RECORD OF DECISION
FEDERAL HIGHWAY ADMINISTRATION
SOUTH PARK BRIDGE PROJECT
FHWA-WA-EIS-05-02-F
KING COUNTY, WASHINGTON
February 3, 2010

INTRODUCTION

The Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), and the King County Department of Transportation (KCDOT) are proposing to replace the South Park Bridge in King County, Washington with a new movable-span bascule bridge. The South Park Bridge spans the Duwamish Waterway along the 14th/16th Avenue South corridor between unincorporated King County and the City of Tukwila, although project-related work will also extend into the City of Seattle on both ends of the project area. The existing bridge, which is listed on the National Register of Historic Places, will be demolished once the new bridge begins service. FHWA and WSDOT are the federal and state lead agencies, respectively, under the National Environmental Policy Act (NEPA). KCDOT is the lead agency under the State Environmental Policy Act (SEPA). The U.S. Coast Guard is the only NEPA cooperating agency for this project.

The Draft Environmental Impact Statement (EIS) for the South Park Bridge Project was issued in October 2005, followed by a 45-day public comment period. Following the review of public and agency comments on the Draft EIS, the Bascule Bridge Alternative was considered to have the least overall adverse impacts to the elements and of the natural and built environment that were evaluated in the Draft EIS.

FHWA concurred with the selection of the Bascule Bridge Alternative as the Preferred Alternative in February 2006. This Record of Decision (ROD) summarizes how the preferred alterative was selected and then further evaluated in the Final EIS. The Notice of Availability (NOA) for the Final EIS was published in the Federal Register on December 31, 2009. The public review period for the Final EIS ended on January 30, 2010.

DECISION

After reviewing the impacts of each of the five alternatives based on the full range of relevant environmental and socioeconomic issue areas presented in the DEIS and subsequent comments from various agencies and the public, the Bascule Bridge Alternative was selected as the Preferred Alternative. Of the five possible choices, it was concluded that building a new movable-span bascule bridge immediately downstream of the existing bridge is the most consistent with the purpose and need for the project based on the relevant decision criteria. Those decision criteria listed below reflect the key issues stated in the purpose and need for the project:

- Improve general traffic mobility

- Improve freight mobility
- Serve marine traffic
- Meet environmental justice requirements
- Have community support
- Preserve South Park businesses
- Preserve South Park community
- Protect habitat and Endangered Species Act (ESA)-listed species
- Have structural longevity

The other four alternatives do not satisfy the project goals and objectives as fully as the Bascule Bridge Alternative. The other four alternatives raised substantial concerns regarding respective impacts on the viability of South Park businesses and long-term livability within the South Park neighborhood compared to the Bascule Bridge Alternative. In particular, the Mid- and High-Level Fixed-Span Alternatives would have substantially greater adverse effects on social and economic viability of the South Park community, as well as the future of navigation in this section of the Duwamish River. Additionally, the No Action Alternative will not maintain the important transportation link provided by the existing bridge.

The Bascule Bridge Alternative was selected as the Preferred Alternative because it ranks the most favorably for all of the decision criteria, with the exception of concerns regarding the protection of habitat and ESA-listed species. Construction of the larger in-water foundation piers required for the Bascule Bridge Alternative will result in greater impacts to the natural environment of the Duwamish Waterway. This will, however, be offset by a substantial reduction in the impacts on most other elements of the built environment, as well as substantial measures to mitigate the potentially adverse impacts to aquatic species and habitat.

ALTERNATIVES CONSIDERED

The following five alternatives were analyzed in the DEIS:

No Action Alternative

This alternative assumes that the poor condition of the existing bridge structure will require future closure; therefore, the impacts associated with removing (but not replacing) the existing bridge were evaluated under this alternative. The No Action Alternative would be fundamentally inconsistent with the principal goals and objectives of the proposed project, because of the long-term impacts resulting from the loss of the existing bridge. This would eliminate an important link in the regional transportation network, and greatly diminish the accessibility of the South Park community and its businesses. Many comments from the South Park residents and business interests expressed their opposition to this alternative. The removal of the bridge would have some environmental benefits in terms of waterway navigation and in-water habitat functions.

Based on the goals for this project, however, the No Action was not considered an appropriate option for the preferred alternative.

Rehabilitation Alternative

This alternative would rehabilitate the existing bridge, although it would require replacing much of the existing bridge structure in order to restore structural integrity. New bridge components would include steel trusses, bascule leaves, mechanical and electrical operating systems, bridge piers, bridge railings, bridge tender towers, and lampposts. The Rehabilitation Alternative was not considered an acceptable preferred alternative choice for several reasons. Preliminary engineering showed that the deteriorated condition of the existing bridge would necessitate a level of reconstruction that is not consistent with initial expectations for true historical rehabilitation. At best, the reconstruction of the bridge would be an unsatisfactory compromise particularly in terms of historical preservation, and life span. In addition, reconstruction would require closing the bridge for an extended period of time, which would have adverse impacts on the economic viability of businesses in South Park. Although this alternative was initially favored by many in the South Park community, the limitations noted above have generally been recognized and accepted through the course of public involvement for the DEIS. In most cases, public and agency comments preferring the Rehabilitation Alternative either acknowledged that is not a viable alternative or noted that they preferred the Bascule Bridge Alternative if rehabilitation of the existing bridge is not possible.

Bascule Bridge (Preferred) Alternative

This alternative would result in construction of a new movable-span bridge immediately downriver of the existing bridge. As a bascule bridge similar in size and function to the existing bridge, this alternative retains existing waterway use and traffic patterns.

The Bascule Bridge Alternative has been selected as the preferred alternative, because it ranks the most favorably for all of the decision criteria other than concerns regarding the protection of habitat and ESA-listed species. Moreover, based on the input from the Community Advisory Group (CAG) and public comments received on the DEIS, building a replacement bascule bridge is strongly favored by the South Park community and business interests. Several agencies also expressly supported this as the preferred alternative, particularly from an historic preservation standpoint. The Washington State Department of Archaeology & Historic Preservation stated that their preference was for a new bascule bridge if the existing bridge cannot be maintained or rehabilitated. Of the three bridge replacement alternatives, the U. S. Department of Interior noted that "...the Bascule Bridge Alternative seems to best achieve the spirit of Section 4(f), because it results in the least number and extent of adverse impacts to Section 4(f) resources."

