul routes and Exhibit 2c for the historic properties in Group 3. None of the historic properties are located within the project limits of construction, and none would be directly affected by project activities. Additionally, all the historic properties

in this grouping are eligible for listing in the NRHP under Criterion C, except for the Denny-Fuhrman (Seward) School at 2515 Boylston Avenue East, which is eligible for listing in the NRHP under Criteria A and C. The Seward School is closest to the more intense construction activity, is located on a potential haul route, and is the only property in the group eligible under more than one criterion. The Seward School is the representative property for this group.

Denny-Fuhrman (Seward) School, 2515 Boylston Avenue East (ID 10)

Property Description

The Denny-Fuhrman (Seward) School at 2515 Boylston Avenue East is eligible for listing in the NRHP under Criterion A for its association with education in Seattle and the development of the Eastlake community. It is also eligible under Criterion C for its distinctive characteristics of a type and period of architecture and as an excellent example of late nineteenth and early twentieth century public school buildings. The property exhibits a high level of historic and architectural integrity.

Seward School Lunchroom and Gymnasium Building (ID 10), Built 1893; 2515 Boylston Avenue East

The school campus, with three historic buildings, is located in the Eastlake neighborhood. The oldest of the three buildings, known as the Denny-Fuhrman School or the Seward School Lunchroom and Gymnasium (photo at right), was originally built in 1893 facing east onto Boylston Avenue, located on the same square but northeast from its current location.

In 1899, an addition to the building doubled its size and resulted in the current footprint, roofline, and arched entries. The building was relocated to its present site in 1917, renovated in 1997-1998, and reopened in September 1999, along with the rest of the complex. This building is listed in the Washington Historic Register (WHR) and is a designated Seattle Landmark. The Seattle Landmark Nomination Form (City of Seattle 1980; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]) notes that it is one of only two nineteenth century frame schoolhouses remaining in Seattle and that it is of "unique significance in representing the history of early public education in Seattle." The nomination form for the WHR (Corley 1973; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]) states that it is "the oldest frame school building in a generally unaltered state in the city of Seattle," and that it is the only one-room schoolhouse remaining in the city.

The Alaska-Yukon-Pacific Exposition held on the University of Washington campus in 1909 brought new transportation and great exposure to the Eastlake neighborhood. Eastlake Avenue was graded, and the streetcar lines were extended north. By 1914, more than 400

pupils attended Seward Elementary School, reflecting the growth and development of the area. In 1932, enrollment was about 580, and Seward became a demonstration school. As a demonstration school, teachers from all over the school district attended half-day sessions at Seward to observe the latest teaching methods and materials. In 1950, Seward's boundaries were expanded when the nearby Cascade School was destroyed in an earthquake. This growth continued until the construction of I-5 in the 1960s, which bisected the neighborhood and contributed to declining enrollment (City of Seattle 1980; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

Seward School (ID 10), Built 1905

The second school building, built in 1905, is also a designated Seattle Landmark (see photo at right). The Seattle Landmark Nomination Form (1980) states that, in plan and internal arrangement, the building conforms to the standard eight-room school plan developed by architect James Stephen and used throughout the school district between 1904 and 1906. It notes that the building is "significant as an essentially unaltered and early example" of this plan.

The third school building on the site was designed by Edgar Blair and built in 1917 (see photo at right) and is also a designated Seattle Landmark. The Seattle Landmark Nomination Form (City of Seattle 1980; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]) states that the school reflected new approaches in the design of educational facilities at the time, particularly a concern for fireproof construction, "which appears to have dictated the use of masonry…. It also appears that changing educational standards may have impacted the long and horizontal external form of the building." It further notes that the building is "significant architecturally as one of the two most distinguished elementary school designs built for the District … and exhibit(s) unusually refined brick and terra cotta detailing."

Seward School (ID 10), Built 1917

As stated in the nomination form, "The greatest significance of the Seward School site … lies in the fact that the three buildings have been grouped on the same site to form a small campus which illustrates the development of public school architecture from the end of the 19th century through the first two decades of the 20th."

Preferred Alternative Impacts

The proposed HOV ramp over I-5 would be roughly 30 feet wide and at approximately the same height as the existing ramp on the east end. It would be approximately 15 feet higher than the existing ramp at the west end as it turns and heads south. The new ramp may be visible from some parts of the Seward School campus and would have a minor permanent effect, altering the integrity of setting though the change in viewshed (see Exhibit 2c).

The Seward School sits on the other side of the I-5 from the landscaped 10th Avenue/Delmar Drive lid, but construction of the lid could affect the campus. The construction would take approximately 26 months; the noise and other effects would vary in intensity during that period, depending on which activities were occurring. The school currently faces a noise wall on the east side of the property between the campus and I-5. This wall would shield the campus from most of the construction impacts from the 10th Avenue/Delmar Drive lid.

The construction of the enhanced pedestrian/bicycle path over I-5 at East Roanoke Street just to the northeast of the campus could impact the school with noise, fugitive dust, and possible vibration. The construction would also be visible from the school and would impact the viewshed to the northeast. Glare from nighttime construction lighting would be experienced intermittently. Boylston Avenue East is also a potential haul route for trucks accessing I-5. Increased noise, fugitive dust, vehicle emissions and possible vibration from the trucks on the haul route and the construction of the HOV lane and the enhanced pedestrian and bicycle crossing could affect the Seward School campus. The school's integrity of feeling and setting would be temporarily altered as a result of the demolition, construction, and hauling.

The integrity of setting and feeling of the Seward School would be intermittently affected by trucks passing the buildings on the potential haul route on Boylston Avenue East. The property would maintain integrity of materials, design, workmanship, location, and association and would retain the ability to demonstrate its architectural significance, which is one of the attributes making it eligible for listing in the NRHP. The ability of the school to fulfill its educational mission and its involvement in the community would not be impaired by the hauling activities, and it would continue to fully convey its association with public education in Seattle and the development of the Eastlake neighborhood.

Construction impacts, such as increased noise and visual intrusions, would not permanently alter the integrity of the Seward School. The significance of the property lies in its distinctive architectural characteristics of type, construction, period, and style, and its association with area history. The construction impacts would temporarily alter the integrity of setting and feeling, but the effects would not be permanent. The Seward School would maintain integrity of materials, design, workmanship, association, and location throughout the construction period.

The property's integrity of feeling and setting would be temporarily diminished during construction of the project due to haul route activity and alterations to the viewshed. The setting and feeling would be permanently altered by operation of the project from of the new

HOV ramp and the enhanced pedestrian/bicycle path over the interstate. The protected features, activities, and attributes of the Seward School under Criterion A would not be substantially impaired by the temporary alteration of setting and feeling from being on a haul route or from the permanent viewshed changes. The protected architectural features and attributes of the Seward School under Criterion C would not be substantially impaired by the temporary alteration of setting and feeling from proximal haul route traffic or the permanent alteration to setting from the HOV lane or the enhanced pedestrian/bicycle crossing. Therefore, there would be no constructive use of this property from the project.

Since there would be no constructive use of the Seward School from the project and it is the representative property of this analysis group, the other properties in this group would also not experience a constructive use from the haul route impacts, the change to the setting, or any other aspect of the proposed project.

Analysis Group 4

There are two NRHP-listed properties in Analysis Group 4: Roanoke Park Historic District and the William H. Parsons House. The district has 80 contributing elements, 12 of which are located along the potential haul routes on Harvard Avenue East and East Roanoke Street. There is an additional property on East Roanoke Street outside the district (the Andrew Gunby House), but it is not located on a potential haul route and is closer to impacts from the Portage Bay Bridge (Exhibit 2d). The district and the Andrew Gunby House are significant under Criterion C, while the William H. Parsons House is listed under Criteria A and C. In this grouping, there is no representative property, so each will be discussed individually, with no assumptions based on similar impacts or similar NRHP significance. See Exhibits 4, 6, and 7 for views in the area.

