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DEPARTMENT OF ECOLOGY
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April 15, 2010

Ms. Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Dear Ms. Young: Jenifer:

S-004-001

Thank you for the opportunity to review the *Supplemental Draft Environmental Impact Statement* (SDEIS) for the *SR 520, I-5 to Medina; Bridge Replacement and HOV Project.* The Department of Ecology has reviewed the SDEIS, and you will find our comments enclosed. Additionally, we are including Ecology's comments on the project's *Aquatic and Wetlands Mitigation Plans* submitted to you in January, 2010 and prepared by Joe Burcar and Caroline Corcoran.

We commend you and the SR 520 team for the high-quality of the SDEIS – it is well-written, clear, and well-organized. As we have noted in the past, the maps, graphics, and charts enable the reader to gain a clear picture and better understanding of the bridge components, statistics, and comparisons of the proposed options.

When you have a chance to review Ecology's comments, you will see that we have emphasized several: those relating to mitigation sequencing and the need for more analysis relating to the bridge-height issue in the Visual Quality and Noise Sections, particularly in Chapters 5 and 6. We cannot emphasize enough how crucial it will be for the project to properly follow the process when determining the preferred alternative and how that process plays a role in setting the appropriate bridge height. These important points are discussed in detail on page one of our comments.

As is Ecology's custom, the comment letter includes input from a variety of technical staff from Headquarters and, for this project, the Northwest Region. Thus, you may find it useful to have their names and contact information: Joe Burcar (joe.burcar@ecy.wa.gov) responded to *Visual, Noise, and Recreation* Impacts; Caroline Corcoran (caroline.corcoran@ecy.wa.gov) to *Ecosystems and Indirect and Cumulative Effects*; Bobb Nolan (robert.nolan@ecy.wa.gov) – *Water Quality*; Millie Piazza (millie.piazza@ecy.wa.gov) – *Social Elements/Environmental Justice*; Annie Szveticz (annie.szveticz@ecy.wa.gov) – *Climate Change and Greenhouse Gases*; and Mike Boyer (mike.boyer@ecy.wa.gov) – *Air Quality*.

S-004-001

Since the SDEIS was published, WSDOT has identified a Preferred Alternative that is similar to Option A, but with a number of design refinements. See Section 1.11 of the Final EIS for a description of the planning process and Chapter 2 of the Final EIS for a description of the Preferred Alternative.

S-004-001 Again, kudos to you those who compiled this SDEIS, and we look forward to our continued work with you and WSDOT on this important state project. Should you have questions, comments, or concerns, you can contact me at 360.407.6789 or terry.swanson@ecy.wa.gov.

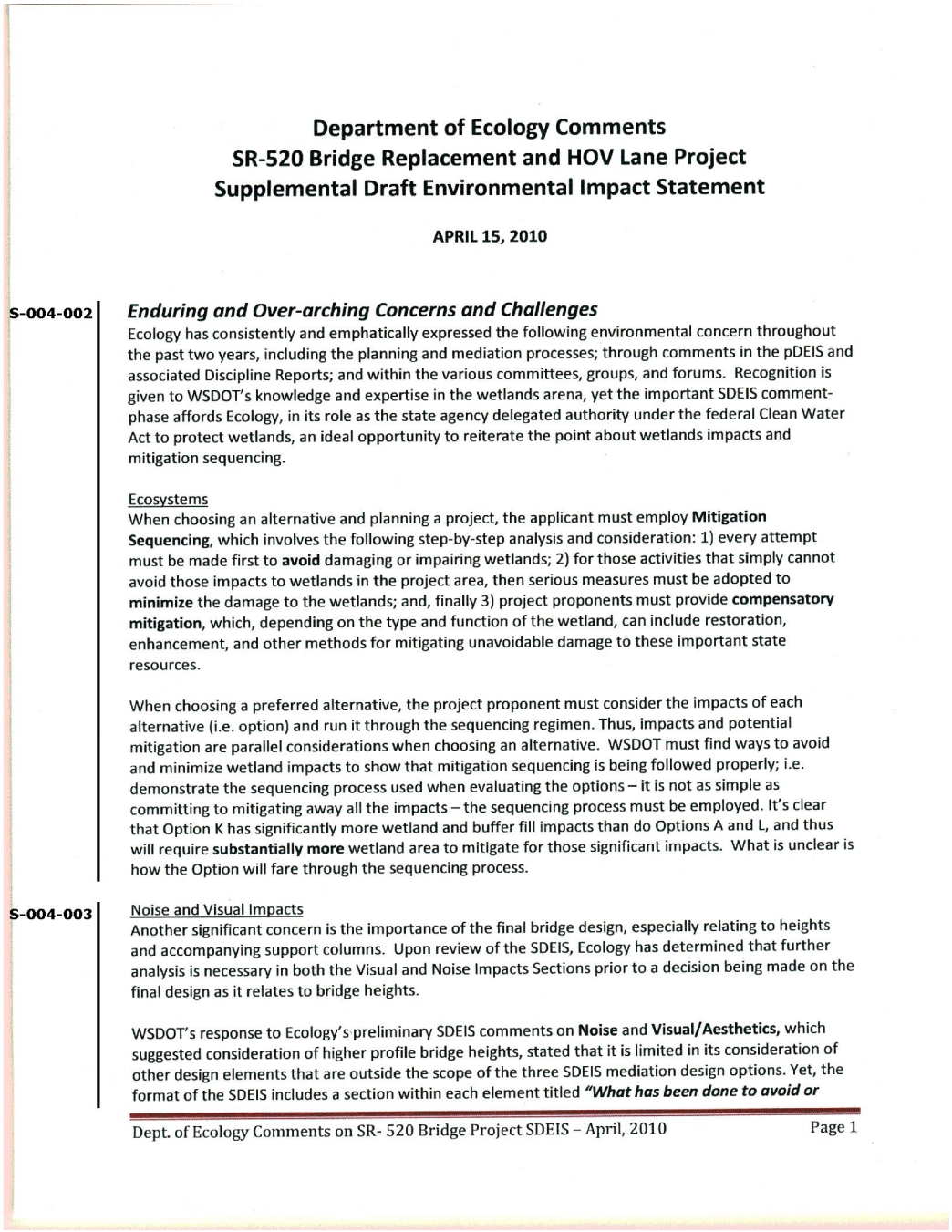
Sincerely,

Therese M Swanson

Therese M. Swanson
Ecology Transportation Coordinator – SR 520 project

Enclosures (3)

cc: Megan White, Director of Environmental Services, WSDOT
Scott White, Permit Lead for SR 520 project, WSDOT
Gordon White, Manager of Ecology Shorelands and Environmental Assistance Program
Jeannie Summerhays, Regional Director Ecology's NW Region



Department of Ecology Comments
SR-520 Bridge Replacement and HOV Lane Project
Supplemental Draft Environmental Impact Statement

APRIL 15, 2010

S-004-002

Enduring and Over-arching Concerns and Challenges

Ecology has consistently and emphatically expressed the following environmental concern throughout the past two years, including the planning and mediation processes; through comments in the pDEIS and associated Discipline Reports; and within the various committees, groups, and forums. Recognition is given to WSDOT's knowledge and expertise in the wetlands arena, yet the important SDEIS comment-phase affords Ecology, in its role as the state agency delegated authority under the federal Clean Water Act to protect wetlands, an ideal opportunity to reiterate the point about wetlands impacts and mitigation sequencing.

Ecosystems

When choosing an alternative and planning a project, the applicant must employ **Mitigation Sequencing**, which involves the following step-by-step analysis and consideration: 1) every attempt must be made first to **avoid** damaging or impairing wetlands; 2) for those activities that simply cannot avoid those impacts to wetlands in the project area, then serious measures must be adopted to **minimize** the damage to the wetlands; and, finally 3) project proponents must provide **compensatory mitigation**, which, depending on the type and function of the wetland, can include restoration, enhancement, and other methods for mitigating unavoidable damage to these important state resources.

When choosing a preferred alternative, the project proponent must consider the impacts of each alternative (i.e. option) and run it through the sequencing regimen. Thus, impacts and potential mitigation are parallel considerations when choosing an alternative. WSDOT must find ways to avoid and minimize wetland impacts to show that mitigation sequencing is being followed properly; i.e. demonstrate the sequencing process used when evaluating the options – it is not as simple as committing to mitigating away all the impacts – the sequencing process must be employed. It's clear that Option K has significantly more wetland and buffer fill impacts than do Options A and L, and thus will require **substantially more** wetland area to mitigate for those significant impacts. What is unclear is how the Option will fare through the sequencing process.

S-004-003

Noise and Visual Impacts

Another significant concern is the importance of the final bridge design, especially relating to heights and accompanying support columns. Upon review of the SDEIS, Ecology has determined that further analysis is necessary in both the Visual and Noise Impacts Sections prior to a decision being made on the final design as it relates to bridge heights.

WSDOT's response to Ecology's preliminary SDEIS comments on **Noise** and **Visual/Aesthetics,** which suggested consideration of higher profile bridge heights, stated that it is limited in its consideration of other design elements that are outside the scope of the three SDEIS mediation design options. Yet, the format of the SDEIS includes a section within each element titled ***"What has been done to avoid or***

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S-004-002

WSDOT has followed mitigation sequencing to avoid and minimize effects on wetlands prior to considering compensatory mitigation. The Preferred Alternative would comparatively minimize potential effects to wetlands and the aquatic environment to the SDEIS options. The Preferred Alternative would have fill in wetlands similar to Options A and L, a uniform grade which would improve the collection and treatment of stormwater over Option A, and would be higher than the existing bridge, thus reducing the intensity of shadows. However, the Preferred Alternative would result in more shading of wetlands than the SDEIS options. The increased shading is a result of shifting the alignment farther south in Union Bay to accommodate future light rail.

WSDOT will continue to coordinate with the Washington State Department of Ecology throughout the project. Please refer to Section 6.11 of the Final EIS and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS) for details.