Mid-Level Fixed-Span Bridge Alternative

This alternative would result in construction of a non-movable bridge that would reduce waterway navigation for larger vessels. The bridge would be approximately 1,660 feet long, abutment to abutment, as well as an elevated approach structure extending through the South Park business district to South Cloverdale Street. The Mid-Level Fixed-Span Alternative was

not considered to be a reasonable choice for the preferred alternative, because of its adverse impacts to both the South Park community and waterway navigation needs. As a result, this alternative was strongly opposed by South Park residents and business interests, particularly those concerned with maintaining waterway navigation. Only one public comment supported this as the preferred alternative based on its lower cost. As noted above, this alternative would contradict the preferences stated by the U. S. Department of Interior and the Washington State Department of Archaeology & Historic Preservation. Moreover, this would not meet the U. S. Coast Guard's requirements for maintaining adequate vertical clearance for waterway navigation based on their input earlier in the DEIS process. The Environmental Protection Agency (EPA) also commented that it would not expect this alternative to be selected as a preferred alternative based on its environmental justice impacts as discussed in the Draft EIS, unless it could be modified to comply with environmental justice requirements. However, no foreseeable means of modifying this alternative adequately to meet those requirements were identified. This alternative does have less impact on the natural environment than the Bascule Bridge, but not substantially enough to warrant consideration of incurring the major social and economic impacts that would be involved.

High-Level Fixed-Span Bridge Alternative

This alternative would be a non-movable bridge with enough vertical clearance above the Duwamish Waterway (approximately 100 feet) to accommodate foreseeable waterway navigation uses. Due to the substantially increased height, the bridge length would increase to approximately 2,332 feet from abutment to abutment. This would require elevated approach structures extending along 14th Avenue South through a substantial portion of the South Park business district. The High-Level Fixed-Span Alternative is not a reasonable choice for the preferred alternative. In particular, the imposing scale of the proposed structure, and the extent to which it would directly impact the South Park community, would have the most substantial and disproportionately adverse social and economic impacts of the DEIS alternatives. This has been the most strongly and consistently opposed alternative by the South Park community throughout the EIS process thus far. This alternative has only been included in the DEIS because federal regulations required that King County evaluate a fixed-span alternative that would satisfy marine navigation requirements. Although this alternative would not provide the unlimited vertical navigation clearance of the moveable bascule bridge, it was considered adequate for further consideration by the Coast Guard during the Draft EIS alternatives selection process. In general, the drawbacks of this alternative are similar, albeit of greater scale and intensity, to those described above for the Mid-Level Fixed-Span Alternative. Similarly, King County does not foresee any way of modifying this alternative to sufficiently mitigate concerns regarding its adverse impacts on the South Park community.

Section 4(f) Evaluation

In accordance with Section 4(f) of the Department of Transportation Act of 1966, a Draft Section 4(f) Evaluation was prepared in conjunction with the Draft EIS that evaluates the impacts of the five alternatives on 4(f) resources, and then a Final Section 4(f) Evaluation was prepared in conjunction with the Final EIS that focused on the preferred alternative. The two 4(f) resources at issue in the Final 4(f) Evaluation were the existing South Park Bridge which is listed on the

National Register of Historic Place (NRHP), and the Red Brick Remnant along 14th Avenue South that is eligible for listing on the NRHP.

FHWA has determined that all of the proposed alternatives, including the No Action Alternative, would result in use of the Section 4(f) resources (the South Park Bridge and the 14th Avenue South Red Brick Road Remnant). The use of the existing bridge meets the criteria for Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges. The cost, safety, and environmental impacts or community disruption resulting from the other alternatives are greater than those associated with the proposed action. Based on the considerations described in the Final 4(f) Evaluation (see Chapter 5 of the Final EIS), there are no feasible and prudent alternatives to use of the Section 4(f) resources (i.e., the South Park Bridge and the 14th Avenue South Red Brick Road Remnant), and the project includes all possible planning to minimize harm from such use.

Alternatives Summary

Based on the consideration of all relevant information, the Bascule Bridge Alternative was considered the only reasonable choice for the preferred alternative, and FHWA has also determined that it is the environmentally preferable alternative. The Bascule Bridge Alternative is one of the best alternatives for all but one of the nine key decision criteria that were used to select the preferred alternative. All of the other four alternatives were considered to be one of the best alternatives for only three or less of those key decision criteria.

The only notable tradeoff between the adverse impacts of the Bascule Bridge Alternative and the other four alternatives is the adverse impact from the larger in-water footprint of the bascule piers. Consequently, the construction of a new bascule bridge would have relatively higher adverse impacts on the natural environment than the other four alternatives, because of its larger in-water foundation piers. The undesirability of this aspect of the Bascule Bridge Alternative was noted in the DEIS comments from the Washington State Department of Fish and Wildlife. Similar concerns were raised at an early ESA consultation meeting on January 19, 2006 with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Services (NMFS). While these agencies emphasized that they would prefer the least amount of in-water structure possible, they were not opposed to the selection of the Bascule Bridge as the preferred alternative. Given this concern, however, substantial efforts have been made to engineer the new bascule bridge in a manner that minimizes its in-water footprint to the maximum extent practicable, and to mitigate related impacts through additional coordination with appropriate resource agencies. As noted in the FEIS comment letter from USFWS (see Attachment A), in spite of its greater potential effects on the natural environment, USFWS is "satisfied that the FEIS provides a convincing rationale for the selection of the Preferred Alternative, and we have no objection to the Preferred Alternative."

MEASURES TO MINIMIZE HARM

As described above, the new bascule bridge was selected because it has the least overall adverse effects of the five alternatives considered; however, adverse impacts will still occur. Impacts that will require specific measures to minimize harm are primarily associated with unavoidable

impacts from the demolition of historic features (including the existing bridge), in-water pile-driving activities that will disturb contaminated sediment and have substantial in-water noise and vibration impacts, and the demolition of several buildings in South Park that will displace a residence and several businesses. To the maximum extent practicable, the design and proposed construction process for the preferred alternative has been developed to avoid and minimize potential environmental impacts.

