

ATTACHMENT 1: ERRATA TO EA

The following corrections apply to the Environmental Assessment (EA) and accompanying discipline reports and technical memoranda for the SR 520, Medina to SR 202: Eastside Transit and HOV Project, which was issued on December 3, 2009. These corrections clarify information or enhance the readability of the EA. Because these changes to the EA do not alter the conclusion of No Significant Impact, the issuance of a revised EA is not required.

Changes to the EA text are identified by the corresponding page number in the EA. Deletions are shown as strikethrough text; additions are shown as underlined text. Changes to map exhibits are summarized where the exhibit is shown. These minor revisions are incorporated into the EA by reference.

Page viii and following page 8-4

APPENDICES

- A Glossary
- B Agency and Tribal Correspondence
- ~~C Draft Programmatic Agreement~~
- D Regulatory Framework
- E Agency Coordination and Public Involvement Discipline Report
- F Description of Alternatives and Construction Techniques
- G Air Quality Technical Memorandum
- H Environmental Justice Technical Memorandum
- I Geology and Soils Technical Memorandum
- J Hazardous Materials Technical Memorandum
- K Cultural Resources Technical Memorandum
- L Ecosystems Discipline Report
- M Energy Technical Memorandum
- N Land Use, Economics, and Relocation Technical Memorandum
- O Noise Technical Memorandum
- P Social Elements Technical Memorandum

- Q Transportation Discipline Report
- R Visual Quality and Aesthetics Technical Memorandum
- S Water Resources Discipline Report
- T Section 4(f) Resources Technical Memorandum
- U Indirect and Cumulative Effects Technical Memorandum

Page 1-5, last paragraph

The study area is within the “usual and accustomed” ~~fishing~~ area of the Muckleshoot Indian Tribe. WSDOT has been and will continue to work coordinating with the Muckleshoot Indian Tribe Fisheries Division to avoid, minimize, or mitigate adverse effects. Additional detail may be found in Appendix H, Environmental Justice Technical Memorandum.

Page 1-6, last paragraph

Cultural Resources. The project is not likely to adversely affect any significant historic or archaeological resources. Several aspects of the project will have beneficial effects on historic properties adjacent to the roadway. ~~These include noise walls incorporated into the project design to reduce road noise, and landscaped lids that will enhance the setting of historic properties.~~ Additional detail may be found in Appendix K, Cultural Resources Technical Memorandum.

Page 1-7, second paragraph

The project will temporarily disturb approximately ~~1.61.4~~ acres of wetlands and 0.9 acre of wetland buffer, and permanently fill approximately 7.0 acres of wetlands and 1.7 acres of wetland buffer. The project will result in a gain of ~~980820~~ linear feet of open channel habitat within fish-bearing streams, including opening up approximately ~~860787~~ linear feet of stream channel currently in culverts, principally in the Yarrow Creek basin. These improvements will result in a substantial net increase in both instream habitat quality and quantity within the study area.

Page 1-7, third paragraph

The project will temporarily disturb approximately 14 acres of wildlife habitat and ~~3.09~~ 3.23 acres of riparian buffer. A total of approximately 65 acres of wildlife habitat and ~~1.72.13~~ acres of riparian buffer will be permanently disturbed by the project. Most of these effects will occur to roadside deciduous and coniferous trees and ornamental trees and lawns. Noise walls constructed as part of the project will reduce noise disturbance to urban-adapted species in the study area.

Page 1-8, second paragraph

Land Use, Economics, and Relocation. To construct the project, ~~1013~~ parcels will need to be fully acquired, and 23 parcels will either be partially acquired or encumbered by permanent easement, for a total of approximately 9.4 acres. An additional 1.3 acres will be temporarily affected during construction. This represents only a fraction of the total land within the study area and will result in only minor changes in land use. WSDOT will provide fair compensation and relocation assistance for people and businesses.

Page 1-10, third paragraph

WSDOT will meet the criteria of the 2008 *Highway Runoff Manual* (WSDOT 2008a), which is considered equivalent to the Washington State Department of Ecology's (Ecology's) *Stormwater Management Manual for Western Washington* (Ecology 2005) within WSDOT right of way. The completed project will add approximately 24.2 acres of new pollution-generating impervious surface (PGIS) to the study area. This PGIS, combined with the ~~existing~~ ~~replaced~~ ~~38.1~~ ~~32.8~~ acres of PGIS in the study area, will result in a total of ~~62.3~~ 57.1 acres of PGIS that will be treated for flow control and pollutants. The project will have minimal or no effect on groundwater. Additional detail may be found in Appendix S, Water Resources Discipline Report.

Page 3-5, last paragraph

The project is adjacent to the "usual and accustomed" ~~fish~~ing areas of the Muckleshoot Indian Tribe. In addition to the agency coordination meetings that Muckleshoot Indian Tribe ~~representatives~~ staff may have attended, the project team has coordinated with staff of the Muckleshoot Indian Tribe throughout the planning and design stages of the project. In addition, the project team sought specific feedback from the staff of the Muckleshoot Indian Tribe Fisheries Division on the team's proposal for replacing fish passage barriers with structures that will allow fish passage. Staff from the Muckleshoot Indian Tribe Preservation Department and members of the Muckleshoot Indian Tribe Preservation Committee have also participated in Section 106 consultation briefings.

Page 4-2, Exhibit 4-2

**Also shown in Appendix F, Description of Alternatives and Construction Techniques,
Page 13, Exhibit 3**

General Updates that apply to Plates 1 – 5

- Corrected “Fairweather Bay Creek” to “Fairweather Creek”.
- Added “Proposed Non-fish Passable Culvert” to legend.
- Removed “Pavement/Shoulder” from legend.

Update specific to Plate 1

- Added westbound transit stop

Update specific to Plate 3

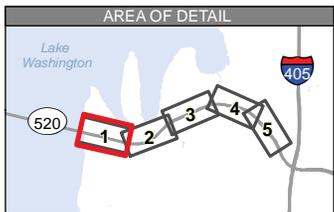
- Clarified the trail on the south side of SR 520 is a local trail extension, but not Points Loops Trail.

Update specific to Plate 4

- Revised Noise wall location on the south side of SR 520.

Update specific to Plate 5

- Updated the extent of the restripe area.

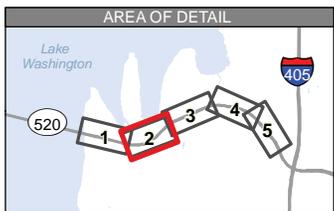
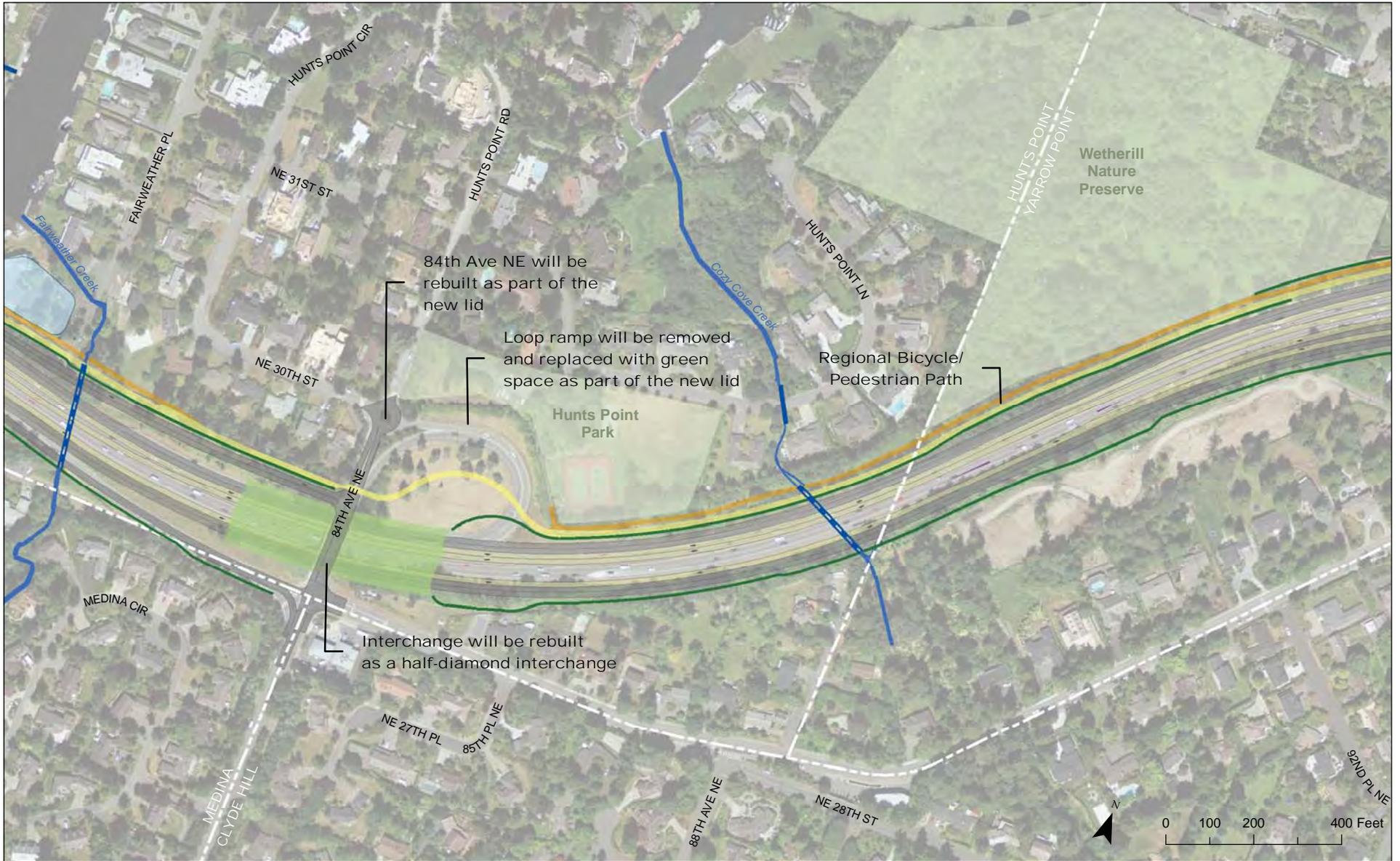


- | | | |
|------------------------------------|-----------------------------------|----------------------|
| Proposed Stream | Lid | General-Purpose Lane |
| Proposed Fish Passable Culvert | Park | HOV/Transit Lane |
| Proposed Non-Fish Passable Culvert | Regional Bicycle/ Pedestrian Path | Stormwater Feature |
| Existing Culvert | Points Loop Trail | Transit Stop |
| Proposed Noise Wall | | |

Source: City of Bellevue (1999) GIS Data (City Limits), King County (2006) Aerial Photo, and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

**Exhibit 4-2. Project Features
Plate 1**

Medina to SR 202: Eastside Transit and HOV Project

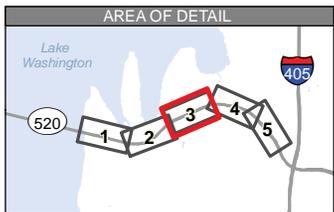
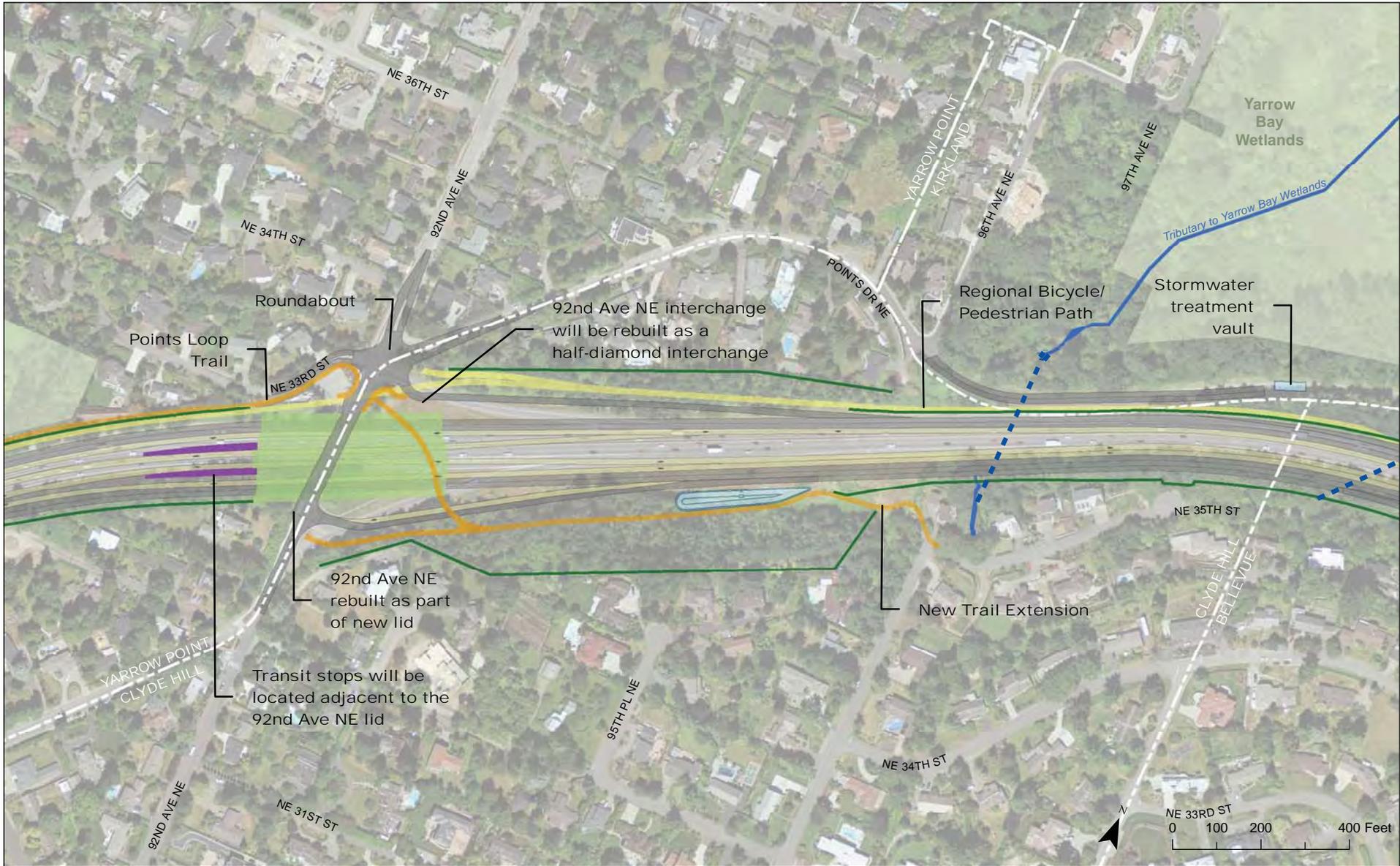


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|------------------------------------|-----------------------------------|----------------------|
| Proposed Stream | Lid | General-Purpose Lane |
| Proposed Fish Passable Culvert | Park | HOV/Transit Lane |
| Proposed Non-Fish Passable Culvert | Regional Bicycle/ Pedestrian Path | Stormwater Feature |
| Existing Culvert | Points Loop Trail | Transit Stop |
| Proposed Noise Wall | | |

Source: City of Bellevue (1999) GIS Data (City Limits), King County (2006) Aerial Photo, and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

**Exhibit 4-2. Project Features
Plate 2**

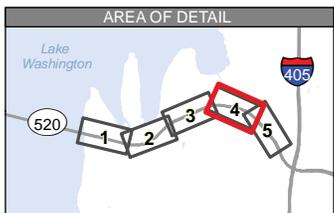
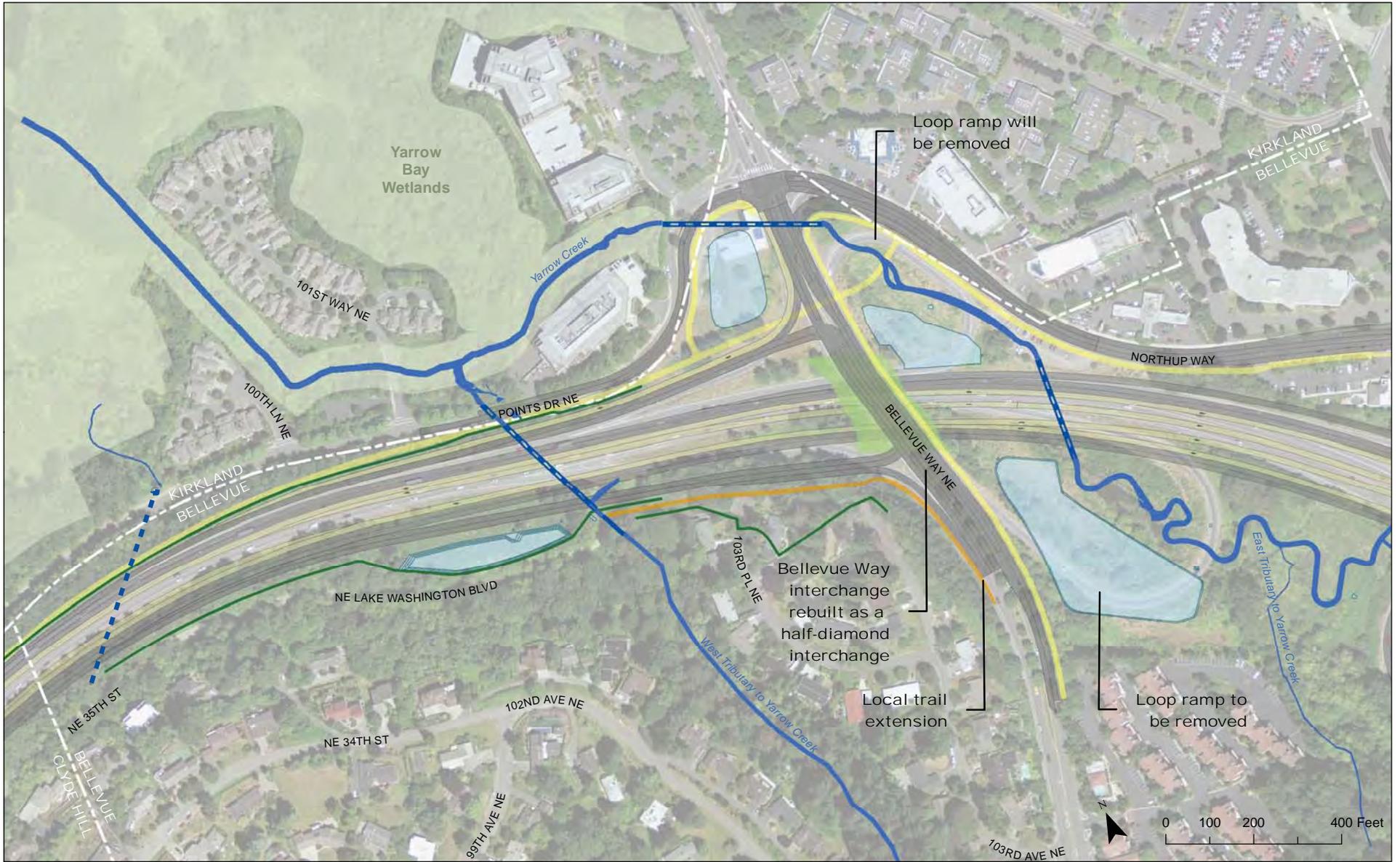
Medina to SR 202: Eastside Transit and HOV Project



- | | | |
|------------------------------------|----------------------------------|----------------------|
| Proposed Stream | Lid | General-Purpose Lane |
| Proposed Fish Passable Culvert | Park | HOV/Transit Lane |
| Proposed Non-Fish Passable Culvert | Regional Bicycle/Pedestrian Path | Stormwater Feature |
| Existing Culvert | Points Loop Trail | Transit Stop |
| Proposed Noise Wall | | |

Source: City of Bellevue (1999) GIS Data (City Limits), King County (2006) Aerial Photo, and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

**Exhibit 4-2. Project Features
Plate 3**
Medina to SR 202: Eastside Transit and HOV Project

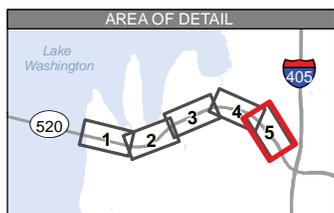
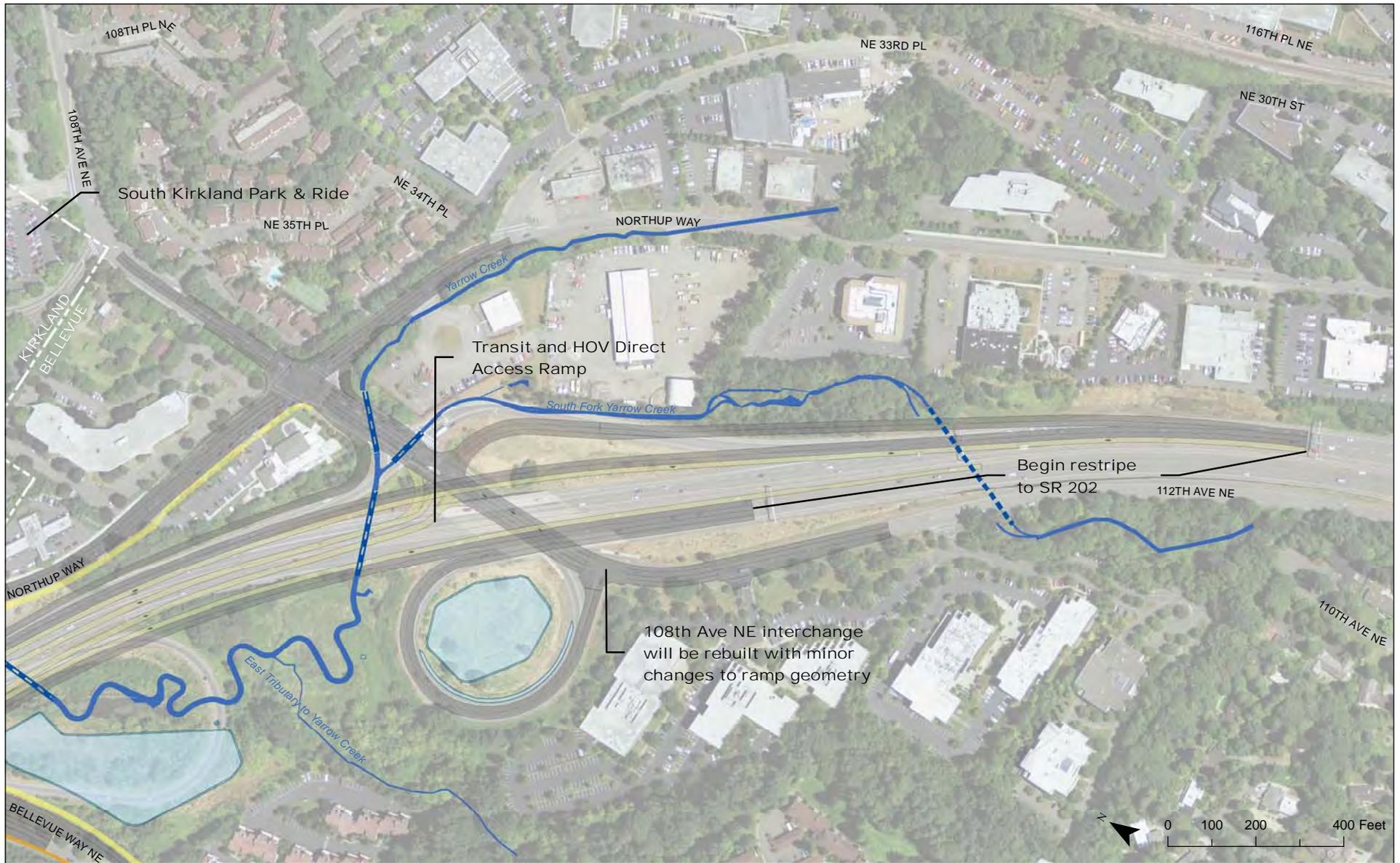


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|------------------------------------|-----------------------------------|----------------------|
| Proposed Stream | Lid | General-Purpose Lane |
| Proposed Fish Passable Culvert | Park | HOV/Transit Lane |
| Proposed Non-Fish Passable Culvert | Regional Bicycle/ Pedestrian Path | Stormwater Feature |
| Existing Culvert | Points Loop Trail | Transit Stop |
| Proposed Noise Wall | | |

Source: City of Bellevue (1999) GIS Data (City Limits), King County (2006) Aerial Photo, and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

**Exhibit 4-2. Project Features
Plate 4**

Medina to SR 202: Eastside Transit and HOV Project



- | | | |
|------------------------------------|-----------------------------------|----------------------|
| Proposed Stream | Lid | General-Purpose Lane |
| Proposed Fish Passable Culvert | Park | HOV/Transit Lane |
| Proposed Non-Fish Passable Culvert | Regional Bicycle/ Pedestrian Path | Stormwater Feature |
| Existing Culvert | Points Loop Trail | Transit Stop |
| Proposed Noise Wall | | |

Source: City of Bellevue (1999) GIS Data (City Limits), King County (2006) Aerial Photo, and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

**Exhibit 4-2. Project Features
Plate 5**

Medina to SR 202: Eastside Transit and HOV Project

Page 4-10, last paragraph

The Bellevue Way NE bridge over SR 520 will be widened to provide landscaping on either side and a shared use path on the east side. The configuration of Bellevue Way NE over SR 520 will consist of two southbound and northbound lanes that will pass through signalized intersections, plus ~~turn lanes at eastbound and westbound ramp terminals~~ a double turn lane for vehicles entering westbound SR 520. A northbound left-turn lane will extend beyond the south traffic signal for vehicles traveling westbound on SR 520.

Page 4-15, first paragraph

Because of the steep terrain, the regional bicycle/pedestrian path and Points Loop Trail will be at different elevations. Support walls will be required to keep the regional path slope at less than a 5-percent grade, per ~~AASHTO-ADA~~ standards. (Railings will be installed ~~where there is a drop-off greater than 36 inches~~ in accordance with the WSDOT Design Manual.) Noise walls may be installed between the regional path and the roadway in some places. Please see Chapter 5.5 for more information on noise wall locations.

Page 4-15, second paragraph

Between 108th Avenue NE and SR 202 (approximately 6.2 miles), the eastbound and westbound lanes will be restriped to shift the HOV lane from the outside lane to the inside lane. The work will also include moving the existing HOV signs on the outside to the inside, or in some cases replacing them with new signs. The restriping work will also include the addition of an eastbound auxiliary lane that extends from 108th Avenue NE to the off-ramp to southbound I-405.

Page 4-17, third paragraph

Increased Open Channel Habitat

Channel realignments and culvert removals and replacements will result in a gain of ~~980820~~ linear feet of open channel habitat within fish-bearing streams, including opening up ~~860787~~ linear feet of stream channel currently confined in culverts.

Page 4-17, last paragraph

The project will result in an increase in impervious surfaces due to roadway widening. To protect surface water resources, a new stormwater treatment system will be installed to treat, detain (where required), and release stormwater runoff. This system is designed to provide treatment and detention that will result in runoff quality comparable to forested conditions (that is, prior to development of the region). While it is anticipated

that the project will add approximately 24 acres of new pollution-generating impervious surfaces (PGIS), the final stormwater management system will treat over ~~62~~ 57 acres of PGIS for water quality.

Page 4-18, first paragraph

Noise walls are proposed for the project from Evergreen Point Road to just west of Bellevue Way NE, a distance of approximately 2 miles, on both sides of SR 520. Overall, ~~464~~ 448 properties will receive benefit from the proposed noise walls.

Some residences located in the vicinity west of Bellevue Way NE along the south side of SR 520 will not benefit from noise walls due to steep topography and ambient noise from adjacent local roadways. For more information on noise and noise mitigation, please see Chapter 5.5 and Chapter 6, respectively.

Page 4-18, last paragraph

Stormwater flow control and stormwater quality treatment within WSDOT-owned right of way is determined by requirements of the *Highway Runoff Manual* (WSDOT 2008a). This project team has designed the stormwater treatment facilities to comply with the *Highway Runoff Manual*. Stormwater flow control and stormwater quality treatment outside of WSDOT-owned right of way is determined by local jurisdictions stormwater plans. Both basic and enhanced stormwater treatment best management practices (BMPs) will be used based on criteria from the *Highway Runoff Manual*. ~~Basic stormwater treatment BMPs will be used for city-owned streets, and enhanced stormwater treatment BMPs will be used for WSDOT-owned roadway runoff. The amount of BMPs to be used is determined by surface area of impervious surfaces (defined as acres). Impervious surface quantities acres are used to then determine the size of the stormwater facilities. Two types of facilities will be used: water quality treatment and water quantity control. Some facilities provide both functions depending upon discharge location.~~ The sizes of the facilities are usually discussed in terms of the volume of runoff they hold (in acre-feet) for detention of surface area for treatment.

Page 4-19, second paragraph

The area from the approach of the Evergreen Point Bridge to Evergreen Point Road (approximately ~~4.4~~ 1.1 acres of impervious surface) will be treated for water quality by the use of a biofiltration swale. The biofiltration swale will be constructed within existing right of way and will directly discharge treated stormwater into Lake Washington under the existing Evergreen Point Bridge (see Plate 1 of Exhibit 4-2 for location).

Page 4-19, third paragraph

Stormwater collected within the Fairweather/Cozy Cove Creek basins (approximately ~~27.7~~ 27.0 acres of impervious surface) will be collected and conveyed to two constructed wetland facilities (see Exhibit 4-10) that will provide enhanced water quality treatment. Both of these facilities will discharge directly into Fairweather Bay.

Page 4-19, last paragraph

The Yarrow Creek basin is the largest basin in the study area. The project proposes to treat approximately ~~333~~ 29.0 acres in PGIS within this basin. Stormwater will be treated for water quality onsite. Stormwater detention will occur both onsite and offsite at a location or locations yet to be determined.

Page 4-20, second paragraph

In accordance with the *Highway Runoff Manual* (WSDOT 2008a), the project team modeled the pre-developed condition for stormwater detention facilities as forested till and attempted to design detention facilities to meet the *Highway Runoff Manual* requirements. The Yarrow Creek basin is the only basin where stormwater detention is required. The other basins in the project area are exempt from detention requirements as determined by the Washington State Department of Ecology. ~~Due to limited availability of right of way, WSDOT was unable to design enough~~ currently in the process of selecting and designing stormwater detention facilities to meet the detention requirement of the *Highway Runoff Manual* withinfor the Yarrow Creek basin.

Page 4-20, last paragraph

~~WSDOT will meet the requirements of the Highway Runoff Manual for both water quality treatment and detention. Where difficult to provide the required detention within the project limits, WSDOT will continue to explore solutions with regulatory agencies within the confines of the Highway Runoff Manual and the State's NPDES Permit obligations. One strategy being pursued is to identify suitable locations for stormwater detention facilities outside of the Yarrow Creek basin to offset the missing detention volume. The detention facilities will be designed to allow WSDOT to meet the needed stormwater detention requirements for this project.~~

Page 4-21, first paragraph

~~WSDOT will follow the provisions of the WSDOT Stormwater Management Program Plan (February 2009) developed under the NPDES General Permit. This Plan establishes a process for evaluating potential locations for off site stormwater detention. WSDOT has currently identified over 200 candidate sites for evaluation within State right of way.~~

Evaluations will ensure no effects to streams, wetlands, or fish habitat will occur by construction of a detention facility. A cultural resources survey would also be conducted following the provisions of the programmatic agreement prior to construction to reduce the risk of encountering cultural resources.

Page 4-21, first, second, third, and fourth bullets

- Stage 1 assumes beginning stream restoration work by constructing new culverts to provide fish passage. Associated stream restoration work will also be completed to the extent practicable where it does not conflict with future stages of construction. ~~along with a~~ Utility relocations along 108th Avenue NE will also begin. Noise walls that are freestanding will be constructed as well as retaining walls.
- Stage 2 will complete the remaining in-water work for the fish passage culverts. Associated stream restoration work will also be completed to the extent practicable where it does not conflict with future stages of construction. Stage 2 will also begin major construction, including the following: reconstructing the bridge over SR 520 at 108th Avenue NE, modifying the existing highway lanes, and constructing the lids at Evergreen Point Road, 84th Avenue NE, and 92nd Avenue NE, and the overcrossing at Bellevue Way NE.
- Stage 3 will involve construction on the highway lanes and completion the construction of the stormwater management facilities.
- Stages 4 and 5 will complete construction of the highway lanes and the transit stops, ~~construct.~~ The remaining stream restoration, will be completed; the restripe of the HOV lanes from 108th to SR 202 will be completed, and ~~open~~ the project will be opened to traffic.