S-004-003

The SDEIS examined the three design options resulting from the mediation process as a component of the 6-lane alternative. Analysis of noise and visual effects focused on the three design options and included review of the environmental effects common to both the no build and the build alternative. Together, this analysis presents a full review of the environmental effects, and is responsive to the Washington State Department of Ecology comments. Presentation of environmental analysis in the Final EIS focuses on the Preferred Alternative.

The height of the Preferred Alternative was developed to minimize the visual and environmental effects. For example, the Preferred Alternative would reduce the shoulder widths through the Arboretum and increase the bridge height over Foster Island (see Chapter 2 of the Final EIS). These design modification would reduce the footprint and visual impact

S-004-003

minimize negative effects?" and ***"What could be done to mitigate for negative effects that cannot be avoided or minimized?"*** However, the SDEIS does not specifically state that responses to both of these fundamental questions must be confined to only those elements defined within the three SDEIS design options. In fact, the report reads logically, because for each element, overall project efforts to avoid or minimize impacts are followed by description of mitigation to offset un-avoidable impacts, for which no limitations on the scope of avoidance, minimization or mitigation effort are identified. Therefore, it is not clear why the response to Ecology's previous comments relied on being confined to the design scope of the three proffered options.

The problem with this response and position is that there is absolutely no clear justification for the lower SDEIS mediation-derived bridge/road profiles. Further, the assumption that low profiles are the only possible outcome appears to derive solely from unproven conclusions or beliefs that higher bridge/road profiles will severely affect views. These perceptions have yet to be illustrated or documented in the SDEIS Visual Impact study. Specifically, the SDEIS Visual Impact Study fails to highlight any visual concerns related to sensitive views in this area or any potential affects related to bridge height or noise wall/bridge-roadway bulk. Again, the assumption, thus far, is only that, and until there is a full discussion and analysis of the impacts to view and noise in the appropriate sections of the SDEIS, AND it can be concluded that such impacts are unavoidable except through lower bridges flanked by high concrete walls, then the threshold documentation and analysis required by SEPA and NEPA has not been met.

Essentially, the (logical) overall advantages of a higher road profile without the need for 12-16 feet- high noise walls could result in: **less visual bulk**, **less environmental impacts** (shading, stormwater) and **less recreational impacts** (canoe/kayak or trails on Foster Island) – benefits to the entire community and public. It is apparent that WSDOT should acknowledge and analyze these associated effects, which Ecology finds essential to completely illustrate avoidance/minimization opportunities associated with the higher bridge/roadway profiles.

Specific SDEIS Chapter and Section Comments

Recreation, Visual, and Recreation Impacts: Project Operation and Permanent Effects - Chapter 5

S-004-004

1. Recreation

a. p. 5-57 - As previously commented, Option K impacts to the University of Washington – Waterfront Activities Center (UW-WAC) will be significant. Additionally, the relatively low bridge profiles for all three SDEIS options in the vicinity of Foster Island could significantly affect aquatic recreational use. The UW-WAC provides a unique aquatic recreational opportunity to thousands of students, facility and staff. A very popular paddling route takes canoers and kayakers who start from the UW around Foster Island, and WSDOT should acknowledge the replacement bridge's potential negative effects on this unique aquatic recreational opportunity.

b. p. 5-62 - Option K's impacts to aquatic-based recreation (see paragraph 3) render this option the **most inconsistent, among the current SDEIS options, with Seattle's Shoreline Master Program**

of the road structure in the Arboretum, allowing more light to reach the ground, with the possibility of sustaining a higher level of vegetation.

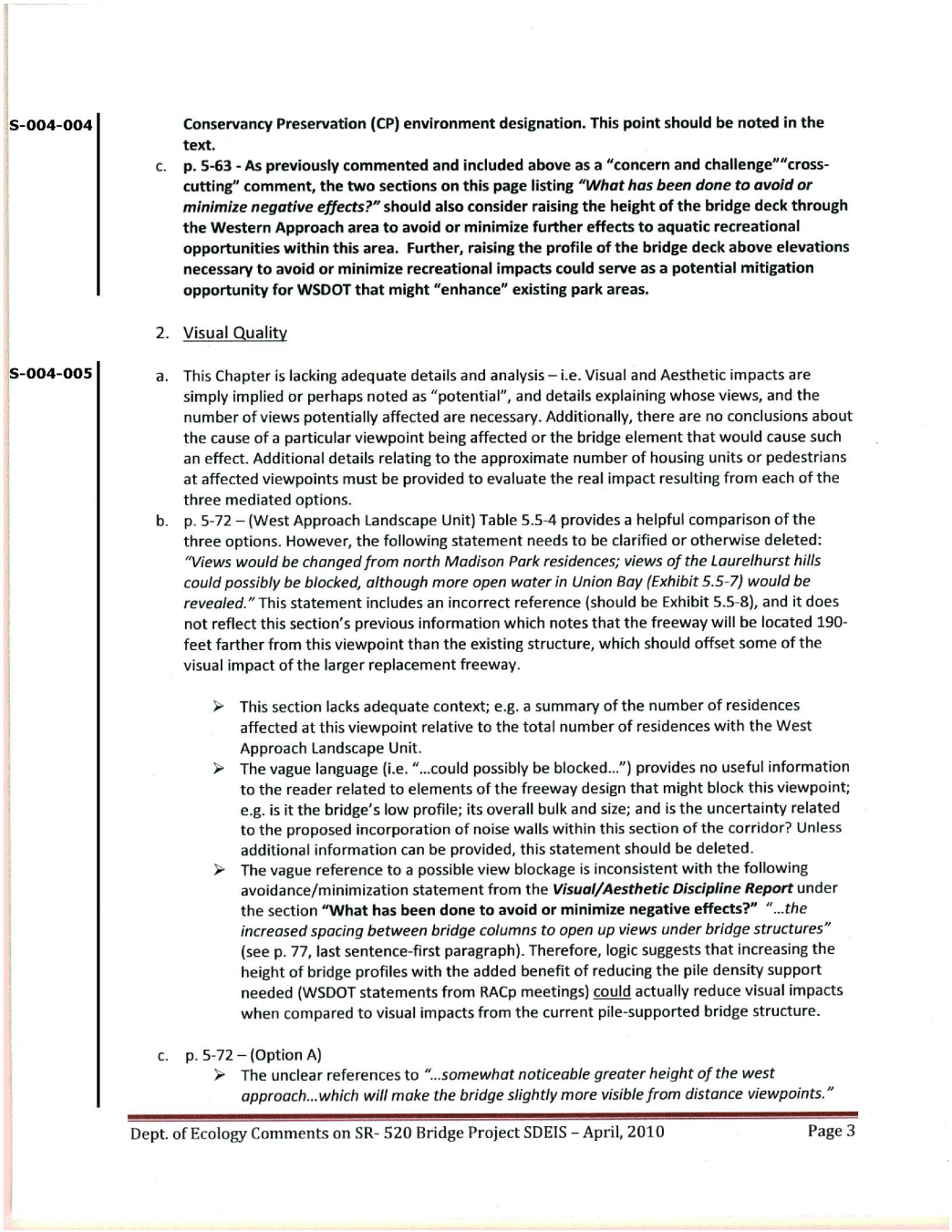
Additionally, noise reduction strategies, such as 4-foot concrete traffic barriers with noise-absorptive coating, reducing the speed limit through the Portage Bay area to 45 mph, encapsulating expansion joints, and using noise-absorptive materials around the Montlake and 10th Avenue East/Delmar Drive East lid portals would reduce noise to the point that noise walls are not recommended in the Seattle portion of the poject area, except potentially along I-5 in the North Capitol Hill area where the reasonableness and feasibility of a noise wall is still be evaluated (see Section 5.7 of the Final EIS). Noise walls are recommended in the Medina area.

Information regarding the potential effects of bridge design can be found in Chapter 6 of the Final EIS. See the Noise Discipline Report Addendum and the Visual Quality Discipline Report Addendum in Attachment 7 to the Final EIS for updated information pertaining to the Preferred Alternative.

S-004-004

The Preferred Alternative identified for the project is similar to Option A in that it does not involve a tunnel under the Montlake Cut as Option K did, but it does include a second bascule bridge adjacent to the existing one. As discussed in the Recreation Discipline Report Addendum (Attachment 7 to the Final EIS), the Preferred Alternative will not have a negative effect on the Waterfront Activities Center during operation. If Option K were identified as the Preferred Alternative in the future, WSDOT would complete the necessary documentation as part of final design and permitting and ensure that negative effects to the Waterfront Activities Center are mitigated to the extent practicable.

The Preferred Alternative modifies the height of SR 520 over Foster



S-004-004

Conservancy Preservation (CP) environment designation. This point should be noted in the text.

c. **p. 5-63 - As previously commented and included above as a "concern and challenge""cross-cutting" comment, the two sections on this page listing *"What has been done to avoid or minimize negative effects?"* should also consider raising the height of the bridge deck through the Western Approach area to avoid or minimize further effects to aquatic recreational opportunities within this area. Further, raising the profile of the bridge deck above elevations necessary to avoid or minimize recreational impacts could serve as a potential mitigation opportunity for WSDOT that might "enhance" existing park areas.**

2. Visual Quality

S-004-005

a. This Chapter is lacking adequate details and analysis – i.e. Visual and Aesthetic impacts are simply implied or perhaps noted as "potential", and details explaining whose views, and the number of views potentially affected are necessary. Additionally, there are no conclusions about the cause of a particular viewpoint being affected or the bridge element that would cause such an effect. Additional details relating to the approximate number of housing units or pedestrians at affected viewpoints must be provided to evaluate the real impact resulting from each of the three mediated options.

b. p. 5-72 – (West Approach Landscape Unit) Table 5.5-4 provides a helpful comparison of the three options. However, the following statement needs to be clarified or otherwise deleted: *"Views would be changed from north Madison Park residences; views of the Laurelhurst hills could possibly be blocked, although more open water in Union Bay (Exhibit 5.5-7) would be revealed."* This statement includes an incorrect reference (should be Exhibit 5.5-8), and it does not reflect this section's previous information which notes that the freeway will be located 190-feet farther from this viewpoint than the existing structure, which should offset some of the visual impact of the larger replacement freeway.