Measures to minimize environmental harm from construction of the new bascule bridge have been developed throughout the EIS process. Prospective mitigation measures were initially identified as part of the technical discipline studies and preliminary project design and engineering efforts associated with the evaluation of all five alternatives in the Draft EIS. The preparation of the technical studies and preliminary engineering work included substantial consultation with relevant agencies and public input. Consequently, the project description for the Bascule Bridge Alternative and the potential mitigation measures presented in the Draft EIS provided the initial measures to minimize the adverse impacts associated with the construction of the new bascule bridge. During the Final EIS phase, a substantial amount of additional work was done to further reduce the potential adverse environmental impacts from the preferred alternative, particularly regarding the potential short-term adverse impacts associated with the construction of the new bascule foundation piers within the Duwamish Waterway.

Following the selection of the Bascule Bridge Alternative as the preferred alternative, subsequent design and engineering was done in conjunction with a formal consultation process with both the USFWS and the National Marine Fisheries Services (NMFS) to address the project's potential effects on species listed under the ESA. The ESA consultation process concluded with the issuance of a Biological Opinion (BiOp) from USFWS and NMFS, and both are referenced in the Final EIS. As part of the ESA consultation process, the project design and engineering focused on: minimizing the duration of in-water construction activities, minimizing the duration and intensity of in-water noise from pile driving, and minimizing the potential resuspension of contaminated sediment during in-water pile driving and removal.

A variety of appropriate Best Management Practices (BMPs) have been incorporated into the final project plans in order to mitigate for potential construction impacts, including specific considerations and features that were presented as mitigation measures in the Draft and Final EIS. These BMPs have been incorporated whenever practical to minimize potential adverse effects and in order to comply with applicable regulations and anticipated permit conditions.

MONITORING AND ENFORCEMENT

Monitoring activities will be conducted throughout the project construction process in order to minimize potential short-term impacts. Longer-term monitoring will occur following construction to ensure that mitigation areas are adequately established, and as needed, to comply with any additional monitoring requirements that may be required pursuant to project permits.

Monitoring will be required during construction as follows:

Water quality impacts

- King County will monitor turbidity and pH during in-water work activities to ensure that water quality meets prescribed state and federal standards. At a minimum, turbidity will be monitored at the edge of the mixing zone (assumed as 300 feet downstream based on applicable regulations) during in-water work activities.
- More stringent water quality monitoring requirements will also be required pursuant to the terms and conditions of the BiOp issued by the USFWS (pp. 76-77). Those additional requirements include monitoring within 150 feet of sediment-generating activities at three locations at 15-minute intervals, with specific provisions for additional monitoring based on turbidity levels. Specific reporting requirements and notification protocols are also included.

In-water noise (hydroacoustic) impacts:

- Hydroacoustic monitoring requirements are specified in the terms and conditions of the BiOps that were issued by both the USFWS and NMFS. Monitoring will be based on a hydroacoustic plan that must be submitted for approval by USFWS and NMFS prior to beginning in-water pile-driving activities.

Post-construction monitoring will be required as follows:

- Riverbank mitigation plantings will require monitoring for at least three years to ensure that adequate plant establishment occurs and the desired habitat functions are sustainable.
- Additional post-construction monitoring plans to address other specific concerns may be developed during the project permitting process.

PROJECT COMMITMENTS

This section summarizes the commitments and mitigation measures that will be made as part of the preferred alternative. Additional mitigation measures provided are also referenced in relevant sections of the Final EIS.

Transportation and Mobility

Construction activities will be phased and use of the existing South Park Bridge will be maintained throughout most of the construction process for the new bridge. Traffic impacts may increase construction projects occurring in the same area; however, extensive mitigation will be required to ensure reasonable levels of congestion in the South Park area during construction. Construction mitigation will include clear warning signs regarding construction activities, estimated time lengths, and detour routes. In addition, modified lane striping and/or channeling will be used as needed to direct drivers around congestion zones, particularly 14th Avenue South. Signal timing changes may be implemented to adjust cycle lengths and green light time for anticipated changes in traffic volumes and patterns during construction. Other measures will maintain local access to affected businesses on 14th Avenue South during construction to the greatest extent practicable.

In order to minimize the impact of new bridge construction on waterway navigation, the existing bridge will continue to open upon request for the passage of waterway vessels, although a few interim bridge closures will likely occur.

Relocations

Full acquisition will be required for six parcels, and five buildings will be demolished on the South Park side of the project area to accommodate the new bridge alignment and to provide construction staging areas. Relocation assistance will be provided to affected residents and businesses in accordance with applicable regulations to mitigate for the loss of the existing properties and businesses that are displaced for the project. Compensation for parcel acquisitions will be provided at fair market value in compliance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended [42 United States Code (USC) 4601 et seq. and 49 Code of Federal Regulations (CFR) Part 24], and the Washington Relocation Assistance Real Property Acquisition Policy Act of 1971, as amended [Revised Code of Washington (RCW) 8.26 and Washington Administrative Code (WAC) 468-100]. Relocation assistance will be provided by qualified personnel employed by King County, who will work closely with affected business owners to minimize the level of disruption that may be caused by the need to relocate. King County will make every effort to assist business owners in finding a suitable replacement site.

Economics

Mitigation for adverse economic impacts during construction due to short-term disruption of local businesses includes implementing the following measures to the greatest extent practical:

- Coordinate construction activities to minimize disruptions to marine and vehicular traffic.
- Coordinate construction activities to maintain access to businesses and provide attractive conditions for conducting business.
- Ensure that other construction mitigation measures to reduce impacts from noise, dust, vibration, and traffic detours also address business operation considerations.
- Adhere to construction phasing and scheduling designed to minimize disruption to businesses.

Mitigation measures to address the permanent displacement of several businesses are described under Relocations, and those measures also address the related adverse economic impacts.