Page 4-23, Exhibit 4-11

Exhibit 4-11. Anticipated Permits and Approvals

Permit	Jurisdiction
Federal	
CWA Section 404 Permit	Army Corps of Engineers
State	
CWA Section 404 Permit <u>401 Water Quality Certification</u>	Washington State Department of Ecology
Coastal Zone Management Act Consistency Determination	Washington State Department of Ecology

Exhibit 4-11. Anticipated Permits and Approvals

Permit	Jurisdiction
CWA Section 402 NPDES Construction Stormwater General Permit	Washington State Department of Ecology
Hydraulic Project Approval	Washington Department of Fish & Wildlife
Local	
Critical Areas Approval	City of Bellevue, City of Kirkland, and City of Redmond
Clearing and Grading Permit (if applicable) — including Site Development Permit and Tree Removal Permit (according to jurisdiction)	City of Bellevue, City of Clyde Hill, City of Medina, City of Redmond, Town of Hunts Point, and Town of Yarrow Point
Noise Variance	City of Bellevue, City of Clyde Hill, City of Kirkland, City of Medina, Town of Hunts Point, and Town of Yarrow Point
Utilities Permit	City of Bellevue and City of Kirkland
Retaining Wall Structural Review (if applicable)	City of Bellevue
Land Use Exemptions (if applicable)	City of Bellevue
Right of Way Permit(s) (Street Use)	City of Bellevue, City of Kirkland, City of Medina, City of Redmond, and Town of Hunts Point
Street Opening Permit(s) (Street Use)	City of Clyde Hill and Town of Yarrow Point
Land Surface Modification Permit (can be used to consolidate Critical Areas and Right of Way processes)	City of Kirkland
Shoreline Substantial Development Permit/Conditional Use	City of Medina, City of Redmond, and Town of Hunts Point

Page 5-3, second paragraph after second bullet

The “usual and accustomed” ~~fishing~~ areas of the Muckleshoot Indian Tribe are located in the project vicinity. However, WSDOT ~~has been and will work~~ continue coordinating with the staff of the Muckleshoot Indian Tribe Fisheries Division to avoid or minimize adverse effects.

Page 5-5, first paragraph

The project will not adversely affect any significant historic or archaeological resources. Several aspects of the project will have beneficial effects on historic properties adjacent to the roadway. These aspects include noise walls incorporated into the project design to reduce road noise, and landscaped lids that will dampen road noise and enhance the setting of historic properties.

Page 5-11, last paragraph

Because there were some portions of the APE that the project team was not able to investigate, WSDOT is also working with DAHP to develop a programmatic agreement to ensure that cultural resources are assessed on these parcels prior to initiation of construction. Please refer to Chapter 6 and to Appendix C, Programmatic Agreement, for additional information.

Page 5-12, second paragraph

Proposed noise walls have been incorporated into the project's design to reduce noise along much of the roadway. The proposed noise walls will have a beneficial effect on the adjacent historic properties by reducing current and anticipated noise to below existing levels.

Page 5-12, last paragraph

The NRHP-eligible residence at 2851 Evergreen Point Road, known as the James Arntson house, will not experience any adverse effects from the Build Alternative. The Arntson house will may experience beneficial visual and audible effects from the new Evergreen Point Road lid. This landscaped lid will increase green space adjacent to the property and reduce the visibility of SR 520 from the property, ~~which will partially restore the original setting of the house.~~ The lid and proposed noise walls will decrease the noise level at the Arntson house from operation of SR 520. The current noise level at this site exceeds 66 dBA. The lid and proposed noise walls will reduce the noise level and result in a noticeable noise decrease. For more specific information on noise effects, please refer to Appendix O, Noise Technical Memorandum.

Page 5-15, first paragraph

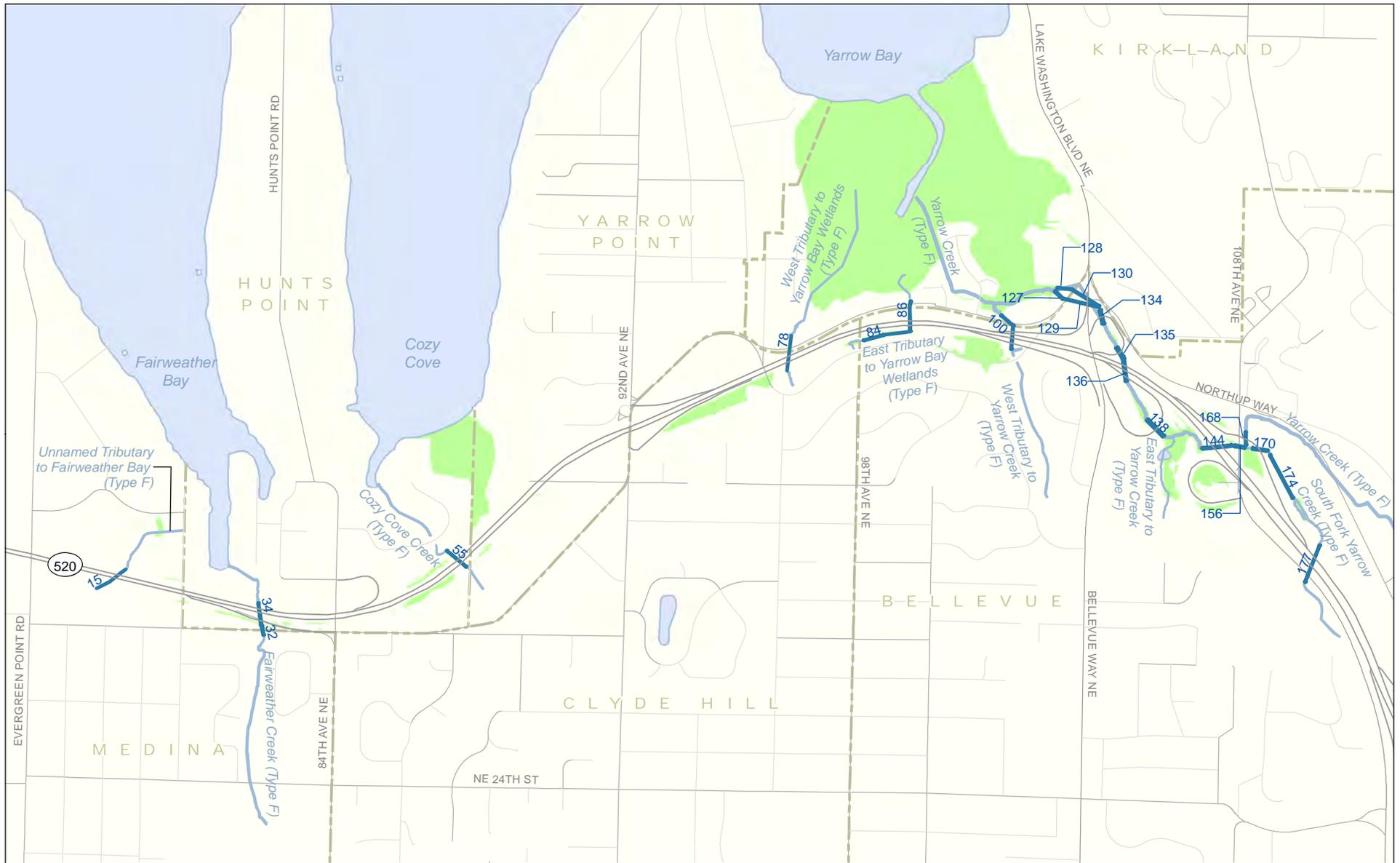
The project will temporarily disturb approximately ~~4.6~~1.4 acres of wetlands and 0.9 acre of wetland buffer, and permanently fill approximately 7.0 acres of wetlands and 1.7 acres of wetland buffer. Construction will temporarily disturb approximately 14 acres of wildlife habitat and ~~3.09~~3.23 acres of riparian buffer. Approximately 65 acres of wildlife

habitat and ~~1.72~~1.13 acres of riparian buffer will be permanently disturbed. There will be 0.24 acre of permanent stream channel impact. Channel realignments and culvert removals and replacements will result in a gain of approximately ~~980~~820 linear feet of open channel habitat within fish-bearing streams, including opening up approximately ~~860~~787 linear feet of stream channel currently confined to culverts.

Page 5-18, Exhibit 5-6

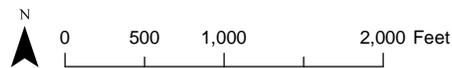
Also shown in Appendix L, Ecosystems Discipline Report, Page 64, Exhibit 20

- Added stream types to stream labels.



- 15 Existing Culvert (Structure ID)
- Stream
- Wetland
- Jurisdictional Boundary

NOTE: Water types above SR 520 may change



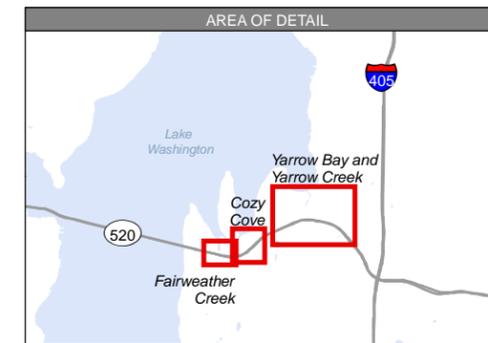
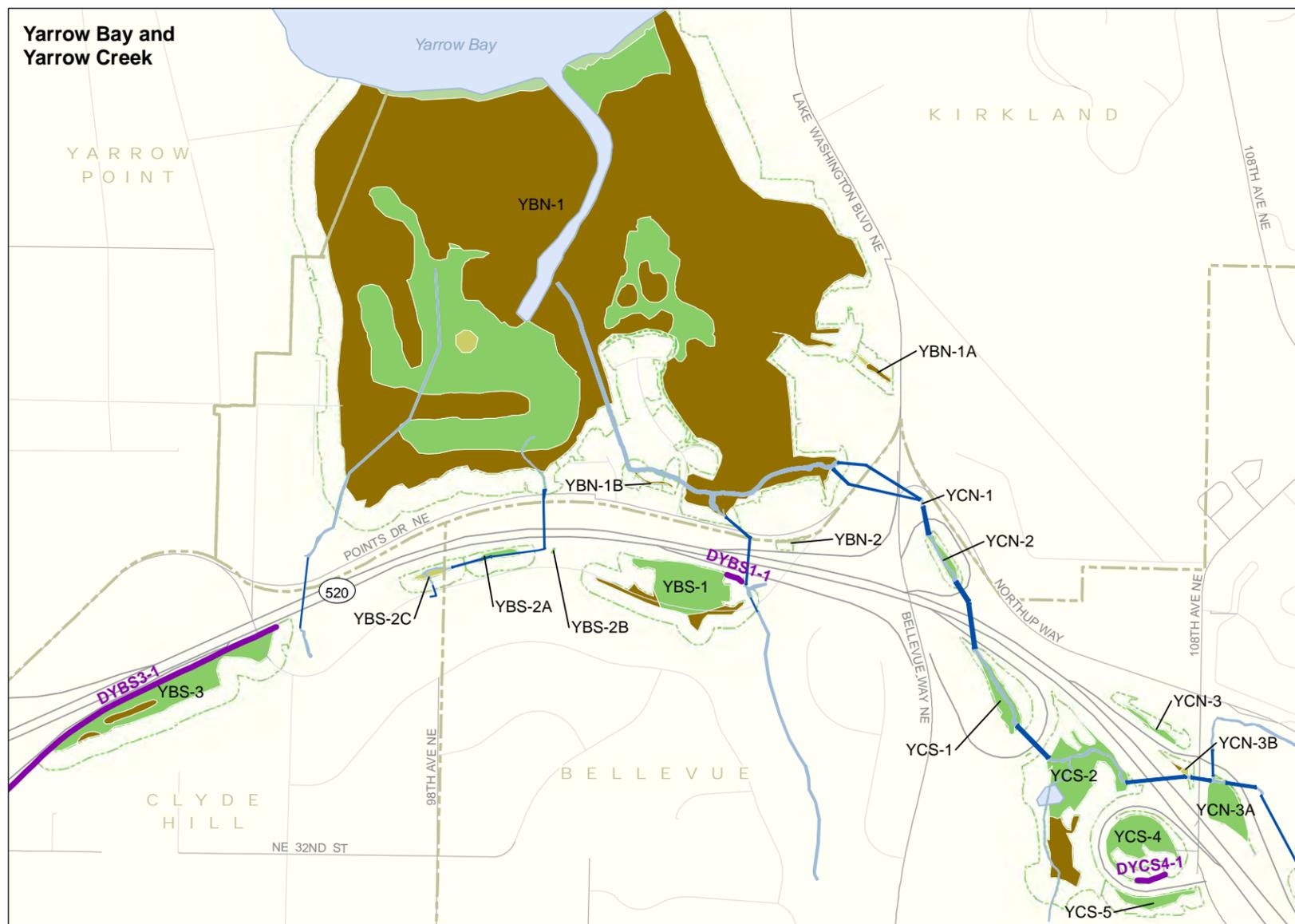
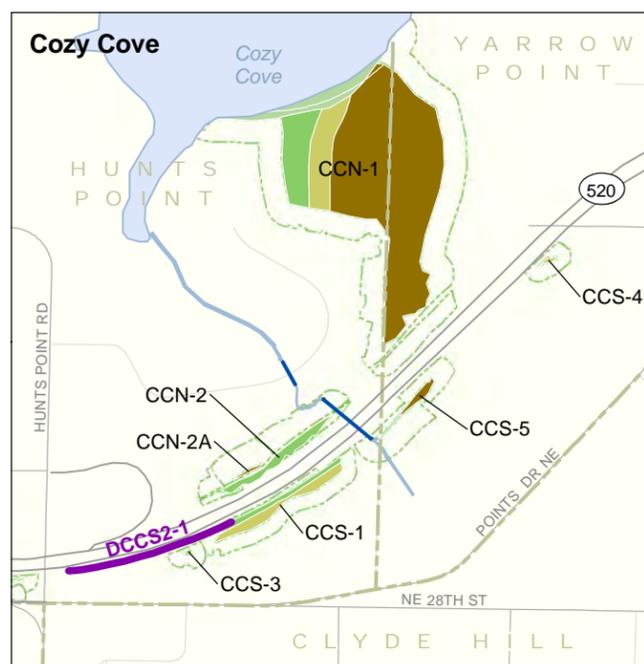
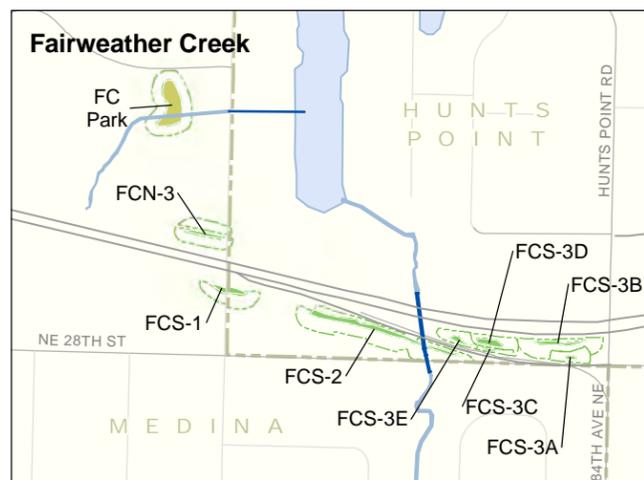
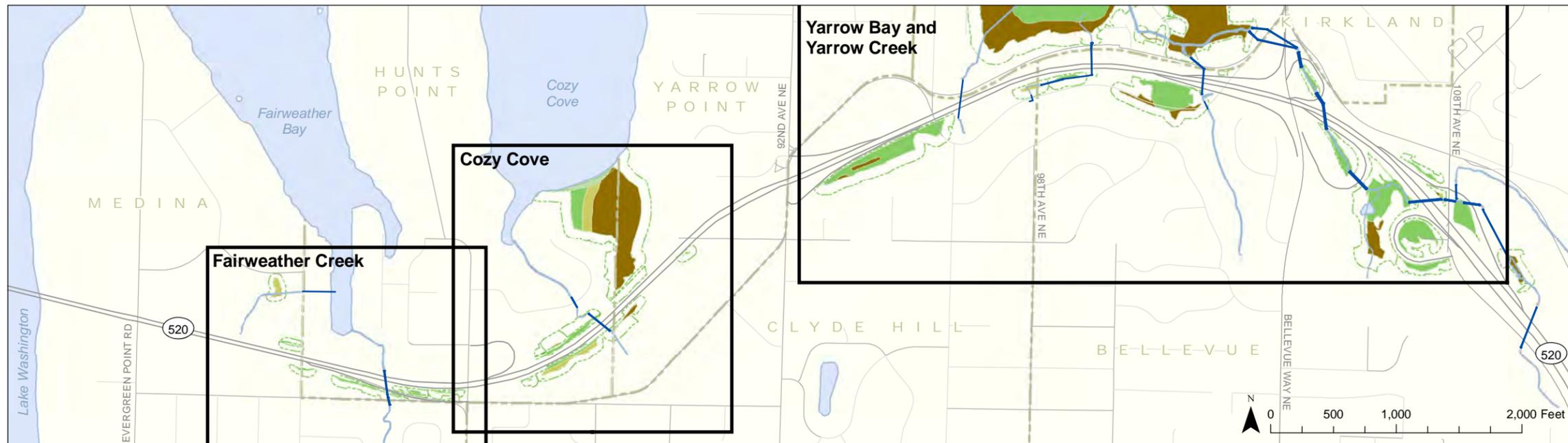
Source: Parametrix (2009) GIS Data (Wetlands and Culverts), King County (2008) GIS Data (Streams, Streets, Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91), vertical datum for layers is NAVD88.

Exhibit 5-6. Existing Stream Alignment and Culvert Locations
 Medina to SR 202: Eastside Transit and HOV Project

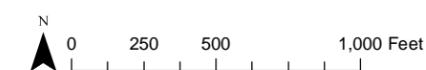
Page 5-20, Exhibit 5-7

Also shown in Appendix L, Ecosystems Discipline Report, Page 33, Exhibit 12

- Added jurisdictional ditches.



- Jurisdictional Ditch
 - Culvert
 - Stream
- Wetland Vegetation Class**
- L2AB (Aquatic Bed)
 - PFO (Palustrine Forested)
 - PSS (Palustrine Scrub-shrub)
 - PEM (Palustrine Emergent)
 - Wetland Buffer
 - Jurisdictional Boundary



Source: King County (2005) GIS Data (Street), King County (2007) GIS Data (Waterbody), CH2M HILL (2008) GIS Data (Stream and Park), and City of Bellevue (1999) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-7. Existing Wetlands and Jurisdictional Ditches
Medina to SR 202: Eastside Transit and HOV Project

Page 5-23, Exhibit 5-9

Exhibit 5-9. Prevalent Fish Species in the Project Vicinity and Their Ecological Roles

Species Scientific Name	Federal and State Status ^a	Native or Nonnative Species	Ecological Roles
Cutthroat trout <i>Oncorhynchus clarki</i>	None	Native	Young compete with other salmonids for prey. Adult cutthroat consume fish, including juvenile Chinook and sockeye salmon. Population likely smaller than some other potential predators.
Steelhead/rainbow trout <i>Oncorhynchus mykiss</i> (anadromous/resident)	FT	Native	Overlapping habitat with other salmonids; consume similar prey. Some predation on young salmonids probable.
Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT, SC	Native	Wild and hatchery origin.
Coho salmon <i>Oncorhynchus kisutch</i>	FCo for Puget Sound	Native	Probably most abundant in north Lake Washington area; primarily hatchery origin.
Sockeye salmon/kokane <i>Oncorhynchus nerka</i> (anadromous/resident)	None	Native ^b	Pelagic (living free) in open water areas.
Peamouth chub <i>Mylocheilus caurinus</i>	None	Native	Large numbers. Some occupy shallow benthic (near the bottom) habitat; consume some of same prey as young salmonids.
Threespine stickleback <i>Gasterosteus aculeatus</i>	None	Native	Numerous, substrate-oriented, often near aquatic vegetation; provide prey for larger fish.
Smallmouth bass <i>Micropterus dolomieu</i>	None	Nonnative	Major fish predator that occupies salmonid lake habitat; resulting in some prey competition. Population size uncertain.
Brown bullhead <i>Ictalurus nebulosus</i>	None	Native	Competitor with young salmonids for similar prey.
Northern pikeminnow <i>Ptychocheilus oregonensis</i>	None	Native	Major fish predator that occupies salmonid fish habitat. Former common name was "northern squawfish."
Pelagic sculpin <i>Cottus aleuticus</i>	None	Native	Pelagic in open water areas. Some overlap in prey with young salmonids. Sculpins represent 72 percent of Lake Washington biomass (the mass of biological organisms in an area).
Prickly sculpin <i>Cottus asper</i>	None	Native	Benthic habitat from shorelines to deep water. Prey competition with young salmonids. Sculpins represent 72 percent of Lake Washington biomass. Larger sculpins prey on small fish.

^a FCo=Federal Species of Concern, FT=Federally Threatened, SC=State Candidate Species

^b Introduced stock; uncertain whether there was originally a native stock inhabiting this watershed.

*Sources: Groot and Margolis 1991, Wydoski and Whitney 2003, SPU and ACOE 2008

Page 5-26, Exhibit 5-10

Also shown in Appendix L, Ecosystems Discipline Report, Page 77, Exhibit 24

Exhibit 5-10. Habitat Conditions and Salmonid Distribution in Study Area Streams

Stream Name	Washington State Department of Natural Resources (WDNR) Stream Type	Confirmed Fish Use	Presumed Fish Use
Unnamed Tributary to Fairweather Bay	Type F	None	None
Fairweather Creek	Type F	Coho salmon downstream of SR 520 ^{a,b} Cutthroat trout downstream upstream of SR 520 ^{a,g}	NA
Cozy Cove Creek	Type F	Cutthroat trout downstream of SR 520 ^c	Coho salmon
West Tributary to Yarrow Bay wetlands	Type F (downstream of SR 520)	None	Coho salmon and cutthroat trout downstream of SR 520
East Tributary to Yarrow Bay wetlands	Type F (downstream of SR 520)	None	Coho salmon and cutthroat trout downstream of SR 520
West Tributary to Yarrow Creek	Type F	Cutthroat trout upstream of SR 520 ^c Coho salmon downstream upstream of SR 520 ^{d,g}	NA
Yarrow Creek	Type F	Cutthroat trout to near headwaters ^{b,d,e,g} Coho downstream of SR 520 ^{c,d,f,g}	NA
East Tributary to Yarrow Creek	Type F	None	Cutthroat trout
South Fork Yarrow Creek	Type F	None	Cutthroat trout downstream of SR 520

^a Anderson and Ray et al. 2001

^b StreamNet 2009

^c 2002 electrofishing associated with SR 520 stream investigations

^d City of Bellevue 2001

^e WDFW 2009

^f Williams et al.1975

^g King County et al. 2001

Page 5-27, first paragraph

Wetlands

Approximately ~~1.61~~ 1.4 acres of wetland will be temporarily affected by construction of the project. Approximately 0.9 acre of wetland buffer will also be affected by construction-related activities. Temporary effects to wetlands and wetland buffers will result from installation of temporary structures, placement of temporary fill for roads or staging, and clearing activities in adjacent portions of the right of way. Wetlands and wetland buffers temporarily affected by construction activities will be restored and replanted with appropriate native vegetation.

Page 5-28, third paragraph

In addition, construction will require substantial in-water work within project vicinity streams, including temporary stream bypasses and dewatering of stream reaches. The in-water work area will be separated from the existing stream with a cofferdam (constructed of sandbags or sheet piling) to minimize the introduction of runoff or sediment into the stream channel during installation and operation of the stream diversion. Prior to any in-water work associated with the diversion inlet, the diversion location will be screened-off with upstream and downstream block nets, and all fish will be removed within the work area. All fish exclusion and removal activities will follow NOAA Fisheries-approved WSDOT protocols for these activities (WSDOT 2009a). With these techniques and application of appropriate BMPs, minimal disturbance to fish populations is anticipated, although individual fish could still be harmed.

Page 5-28, fourth paragraph

Project construction will require clearing of riparian buffers for construction access. During construction, about ~~3.09~~ 3.23 acres of riparian vegetation will be cleared along several streams.

Page 5-28, last paragraph

Temporary clearing of vegetation along affected stream corridors could result in a short-term reduction of in-stream cover, which would have adverse effects on fish. Temporary effects would occur until plants installed in the affected stream corridors are established. Growth rates differ among vegetation types and species, and depend on soil and other habitat conditions. Generally, emergent vegetation takes one year to establish, whereas woody vegetation (for example, shrubs) can take several years to become established. Trees could take 10 years or more to produce vegetation cover similar to existing conditions. The equivalent habitat function for the plantings may vary over time until similar vegetation cover that exists today is achieved. Although the existing riparian conditions along the streams vary, the majority of streams have

riparian buffers that are already moderately to severely degraded. The existing buffers of streams with the greatest amount of project effects consist primarily of non-native vegetation such as reed canarygrass, and the affected areas are relatively small when compared with the amount of overall buffer for the individual streams. Based on these factors, many of the functions that riparian vegetation provides (such as large woody debris [LWD] recruitment, contribution of organic material, and regulation of stream temperatures) are already altered and will not be substantially affected compared with existing conditions.

Page 5-29, first paragraph

Furthermore, all riparian buffer areas that undergo temporary clearing for construction will be fully revegetated following completion of construction activities. Native trees and shrubs, including fast-growing species such as willows, will be planted, and maintenance and monitoring procedures will be followed to ensure proper levels of plant survival and cover, ultimately resulting in an improved riparian zone condition with increased densities of native shrubs and trees.

Page 5-31, second paragraph

Detention and treatment of stormwater runoff from new and existing roads will affect wetland functions to varying degrees. Hydrologic functions (for example, reducing flooding and erosion) will likely not be affected because the Build Alternative will be designed according to the *Highway Runoff Manual* (WSDOT 2008a). Potential for impacts to groundwater recharge through the creation of new impervious surface is anticipated to have negligible effects due to local conditions and project design elements. The amount of wetland area available to provide water quality functions will be reduced; however, stormwater facilities constructed and treatment of stormwater runoff that is currently not treated will partially offset the loss of water quality functions provided by wetlands in the study area.

Page 5-34, second paragraph

To the extent possible, project design will avoid and minimize loss of open stream channel, as well as upgrade fish passage structures within the right of way that convey fish-bearing streams. Overall, fish passage conditions will improve on five streams; whereas today, SR 520 acts as a barrier to fish. Project-wide, channel realignments and culvert removals and replacements will result in a gain of ~~980820~~ linear feet of open channel habitat within fish-bearing streams, including daylighting approximately ~~860787~~ linear feet of stream channel currently confined in culverts (see Exhibit 5-13). The overall results of the stream crossing improvements and the channel realignments will be a substantial net increase in both instream habitat quality and quantity within the study area.

Page 5-34, third paragraph

To the extent possible, project design will avoid and minimize loss of open stream channel, as well as upgrade fish passage structures within the right of way that convey fish-bearing streams. However, two fish passage barrier culverts will be extended or replaced, but not upgraded to fish passage status due to limited low quality habitat upstream of SR 520 which would provide extremely minimal gains for fish. Outlet protection will be provided to minimize erosion at the outlet. One of the existing culverts is perched and creating downstream channel instability. Improvements associated with that culvert outlet will reduce erosion and downstream sedimentation, and will improve downstream substrate conditions. Effects due to the erosion measures will be mitigated.

Page 5-35, Exhibit 5-13

Also shown in Appendix L, Ecosystems Discipline Report, Page 106, Exhibit 33

Exhibit 5-13. Effects of the Build Alternative on Eastside Culvert Crossings

Stream	Is Affected Stream Reach Fish-Bearing? (Yes/No)	Net Change in Number of Culverts within Stream	Net Change in Length of Stream Confined in Culvert (Linear Feet) ^a	Net Change in Open Channel Length of Stream (Linear Feet) ^a
Fairweather Creek	Yes	-1	-50 <u>-28</u>	<u>44</u> +17
<u>Unnamed Tributary to Fairweather Bay</u>	<u>Yes</u>	<u>0</u>	<u>+57</u>	-63
Cozy Cove Creek	Yes	0	-17 <u>-6</u>	-31 <u>-36</u>
Tributary to Cozy Cove Creek	No	0	0	-10
West Tributary to Yarrow Bay Wetlands	No <u>Yes</u>	0	<u>+67</u> +58	-67 <u>-109</u>
East Tributary to Yarrow Bay Wetlands	No	<u>±0</u>	+125	-195
West Tributary to Yarrow Creek	Yes	1	-12 <u>-9</u>	-76 <u>-87</u>
Tributary of West Tributary to Yarrow Creek	No	<u>±0</u>	0	-84
Main Stem Yarrow Creek	Yes	-4	-470 <u>-488</u>	<u>690</u> +724
East Tributary to Yarrow Creek	Yes	0	0	<u>0</u> +5
South Fork Yarrow Creek	Yes	-1	-500 <u>-496</u>	<u>709</u> +658
Totals		-3<u>-5</u>	-857<u>-787</u>	<u>980</u>+820

^a Negative numbers indicate that the channel length confined to a culvert or open channel would decrease. Please note that the realignment of culverts results in differences between culvert length added/lost and open channel added/lost.

Unnamed Tributary of Fairweather Bay is not crossed by SR 520

Page 5-36, first paragraph

Riparian Vegetation

Removing streamside vegetation to construct the expanded roadway will reduce the amount and quality of LWD recruited to streams, reduce stream shade that in turn could increase stream temperatures, and destabilize stream banks, thus adding to stream bank erosion. Effects due to project operation on regulated riparian buffers will occur along three streams in the study area, totaling approximately 1.72.13 acres.

Page 5-36, second paragraph

Depending on the stream, the amount of permanent buffer that will be removed because of placement of fill will range from less than 0.40.01 acre to 0.60.92 acre under the Build Alternative. Clearing of vegetative material along affected stream corridors could temporarily reduce in-stream cover, which could have adverse effects on fish. Temporary effects would occur until plants installed in the affected stream corridors are established. Growth rates differ among vegetation types and depend on soil and other habitat conditions. Generally, emergent vegetation takes one year to establish, whereas woody vegetation (for example, shrubs) can take several years to become established.

Page 5-49, first paragraph

Project construction will require WSDOT to acquire about 9.4 acres – full acquisition of 4013 parcels and partial acquisition of 23 parcels. An additional 1.3 acres will be temporarily affected during construction. Land use changes will not change the character of the area. Project construction could have minor short-term effects on properties, including increased noise, dust, traffic, and odor from equipment operations, and/or glare from construction lighting.

Page 5-54, second paragraph

How will the project affect land use, economics, and relocation during construction?