- This section lacks adequate context; e.g. a summary of the number of residences affected at this viewpoint relative to the total number of residences with the West Approach Landscape Unit.
- The vague language (i.e. "...could possibly be blocked...") provides no useful information to the reader related to elements of the freeway design that might block this viewpoint; e.g. is it the bridge's low profile; its overall bulk and size; and is the uncertainty related to the proposed incorporation of noise walls within this section of the corridor? Unless additional information can be provided, this statement should be deleted.
- The vague reference to a possible view blockage is inconsistent with the following avoidance/minimization statement from the ***Visual/Aesthetic Discipline Report*** under the section **"What has been done to avoid or minimize negative effects?"** *"...the increased spacing between bridge columns to open up views under bridge structures"* (see p. 77, last sentence-first paragraph). Therefore, logic suggests that increasing the height of bridge profiles with the added benefit of reducing the pile density support needed (WSDOT statements from RACp meetings) could actually reduce visual impacts when compared to visual impacts from the current pile-supported bridge structure.

c. p. 5-72 – (Option A)

- The unclear references to *"...somewhat noticeable greater height of the west approach...which will make the bridge slightly more visible from distance viewpoints."*

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Island and the entire west approach of the floating bridge. The clearance under the west approach is as follows: in Union Bay (over water) the clearance would be 11 to 24 feet; the clearance over Foster Island would be 16 to 20 feet; and clearance over Lake Washington would be 27 to 48 feet (not including the transition span). The Preferred Alternative is taller than Option A and would improve trail and boating clearance under SR 520 compared to existing conditions.

S-004-005

Analysis of visual quality related to the Preferred Alternative was completed for the Final EIS. See the Visual Quality Discipline Report Addendum (Attachment 7 to the Final EIS), which provides analyses of the views and makes clear who the viewers are at each viewpoint. The Potential Effects section of the document discusses likely effects and states what would cause them. Additional detail is provided about the number and types of users sufficient to understand the nature and scope of any effects in each viewshed.

S-004-005

are not illustrated in either the SDEIS or Visual/Aesthetic Discipline Report and therefore are not relevant to this section.

- *"Distance viewpoints"* are not defined in the SDEIS, thus the reader is left with no relevant information regarding who may be affected and, more importantly, how their views might be affected by increasing existing bridge's height.
- As previously noted in Ecology comments, in both the preliminary SDEIS and Visual/Aesthetic Discipline Reports, neither analysis adequately evaluates or provides any relevant conclusions as to the potential benefits or negative impacts associated with higher bridge profiles through the West Approach Landscape Unit.
- Finally, the last paragraph concludes that Option A's impacts on views and aesthetics are insignificant because "long-term vegetation growth will serve to diminish any visual effects of the bridge." This conclusion, when coupled with a recommendation in the Visual/Aesthetic Discipline Report (page 79, 1st bullet), which encourages re-vegetation[1][1] adjacent to the bridge; supports higher bridge profiles because they would allow for more robust vegetation to establish beneath the bridge and adequate natural light to promote vegetation growth, which could also serve to further mitigate visual impacts consistent with the referenced recommendation from the Visual/Aesthetic Discipline Report. Put simply – if vegetation reduces visual impacts, and vegetation grows and establishes more quickly and permanently beneath a higher bridge, then views will be enhanced if the bridge is higher.

S-004-006

d. p. 5-73 – (Option 'A' Sub-options) similar comment as stated above.

- The following statement within the second bullet does not provide enough information to inform the reader as to either the basis or significance of *"...slight visual changes..."*; *"Changing the profile of Option A to a constant-slope profile in the west approach would result in slight visual changes compared to the effects described above..."* Please clarify whether this statement is intended to imply positive or negative results from the *"slight visual change."*

S-004-007

e. p. 5-79 - Under the section title; ***"What has been done to avoid or minimize negative effects?"*** Consistent with the previous comment, has WSDOT considered raising bridge profiles as a way to minimize visual impact? Some of the benefits have been referenced in comments above (i.e. reduced bridge support column density – opening views below the new bridge deck, increased opportunity to re-establish mature vegetation providing sound attenuation, natural habitat, and visually screening the roadway). In fact, this benefit is mentioned within the "mitigation" section on pages 5-80 & 5-81, but does not appear to be incorporated into the project design or future mitigation plans. Alternatively, if higher bridge profiles do not minimize Visual/Aesthetic impacts, then this should be clearly stated within the SDEIS in reference to the specific viewpoints (including a description) of who would be effected by higher bridge profiles than currently described for all three mediation design options.

1. Visual Aesthetic Discipline Report (page 79, 1st bullet) under the section titled: **What would be done to mitigate negative effects that could not be avoided or minimized?** *"Revegetate areas where natural habitat, vegetation, or neighborhood tree screens would be removed. These areas are under Portage Bay Bridge; through Montlake, Montlake Park and the Arboretum. Mature vegetation could generally be used to revegetate parks and re-establish three screens in these areas..."*

S-004-006

Visual changes are not categorized as "positive" or "negative" according to the FHWA Visual Impact Assessment Guidance for Highway Projects. Please see the Affected Environment section of the Visual Quality Discipline Report for an explanation about how visual quality is analyzed. However, the Preferred Alternative includes a profile similar to the Option A suboption in the west approach area, and Section 5.5 of the Final EIS provides additional discussion of visual effects associated with the profile in this area.

S-004-007

Please see the responses to comments S-004-003 and S-004-004 regarding the effects of bridge height and noise walls.

S-004-007

f. The SDEIS should also consider the Visual/Aesthetic impacts associated with proposed noise walls along the corridor. The Visual/Aesthetic Discipline Report specifically highlights Visual/Aesthetic concerns associated with noise walls in the reports summary of *"Key Points"* (page 3, last bullet) and in discussion of *"Avoidance and Minimization"* efforts (page 77, second paragraph). Therefore, the Visual/Aesthetic Discipline Report conclusion that noise walls can significantly affect views should be carefully and thoroughly considered.

g. Further, as concluded in the Noise section (see comments below) of the SDEIS, the height of a noise wall is determined by the relative difference in elevation between the roadway and the noise receiver (residences adjacent/above the roadway),thus lower bridge profiles will require higher noise walls to mitigate noise impacts on neighboring receivers. However, higher noise walls will increase Visual/Aesthetic impacts to surrounding views, so higher bridge profiles should be considered as an offset to both Visual/Aesthetic and Noise (lower noise wall required) impacts (while also allowing vegetation to establish and mature along the roadway.

h. At p. 2-27, the mention of the view from the land bridge under Option K raises a question about relevance – i.e. is this considered to be mitigation for the higher bridge profile of K?

3. Noise

a. WSDOT's somewhat narrow, constrained response to Ecology's previous comments seriously limits, for all intents and purposes, recognition and consideration of other design solutions that have been noted as potentially effective in the previous Noise Mitigation Guidance.

b. p. 5-108; Section: ***"What has been done to avoid or minimize negative effects?"*** As previously commented, WSDOT has not adequately considered all potential Highway Design Measures, including raising the 520-bridge profile through the West Approach area east of Montlake. If raising the bridge profile would mitigate noise impacts, then such measures should be examined in the SDEIS. Alternatively, if WSDOT's noise analysis concludes that raising the profile would lead to significant noise reductions, then that finding should also be stated in the SDEIS. Further, related impacts or benefits from changes to bridge height such as potentially lower noise walls or increased vegetation associated with higher bridge profiles should also be referenced in this section of the SDEIS.

c. In the "Western Approach Area" (east of Montlake) it appears that lower SDEIS bridge profiles require 12-16 feet- high noise walls along the roadway to mitigate noise impacts to adjacent neighborhoods located at higher elevations (which WSDOT confirmed). Again, the question arises why noise impacts could not be "avoided or minimized" (i.e. Mitigation Sequencing) by raising the entire bridge/road profile, thus reducing the need for such high noise walls. WSDOT has confirmed that raising the roadway could result in lower noise walls, but stated that raising the road profile was outside of scope/authority of their noise mitigation and would not be fiscally feasible to justify through noise mitigation.

d. Further, based on the information provided in the SDEIS, it is not clear how many residents within the West Approach (east of Montlake) can actually see the bridge or how the replacement bridge will negatively affect them through noise or blighted views. While

S-004-007

Laurelhurst, and a small portion of Madison Park, residents can see the bridge, yet reside some distance away, and therefore these areas would seem less affected from an increase in bridge/roadway height. Unfortunately, the Visual Impact Study neither confirms nor denies the potential effect of higher bridge/road profiles to these communities. Despite our repeated suggestions, WSDOT has not analyzed the potential visual effects and/or noise mitigation opportunities of higher bridge/roadway profiles through this section of the corridor.

e. Regardless, and somewhat ironically, the SDEIS low bridge/road profiles including the (estimated) 12'-16' high noise walls (required to offset noise impacts) dramatically increasing the overall visual bulk of the roadway, counter to the communities' stated visual concerns. Therefore, it seems logical that a higher bridge/road profile that did not include 12'-16' high noise walls could create less of a visual impact to the neighboring community? (We again encourage WSDOT to analyze higher bridge profiles to inform this important decision.)

S-004-008

f. In Chapter 2 at p. 2-3 to 2-4, a description of how the final design of the bridge will be determined, but it remains unclear to the reader how this actually will be decided and what the process is.

4. Land-Use

S-004-009

Thank you for incorporating Ecology's previously-suggested changes to the SDEIS.

Ecosystems

S-004-010

1. Project Operational and Permanent Effects – Chapter 5

   - p. 144 - 145 Mitigation ratio assumptions are noted. Ratios provided in the Joint Guidance are based on wetland mitigation occurring concurrently with wetland impacts. Mitigation ratios may be adjusted depending on the timing of mitigation construction in relation to project wetland impacts. If mitigation is done in advance of project impacts, ratios may be lowered. If mitigation is done after project impacts, ratios may be raised.