Andrew Gunby House, 1118 East Roanoke Street (ID 45)

Property Description

The Gunby House is eligible for listing in the NRHP under Criterion C for distinctive characteristics unique to its period and as the work of a master architect. The Gunby House (see photo at right) was designed in 1939 by noted architect John T. Jacobsen (1903-1998). A native of Seattle, Jacobsen received his architectural degree from the University of Washington and master's degree from the University of Pennsylvania. His work has been credited with helping to form the basis for Pacific Northwest Modernism. His best-known projects include his own Madison Park home (circa 1936), the George Horton House (1938),

Andrew Gunby House (ID 45), 1118 East Roanoke Street

Existing View

Preferred Alternative Visualization

Exhibit 6. View from Roanoke Street
Looking southwest at the Enhanced Bicycle Pedestrian Bridge over I-5.

Existing View

Preferred Alternative Visualization

Exhibit 7. View Near Roanoke Park Entrance on Roanoke Street
Looking southeast toward Delmar Drive East and 10th and Delmar lid.

the Armbruster House (1946), Helen Bush School's Miller Hall (circa 1948), University of Washington's Gerberding Hall (1949), the Goslin House (1939), and the Gunby House (1939), all located in Seattle. After relocating to Hawaii, Jacobson worked on various projects and opened his own firm. There, he designed the Sea Life Park and research facilities, the Winnie Units at Punahou School, and aviator Charles Lindbergh's home (1971), and he was very involved in early NRHP designations and historic preservation efforts in Hawaii (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

The Gunby House is a two-story single-family residence with a rectangular footprint. It has a split-level plan with a side gable roof over the western section of the house, and a front gable roof over the eastern section. The western end of the house has an open carport on the ground floor, and has an exterior stair on the west elevation to access the second-story living space. On the eastern end of the house, the living space is two stories, and the second story projects out slightly above the first story on the south and east elevations. The ground-floor entry is located on the south elevation adjacent to the carport and is slightly recessed. Next to the entry is an exterior brick chimney. The ground floor features two large plate-glass windows divided into six lights, typical of this era of architectural design.

Preferred Alternative Impacts

The Gunby House views Portage Bay on a bluff near where Boyer Avenue turns to the southeast and passes under SR 520. There is mature vegetation and a steep slope between this property and the existing SR 520 corridor. The 10th Avenue/Delmar Drive lid would be located to the southwest of this property.

The construction of the 10th Avenue/ Delmar Drive lid to the southwest of the Gunby House would take approximately 26 months and the noise and other effects would vary in intensity during that period, depending on which activities were occurring. Glare from nighttime construction lighting would be experienced at the Gunby House intermittently. Increased noise, fugitive dust, and possible vibration from demolishing and removing the 10th Avenue East and Delmar Drive East bridges over SR 520 and constructing the new 10th Avenue/Delmar Drive lid also would affect the Gunby House. The Gunby House would experience these temporary, proximity effects to varying degrees.

Some of the vegetative buffer between SR 520 and the Gunby House would be entirely or partially removed during construction. Removal of this vegetation would alter the integrity of setting and feeling for the Gunby House.

The Gunby House would be temporarily affected by fugitive dust and possible vibration during demolition and reconstruction of the Portage Bay Bridge and erection of the work bridges, including pile-driving for new piers. The setting and feeling would be altered by the work bridges and construction activity due to the altered viewshed. During operation, the viewshed would also be altered by the larger Portage Bay Bridge. However, it would not be a substantial change to the viewshed because the existing view from the building includes a bridge over the bay. At the Gunby House, noise levels under the Preferred Alternative would be reduced compared to existing noise levels at this location (see the Noise Discipline Report

Addendum and Errata [Attachment 7 to the Final EIS] for more information). The property's integrity of setting and feeling would be temporarily altered as a result of the construction activities. None of the proposed construction activities or project operation would diminish the integrity of design, materials, workmanship, association, or location of the Gunby House.

The Gunby House would experience varying degrees of proximal impacts from demolition and construction activities, including those at the Portage Bay Bridge and the 10th Avenue/Delmar Drive lid. Due to the surrounding topography, the setting and feeling of the building could be altered by the new Portage Bay Bridge to the east during and after construction. These changes to the setting and feeling would not substantially diminish the architectural attributes of the Gunby House that make it significant.

The protected architectural features and attributes of the Gunby House and the association with the architect under Criterion C would not be substantially impaired by the temporary alteration of setting and feeling from proximal construction activities or the alteration to setting from the viewshed changes of the bridge. Therefore, there would be no constructive use of the Gunby House from the project.

Roanoke Park Historic District (ID 37)

Property Description

The boundaries of the Roanoke Park Historic District are roughly East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East, and include Roanoke Park, located at 910 East Roanoke Street (Exhibit 2d). The Roanoke Park Historic District was listed in the NRHP in July 2009. There are 101 properties in the district, 80 of which are contributing elements, including Roanoke Park itself and the individually listed William H. Parsons House (discussed below). The following paragraphs describe some of the defining characteristics and historic significance of the district. According to the 2009 NRHP nomination form for the Roanoke Park Historic District (see Attachment 4 to the Final Cultural Resources Assessment and Discipline Report):

> The Roanoke Park Historic District is [significant] under Criterion A for its direct association with events that made a significant contribution to the broad patterns of local and national history. The district is also significant under Criterion C for its collection of early 20th century residential architecture designed by many notable Seattle architects. The period of significance for the Roanoke Park Historic District begins in 1899 (the earliest construction date) and ends in 1939 (the date the neighborhood was built out).

Significant under Criterion A for its contribution to the patterns of history, the "Roanoke Park Historic District drew some of Seattle's and the country's most authentic characters, powerful influencers, and notable benefactors" (O'Connor et al. 2009; see also Roanoke Park Historic District nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report). The Roanoke Park neighborhood was an early streetcar suburb of Seattle, and the nomination notes that it was home to many influential residents,

including Louisa Boren Denny, the last surviving adult member of the landing party at Alki Point, who spent her last years living in what is now the Roanoke Park Historic District. Two early Seattle mayors lived in the neighborhood: Ole Hanson and Hugh Caldwell. Influential women in early Seattle who called Roanoke Park home included Bernice Stern, the first woman elected to the King County Council, later serving as King County Council chairwoman (Chesley 2006). Mrs. Stern, who also served on the Seattle City Council and, later, on the Washington State Transportation Commission, grew up in the neighborhood and lived here in the early years of her marriage. Alice Franklin Bryant, another Roanoke Park resident, was known internationally as a peace activist and advocate for justice. Jean Ross, who lived in the district from age 5 to 87 (from 1926 to 2008), was the first female engineer to work for Boeing (O'Connor et al. 2009; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

Also significant under Criterion C, the "Roanoke Park Historic District is an oasis of substantial single-family residences, many of which were designed by architects of some renown…. The Roanoke Park Historic District contains a distinctive collection of housing stock representative of a forty-year period from 1899 through 1939" (O'Connor et al. 2009; see also Roanoke Park Historic District nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

According to the nomination, the Roanoke Park Historic District contains architectural styles including Colonial Revival, Neo-Classical Revival, Tudor Revival, Mission/Spanish Revival, English Arts and Crafts, Craftsman, American Foursquare, Italian Renaissance, French Norman Revival, and many others.

In addition to its architecture, the district is notable for its park and landscape. The nomination describes Roanoke Park as "the district's jewel, a 2.2-acre, green gateway" to the neighborhood. It was originally included as a component in the Olmsted Brothers' plan for Seattle's parks and boulevard system as "the Roanoke terminus of Interlaken Park." In addition to the elms in the park, the district also has mature horse chestnuts and hedge maples (O'Connor et al. 2009; see also Roanoke Park Historic District nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS]).