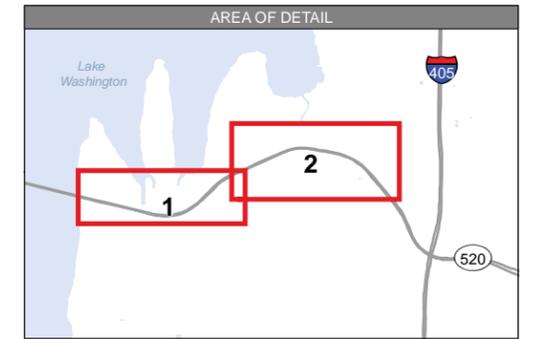
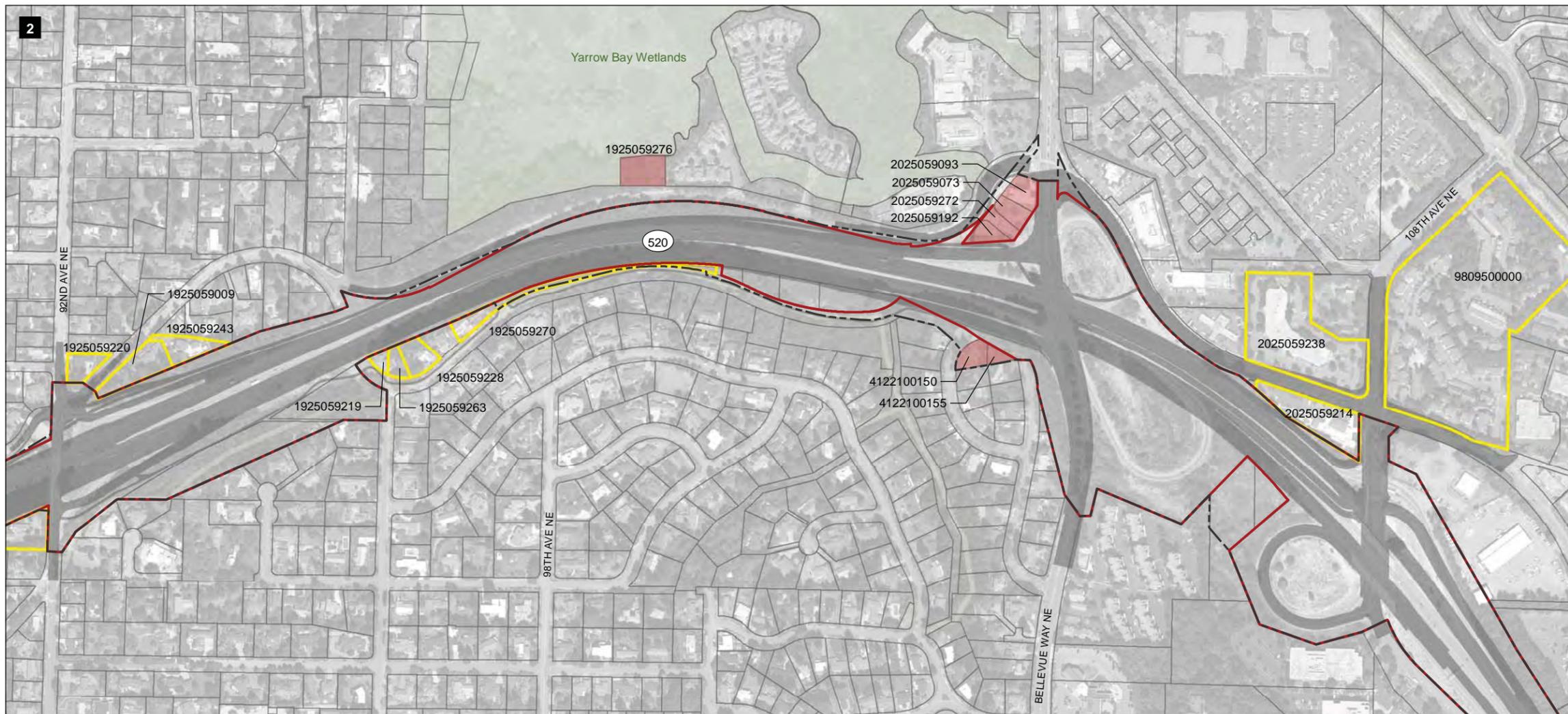
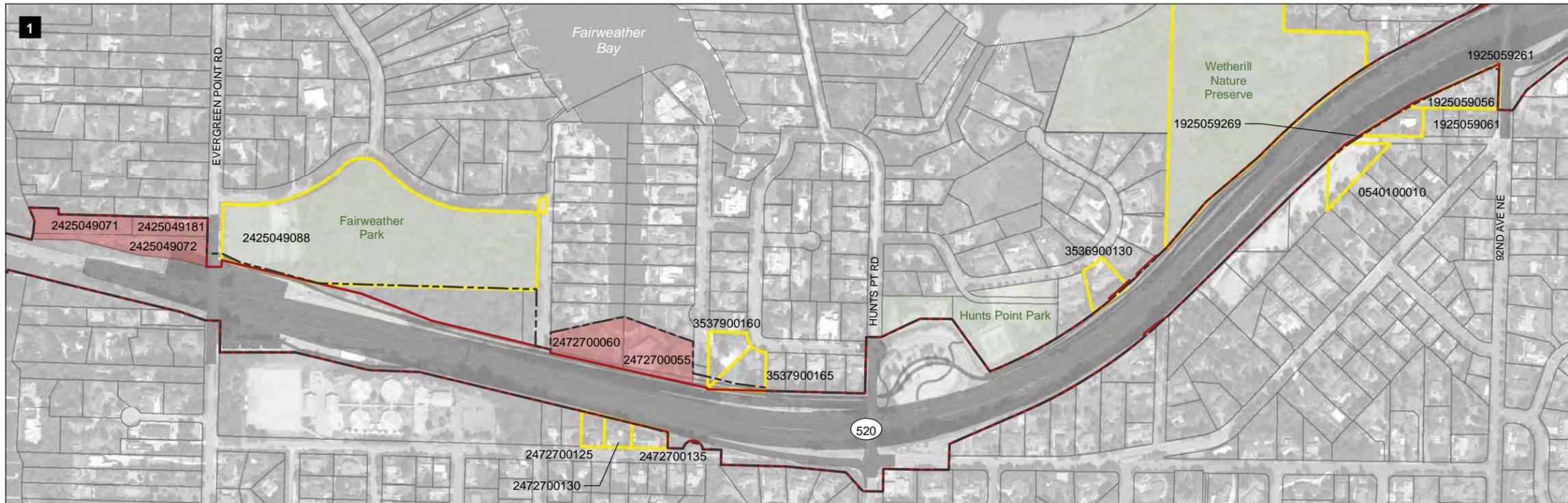
Project effects on land use patterns in the study area and the local economy include the permanent effects of property acquisitions needed for project construction. Exhibit 5-19 shows the acquisition map. Widening of SR 520 will occur mostly within existing WSDOT-owned property with the exception of fully acquiring 4013 parcels (5

residences, ~~46~~ vacant, and ~~12~~ commercial properties) and partially acquiring 23 parcels. Overall, the project will require acquisition of roughly 9.4 acres for right of way (commercial – ~~0.59~~0.56 acres; residential – ~~4.97~~5.73 acres; vacant – ~~1.62~~0.96 acres; other – ~~2.21~~2.16 acres).

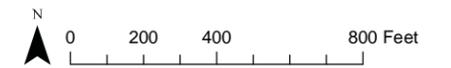
Page 5-55, Exhibit 5-19

Also shown in Appendix N, Land Use, Economics, and Relocation Technical Memorandum, Page 35, Exhibit 16

- Updated to reflect current acquisition assumptions.
- Revised identification of partial acquisitions and permanent easements.



- Properties Affected by Full Acquisition
- Properties Affected by Partial Acquisitions and Permanent Easements
- Parcel
- Proposed Right-of-way
- Existing Right-of-way
- Pavement
- Park



Source: City of Bellevue (2004) GIS Data (Parcel), City of Redmond (2009) GIS Data (Parcel), City of Kirkland (2008) GIS Data (Parcel) King County (2008) GIS Data (Parcel, Stream, Street) King County (2007) GIS Data (Waterbody), CH2M HILL (2008) GIS Data (Park). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-19. Acquisitions Map

Medina to SR 202: Eastside Transit and HOV Project

Page 5-60, second paragraph

The Traffic Noise Model was used to estimate operational noise levels at ~~168~~182 locations in the project corridor. Modeling was performed to determine what locations in the study area exceeded the FHWA and Washington State noise abatement criteria (NAC). Therefore, peak-hour traffic noise levels were calculated for existing conditions using current traffic volumes and for the Build Alternative and No Build Alternative using predicted 2030 traffic volumes, with and without noise mitigation measures.

Page 5-61, third bullet

- Hunts Point, Clyde Hill, Yarrow Point and Kirkland — North of SR 520 between 84th Avenue NE and 108th Avenue NE (east of Bellevue Way NE).

Page 5-61, fourth bullet

- Hunts Point, Clyde Hill, Yarrow Point and Bellevue — South of SR 520 between 84th Avenue NE and 108th Avenue NE (east of Bellevue Way NE).

Page 5-61, last paragraph

From the measurements and modeling described above, WSDOT concluded that current noise levels in the study area range between 48 and 72 A-weighted decibels (dBA). The baseline conditions in the study area include traffic on SR 520 and local arterials such as Bellevue Way NE, 84th Avenue NE, NE 28th Street, NE Points Drive ~~Points Drive~~ NE, 92nd Avenue NE, and Evergreen Point Road. Under these conditions, some study area locations already approach, meet, or exceed the NAC. There are approximately ~~128~~155 residences in the study area that meet or exceed the Washington state NAC of 66 dBA.

Page 5-63, second paragraph

The Build Alternative peak-hour traffic noise levels were modeled for the same ~~168~~182 locations in the study area as existing peak-hour traffic conditions. Compared with today's and the projected 2030 No Build Alternative noise levels, the proposed Build Alternative, which includes noise walls and lids at the three overpasses, will reduce the noise levels substantially throughout the SR 520 project corridor. Overall, the Build Alternative will lower the number of residences where noise levels exceed the NAC from ~~128~~155 today to ~~20~~36. All of the remaining ~~20~~36 properties exceeding the NAC do so because of noise from arterial roads, such as Bellevue Way NE, 92nd Avenue NE, and 84th Avenue NE, or because area topography limits the effectiveness of noise walls. The Build Alternative with the proposed noise walls will not cause any substantial (more than 10 dBA) increases in noise.

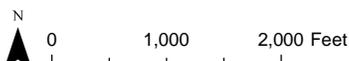
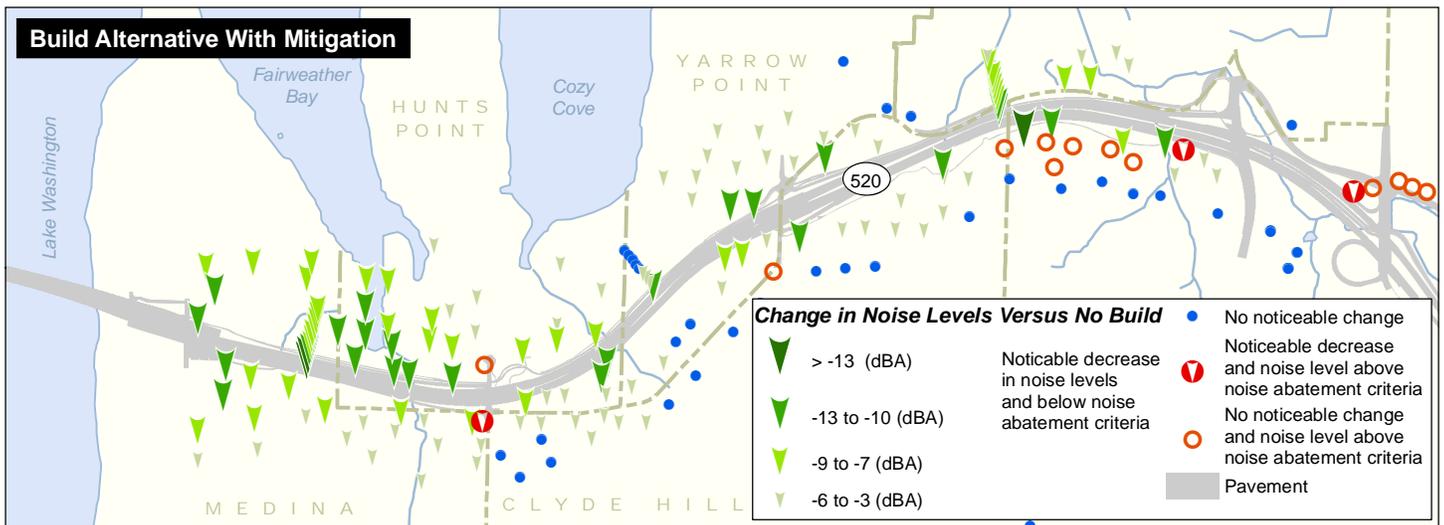
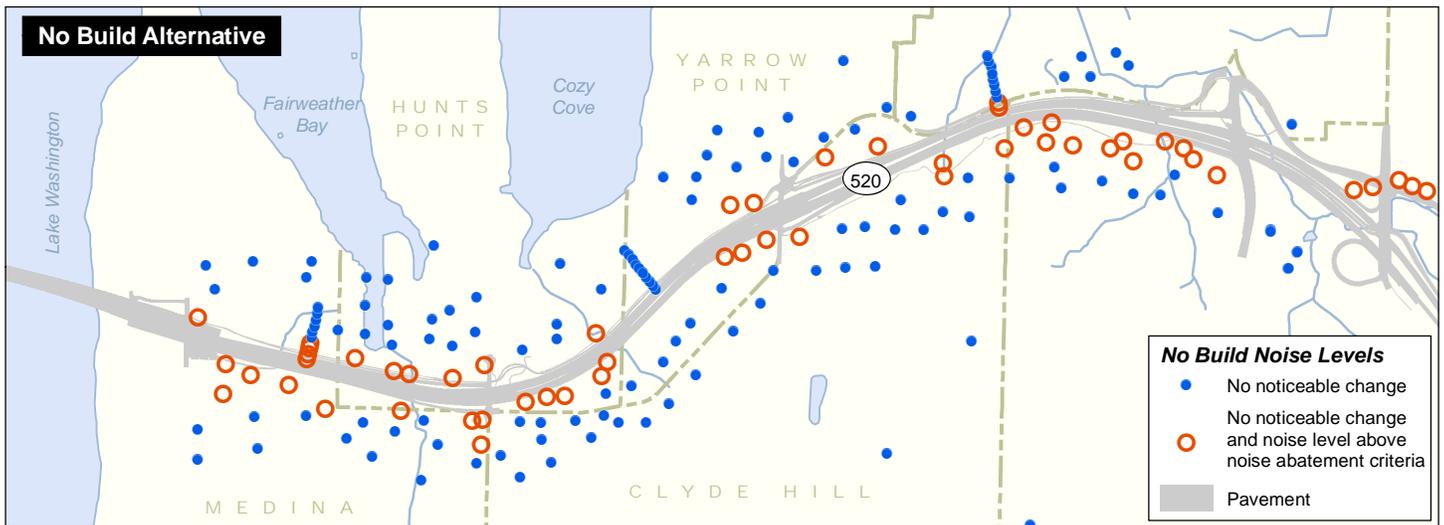
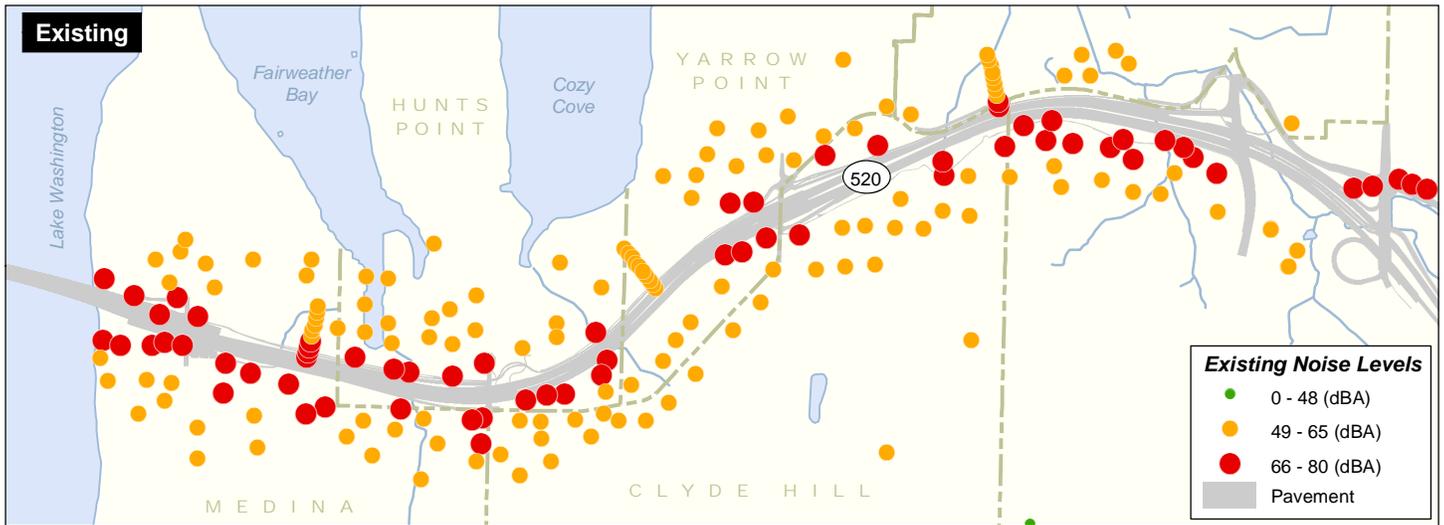
Page 5-63, last paragraph

Noise walls are proposed for the Build Alternative from the Evergreen Point Road lid to just west of Bellevue Way NE. The noise walls will be virtually continuous through the entire area except for breaks at 84th Avenue NE and 92nd Avenue NE, where the noise walls will be integrated with the lids. The overall project corridor noise walls will be approximately 18,000 feet long with heights varying from 8 feet to ~~26~~20 feet. The taller noise walls will be necessary in areas where residents are located uphill from the project corridor. For the purpose of evaluating the noise walls under WSDOT cost criteria, the proposed noise walls on the north and south side of SR 520 were considered one complete noise wall system with breaks for the 84th Avenue NE and 92nd Avenue NE lids. Exhibit 5-22 shows the locations of the proposed noise walls.

Page 5-64, Exhibit 5-21

Also shown in Appendix O, Noise Technical Memorandum, Page 40, Exhibit 19

- Updated noise modeling data.
- Added locations and data for the Lake Washington Boulevard trail
- Added locations and data for the area between Bellevue Way NE and 108th Avenue NE.



Source: King County (2007) GIS Data (Waterbody), City of Bellevue (1999) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-21. Noise Levels Changes in the Study Area

Medina to SR 202: Eastside Transit and HOV Project

Page 5-66, first paragraph

A total of ~~464~~⁴³⁷ residential equivalents (~~55~~⁶⁵ with noise levels of 70 dBA or higher) will benefit from construction of the proposed noise walls under the Build Alternative. Because the Build Alternative includes construction of proposed noise walls in the analysis, the number of residential equivalents experiencing traffic noise effects under this alternative will be reduced compared with existing conditions. On average, the Build Alternative will meet noise abatement objectives by providing an average of 7 to 10 dBA noise reduction.

Page 5-66, third paragraph

If a noise wall described in the EA is not constructed as part of the project, it will normally be due to one of three issues: the noise reduction of the noise wall is insufficient and does not meet WSDOT noise reduction requirements; the cost of the wall exceeds the allowable amount; or there are constructability issues such as unstable ground. Once the noise wall locations and heights are ~~finalized~~ determined, WSDOT will engage coordination with residents adjacent to the proposed noise walls will be performed in an advisory community polling process to gauge support for the noise walls. In addition, alternative noise-reduction strategies may be considered along portions of the corridor where feasible.

Page 5-67, last paragraph

Under the No Build Alternative, there are approximately ~~146~~¹⁷³ residences in the study area where the state traffic NAC of 66 dBA would be met or exceeded. Under the No Build Alternative, noise levels are projected to increase in 2030 by only 1 to 2 dBA in most locations, an amount that is not normally noticeable to people with average hearing. However, with this increase, noise levels would exceed the NAC at an additional 18 residences, bringing the total to ~~146~~¹⁷³ from the current estimate of ~~128~~¹⁵⁵ residences.

Page 5-73, second paragraph

The Bellevue School District and the Lake Washington School District serve the study area. While there are no public schools located in the study area, there are seven schools in these two districts with attendance boundaries that cross the study area. There are two private schools (Bellevue Christian School/Three Points Elementary in Medina and Eastside Preparatory School in Kirkland) and one public post-secondary school (Bellevue Community College- North Campus) in the study area (Exhibit 5-24). In addition, there are private child care facilities and preschools are located in the study area.

Page 5-92, first bullet

Freeway Transit Stations

- The Evergreen Point Road and 92nd Avenue NE freeway transit stations may need to be closed for short durations (4 to 6 months). Construction restrictions will be in place to prevent closure of both stations at the same time. However, the park and ride lot at Evergreen Point Road may be closed for up to two years during construction of the lid. WSDOT will work with local transit agencies to provide advance notice and alternatives for the users of the facility.

Page 5-105, Exhibit 5-33

Exhibit 5-33. View Looking ~~West~~Northeast from Entrance of the Evergreen Point Road Park-and-Ride

Page 5-111, first paragraph

Construction activities such as replacing culverts or installing retaining walls could temporarily alter the quality or flow of surface water bodies or groundwater in the study area. The completed project will add 24.2 acres of new pollution-generating impervious surface (PGIS) to the study area and treat a total of ~~62.3~~ 57.1 acres of PGIS. Stormwater associated with impervious surfaces will be treated for pollutants and controlled for flow rate increases. The project will have minimal or no effect on groundwater.

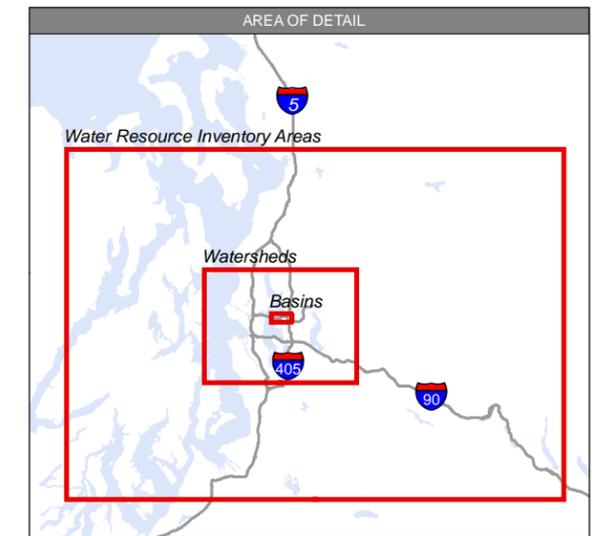
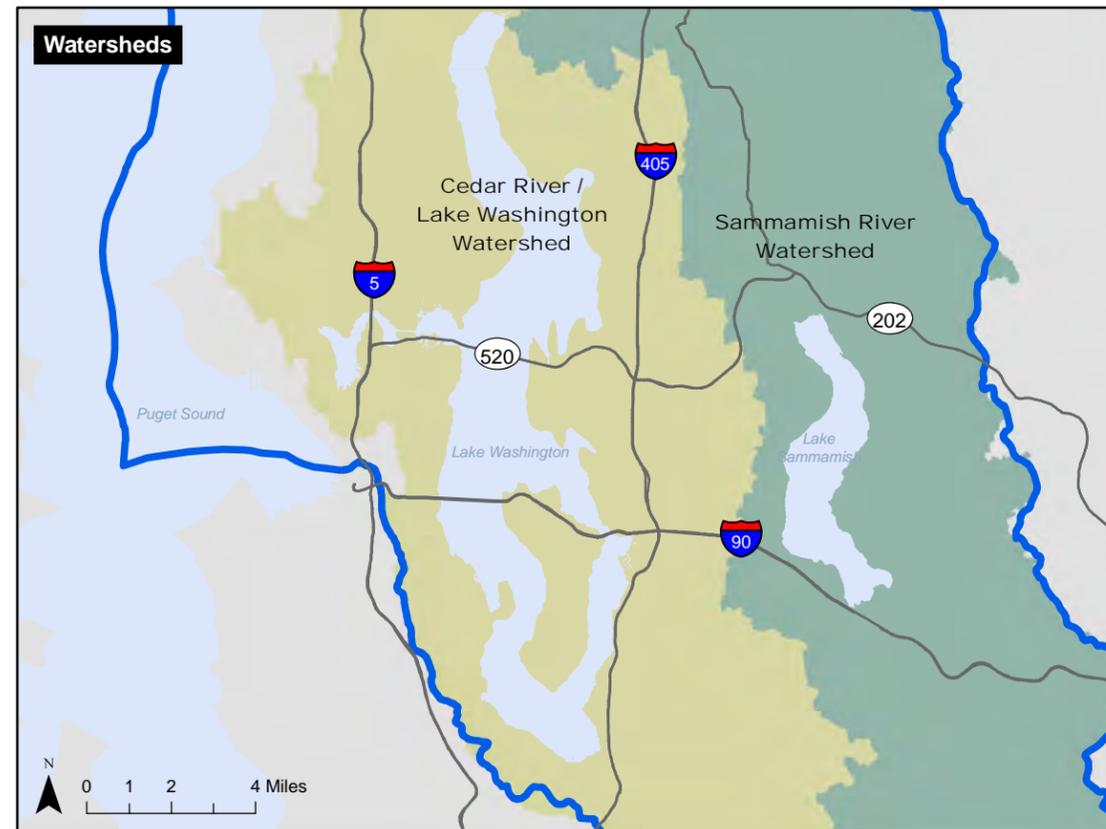
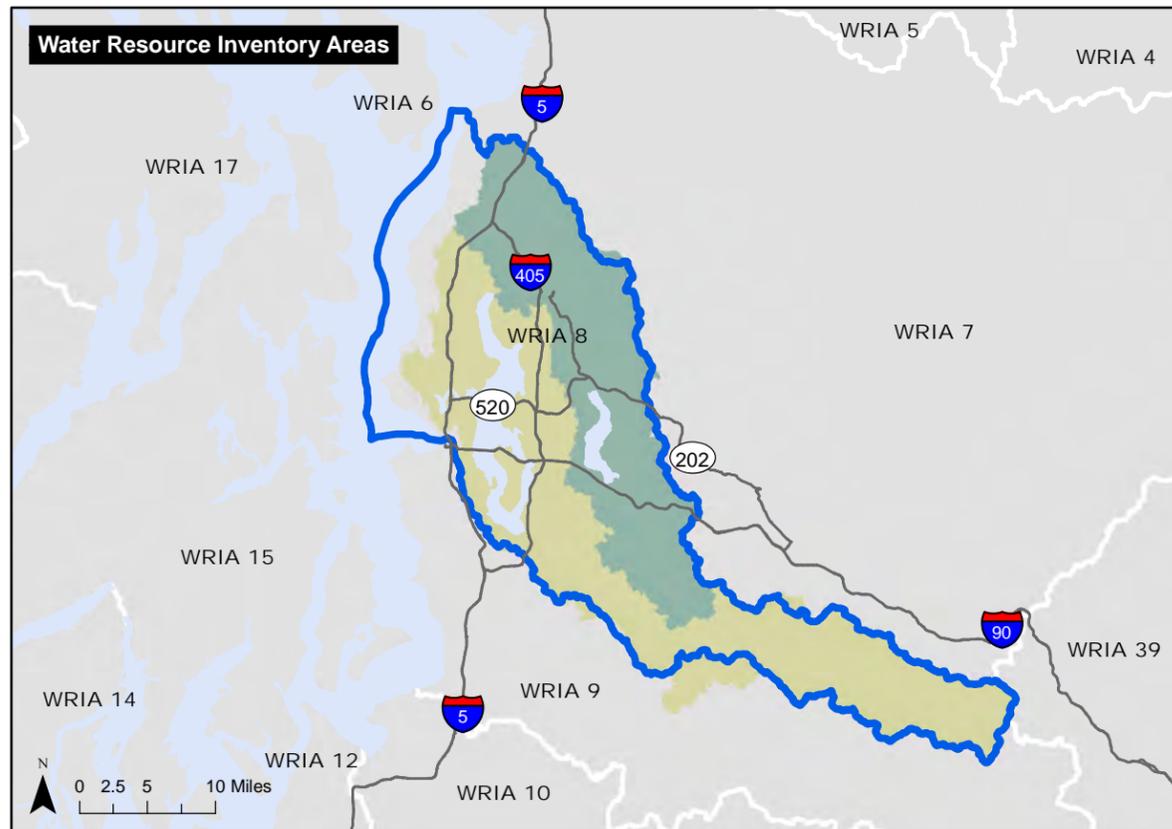
Page 5-113, last paragraph

Exhibit 5-37 shows the surface water bodies in the study area: Lake Washington, Fairweather Creek, Unnamed Tributary to Fairweather Bay, Cozy Cove Creek, and Yarrow Creek (including the east and west tributaries). These water bodies are located in developed suburban areas where impervious surfaces cover 30 to 33 percent of the stream basins.

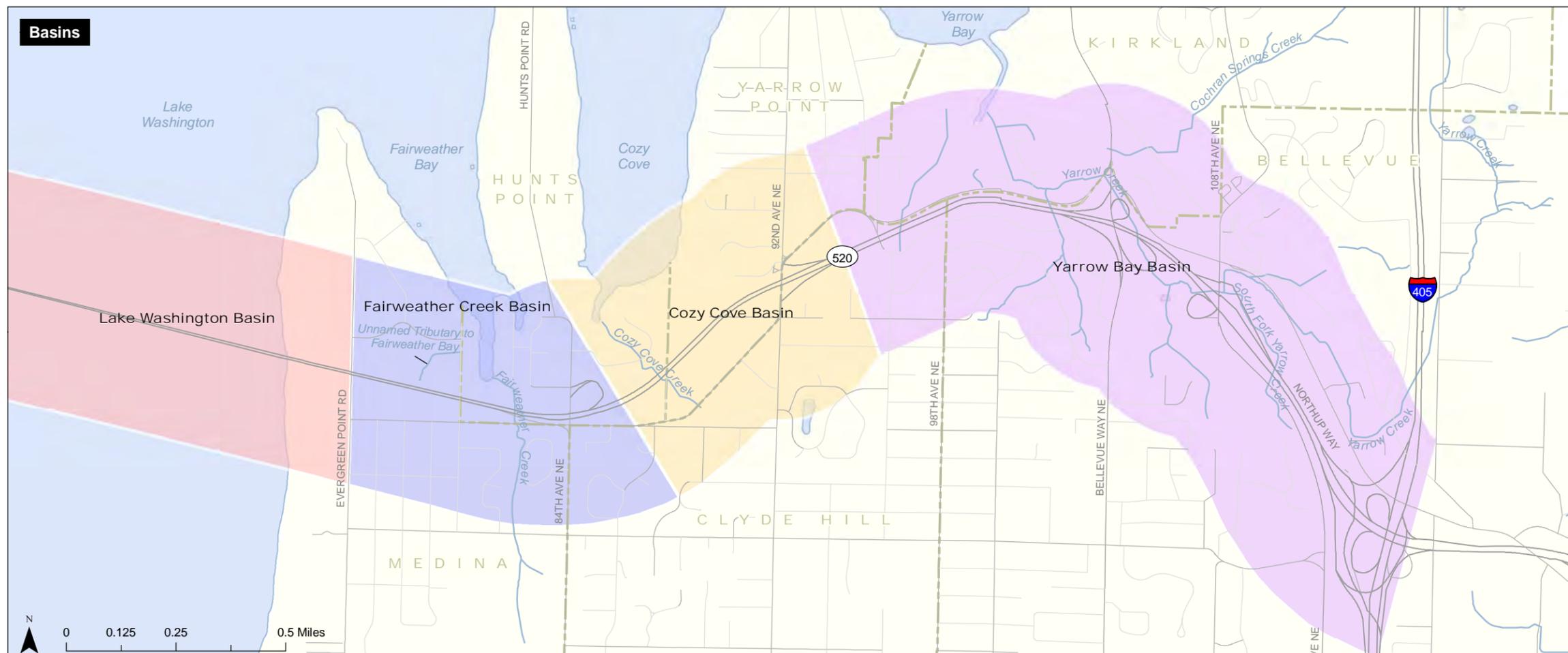
Page 5-114, Exhibit 5-37

Also shown in Appendix L, Ecosystems Discipline Report, Page 63, Exhibit 19

- Removed “Bay” from Fairweather Creek label.



- Water Resource Inventory Area 8 Boundary
- Water Resource Inventory Area
- Watershed**
- Cedar River / Lake Washington Watershed
- Sammamish River Watershed
- Creek Basin**
- Lake Washington
- Fairweather Creek
- Cozy Cove
- Yarrow Bay



Source: King County (2008) GIS Data (Highways, Water Bodies), Washington Department of Ecology (2000) GIS Data (WRIA). Horizontal datum for all layers is NAD83(91), vertical datum for layers is NAVD88.

Exhibit 5-37. Location of Affected Watersheds, Basins and Creeks

Medina to SR 202: Eastside Transit and HOV Project

Page 5-116, after second bullet

- **Unnamed Tributary to Fairweather Bay.** This stream has not been listed for exceedences on the Ecology 303(d) list (Ecology 2009).

Page 5-117, third paragraph

Construction and operation of the Build Alternative will result in an increase of 24.2 acres pollution-generating impervious surfaces (PGIS). The project will treat 24.2 acres of new PGIS and ~~38.1~~ 32.9 acres of ~~existing~~ replaced PGIS, for a total of ~~62.3~~ 57.1 acres of PGIS. The ~~62.3~~ 57.1 acres of PGIS will be treated for stormwater pollutants and controlled to prevent flow increases, as required by the Highway Runoff Manual (WSDOT 2008a). Treatment of ~~62.3~~ 57.1 acres of PGIS will improve water quality of the receiving water bodies in the study area.