2. Effects during Construction of the Project – Chapter 6

   - p.124- Mitigation for ecosystems, including wetlands, should include compensatory wetland mitigation for long-term temporary effects; i.e. those.

S-004-011

3. Indirect and Cumulative Effects – Chapter 7

a. Pages 103 and 106 The document states that, "Wetland fill from Option K would be three times more than from Option L and nine times more than from Option A." This is incorrect. Wetland fill from Option K would be five times more than from Option L and eighteen times more than from Option A. Please correct this error – it is significant and should be addressed earlier than issuance of the FEIS as decisions and opinions may be based on on the incorrect information.

S-004-008

After publication of the Final EIS, if FHWA determines the analysis to be adequate and to comply with necessary standards, the agency will prepare a Record of Decision (ROD) that identifies the selected alternative, states how it meets relevant regulations, and discloses the project effects and mitigation measures and commitments to be incorporated into project construction and operation. The ROD will also identify outstanding issues yet to be resolved. See Sections 1.6 and 1.11 of the Final EIS for a description of the planning process up to the publication of the Final EIS and Section 1.13 for information about the next steps.

S-004-009

Comment noted.

S-004-010

Mitigation ratios for permanent and long-term construction effects were discussed in detail during the Natural Resource Technical Working Group (NRTWG) meetings. The NRTWG included the Washington State Department of Ecology and other regulatory agencies. At the meetings, mitigation ratios were agreed upon for project effects and were used in developing the aquatic and wetland mitigation plans based on the assumption of mitigation occurring concurrent with project wetland impacts. Please see Section 6.11 of the Final EIS, as well as the Conceptual Wetland Mitigation Plan and the Conceptual Aquatic Mitigation Plan (Attachment 9 to the Final EIS).

S-004-011

The statement concerning Option K and Option A wetland fill effects was an error on page 103 of the Indirect and Cumulative Effects Discipline Report. Page 106 did not contain any errors. This text has been revised in Final Indirect and Cumulative Effects Discipline Report (Attachment 7

S-004-011 b. The document states that, "Option K would have the greatest shade effects from project operation, and Option A would have the least." This is incorrect. Option L would have the most shade effects from project operation and Option A would have the fewest.

S-004-012 c. The document states that "The wetlands assessment did not identify any expected indirect effects of the proposed project on wetlands (WSDOT 2009f)." I did not see any mention of indirect effects in the Ecosystems Discipline Report. Also, Option K proposes to fill 5.4 acres of wetland buffer fill, which may have an indirect impact on wetlands.

S-004-013 d. The document states that "Where avoidance was not possible, effects were minimized by raising bridge heights, treating stormwater, and improving water quality functions of aquatic wetlands." Bridge height should increase for all Options to further offset shading impacts.

Environmental Justice/Social Elements

1. Executive Summary

S-004-014
- The summary mentions only a tribal impact under the Environmental Justice discussion (p.41), while the SDEIS Environmental Justice (EJ) analysis also identifies an impact on low-income populations: *"The environmental justice analysis concluded that the SR 520, I-5 to Medina: Bridge Replacement and HOV Project would result in a disproportionately high and adverse effect on low-income populations. The disproportionate effect would be because of tolling only and is discussed in Section 5.3 and in the Environmental Justice Discipline Report (Attachment 7)."* For balance, this additional EJ impact on low-income populations should be included in the Executive Summary.

S-004-015 2. Public Involvement – Chapter 2

- p. 1-40 - This chapter would be strengthened by including mention of the EJ analysis as it relates to low-income populations and people of color. Currently only Tribal outreach is listed as relating to the environmental justice outreach for this project.

S-004-016 3. Social Elements – Chapter 4

- p. 4-23 - The SDEIS mistakenly attributes the establishment of the concept of environmental justice to "Executive Order 12898." The concept's origin should be attributed to Dr. Benjamin Chavis, the previous director of the United Church of Christ's Commission for Racial Justice.

S-004-017 4. Social Elements – Chapter 7

- p. 7-21 - The cumulative impacts of increased *"heavy traffic include noise, air emissions, and lowered transportation efficiency due to idling or slow-moving vehicles"* on low-income populations located in the alternate route neighborhoods should be included as an "Indirect Effect" on an environmental justice population

S-004-018 5. Appendix: Environmental Justice

to the Final EIS), which analyzes the effects of the Build Alternative, including Options A, K, and L and the Preferred Alternative , compared to the No Build Alternative. This is because in most cases the analysis finds that the indirect or cumulative effects would not vary sufficiently among the SDEIS options and Preferred Alternative to allow meaningful discrimination.

S-004-012

Fill in wetland buffers, including the fill of buffer for Option K that is mentioned in the comment, would be a direct effect. The analysts did not find indirect effects on wetlands.

S-004-013

The heights of the bridges were determined based on a number of factors, including effects on wetlands and open water. The bridge heights and profile have been designed to minimize environmental effects such as shading and visual quality effects to the greatest extent practicable while balancing transportation needs of the project. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative bridge design. Also see the response to Comment S-004-003.

S-004-014

The summary on page 41 of the Executive Summary to the SDEIS deals only with effects during project construction. However, the discussion on page 30 includes permanent and operation effects on environmental justice, in which tolling effects on low-income populations are summarized.

S-004-015

This section of the introduction is designed to give a brief summary of how the public was involved in the project up to the time of publication.

S-004-018

a. The **SDEIS thoroughly addresses** Ecology's previous EJ comments on the pDEIS and Discipline Reports. The report clarifies the community involvement in the scoping process and clearly identifies the community concerns that were raised.

b. The potential impacts to low-income populations and people of color **are more clearly presented.**

S-004-019

c. The Appendix references EO12898 and USDOT's Order 5610.2 requirements for requiring federally-funded projects to address EJ in Minority and Low-Income Populations and the explicit consideration of human health and environmental effects. Given these requirements, a summary or evaluation of potential adverse health effects related to the 520 project should be included in the EJ Discipline Report (e.g., air quality impacts).

S-004-020

d. It would be helpful if the report clarified how the project will mitigate for the financial burden of tolling (p. 61, 88) on low-income residents. And if no mitigation is proposed, the report should clarify why mitigation options are not being pursued.

S-004-021

e. The definition of "variable tolling" needs to be clearly presented on p. 17. It may be misinterpreted that variable tolling refers to a sliding scale income-based tolling program. The definition of variable tolling used for this project does not appear until the "Environmental Justice Survey Final Report" in Attachment 1 at the end of the discipline report.

S-004-022

f. The issue of subsidized tolling for low-income drivers should be addressed in the report.

Water Resources-Discipline Report

S-004-023

1. Project Operational and Permanent Effects – Chapter 5

➢ Pg. 5-122:- Ecology has not yet reviewed the final AKART study nor approved WSDOT's proposed treatment strategy (i.e. high efficiency sweeping and catch basins) but will begin the process upon receipt of the AKART document. Approval should not be presumed until Ecology issues a formal approval letter. The standard for approval is based on Ecology's need to have reasonable assurance that the proposed treatment strategy will meet state water quality standards. Depending on the final Study's conclusions, which should reflect comments that Ecology made on the draft, Ecology may require WSDOT to develop a monitoring plan for specific treatment components.

S-004-024

2. Effects during Construction of the Project – Chapter 6

➢ Pg. 6-134:- How will the project meet water quality standards in the event of an extended time period between phased construction of the four-lane floating bridge and the final six-lane bridge configuration? Is high-efficiency sweeping planned for the four lane phase? Because the four-lane bridge requires significantly fewer supplementary stability pontoons (SSPs), most of the run-off will not will not be routed into the SSPs for dilution and spill containment. Thus, water quality standards cannot be met.

The environmental justice analysis is discussed in detail in the SDEIS, starting on page 5-47, and in the Environmental Justice Discipline Report (Attachment 7 to the SDIES). Updated information can be found in Section 5.3 of the Final EIS and in the Environmental Justice Discipline Report Addendum (Attachment 7 to the Final EIS).

S-004-016

Dr. Benjamin Chavis is considered by many to be the father of environmental justice. However, environmental justice regulations, which are what the statement was referring to, are based on Executive Order 12898; therefore, no change to the document has been made.

S-004-017

The Final EIS environmental justice analysis finds that the project would not indirectly affect low income or minority populations. It also finds that there is not a high and disproportionate adverse effect on low-income populations due to tolling. After careful consideration of the project benefits, other current and future projects, and the regional dialogue on mobility, WSDOT found that the project would not contribute to an adverse cumulative effect on low income populations. See Section 5.3 and Chapter 7 of the Final EIS, and the Environmental Justice Discipline Report Addendum and the Final Cumulative Effects Discipline Report (both in Attachment 7 of the Final EIS) for further discussion.

Overall, the project is expect to result in long-term direct improvements in noise, air quality, and congestion; see Chapter 5 of the Final EIS for further information.

S-004-018

Comment noted.

S-004-025 **Appendix: Energy and Greenhouse Gases Discipline Report**

This SDEIS could benefit from an improved assessment of impacts and discussion of reasonable alternatives for effects associated with greenhouse gas emissions and the "vulnerability" associated with the changing climate combined with the proposed project.

S-004-026 1. Greenhouse Gas (GHG) Emissions Evaluation

a. The analysis of Vehicle Miles Traveled (VMT) and the conclusion of reduced emissions is based on an assumption of no tolling on I-90 (and the existing SR 520 as the "no action alternative") and no light rail between Seattle and the East side. These two measures are now either funded or recommended by the Puget Sound Regional Council (PSRC), thus they are not "remote or speculative" and should be included in the analysis and comparison of alternatives and options.

S-004-027 b. The "operational" GHG analysis is flawed because it addresses only vehicle trips across the bridge. The real analysis of VMT emissions is absent because of a purported decrease in vehicle demand on SR 520 as a result of the proposal.

c. The disclosed increase of VMT on I-90 and SR 522 (to avoid tolling) was not included in the evaluation. Additionally, the indirect and cumulative land-use impacts associated with the proposal could result in additional emissions. The larger transportation system must be included in the analysis of VMT and anticipated GHG reductions because moving VMT from SR 520 to another road will not decrease GHGs.