Another aspect of the Roanoke Park Historic District is its distinctive views. Because it sits on a plateau, the district has unique views that contribute to its setting. On the east side of the district, the view encompasses Portage Bay, the Montlake Cut, the historic Montlake Bridge, the Seattle Yacht Club, and the National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center complex. The Gothic Revival Suzzallo Library and other buildings on the University of Washington campus are visible across the bay to the northeast. On the west, the district view includes the downtown skyline, the Space Needle, Lake Union, the industrial structures of Gas Works Park, and the east side of Queen Anne Hill.

Although some of the properties in the Roanoke Park Historic District have experienced alterations over time, including the park itself, they remain substantially intact with few exceptions. Overall, the contributing resources in the district and the Roanoke Park Historic District itself display good historic integrity.

Preferred Alternative Impacts

Construction and operation of the Preferred Alternative would have various impacts on the historic district including vegetation loss, demolition and construction of bridges, the HOV lane over I-5, and visual alterations. Some of the vegetative buffer between SR 520 and the Roanoke Park Historic District would be entirely or partially removed during construction of the SR 520, I-5 to Medina project. During construction of the new roadway and lid, mature vegetation would be protected and retained to the extent reasonable and feasible. Although the buffer area contains a variety of mature trees, it also has several invasive species that would be cleared and replaced with native vegetation, in accordance with WSDOT standard construction specifications on invasive species and vegetation replacement (WSDOT 2010). While some existing buffer might be reduced, adding the lid at 10th Avenue East and Delmar Drive East would provide for a new type of buffer from the roadway that would be more effective than the existing vegetative buffer. After project construction is completed, permanent erosion control measures for areas affected by construction would be implemented, and those areas where invasive species were cleared would be replanted with native plant materials, as appropriate. This would alter the district's integrity of setting.

The proposed HOV ramp over I-5 would be roughly 30 feet wide and at approximately the same height as the existing ramp on the east end. It would be approximately 15 feet higher than the existing ramp at the west end as it turns and heads south. The new HOV ramp could be visible from the southwestern portion of the Roanoke Park Historic District and would have a minor permanent effect, altering the integrity of setting.

Under the Preferred Alternative, an enhanced bicycle/pedestrian path would be added to the south side of the existing East Roanoke Street Bridge over I-5. The existing bridges at 10th Avenue East and Delmar Drive East would be replaced by a single lid that would rebuild both crossings and would be landscaped to create a visual link with Roanoke Park. The lid would provide a pedestrian passageway between the North Capitol Hill and Portage Bay/Roanoke neighborhoods, which are currently separated by SR 520, would increase landscaped green space in the area, and would reduce noise levels for some properties. The lid would serve to visually shield many of the historic properties from the effects of the wider SR 520 roadway.

The new Portage Bay Bridge would have a visual effect on portions of the Roanoke Park Historic District. The new bridge profile would be less than 15 feet taller than the existing bridge on the eastern end, and would have the same profile on the western end, closest to the district. It would be approximately 45 to 60 feet wider than the existing bridge and farther south on the west bank of Portage Bay. The visualization shows the views of Portage Bay Bridge looking southeast from Edgar Street under existing conditions and under the Preferred Alternative. The visual effect from the new bridge would be most pronounced for

houses on the east side of 10th Avenue East between East Roanoke Street on the south and just north of East Shelby Street on the north. Those houses currently have direct views of the existing Portage Bay Bridge.

The wider profile of the Portage Bay Bridge and the increased height on the eastern end would have a visual effect on the setting and feeling of the Roanoke Park Historic District and the contributing elements that have a view of the bridge and the bay. A wider west end of the bridge would affect views from the homes next to the bridge on the north side, which would make the bridge more dominant in eastward views. However, the new Portage Bay Bridge would not alter the integrity of design, materials, workmanship, location, or association of the district, which is listed in the NRHP for its association with the broad patterns of history and for its intact architectural features. The new bridge would alter the integrity of setting and feeling. Approximately one third of the contributing properties in the district (roughly 30 to 35 properties, depending on the season) would have views of the replacement bridge. The community will be involved in the context-sensitive design process for the new bridge in an effort to minimize visual impacts of the new bridge. The historic Montlake Bridge is also part of the distant viewshed of the Roanoke Park Historic District. The new bascule bridge on the east side of the historic bridge would be visible primarily from the rear of houses on 10th Avenue East between East Hamlin and East Shelby streets. The new bascule bridge would not obscure the view of the original Montlake Bridge from these houses and would be only slightly visible beyond the historic bridge from this vantage point. The new bridge would not block views from the district of any other notable buildings or natural resources, including, but not limited to, the Montlake Cut, the Seattle Yacht Club, and the NOAA Northwest Fisheries Science Center buildings. Although it slightly alters the setting and feeling of some contributing properties, this effect would be minor because of the distance of the historic bridge from the district.

The noise levels for the Preferred Alternative would be substantially the same in the Roanoke Park Historic District as analyzed in the Noise Discipline Report Addendum and Errata (see Attachment 7 to the Final EIS). That report states:

> With the Preferred Alternative fewer receivers [in the Portage Bay/Roanoke neighborhood] would exceed the NAC [noise abatement criteria] compared to the No Build Alternative noise levels. Twenty-two residences would exceed the NAC under the Preferred Alternative compared to 24 residences with the No Build Alternative.

As described above, some areas would experience a reduction in noise levels, while others would not (see the Noise Discipline Report Addendum and Errata for more information regarding the locations of noise receptors and their respective noise levels during project operation). In summary, the Preferred Alternative would permanently alter the Roanoke Park Historic District's integrity of setting and feeling as a result of the new HOV ramp, the enhanced bike/pedestrian crossing of I-5, the Portage Bay and Montlake Bridges, and the new 10th Avenue/Delmar Drive lid.

Construction of the Preferred Alternative would result in a number of effects on the Roanoke Park Historic District, and would temporarily alter the district's integrity of setting and feeling. These effects include:

- Noise, fugitive dust, and possible vibration from construction of the reconfigured intersection at East Roanoke Street and 10th Avenue East
- Increased noise, fugitive dust, and possible vibration from construction of the work bridges flanking the Portage Bay Bridge, demolition of the existing bridge, and construction of the new bridge
- Increased noise, fugitive dust, and possible vibration from demolition of the 10th Avenue East and Delmar Drive East overcrossings and construction of the new lid
- Increased noise, fugitive dust, traffic, possible vibration from construction, and glare from lighting for nighttime construction of the I-5/SR 520 interchange, the HOV lane over I-5 and the enhanced bicycle/pedestrian path over I-5

There would be a change in setting and feeling to the district during the construction period from the visual interruptions of the work bridges and construction activity related to Portage Bay Bridge as well as from the loss of vegetative buffer between East Roanoke Street and SR 520.

No construction or construction staging would occur within Roanoke Park or the Roanoke Park Historic District. Based on analysis in the 2009 Geology and Soils Discipline Report (see Attachment 7 to the Final EIS), the probability of landslides in the historic district from project construction in the vicinity is expected to be low.

Detours and Haul Routes

During construction, East Roanoke Street would experience temporary lane closures and detours while the 10th Avenue East and East Roanoke Street intersection is realigned. These could include short-term closures during off-peak times, which might require brief detours over an approximately 15-month period. The closures could result in temporarily restricted access along East Roanoke Street. However, at least one lane would be open at all times to allow local traffic access on East Roanoke Street. Harvard Avenue East and East Roanoke Street, which border the Roanoke Park Historic District, could provide the most direct access to portions of the project, and are likely to experience truck traffic as potential haul routes. The main travel route to access the 10th Avenue/Delmar Drive lid construction area would likely be from I-5 to East Roanoke Street, and Delmar Drive East could operate as a secondary route for access and egress from the lid area. Most trucks coming from westbound SR 520 would likely use the Harvard/Roanoke exit. On East Roanoke Street at Delmar Drive East, the potential route could average as many as 30 trucks per day intermittently during active construction for approximately 26 months. Worst-case peak levels could reach as many as 170 trucks per day, which could occur periodically over 26 months.