Page 5-123, second paragraph

The highway construction would require removal of existing vegetation between the trail and SR 520; this vegetation enhances the recreational experience for trail users and serves as a buffer from the highway. Replacement of the vegetation strip with noise wall may affect the character of the trail. However, WSDOT will retain the vegetation along the trail on the opposite side from SR 520 where practicable, including the mature trees between the trail and Wetherill Nature Preserve. In addition, WSDOT will also replant exposed areas and add landscape planters to break up the wall where practicable. ~~However, the~~ The proposed noise walls would reduce noise levels in 2030 by 5 to 15 A-weighted decibels (dBA) compared with existing conditions and by 6 to 16 dBA compared with the No Build Alternative. As a result, the change in character of the trail is not anticipated to be so severe that it would impact the continued use of the trail. Many trail users may experience a more comfortable experience with the reduction in noise levels (WSDOT 2009b).

Page 5-124, first paragraph

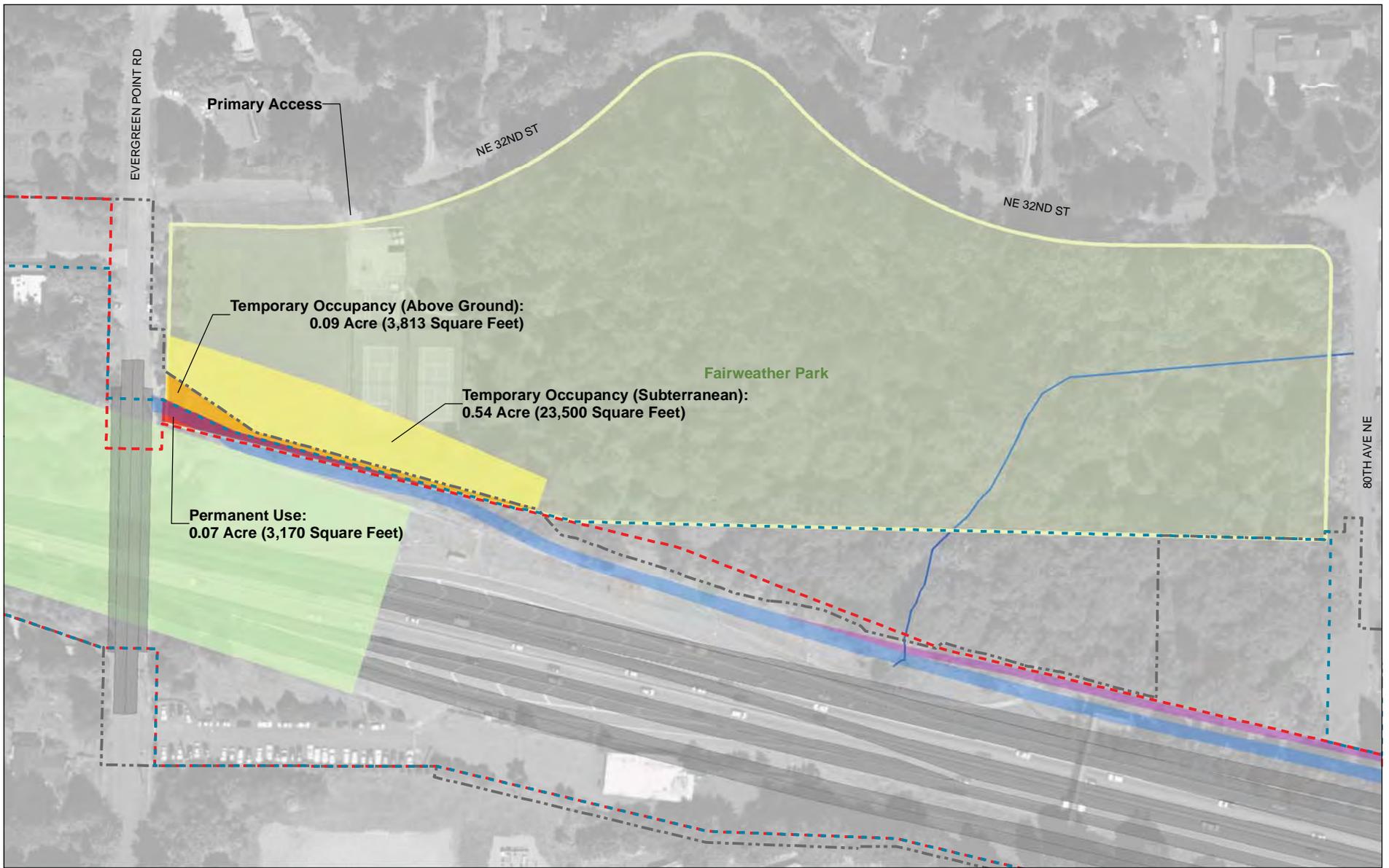
During construction, an additional ~~0.07~~ 0.63 acre of the southwest corner of the park would be temporarily occupied for construction of the Evergreen Point Road lid and relocation of the Points Loop Trail. Of the 0.63 acre of temporary occupancy, 0.54 acre would be subterranean and would accommodate tiebacks of metal or fiberglass rods. These tiebacks will support temporary shoring walls during construction of the permanent lid abutments/retaining walls. The tiebacks are anticipated to be a minimum of 4 to 5 feet below the surface. No surface uses will be impacted in this subterranean area. This area During construction, the 0.09 acre of above ground temporary occupancy would be fenced off and not available to park users for up to ~~12-18~~ months. Because the park entrance is at the north boundary of the park, access and use of the park would

continue during construction, and use of the tennis courts would not be affected. The affected area is primarily vegetated with shrubs and grasses. After construction, the area would be regraded and revegetated. During construction, the park would experience temporary construction effects such as noise and fugitive dust. However these effects would not have a severe effect on the park's activities, features, or attributes.

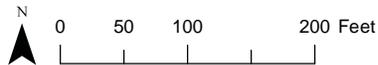
Page 5-125, Exhibit 5-39

Also shown in Appendix T, Section 4(f) Resources Technical Memorandum, Page 7, Exhibit 3

- Updated Temporary Occupancy number to include a subterranean easement.
- Added existing and proposed right of way line.
- Added a note to indicate the primary access to the park.



- Temporary Occupancy (Above Ground)
- Temporary Occupancy (Subterranean)
- Permanent Use
- Proposed Pavement
- Proposed Lid
- Limits of Construction
- Proposed Regional Bicycle/Pedestrian Path
- Proposed Points Loop Trail
- Park
- Existing Right of Way
- Proposed Right of Way



Source: King County (2006) Aerial Photo, King County (2005) GIS Data (Stream), CH2M HILL (2008) GIS Data (Park), City of Bellevue (1999) GIS Data (City Limits), and King County (2004) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

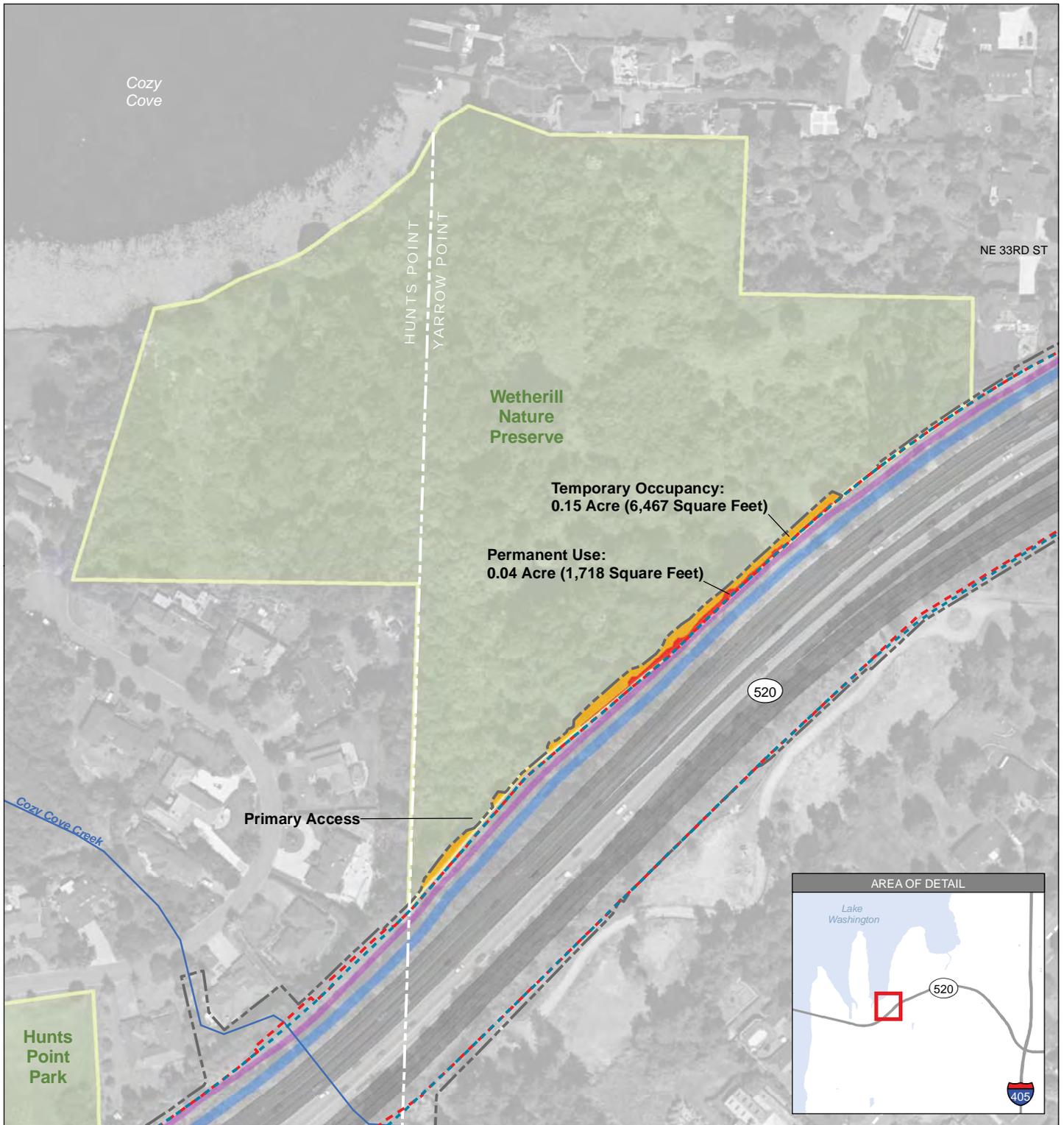
Exhibit 5-39. Fairweather Park

Medina to SR 202: Eastside Transit and HOV Project

Page 5-127, Exhibit 5-40

**Also shown in Appendix T, Section 4(f) Resources Technical Memorandum, Page 9,
Exhibit 4**

- Revised “Temporary Use” to Temporary Occupancy”
- Added existing and proposed right of way line.



- Temporary Occupancy
- Permanent Use
- Proposed Pavement
- Proposed Lid
- Limits of Construction
- Proposed Regional Bicycle/
Pedestrian Path
- Proposed Points
Loop Trail
- Park
- Existing Right of Way
- Proposed Right of Way

Source: King County (2006) Aerial Photo, King County (2005) GIS Data (Stream), CH2M HILL (2008) GIS Data (Park), City of Bellevue (1999) GIS Data (City Limits), and King County (2004) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

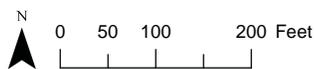


Exhibit 5-40. Wetherill Nature Preserve

Medina to SR 202: Eastside Transit and HOV Project

Page 5-128, last paragraph

The project would result in no permanent acquisition of Hunts Point Park or Yarrow Bay Wetlands. However, there would be temporary occupancy in each of these parks during project construction. In Hunts Point Park, 0.03 acre (1 percent of the total park area) in the ~~southwest~~ southeast corner of the park adjacent to Hunts Point Road would be regraded as part of the roadway construction (Exhibit 5-41). In the Yarrow Bay Wetlands, ~~0.120.22~~ 0.22 acre (less than 1 percent of the total park area) would have to be accessed for construction of a two culverts with outflow beneath ~~Points Road~~ NE NE Points Drive (Exhibit 5-42). The temporary occupancy in each of these parks would be up to 1 year in duration. Areas disturbed during construction would be revegetated. The temporary occupancy of these parks would not constitute a Section 4(f) use of these resources as outlined in 23 CFR—Part 774.13(d). As noted earlier, 23 CFR--Part 774.13[d] requires documented agreement by the official(s) with jurisdiction over the Section 4(f) resource with the evaluation that the temporary occupancy is so minimal that it does not constitute a use within the meaning of Section 4(f). Coordination with the towns of Hunts Point and Yarrow Point, and the City of Kirkland is ongoing. Letters of agreement from these municipalities will be received before the final decision document is completed.

Page 5-130, Exhibit 5-41

Also shown in Appendix T, Section 4(f) Resources Technical Memorandum, Page 11, Exhibit 5

- Revised Temporary Occupany location and quantity.
- Added existing and proposed right of the way line.
- Added a note for “primary access”.



- Temporary Occupancy
- Proposed Pavement
- Proposed Lid
- Limits of Construction
- Proposed Regional Bicycle/ Pedestrian Path
- Proposed Points Loop Trail
- Park
- Existing Right of Way
- Proposed Right of Way



Source: King County (2006) Aerial Photo, King County (2005) GIS Data (Stream), CH2M HILL (2008) GIS Data (Park), City of Bellevue (1999) GIS Data (City Limits), and King County (2004) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

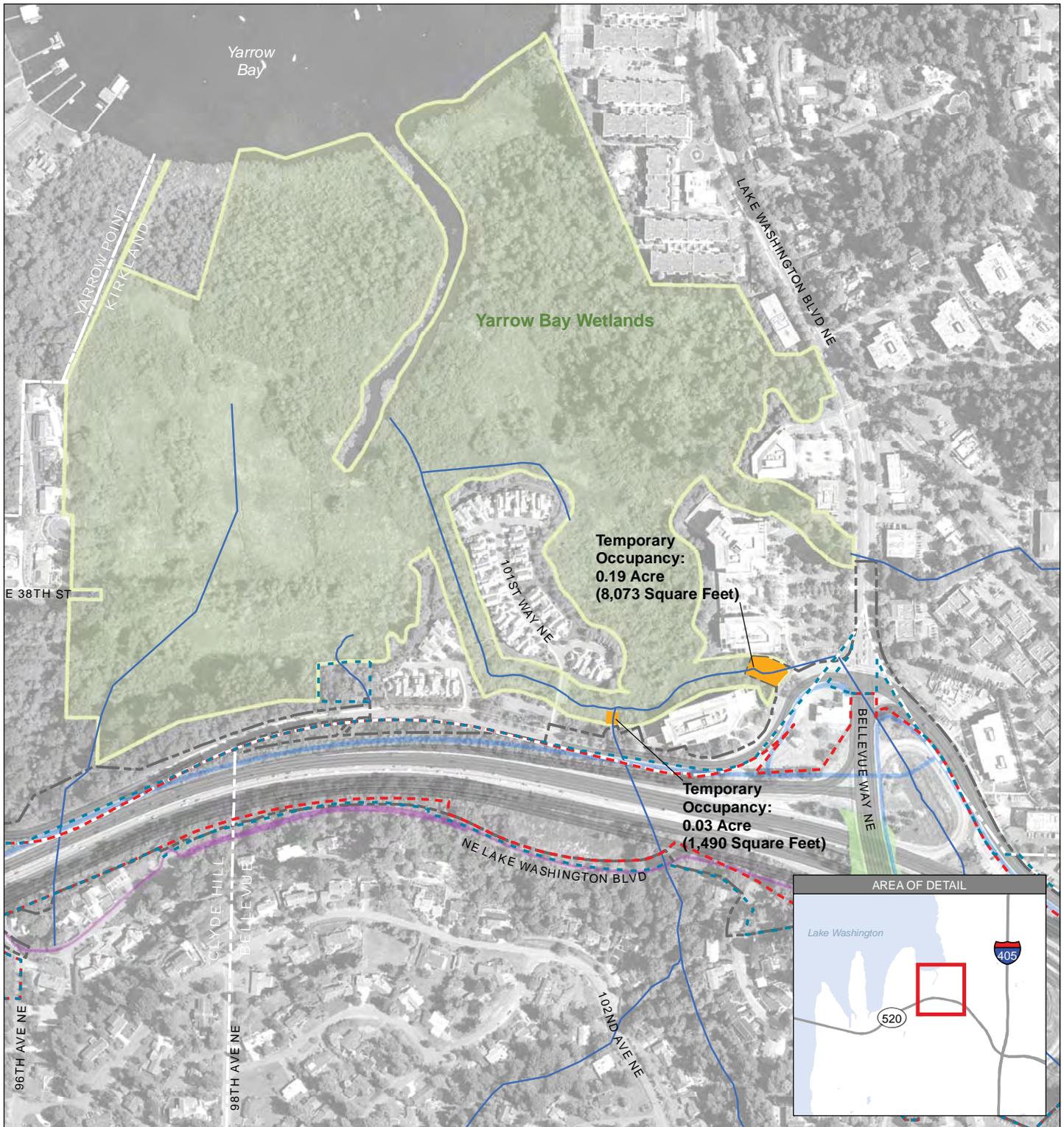
Exhibit 5-41. Hunts Point / D. K. McDonald Park

Medina to SR 202: Eastside Transit and HOV Project

Page 5-131, Exhibit 5-42

Also shown in Appendix T, Section 4(f) Resources Technical Memorandum, Page 12, Exhibit 6

- Added existing and proposed right of way line.
- Revised temporary occupancy quantity and added a second location.



- Temporary Occupancy
- Proposed Pavement
- Proposed Lid
- Limits of Construction
- Proposed Regional Bicycle/
Pedestrian Path
- Proposed Points
Loop Trail
- Park

- Existing Right of Way
- Proposed Right of Way



Source: King County (2006) Aerial Photo, King County (2005) GIS Data (Stream), CH2M HILL (2008) GIS Data (Park), City of Bellevue (1999) GIS Data (City Limits), and King County (2004) GIS Data (City Limits). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-42. Yarrow Bay Wetlands

Medina to SR 202: Eastside Transit and HOV Project

Page 5-134, last paragraph

~~During construction, approximately 0.2 acre of the school property adjacent to the existing SR 520 right of way would be temporarily occupied to construct the noise wall. This construction would occur within an existing slope easement. This temporary occupancy would not constitute a use of the historic property.~~

Page 5-136, last paragraph

The analysts identified cumulative effects by following the Guidance on Preparing Cumulative Impact Analyses (WSDOT et al. 2008) and by reviewing plans and policies developed by the Puget Sound Regional Council (PSRC), including Vision 2040 (PSRC 2008), the Transportation 2040 Draft EIS (PSRC 2009b), and the 2010 to 2013 Transportation Improvement Program projects. Many land development and transportation projects are under construction or planned for construction in the reasonably foreseeable future, ~~as shown in Exhibit 6.~~ The analysts reviewed trends from past and present actions and then considered the action in light of the trend plus reasonable future actions. This chapter summarizes the conclusions of the analysis; additional detail about the analysis of indirect and cumulative effects may be found in Appendix U, Indirect and Cumulative Effects Technical Memorandum.

Page 5-137, heading after second paragraph

~~What would the~~ How would the project contribute to a cumulative effect on air quality likely be?

Page 5-138, heading after second paragraph

~~What would the~~ How would the project contribute to a cumulative effect on low-income, minority, or LEP populations likely be?

Page 5-139, heading after second paragraph

~~What would the~~ How would the project contribute to a cumulative effect on geology and soils likely be?

Page 5-140, heading after first paragraph

~~What would the~~ How would the project contribute to a cumulative effect on hazardous materials likely be?

Page 5-140, heading before last paragraph

~~What would the~~How would the project contribute to a cumulative effect on cultural resources likely be?

Page 141, heading after first paragraph

~~What would the~~How would the project contribute to a cumulative effect on ecosystems likely be?

Page 5-142, first heading at top of page

~~What would the~~How would the project contribute to a cumulative effect on energy-likely be?

Page 5-143, heading after second paragraph

~~What would the~~How would the project contribute to a cumulative effect on land use, economics, and relocation-likely be?

5-144, heading after second paragraph

~~What would the~~How would the project contribute to a cumulative effect on noise-likely be?

Page 5-145, heading before first paragraph

~~What would the~~How would the project contribute to a cumulative effect on social elements-likely be?

Page 5-145, heading after third paragraph

~~What would the~~How would the project contribute to a cumulative effect on transportation likely be?

Page 5-146, heading after second paragraph

~~What would the~~How would the project contribute to a cumulative effect on visual quality and aesthetics-likely be?

Page 5-146, heading before last paragraph

~~What would the~~How would the project contribute to a cumulative effect on water resources likely be?

Page 8-2

Groot, C. and L. Margolis. 1991. *Pacific Salmon Life Histories*. University of British Columbia Press, Vancouver, British Columbia.

King County et al. (King County and 25 Authors). 2001. *Known Freshwater Distribution of Salmon and Trout in WRIA 8*. Excel Database and Maps. Available online at: <http://www.govlink.org/watersheds/8/reports/fish-maps/default.aspx>.

Page 8-3

SPU and ACOE (Seattle Public Utilities and U.S. Army Corps of Engineers). 2008. *Synthesis of Salmon Research and Monitoring. Investigations Conducted in the Western Lake Washington Basin*. Seattle, WA. December 31, 2008.

Page 8-4

Wydoski, R. S., and R. R. Whitney. 2003. *Inland Fishes of Washington*. Second edition, revised and expanded. American Fisheries Society, Bethesda, MD, in association with University of Washington Press, Seattle, WA.

Appendix C, Draft Programmatic Agreement

~~APPENDIX C — DRAFT PROGRAMMATIC AGREEMENT~~

[Please note that WSDOT is no longer seeking a Programmatic Agreement (PA) under Section 106. Based on consultation with the Washington State Department of Archaeology and Historic Preservation (DAHP), it was determined that PA was no longer necessary due to the certainty of the proposed stormwater detention location within the Yarrow Creek basin. The proposed location is within the Area of Potential Effects (APE) and therefore no new effects on historic properties are expected. DAHP concurred with this determination in April 2010.]

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 11, Exhibit 2

Exhibit 2. Agencies and Tribes Invited to Participate in the Project Forums, Forums for Participation, and Regulatory Authority

Agency or Tribe	Available Forums					Regulatory Authority
	RACp ^a / TWGs ^b	ESA SG ^c	MAP ^d	DAT ^e	Other ^f	
Federal agencies						
Environmental Protection Agency	X		X ^g		X	Review of Corps Clean Water Act Section 404 Permit; review and rating of NEPA document(s)
National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries)	X	X			X	Endangered Species Act Section 7 consultation
National Park Service	X					Confirm Land and Water Conservation Fund Act Section 6(f) approval
U.S. Coast Guard	X					None for Eastside Transit and HOV Project; participate in RACp due to regulatory authority for Bridge Replacement and HOV Project
U.S. Army Corps of Engineers	X		X		X	Clean Water Act Section 404 Individual Permit
U.S. Fish and Wildlife Service	X	X			X	Endangered Species Act Section 7 consultation
State agencies						
Department of Archaeology and Historic Preservation	X				X	National Historic Preservation Act Section 106 Compliance
Washington State Department of Ecology	X		X	X	X	Clean Water Act Section 401 Certification and Section 402 NPDES Construction Stormwater General Permit; Coastal Zone Management Act Consistency Determination; Shoreline Management Act Review
Washington State Department of Fish and Wildlife	X		X		X	Hydraulic Project Approval
Washington State Department of Natural Resources	X					None for Eastside Transit and HOV Project; participate in RACp due to regulatory authority for Bridge Replacement and HOV Project
Washington State Recreation and Conservation Office	X				X	None for Eastside Transit and HOV Project; participate in RACp due to regulatory authority for Bridge Replacement and HOV Project
Regional and local agencies (counties, cities, towns, and transit agencies)						
City of Bellevue	X				X	Critical areas, clearing and grading, right of way/street use, utilities and dewatering discharge permits, noise variance, land use exemptions
City of Clyde Hill	X				X	Right of way permit, noise variance, clearing and grading
City of Kirkland	X				X	Critical areas, right of way, and utilities permits, noise variance, clearing and grading

Exhibit 2. Agencies and Tribes Invited to Participate in the Project Forums, Forums for Participation, and Regulatory Authority

Agency or Tribe	Available Forums					Regulatory Authority
	RACp ^a / TWGs ^b	ESA SG ^c	MAP ^d	DAT ^e	Other ^f	
City of Medina	X				X	Shoreline Substantial Development Permit, grading, right of way, noise variance, tree removal permit
City of Mercer Island	X					None
City of Seattle	X					None for Eastside Transit and HOV Project; participate in RACp due to regulatory authority for Bridge Replacement and HOV Project
City of Redmond					X	Shoreline Substantial Development Permit, clearing and grading
King County Metro	X				X	None; coordination related to future transit improvements
Puget Sound Clean Air Agency						Clean Air Conformity Certification
Sound Transit	X				X	None; coordination related to future transit improvements
Town of Hunts Point	X				X	Shoreline Conditional Use permit, right of way permit, and noise variance
Town of Yarrow Point	X				X	Right of way permit and noise variance
Tribes						
Duwamish Tribe ^h					X	None; coordination due to consulting party status
Muckleshoot Indian Tribe ⁱ	X		X ⁱ		X	Interested tribe per Section 106; tribal treaty rights
Snoqualmie Tribe					X	Interested tribe per Section 106
Suquamish Tribe					X	Interested tribe per Section 106
Tulalip Tribes					X	Interested tribe per Section 106
Yakama Nation					X	Interested tribe per Section 106

Notes:

^a RACp: Regulatory Agency Coordination process (corridor-wide focus from July 2007 through June 2008; modified focus to the Bridge Replacement and HOV Project exclusively in June 2008).

^b TWGs: Technical Working Group (corridor-wide focus from July 2007 through June 2008; modified focus to the Bridge Replacement and HOV Project exclusively in June 2008).

^c ESA SG: Endangered Species Act Steering Group.

^d MAP: Multi-Agency Permitting Team.

^e DAT: Demonstrative Approach Team.

^f Other: May include technical coordination meetings, field visits, and/or individual briefings with permitting agencies or tribes.

^g The Environmental Protection Agency did not participate in the MAP Team but attended some MAP Team meetings and field visits.

^h The Duwamish Tribe is not federally recognized.

ⁱ The Muckleshoot Indian Tribe Fisheries Division and Preservation Department participated in some tribal and agency forums at a staff level. The Muckleshoot Indian Tribe did not participate in the MAP Team but was briefed on the process and attended a meeting and field visit with the MAP Team.

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 16, Exhibit 4

Exhibit 4. Meetings with Agencies and Tribes Since Project Initiation through Aug. 31, 2009

Date	Agency	Location	Topic
Oct. 1, 2008	City of Bellevue	Bellevue City Hall	Stormwater, potential wetland mitigation opportunities, geotechnical work
Nov. 6, 2008	Washington State Department of Fish and Wildlife (WDFW), Muckleshoot Indian Tribe <u>Fisheries Division</u>	SR 520 Project Office	Project overview, existing fish passage barriers, proposed fish passage improvements
Nov. 12, 2008	City of Bellevue	Bellevue City Hall	Stormwater, potential wetland mitigation opportunities, geotechnical work
Nov. 26, 2008	WDFW, Muckleshoot Indian Tribe <u>Fisheries Division</u>	Field visit	Existing fish passage barriers and stream habitat conditions
Dec. 15, 2008	WDFW, Muckleshoot Indian Tribe <u>Fisheries Division</u>	SR 520 Project Office	Existing fish passage barriers and proposed fish passage improvements
Jan. 14, 2009	City of Bellevue	Bellevue City Hall	Stormwater, potential wetland mitigation opportunities, geotechnical work, design coordination
Jan. 26, 2009	WDFW, Muckleshoot Indian Tribe <u>Fisheries Division</u>	SR 520 Project Office	Existing fish passage barriers and proposed fish passage improvements
Feb. 3, 2009	City of Bellevue City of Kirkland	Bellevue City Hall	Existing fish passage barriers and proposed fish passage improvements
Feb. 10, 2009	City of Kirkland	Kirkland City Hall	Design concepts for NE Points Drive and Bellevue Way / Lake Washington Boulevard
Feb. 11, 2009	City of Bellevue	SR 520 Project Office	Wetland mitigation, design concepts for Bellevue Way and 108th Avenue NE / Northup Way
Feb. 17, 2009	DAT	Seattle	Stormwater
Feb. 20, 2009	City of Medina	Medina City Hall	Permitting
Feb. 24, 2009	City of Medina Parks Board	Medina City Hall	Fairweather Park and Evergreen Point Road/SR 520 lid interface
Mar. 2, 2009	MAP Team	Bellevue Ecology Office	Project overview, stormwater, culverts, permitting, mitigation
Mar. 11, 2009	WDFW, Muckleshoot Indian Tribe <u>Fisheries Division</u>	SR 520 Project Office	Proposed design for fish passable structures
Mar. 12, 2009	City of Kirkland	Washington State Ferries Office	Design concepts for NE Points Drive and Bellevue Way
Mar. 18, 2009	City of Clyde Hill	Clyde Hill City Hall	Permitting
Mar. 23, 2009	Towns of Yarrow Point and Hunts Point	Yarrow Point Town Hall	Permitting
Mar. 24, 2009	City of Kirkland	Kirkland City Hall	Permitting
Mar. 30, 2009	MAP Team	Bellevue Ecology Office	Potential impacts, mitigation
Mar. 31, 2009	City of Bellevue	SR 520 Project Office	Stormwater

SR 520, MEDINA TO SR 202: EASTSIDE TRANSIT AND HOV PROJECT
FINDING OF NO SIGNIFICANT IMPACT

Apr. 1, 2009	City of Bellevue	Bellevue City Hall	Design concepts and traffic management for 108th Avenue NE/Northup Way
Apr. 7, 2009	City of Bellevue	Bellevue City Hall	Permitting
Apr. 13, 2009	City of Clyde Hill	Clyde Hill City Hall	Design and technical coordination
Apr. 14, 2009	City of Bellevue City of Kirkland	Washington State Ferries Office	Roadway design and bicycle / pedestrian facilities
May 12, 2009	MAP Team	Conference call	Mitigation
May 14, 2009	U.S. Army Corps of Engineers (Corps)	Field visit	Wetlands
May 20, 2009	City of Kirkland	Kirkland City Hall	Stormwater, NE Points Drive
June 15, 2009	City of Medina Parks Board	Medina City Hall	<i>de minimis</i> Section 4(f) impacts
June 17, 2009	City of Medina	Medina Maintenance Yard	Culvert design, stormwater
June 22, 2009	King County Metro Sound Transit	Seattle	Eastside transit station design
June 30, 2009	U.S. Army Corps of Engineers (Corps)	Field visit	Wetlands
July 21, 2009	City of Kirkland	Seattle	Bicycle / pedestrian connectivity
July 23, 2009	King County Metro Sound Transit	Seattle	Transit and tolling coordination
July 30, 2009	City of Bellevue	Bellevue City Hall	Traffic operations, 103rd Place NE
July 31, 2009	Ecology WDFW	Field visit	Stormwater outfalls and drainage
Aug. 5, 2009	City of Bellevue Sewer District	Seattle	Fairweather pump station property, potential property impacts

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 17, first bullet

- Fish passage and culvert design – The project team met with the Washington State Department of Fish and Wildlife (WDFW) and the Muckleshoot Indian Tribe Fisheries Division four times between November 2008 and March 2009 to solicit feedback on the design of replacement structures to improve fish passage.

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 17, last paragraph

The project site is adjacent to the “usual and accustomed” ~~fishing~~ areas of the Muckleshoot Indian Tribe. In addition to the agency coordination meetings that

Muckleshoot Indian Tribe ~~representatives staff~~ may have attended, the project team has coordinated with staff of the Muckleshoot Indian Tribe throughout the planning and design stages of the project. Representatives Staff from the Muckleshoot Indian Tribe Fisheries Division have has attended several of the RACp, TWG, and MAP Team meetings. Staff from the Muckleshoot Indian Tribe Preservation Department has attended some RACp meetings and participated in Section 106 consultation briefings. Muckleshoot Indian Tribe Preservation Committee members also participated in Section 106 consultation briefings.