S-004-028 d. The GHG emissions associated with construction and operational waste management should be addressed, as these could be substantial sources of emissions that could be mitigated without major changes in the options.

e. Other sources of emissions such as extraction, processing, and transportation of purchased materials (also referred to as "embodied emissions") must be evaluated and assessed for available reductions as well. WSDOT's internal *"Interim Approach for Project-Level Greenhouse Gas and Climate Change Evaluations"* (December 30, 2008) indicates that a qualitative analysis of embodied emissions is appropriate in an EIS.

S-004-029 2. Emissions Avoidance and Reduction

➢ Specifics appear to be lacking on if and how reduction of GHG emissions from both the operational and construction activities would occur. A more robust analysis is needed other than simply stating that they "will continue with existing statewide work to reduce transportation GHG emissions" and possibly "undertake measures to conserve energy during construction . . ."

S-004-030 3. Impacts of Climate Change on the Proposal

a. The SDEIS considers (very briefly with no analysis) the impacts of potential sea level rise and increased storm activity to the bridge structure. However, the cumulative impacts of both the proposal and the changing climate warrant consideration. A complete analysis includes not only

S-004-019

Page 65 of the Environmental Justice Discipline Report stated that there would likely be some adverse air quality effects related to human health during project construction. Regarding operation, page 77 of the Environmental Justice Discipline Report discussed the potential for localized increases in concentrations of pollutants from motor vehicles, including carbon monoxide. However, based on the air quality analysis for the SDEIS options and the Preferred Alternative, the project overall is not expected to result in new violations of National Ambient Air Quality Standards in the future, nor would it increase the frequency or severity of any existing violations. More detailed information regarding health effects related to air quality is in the Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS).

S-004-020

Since publication of the SDEIS, WSDOT and its federal, state, and local transit agency partners have committed to implementing measures to address the effects of tolling in general, as well as tolling of the SR 520 bridge, on low-income populations. As discussed in Section 5.3 of the Final EIS and under "What has been done to avoid or minimize negative effects on low-income, minority, and LEP populations?" in the Environmental Justice Discipline Report Addendum (in Attachment 7 to the Final EIS), that includes measures such as investing in targeted transit improvements, and conducting additional public outreach regarding tolling. With these measures in place, the project would not generate adverse effects to LEP populations from tolling and no mitigation is proposed. It should also be noted that the proposed toll would vary by time of day, with reduced tolls during off-peak hours, as discussed in Chapter 2 of the Final EIS and the Environmental Justice Discipline Report Addendum.

S-004-021

A definition of variable tolling has been added to the Potential Effects

S-004-030

climate change implications for the state's transportation system but also the cumulative impacts associated with changes in the climate combined with the transportation project on the both the natural and built environment.

b. For example, a more complete analysis might conclude that climate change impacts coupled with the expansion of the bridge approaches likely will result in additional impacts to wetlands and other nearshore habitat. Plus, local air pollution and air temperature changes combined with the proposal would exacerbate the impacts to human health in nearby communities.

Discipline Report: Air Quality

S-004-031

- Based on the air quality analysis included in the SDEIS, this project meets all transportation conformity requirements for the federal and state Clean Air Acts and the Central Puget Sound Carbon Monoxide Maintenance Plan. WSDOT provides a clear, thorough, and easy to read description of the project along with the appropriate air quality analysis.

Other Topics and Issues

S-004-032

1. Medina Bridge Maintenance Facility

- Based on the most recent maintenance facility building and dock designs shared with Ecology at a February 4th 2010 Technical Working Group meeting, Ecology would like to acknowledge WSDOT's substantial progress in reducing nearshore/aquatic impacts from the facility by generally reducing overwater structure to the absolute minimum based on the necessary maintenance capabilities. Ecology **anticipates ongoing coordination** to continue to refine this design to minimize aquatic impacts and comply with the City of Medina Shoreline Master Program.

2. Agency Correspondence Section

S-004-033

- What category of correspondence is this section intended to include? Ecology's comments on the pDEIS, while not in "letter-form" should perhaps have been included in this section.

3. Phasing

S-004-034

- If the project is constructed in phases, with the 4-lane bridge deck taking priority, will the years w/o the HOV benefit of the built-out 6-lane be evaluated and the impacts revealed?

4. Comparison b/t 2006 EIS alternatives and 2010 SDEIS mediation options

S-004-035

The table at p. 2-41 is somewhat misleading as it equates option K with the Pacific St. Interchange, but only as it relates to traffic movement issues. In other ways, options A and L are more similar to the PIE as depicted on the chart on p. 2-43.

section the Environmental Justice Discipline Report Addendum (Attachment 7 to the Final EIS).

S-004-022

Please see the response to Comment S-004-020.

S-004-023

On June 30, 2010, after the SDEIS was published, the Washington State Department of Ecology issued a conditional approval of WSDOT's AKART and Water Quality Studies Report. The approval included a condition that WSDOT include an Ecology-approved monitoring plan for the high-efficiency sweeping program. The approval also came with conditions concerning the monitoring of operation performance. The AKART report and the Ecology approval letter will be made available when the Final EIS is published.

S-004-024

The SDEIS discussed the possibility of constructing the project in separate phases over time, with the vulnerable structures (the Evergreen Point floating bridge, west approach bridge, and Portage Bay bridge) built first. This "Phased Implementation scenario" was analyzed for each environmental resource. As discussed in Section 2.8 of this Final EIS, due to the funding shortfall, FHWA and WSDOT still believe it is prudent to evaluate the possibility of phased construction of the corridor should full project funding not be available by 2012. Currently committed funding is sufficient to construct the Evergreen Point floating bridge and landings; a Request for Proposals has been issued for this portion of the project, with proposals due in June 2011. Accordingly, this Final EIS discusses the potential for the floating bridge and landings to be built as the first phase of the SR 520, I-5 to Medina project. This differs from the SDEIS Phased Implementation scenario, which included the west approach and the Portage Bay bridge in the first construction phase.

Because the following pages of this item are difficult to read, a full page version of this item is included at the end of the response to comments on the SDEIS in the printed version, and in a separate PDF file in the DVD and online version.

S-004-036

Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

FOR INTERNAL USE ONLY | Task Order #

QA Reviewer: ___ Date: ___

Comments:

Report Name and Date	Draft Corridor Initial Wetland Mitigation Plan for Cooperating Agency Review (Y-9761 CZ 3.1.1)		
Report Author(s)	Pat Togher		
Name of Reviewer(s)/Agency(ies)	Caroline Corcoran, Ecology		
Date of Request	Thursday, October 15, 2009	COMMENTS DUE BY	Friday, January 29, 2010

☐ Pass ☐ Resubmit

No.	Page*	Line No.	Exhibit No.	Priority**	Comment	Reviewer Initials	Response	Status Code***	Responder Initials	QC Back-check	QA Check
Opt.	iii	4-7		1	This is a substantive comment about your report.	XXX	<Comment is incorporated.>	A	AAA		
1	3-2	8		1	Not all of the shaded wetlands would continue to function if there is enough shade to prevent all plant growth.	CC					
2	3-2		Table 2.	1	The table shows that mitigation wouldn't be needed for impacts that were less than 0.1 acre. If the impacts are too small to be quantified in the total, please state this.	CC					
3	3-3	6-8			Thank you for stating that the ratios only reflect one type of wetland effect and one type of activity.	CC					
4	3-3	15-		1	Why is it anticipated that shading impacts would be mitigated on-site before using off-site	CC					

S-004-037

S-004-038

S-004-039

S-004-040

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If the floating bridge is constructed prior to the west approach, the floating bridge would be replaced with a new structures and the roadway striped to its ultimate 6-lane width, tapering to 4 lanes at the west end of the floating bridge. To connect the western end of the floating span to the existing west approach, WSDOT would construct a new interim connection, four lanes wide and approximately 1,500 feet long, between the new west transition span and the existing west approach bridge (Exhibit 2-29). This interim connection was also described in section 2.4 of the SDEIS. It would be supported on columns that would later be reused for the eastbound portion of the new west approach bridge. When the new west approach bridge is constructed, the interim bridge deck would be removed and the columns heightened to support the west approach bridge at its planned grade.

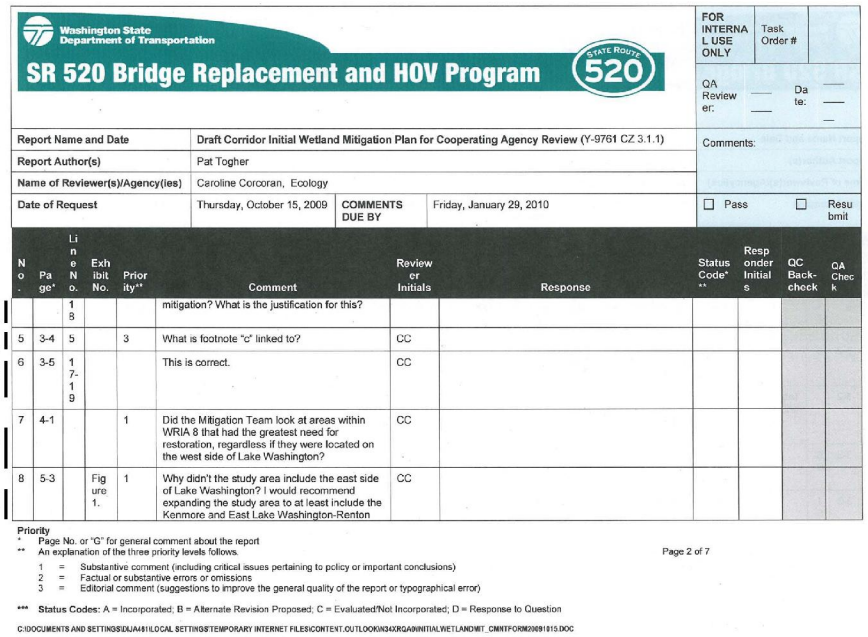
Water quality standards, per the approved NPDES construction permit, will be maintained during construction. Please refer to the Water Resources Discipline Report Addendum in Attachment 7 to the Final EIS.