Social Elements

Based on extensive public outreach during the Draft and Final EIS process, the new bascule bridge project is generally considered a very desirable capital improvement for the livability and social cohesion of the affected South Park community. This public input is reflected in the proposed project design which incorporates a variety of design features to enhance the public accessibility, safety and streetscape amenities. These design features are intended to enhance the long-term viability and livability of the South Park neighborhood.

Environmental Justice
The South Park community has a diverse population with demographic characteristics that meet the requirements for environmental justice considerations under Presidential Executive Order 129898 and FHWA environmental justice guidelines. As discussed above, a key consideration for selecting the Bascule Bridge Alternative as the preferred alternative was that it had the least adverse environmental justice impacts for the South Park community. In addition to the selection of the preferred alternative, the primary commitment to minimize the potential environmental justice impacts is keeping the existing bridge operational throughout as much of the construction process as possible.

In addition to environmental justice populations in the South Park community, the Muckleshoot Indian Tribe conducts tribal fishing activities in the Duwamish Waterway, including the portion of the river within the project area. This tribal fishing by the Muckleshoot Indian Tribe would be adversely affected by construction of the new bridge project. In particular, the Muckleshoot Indian Tribe has expressed concern regarding the loss of access to their existing fishing sites around and near the existing bridge during the three fishing seasons (2010 through 2012) in which the new bridge will be built and the existing bridge will be demolished. Displacement of these tribal fishermen from this location will result in economic losses for which appropriate mitigation will be negotiated with the Muckleshoot Indian Tribe.

Cultural Resources
In accordance with the Section 4(f) considerations and the project's Section 106 Memorandum of Agreement, the following commitments have been made in order to address the impacts associated with removal of the historic South Park Bridge:

- South Park Bridge
- Historic American Engineering Record (HAER) documentation will be completed prior to the removal of the existing bridge.
- Mitigation measures as per the King County Landmarks Commission Certificate of Appropriateness #07.32, including, but not limited to, those described briefly below:
- Salvage and re-use of steel hand railing on new bridge
- Salvage of lighting standard(s), concrete railing segment, guide track and rocker, and truss component for public display
- Salvage of control panel and one reduction gear set
- Provide interpretive displays on new bridge and in adjacent public space
- Investigate alternative re-uses of larger elements of the bridge
- Prepare an article on the history of the bridge for the HistoryLink.org website

In addition, the following commitments have been made in order to address the permanent impacts to the 14th Avenue South Red Brick Road Remnant:

- HAER documentation will be completed prior to the removal of the existing roadway.

- As many bricks as practicable for re-use will be salvaged and potentially reconstructed in a new public space adjacent to the new bridge.
- During roadbed removal at least one cross-section of the roadbed will be photographed to document construction methods.

The Boeing Plant 2 Building 2-41 is another historic structure that is adjacent to the north approach for the existing bridge (immediately upstream) on the Boeing Company facilities. Appropriate BMPs will be implemented (e.g., for dust and vibration) to avoid adverse effects during the construction of the new bridge and removal of the existing bridge. The historic relationship of the South Park Bridge to the Boeing plant will be highlighted in at least one interpretative display.

In addition to the resource-specific mitigation measures above, a Plan for the Unanticipated Discovery of Cultural Resources and Human Remains will be in effect during all ground-disturbing activities associated with the project.

Visual Quality

The design of the Preferred Alternative has integrated a variety of features to enhance the visual qualities of the new bridge and its surrounding area, particularly in the affected South Park neighborhood. These design features to mitigate the potential visual quality effects of the project include the following measures:

- Context-sensitive design principles shall be considered and incorporated into the design to the greatest extent practicable.
- Public interpretive signs shall be used to identify the historical significance of the existing South Park Bridge and other notable features in the vicinity.
- New access areas (e.g., sidewalks and street landscaping) will be enhanced where appropriate to improve visual qualities in the project area.
- Native riparian vegetation will be used along the shore of the Duwamish Waterway for riverbank restoration features. This will improve the appearance of the shoreline, now dominated by nearby industrial facilities.
- A public riverfront access point is proposed next to the new bridge. This will maintain a view of the waterway and marina from the commercial area.
- To reduce the mass and scale of bridge abutment walls (and to discourage graffiti), concrete surfaces will have texture or relief (e.g., rustication).

Air Quality

Construction activities will cause temporary emissions of pollutants, including dust and odors, although the emissions will vary over the approximately 32-month construction period. Construction-generated particulate emissions from fugitive dust and diesel exhaust is the primary concern. Specific measures will be implemented in conjunction with the development of final

design and contract specifications in order to minimize fugitive dust and to minimize particulate emissions from the operation of construction equipment.

Noise and Vibration
There will be noise and vibration impacts to businesses and residences in the immediate vicinity of the project during construction of the Preferred Alternative due to heavy equipment operation, construction traffic, pile driving, and demolition of the existing bridge. Various mitigation measures will be used to minimize the short-term noise impact during construction activities. There will also be long-term increases in noise levels near the project area based on projected traffic levels. As discussed in the FEIS, this increase will impact certain buildings such as the Sea Mar Community Health Center (several blocks south of the bridge) and will require consideration of noise mitigation measures. During final design and permitting, King County will coordinate with Sea Mar Community Health Center and other affected businesses adjacent to the project to confirm whether other practicable measures could be taken to reduce noise impacts during and following construction of the new bridge.

Utilities
Various measures provided in the Final EIS to mitigate construction impacts to utilities have already been incorporated into the final stages of engineering and design for the preferred alternative. King County will continue to coordinate with representatives from each affected utility to minimize any potential disruptions in service during construction. Other measures to mitigate adverse construction impacts to utilities during project construction include:

- Consider issues related to hazardous materials, archaeological and historical resources, water resources, transportation, and business impacts when planning utility work associated with bascule bridge construction. Coordinate mitigation measures related to these other environmental issues with those developed to avoid, reduce, and minimize potential impacts to utilities.
- Require temporary erosion and sedimentation controls for utility trench excavation and earthwork removal for underground lines, such as gas, sanitary sewer, water, steam, and fuel oil.
- Comply with applicable utility policies as specified in King County Road Standards and King County Ordinances.
- Work with property and business owners to maintain access to the extent possible for properties and businesses during construction.