On Harvard Avenue East, north of East Roanoke Street, haul route volumes could average 15 trucks per day for the duration of construction (approximately 66 months). The existing truck and bus count at this location is more than 690 per day, so an additional 15 trucks per

day would not be a significant change. Worst-case peak volumes could reach up to 70 trucks per day, occurring for 60 non-consecutive days throughout the active construction period. This means approximately 3 percent of total construction days could experience peak levels. As noted in the introduction, average haul truck volumes are estimates meant to approximate construction truck activity during a typical day for the duration of a potential haul route's use; these estimates will be updated as construction planning and scheduling progress.

Trucks on the potential haul routes would temporarily diminish the integrity of setting and feeling of the Roanoke Park Historic District, including the William H. Parsons House on Harvard Avenue East, during the construction period. These properties could experience higher traffic volume, increased emissions, fugitive dust, and increased noise from the intermittent truck traffic along these potential haul routes.

The following elements of the Preferred Alternative would alter the Roanoke Park Historic District's integrity of setting:

- Visual change to the setting from the new HOV ramp on I-5 for selected properties on the southwestern edge of the district.
- Visual change to the setting from the replacement Portage Bay Bridge.
- Decreased noise from operation of the Preferred Alternative
- Decreased noise levels, increased green space, and new pedestrian connections to the adjacent North Capitol Hill neighborhood as a result of the new 10th Avenue/Delmar Drive lid over SR 520.

The Preferred Alternative would alter the integrity of setting for the Roanoke Park Historic District, but would not compromise any other aspect of historic integrity of the district. The integrity of materials, design, workmanship, location, and association would be retained.

The setting of the Roanoke Park Historic District would be altered during construction from the demolition and construction associated with the Portage Bay and Montlake bridges, the 10th Avenue/Delmar Drive lid, the HOV lane over I-5, the enhanced bicycle/pedestrian crossing of I-5, and truck traffic from the two potential haul routes adjacent to the district. There would be visual alterations to the setting of the district from the new HOV ramp, the Portage Bay Bridge, the bicycle/pedestrian bridge over I-5, and the new lid from operation of the project. During operation and construction, the integrity of design, materials, workmanship, location, and association of the district would not be altered by demolition and construction activities.

The attributes and features that make the district significant (its association with the development of the region and the area's several prominent citizens, and its intact collection of early twentieth century buildings) would not be substantially diminished by the changes in setting described. The district would continue to convey its significance through the association with area history and through its architectural cohesiveness. Since the setting of the district would not be substantially impaired from construction activities, nor from

operation of the project, there would be no constructive use of the Roanoke Park Historic District from the Preferred Alternative.

William H. Parsons House, 2706 Harvard Avenue East (ID 38)

Property Description

The William H. Parsons House (also called the Harvard Mansion) is listed in the NRHP under Criterion A for its association with significant events and local financial history, and Criterion C for its distinctive characteristics of the Neo-Classical style. It is also a contributing element to the NRHP-listed Roanoke Park Historic District.

William H. Parsons House (ID 38), 2706 Harvard Avenue

The Harvard Mansion is one of Seattle's most prominent and best-known residences, situated at the corner of Harvard Avenue East and East Edgar Street along I-5. The double lot provides the mansion with a spacious setting with a lawn, gardens, and a brick courtyard in the rear. All three of the mansion's floors afford spectacular views of Lake Union, the Olympic Mountains, Queen Anne Hill, the Fremont and Wallingford neighborhoods, and the downtown Seattle skyline. The third floor also provides partial views east to the Cascade Mountains and Lake Washington. Conversely, looking east toward Roanoke Park from these areas, the mansion is clearly seen as the most pronounced landmark on the horizon, perched atop the Roanoke Park ridge (Aspel 1991; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report).

The Harvard Mansion is a three-story wood-frame structure that reflects the popular Neo-Classical style of the early twentieth century, characterized by a dramatic classical portico, veranda, and cornice moldings. The house rests on a stone foundation with daylight basement and is capped by a medium-pitched hipped roof with pedimented dormers (Aspel 1991; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report).

Preferred Alternative Impacts

The traffic along the potential haul routes of Harvard Avenue East and I-5 would temporarily diminish the integrity of setting and feeling of the William H. Parsons House during the construction period. The property could experience higher traffic volumes, increased emissions, fugitive dust, and increased noise from the intermittent truck traffic along these haul routes. Although it is more than a block from the construction of the enhanced pedestrian/bicycle overpass at East Roanoke Street, the building could experience

some visual alteration from construction and operation of the overpass. The demolition and construction associated with the 10th Avenue/Delmar Drive lid would take approximately 26 months, so the noise and other effects would vary in intensity during that period, depending on which activities were occurring. The William H. Parsons House could be affected by noise and vibration from these construction activities, but due to its distance from the limits of construction, the setting and feeling of the property would not be diminished from this construction.

The integrity of feeling and setting would be temporarily diminished during construction of the project due to the haul route. The setting and feeling would be altered by operation of the project from the HOV ramp and the enhanced pedestrian/bicycle path over the interstate. The integrity of design, materials, workmanship, location and association would not be altered by operation or construction of the Preferred Alternative. The protected features, activities, and attributes of the William H. Parsons House and its associations under Criterion A would not be substantially impaired by the temporary alteration of setting and feeling from being on a haul route or from the viewshed changes. The protected architectural features and attributes of the William H. Parsons House under Criterion C would not be substantially impaired by the temporary alteration of setting and feeling from haul route traffic or the alteration to setting from the HOV lane or the pedestrian bridge. Therefore, there would be no constructive use of this property from the project.

Analysis Group 5

Analysis Group 5 incorporates historic properties south of SR 520, east of I-5, and west of 11th Avenue East. The historic properties west of 10th Avenue East sit at a higher elevation, giving them views over I-5 to Lake Union, and are farther from the most intense construction activities. All of these properties would have some proximal impacts from project construction and operation. The Boyd House (ID 39 on Exhibit 2e) sits at the foot of the bluff just south of the 10th Avenue/Delmar Drive East lid and would experience more frequent and intense temporary construction impacts than the other historic properties in this grouping. The Boyd House is the representative property for this group. Exhibit 8 shows views in the area.

Boyd House, 2422 Federal Avenue East (ID 39)

Property Description

The Boyd House, located at 2422 Federal Avenue East, was built in 1907. This Arts and Crafts/Craftsman -style residential building (see photo at right) retains good physical integrity, although its setting has been affected by the construction of SR 520 immediately to the north. It is eligible for listing in the NRHP under Criterion C for its distinctive architectural characteristics. It is a good,

Boyd House (ID 39), 2422 Federal Avenue East

Existing View

Preferred Alternative Visualization

Exhibit 8. View from a Residence on the East Side of I-5.
Facing west toward the proposed HOV ramp over I-5.

representative example of residential Arts and Crafts/Craftsman style architecture from the early twentieth century.