S-004-025

Sections 2.3 and 2.4 of the Final EIS provides further discussion of project alternatives; including why a transit-optimized 4-Lane Alternative and initial implementation of light rail transit on SR 520 are not reasonable alternatives. Section 5.9 includes a discussion of how the Preferred Alternative relates to regional goals to reduce greenhouse gas emissions.

S-004-026

The assumption of light rail across I-90 is included in the analysis conducted for the Energy Discipline Report Addendum (Attachment 7 to the Final EIS). Please see the Final Transportation Discipline Report (Attachment 7 to the Final EIS) for a discussion of assumptions about



Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

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S-004-040		18			mitigation? What is the justification for this?						
S-004-041	5	3-4	5		3	What is footnote "c" linked to?	CC					
S-004-042	6	3-5	17-19			This is correct.	CC					
S-004-043	7	4-1			1	Did the Mitigation Team look at areas within WRIA 8 that had the greatest need for restoration, regardless if they were located on the west side of Lake Washington?	CC					
S-004-044	8	5-3		Figure 1.	1	Why didn't the study area include the east side of Lake Washington? I would recommend expanding the study area to at least include the Kenmore and East Lake Washington-Renton	CC					

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tolling and light rail. See also the Potential Effects section of the Energy Discipline Report Addendum for the results of the energy and greenhouse gas emissions analysis based on the new assumptions associated with the Preferred Alternative.

S-004-027

The regional transportation demand model for the project was updated for the Final EIS to account for light rail on I-90, which would be in operation in 2030 (see the Final Transportation Discipline Report in Attachment 7 to the Final EIS). Additionally, the Energy Discipline Report Addendum (Attachment 7 to the Final EIS) has been updated to include an analysis of the greenhouse gas effects at a subregional level. This analysis takes into account vehicles crossing the lake via SR 520 and I-90, as well as travelers choosing to go around the lake. With the completion of HOV lanes on SR 520 under the proposed project, more trips would shift to transit and vehicle miles traveled in the study area would decrease compared to the No Build Alternative (see Exhibit 18 in the Energy Discipline Report).

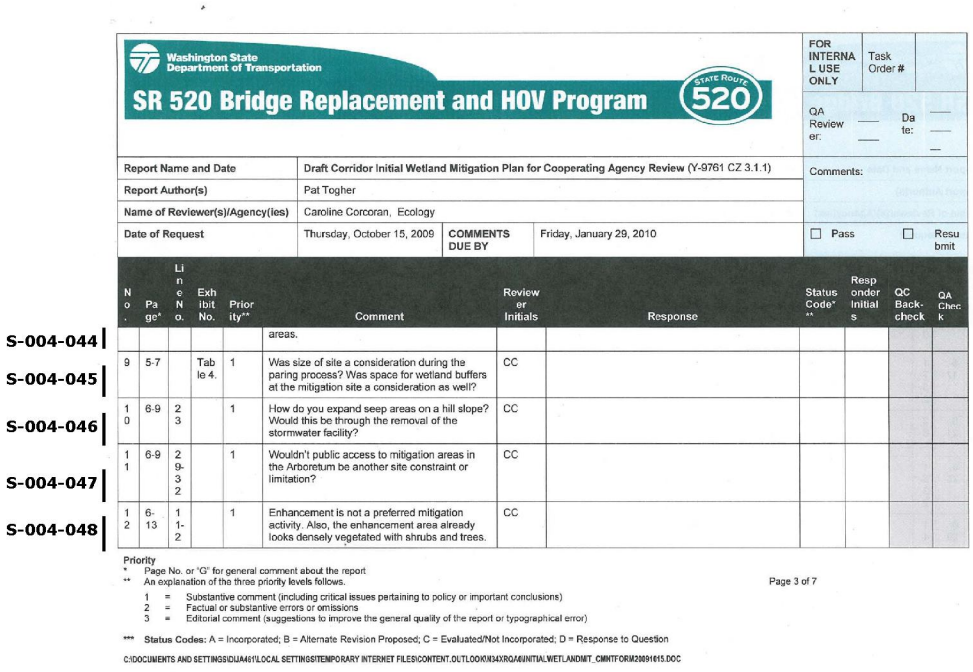
S-004-028

Standardized tools are not currently available to account for emissions associated with construction waste practices for roadway construction. Thus, there is no analysis of this in the Energy Discipline Report Addendum.

The SDEIS analysis of construction GHG emission levels accounted for embodied emissions. Section 6.9 of the Final EIS and the Energy Discipline Report Addendum (Attachment 7 to the Final EIS) note how embodied emissions are accounted for in the analysis.

S-004-029

The Energy Discipline Report Addendum (Attachment 7 to the Final EIS)



Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

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S-004-044					areas.						
S-004-045	9	5-7		Table 4.	1	Was size of site a consideration during the paring process? Was space for wetland buffers at the mitigation site a consideration as well?	CC					
S-004-046	10	6-9	23		1	How do you expand seep areas on a hill slope? Would this be through the removal of the stormwater facility?	CC					
S-004-047	11	6-9	29-32		1	Wouldn't public access to mitigation areas in the Arboretum be another site constraint or limitation?	CC					
S-004-048	12	6-13	11-12		1	Enhancement is not a preferred mitigation activity. Also, the enhancement area already looks densely vegetated with shrubs and trees.	CC					

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includes additional discussions of emissions reduction for operational and construction energy use and greenhouse gas emissions.

S-004-030

As discussed in Section 5.9 of the Final EIS, long-term emissions of greenhouse gases in the project area would be lower under the Preferred Alternative than under the No Build Alternative. Chapter 7 of the Final EIS and the Final Indirect and Cumulative Effects Discipline Report (Attachment 7 of the Final EIS) provide additional discussion of climate change processes and cumulative effects to resources such as habitat and aquatic resources.

Because NEPA analyses deal with specific environmental components such as air quality or wetlands, WSDOT avoids discussion of broad, hypothetical effects that cannot be reliably analyzed with available information and technology. Additionally, a full assessment of the effects of global climate change on the natural and built environments, beyond an assessment of the project's likely contribution, as provided in the Final EIS, would be outside the scope of the Final EIS.

S-004-031

Comment noted.

S-004-032

WSDOT will continue to coordinate with regulatory agencies, tribes, and community entities regarding design refinements for the maintenance facility and other aspects of the project. See the Ecosystems and Geology and Soils Discipline Report addendums (Attachment 7 of the Final EIS) for new information regarding the bridge maintenance facility under the Preferred Alternative. WSDOT will comply with the City of Medina Shoreline Master Program as applicable.

Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

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		0									
13	6-17	17-32		1	Enhancement is not a preferred mitigation activity. Another constraint would include public access to mitigation areas, since this is a city park.	CC					
14	6-21	26		1	Mitigation ratios will be higher if mitigation construction doesn't begin until bridge replacement is complete.	CC					
15	6-25	15-32		1	It's good to have so much restoration potential. Wouldn't pedestrian access be a site constraint?	CC					
16	6-29	14		1	Enhancement is not a preferred mitigation activity.	CC					

S-004-048

S-004-049

S-004-050

S-004-051

S-004-052

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S-004-033

Pages 5 through 8 of the Agency and Coordination and Public Involvement Discipline Report summarized all comments submitted by agencies and tribes during the Draft EIS comment period. The comments received from the Department of Ecology (dated October 31, 2006) were included in this summary. Responses to Draft EIS comments are in the Draft EIS Comment Summary Report in Attachment 13 to the Final EIS.

S-004-034

Please see the response to Comment S-004-024 regarding revised potential phasing. The operational transportation effects are described in Final EIS Section 5.15 and would be similar to the No Build Alternative.

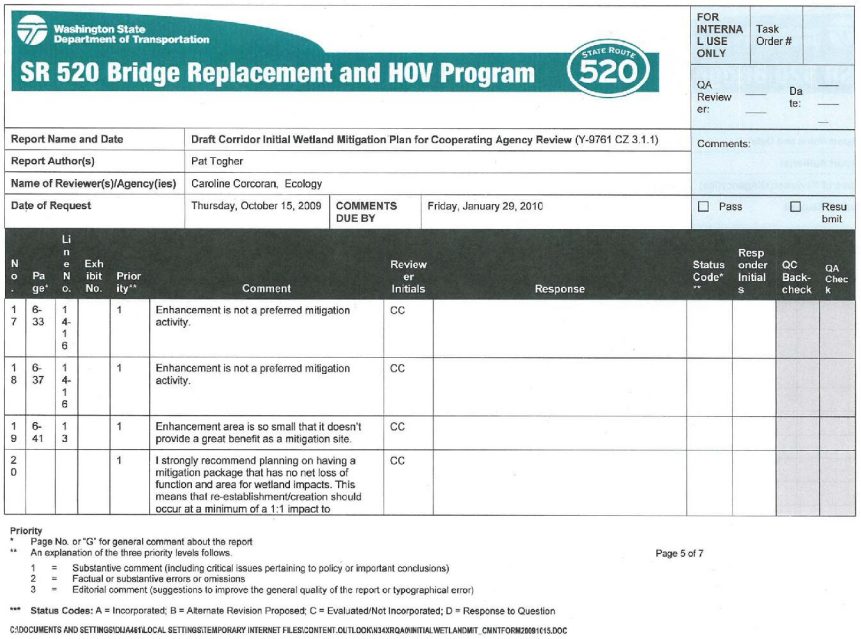
S-004-035

The table on page 2-41 of the SDEIS was designed to give a general comparison between the Draft EIS options and the SDEIS options. Option K was the most similar to the Pacific Street Interchange option. The text was more detailed regarding the description of alternatives.