Water Resources
The new bridge design has incorporated stormwater facilities consisting of curbs, bridge drains, catch basins, a wet vault, and rain gardens to collect, convey, and treat storm runoff. These features will improve the long-term water quality associated with stormwater runoff from the project versus the existing bridge. Various mitigation measures presented in the Final EIS have been incorporated into the project plans to avoid or minimize potential impacts to the Duwamish Waterway during construction. These include the water quality monitoring noted above in the monitoring section, as well as specific water quality monitoring provisions discussed below as

commitments based on ESA compliance. All construction-related water will be treated to meet applicable water quality standards prior to discharge.

Fish, Vegetation and Wildlife

Following the selection of the Bascule Bridge Alternative as the preferred alternative, subsequent design and engineering was done in conjunction with formal consultation processes with both the USFWS and the NMFS to address the project's potential effects on species listed under the ESA. The ESA consultation process concluded with the issuance of a BiOp from USFWS and NMFS. The BiOp from USFWS was included as an appendix to the FEIS. The BiOp from NMFS was issued on January 25, 2010.

The key commitments to address the USFWS BiOp include the following:

1. All work below mean higher high water (MHHW) of the lower Duwamish River will be completed during an in-water work window of August 1 to February 15.
2. All impact pile driving will be done using a noise attenuation device (confined bubble curtain, temporary noise attenuation pile, or functional equivalent).
3. Prior to, or during, installation of the trestle/piles or steel sheet pile cofferdams, the project will place a blanket of clean granular material to reduce the amount of sediment that may be re-suspended during the course of pile installation and removal. A 6- to 12-inch-deep sand blanket will be used. The project will place this sand blanket over an area below MHHW as large as 35,000 square feet (0.8 acre).
4. The project will remove approximately 350 12-inch-diameter creosote-treated wood piles associated with the existing bridge pier protection system. This material and any other treated wood waste produced by the project will be disposed of at a properly permitted disposal site.
5. Temporary pipe piles and sheet piles will be removed following construction. If piles break off during extraction, or their removal cannot be achieved by these methods, the project will cut piles off at the mudline or top the sand blanket.
6. After construction the project does not propose to remove the sand blanket. The USFWS expects that this material will be removed at a later date as part of a future clean-up or remedial action conducted within the reach.
7. Construction of the two permanent caisson foundations will require careful excavation, handling, storage, testing, treatment, transport, and disposal of native substrates, as well as any water that is in contact with the substrates, known or suspected of contamination.
8. The project will implement a Spill Prevention Control and Countermeasure (SPCC) plan, which will include a description of the preexisting contamination and measures necessary to conduct work without allowing release of these materials.
9. The project will seal the temporary sheet pile cofferdams so as to minimize exchange with the surrounding water column and will partially dewater the cofferdams prior to excavation. The project will pump dewater into a holding tank, and will test and treat this

water to ensure any discharge meets all relevant and applicable State surface water quality criteria, or allowable limits described in issued wastewater discharge permits.

10. The project will implement approved protocols for waste sampling and characterization. Any material characteristically hazardous of toxic waste will be disposed of according to all applicable State and federal requirements, at an approved up-land disposal site or in-water dredge material disposal site operating under the Dredged Material Management Program (DMMP).
11. The project will complete in-water work necessary to restore and enhance left-bank shallow water, shoreline, and riparian zones in the immediate vicinity of the new bridge. The project will create approximately 6,000 square feet of tidally influenced emergent marsh, approximately 2,300 square feet of shrub-dominated transition zone, and will plant woody riparian vegetation along the existing bank armor and replacement with bioengineered slopes and placement of large woody debris to enhance shallow-water habitat.

The NMFS BiOp concluded that the South Park Bridge Project, as proposed, is not likely to jeopardize the continued existence of Puget Sound (PS) Chinook salmon and PS steelhead, or result in the destruction or adverse modification of designated critical habitat for PS Chinook salmon. The key commitments to address the NMFS BiOp include the following:

1. Minimize incidental take from pile-driving activities within the Mean Lower Low Water (MLLW) mark by a minimum of 20 dB reduction. This will require the use of the following specific performance standards for impact pile/proofing activities in the Duwamish River:
    a. To the fullest extent practicable and through design, testing, and careful implementation, maximize effectiveness of the noise attenuation device with the goal of achieving a 20 dB attenuation measured at distance of ten meters from the pile in order to prevent accumulated SEL of 187 dB from extending over more than 75 percent of the wetted channel width.
    b. As the science evolves, use the best available underwater sound attenuation technology for any actions where there will be impact pile driving in the presence of listed species.

2. Minimize incidental take from temporary degradation of surface water quality from in-water construction activities. This requires monitoring downstream turbidity levels in the Duwamish River during sediment-generating, in-water construction activities. The monitoring plan shall include the items listed below as part of the submittal, or a functionally-equivalent proposal for effective monitoring shall be submitted to NMFS for review no fewer than 60 days prior to in-water construction:
    a. Monitoring shall be conducted a distance of 30 feet downstream of in-water construction activities.

b. If results indicate exceedances after two consecutive sampling events, operations will cease and a turbidity curtain or functional equivalent will be deployed around the specific activity, as close as practicable.

c. Submit a monitoring report to NMFS by December 31 following each in-water construction season that includes information specified in the BiOp.

3. Minimize incidental take resulting from reduced forage and predation, limit the area of temporary impacts from structures in the Duwamish River to 20,000 square feet and 35,000 square feet for riverbed habitat, respectively.