The house is a 1½-story Arts and Crafts/Craftsman bungalow on a rectangular footprint with a front gable roof with deep open eaves, typical of the style. The partial-width front porch is centered and has a front gable roof with decorative beams in the open gable end supported on two square columns and a multi-light entry door, all features of the Arts and Crafts/Craftsman style of architecture (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

Preferred Alternative Impacts

Under the Preferred Alternative, the Boyd House would experience reduced noise levels compared to existing noise levels at this location (Noise Discipline Report Addendum and Errata [Attachment 7 to the Final EIS]). The landscaped 10th Avenue/Delmar Drive lid over SR 520 would buffer highway noise during operation, and would contribute to the overall noise reduction in this area. The Boyd House sits adjacent to SR 520, is currently buffered by mature vegetation. The house would be adjacent to the demolition of the 10th Avenue and Delmar Drive overpasses and subsequent construction of the lid. While construction of the 10th Avenue/Delmar Drive lid would take approximately 26 months, the noise and other effects would vary in intensity during that period, depending on which activities were occurring. Glare from nighttime construction lighting would be experienced intermittently. Increased noise, fugitive dust, and possible vibration from demolishing and removing the 10th Avenue East and Delmar Drive East bridges over SR 520 and constructing the new 10th Avenue/Delmar Drive lid would also affect the Boyd House for those 26 months. The integrity of feeling and setting at the Boyd House would be temporarily altered as a result of the construction activities of the Preferred Alternative.

The vegetative buffer between SR 520 and the Boyd House would be entirely or partially removed during construction. Removal of this vegetation would alter integrity of setting of the Boyd House. After construction, some vegetation would be replaced and there would be greater green space due to the landscaped lid adjacent to the house.

Although farther removed from Portage Bay, the Boyd house could be temporarily affected by fugitive dust and possible vibration during demolition and reconstruction of the Portage Bay Bridge and erection of the work bridges, including pile-driving for new piers.

In summary, the integrity of the setting and feeling of the Boyd House would be temporarily altered by construction activities for the 10th Avenue/Delmar Drive lid, the change in vegetation, and to a lesser degree the demolition and construction of the Portage Bay Bridge. Integrity of location, association, design, materials, and workmanship would be maintained throughout the construction period and during operation of the project. The protected architectural features and attributes of the Boyd House under Criterion C would not be substantially impaired by the temporary alteration of setting and feeling from proximal construction activities. Therefore, there would be no constructive use of the Boyd House from the project. Since there is no constructive use of the Boyd House and it is the

representative historic property in Analysis Group 5, then the remaining historic properties in this grouping also would not experience a constructive use from the project.

Analysis Group 6

The historic properties in Analysis Group 6 are south of East Lynn Street, north of East Garfield Street and adjacent to I-5; three are on the east side of I-5 and the remainder are on the west side along the potential haul route on Boylston Avenue East (Exhibit 2f). I-5 is also a proposed haul route (see Exhibit 3). The properties on the west side all currently face the noise wall on the east side of Boylston Avenue East separating them from I-5. The properties on the east side of I-5 are situated at a higher elevation and do not have noise walls. The Chung House, in particular, has limited vegetation to serve as a visual barrier; it sits on a bluff and has views of I-5 and across I-5 to Lake Union. The Chung House is the representative property in this grouping.

Chung House, 1980 Harvard Avenue East (ID 4)

Property Description

The Chung House is a Tudor Revival style house from 1932 (see photo at right). It is eligible for listing in the NRHP under Criterion C for its distinctive architectural characteristics as a good, representative example of Tudor Revival style architecture. Its setting has been compromised by the construction of I-5 immediately to the west of the property, but the house has had few alterations to design or materials.

Chung House (ID 4), 1980 Harvard Avenue East

This house has an L-shaped footprint with a side gable roof over the main house and a front gable with a clipped end. The roof is steeply pitched, a typical feature of the Tudor Revival style, and lined with a wooden fascia board. There is a small, square dormer clad in wide wood siding with a steep pyramidal roof and six-light window on the front western slope of the main roof. The exterior of the house is brick veneer, with patterned brick and exposed timber frames highlighting the shed-roofed entry portico. The façade gable end has a 12-light window with a course of jack end bricks as the lintel and a brick sill, which are common features of the style (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

Preferred Alternative Impacts

Under the Preferred Alternative, an enhanced bicycle/pedestrian path would be added to the south side of the existing East Roanoke Street Bridge over I-5, which would not directly affect historic properties but could be visible from the Chung House. I-5, directly in front of the Chung House, is also a potential haul route for the duration of project construction (Exhibit 2f).

North of the property, construction of the I-5/SR 520 interchange, the HOV lane crossing over I-5 and the enhanced bicycle/pedestrian path would have some visual impact on the property as well as increased noise and vibration from construction activities, fugitive dust, and glare from lighting for nighttime construction.

The integrity of setting and feeling of historic properties along haul routes would be temporarily diminished during construction. Hauling could diminish the setting and feeling of the historic properties from increased traffic, noise, emissions and fugitive dust from the haul trucks on I-5 and Boylston Avenue. The Boylston Avenue East haul route would likely be used intermittently for the duration of construction, and could average approximately 25 trucks per typical construction work day. The I-5 haul route would be used for the duration of construction and would have a higher average truck volume as it is already used for hauling and is one of the preferred routes for hauling. Construction effects would occur intermittently, and none would be permanent.

The Chung House would experience these temporary effects to varying degrees. The integrity of feeling and setting at the Chung House would be temporarily altered as a result of construction of these project elements. The viewshed from the Chung House would be altered by the addition of the HOV lane, but only to a small degree. The viewshed currently includes the multiple lanes of I-5 and an existing ramp, so the addition of the HOV ramp would not be a significant change from existing conditions. The integrity of design, materials, workmanship, location and association of the Chung House would not be changed by construction or operation of the project.

The protected architectural features and attributes of the Chung House under Criterion C would not be substantially impaired by the temporary alteration of setting and feeling from proximal construction activities, the haul route traffic and the changed viewshed. Therefore, there would be no constructive use of the Chung House from the project. Since there is no constructive use of the Chung House and it is the representative historic property in Analysis Group 6, then the remaining historic properties in this grouping also would not experience a constructive use from the project.

Analysis Group 7

Historic properties in Analysis Group 7 include contributing properties in the western part of Montlake Historic District, properties along potential haul routes on Boyer Avenue East and Delmar Drive East, and properties just south of SR 520 near Portage Bay. The greater proximal impacts would be on properties closer to the construction activity on the 10th Avenue/Delmar Drive lid and the Portage Bay Bridge. The Alden Mason House is on the potential Boyer Avenue East haul route, is adjacent to SR 520 and near the base of the Portage Bay Bridge, and is eligible for listing in the NRHP under Criteria B and C. The Alden Mason House is the representative property for this group of historic properties. The other historic properties in the group are all eligible for listing under Criterion C only; they are further removed from the construction area and are only included in the APE because they are located on potential haul routes. Exhibits 9 and 10 show views in the area toward the Portage Bay Bridge.

Existing View

Preferred Alternative Visualization

Exhibit 9. View of Boyer Avenue East
Looking from the west side of the street, near the Alden Mason House, looking northeast toward the Portage Bay Bridge.

Existing View

Preferred Alternative Visualization

Exhibit 10. View from the East Side of Boyer Avenue East
On the Shore of Portage Bay just south of Portage Bay Bridge, looking northeast toward Portage Bay Bridge.