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 19, Exhibit 5

Exhibit 5. Formal Correspondence and Meetings with Tribes Since Project Initiation through Aug. 31, 2009

Date	Tribe	Location	Topic
Nov. 3, 2008	<u>Muckleshoot Indian Tribe Preservation Department</u>	Muckleshoot Indian Tribe Office	Section 106 consultation
Nov. 3, 2008	Tulalip Tribes	Tulalip Tribe Office	Section 106 consultation
Nov. 6, 2008	<u>Muckleshoot Indian Tribe Fisheries Division</u>	SR 520 Project Office	Project overview, existing fish passage barriers, proposed fish passage improvements
Nov. 11, 2008	Duwamish Tribe ^a Muckleshoot Indian Tribe Snoqualmie Tribe Suquamish Tribe Tulalip Tribes Yakama Nation	N/A	Letter to initiate Section 106 consultation
Nov. 17, 2008	Suquamish Tribe	SR 520 Project Office	Section 106 consultation
Nov. 24, 2008	Snoqualmie Tribe	Snoqualmie Indian Tribe Office	Section 106 consultation
Nov. 26, 2008	<u>Muckleshoot Indian Tribe Fisheries Division</u>	Field visit	Existing fish passage barriers and stream habitat conditions
Dec. 15, 2008	<u>Muckleshoot Indian Tribe Fisheries Division</u>	SR 520 Project Office	Existing fish passage barriers and proposed fish passage improvements
Dec. 10, 2008	Duwamish Tribe ^a	Duwamish Tribe Office	Section 106 consultation
Jan. 26, 2009	<u>Muckleshoot Indian Tribe Fisheries Division</u>	SR 520 Project Office	Existing fish passage barriers and proposed fish passage improvements
Feb. 25, 2009	Duwamish Tribe ^a Muckleshoot Indian Tribe Snoqualmie Tribe Suquamish Tribe Tulalip Tribes Yakama Nation	N/A	Letter regarding area of potential effects
Mar. 11, 2009	<u>Muckleshoot Indian Tribe Fisheries Division</u>	SR 520 Project Office	Proposed design for fish passable structures

Mar. 17, 2009	Muckleshoot Indian Tribe <u>Fisheries Division</u>	SR 520 Project Office	Overview of project design
May 13, 2009	Duwamish Tribe ^a Muckleshoot Indian Tribe Snoqualmie Tribe Suquamish Tribe Tulalip Tribes Yakama Nation	N/A	Letter with updated area of potential effects and notice of archaeological work
July 8, 2009	Duwamish Tribe ^a	West Seattle	Section 106 Consultation
July 27, 2009	Muckleshoot Indian Tribe <u>Preservation Department</u>	Muckleshoot Indian Tribe Office	Section 106 Consultation

Notes:

^a The Duwamish Tribe is not federally recognized.

^b Additional correspondence occurred via e-mail and phone.

Appendix E, Agency Coordination and Public Involvement Discipline Report

Page 23, first heading after bullets

Muckleshoot Indian Tribe Fisheries Division (October 31, 2008)

Appendix F, Description of Alternatives and Construction Techniques

Page 11, last paragraph

Construction along the Eastside corridor would occur from just west of Evergreen Point Road to just east of 108th Avenue NE, a distance of about 2.6 miles. From I-405 to SR 202 (about 6.2 miles), no roadway construction would occur; improvements would be limited to restriping to shift the HOV lanes to the inside and placing new signs.

Appendix F, Description of Alternatives and Construction Techniques

Page 12, first paragraph

The Build Alternative would provide six lanes (four general-purpose and two HOV) from just west of Evergreen Point Road to SR 202. New construction between Evergreen Point Road and I-405 would add a new eastbound HOV lane to connect with the existing HOV lane and provide standard 10-foot-wide shoulders, both eastbound and westbound. The project would also rebuild or improve the existing interchanges and crossings from Evergreen Point Road to 108th Avenue NE. The existing Evergreen Point Bridge would function as it does today. The east approach roadway would be widened just west of Evergreen Point Road and tapered back to the existing roadway before the

Evergreen Point Bridge. Exhibit 2 shows the existing and proposed traffic cross sections. Exhibit 3, Plates 1–5, shows the project design features and footprint.

Appendix F, Description of Alternatives and Construction Techniques

Page 21, first paragraph after Exhibit 8

The Bellevue Way NE bridge over SR 520 would be widened to provide landscaping on either side and a shared use path on the east side. The configuration of Bellevue Way NE over SR 520 would consist of two southbound and northbound lanes that would pass through signalized intersections, plus ~~turn lanes at eastbound and westbound ramp terminals~~ a double left turn lane for vehicles entering westbound SR 520. A northbound left-turn lane would extend beyond the south traffic signal for vehicles traveling westbound on SR 520.

Appendix F, Description of Alternatives and Construction Techniques

Page 25, fourth paragraph

The existing Points Loop Trail would remain on the ~~south-north~~ side of SR 520 for local pedestrian and recreational use only. Several sections of the trail would be ~~relocated to the north and~~ rebuilt to accommodate the regional path, but would follow the original alignment as closely as possible. The existing pedestrian overpass just east of Evergreen Point Road would be removed. Pedestrian access across SR 520 would be replaced by the new lid at Evergreen Point Road and the new lid at 84th Avenue NE.

Appendix F, Description of Alternatives and Construction Techniques

Page 25, last paragraph

Because of the steep terrain, the regional bicycle/pedestrian path and Points Loop Trail would be at different elevations. Support walls would be required to keep the regional path slope at less than a 5-percent grade, per ~~AASHTO-ADA~~ standards. (Railings would be installed ~~where there was a drop-off greater than 36 inches~~ in accordance with the WSDOT Design Manual.) Noise walls could be installed between the regional path and the roadway in some places.

Appendix F, Description of Alternatives and Construction Techniques

Page 26, first paragraph

Restriping Work

Between 108th Avenue NE and SR 202 (approximately 6.2 miles), the eastbound and westbound lanes would be restriped to shift the HOV lane from the outside lane to the

inside lane. The work would also include moving the existing HOV signs on the outside to the inside or, in some cases, replacing them with new signs. The restriping will also include the addition of an eastbound auxiliary lane that extends from 108th Avenue NE to the off-ramp to southbound I-405.

Appendix F, Description of Alternatives and Construction Techniques

Page 27, first paragraph

Stormwater flow control and stormwater quality treatment within WSDOT-owned right of way is determined by requirements of the Highway Runoff Manual (WSDOT 2008d). Stormwater flow control and stormwater quality treatment outside of WSDOT-owned right of way is determined by local jurisdictions' stormwater plans. Both basic and enhanced stormwater treatment best management practices (BMPs) would be used based on criteria from the HRM. ~~Basic stormwater treatment BMPs will be used for city-owned streets, and enhanced stormwater treatment BMPs will be used for WSDOT-owned roadway runoff. The amount of BMPs to be used is determined by surface area of impervious surfaces (defined as acres). Impervious surface quantities are acreage is used to then determine the size of the stormwater facilities. Two types of facilities will be used; water quality treatment and water quantity control. Some facilities provide both functions depending upon discharge location.~~ The sizes of the facilities are usually discussed in terms of the volume of runoff they hold (in acre-feet) for detention of surface area for treatment.

Appendix F, Description of Alternatives and Construction Techniques

Page 27, last paragraph

The Yarrow Creek basin is the largest basin in the study area. The project proposes to treat approximately ~~333~~29.0 acres in pollution-generating impervious surface (PGIS) within this basin. Stormwater would be treated for water quality onsite. Stormwater detention would occur both onsite and offsite at a location or locations yet to be determined. For more information on water quality and quantity treatment, please see the Water Resources Discipline Report (WSDOT 2009d).

Appendix F, Description of Alternatives and Construction Techniques

Page 28, second paragraph

In accordance with the Highway Runoff Manual (WSDOT 2008d), the project team modeled the pre-developed condition for stormwater detention facilities as forested till and attempted to design detention facilities to meet the Highway Runoff Manual requirements. The Yarrow Creek basin is the only basin where stormwater detention is required. The other basins in the project area are exempt from detention requirements

as determined by the Washington State Department of Ecology. ~~Due to limited availability of right of way, WSDOT was unable to design enough~~ is currently in the process of selecting and designing stormwater detention facilities to meet the detention requirement of the Highway Runoff Manual for the within Yarrow Creek basin to meet the intent of the *Highway Runoff Manual*.

Appendix F, Description of Alternatives and Construction Techniques

Page 28, last paragraph

~~WSDOT will meet the intent of the *Highway Runoff Manual* requirements and will continue to explore solutions to achieve this commitment. WSDOT continues to work with regulatory agencies to determine the appropriate strategy. The current strategy is to identify suitable locations for stormwater detention facilities outside of the Yarrow Creek basin. The detention facilities will be designed to allow WSDOT to meet the needed stormwater detention requirements for this project.~~

Appendix F, Description of Alternatives and Construction Techniques

Page 29, first paragraph

Potential sites for stormwater detention facilities will be selected based on criteria that include no substantial environmental effects. This includes no effects to streams, wetlands, or fish habitat. A cultural resources survey will be conducted prior to construction to reduce the risk of encountering cultural resources. ~~The site or sites must also be located within existing WSDOT property.~~

Appendix F, Description of Alternatives and Construction Techniques

Page 31, first paragraph

Increased Open Channel Habitat

Channel realignments and culvert removals and replacements would result in a gain of ~~980~~820 linear feet of open channel habitat within fish-bearing streams, including opening up ~~860~~787 linear feet of stream channel currently confined in culverts.

Appendix F, Description of Alternatives and Construction Techniques

Page 32, last bullet

- Stage 2 would complete the remaining in-water work for the fish-passage culverts. Stage 2 would also begin major construction, including the following: reconstructing the bridge over SR 520 at 108th Avenue NE, modifying the existing mainline lanes, and constructing the lids at Evergreen Point Road, 84th Avenue NE, and 92nd

Avenue NE, and the overcrossing at Bellevue Way NE. Stormwater management facilities will also be built as needed to accommodate added impervious surfaces.

Appendix F, Description of Alternatives and Construction Techniques

Page 33, first bullet

- Stage 3 would involve construction on the mainline and ~~the construction completion~~ of the stormwater management facilities.

Appendix F, Description of Alternatives and Construction Techniques

Page 36, third paragraph

Fish Passage Culverts

Fish passage culverts, for this project, are generally three-sided, bottomless structures with some four-sided structures with widths in the range of 14-8 to 16-18 feet. The walls would either be cast in place or precast.

Appendix F, Description of Alternatives and Construction Techniques

Page 36, fourth paragraph

Generally, ~~t~~Two rows of auger cast piles would be placed a little wider than the footprint of the culvert. The piles would be used to support the culvert. Soil would then be excavated from between the two rows of piles. The sides of the culvert would either be cast in place concrete or precast concrete. Once the culverts were placed, soil would be backfilled around the culvert and the top of the culvert would be placed. Once the culvert was complete, there would be an exposed face of the culvert walls, generally 4-5 to 6-7 feet in height.

Appendix F, Description of Alternatives and Construction Techniques

Page 37, second paragraph

Bridge Substructure

The type of substructure selected for each bridge would be based on soil conditions, groundwater depth, water depth (if the structure is placed in water), and weight of the superstructure and the load it would carry. Substructure foundation types anticipated for this project are described below and include spread footings, drilled shafts ~~and~~ ~~waterline~~ ~~footings~~, and concrete columns. These are described below.

Appendix H, Environmental Justice Technical Memorandum

Page 5, fifth paragraph

The study area is within the “usual and accustomed” ~~fishing~~ areas of the Muckleshoot Indian Tribe. However, WSDOT has been and will continue coordinating work with the Muckleshoot Tribe Fisheries Division to avoid or minimize adverse effects.

Appendix H, Environmental Justice Technical Memorandum

Page 27, third paragraph

The Build Alternative would result in new impervious surfaces, but would also treat for water quality all new and ~~existing~~ replaced pollution-generating impervious surfaces within the SR 520 corridor. No such treatment would occur under the No Build Alternative. Also, runoff from all impervious surfaces draining to streams would undergo detention under the Build Alternative, resulting in an improved flow regime compared with the No Build Alternative.

Appendix L, Ecosystems Discipline Report

Page 2, last bullet

- Under the Build Alternative, WSDOT would use temporary work areas both within and outside of the existing project right of way. Construction activities would affect ~~4-6~~1.4 acres of wetlands by vegetation clearing. Implementing erosion and sediment control measures, spill prevention plans, and other best management practices (BMPs) would minimize construction effects. After construction of the project, the affected wetland areas would be restored by replanting with appropriate native wetland vegetation.

Appendix L, Ecosystems Discipline Report

Page 3, third bullet

- The project would lengthen the main stem and South Fork of Yarrow Creek and add habitat features and riparian vegetation to benefit fish. Project-wide, channel realignments and culvert removals and replacements would result in a gain of ~~980~~820 linear feet of open-channel habitat within fish-bearing streams, including a reduction of ~~857~~787 linear feet in the stream length confined in culverts. The overall results of the stream crossing improvements and the channel realignments would be a substantial net increase in both in stream habitat quality and quantity within the study area. In addition, improved fish passage conditions downstream of the channel enhancements would result in greater fish use of these stream reaches.

Appendix L, Ecosystems Discipline Report

Page 39, last paragraph

Four roadside ditches (Ditches DCCS2-1, DYBS1-1, DYBS3-1, and DYCS4-1) in the study area totaling less than 0.01 acre met USACE jurisdictional criteria and ~~might~~ would be affected by the project. Two of these ditches have standing water during the field investigation (Ditches DCCS2-1 and DYCS4-1); the other two ditches (Ditches DYBS1-1 and DYBS3-1) had flowing water. The primary function of the identified ditch segments is conveyance. These functions would be mitigated within the stormwater conveyance system. Additional details are provided in the Jurisdictional Ditch Report Technical Memorandum (WSDOT 2009c).

Appendix L, Ecosystems Discipline Report

Page 41, third paragraph

Build Alternative

Construction of the Build Alternative would affect ~~1.61.4~~ 1.41.2 acres of wetland outside of the permanent road footprint. Less than 0.1 acre of Category I wetland (all forested); ~~1.41.2~~ 1.41.2 acre of Category II wetland (less than 0.1 acre forested, ~~1.41.2~~ 1.41.2 acre emergent); and 0.1 acres of Category III wetland (all emergent) would be temporarily affected.

Appendix L, Ecosystems Discipline Report

Page 47, Exhibit 15

Exhibit 15. **Affected Wetlands and Wetland Buffers in the Study Area**

Wetland	Operational (acres) ^a		Construction (acres) ^a	
	Wetland	Buffer	Wetland	Buffer
Fairweather Creek				
FC Park	-	-	-	-
FCN-3	<0.1	-	-	-
FCS-1	<0.1	-	-	-
FCS-2	0.2	-	-	-
FCS-3A	<0.1	-	-	-
FCS-3B	<0.1	-	-	-
FCS-3C	<0.1	-	-	-
FCS-3D	<0.1	-	-	-
FCS-3E	<0.1	-	-	-

Exhibit 15. Affected Wetlands and Wetland Buffers in the Study Area

Wetland	Operational (acres) ^a		Construction (acres) ^a	
	Wetland	Buffer	Wetland	Buffer
Cozy Cove^b				
CCN-1	-	0.5	-	<0.1
CCN-2	0.3	-	-	-
CCN-2A	<0.1	-	-	-
CCS-1	0.5	-	-	-
CCS-3	<0.1	-	-	-
CCS-4	<0.1	-	-	-
CCS-5	0.1	-	-	-
Yarrow Bay				
YBN-1	<0.1	<0.1	<0.1	<0.1
YBN-1A	-	-	-	-
YBN-1B	-	-	-	-
YBN-2	<0.1	-	-	-
YBS-1	1.4	0.6	-	<0.1
YBS-2A	0.1	-	-	-
YBS-2B	<0.1	-	-	-
YBS-2C	0.1	-	-	-
YBS-3	2.1	-	-	-
Yarrow Creek				
YCN-1	<0.1	-	-	-
YCN-2	<0.1	-	<0.1	-
YCN-3	0.1	-	-	-
YCN-3A	0.6	<0.1	-	<0.1
YCN-3B	<0.1	-	-	-
YCN-4A	<0.1	-	<0.1	-
YCN-5	-	-	-	-
YCN-6	-	-	-	-
YCN-7	-	-	-	-

Exhibit 15. Affected Wetlands and Wetland Buffers in the Study Area

Wetland	Operational (acres) ^a		Construction (acres) ^a	
	Wetland	Buffer	Wetland	Buffer
YCN-8	-	-	-	-
YCS-1	0.1	-	0.3 <u>0.2</u>	-
YCS-2	0.2	0.2	1.1 <u>1.0</u>	0.5
YCS-4	1.0	0.5	-	0.3
YCS-5	<0.1	<0.1	<0.1	<0.1
YCS-6	-	-	-	-
Total^c	7.0	1.7	1.6<u>1.4</u>	0.9

^a " " no effect.

^b Wetland CCS-2 was deleted because it was determined to be a ditch by USACE in September 2009.

^c Totals do not reflect rounding at individual locations. Impacts to individual locations have been rounded to the nearest 0.1 acre.

Appendix L, Ecosystems Discipline Report

Page 48, last paragraph

The Build Alternative would increase the impervious surface of the roadway by 1 to 32 percent, depending on the basin (WSDOT 2009a). Eleven new stormwater facilities (seven constructed wetlands, one media filter drain, one water quality vault, one bioswale, and one detention pond) would be constructed to treat and detain stormwater runoff from the existing and new road surfaces. The Build Alternative would be designed according to the 2008 *Highway Runoff Manual* (WSDOT 2008). Potential for impacts to groundwater recharge through the creation of new impervious surface is anticipated to have negligible effects due to local conditions and project design elements. As a result, it would likely not affect the hydrologic functions of wetlands in the study area.

Appendix L, Ecosystems Discipline Report

Page 59, first paragraph

There would be approximately 31.6 acres of area available for potential wetland mitigation at the proposed mitigation site. The proposed rehabilitation provides sufficient wetland mitigation for all of the effects resulting from the project and meets the requirements as outlined in the joint guidance Ecology/USACE/EPA (Ecology et al. 2006). Because the site selected is a relatively distinct ecological unit, it would not be appropriate to rehabilitate only the portion necessary for the SR 520, Medina to SR 202: Eastside Transit and HOV Project. As a result, the mitigation concept provides excess

wetland/functional buffer mitigation. Any excess mitigation capacity at the Keller Mitigation Site will serve as advance mitigation for wetland and stream impacts associated with future WSDOT roadway improvement projects for this project.

Appendix L, Ecosystems Discipline Report

Page 59, last paragraph

The construction of the project would affect ~~4.6~~1.4 acres of wetlands. These effects would ~~result primarily occur~~ from culvert replacements and stream and riparian buffer improvements in the Yarrow Creek corridor. Mitigation for construction effects will be onsite at a 1:1 ratio. Specific on-site wetland mitigation activities will include ~~culvert replacement, fish passage improvements (some locations), stream habitat improvements, and replanting disturbed riparian areas (including wetlands and buffers) with native trees and shrubs that are generally absent in these areas currently.~~

Appendix L, Ecosystems Discipline Report

Page 61, first paragraph

The Muckleshoot Indian Tribe has a staff of fisheries biologists that takes an active role in managing salmonids within the area. Tribal fishing can occur at multiple and variable locations within the Lake Washington system. WSDOT is coordinating with the Muckleshoot Indian Tribe because the proposed project could affect ~~access to the Muckleshoot's affirmed treaty fishing areas~~the right to access its fisheries resources within its Usual and Accustomed Areas. For more information, see the Indian Fishing Rights section in the Cultural Resources Technical Memorandum (WSDOT 2009a).

Appendix L, Ecosystems Discipline Report

Page 74, last paragraph

Large pieces of wood, referred to as LWD, play an important habitat role in Pacific Northwest streams. LWD produces and enhances fish habitat, because it forms pools and increases channel complexity in streams. It also provides cover where fish can hide from predators and can improve both the quantity and quality of fish habitat. During periods of low flow and winter high-flow conditions, LWD modifies streamflow, adds structure, and increases the volume of usable habitat for some fish in small streams. Finally, LWD plays a very important role in retaining nutrients and regulating temperatures in streams. How large a piece of LWD needs to be to provide these functions is relative to its ability to affect morphological processes within a stream. For streams ~~of the size of those within the study area, pieces of wood 12 inches in diameter or larger~~at least 10 centimeters in diameter and 2 meters in length would serve this

function. Smaller wood is also important because it increases wood jam complexity and provides primary source food for the stream food web.

Appendix L, Ecosystems Discipline Report

Page 75, first paragraph

Unobstructed fish passage is particularly important for anadromous fish, including juveniles migrating to the sea and adults returning to the streams to spawn. During migration periods, anadromous fish frequently encounter culverts (pipes or arches that allow water to flow from one side of a road to the other). Culvert openings that are too high above the stream channel for fish to jump into or that are positioned at a grade too steep for fish to ascend can be barriers to fish migration and limit the distribution of a species and productivity of the stream. In addition, culverts that are not sized correctly can have water velocities that exceed fishes' swimming abilities during high flows or have water depths too shallow for fish passage during low flows.

Appendix L, Ecosystems Discipline Report

Page 79, third paragraph

~~Upstream (south) of SR 520, the stream habitat quality is poor. Riparian vegetation consists of grass and a few shrubs, with almost no tree cover except for a few scattered red alders. Invasive species such as English ivy, nightshade, and Himalayan blackberry make up more than half of the existing riparian vegetation.~~

Appendix L, Ecosystems Discipline Report

Page 93, last paragraph

Multiple fish passage barriers at Lake Washington Boulevard and farther upstream make it highly unlikely that any anadromous salmon access upstream areas for spawning. Juvenile Chinook salmon migrating along Lake Washington shorelines may use the mouth and the Yarrow Bay wetlands for short-term rearing, ~~although none have been reported in recent surveys.~~

Appendix L, Ecosystems Discipline Report

Page 98, second paragraph

Lastly, construction of the proposed project would require clearing of riparian buffers for construction access. The ecosystems analysts calculated operational riparian buffer effects by using the footprint of permanent structures (see *How would operation of the project affect fish and aquatic habitat?*), while the limits of construction were used to

calculate riparian effects. To construct the project, about ~~3.09~~2.23 acres of riparian vegetation would be cleared along several streams (Exhibit 30).

Appendix L, Ecosystems Discipline Report

Page 99, Exhibit 30

Exhibit 30. Riparian Buffer Effects on Streams from the Build Alternative during Construction

Stream	Is Affected Stream Reach Fish-Bearing? (Yes/No)	Riparian Buffer Clearing Effects during Construction (acres)	Maximum Number of Trees Affected in the Riparian Buffer ^a
Unnamed Tributary to Fairweather Bay	Yes	0.1 ^b <u>0.03</u>	Unknown ^b <u>2</u>
Fairweather Creek	Yes	0 <u>0.18</u>	0
Cozy Cove Creek	Yes	0	0
Tributary to Cozy Cove Creek	No	0	0
West Tributary to Yarrow Bay Wetlands	Yes <u>No</u>	0.50 <u>0.43</u>	2
East Tributary to Yarrow Bay Wetlands	No	0.10 <u>0.04</u>	0
West Tributary to Yarrow Creek	Yes	0.30 <u>0.11</u>	1
Tributary of West Tributary to Yarrow Creek	No	0	0
Main Stem Yarrow Creek	Yes	1.31 <u>1.2</u>	20 <u>18</u>
East Tributary to Yarrow Creek	Yes	0 <u>0.14</u>	0 <u>2</u>
South Fork Yarrow Creek	Yes	0.71 <u>1.1</u>	47 <u>72</u>
Totals		3.09<u>2.23</u>	75<u>79</u>

^a The numbers presented for effects on trees represent all trees within the affected area. The actual number of trees affected would likely be less, because tree clearing within construction or access areas would be avoided or minimized to the extent possible.

^b Riparian buffer impacts for this stream were estimated, based on preliminary project design.

Appendix L, Ecosystems Discipline Report

Page 105, last paragraph

Overall fish passage conditions would be improved on five streams. Project-wide, channel realignments and culvert removals and replacements would result in a gain of ~~980~~820 linear feet of open-channel habitat within fish-bearing streams, and a reduction of ~~857~~787 linear feet in the stream length confined in culverts (Exhibit 33). The overall results of the stream crossing improvements and the channel realignments would be a substantial net increase in both in-stream habitat quality and quantity within the study

area. In addition, improved fish passage conditions downstream of the channel enhancements would result in greater fish use of these stream reaches.

Appendix L, Ecosystems Discipline Report

Page 107, first paragraph after bullets

Because there are no stormwater facilities in the study area today, the Build Alternative would have beneficial effects on the magnitude of peak flows within streams. In addition, because stormwater discharges from detention facilities to streams within the study area will be designed to ~~mimic~~ mimic approximate the natural flow regime, ~~no negative effects on it is not expected that~~ stream base flows would ~~occur~~ change measurably from the increase in impervious surface. It would not be possible to detect any change in measures of aquatic habitat and community health due to stormwater runoff flows from the SR 520, Medina to SR 202: Eastside Transit and HOV Project.

Appendix L, Ecosystems Discipline Report

Page 108, last paragraph

Effects due to project operation on regulated riparian buffers would occur along three streams in the study area, totaling approximately ~~1.72~~ 1.13 acres (Exhibit 34). However, some of this area is also classified as wetland, and those effects (and mitigation for those effects) are discussed in the Wetlands section of this discipline report.

Appendix L, Ecosystems Discipline Report

Page 109, Exhibit 34

Exhibit 34. Riparian Buffer Effects on Streams from the Build Alternative during Project Operation

Stream	Is Affected Stream Reach Fish-Bearing? (Yes/No)	Riparian Buffer Effects during Project Operation (acres)	Number of Riparian Buffer Trees Permanently Affected during Project Operation (acres)
Unnamed Tributary to Fairweather Bay	Yes	Approx. 0.1 <u>0.35</u>	Unknown <u>18</u>
Fairweather Creek	Yes	0 <u>0.01</u>	0
Cozy Cove Creek	Yes	0	0
Tributary to Cozy Cove Creek	No	0	0
West Tributary to Yarrow Bay Wetlands	Yes <u>No</u>	0 <u>20.19</u>	0

Exhibit 34. Riparian Buffer Effects on Streams from the Build Alternative during Project Operation

Stream	Is Affected Stream Reach Fish-Bearing? (Yes/No)	Riparian Buffer Effects during Project Operation (acres)	Number of Riparian Buffer Trees Permanently Affected during Project Operation (acres)
East Tributary to Yarrow Bay Wetlands	No	0 <u>0.01</u>	0
West Tributary to Yarrow Creek	Yes	0 <u>40.36</u>	13 <u>11</u>
Tributary of West Tributary to Yarrow Creek	No	0	0
Main Stem Yarrow Creek	Yes	0 <u>60.92</u>	13 <u>20</u>
East Tributary to Yarrow Creek	Yes	0	0
South Fork Yarrow Creek	Yes	0 <u>40.29</u>	59 <u>43</u>
Totals		1<u>72.13</u>	85<u>92</u>

^a-Riparian buffer effects for this stream were estimated, based on preliminary project design.

Appendix L, Ecosystems Discipline Report

Page 109, last paragraph

Depending on the stream, the amount of permanent buffer that would be removed because of placement of fill would range from less than ~~0~~10.01 acre to ~~0~~60.92 acre under the Build Alternative. Clearing of vegetative material along affected stream corridors could reduce in-stream cover, which would have adverse effects on fish. Although the existing riparian conditions along the streams vary, the majority of streams have riparian buffers that are already moderately to severely degraded under existing conditions. Therefore, many of the functions that riparian vegetation provides (such as LWD recruitment, contribution of organic material, and regulation of stream temperatures) are already altered and would not be substantially affected compared with existing conditions. In streams where effects to riparian vegetation losses would be large, or involve removing trees or large shrubs that provide substantial shade, riparian buffer mitigation would occur where feasible (see the Fish Resources Mitigation section for details).

Appendix L, Ecosystems Discipline Report

Page 114, first bullet

- Approximately ~~1~~72.13 acres of riparian buffer loss from expansion of the SR 520 alignment and associated stormwater facilities.

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Page 128, last paragraph

Construction activities would affect ~~1.6~~1.4 acres of wetlands and 0.9 acre of wetland buffers. Because these are small amounts and would be temporary in nature, negligible effects on wildlife habitat and populations would be expected.

Appendix L, Ecosystems Discipline Report

Page 134, third paragraph

The Build Alternative would remove a total of 65 acres of wildlife habitat, approximately ~~6~~94 percent (61 acres) of which is Urban Matrix that is currently not part of the existing SR 520 footprint, and ~~4~~6 percent (4 acres) of which is Parks and Other Protected Areas in the study area (Exhibit 39). For both cover types, the amount of area affected would be relatively small compared with the total amount available within and adjacent to the study area. In addition, the habitat quality in the Urban Matrix cover type (where most vegetation removal would occur) is generally low, so effects on wildlife populations and distribution in the project are not expected.

Appendix L, Ecosystems Discipline Report

Page 134, third paragraph

While most of the affected vegetation occurs in areas of low-quality habitat, approximately 7.0 acres of wetland habitat would be removed, as well as ~~1.7~~1.4 acres of wetland buffer habitat throughout all cover types. Depending on existing habitat quality in each affected area, remaining wetland, and proximity to other wetland habitats, wildlife could be displaced to other areas. Species that could be affected include garter snakes, songbirds such as marsh wrens and warblers, and Pacific treefrogs.

Appendix L, Ecosystems Discipline Report

Page 140, first bullet

- Increasing overall stream lengths by ~~980~~820 linear feet, creating habitat that might be used by wildlife.

Appendix L, Ecosystems Discipline Report

Page 143

King County et al. (King County and 25 Authors). 2001. *Known Freshwater Distribution of Salmon and Trout in WRIA 8. Excel Database and Maps*. Available online at: <http://www.govlink.org/watersheds/8/reports/fish-maps/default.aspx>.

Appendix L, Ecosystems Discipline Report

Page 146

WSDOT. 2009a. *Water Resources Discipline Report; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009b. *Geology and Soils Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009c. *Jurisdictional Ditch Report Technical Memorandum, SR 520, Medina to SR 202: Eastside Transit and HOV Project*.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 4, first bullet after last heading

What are the key points of this technical memorandum?

- The amount of land acquisition (full and partial acquisitions) required for the completed SR 520, Medina to SR 202: Eastside Transit and HOV Project is approximately ~~109.4~~ 109.4 acres.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 4, second bullet after last heading

- The project would fully acquire ~~1013~~ 1013 parcels (5 residences, ~~46~~ 46 vacant and ~~one~~ one commercial property~~ies~~) and partially acquire 23 parcels.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 32, last paragraph

Build Alternative

Widening of SR 520 would occur mostly within existing WSDOT-owned property. Exhibit 15 summarizes the number of parcels that would be affected by full and partial acquisitions, right of way, and permanent easements within each jurisdiction and Exhibit 16 is a map of those parcels. As shown in Exhibit 17, most acquisitions would be small relative to the total size of the affected properties, and the loss of land would not have an adverse effect on the overall function or use of the properties. Approximately ~~10~~ 13 properties in their entirety would be acquired or have been acquired through early acquisitions.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 33, Exhibit 15

Exhibit 15. Property Acquisitions within Each Jurisdiction

Jurisdiction	Full Acquisitions			Partial Acquisitions		Total
	Parcels	Acres	Relocations	Parcels	Acres	
Medina	3	2.31	2	4 2	2.25 2.12	4.564.43
Hunts Point	2	1.98	2	8 6	0.44 0.21	2.422.19
Clyde Hill	0	0	0	4 6	0.28 0.53	0.280.53
Yarrow Point	1	0.001	0	3 6	0.24 0.10	0.2410.10
Kirkland	0 1	0 0.45	0	1 0	0 .440	0.440.45
Bellevue	4 6	1.74 1.35	1	3	0.42 0.36	2.161.71
Total	10 13	6.03 6.09	5	23	4.07 3.32	10.1019.41

Totals include both early and planned right of way acquisition and permanent easements.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 33, first paragraph after Exhibit 15

In total, approximately ~~109~~4 acres of land would be acquired for right of way and permanent easements. Most of the property would be acquired in Medina, Hunts Point, and Bellevue. Of the approximately ~~33~~36 parcels that would be affected, most are used for single-family residential purposes (see Exhibit 18). The partial acquisitions will occur as narrow strips of land from the backyards of residences adjacent to SR 520, bringing the right of way closer to the homes. The noise walls included in the project would do much to dampen the noise from the highway and screen the highway from view.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 34, second paragraph

Medina

In Medina, approximately ~~4.64~~4.43 acres of property would be acquired for right of way or permanent easement. Three parcels will be acquired in their entirety and would result in the relocation of two single-family residences. These properties are located near the east highrise on the south side of SR 520. WSDOT recently purchased ~~two of these~~ properties.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 34, fourth paragraph

Hunts Point

In Hunts Point, approximately ~~2.4~~ 2.19 acres of property would be acquired. Most of the property would come from two parcels that would be fully acquired for a new stormwater detention pond. This acquisition would affect two single-family residences on large lots (greater than 0.5 acre; see Exhibit 18). The residences on these two lots are larger than the average homes in the area. The affected properties are flanked by single-family residences to the west and north, and SR 520 to the south. The character of these properties would change with the removal of the houses and construction of the detention pond. However, the detention pond would be designed such that the adjacent homeowners would not be affected.