4. Ensure completion of a monitoring and reporting program to confirm that the take exemption for the proposed action is not exceeded, and that the terms and conditions in this incidental take statement are effective in minimizing incidental take, by developing and implementing a hydroacoustic monitoring plan to document the effectiveness of the approved sound attenuation system. This monitoring plan must include the following:

   a. Submit the design specifications for the selected sound attenuation system to NMFS for review a minimum of 60 days prior to initiation of impact pile-driving activities.

   b. Notify the Services within 24 hours if noise monitoring indicates that take limits will be exceeded.

   c. Submit hydroacoustic monitoring report to Services for review within 120 days of the completion of monitoring activities.

   d. The hydroacoustic monitoring plan, attenuation system specifications, and hydroacoustic monitoring results must be prepared and implemented by individuals with proven and appropriate expertise in the fields of underwater acoustics and sound attenuation technologies, the biological effects of hydroacoustic stressor exposure, and related data collection.

5. If a sick, injured, or dead specimen of a threatened or endangered species is found in the action area, the finder must notify NMFS Law Enforcement or other appropriate contacts, as well as follow appropriate handling precautions and directions from Law Enforcement, as described in the BiOp.

Geology and Soils

Earthquake drains will be installed as part of the project design to reduce the risk of liquefaction and lateral spreading in the shore-side areas of the project during potential seismic events.

Further consideration will be given to providing ground improvements for the existing bridge in the form of compaction grouting. This technique would minimize further settlement of the existing bridge piers due to construction-induced vibrations during construction of the new bridge. Additional geotechnical analysis is required to confirm whether this is warranted.

Hazardous Materials
BMPs and project-specific contingency plans will be prepared and implemented to manage both anticipated and unanticipated hazardous materials and contaminated soil, groundwater, sediment, and surface water encountered during construction. BMPs will also be applied for ongoing bridge and roadway maintenance activities involving potential hazardous materials releases.

If hazardous materials are encountered, appropriate control and cleanup measures will be implemented to minimize adverse effects on workers, the general public, and the environment.

Sites left with residual contamination in excess of standard or negotiated cleanup levels will be clearly identified in documentation provided to the Washington State Department of Ecology. Restrictive covenants may be required as part of the property title to place limits on property transfer and to establish allowable conditions for future invasive work.

COMMENTS RECEIVED ON THE FINAL EIS AND RESPONSES

The Notice of Availability of the FEIS was published in the *Federal Register* on December 31, 2009, and the review period ended on January 30, 2010. Responses to the comments that were received during the 30-day review period are provided in Attachment A.

CONCLUSION

The purpose of this project is to find the most reasonable long-term solution to address the deteriorated condition and seismic vulnerability of the South Park Bridge. For the reasons discussed above, the Bascule Bridge Alternative has been determined to provide the best solution of the five alternatives evaluated in the Draft EIS. The other four alternatives evaluated in the Draft EIS raised substantial concerns regarding their respective impacts on the viability of South Park businesses and the long-term livability of the South Park neighborhood. Consequently, the Bascule Bridge Alternative was selected as the Preferred Alternative for further analysis in the Final EIS.

After considering the information presented in the Final EIS and comments received during the subsequent 30-day review period, FHWA selects the Preferred Alternative for construction of the South Park Bridge Project. The Preferred Alternative consists of constructing a new movable-span, bascule bridge across the Duwamish Waterway, and then removing the existing South Park Bridge. FHWA finds that all practicable measures to minimize environmental harm have been incorporated into the project. FHWA will ensure that the commitments outlined above and in the Final EIS will be implemented as part of the project design, construction, and post-construction monitoring.

RECORD OF DECISION APPROVAL

The Record of Decision for the South Park Bridge Project is hereby approved.

Feb. 3, 2010
Date

Daniel M. Mathis
Daniel M. Mathis
Division Administrator
Federal Highway Administration

ATTACHMENT A

Responses to Comments on the FEIS

The Notice of Availability of the FEIS was published in the *Federal Register* on December 31, 2009, and the 30-day FEIS review period ended on January 30, 2010. The Legal Notification of the FEIS Notice of Availability was published on December 30, 2009 in the *Seattle Times* with contact information for providing written comments. Notice signs were posted at the project site with information about providing comments on the FEIS. Public notices for the FEIS were also published in local Spanish- and Vietnamese-language newspapers. Separate telephone numbers were also provided with translation assistance for Spanish and Vietnamese speakers.

Four substantive comments were received via letter, email, and telephone message:

1. U.S. Department of Interior Fish and Wildlife Service
    - Letter dated January 22, 2010 from Willie R. Taylor, Director, Office of Environmental Policy and Compliance

2. South Park Neighborhood Association
    - Letter dated January 12, 2010 from Dagmar Cronn, President

3. King County Department of Natural Resources, WRIA 9
    - Email dated January 29, 2010 from Dennis Clark, Public Outreach/Stewardship Coordinator

4. Public Comment
    - Telephone message received January 29, 2010 from an individual South Park resident, Penni Cocking.

Comment 4:

Telephone message received January 29, 2010 from South Park resident, Penni Cocking.

The commenter strongly emphasized her preference to see the existing bridge preserved and restored in its original historic condition. She noted that the existing bridge is a cultural and educational piece, which is significant in many ways. She added that the bridge was listed on the National Register and the County Register because of who built it, when it was built, and its history. These historical qualities and beauty of the existing bridge will be lost if it is not preserved, and the new bridge is does not sufficiently address this. Existing use of the bridge has been heavier than it should be (e.g., industrial truck traffic) for an historic bridge of this kind, and planners have not taken measures to adequately protect it from uses it was not designed to handle.

She also stated that the FEIS review period did not provide enough time for area residents to provide adequate comments, and it should be extended for a month. She also noted that she did not think that the public notices for the Final EIS had been posted in places where they would be seen be enough people in the neighborhood. In particular, the notice signs posted at the ends of the bridge were not as visible as they should have been.

Response:
The commenter's strong desire to preserve the existing South Park Bridge is acknowledged; however, as discussed in the FEIS and summarized in this Record of Decision in the Alternatives Considered section, the Rehabilitation Alternative was not considered a feasible option. Measures to mitigate for the loss of the historic bridge have been developed through coordination with the agencies responsible for its listing on the National Register of Historic Places, and as a King County Landmark.