S-004-036

The Natural Resource Technical Working Group (NRTWG) was formed in June 2010 to consolidate the Mitigation TWG and other TWGs into a comprehensive forum for regulatory agencies, including the Department of Ecology, to discuss project effects and mitigation. The NRTWG discussed wetland and aquatic effects in detail and suggested appropriate mitigation measures to WSDOT.

The comments from Ecology on the Draft Initial Wetland Mitigation Plan were incorporated into the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS), which was submitted as part of the Joint Aquatic Resource Permits Application. These comments were also



Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

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17	6-33	14-16		1	Enhancement is not a preferred mitigation activity.	CC					
18	6-37	14-16		1	Enhancement is not a preferred mitigation activity.	CC					
19	6-41	13		1	Enhancement area is so small that it doesn't provide a great benefit as a mitigation site.	CC					
20				1	I strongly recommend planning on having a mitigation package that has no net loss of function and area for wetland impacts. This means that re-establishment/creation should occur at a minimum of a 1:1 impact to	CC					

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S-004-053

S-004-054

S-004-055

S-004-056

responded to in the response-to-comment form submitted to Ecology as part of the Wetland Mitigation Plan development process. Please refer to the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS) and the mitigation discussion in the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS).

In addition to being addressed in the Conceptual Wetland Mitigation Plan, several comments are also responded to individually below.

S-004-037

The analysis of shading effects follows accepted methodology, providing a conservative estimate by considering all shade to be complete shade, rather than partial shade. However, higher bridge height, generally starting at about 8 feet, would result in partial shade. With bridge height over 24 feet there would be no shading effects.

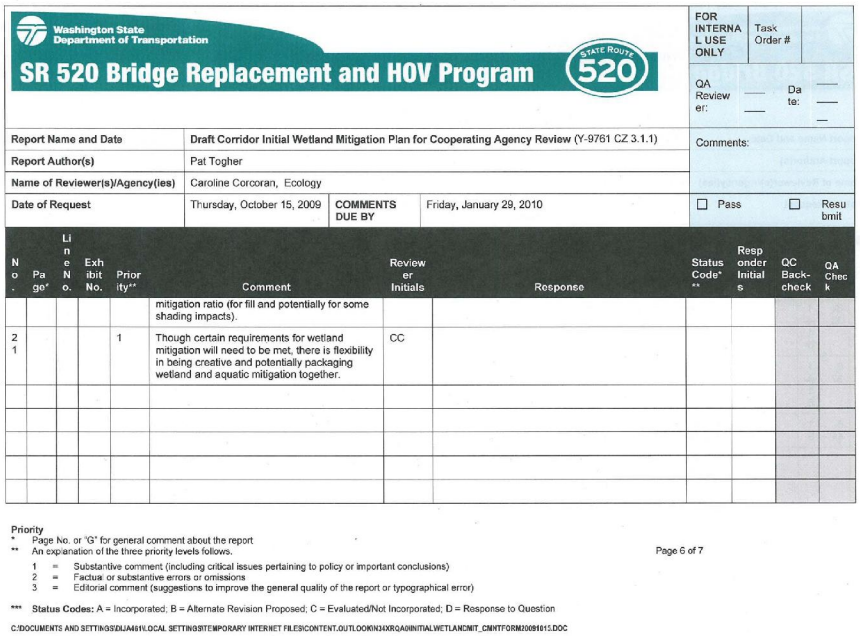
WSDOT has designed the bridge to minimize fill and shading effects to wetlands to the greatest extent practicable. WSDOT will mitigate all effects on wetlands and wetland buffers from construction and operation of the project, including both wetland fill (loss) and wetland shading. Please see the Ecosystems Discipline Report Addendum in Attachment 7 to the Final EIS and the Conceptual Wetland Mitigation Plan in Attachment 9 to the Final EIS for details.

S-004-038

Please see the response the comment S-004-036.

S-004-039

Mitigation ratios for project wetland impacts were confirmed with regulatory agencies, including Ecology, during the Natural Resource Technical Working Group process. Wetland mitigation and has been developed on a watershed based approach and will meet the goal of no



Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program (STATE ROUTE 520)

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					mitigation ratio (for fill and potentially for some shading impacts).						
21				1	Though certain requirements for wetland mitigation will need to be met, there is flexibility in being creative and potentially packaging wetland and aquatic mitigation together.	CC					

S-004-056

S-004-057

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net loss. These ratios were used to develop appropriate mitigation for project effects and were discussed in the Final EIS and the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS), as well as in the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

S-004-040

Federal regulators, Washington state agencies (including WSDOT), and some local governments require that mitigation efforts be completed in a specific sequence. First, WSDOT would attempt to avoid and minimize effects as much as possible. If effects still existed, mitigation measures would be implemented in the area where the effect occurred, through repairing, rehabilitating, or restoring the affected environment. Only then, if an effect still existed, would WSDOT compensate for the effect by replacing, enhancing, or providing substitute resources or environments.

Mitigation for project wetland impacts will occur at two on-site and two off-site mitigation areas. The sites include the University of Washington Arboretum shoreline, current WSDOT right of way known as the WSDOT peninsula, the University of Washington Union Bay Natural Area, and at King County-owned parcels along the Cedar River.

S-004-041

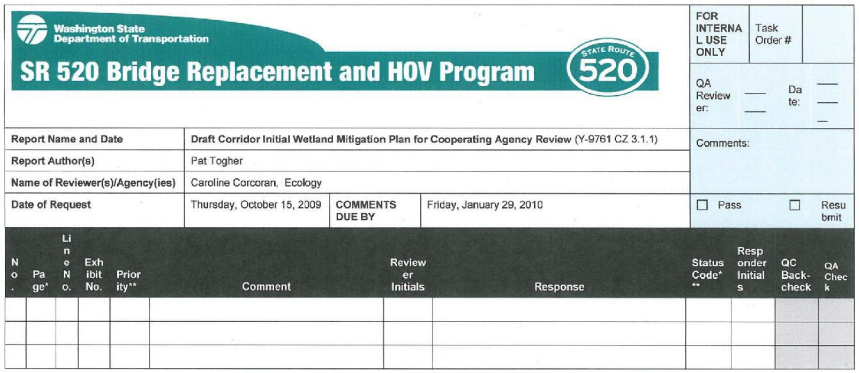
Footnote "c" refers to amounts of fill listed as "<0.1" and indicates the degree of rounding. Rounding was clarified in tables in the Final EIS and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

S-004-042

Comment noted.

S-004-043

WSDOT employed a watershed (WRIA 8) approach to assess the most



Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program

STATE ROUTE 520

FOR INTERNAL USE ONLY | Task Order #

QA Reviewer: ___ ___ Date: ___ ___ ___

Comments:

Report Name and Date	Draft Corridor Initial Wetland Mitigation Plan for Cooperating Agency Review (Y-9761 CZ 3.1.1)		
Report Author(s)	Pat Togher		
Name of Reviewer(s)/Agency(ies)	Caroline Corcoran, Ecology		
Date of Request	Thursday, October 15, 2009	COMMENTS DUE BY	Friday, January 29, 2010

☐ Pass ☐ Resubmit

No.	Page*	Line No.	Exhibit No.	Priority**	Comment	Reviewer Initials	Response	Status Code***	Responder Initials	QC Back-check	QA Check

Priority
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appropriate mitigation sites for project effects. The potential mitigation sites on the east side of Lake Washington were assessed for the SR 520 Medina to SR 202 project. Those sites on the west side of the lake were assessed for the SR 520, I-5 to Medina project. The mitigation-site selection process was presented to the Natural Resource Technical Working Group and is discussed at length in the Conceptual Wetland Mitigation Plan (Attachment 9 of the Final EIS).

S-004-044

Please see the response to Comment S-004-043.

S-004-045

WSDOT used a landscape approach to mitigation; both size and buffers were considered. No sites were specifically eliminated due to size because of the small set of potential sites.

S-004-046

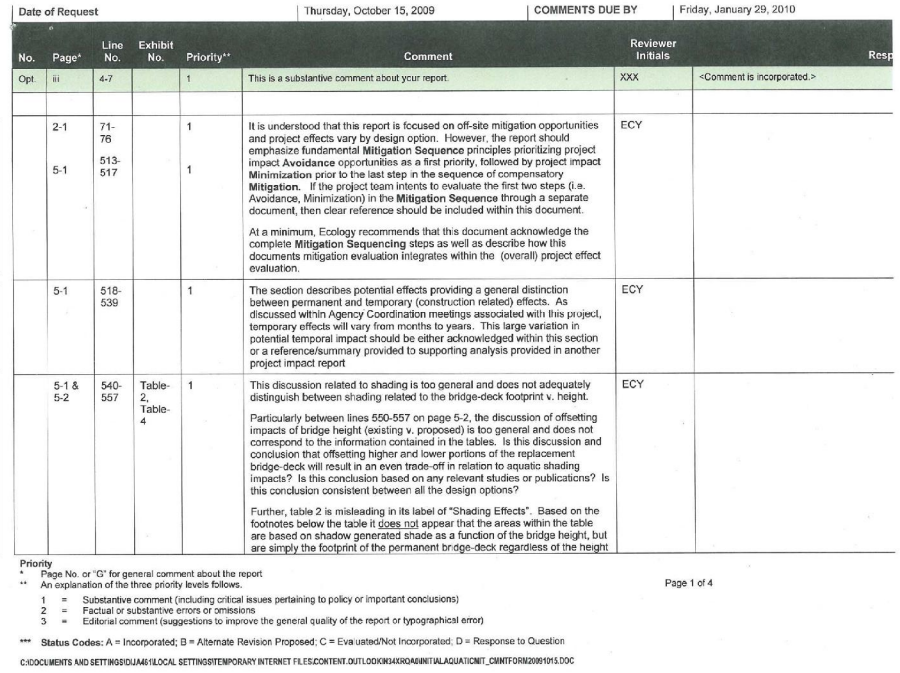
To create a seep wetland the hillslope could be graded and/or the stormwater facility could be removed.

S-004-047

Public access could be a constraint that would limit available mitigation credits in the Arboretum.