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 34, last paragraph

Kirkland

In Kirkland, one vacant property would be affected. The portion of the property, approximately 0.45 acre) proposed for acquisition is undeveloped wooded area. No changes in land use or character are anticipated. ~~This property would be acquired with the intent of developing the site for stormwater purposes. This property has already been acquired.~~

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 36, Exhibit 17

Exhibit 17. Property Acquisition by Existing Land Use

	Commercial (acres)	Residential (acres)	Other (acres)	Vacant (acres)	Total (acres)
Medina		<u>1.572.31</u>	<u>2.212.12</u>	<u>0.770.0</u>	<u>4.554.43</u>
Hunts Point		<u>2.322.19</u>		<u>0.10.0</u>	<u>2.422.19</u>
Clyde Hill		<u>0.170.42</u>		0.11	<u>0.280.53</u>
Yarrow Point		<u>0.130.06</u>	0.04	<u>0.120</u>	<u>0.250.10</u>
Kirkland		<u>0.440.0</u>		<u>00.45</u>	<u>0.440.45</u>
Bellevue	<u>1.280.56</u>	<u>0.340.75</u>		<u>0.520.40</u>	<u>2.141.71</u>
Total	<u>1.280.56</u>	<u>4.975.73</u>	<u>2.212.16</u>	<u>1.620.96</u>	<u>10.089.41</u>

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 36, Exhibit 18

Exhibit 18. Full Property Acquisitions

	Parcel Number	Owner	Property Address	Existing Land Use	Size Acquisition Amount (ft ²)	Assessed Value	Jurisdiction	Acquisition Type
1	2425049072	WSDOT; early acquisition	2879 Evergreen Pt Rd	Single Family (Res Use/Zone)	44,548	\$1,007,000	Medina	Full
2	2425049181	WSDOT; early acquisition	3100 Evergreen Pt Rd	Single Family (Res Use/Zone)	22,380	\$1,194,000	Medina	Full
3	2425049071	WSDOT; early acquisition	3100 Evergreen Pt Rd	Vacant (Single-family)	33,548	\$1,955,000	Medina	Full
4	2472700055	Private	3003 Fairweather Pl	Single Family (Res Use/Zone)	48,787	\$2,963,000	Hunts Point	Full
5	2472700060	Private	2840 80th NE	Single Family (Res Use/Zone)	37,412	\$1,712,000	Hunts Point	Full
6	1925059261	Private	9039 NE 33rd St	Vacant (Single-family)	60	\$500	Yarrow Point	Full
7	4122100150	Private	3240 103rd Pl NE	Single Family (Res Use/Zone)	11,447	\$701,000	Bellevue	Full
8	4122100155	Private	3240 103rd Pl NE	Vacant (Single-family)	5,528	\$150,000	Bellevue	Full
9	20250592545 1925059276	WSDOT; early acquisition	No address 10301 NE Lake	Vacant (multifamily)	47,063 19,602	85,300 1,000	Bellevue Kirkland	Full
10	2025059192	WSDOT; early acquisition	Washington Blvd.	Vacant (Commercial)	9,490	\$569,400	Bellevue	Full
11	2025059272	WSDOT; early acquisition	No address	Vacant (Commercial)	8,186	\$491,100	Bellevue	Full
12	2025059093	WSDOT; early acquisition	3645 104TH AVE NE	Industrial (Gen Purpose)	13,360	\$802,600	Bellevue	Full
13	2025059073	WSDOT; early acquisition	10307 NE Lake Washington Blvd.	Service Building (General Commercial Zone)	10,826	\$542,300	Bellevue	Full
14	9809500000	Yarrowood Condominium	10826 NE 35 th Place	Multi-family Res Use Zone	4,051	N/A	Bellevue	Partial
15	2025059238	WA- 10700 Building LLC	10700 Northup Way	Commercial Use Zone	6,910	N/A	Bellevue	Partial
16	2025059214	Bravo	10733 Northup Way	Commercial Use Zone	4,580	N/A	Bellevue	Partial
17	1925059270	Private	9632 NE 35 th Place	Single Family (Res Use Zone)	6,713	N/A	Clyde Hill	Partial
18	2472700135	Private	8044 NE 28 th Street	Single Family (Res Use Zone)	230	N/A	Hunts Point	Partial
19	3537900160	Private	3001 Hunts Point Circle	Single Family (Res Use Zone)	1,031	N/A	Hunts Point	Partial
20	3537900165	Private	8301 Hunts Point Circle	Single Family (Res Use Zone)	5,520	N/A	Hunts Point	Partial
21	2425049088	Public	79 th Avenue NE	Park	3,170	N/A	Medina	Partial
22	2425049104	Public	7800 NE 28TH ST	Vacant	89,695	N/A	Medina	Partial
23	1925059269, 1925059061	Private	9106 NE 32 nd Place	Single Family (Res Use Zone)	763	N/A	Yarrow Point	Partial

SR 520, MEDINA TO SR 202: EASTSIDE TRANSIT AND HOV PROJECT
FINDING OF NO SIGNIFICANT IMPACT

<u>24</u>	<u>1925059220</u>	<u>Private</u>	<u>9220 POINTS DR NE</u>	<u>Single Family (Res Use Zone)</u>	<u>189</u>	<u>N/A</u>	<u>Yarrow Point</u>	<u>Partial</u>
<u>25</u>	<u>0540100010</u>	<u>Private</u>	<u>9021 NE 32nd Place</u>	<u>Single Family (Res Use Zone)</u>	<u>321</u>	<u>N/A</u>	<u>Yarrow Point</u>	<u>Partial</u>
<u>26</u>	<u>1925059056</u>	<u>Private</u>	<u>3223 92nd Avenue NE</u>	<u>Single Family (Res Use Zone)</u>	<u>1,148</u>	<u>N/A</u>	<u>Yarrow Point</u>	<u>Partial</u>
<u>27</u>	<u>1925059022</u>	<u>Public</u>	<u>NE 33rd Street</u>	<u>Park</u>	<u>1,718</u>	<u>N/A</u>	<u>Yarrow Point</u>	<u>Partial</u>
<u>28</u>	<u>1925059228</u>	<u>Private</u>	<u>9618 NE 35th Place</u>	<u>Single Family (Res Use Zone)</u>	<u>1,122</u>	<u>N/A</u>	<u>Clyde Hill</u>	<u>Permanent Easement</u>
<u>29</u>	<u>1925059219, 1925059263</u>	<u>Private</u>	<u>9602 NE 35th Place</u>	<u>Single Family (Res Use Zone)</u>	<u>907</u>	<u>N/A</u>	<u>Clyde Hill</u>	<u>Permanent Easement</u>
<u>30</u>	<u>1925059009</u>	<u>Private</u>	<u>9229 NE Points Drive</u>	<u>Single Family (Res Use Zone)</u>	<u>5,795</u>	<u>N/A</u>	<u>Clyde Hill</u>	<u>Permanent Easement</u>
<u>31</u>	<u>1925059243</u>	<u>Private</u>	<u>9243 NE Points Drive</u>	<u>Single Family (Res Use Zone)</u>	<u>1,701</u>	<u>N/A</u>	<u>Clyde Hill</u>	<u>Permanent Easement</u>
<u>32</u>	<u>2472700125</u>	<u>Private</u>	<u>8024 NE 28th Street</u>	<u>Single Family (Res Use Zone)</u>	<u>80</u>	<u>N/A</u>	<u>Hunts Point</u>	<u>Permanent Easement</u>
<u>33</u>	<u>2472700130</u>	<u>Private</u>	<u>8034 NE 28th Street</u>	<u>Single Family (Res Use Zone)</u>	<u>521</u>	<u>N/A</u>	<u>Hunts Point</u>	<u>Permanent Easement</u>
<u>34</u>	<u>3536900130</u>	<u>Private</u>	<u>8521 Hunts Point Lane</u>	<u>Single Family (Res Use Zone)</u>	<u>519</u>	<u>N/A</u>	<u>Hunts Point</u>	<u>Permanent Easement</u>
<u>35</u>	<u>2472700135</u>	<u>Private</u>	<u>8044 NE 28th Street</u>	<u>Single Family (Res Use Zone)</u>	<u>1,232</u>	<u>N/A</u>	<u>Hunts Point</u>	<u>Permanent Easement</u>
<u>36</u>	<u>1925059270</u>	<u>Private</u>	<u>9632 NE 35th Place</u>	<u>Single Family (Res Use Zone)</u>	<u>7,166</u>	<u>N/A</u>	<u>Clyde Hill</u>	<u>Permanent Easement</u>

Source: <http://www5.kingcounty.gov/kcgisreports> (2009).

Appendix N, Land Use, Economics, and Relocation Technical Memorandum

Page 37, first paragraph

Bellevue

In Bellevue, approximately ~~2.21~~2.71 acres of property would be acquired for right of way or a permanent easement. ~~Four~~Six parcels would be acquired in their entirety. These properties are located near the near Bellevue Way NE interchange and along Northup Way and 108th Avenue NE (see Exhibit 16). These full acquisitions would be necessary for stormwater facilities and would result in the relocation of one single-family residence, a storage garage, and a small food retailer. Other property acquisitions would be limited to narrow strips of mostly commercial and multi-family residential land adjacent to the existing local roadways and WSDOT-owned right of way.

Appendix O, Noise Technical Memorandum

Page 1, fourth paragraph

Today, there are approximately ~~128~~155 residences in the SR 520 project study area that have noise levels that meet or exceed the FHWA and Washington State traffic noise

abatement criteria (NAC) of 66 dBA Leq (equivalent sound pressure level in A-weighted decibels).

Appendix O, Noise Technical Memorandum

Page 1, fifth paragraph

Under the No Build Alternative, noise levels are projected to increase in 2030 by only 1 to 2 dBA Leq in most locations, an amount that is not normally noticeable to most people. However, with this increase, noise levels would exceed the NAC at an additional 18 residences, bringing the total up to ~~446~~173 from the current estimate of ~~428~~155.

Appendix O, Noise Technical Memorandum

Page 1, last paragraph

Compared to today's and the projected 2030 No Build Alternative noise levels, the proposed Build Alternative, which includes noise walls along both sides of the SR 520 and lids at the three overpasses, would reduce the noise levels substantially throughout the project corridor. The total number of residences where noise levels would exceed the NAC would be reduced to ~~2036~~ under the proposed Build Alternative. All of the remaining ~~2036~~ properties exceeding the NAC do so because of noise from arterial roads, such as Bellevue Way, 92nd and 84th Avenues, Northrup Way, or because area topography limits the effectiveness of noise walls.

Appendix O, Noise Technical Memorandum

Page 6, last paragraph

The State of Washington allows for an exceedance of the noise regulations based on the amount of time the noise source exceeds the criteria. The State of Washington noise regulations are applicable to the construction phases of transportation projects. The sound level descriptor L_{xx} is defined as the sound level exceeded xx percent of the time. To assist with compliance to the noise regulations, the statistical L_{xx} noise descriptor is very useful. For example, during a 1 hour measurement, an L_{25} of 75 dBA means the sound level was at or above ~~85~~75 dBA for 15 minutes of that hour (25 percent of the time), which could be used to verify the 15-minute allowable exceedance criterion in the state's code. Similarly, two other statistical descriptors, the $L_{8.3}$ and $L_{2.5}$ can be used to verify the 5-minute and the 1.5-minute allowable exceedance criteria in the state's code.

Appendix O, Noise Technical Memorandum

Page 13, next to last bullet

- Hunts Point, Clyde Hill, Yarrow Point and Kirkland — North of SR 520 between 84th Avenue NE and 108th Avenue NE (east of Bellevue Way NE).

Appendix O, Noise Technical Memorandum

Page 13, last bullet

- Hunts Point, Clyde Hill, Yarrow Point and Bellevue — South of SR 520 between 84th Avenue NE and 108th Avenue NE (east of Bellevue Way NE).

Appendix O, Noise Technical Memorandum

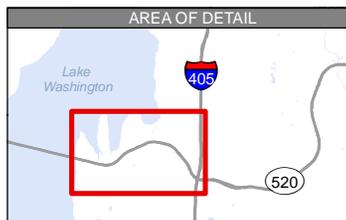
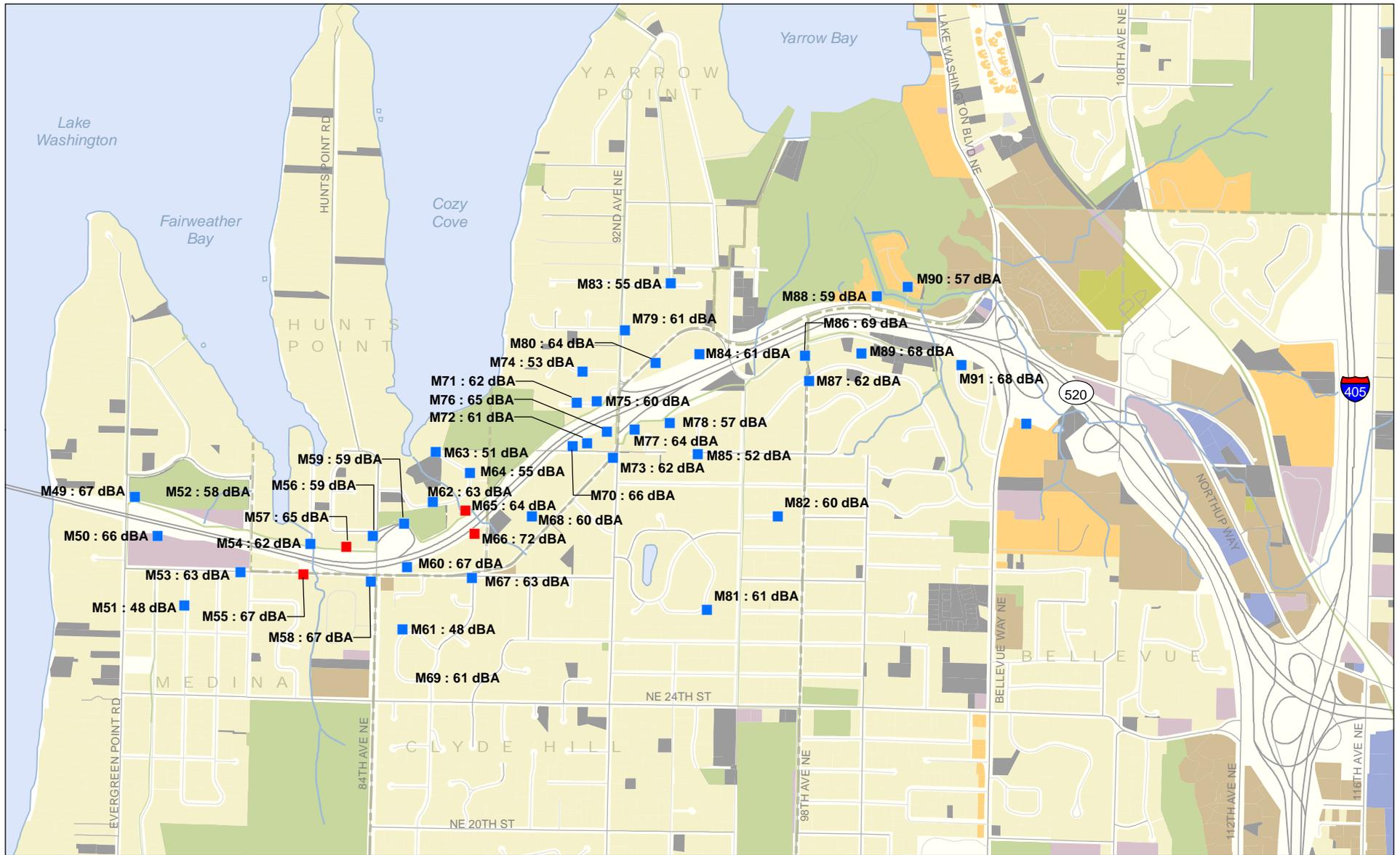
Page 14, second paragraph

Exhibit 4 shows the four noise modeling neighborhood designations used in this analysis. East of 108th Avenue the project would only restripe the highway, and no change the vertical or horizontal alignment of the highway is planned. The restriping is not predicted to result in a 3 dBA change in noise levels and this section of the project would not qualify as a Type 1 Project. Therefore, the section of the project east of 108th Avenue, where there are no physical changes to the highway or local roadways, was not analyzed for traffic noise.

Appendix O, Noise Technical Memorandum

Page 20, Exhibit 6

- Revised some of the quantities for the noise monitoring sites.



Noise Monitoring Site		Existing Land Use	
■ Long Term	■ Single Family	■ Commercial	■ Vacant
■ Short Term	■ Multifamily	■ Industrial	■ Unknown
	■ Park/Open Space	■ Parking	

Monitoring Site Identifier: M1 : 59 dBA

Measured sound level

N
0 500 1,000 2,000 Feet

Source: King County (2008) GIS Data (Parcel), King County (2005) GIS Data (Stream and Street), King County (2007) GIS Data (Waterbody), City of Bellevue (1999) GIS Data (City Limit), and CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 6. Noise Monitoring Sites in the Study Area

Medina to SR 202: Eastside Transit and HOV Project

Appendix O, Noise Technical Memorandum

Page 21, Exhibit 7

Exhibit 7. Noise Monitoring Locations, Data, and Descriptions

Number ^a	Address (closest to monitoring location)	Type	Duration	Noise Level ^b
Medina and Hunts Point North				
M49*	Playfield near tennis courts	Short-Term	15 minutes	67
M52	3010 80th Avenue NE	Short-Term	15 minutes	58
M54	3003 Fairweather Lane – near foot trail	Short-Term	15 minutes	62
M56	2831 Hunts Point Road	Short-Term	15 minutes	59
M57	8305 Hunts Point Circle (NE 30th Avenue)	Long-Term	25 hours	65
*M40, M43, M45, and M46 were reported in the SR 520 Bridge Replacement and HOV Project Draft Environmental Impact Statement. Because these are west of Evergreen Point Road, they were not analyzed for this report.				
Medina and Hunts Point South				
M50*	Bellevue Christian School	Short-Term	15 minutes	66
M51	2619 78th Avenue NE – near NE 28th Street	Short-Term	15 minutes	48
M53	7979 NE 28th	Short-Term	15 minutes	63
M55	8049 NE 28th Avenue	Long-Term	24 hours	67
M58	Intersection of 84th Avenue NE and NE 28th Street, next to the off-ramp	Short-Term	15 minutes	67
*M41, M42, M44, M47 and M48 were reported in the SR 520 Bridge Replacement and HOV Project Draft Environmental Impact Statement. Because these are west of Evergreen Point Road, they were not analyzed for this report.				
Hunts Point, Clyde Hill, Yarrow Point, and Kirkland				
M59	Fairweather Park Entrance	Short-Term	15 minutes	59
M62	8472 Hunts Point Road Lane	Short-Term	15 minutes	63
M63	8580 Hunts Point Road Lane	Short-Term	15 minutes	51
M64	8581 Hunts Point Road Lane	Short-Term	15 minutes	55
M65	8531 Hunts Point Road Lane	Long-Term	25 hours	64
M71	9043 NE 33rd Street – behind wall	Short-Term	15 minutes	62
M74	9030 NE 34th Street	Short-Term	15 minutes	53
M75	9052 NE 33rd Street	Short-Term	15 minutes	60
M79	Intersection of NE 36th Street and 92nd Avenue NE	Short-Term	15 minutes	61
M80	9243 Points Drive	Short-Term	15 minutes	64
M83	Dead-end on NE 37th Street – east of 92nd Avenue NE	Short-Term	15 minutes	55
M84	9417 Points Drive	Short-Term	15 minutes	61
M88	10015 off Points Drive and 100th Lane NE	Short-Term	15 minutes	59
M90	Intersection of 101st Way and NE 35th Court	Short-Term	15 minutes	57
Hunts Point, Clyde Hill, Yarrow Point, and Bellevue				

Exhibit 7. Noise Monitoring Locations, Data, and Descriptions

Number ^a	Address (closest to monitoring location)	Type	Duration	Noise Level ^b
M60	8500 NE 28th Street – next door in field	Short-Term	15 minutes	67
M61	8510 85th Avenue NE	Short-Term	15 minutes	48
M66	2827 88th Avenue NE	Long-Term	24 hours	72
M67	Intersection of NE 28th Street and 88th Avenue NE	Short-Term	15 minutes	63
M68	9010 Points Drive	Short-Term	15 minutes	60
M69	8829-8832 NE 25th Street	Short-Term	15 minutes	61
M70	9106 – on street north of NE 32nd Street	Short-Term	15 minutes	66
M72	9114 NE 32nd Street – closer to SR 520	Short-Term	15 minutes	61
M73	Intersection of Points Drive and 92nd Avenue NE	Short-Term	15 minutes	62
M76	3233 92nd Avenue NE	Short-Term	15 minutes	65
M77	3223 93rd Place NE	Short-Term	15 minutes	64
M78	3216 93rd Place NE	Short-Term	15 minutes	57
M81	2710 95th Avenue NE	Short-Term	15 minutes	61
M82	9636–9645 NE 30th Street	Short-Term	15 minutes	60
M85	8411 NE 32nd Street	Short-Term	15 minutes	52
M86	9650 98th Avenue NE – off NE 34th Place	Short-Term	15 minutes	69
M87	9660 NE 34th Place	Short-Term	15 minutes	62
M89	9836 NE 34th Place	Short-Term	15 minutes	68
M91*	3240 103rd Place	Short-Term	15 minutes	68

**M92 through M98 were reported in the SR 520 Bridge Replacement and HOV Project Draft Environmental Impact Statement, but are located east of Bellevue Way NE. Only re-striping will occur east of Bellevue Way NE and therefore no noise analysis will be performed in this area.*

^a See Exhibit 6 for a map of the noise monitoring locations.
^b Measured L_{eq} noise level in decibels with A-weighting (dBA).

Appendix O, Noise Technical Memorandum

Page 23, second paragraph

In addition to sites where noise was measured (designated M49 through M91), noise levels were modeled at ~~168~~182 locations in the project corridor. Modeling was performed to determine what locations in the study area exceeded the NAC. Therefore, peak-hour traffic noise levels were calculated for existing conditions using current traffic volumes and for the future No Build and Build Alternatives using predicted 2030 traffic volumes, with and without noise mitigation measures.

Appendix O, Noise Technical Memorandum

Page 23, third paragraph

The noise receiver locations were carefully selected to ensure that all potentially affected areas were studied. The noise discipline team selected ~~168~~182 receivers in the study area based on aerial mapping and onsite visits. The ~~168~~182 receivers collectively represent approximately ~~483~~579 residences within the study area.

Appendix O, Noise Technical Memorandum

Page 26, third paragraph

Existing peak-hour traffic noise levels were modeled for a total of ~~168~~182 receivers throughout the study area. The receiver locations were carefully selected to ensure that all potentially affected areas would be studied.

Appendix O, Noise Technical Memorandum

Page 26, fifth paragraph

Existing peak-hour traffic noise levels were modeled for ~~168~~182 receiver locations, representing ~~483~~579 residences within the project corridor. Noise levels at ~~45~~55 receivers (representing ~~128~~155 residences) exceeded the WSDOT NAC of 66 dBA L_{eq} .

Appendix O, Noise Technical Memorandum

Page 27, second paragraph

Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Existing peak-hour traffic noise levels were modeled for ~~62~~76 receiver locations (representing ~~202~~263 residences) in Hunts Point, Clyde Hill, Yarrow Point, and Bellevue east of 84th Avenue NE and south of SR 520. Existing peak-hour noise levels in this area ranged from 48 to 73 dBA L_{eq} . The results for receivers PB-1 through PB-24 and PB-28 through PB-~~64~~73 are included in Exhibit 24-23 and in the *Potential Effects of the Project* section of this report. Noise levels at ~~18~~28 receivers (~~58~~85 residences) in this area currently exceed the NAC.

Appendix O, Noise Technical Memorandum

Page 27, last paragraph

Public parks (e.g., Fairweather Park), the Points Loop Trail, the Lake Washington Boulevard trail, and the SR 520 bike and pedestrian path were also included in the modeling analysis. Because these types of facilities generally have a greater number of receivers than if simply counted as a residence, WSDOT has developed a method of

assigning a “residential equivalents” value to noise-sensitive areas such as parks. Based on WSDOT’s *Environmental Procedures Manual (2003)*, residential equivalents values were calculated for the parks along SR 520, Points Loop Trail, Lake Washington Boulevard trail, the Yarrow Bay KinderCare Day Care Center, and the SR 520 bike and pedestrian path. In the calculations, the team assumed that the parks and trails would be used 10 hours per day, 7 days per week, and 12 months per year. Typically, less than 12 months per year are assumed for parks and trails; however, because of the high density of residential structures around the parks and because the trail would be a commuter route for bicyclists, the team assumed a full year of use. It was also assumed that a maximum of 50 people would use each facility during any one hour. At the KinderCare facility, two outdoor play areas were identified: one that primarily receives traffic noise from SR 520 and the other from 108th Avenue NE and Northup Way. The residential equivalent of 2.38 residents for each outdoor play area was calculated based on each area having 20 children, 4 hours per day, 5 days per week, and 12 months per year. (Yasmin Ali, Director, Yarrow Bay KinderCare Day Care Center, Bellevue, WA, February 24, 2010. Discussed operational hours, number of students, hours and days of outdoor use.)

Appendix O, Noise Technical Memorandum

Page 35, first paragraph

The No Build Alternative peak-hour traffic noise levels were modeled for the same ~~168~~182 receiver locations in the study area as under the existing peak-hour traffic conditions. Noise levels would be expected to increase slightly over today’s levels because of growth in traffic volumes on SR 520 and other roadways within the study area. Of the ~~168~~182 modeled receivers, ~~526~~2 receivers (representing ~~146~~173 residences) would have noise levels exceeding the NAC of 66 dBA L_{eq}. As previously stated, ~~45~~55 receivers (representing ~~128~~155 residences) currently exceed the NAC. Under the No Build Alternative, an additional 18 residences would exceed the NAC.

Appendix O, Noise Technical Memorandum

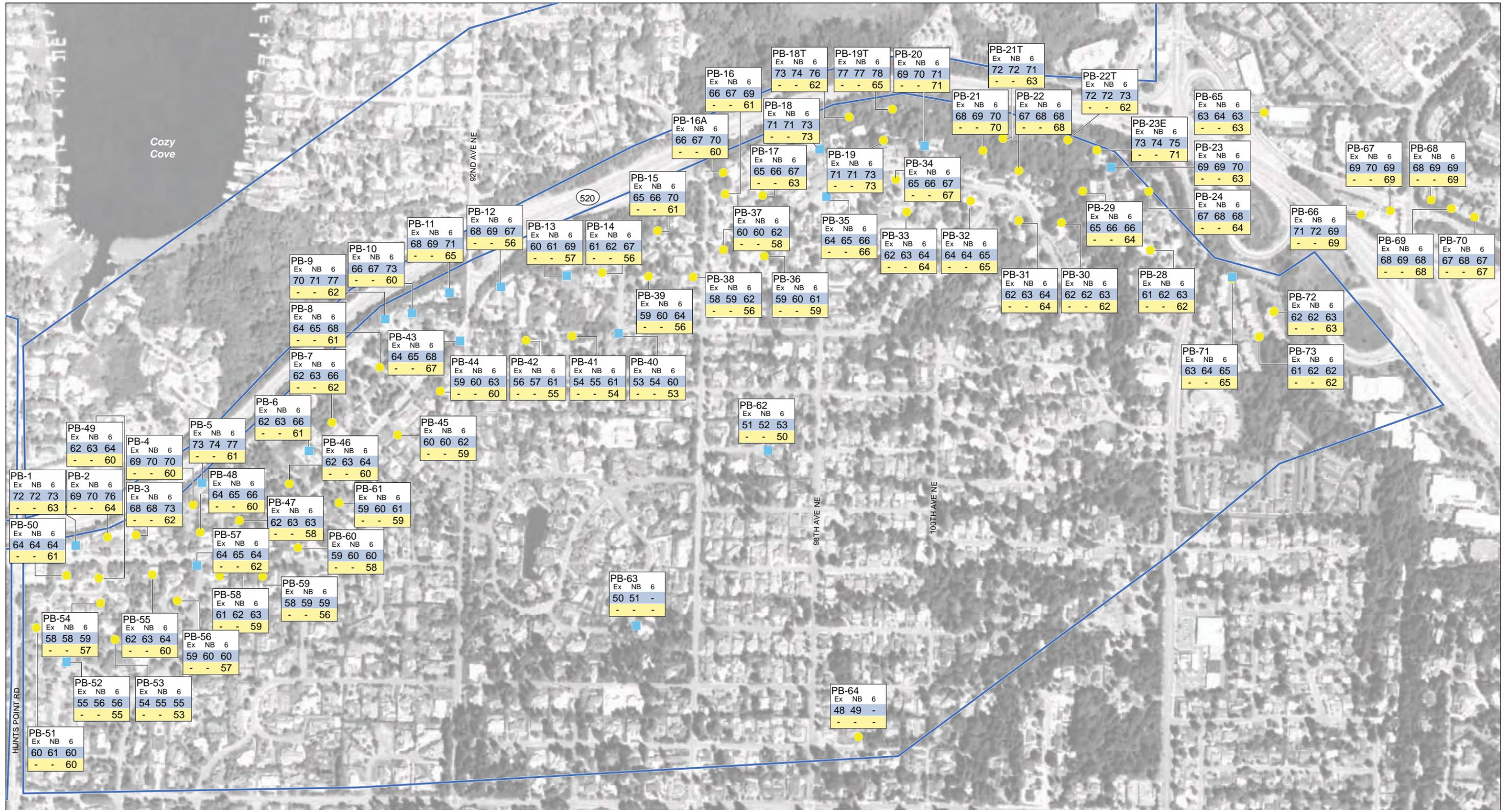
Page 35, third paragraph

The Build Alternative peak-hour traffic noise levels were modeled for the same ~~168~~182 receiver locations (representing ~~483~~579 residences) in the project study area as existing peak-hour traffic conditions. Overall, the Build Alternative would increase the number of residences where noise levels exceed the NAC from ~~128~~155 today to ~~167~~194. While the addition of three lids over the highway at Evergreen Point Road and 84th and 92nd Avenues NE would assist in reducing noise levels at those residences near the lids, there would be an overall increase in traffic noise levels throughout the study area.

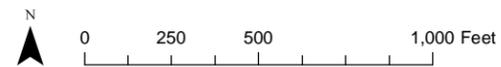
Appendix O, Noise Technical Memorandum

Page 39, Exhibit 18

- Updated noise modeling data.
- Added locations and data for the Lake Washington Boulevard trail
- Added locations and data for the area between Bellevue Way NE and 108th Avenue NE.



- Modeling Location
- Monitor and Modeling Location
- Noise Analysis Area



Source: King County (2006) Aerial Photo. Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 18. Noise Modeling Locations and Levels in Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Medina to SR 202: Eastside Transit and HOV Project

Appendix O, Noise Technical Memorandum

Page 46, first paragraph after Exhibit 22

The noise discipline team modeled peak-hour traffic noise levels for ~~6276~~ receiver locations (representing ~~202263~~ residences) in Hunts Point, Clyde Hill, Yarrow Point, and Bellevue east of 84th Avenue NE and south of SR 520. Currently, ~~5885~~ residences exceed the NAC. Under the No Build Alternative, noise levels at an additional 4 receivers (13 residences) would exceed the NAC, bringing the total number of residences exceeding the NAC to ~~7498~~.

Appendix O, Noise Technical Memorandum

Page 46, last paragraph

Under the Build Alternative, noise levels at an additional 12 receivers (38 residences) would exceed the NAC, bringing the total number of residences exceeding the NAC to ~~96123~~.

Appendix O, Noise Technical Memorandum

Page 47, second paragraph

Receivers PB-18T through PB-22T represent areas along the Lake Washington Boulevard trail that extends along the south side of SR 520 between 96th Avenue NE (PB-18) and just west of the vicinity of 103rd Avenue NE.