The 30-day FEIS review period will not be extended. The South Park neighborhood has been involved throughout the EIS process as noted in the FEIS comment letter from the South Park Neighborhood Association. In addition to the notice signs posted at the bridge, the Notice of Availability for the FEIS was mailed to many residents and businesses in the South Park neighborhood, and published in local newspapers.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

TAKE PRIDE IN AMERICA

JAN 22 2010

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PEP/NRM

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K.C. Road Engineering Services

ER 05/844

Mr. Jim Sussex
Senior Environmental Engineer
King County Department of Transportation
King Street Center, MS-KSC-TR-0231
201 South Jackson Street
Seattle, Washington 98104-3856

Dear Mr. Sussex:

The Department of the Interior has reviewed the Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation for the **South Park Bridge Project over the Duwamish Waterway at 14th/16th Avenue South in Seattle, King County, Washington**, and provides the following comments.

FISH AND WILDLIFE COORDINATION

F-001-001 The Fish and Wildlife Service (FWS) completed a formal Endangered Species Act section 7 consultation for the project last year, and in August 2009, issued a Biological Opinion addressing the project's potential adverse effects to listed bull trout and designated bull trout critical habitat (FWS Ref. No. 13410-2008-F-0383). Relevant portions of the FEIS and supporting documentation provide details that are consistent with the information provided during consultation. We have no major concerns or comments that relate to the terms of our earlier consultation.

F-001-002 The FEIS provides information with which to judge the relative merits of the considered alternatives. The Proponent has identified the Preferred Alternative (Bascule Bridge) as the alternative having the greatest potential effects on the natural environment, including listed species and their habitat (pp. xxviii and 2-21). Nevertheless, the FWS is satisfied that the FEIS provides a convincing rationale for selection of the Preferred Alternative, and we have no objection to the Preferred Alternative. Furthermore, we have no major concerns, comments, or recommendations pursuant to the Fish and Wildlife Coordination Act or Migratory Bird Treaty Act.

F-001-001

Comment noted.

F-001-002

Comment noted.

We offer only the following, minor comments for your consideration:

F-001-003 <> (p. 3-98) " ... the new bridge and stormwater treatment system will necessitate changes to the ... Boeing Plant 2 stormwater outfall." We recommend that the Proponent work in cooperation with the Boeing Company and Washington State Department of Ecology to identify any problematic connections and/or discharges to this combined system, and to identify and implement any additional source control measures appropriate to/for improving the quality of industrial site stormwater runoff.

F-001-004 <> (p. 3-101) Table 3-12-1 is mislabeled. The right-side column reports hazard quotients, not water column concentrations.

F-001-005 <> (p. 3-119) " The BiOps [document] ... a limited, unquantifiable amount of take for ... bull trout." Our Biological Opinion did quantify incidental take, by using habitat as a surrogate. The Biological Opinion places both spatial and temporal limits on the amount of exempted incidental take.

F-001-006 <> (pp. 3-127 through 3-153) This chapter from the FEIS identifies a number of precautions and mitigation measures that we hope and expect will enable the Proponent to effectively prevent the release or spread of site contamination and contaminated media. In our judgment, these precautions and measures are the single most important means by which the project can control and limit potential adverse effects on the natural environment. We would encourage that the Proponent continue work in cooperation with the Environmental Protection Agency, Washington State Department of Ecology, Boeing Company and other property holders and interested parties to plan for, refine and improve these strategies and to ensure their effective and coordinated implementation during construction.

Please feel free to call or email contacts below, if we can be of further assistance.

Ryan McReynolds
Transportation Liaison
U.S. Fish & Wildlife Service - WFWO (Lacey)
Consultation & Technical Assistance Division
ryan_mcreynolds@fws.gov
360.753.6047

Emily J. Teachout
Transportation Liaison Team Lead
U.S. Fish & Wildlife Service - WFWO (Lacey)
Consultation & Technical Assistance Division
emily_teachout@fws.gov
360-753-9583

F-001-003

King County will continue to coordinate directly with the Boeing Company and the Washington State Department of Ecology through the final project engineering and permitting processes in order to address these concerns regarding connections to existing stormwater lines, as well as identifying and implementing appropriate measures to improve the quality of stormwater runoff from the project site.

F-001-004

The right-side column is labeled correctly, although the reference to Hazard Quotient (HQ) in the footnote may be unclear. Table 3-12-1 presents calculated worst case water concentrations in the water column for individual contaminants in the sediment. These values were calculated based on the solubility of those contaminants. The potential for adverse effects from chemical concentrations was assessed by calculating the HQ for each chemical on the list. The HQ is a ratio of the water quality concentration to the toxicity reference value for each chemical, with and HQ greater than 1.0 indicating that there is a potential for adverse effect. Further analysis was performed for those chemicals. The bolded values in the right-side column of Table 3-12-1 highlight which of the water column concentrations exceeded an HQ of 1.0 and were carried on for further analysis. For reference, the Biological Assessment (provided in FEIS Appendices) presents two related tables: Table 5-4 lists the estimated water column concentrations that are shown in the right-side column of Table 3-12-1, which is also consistent with Table 4-1 Worst-Case Calculated Water Column Concentrations of Individual Sediments Contaminants within the Project Vicinity used to Identify COPCs.

F-001-005

Comment noted.

The Department of the Interior appreciates the opportunity to provide these comments.

Sincerely,

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

F-001-006

The importance of effectively implementing appropriate precautions and mitigation measures related to hazardous materials is acknowledged. Substantial efforts will continue to be made through the final engineering, permitting, and construction management processes to effectively prevent the release and spread of site contamination and contaminated media. These efforts include a commitment to continue ongoing cooperation activities with the U.S. Environmental Protection Agency, Washington State Department of Ecology, Boeing Company, and other interested parties to effectively address hazardous materials concerns.

SOUTH PARK
South Park Neighborhood Association
South Park Neighborhood Center
8201 10th Ave. S.
Seattle, WA 98108
206-767-3650

January 12, 2010

Jim Sussex
Senior Environmental Engineer
King County Department of Transportation
King Street Center, Mail Stop KSC-TR-0231
201 South Jackson Street
Seattle, WA 98104-3856

Dear Mr. Sussex:

L-002-001 On behalf of the South Park Neighborhood Association, I write to commend King County for conducting a thorough and professional Environmental Impact Study for the South Park Bridge Project.