S-004-048

This site has limited potential for more desirable mitigation types, such as creation, reestablishment, or rehabilitation. This site was eliminated from further consideration in the development of the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).



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Opt.	iii	4-7		1	This is a substantive comment about your report.	XXX	<Comment is incorporated.>
S-004-058	2-1 5-1	71-76 513-517		1 1	It is understood that this report is focused on off-site mitigation opportunities and project effects vary by design option. However, the report should emphasize fundamental **Mitigation Sequence** principles prioritizing project impact **Avoidance** opportunities as a first priority, followed by project impact **Minimization** prior to the last step in the sequence of compensatory **Mitigation.** If the project team intents to evaluate the first two steps (i.e. Avoidance, Minimization) in the **Mitigation Sequence** through a separate document, then clear reference should be included within this document. At a minimum, Ecology recommends that this document acknowledge the complete **Mitigation Sequencing** steps as well as describe how this documents mitigation evaluation integrates within the (overall) project effect evaluation.	ECY	
S-004-059	5-1	518-539		1	The section describes potential effects providing a general distinction between permanent and temporary (construction related) effects. As discussed within Agency Coordination meetings associated with this project, temporary effects will vary from months to years. This large variation in potential temporal impact should be either acknowledged within this section or a reference/summary provided to supporting analysis provided in another project impact report	ECY	
S-004-060	5-1 & 5-2	540-557	Table-2, Table-4	1	This discussion related to shading is too general and does not adequately distinguish between shading related to the bridge-deck footprint v. height. Particularly between lines 550-557 on page 5-2, the discussion of offsetting impacts of bridge height (existing v. proposed) is too general and does not correspond to the information contained in the tables. Is this discussion and conclusion that offsetting higher and lower portions of the replacement bridge-deck will result in an even trade-off in relation to aquatic shading impacts? Is this conclusion based on any relevant studies or publications? Is this conclusion consistent between all the design options? Further, table 2 is misleading in its label of "Shading Effects". Based on the footnotes below the table it does not appear that the areas within the table are based on shadow generated shade as a function of the bridge height, but are simply the footprint of the permanent bridge-deck regardless of the height	ECY	

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S-004-049

Please see responses to S-004-047 and S-004-048.

S-004-050

Please see the response to Comment S-004-039.

S-004-051

Pedestrian access and use of the site trails would be a future use. Some trails are only used for foot traffic while some allow bicycle traffic. Appropriate buffers for level of use will be incorporated into the restoration design.

S-004-052

This site has been eliminated from further consideration. Please see the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

S-004-053

This site has been eliminated from further consideration. Please see the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

S-004-054

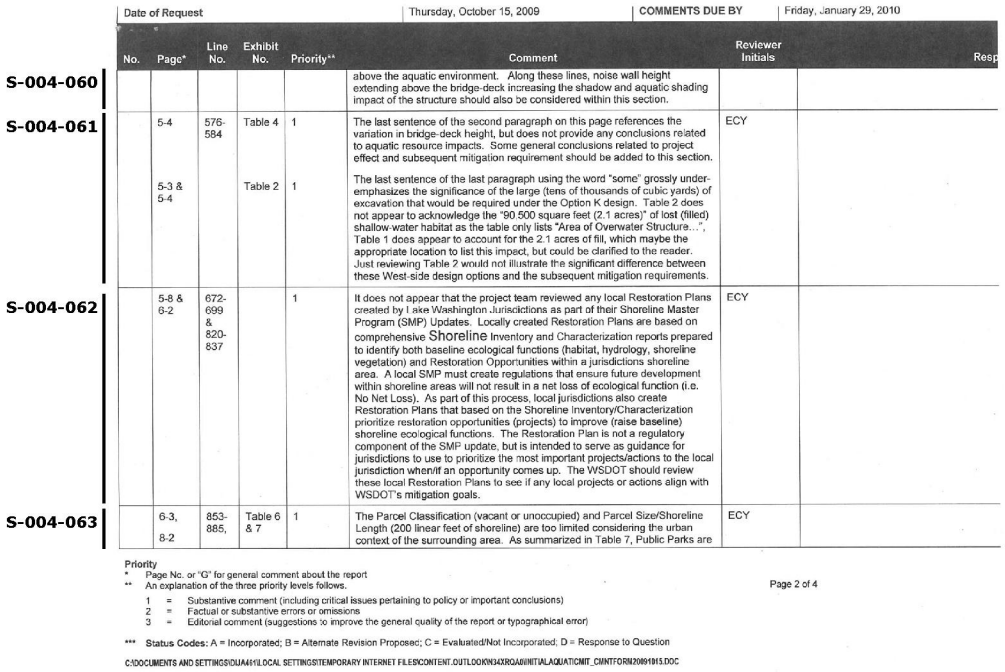
See response to S-004-053.

S-004-055

Enhancement of the Foster Island shoreline may be appropriate mitigation for temporary construction impacts in the Arboretum.

S-004-056

Please see the response to Comment S-004-039.



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S-004-060					above the aquatic environment. Along these lines, noise wall height extending above the bridge-deck increasing the shadow and aquatic shading impact of the structure should also be considered within this section.			
S-004-061	5-4	576-584	Table 4	1	The last sentence of the second paragraph on this page references the variation in bridge-deck height, but does not provide any conclusions related to aquatic resource impacts. Some general conclusions related to project effect and subsequent mitigation requirement should be added to this section.	ECY		
	5-3 & 5-4		Table 2	1	The last sentence of the last paragraph using the word "some" grossly under-emphasizes the significance of the large (tens of thousands of cubic yards) of excavation that would be required under the Option K design. Table 2 does not appear to acknowledge the "90,500 square feet (2.1 acres)" of lost (filled) shallow-water habitat as the table only lists "Area of Overwater Structure…", Table 1 does appear to account for the 2.1 acres of fill, which maybe the appropriate location to list this impact, but could be clarified to the reader. Just reviewing Table 7 would not illustrate the significant difference between these West-side design options and the subsequent mitigation requirements.			
S-004-062	5-8 & 6-2	672-699 & 820-837		1	It does not appear that the project team reviewed any local Restoration Plans created by Lake Washington Jurisdictions as part of their Shoreline Master Program (SMP) Updates. Locally created Restoration Plans are based on comprehensive Shoreline Inventory and Characterization reports prepared to identify both baseline ecological functions (habitat, hydrology, shoreline vegetation) and Restoration Opportunities within a jurisdictions shoreline area. A local SMP must create regulations that ensure future development within shoreline areas will not result in a net loss of ecological function (i.e. No Net Loss). As part of this process, local jurisdictions also create Restoration Plans that based on the Shoreline Inventory/Characterization prioritize restoration opportunities (projects) to improve (raise baseline) shoreline ecological functions. The Restoration Plan is not a regulatory component of the SMP update, but is intended to serve as guidance for jurisdictions to use to prioritize the most important projects/actions to the local jurisdiction when/if an opportunity comes up. The WSDOT should review these local Restoration Plans to see if any local projects or actions align with WSDOT's mitigation goals.	ECY		
S-004-063	6-3, 8-2	853-885,	Table 6 & 7	1	The Parcel Classification (vacant or unoccupied) and Parcel Size/Shoreline Length (200 linear feet of shoreline) are too limited considering the urban context of the surrounding area. As summarized in Table 7, Public Parks are	ECY		

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S-004-057

WSDOT may propose to combine wetland and aquatic mitigation elements at one site. WSDOT will continue to work with Ecology in the selection of mitigation strategies. See the response to S-004-040 regarding selection of mitigation sites.

S-004-058

WSDOT acknowledges the mitigation sequencing requirements of the Clean Water Act and federal and state mitigation guidance. Avoidance and minimization measures were included in the SDEIS and have been expanded in the Final EIS, Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS), and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

S-004-059

Construction will occur for about 5 or 6 years, depending on the area. These construction effects are designated long-term temporary effects and are distinguished from permanent effects. Please see the response to Comment S-004-039 for additional information about mitigation ratios corresponding to the different effects.

S-004-060

Section 5.11 of the Final EIS, the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS), and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS) include more refined discussions of shading impacts to wetlands, including references to bridge heights and corresponding mitigation.

S-004-061

Please see the response to Comment S-004-060.

S-004-063

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		1194			the only lake front land-use that will met this limiting criteria. It seems as though WSDOT maybe missing opportunities to establish restoration/conservation easements or other preservation type actions based on these criterion. If WSDOT chooses to maintain these criterion, then they should objectively acknowledge the true restoration potential of existing public park sites. Municipal regulations typically limit selling of park land without comparable replacement of a sold or transferred site. It is unlikely that WSDOT would be able to purchase a public park along Lake Washington to use for restoration while also finding a similar lakefront site to replace the lost public park amenities. Alternatively, WSDOT may intend to incorporate ecological restoration into existing park areas, while maintaining recreational park opportunities. If WSDOT intends to follow this mitigation strategy, than both Recreation (park) and mitigation (restoration) goals should be evaluated to ensure they are not in conflict. A public shoreline parks could be improved to increase ecological functions, but not without tradeoffs to park use and accessibility, which must be comprehensively evaluated to ensure a worthwhile restoration investment capable of producing ecological lift.		

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S-004-062

WSDOT reviewed local restoration plans created by the jurisdictions of Kenmore, Mercer Island, Renton, Kirkland and Bellevue and incorporated sites and actions identified in those plans into the evaluation of potential mitigation opportunities. Other Lake Washington jurisdictions, including Seattle have not yet completed their restoration plans as part of their Shoreline Master Plan updates. However, WSDOT coordinated with the City of Seattle's Department of Planning and Development and Parks Department through the Natural Resource Technical Working Group. The City Department of Planning and Development oversees the City Shoreline Management Zone. Potential restoration and mitigation sites were reviewed for their ability to provide adequate mitigation for project impacts. Appendix A of the 2009 Initial Wetland Mitigation Report identified a number of sites suggested by the City. None of these sites were ultimately chosen for project wetland mitigation.

S-004-063

Please see the response to Comment S-004-062.

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