Appendix O, Noise Technical Memorandum

Page 47, last paragraph

~~Readers familiar with the SR 520 Bridge and HOV Replacement Project Draft Environmental Impact Statement will notice that PB-25 through PB-27 are not included in this report. These receivers are located east of Bellevue Way NE where only re-striping would occur, and thus no noise analysis is required. Therefore, these receivers were not included in this report. Receivers PB-65 through PB-73 represent areas east of Bellevue Way NE. PB-65 represents the outdoor pool area at the La Quinta Hotel and PB-66/ PB-67 represent the two outdoor play areas at the Yarrow Bay KinderCare Day Care Center. The condominium homes in the northeast corner of 108th Avenue NE and Northup Way are represented by PB-68 through PB-70. PB-71 through PB-73 represent the condominium homes located off of Bellevue Way NE and NE 32nd Place. Receiver PB-16A was added to account for the four residences along NE 35th Place just north of PB-16. Receiver PB-23E was added to more closely evaluate the outdoor use at one of the residences represented by receiver PB-23.~~

Appendix O, Noise Technical Memorandum

Page 48, Exhibit 23

Exhibit 23. Build Alternative 2030 Peak-Hour Traffic Noise Levels for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Residential Structures	NAC	Existing^{a,b}	No Build^{a,b}	Build Alternative^{b,d}
PB-1	2	66	72	72	73
PB-2	2	66	69	70	76
PB-3	2	66	68	68	73
PB-4	3	66	69	70	70
PB-5	3	66	73	74	77
PB-6	4	66	62	63	66
PB-7	2	66	62	63	66
PB-8	3	66	64	65	68
PB-9	3	66	70	71	77
PB-10	4	66	66	67	73
PB-11	3	66	68	69	71
PB-12	2	66	68	69	67
PB-13	3	66	60	61	69
PB-14	4	66	61	62	67
PB-15	4	66	65	66	70
PB-16	11 ^c	66	66	67	69
PB-16A	4	66	71	72	74
PB-17	4	66	65	66	67
PB-18	2	66	71	71	73
<u>PB-18T</u>	<u>4^c</u>	<u>66</u>	<u>73</u>	<u>74</u>	<u>76</u>
PB-19	2	66	71	71	73
<u>PB-19T</u>	<u>4^c</u>	<u>66</u>	<u>77</u>	<u>77</u>	<u>78</u>
PB-20	3	66	69	70	71
PB-21	0	66	68	69	70
<u>PB-21T</u>	<u>4^c</u>	<u>66</u>	<u>72</u>	<u>72</u>	<u>71</u>
PB-22	4	66	67	68	68
<u>PB-22T</u>	<u>4^c</u>	<u>66</u>	<u>72</u>	<u>72</u>	<u>73</u>
PB-23	3	66	69	69	70
<u>PB-23E</u>	<u>1</u>	<u>66</u>	<u>73</u>	<u>74</u>	<u>75</u>
PB-24	4	66	67	68	68

Exhibit 23. Build Alternative 2030 Peak-Hour Traffic Noise Levels for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Residential Structures	NAC	Existing ^{a,b}	No Build ^{a,b}	Build Alternative ^{b,d}
PB-28	4	66	61	62	63
PB-29	2	66	65	66	66
PB-30	3	66	62	62	63
PB-31	4	66	62	63	64
PB-32	3	66	64	64	65
PB-33	3	66	62	63	64
PB-34	3	66	65	66	67
PB-35	3	66	64	65	66
PB-36	4	66	59	60	61
PB-37	3	66	60	60	62
PB-38	3	66	58	59	62
PB-39	4	66	59	60	64
PB-40	4	66	53	54	60
PB-41	4	66	54	55	61
PB-42	3	66	56	57	61
PB-43	3	66	64	65	68
PB-44	4	66	59	60	63
PB-45	3	66	60	60	62
PB-46	4	66	62	63	64
PB-47	3	66	62	63	63
PB-48	3	66	64	65	66
PB-49	3	66	62	63	64
PB-50	4	66	64	64	64
PB-51	4	66	60	61	60
PB-52	4	66	55	56	56
PB-53	4	66	54	55	55
PB-54	2	66	58	58	59
PB-55	2	66	62	63	64
PB-56	3	66	59	60	60
PB-57	3	66	64	65	64
PB-58	2	66	61	62	63
PB-59	4	66	58	59	59

Exhibit 23. Build Alternative 2030 Peak-Hour Traffic Noise Levels for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Residential Structures	NAC	Existing ^{a,b}	No Build ^{a,b}	Build Alternative ^{b,d}
PB-60	4	66	59	60	60
PB-61	6	66	59	60	61
PB-62	4	66	51	52	53
PB-63	4	66	50	51	-- ^e
PB-64	4	66	48	49	-- ^e
<u>PB-65</u>	<u>1</u>	<u>66</u>	<u>63</u>	<u>64</u>	<u>63</u>
<u>PB-66</u>	<u>2</u>	<u>66</u>	<u>71</u>	<u>72</u>	<u>69</u>
<u>PB-67</u>	<u>2</u>	<u>66</u>	<u>69</u>	<u>70</u>	<u>69</u>
<u>PB-68</u>	<u>2</u>	<u>66</u>	<u>68</u>	<u>69</u>	<u>69</u>
<u>PB-69</u>	<u>2</u>	<u>66</u>	<u>68</u>	<u>69</u>	<u>68</u>
<u>PB-70</u>	<u>2</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>67</u>
<u>PB-71</u>	<u>8</u>	<u>66</u>	<u>63</u>	<u>64</u>	<u>65</u>
<u>PB-72</u>	<u>6</u>	<u>66</u>	<u>62</u>	<u>62</u>	<u>63</u>
<u>PB-73</u>	<u>12</u>	<u>66</u>	<u>61</u>	<u>62</u>	<u>62</u>

^a All noise levels in exhibit are L_{eq} in decibels with A-weighting (dBA).
^b Bold numbers throughout exhibit indicate noise levels exceeding the NAC, 66 dBA L_{eq}.
^c Residential equivalents for park are represented by this receiver.
^d Noise level includes noise reducing effects of the proposed lids.
^e TNM is not accurate for traffic noise projections past 500 feet.

Appendix O, noise Technical Memorandum

Page 51, fourth paragraph

Highway Design Measures

Highway design measures include altering the roadway alignment and depressing roadway cut sections. Altering roadway alignment could decrease noise levels by moving the noise source farther from the affected receivers. Because of the limited right-of-way in the project corridor, and the fact that noise impacts are expected to occur along both sides of the project roadway, this method is not seen as a feasible noise-reducing design option. In addition, realigning the project roadway would lower noise levels for residences on one side of roadway, but would increase noise levels for residences on the other. Finally, the limited right-of-way within which the proposed Build Alternative alignment could be constructed is further evidenced by the fact that some residential structures would be displaced to make room for the new roadway.

Appendix O, Noise Technical Memorandum

Page 51, sixth paragraph

Each of the three lids evaluated for this project would be approximately 500 feet long over the highway, which is short enough to not require ventilation but long enough to help reconnect the communities along SR 520. The locations of the ~~five~~three lids are:

- Evergreen Point Road (with inside transit stop)
- 84th Avenue NE
- 92nd Avenue NE (with inside transit stop)

Appendix O, Noise Technical Memorandum

Page 60, first paragraph after Exhibit 30

What noise walls are proposed for the Build Alternative?

Noise walls are proposed for the Build Alternative from Evergreen Point Road to just west of Bellevue Way NE. The area between Bellevue Way and just west of 108th Avenue NE was considered for noise mitigation but none of the noise walls evaluated meet both the feasibility and reasonableness criteria required by WSDOT.

Along the north side of SR 520, the recommended noise walls would be virtually continuous through the entire area except for breaks at 84th Avenue NE and 92nd Avenue NE, where the noise walls would be integrated with the lids. Along the south side, the recommended noise walls are also essentially continuous except near ~~The overall project corridor noise walls would be approximately 18,000 feet long with heights varying from 8 feet to 26 feet. The taller noise walls would be necessary in areas where residents are located uphill from the project corridor. the homes in the residential area along NE 34th Place and NE 34th Street (PB-18 through PB-22) that are elevated 50 to 140 feet above the project roadways.~~

Several noise walls were evaluated for this area, including:

1. A noise wall on the hillside at 18 to 22 feet was not considered feasible due to the steep hillside and added cost to shore up the hillside to support a noise wall.
2. A noise wall along the southern edge of the pavement with heights varying from 32 to 34 feet was evaluated. The wall would reduce traffic noise levels by a maximum of 6 dBA at one residence, with the other residences in the area receiving noise reductions ranging from 2 to 4 dBA, which would not meet WSDOT's feasibility criteria. Further, due to the added cost of constructing a wall of this height, the wall would not meet WSDOT's reasonableness criteria. With subsequent project design changes that added the requirement of a detention pond in this area, two variations of this wall were also considered. The first variation considered a wall along the south boundary of the detention pond. However, the altered wall footprint resulted in less reduction in noise level

- despite raising the heights above 34 feet, which again failed to meet WSDOT's feasibility and reasonableness criteria. The second variation considered a wall along the center of the highway which would mitigate traffic noise levels from only the westbound lanes of SR 520. The traffic noise level reductions that would be achieved by this design would be minimal resulting in a failure to meet WSDOT's feasibility criteria.
3. The final noise wall considered for this area focused on mitigating only the traffic noise along the Lake Washington Boulevard trail that extends along the south side of SR 520 between 96th Avenue NE (PB-20) and the noise wall evaluated in the vicinity of 103rd Avenue NE. Although fewer traffic noise impacts would be mitigated, a noise wall with lower heights varying between 10 and 12 feet would meet WSDOT's feasibility and reasonableness criteria for the trail.

The overall project corridor noise walls would be approximately 18,000 feet long with heights varying from 8 feet to 20 feet. The taller noise walls would be necessary in areas where residents are located uphill from the project corridor. Exhibit 31 shows the locations and heights of the proposed noise walls. The heights shown on Exhibit 31 are for the height of the noise wall above any retaining walls, where applicable, or above the highest ground elevation near SR 520.

Appendix O, Noise Technical Memorandum

Page 61, fourth paragraph

On the north side of the highway, from Evergreen Point Road to ~~Bellevue Way NE~~108th Avenue NE, the noise wall heights would vary as described below.

Appendix O, Noise Technical Memorandum

Page 61, fifth paragraph

The noise wall height would be 12 feet at Evergreen Point Road, increasing to 14 feet and then 16 feet near the eastern boundary of Fairweather Park. At 80th Avenue NE (PN-25), the noise wall would increase to 18 feet and continue at that height until connecting with the 84th Avenue NE lid. From the east side of the 84th Avenue NE lid to the 92nd Avenue NE lid, the noise wall height would start at 12 feet and within the first 150 feet step up to 16 feet and remain at that height until connecting with the 92nd Avenue NE lid. From the east side of the 92nd Avenue NE lid to 96th Avenue NE (PK-20), the noise wall height would start at 8 feet and within the first 50 feet step up to 10 feet and remain at 10 feet as it extends along the north side of the westbound SR 520 off-ramp to 92nd Avenue NE. From 96th Avenue NE (PK-20) to approximately 400 feet west of Bellevue Way NE the noise wall would be 10 feet high.

On the south side of the highway, from Evergreen Point Road to ~~Bellevue Way NE~~108th Avenue NE, the wall heights would be constructed as described below.

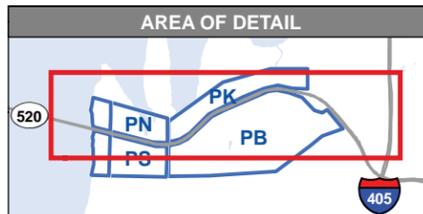
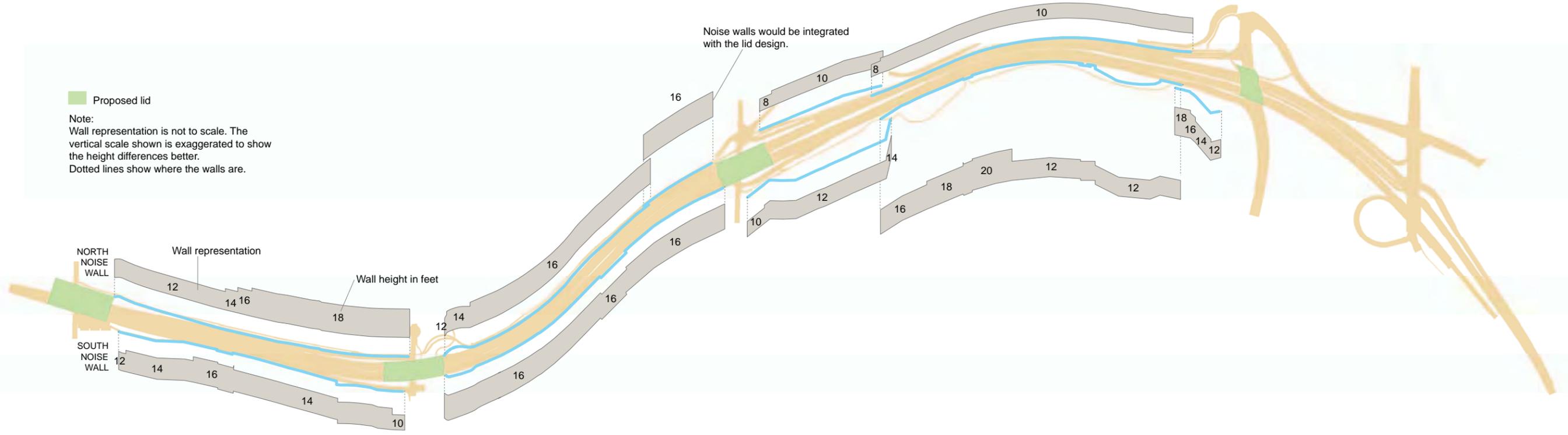
Appendix O, Noise Technical Memorandum

Page 62, Exhibit 31

- Updated to show revised noise wall heights.

Proposed lid

Note:
Wall representation is not to scale. The vertical scale shown is exaggerated to show the height differences better. Dotted lines show where the walls are.



- Noise Wall
- Lid
- Pavement



Source: King County (2008) GIS Data (Streams, Streets, Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91), vertical datum for layers is NAVD88.



Exhibit 31. Noise Wall Locations and Heights for the Build Alternative

Medina to SR 202: Eastside Transit and HOV Project

Appendix O, Noise Technical Memorandum

Page 63, first paragraph

The next wall segment would be constructed along the SR 520 shoulder and start at a height of 16 feet and rise to ~~22~~18 feet at 96th Avenue NE (PB-16A). The wall would remain at ~~22~~18 feet for ~~600~~306 feet of wall length, at which point it would step up to ~~24~~20 feet. The wall height would remain at ~~24~~20 feet for ~~650~~402 feet (near the cul-de-sac at the end of NE 35th Street) and then step down to 12 feet and remain at that height until overlapping with the last wall segment just west of 103rd Place NE as described below. ~~102nd Avenue NE). The wall height would gradually step down to 20 feet near PB 19 and then step up to 22 feet and then 26 feet near PB 21. The wall would remain t 26 feet for approximately 430 feet and step down to 22 feet before ending near the start of the SR 520 eastbound off ramp to Bellevue Way NE.~~

Appendix O, Noise Technical Memorandum

Page 63, second paragraph

The last wall segment would begin just west of 103rd Place NE, run east along the new SR 520 right of way, and end after wrapping around the east side of ~~the~~ 103rd Avenue. This wall segment height would be ~~16~~18 feet from the west end and, near the midpoint of the wall length, step down to 16 feet, then to 14 feet and to 12 feet ~~remain at that height until reaching~~ near its eastern end point.

Appendix O, Noise Technical Memorandum

Page 66, before Exhibit 35

Four noise walls that collectively extend along the neighborhoods south of SR 520 between 84th Avenue NE and Bellevue Way NE were evaluated. Three additional walls were evaluated east of Bellevue Way NE. Each of the seven walls is noted in Exhibit 35. Under each noise wall description, the receivers that represent those homes that would benefit from the particular noise wall are listed.

Appendix O, Noise Technical Memorandum

Page 66, Exhibit 35

Exhibit 35. Noise Wall Performance Summary for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Build Noise Levels without Noise Wall ^{a,b}	Build Noise Levels with Noise Wall ^{a,b}	Noise Reduction ^a	Benefited Homes ^d	Capital Available for Mitigation ^c
<u>84th Avenue NE to 92nd Avenue NE</u>					
PB-1	73	63	10	2	\$125,580
PB-2	76	64	12	2	\$132,840
PB-3	73	62	11	2	\$125,580
PB-4	70	60	10	3	\$155,700
PB-5	77	61	16	3	\$199,260
PB-6	66	61	5	4	\$149,520
PB-7	66	62	4	2	\$74,760
PB-8	68	61	7	3	\$133,920
PB-9	77	62	15	3	\$199,260
PB-10	73	60	13	4	\$251,160
PB-11	71	65	6	3	\$166,590
<u>PB-43</u>	<u>68</u>	<u>67</u>	<u>1</u>	<u>0</u>	<u>\$0</u>
<u>PB-44</u>	<u>63</u>	<u>60</u>	<u>3</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-45</u>	<u>62</u>	<u>59</u>	<u>3</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-46</u>	<u>64</u>	<u>60</u>	<u>4</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-47</u>	<u>63</u>	<u>58</u>	<u>5</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-48</u>	<u>66</u>	<u>60</u>	<u>6</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-49</u>	<u>64</u>	<u>60</u>	<u>4</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-50</u>	<u>64</u>	<u>61</u>	<u>3</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-51</u>	<u>60</u>	<u>60</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<u>PB-52</u>	<u>56</u>	<u>55</u>	<u>1</u>	<u>0</u>	<u>\$0</u>
<u>PB-53</u>	<u>55</u>	<u>53</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-54</u>	<u>59</u>	<u>57</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-55</u>	<u>64</u>	<u>60</u>	<u>4</u>	<u>2</u>	<u>\$74,760</u>
<u>PB-56</u>	<u>60</u>	<u>57</u>	<u>3</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-57</u>	<u>64</u>	<u>62</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-58</u>	<u>63</u>	<u>59</u>	<u>4</u>	<u>2</u>	<u>\$74,760</u>
<u>PB-59</u>	<u>59</u>	<u>56</u>	<u>3</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-60</u>	<u>60</u>	<u>58</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-61</u>	<u>61</u>	<u>59</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-62</u>	<u>53</u>	<u>50</u>	<u>3</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-63</u>	<u>50</u>	<u>48</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-64</u>	<u>47</u>	<u>46</u>	<u>1</u>	<u>0</u>	<u>\$0</u>
<i>Total Available for Noise Mitigation</i>					\$3,171,990

SR 520, MEDINA TO SR 202: EASTSIDE TRANSIT AND HOV PROJECT
FINDING OF NO SIGNIFICANT IMPACT

Exhibit 35. Noise Wall Performance Summary for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Build Noise Levels without Noise Wall ^{a,b}	Build Noise Levels with Noise Wall ^{a,b}	Noise Reduction ^a	Benefited Homes ^d	Capital Available for Mitigation ^c
<u>92nd Avenue NE to 96th Avenue NE</u>					
PB-12	67	56	11	2	\$82,220
PB-13	69	57	12	3	\$144,810
PB-14	67	56	11	4	\$164,440
PB-15	70	59 61	11 9	4	\$207,600
<u>PB-40</u>	<u>60</u>	<u>52</u>	<u>8</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-41</u>	<u>61</u>	<u>53</u>	<u>8</u>	<u>4</u>	<u>\$149,520</u>
<u>PB-42</u>	<u>61</u>	<u>55</u>	<u>6</u>	<u>3</u>	<u>\$112,140</u>
<i>Total Available for Noise Mitigation</i>					\$1,010,250
<u>96th Avenue NE to west of 103rd Place NE</u>					
PB-16	69	59 61	10 8	11 ^d	\$530,970
PB-16A	74	62 62	12 12	4	\$207,600 \$265,680
PB-17	67	62 63	5 4	4	\$164,440
PB-18	73	70 72	3 1	0	\$0
<u>PB-18T</u>	<u>76</u>	<u>62</u>	<u>14</u>	<u>4^d</u>	<u>\$265,680</u>
PB-19	73	71 72	2 1	0 0	\$0
<u>PB-19T</u>	<u>78</u>	<u>65</u>	<u>13</u>	<u>4^d</u>	<u>\$265,680</u>
PB-20	71	70 71	1 0	0 0	\$0
PB-21	70	66 71	4 1	0	\$0
<u>PB-21T</u>	<u>71</u>	<u>63</u>	<u>8</u>	<u>4^d</u>	<u>\$222,120</u>
PB-22	68	65 69	-1	0	\$0
<u>PB-22T</u>	<u>73</u>	<u>62</u>	<u>11</u>	<u>4^d</u>	<u>\$251,160</u>
<u>PB-30</u>	<u>63</u>	<u>62</u>	<u>1</u>	<u>0</u>	<u>\$0</u>
<u>PB-31</u>	<u>64</u>	<u>64</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<u>PB-32</u>	<u>65</u>	<u>65</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<u>PB-33</u>	<u>64</u>	<u>64</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<u>PB-34</u>	<u>67</u>	<u>67</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<u>PB-35</u>	<u>66</u>	<u>65</u>	<u>1</u>	<u>0</u>	<u>\$0</u>
<u>PB-36</u>	<u>61</u>	<u>59</u>	<u>2</u>	<u>0</u>	<u>\$0</u>
<u>PB-37</u>	<u>62</u>	<u>57</u>	<u>5</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-38</u>	<u>62</u>	<u>56</u>	<u>6</u>	<u>3</u>	<u>\$112,140</u>
<u>PB-39</u>	<u>64</u>	<u>56</u>	<u>8</u>	<u>4</u>	<u>\$149,520</u>
<i>Total Available for Noise Mitigation</i>					\$2,577,850 \$2,339,530
<u>103rd Place NE to Bellevue Way NE</u>					
PB-23	70	64 63 ^e	6 7	43	\$155,700
<u>PB-23E^e</u>	<u>75</u>	<u>71</u> ^g	<u>4</u>	<u>1</u>	<u>\$66,420</u>
PB-24	68	64	4	4	\$178,560

Exhibit 35. Noise Wall Performance Summary for Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520

Receiver Number	Build Noise Levels without Noise Wall ^{a,b}	Build Noise Levels with Noise Wall ^{a,b}	Noise Reduction ^a	Benefited Homes ^d	Capital Available for Mitigation ^c
PB-28	63	61	2	0	\$0
PB-29	66	63 ^g	3	2	\$74,760
PB-65 ^f	<u>63</u>	<u>63</u>	<u>0</u>	<u>0</u>	<u>\$0</u>
<i>Total Available for Noise Mitigation</i>					<u>\$475,440</u>
<u>Yarrow Bay KinderCare Day Care Center - Along SR 520^h</u>					
PB-66	69	<u>62</u>	<u>7</u>	<u>2.38</u>	<u>\$114,929</u>
<i>Total Available for Noise Mitigation</i>					<u>\$114,929</u>
<u>Yarrow Bay KinderCare Day Care Center - Along Northup Way^h</u>					
PB-67	69	<u>64</u>	<u>5</u>	<u>2.38</u>	<u>\$114,929</u>
<i>Total Available for Noise Mitigation</i>					<u>\$114,929</u>
<u>Condominium Homes at 108th NE & Northup Way</u>					
PB-68	69	<u>64</u>	<u>5</u>	<u>2</u>	<u>\$96,540</u>
PB-69	68	<u>61</u>	<u>7</u>	<u>2</u>	<u>\$89,280</u>
PB-70	67	<u>61</u>	<u>6</u>	<u>2</u>	<u>\$82,220</u>
<i>Total Available for Noise Mitigation</i>					<u>\$268,040</u>

^a All noise levels in the exhibit are stated as L_{eq} in decibels with A-weighting (dBA).

^b Bold numbers throughout exhibit indicate noise levels exceeding the NAC, 66 dBA L_{eq}.

^c Available mitigation capital from WSDOT criteria for cost evaluation.

^d Includes residential equivalents for the park area, Points Loop Trail, Lake Washington Boulevard trail, and/or SR 520 bike and pedestrian path represented by this receiver.

^e This receiver specifically represents the back yard main level deck of one home near PB-23 and was included to further refine the noise wall heights in this area.

^f This receiver represents the La Quinta outdoor pool use - no noise wall required for this area.

^g This receiver is listed under the noise wall from 103rd Place NE to Bellevue Way NE but is also partially influenced by the noise wall from 96th Avenue NE to west of 103rd Place NE.

^h Two noise walls were evaluated for the Yarrow Bay KinderCare facility.

Appendix O, Noise Technical Memorandum

Page 68, first paragraph after Exhibit 35

In accordance with the WSDOT ~~feasibility~~~~cost-effectiveness~~ criteria, each noise wall ~~recommended~~~~evaluate~~ for this project ~~must~~ ~~would~~ provide 5 dBA or greater reductions for the first row of residences ~~with at least one receiver having a minimum of 7 dBA reduction~~. Each noise wall meets the feasibility criteria except for the wall evaluated along Northup Way for the Yarrow Bay KinderCare Day Care Center. This noise wall would not achieve a minimum of 7 dBA for at least one receiver and is therefore not recommended for this project. ~~Many residences would have a reduction of 10 dBA or higher.~~

Appendix O, Noise Technical Memorandum

Page 68, second paragraph after Exhibit 35

A summary of the cost analysis for each neighborhood noise wall system is provided in Exhibit 36. Each Four of the seven evaluated noise walls meets the WSDOT cost criteria with residual capital. On the south side of SR 520, between 96th Avenue NE and 103rd Place NE, the substantial difficult-topographical differences between the residences and the project roadway conditions require a 32 to 24 foot high noise wall to meet WSDOT's feasibility criteria resulting in a cost that exceeds WSDOT's cost criteria. However, in this same area between 96th Avenue NE and 103rd Place NE, a lower noise wall height of 12 feet would mitigate the noise receivers representing the Lake Washington Boulevard trail and would meet WSDOT's reasonableness criteria. The noise wall between the KinderCare facility and SR 520 would not meet WSDOT's reasonableness criteria due to the length and height required to mitigate the outdoor play area. The noise wall evaluated for the condominium homes at 108th Avenue NE and Northup Way would not meet the WSDOT reasonableness criteria. The outdoor uses (2nd floor balconies) that face the project roadways are elevated with respect to the roadways and the required higher wall height would be cost-prohibitive. would require higher walls (up to 26 feet) in areas between Bellevue Way and NE 92nd Avenue than are normally constructed. Despite the higher wall heights, the noise wall meets the WSDOT cost criteria with a residual capital of \$3,435.

Appendix O, Noise Technical Memorandum

Page 68, last paragraph

A total of 451437 residential equivalents (5565 with noise levels of 70 dBA or higher) would benefit from construction of the proposed noise walls.

Appendix O, Noise Technical Memorandum

Page 69, Exhibit 36

Exhibit 36. Details and Cost Analysis for Each Neighborhood Noise Wall System

Noise Wall Description	Heights Along Wall (ft) ^a			Length (ft) ^b	Wall Area (ft ²) ^c	Cost ^d	Available Capital ^e	Residual Capital ^f
	Min	Avg	Max					
Medina and Hunts Point North of SR 520								
Evergreen Point Road Lid to 84th Ave NE Lid	12	15	18	2,355	36,128	\$1,929,223 1,929,235	\$3,614,280	+\$1,685,057 1,685,045
Hunts Point, Clyde Hill, Yarrow Point, and Kirkland North of SR 520								
84th Ave NE Lid to Bellevue Way	12	16	16	2,542	40,343	\$2,154,324 2,154,316	\$2,562,260	+\$407,936 407,944

Exhibit 36. Details and Cost Analysis for Each Neighborhood Noise Wall System

Noise Wall Description	Heights Along Wall (ft) ^a			Length (ft) ^b	Wall Area (ft ²) ^c	Cost ^d	Available Capital ^e	Residual Capital ^f
	Min	Avg	Max					
NE								
Medina and Hunts Point South of SR 520								
Evergreen Point Road Lid to 84th Ave NE Lid	10	14	16	2,319	32,703	\$1,746,357 <u>1,746,340</u>	\$2,527,330	+\$780,973 <u>780,990</u>
Hunts Point, Clyde Hill, Yarrow Point, and Bellevue South of SR 520								
84th Ave NE Lid to 92nd Ave Bellevue-NE	<u>16</u>	<u>16</u>	<u>16</u>	<u>2,599</u>	<u>41,578</u>	<u>\$2,220,265</u>	<u>\$3,171,990</u>	<u>+\$951,725</u>
92nd Avenue NE to 96th Avenue NE	10	11.8	12	1,352	15,932	\$850,769	\$1,010,250	+\$159,481
96th 92nd Avenue NE to west of 103rd Place NE	16 <u>10</u>	28 <u>14.6</u>	34 <u>20</u>	2,579 <u>1,685</u>	71,679 <u>26,986</u>	\$3,827,659 <u>\$1,441,052</u>	\$2,519,770 <u>\$2,339,530</u>	-\$1,307,889 <u>+898,478</u>
103rd Place NE to Bellevue Way NE	12	15	18	420	6,295	\$336,153	\$475,440	+\$139,287
Yarrow Bay KinderCare Day Care Center								
108th Ave NE On ramp to SR 520 Westbound	11	14	15	350	4,779	\$256,267	\$114,929	-\$141,338
Condominium Homes at 108th NE & Northup Way								
Northup Way east of 108th Ave NE	14	16	18	522	8,347	\$445,730	\$268,040	-\$177,690

^a Minimum, average, and maximum noise wall heights in feet.

^b Length of proposed noise walls in feet.

^c Total noise wall surface area in square feet.

^d Cost of noise wall based on \$53.40 per square foot from WSDOT criteria for cost evaluation.

^e Available mitigation capital from WSDOT criteria for cost evaluation.

^f Residual mitigation capital: positive value is within the allowable capital based on WSDOT criteria; negative value exceeds the criteria.

Appendix O, Noise Technical Memorandum

Page 69, second paragraph after Exhibit 36

~~Because of the favorable topographical features on the Eastside, there are only a few residential locations where the project could not provide effective noise abatement.~~

Appendix O, Noise Technical Memorandum

Page 69, last paragraph

~~Under the Build Alternative, peak-hour noise levels at 2036 residences or residential equivalents (PN-29, PS-13, PB-18, PB-19, PB-20, PB-22, PB-23E, PB-34 and, PB-43, PB-66 through, PB-68, PB-69, and PB-70) would exceed the NAC. Residences represented by PN-29 and PS-13 would continue to receive unmitigated traffic noise from 84th Avenue NE. Increasing the noise wall height along SR 520 would not reduce noise levels at PN-29 or PS-13. Residences represented by PB-18, PB-19, PB-20, PB-22, PB-23E and PB-34 are elevated between 50 and 140 feet approximately 80 feet above the grade of SR 520. The elevation difference between the receivers and SR 520 precludes a noise wall design that could meet both the feasibility and reasonableness criteria established by WSDOT. ~~would reduce the effectiveness of the proposed noise wall. Raising the height of the noise wall would not lower the noise levels to below the NAC.~~ PB-43 would continue to receive traffic noise levels from 92nd Avenue NE; therefore, no additional noise reduction could be achieved with the project noise walls.~~

~~The Yarrow Bay KinderCare Day Care Center has two outdoor play areas, one near SR 520 (PB-66) and another near Northup Way (PB-67). Noise walls were evaluated for each of the areas. The wall along the 108th Avenue NE on-ramp to SR 520 westbound meets WSDOT's feasibility criteria but does not meet the reasonableness (cost-effective) criteria. The noise wall along Northup Way evaluated for the outdoor use area in front of the KinderCare building meets WSDOT's feasibility and reasonableness criteria and is recommended. Similarly, the noise wall along Northup Way evaluated for the outdoor use area in front of the KinderCare building meets WSDOT's feasibility criteria but does not meet the reasonableness (cost-effective) criteria. Therefore, the two walls evaluated for the KinderCare Day Care Center are not recommended.~~

~~The condominiums located in the northeast corner of Northup Way and 108th Avenue NE were constructed with the living area above the garages. Six of these condominium homes have outdoor balconies that face Northup Way and SR 520 (PB-68, PB-69 and PB-70). The noise wall evaluated for these 6 balconies meets WSDOT's feasibility criteria but does not meet the reasonableness criteria due to the higher wall height necessary to achieve the required noise level reductions at these second floor residential uses. Traffic noise levels at these outdoor balconies would exceed the NAC with the Build Alternative.~~

Appendix R, Visual Quality and Aesthetics Technical Memorandum

Page 5, fifth bullet

- The addition of continuous noise walls of varying heights (8 to ~~28~~ 20 feet high) on both sides of the highway from Evergreen Point Road to Bellevue Way.