Over the years of the study, our neighborhood was consulted frequently and provided with pertinent information. Our concerns and suggestions were listened to and incorporated into the final result.

We would like to thank the staff who worked so hard on this project. In the course of this study, we felt that a true partnership developed, leading to a result that we can all support.

Sincerely,

Dagmar Cronn

Dagmar Cronn
President
South Park Neighborhood Association
cronn@oakland.edu
206-257-0578

L-002-001

Comment acknowledged. King County also appreciates the substantial efforts that the South Park Neighborhood Association and other individuals and organizations contributed throughout the course of the extensive environmental impact statement process for the South Park Bridge Project.

From: Clark, Dennis
Sent: Friday, January 29, 2010 10:56 AM
To: Sussex, Jim
Cc: Osterman, Doug; Berge, Hans; Higgins, Kollin; Latterell, Josh; Ogier, Sarah
Subject: WRIA 9 Comments on South Park Bridge Project FEIS

Jim,

We have reviewed Section 3.13 Fish, Wildlife, and Vegetation Section of the Final EIS for the South Park Bridge Project.

Thank you for carefully responding to the comments submitted in 2005 by WRIA 9 staff Gordon Thomson.

L-001-001

We have one serious concern that we ask the project team to address in preparing for construction.

On page 3-117, a proposed mitigation measure is "Conducting pile driving when protected fish species, particularly juveniles, will least likely be present (August 1 to February 15)."

The parenthetical reference of "August 1 to February 15" does not match observations of when protected fish species are present in the Duwamish and does not take into account the severity of potential impacts, both of which could lead to "take." All adult salmon – including ESA-listed Chinook -- and much of the ESA-listed steelhead run will be transitioning from salt to freshwater in the Duwamish during that period. Impacts of noise, in-water construction activity, and (potentially) lighting are all disruptive and may cause significant delay in the upstream migration, particularly for Chinook. With stream life of a fall Chinook being approximately 10 days, even a delay of one day can significantly reduce the likelihood of successful spawning. Given that the number of natural origin (NOR) Chinook spawners in the Green River ranges from the hundreds to low thousands per year, "take" of these fish jeopardizes recovery of the population.

In addition, although of lesser importance, the outmigration of naturally produced juvenile Chinook fry are migrating to the transition zone from January through March – peaking in late February to early March -- and may be affected by activity that overlaps the beginning of their migration. For this reason, USACE began sampling January 22 this year to identify when sufficient numbers of Chinook fry migrants are arriving at Turning Basin #3 to warrant modifying their current maintenance dredge of the Turning Basin.

While the *operational* impacts of the bridge are greatest on *juvenile* salmonids, the *construction* impacts would most seriously affect *adult* salmonids. For juveniles, the transition in the South Park bridge area of the Duwamish is relatively rapid (because most osmoregulation and estuarine rearing appears to be concentrated upstream). In contrast, the bridge project area is where the adults typically mill around prior to ascending the river because they favor the deeper, cooler water of this part of the estuary. Consequently, the proposed August 1 – February 15 construction "fish window" is probably the worst time of year for Green River salmonids overall.

At present, the FEIS has an incorrect assessment of potential impacts of construction on ESA-listed salmonids and thus inadequate proposed mitigation. We recognize that the presence of both upstream-migrating adult salmonids and outmigrating juveniles significantly limits the time available for the most disruptive construction work but we think these likely impacts must be addressed to minimize the potential for "take."

Thank you for your consideration.

Dennis Clark
206-296-1909 additional contact information
Public Outreach/Stewardship Coordinator
Green/Duwamish and Central Puget Sound Watershed Salmon Habitat Recovery (WRIA 9)

L-001-001

The referenced in-water work window of August 1st to February 15th is based on the standard in-water work window issued by the Washington State Department of Fish and Wildlife (WDFW), as well as substantial consultation pursuant to the Endangered Species Act (ESA) with both the U.S. Fish and Wildlife (USFWS) and the National Marine Fisheries Service (NMFS). The presence of listed species during the August 1st to February 15th timeframe, as well as their vulnerability to various in-water construction impacts, has been recognized throughout the ESA consultation process. Consequently, substantial efforts were made to minimize the potential impacts to listed species that may be present within the action area for the project during that timeframe. Initial discussions with resource agencies include consideration of shorter in-water work windows; however, shorter in-water windows would necessitate additional in-water construction seasons, which would generate increased temporal impacts to the listed species. Since the project activities and proposed in-water work window were determined *likely to adversely affect* listed species, formal consultation was required under Section 7 of the ESA. A thorough assessment of potential impacts to listed species was provided in the Biological Assessment (BA) and subsequent BA Addendum for the preferred alternative. Those documents are provided as Appendices to the FEIS. The formal consultation process culminated in the issuance of separate Biological Opinions (BiOps) by USFWS and NMFS. The BiOps provided incidental take statements, represented as spatial and temporal limits to construction activities (including pile driving), that must be followed during the August 1st to February 15th work window. The project will minimize take of listed species through implementation of best management practices, minimization measures, and adherence to Reasonable and Prudent Measures issued in the BiOps. The key commitments to minimize impacts to listed species are included in the Record of Decision, and the BiOps are also available for review. The project is required to obtain permits from local, state, and federal

agencies that will also require adequate mitigation for impacts to aquatic species and habitat. Proposed mitigation, as prescribed by the WRIA 9 Salmon Habitat Plan, includes restoration of riparian areas and creation of a vegetated intertidal riparian habitat along the lower Duwamish River. The long-term benefits of restoring intertidal riparian habitat along this length of the Duwamish River will sufficiently offset project effects resulting from *operational* and *construction* impacts associated with the new bridge.

Your concerns are acknowledged regarding the vulnerability of listed species (especially during the critical life stages noted) that may be present during the proposed in-water work window. However, both the USFWS and NMFS have provided take statements with mandatory terms and conditions in their respective BiOps that those agencies have concluded will prevent the project from jeopardizing the continued existence of the listed species.