Alden Mason House, 2545 Boyer Avenue East (ID 48)

Property Description

The residential building at 2545 Boyer Avenue East is a Modern-style house, built in 1949 (see photo at right). It was designed for artist Alden Mason by Victor Steinbrueck, a prominent Seattle architect and one of the designers of the iconic Space Needle. This flat-roofed house is visually striking, situated on the hill overlooking Portage Bay, and is an excellent example of the Modern style. It has had few alterations over the years, and all the changes are minor and do not significantly affect the integrity of the property. The house is eligible for listing in the NRHP under Criterion C for distinctive characteristics unique to its period and as the work of a master architect, and under Criterion B for its association with Alden Mason, noted Seattle artist and influential long-time faculty member at the University of Washington (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

Alden Mason House (ID 48), 2545 Boyer Avenue East

Preferred Alternative Impacts

The Mason House sits adjacent to SR 520 and the base of the Portage Bay Bridge (see Exhibit 2g). At this location, noise levels under the Preferred Alternative would be reduced compared to the existing noise levels (see the Noise Discipline Report Addendum and Errata [Attachment 7 to the Final EIS] for more information). This property could experience impacts from the demolition and construction related to the 10th Avenue/Delmar Drive lid to the northwest. While construction of the 10th Avenue/Delmar Drive lid would take approximately 26 months, the noise and other effects would vary in intensity during that period. Glare from nighttime construction lighting would be experienced intermittently. Increased noise, fugitive dust, and possible vibration from demolishing and removing the 10th Avenue East and Delmar Drive East bridges over SR 520 and constructing the new 10th Avenue/Delmar Drive lid would also affect the Mason House. The Mason House would experience these temporary effects to varying degrees.

The Mason House would be temporarily affected by fugitive dust and possible vibration during demolition and reconstruction of the Portage Bay Bridge and erection of the work bridges, including pile-driving for new piers. However, this would not diminish the property's integrity of materials, design, workmanship, location, or association. The Mason House would likely also experience glare from nighttime construction lighting because it is close to the bridge and, thus, close to construction activities. Construction effects would occur intermittently, and none would be permanent.

Boyer Avenue East is a potential haul route that could be used throughout the construction period. This route, near East Shelby street, may average 20 additional trucks per day when in

use and may experience peak volumes up to 230 trucks per day, intermittently throughout construction. To provide some context for this volume of truck traffic, approximately 130 to 140 trucks and buses per day pass along Boyer Avenue East. During construction, the average trucks per day on Boyer Avenue East near East Lynn Street would be 15 trucks per day, and approximately 210 trucks per day during peak construction activities. The integrity of setting and feeling of historic properties along haul routes would be temporarily diminished during construction. Hauling could diminish the setting and feeling from increased traffic, emissions, noise, and fugitive dust from the haul trucks.

Some of the vegetative buffer between SR 520 and Mason House would be entirely or partially removed during construction. Removal of this vegetation would alter the integrity of setting for the Mason House.

From all the temporary, proximal impacts discussed above, the integrity of feeling and setting of the Mason House would be temporarily altered as a result of this project. The integrity of design, materials, workmanship, location, and association would not be altered by construction or operation of the Preferred Alternative.

The protected architectural features and attributes of the Mason House under Criterion C and the association with the artist Alden Mason under Criterion B would not be substantially impaired by the temporary change to the setting and feeling from proximal construction activities and haul route traffic. Therefore, there would be no constructive use of the Mason House from the project. Since there is no constructive use of the Mason House and it is the representative historic property in Analysis Group 7, then the remaining historic properties in this grouping also would not experience a constructive use from the project.

Analysis Group 8

There are no historic properties affected under the Preferred Alternative in Analysis Group 8, which is north of the Montlake Cut and north of the Montlake Boulevard/NE Pacific Street intersection (see Exhibit 2h). This area is included in the APE due to elements of the project under a suboption to Option L, which is not part of the Preferred Alternative. The limits of construction of the project under the Preferred Alternative do not enter the boundaries of this analysis group and there are no potential haul routes through this area. There are no project impacts in this grouping and therefore no constructive uses of historic properties.

Analysis Group 9

Analysis group 9 includes several properties that are unique and cannot be analyzed with other properties plus other individually eligible properties and contributing elements to the Montlake Historic District (see Exhibit 2i). The Seattle Yacht Club and the Montlake Bridge are discussed individually below. The residential property, 2133 East Hamlin Street, eligible for listing in the NRHP under Criterion C and is a contributing element to the district, is located immediately north of SR 520 and the proposed Montlake lid. This is the property that represents the remaining historic properties within this grouping, all of which are within

the Montlake Historic District. The district as a whole would have a Section 4(f) use, and so is discussed in detail in Chapter 9 of this Final EIS, but it is not addressed in this technical memorandum. The properties in this grouping include contributing elements to the historic district and properties that are individually eligible for listing in the NRHP under Criterion C apart from their contributing status. Exhibits 11 through 13 show views from the Seattle Yacht Club and of the Montlake Bridge.

Seattle Yacht Club, 1807 East Hamlin Street (ID 55)

Property Description

The Seattle Yacht Club Main Station (see photo), located within the Montlake Historic District and fronting on Portage Bay, is listed in the NRHP under Criterion A for its association with the social and maritime history of Seattle. Various cultural contributions made by the yacht club include: boating and yachting, sponsoring races, training young sailors, and providing a place for both professional and amateur boaters and boat builders to congregate. Boating was the most important form of transportation for the early settlers in the Puget Sound region. The Main Station is a physical representation of the height of the yachting community in the early twentieth century in Seattle. The period of significance of the Seattle Yacht Club runs from 1920, when the current building was completed, to 1946, when membership was at an all-time low due to World War II. A cultural institution of the Seattle Yacht Club is the traditional Opening Day ceremonies through the Montlake Cut and on Portage Bay held at the beginning of May each year (Mirro and Johnson 2005; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report).

Seattle Yacht Club (ID 55), 1807 East Hamlin Street

Preferred Alternative Impacts

During construction of the Preferred Alternative, the Seattle Yacht Club could experience the following proximity impacts: fugitive dust, glare from nighttime construction lighting, intermittent interruption of marine access, intermittent restrictions on vehicular access, and possible vibration from demolition of the existing Portage Bay Bridge and construction of work bridges, the new Portage Bay Bridge and the new bascule bridge (see Exhibit 2i). Work bridges and barges used to demolish and reconstruct the Portage Bay Bridge might occasionally interfere with the Seattle Yacht Club's maritime activities in Portage Bay, but would not restrict access entirely. Similarly, temporary supports and barges used to construct the new bascule bridge adjacent to the historic Montlake Bridge might occasionally interfere

Existing View

Preferred Alternative Visualization

Exhibit 11. View from the Seattle Yacht Club Lawn
Looking southwest toward Portage Bay Bridge.

Existing View

Preferred Alternative Visualization

Exhibit 12. View from Montlake Boulevard near Shelby Street East
Looking north along Montlake Boulevard toward the Montlake Bridge.

Existing View

Preferred Alternative Visualization

Exhibit 13. View toward the Montlake Bridge
Looking west along the Montlake Cut from northeast corner of East Montlake Park.

with the Seattle Yacht Club's activities in the Montlake Cut, but access would not be restricted entirely. WSDOT has committed to not transporting pontoons through the Montlake Cut or Portage Bay during Opening Day events, including the week before and the week after the ceremonies. Development of a coordination plan and communication process negotiated between the Seattle Yacht Club and WSDOT are stipulated in the Programmatic Agreement (see the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to the Final EIS), along with other commitments WSDOT is making to address potential construction impacts on this historic property.

Despite these commitments to minimize and mitigate impacts, construction of the Preferred Alternative would affect the Seattle Yacht Club and diminish integrity of setting, feeling, and association. Although marine and land access to the Seattle Yacht Club would be maintained at all times, there may be periods during construction when some limitations on access to the Seattle Yacht Club and Portage Bay may be necessary. Access to Seattle Yacht Club facilities is critical for the continued operation of the property. The ability to maintain the historic structure depends on the economic and operational viability of the Seattle Yacht Club through the revenues generated by members and guests having access to the facility. Limited access leading to reduced use of the facility by members could reduce the Seattle Yacht Club's ability to manage its historic structure and conduct its traditional activities. However, some access would be maintained at all times throughout the construction process. Through measures stipulated in the Programmatic Agreement (including a process to address coordination of in-water construction with maritime activities), effects on the historic property will be avoided where possible and minimized to the greatest extent feasible.

The new Portage Bay Bridge would operate approximately 110 feet north of the current bridge, bringing the bridge closer to the Seattle Yacht Club (see Exhibit 11). Although the setting would be permanently affected by this closer location, the visual effect would not be significant as the Seattle Yacht Club is already located in close proximity to the bridge. The new viewshed would not be significantly different from the existing viewshed. The setting and feeling of the Seattle Yacht Club would be altered by the larger, closer bridge, but the property would retain integrity of location, association, design, workmanship, and materials. As stipulated in the Programmatic Agreement, the community will be involved in the context-sensitive design process for the new bridge, and WSDOT will implement noise reduction strategies to minimize noise, as warranted.

WSDOT has committed to various minimization and mitigation measures for the anticipated effects of the project on the Seattle Yacht Club that will reduce the proximity impacts on the property, including maintaining marine access during construction, involving the community in the design process, and other measures stipulated in the Programmatic Agreement. The significant functions of the Seattle Yacht Club, such as sailing, boating, teaching, racing, and providing a gathering place, would be limited periodically during construction, but for the most part would continue unimpeded. The Seattle Yacht Club would not lose marine access to most of the bay or to the Montlake Cut, and stipulations have been made to avoid or minimize effects on its Opening Day ceremonies.

After construction of the project is completed, all the features and attributes that make the property historically significant would be fully functional, and permanent changes to the setting and feeling would be minor. The maritime activities, features, and attributes of the Seattle Yacht Club would not be substantially diminished by the project, and the significance of the Seattle Yacht Club would not be meaningfully reduced or lost. Therefore, the effects from the project would not substantially impair the property's association with Seattle's maritime history, which is the attribute that makes it a protected resource and thus there would not be a constructive use of the property.

Montlake Bridge (ID 55)

Property Description

The Montlake Bridge over the Montlake Cut is listed in the NRHP under Criterion C for its significant engineering and architectural design as a part of the Historic Bridges/Tunnels in Washington State NRHP nomination. It is an active bascule bridge over an active navigational channel and is still used as originally designed (see photo at right). It is significant for its type as a moving bascule bridge as well as for its unique architectural features. The bascule bridge is a specific bridge technology that evolved out of the need to span navigable waterways. One of the unique engineering features of the Montlake Bridge is that the trunnions are supported on a cantilevered projection from the pier, which distinguishes it from other bascule bridges of the time. In addition, this bridge includes ornate towers over the piers on both sides of the cut, making it feel monumental and creating a visual landmark (Soderberg 1980b; see also nomination form in Attachment 4 to the Final Cultural Resources Assessment and Discipline Report).

Montlake Bridge (ID 55)

Preferred Alternative Impacts

The Preferred Alternative includes a new bascule bridge immediately east of the existing historic Montlake Bridge (see Exhibit 2i). Bridge construction, which is expected to last approximately 29 months, would introduce increased noise, fugitive dust, glare from nighttime construction lighting, and possible vibration to the Montlake Bridge. Because of the close physical proximity, constructing a new bascule bridge immediately adjacent to the historic Montlake Bridge would affect the setting and feeling of the bridge as a result of noise, construction activity, and change of views from and of the bridge. The Programmatic Agreement stipulates that safeguards will be put in place to protect the historic Montlake Bridge and to ensure that it is not physically affected in any way during construction of the new bascule bridge.

When completed, the new bascule bridge immediately adjacent to the historic Montlake Bridge would modify the setting and feeling of the historic bridge (Exhibit 12). This is an iconic bridge that is a part of the community's viewscape. Views to the east from the bridge for those crossing it would be affected by the adjacent bridge, and the view of the historic bridge from the east also would be affected. To mitigate these effects of the new bridge, a context-sensitive design for the new bridge would minimize effects on the historic bridge by decreasing the visual impact, allowing the historic Montlake Bridge and its iconic towers to be more visually prominent than the new structure. Mitigation measures, including community involvement in the new bridge design, are stipulated in the Programmatic Agreement.

The Montlake Bridge is an active bascule bridge that accommodates marine traffic through a navigational channel. During and after project construction, the bridge would continue to operate as a bascule bridge. The new bridge immediately adjacent to the historic bridge would reduce the integrity of setting and feeling. The integrity of design, materials, workmanship, association, and location would not be impacted. The significant engineering and architectural features would not be substantially impaired by the project due to the context-sensitive design of the new bridge and the continued operation of the historic bridge during construction and operation of the project. The activities, features, and attributes of the historic Montlake Bridge would not be substantially diminished by the project, and the significance of the historic bridge would not be meaningfully reduced or lost. Therefore, there would be no constructive use of the Montlake Bridge from the Preferred Alternative.

2133 East Hamlin Street (ID 109)

The Dutch Colonial Revival-style residence located at 2133 East Hamlin Street was built in 1919 and is eligible for listing in the NRHP as a contributing element to the Montlake Historic District. It has very good integrity and is a representative example of the early twentieth century houses that make up the district (see photo at right). The house embodies the distinctive characteristics of Dutch Colonial Revival-style architecture, and the only apparent change is to the wooden porch railings. The house's cruciform plan and cross-gambrel roof make it a noteworthy example of the style. Therefore, it is also individually eligible for the NRHP under Criterion C (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

2133 East Hamlin Street (ID 109)

Preferred Alternative Impacts

Buildings located on the south side of East Hamlin Street would lose the landscaped buffer provided by the Canal Reserve Land south of the alleyway behind them (see Exhibit 2i). Currently, the SR 520 ramp is 135 to 195 feet from the rear of the properties along East Hamlin Street. Under the Preferred Alternative, the ramp would be approximately 65 to 130 feet from the rear of these properties. A new bicycle and pedestrian path would be north of the ramp, below grade, with retaining walls on each side. An approximately 45- to 100-foot buffer would remain between the rear yards of the houses on Hamlin Street and the north retaining wall of the new bicycle and pedestrian path. Although the Canal Reserve Land and the mature specimen trees would be lost, the land would become part of the landscaped lid, so open green space would remain in the area. The integrity of setting and feeling of this part of the district would be diminished by the loss of this green space and its large specimen trees dating back as far as 1909.

A constructed wetland for stormwater treatment would be built on most of the site currently occupied by the Museum of History and Industry (MOHAI) in McCurdy Park, necessitating removal of the MOHAI building and acquisition of the land. The demolition of MOHAI would bring additional noise, and possibly dust and vibration, to the properties along the east end of East Shelby and East Hamlin streets.

The area east of East Shelby and East Hamlin streets (the MOHAI area) would also be used as a staging area for the duration of the construction period. This staging area would be available for use 24 hours per day to support mobilization and demobilization of construction and would house construction vehicles, equipment, materials, and related construction activities. These construction activities would generate dust, noise, and visual interruptions for the duration of construction in close proximity to this residential structure. The visual and audible impacts associated with the construction staging area would temporarily alter the integrity of setting and feeling of this property.

The new bascule bridge across the Montlake Cut would be designed to not obscure the view of the original Montlake Bridge, as much as possible, from the historic properties that include the bridge in their viewsheds. The change in viewshed would be a minor alteration to the setting of the historic properties that have a view of the bridge.

Other impacts from construction of the Preferred Alternative on properties in Analysis Group 9 include increased dust, noise, possible vibration, visual alterations, and possible glare from nighttime lighting from construction associated with the Portage Bay Bridge, the west approach, the Montlake lid, the new bascule bridge, and the Lake Washington Boulevard and R.H. Thompson ramps

Although 2133 East Hamlin Street is not located along a potential haul route, other historic properties in this grouping are. Those properties would have impacts associated with haul route traffic during construction. For those properties along the potential haul routes, the integrity of setting and feeling would be intermittently affected by the haul trucks. The properties would maintain integrity of location, association, materials, design, and workmanship, and would retain the ability to demonstrate their architectural significance

under Criterion C. The setting and feeling of properties along the potential haul routes would be temporarily diminished during construction.

Construction of the Preferred Alternative would temporarily alter the setting and feeling of the residential property at 2133 East Hamlin Street from demolition and construction activities as well as from the proximity of the construction staging area. The operation of the project could also alter the setting and feeling of the historic property from changes in the viewshed from the loss of vegetation on the Canal Reserve Land and the addition of the Montlake lid. None of these project effects from construction or operation would diminish the characteristics under Criterion C that make this building architecturally significant.

The protected architectural features and attributes of the representative property significant under Criterion C would not be substantially impaired by the temporary change to the setting and feeling from proximal construction activities and permanent changes to the viewshed from the loss of vegetation on the Canal Reserve Land and the addition of the Montlake lid. Therefore, there would be no constructive use of the residential property at 2133 East Hamlin Street from the project. The properties in the grouping that are along potential haul routes would have no constructive use from the temporary setting changes due to haul truck traffic. The project would not have a constructive use of the Seattle Yacht Club and the Montlake Bridge. Therefore, there are no properties in Analysis Group 9 that would experience a constructive use from the project.

Analysis Group 10

The Edgewater Condominiums are the only historic property without a Section 4(f) use in Analysis Group 10 (the Evergreen Point Bridge has a section 4(f) use). No other historic properties are discussed in this section. Exhibit 14 shows views of the Evergreen Point Bridge from the Edgewater Condominiums.

Edgewater Condominiums (ID 226), 2411 42nd Avenue East

Edgewater Condominiums, 2411 42nd Avenue East (ID 226)

Property Description

The Edgewater Condominiums at 2411 42nd Avenue East are eligible for listing in the NRHP under Criterion C as a part of the Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957 (see photos at right). They were built in 1938 and 1940 as the Edgewater Park Apartments and designed by noted architect John Graham, Jr. (1908-1991). A Seattle native and son of architect John Graham, Sr., he studied at the

Existing View

Preferred Alternative Visualization

Exhibit 14.View from Edgewater Condominiums in North Madison Park
Looking northwest toward SR 520 west approach bridge.

University of Washington and graduated from Yale University. In 1946, John Graham, Jr. returned to Seattle and took over the Graham architecture firm. He went on to build an international reputation and design projects all over the world. His best known project is probably the Space Needle for the Seattle World's Fair in 1960-62, designed with Victor Steinbrueck.

The Edgewater Condominiums complex was built by local businessmen organized as the Madison Park Corporation and is the earliest known local example of a privately owned apartment complex. According to the nomination, apartment complexes such as this "consisted of a grouping of multi-unit, multi-story buildings arranged in a landscaped setting. They extended the bungalow court's concept of a setting apart from the street, but they were larger in scale, with higher densities and larger buildings ..." (Sheridan 2008; see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report). The Edgewater Condominiums embody this description of the early twentieth century apartment complex.

Preferred Alternative Impacts

The Edgewater Condominiums would experience an alteration of setting and feeling from the new west approach of the Preferred Alternative (see Exhibit 2j). The west highrise would shift slightly to the northwest, and the west approach would be a few feet higher and approximately 190 feet farther north than the existing structure. This would reveal more open water views in Union Bay from this residential property. The height of the floating bridge would increase to an elevation of approximately 20 feet above the water surface. This change to the viewshed would alter the integrity of setting and feeling of the property to some degree, but it would not be a significant change from existing conditions.

Under the Preferred Alternative, noise levels would be reduced compared to existing noise levels at this location (see the Noise Discipline Report Addendum and Errata [Attachment 7 to the Final EIS] for more information). .The setting and feeling of the Edgewater Condominiums would be altered by these changes, but the effects would be minor. The viewshed from this property currently includes a bridge approach and a floating bridge, so the changes as a result of the SR 520, I-5 to Medina project would not be significant. This multi-unit residential complex would maintain integrity of design, materials, workmanship, association, and location.

The Edgewater Condominiums would experience increased noise from demolition and construction of the west approach to the Evergreen Point Bridge, as well as potential glare from nighttime construction activities. These construction impacts would occur during demolition and reconstruction of the west approach, as well as construction of the work bridges and the replacement floating bridge. Integrity of setting and feeling of the historic property would be temporarily altered by increased noise and glare during construction.

The protected architectural features and attributes of the Edgewater Condominiums under Criterion C would not be substantially impaired by the temporary change to the setting and feeling from proximal construction activities and changes to the viewshed from the new

bridge. Therefore, there would be no constructive use of the Edgewater Condominiums from the project.

Analysis Group 11

Analysis Group 11 includes historic properties in the Eastside portion of the APE. There are only two properties, but the Arntson House serves as the representative historic property in this grouping since it is much closer to the construction activity and to the Evergreen Point Bridge.

Arntson House, 2851 Evergreen Point Road (ID 234)

Property Description

The Arnston House, located at 2851 Evergreen Point Road, is eligible for listing in the NRHP under Criterion C for its distinctive architectural characteristics, which are uniquely representative of the mid-century period (see photo at right). The wide, low, intersecting gables of the roof emphasize its horizontality, and the many windows and exterior spaces reflect the original wooded isolation of the site, on a bluff overlooking Lake Washington. Although part of the lot was taken for the original construction of the Evergreen Point Bridge/SR 520, and new construction has since been built near the house, the site still retains much of its original feeling. The form and design of the house are visually striking, and it exhibits an intact display of mid-century modern architectural design. Although the design and setting of the property have been somewhat affected, it retains integrity of materials, feeling, location, association, and workmanship (see HPI form in Attachment 3 to the Final Cultural Resources Assessment and Discipline Report).

Arntson House (ID 234), 2851 Evergreen Point Road

Preferred Alternative Impacts

Under the Preferred Alternative, the SR 520 corridor near the Arntson House would be widened to six lanes, from the existing four lanes (see Exhibit 2k).

The Arntson House would experience moderately increased noise levels, fugitive dust, and possible vibration associated with demolishing the east approach of the Evergreen Point Bridge and construction of the new east approach structure. The Arntson House could experience fugitive dust and noise increases associated with construction of the bridge maintenance facility and dock located under the approach area. Most of these effects would

occur intermittently, and none would be permanent. The integrity of feeling and setting of the Arntson House would be altered from the increased noise, dust and possible vibrations, but no other aspects of integrity would be compromised.

The new floating portion of the bridge would be slightly higher than the existing floating portion, but this greater height would be a minimal visual change to the setting of historic properties in the Eastside transition area.

The protected architectural features and attributes of the Arntson House under Criterion C would not be substantially impaired by the temporary change to the setting and feeling from proximal construction activities and changes to the viewshed from the new bridge. Therefore, there would be no constructive use of the Arntson House from the project. Since there is no constructive use of the Arntson House and it is the representative historic property in Analysis Group 11, then the remaining historic property in this grouping also would not experience a constructive use from the project.

Conclusion

This analysis has evaluated historic properties within the APE that would not have a physical Section 4(f) use under the Preferred Alternative for the potential for constructive use of these properties. Under Section 4(f), a use may occur when there is a *constructive* use of land, which is defined in 23 CFR 774.15:

> A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.
>
> Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished. [23 CFR 774.15 (a)]

The analysis of the 11 groupings of historic properties shows that none of these groups would have substantial impairment of the protected activities, features, and attributes of the historic properties. Therefore, there would be no constructive use of historic properties from the construction and operation of the Preferred Alternative.

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