Appendix R, Visual Quality and Aesthetics Technical Memorandum

Page 22, third bullet

- Presence of continuous noise walls of varying heights (8 to ~~28~~ 20 feet high) on both sides of the highway from Evergreen Point Road to Bellevue Way.

Appendix S, Water Resources Discipline Report

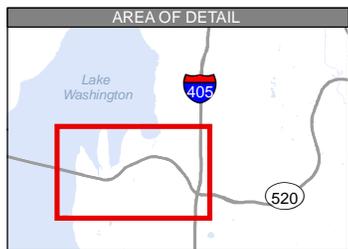
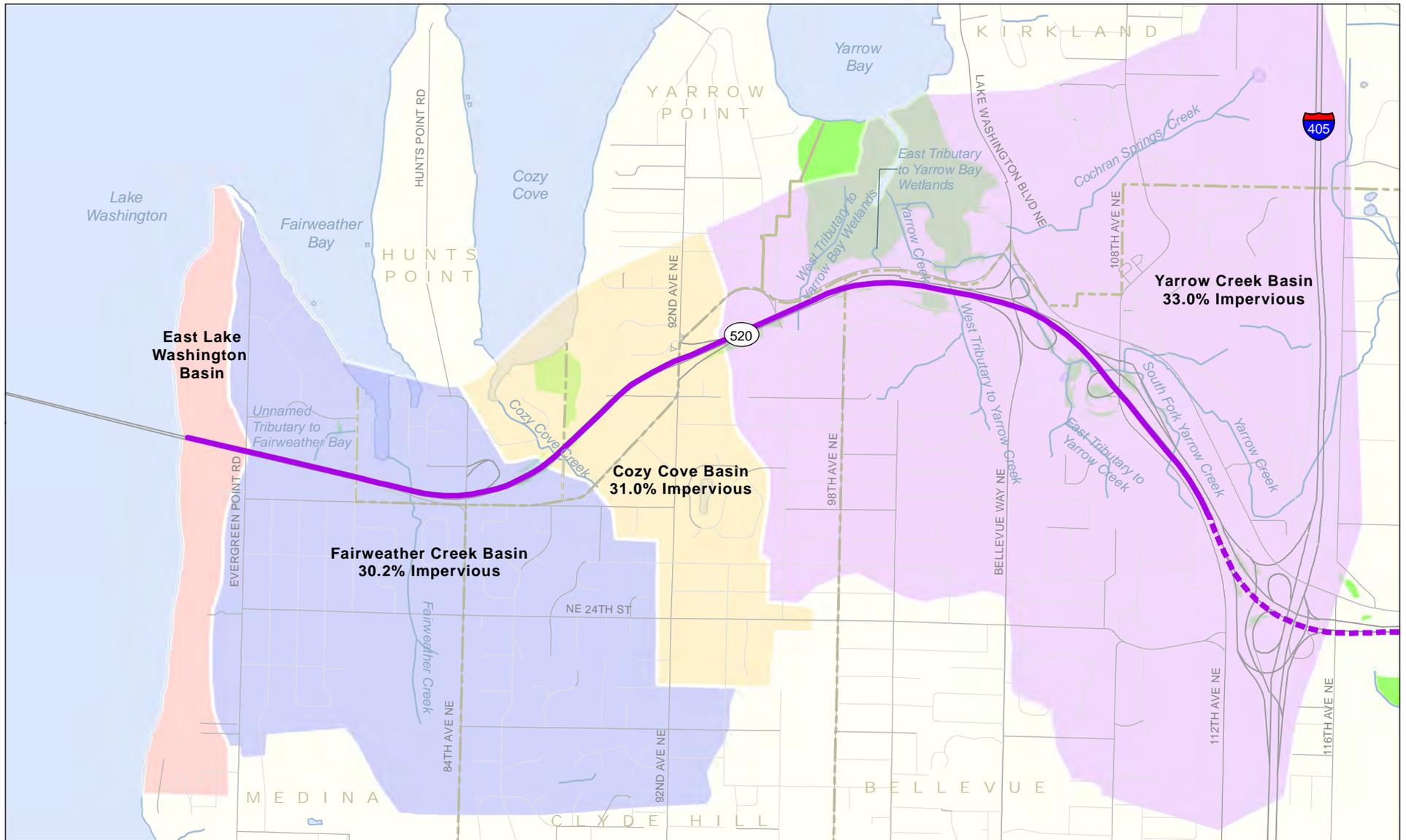
Page 6, fourth paragraph

When State Route (SR) 520 was constructed stormwater treatment and flow was not required. Stormwater would continue to be discharged without treatment or flow control under the No Build Alternative. Conversely, stormwater would be treated and flows controlled (as required) for the Build Alternative.

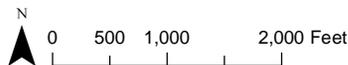
Appendix S, Water Resources Discipline Report

Page 15, Exhibit 6

- Figure revised with the correct impervious surface quantities.



- Construction Extent
- Restriping Extent
- Stream
- Wetland
- City Limits



Source: City of Bellevue (1999) GIS Data (City Limits), King County (2004) GIS Data (Stream), King County (2005) GIS Data (Street), King County (2007) GIS Data (Waterbody), and King County (2008) GIS Data (Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 6. Percent Impervious Surface in Study Area Basins

Medina to SR 202: Eastside Transit and HOV Project

Appendix S, Water Resources Discipline Report

Page 17, after first paragraph

Unnamed Tributary to Fairweather Bay

The Unnamed Tributary to Fairweather Bay is a short (0.2 mile long) stream that drains Fairweather Park, on the north side of SR 520, and also provides some drainage from the SR 520 roadway and some area south of the highway (Exhibit 25). It is included in the Fairweather Creek Basin. The stream, which discharges into the east shoreline of Fairweather Bay via a discharge pipe under 80th Avenue NE, originates at the outlet of two corrugated metal culverts which discharge into a catch basin on the north side of SR 520. These culverts receive stormwater from paved areas within and south of the SR 520 right of way. The stream is perennial, which likely indicates groundwater input into the upstream pipe system, as no open channel conveyance was observed above the catch basin. The watershed is moderately developed upstream of SR 520, while the majority of open channel is located in an undeveloped area, with some residential development at the stream mouth. The stream is not listed for exceedences on the Ecology 303(d) list (Ecology 2009).

For the Unnamed Tributary to Fairweather Bay, approximately 57 linear feet and 63 square feet of stream channel will be placed in a culvert in order to construct retaining walls (Exhibit 33).

Appendix S, Water Resources Discipline Report

Page 25, Exhibit 10

Exhibit 10. **Stormwater Treatment and Flow Control Requirements for Study Area Basins**

Applicable Study Area Basins	Water Quality Treatment and Flow Control Requirements
Lake Washington	Water Quality – Basic Treatment Flow Control – None
Fairweather Creek basin	Water Quality – Basic Enhanced Treatment Flow Control – None
Cozy Cove Creek basin	Water Quality – Enhanced Treatment Flow Control – None
Yarrow Creek basin ^a	Water Quality – Enhanced Treatment Flow Control – Provided

^a The overpass crossing the SR 520 roadway, which drains to the Kirkland municipal separated storm sewer system, would be treated following Kirkland’s municipal code. Similarly, other areas where surface streets would be improved as part of the project (e.g., 108th Avenue NE, Northup Way, and ~~NE Points Drive~~ Points Drive-NE) would be treated following the relevant municipal code.

Appendix S, Water Resources Discipline Report

Page 27, second paragraph

The HRM presents methods for ~~two approaches to~~ designing a stormwater treatment and flow control system that complies with federal and state water quality regulations. ~~These approaches are called the presumptive approach and the demonstrative approach. Both approaches~~ “are It is based on best available science and on result from existing federal and state laws that require stormwater treatment systems to be properly designed, constructed, maintained and operated” (WSDOT 2008a). ~~In the HRM, the presumptive approach~~ specifies a menu of BMPs that engineers can use to design a storm-water system to meet Ecology’s storm-water regulations. The HRM provides information to guide engineers in “the proper selection, design, construction, implementation, operation, and maintenance of BMPs” (WSDOT 2008a). “Projects that follow the stormwater BMPs contained in [the HRM] are presumed to have satisfied [the] demonstration requirement and do not need to provide technical justification to support the selection of BMPs” (WSDOT 2008a).

~~Alternatively, engineers can design storm water systems using storm water BMPs and management approaches that are not included in the HRM. This approach is called the demonstrative approach, which can be used if it can be:~~

- ~~“[d]emonstrate[d] that the project will not adversely impact water quality by collecting and providing appropriate supporting data to show that the alternative approach protects water quality and satisfies state and federal water quality laws; and by~~
- ~~Meet[ing] the technology based requirements of state and federal law” (WSDOT 2008a).~~

Appendix S, Water Resources Discipline Report

Page 28, first paragraph

~~Based on this guidance from the HRM, the project engineers on the design team followed the presumptive approach to design the flow control and storm water treatment facilities for the study area. However, project engineers determined that standard BMPs specified for flow control using the presumptive approach would not meet the HRM requirements in the Yarrow Creek basin because there is not enough pond volume available to meet the requirements of the HRM. Project engineers instead applied the demonstrative approach to design a storm water flow control system for the affected waterways in this basin. Exhibit 11 identifies the steps followed by the project engineers to determine how the project would comply with federal and state water quality regulations affect surface water resources using the presumptive and demonstrative approaches.~~

Exhibit 11. Steps Involved in Applying the HRM ~~Presumptive and Demonstrative~~
Approaches for this Project

~~Steps followed to apply the presumptive approach for this project~~

- 1) Identify the surface water bodies receiving stormwater and the associated level(s) of flow control and water quality treatment required by the HRM.
- 2) Determine the total area of PGIS and the Water Quality Design Storm for the study area. With that information, determine the appropriate size and location for required treatment and flow control facilities.
- 3) Identify the types and combinations of flow control and water quality treatment BMPs to be used from the flowcharts provided in the HRM. Evaluate feasibility, location constraints, and costs.
- 4) Presume that the project has demonstrated compliance with state and federal water quality criteria based on the HRM guidance (WSDOT 2008a).

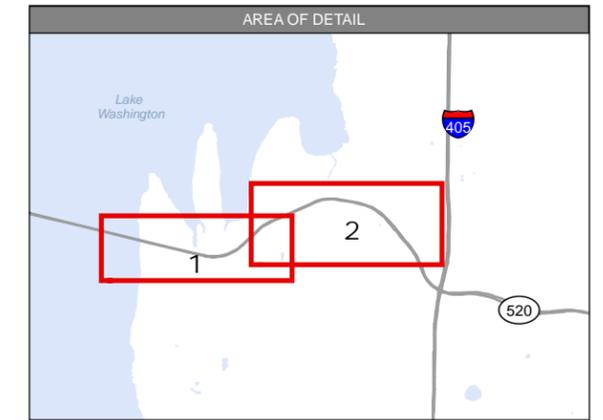
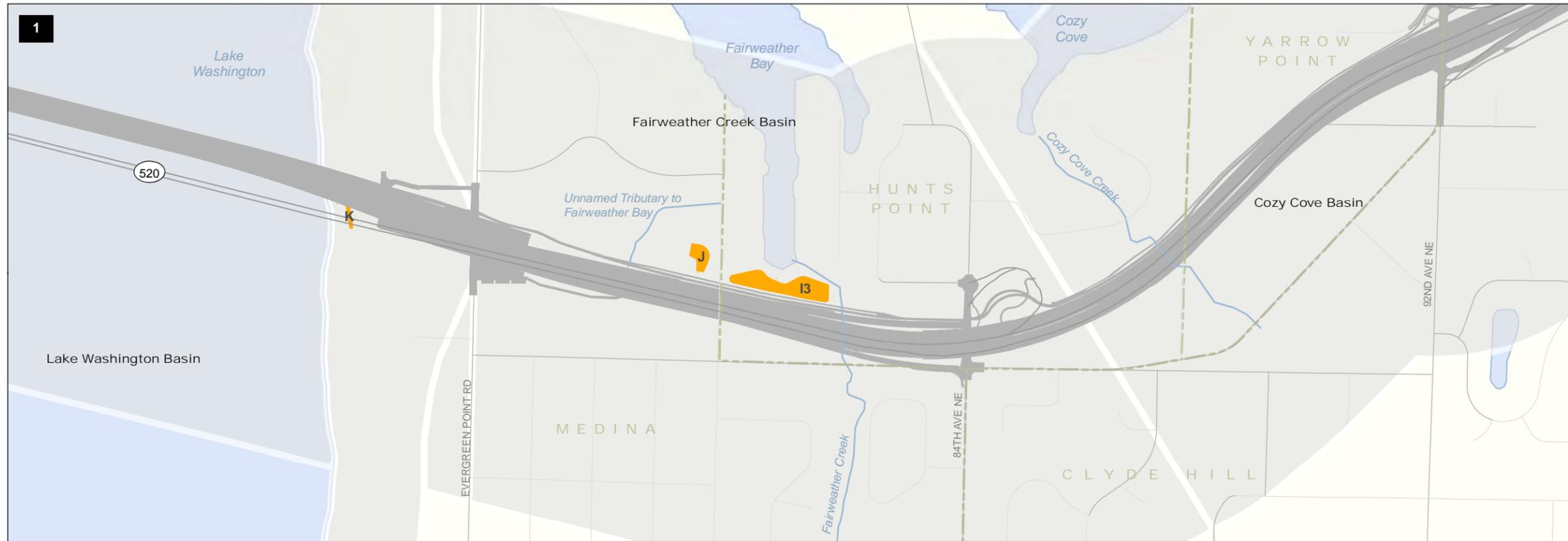
~~Steps followed to apply the demonstrative approach for this project~~

- ~~1) Identify the surface water bodies receiving stormwater and the associated level(s) of flow control and water quality treatment required by the HRM.~~
 - ~~2) Determine the types of flow control BMPs that can be used. The BMPs can come from the HRM, or they can be new or innovative emerging technologies.~~
 - ~~3) Develop an approach to demonstrate that storm water discharges would meet the flow control standards of the HRM and Stormwater Management Manual for Western Washington.~~
 - ~~4) Demonstrate that storm water discharges would meet relevant state criteria.~~
-

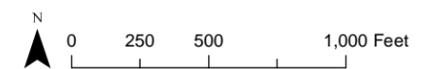
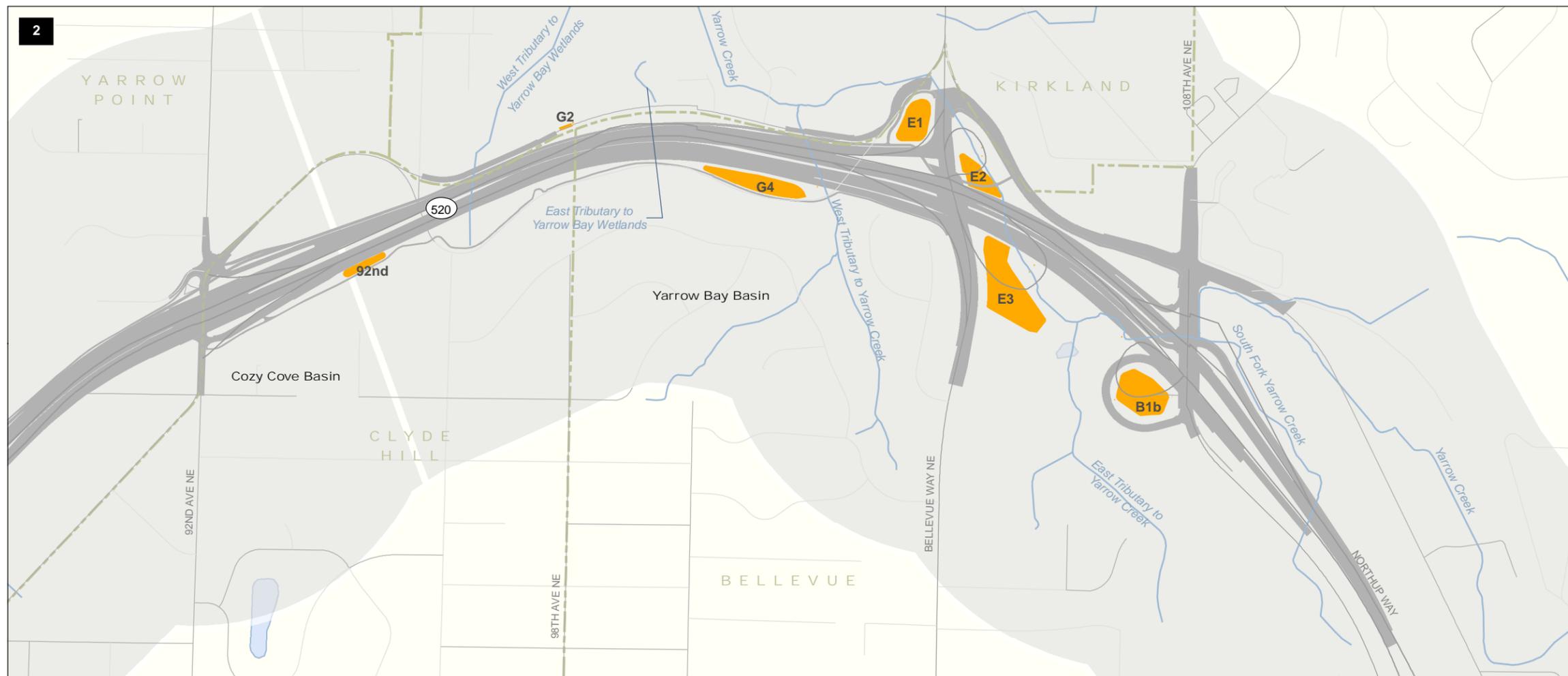
Appendix S, Water Resources Discipline Report

Page 31, Exhibit 12

- Added labels to the stormwater treatment facilities.



- Stream
- Proposed Stormwater Facility
- Creek Basin
- Pavement



Source: City of Bellevue (1999) GIS Data (City Limits), King County (2004) GIS Data (Stream), King County (2005) GIS Data (Street), King County (2007) GIS Data (Waterbody), and King County (2008) GIS Data (Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 12. Proposed Stormwater Management Facilities

Medina to SR 202: Eastside Transit and HOV Project

Appendix S, Water Resources Discipline Report

Page 37, 3rd paragraph

Construction and operation of the Build Alternative would result in an increase of PGIS in each TDA, ranging from ~~1.8 to 10.8~~ 0.2 to 13.0 additional acres (Exhibit 14). While PGIS would increase over existing conditions, both the existing and future PGIS would be treated for stormwater pollutants and controlled for flow increases as described above.

Appendix S, Water Resources Discipline Report

Page 38, Exhibit 14

Threshold Discharge Area	Existing Pollutant-Generating Impervious Area (ac)	Proposed <u>Replaced</u> Pollutant-Generating Impervious Area (ac)	Added Pollutant-Generating Impervious Area (ac)	Percent Increase in New over Existing Pollutant-Generating Impervious Area
TDA 1	24.7 <u>25.6</u>	35.4 <u>16.0</u>	10.8 <u>13.0</u>	56% <u>49%</u>
TDA 2	7.7 <u>7.8</u>	12.7 <u>6.9</u>	5 <u>5.7</u>	35% <u>26%</u>
TDA 3	10.3 <u>10.7</u>	15 <u>9.0</u>	4.7 <u>5.3</u>	54% <u>51%</u>
TDA 4	1.2 <u>1.3</u>	2.9 <u>0.9</u>	1.8 <u>0.2</u>	150% <u>86%</u>
Total	<u>45.4</u>	<u>32.8</u>	<u>24.2</u>	

Appendix S, Water Resources Discipline Report

Page 39, Exhibit 16

Basin	Total Area (ac)	Current Imperv. Surface (ac)	Added Imperv. Surface (ac)	Future Imperv. Surface (ac)	Current % Imperv. Surface	Future % Imperv. Surface	% Increase, Imperv. Surface
Fairweather Creek	548	165.5	5 <u>5.7</u>	170.5 <u>171.2</u>	30.2%	31.1% <u>31.2%</u>	0.9% <u>1.0%</u>
Cozy Cove Creek	189.1	58.6	4.7 <u>5.3</u>	63.3 <u>63.9</u>	31.0%	33.5% <u>33.7%</u>	2.5% <u>2.7%</u>
Yarrow Creek	1427.7	471.2	1.8 <u>0.2</u>	473 <u>471.4</u>	33.0%	33.1%	0.1%

Appendix T, Section 4(f) Resources Technical Memorandum

Page 6, first paragraph

The highway construction would require removal of existing vegetation between the trail and SR 520; this vegetation enhances the recreational experience for trail users and serves as a buffer from the highway. Replacement of the vegetation strip with noise wall may affect the character of the trail. However, WSDOT will retain the vegetation along the trail on the opposite side from SR 520 where practicable, including the mature trees between the trail and Wetherill Nature Preserve. In addition, WSDOT will also replant exposed areas and add landscape planters to break up the wall where practicable.

~~However, the~~ The proposed noise walls would reduce noise levels in 2030 by 5 to 15 A-weighted decibels (dBA) compared with existing conditions and by 6 to 16 dBA compared with the No Build Alternative. As a result, the change in character of the trail is not anticipated to be so severe that it would impact the continued use of the trail. Many trail users may experience a more comfortable experience with the reduction in noise levels (WSDOT 2009b).

Appendix T, Section 4(f) Resources Technical Memorandum

Page 6, last paragraph

~~During construction, an additional 0.07 acre of the southwest corner of the park would be temporarily occupied for construction of the Evergreen Point Road lid and relocation of the Points Loop Trail. an additional 0.63 acre of the southwest corner of the park would be temporarily occupied for construction of the Evergreen Point Road lid and relocation of the Points Loop Trail. Of the 0.63 acre of temporary occupancy, 0.54 acre of this temporary occupancy would be subterranean and would accommodate tiebacks of metal or fiberglass rods. These tiebacks will support temporary shoring walls during construction of the permanent lid abutments/retaining walls. The tiebacks are anticipated to be a minimum of 4 to 5 feet below the surface. No surface uses will be impacted in this subterranean area. This area~~ During construction, the 0.09 acre area of aboveground temporary occupancy would be fenced off and not available to park users for up to ~~12-18~~ months. Because the park entrance is at the north boundary of the park, access and use of the park would continue during construction, and use of the tennis courts would not be affected. The affected area is primarily vegetated with shrubs and grasses. After construction, the area would be regraded and revegetated. During construction, the park would experience temporary construction effects such as noise and fugitive dust. However, these effects would not have a severe effect on the park's activities, features, or attributes (WSDOT 2009b).

Appendix T, Section 4(f) Resources Technical Memorandum

Page 10, last paragraph

The project would result in no permanent acquisition of Hunts Point Park or Yarrow Bay wetlands. However, there would be temporary occupancy in each of these parks during project construction. In Hunts Point Park, 0.03 acre (1 percent of the total park area) in the ~~southwest~~ southeast corner of the park adjacent to Hunts Point Road would be regraded as part of the roadway construction (Exhibit 56). In the Yarrow Bay wetlands, ~~0.12~~ 0.22 acre (less than 1 percent of the total park area) would need to be accessed for construction of two culverts with outflow beneath Points Road NE NE Points Drive (Exhibit 65). The temporary occupancy in each of these parks would be up to 1 year in duration. Areas disturbed during construction would be revegetated. The temporary occupancy of these parks would not constitute a Section 4(f) use of these

resources as outlined in 23 CFR--Part 774.13(d). As noted earlier, 23 CFR--Part 774.13[d] requires documented agreement by the official(s) with jurisdiction over the Section 4(f) resource with the evaluation that the temporary occupancy is so minimal that it does not constitute a use within the meaning of Section 4(f). Coordination with the towns of Hunts Point and Yarrow Point and the City of Kirkland is ongoing. Letters of agreement from these municipalities will be received before the final decision document is completed.

Appendix T, Section 4(f) Resources Technical Memorandum

Page 14, last paragraph

~~During construction, approximately 0.2 acre of the school property adjacent to the existing SR 520 right of way would be temporarily occupied to construct the noise wall. This construction would occur within an existing slope easement. This temporary occupancy would not constitute a use of the historic property.~~

Appendix U, Indirect and Cumulative Effects Technical Memorandum

Page 5, first bullet

- Cumulative effects analyses were conducted on air quality, ecosystems, economics, land use, noise, transportation, visual quality, and water resources because of direct effects identified in the EA. ~~The direct effects associated with these resources did not measurably contribute to a cumulative effect.~~ The Build Alternative would have a negligible contribution to the cumulative effects of past, present and future actions for these resources.

Appendix U, Indirect and Cumulative Effects Technical Memorandum

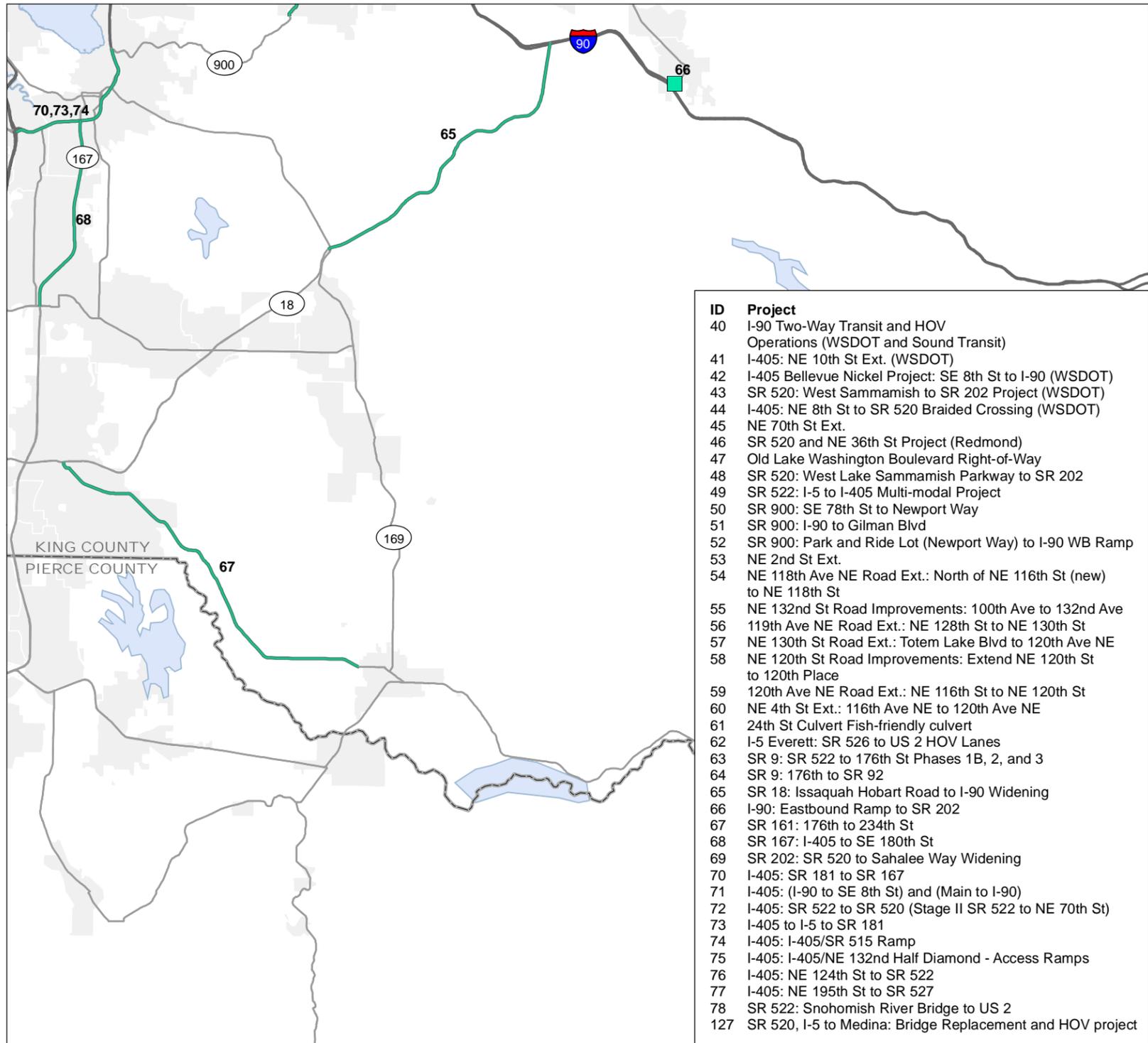
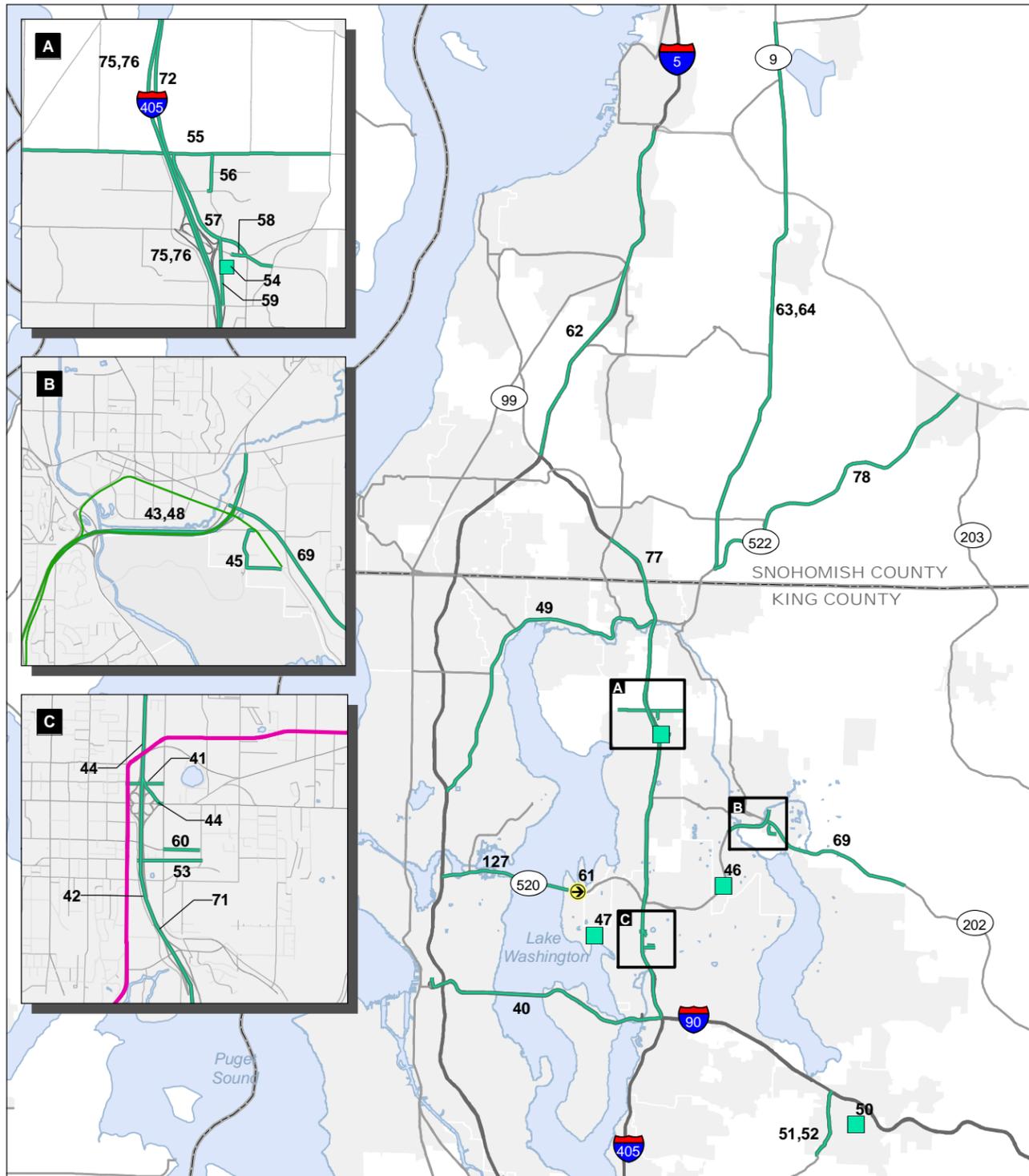
Page 5, fourth bullet

- ~~The Build Alternative would have a negligible contribution to the cumulative effects of past, present and future actions.~~

Appendix U, Indirect and Cumulative Effects Technical Memorandum

Page 16, Exhibit 6f

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



ID	Project
40	I-90 Two-Way Transit and HOV Operations (WSDOT and Sound Transit)
41	I-405: NE 10th St Ext. (WSDOT)
42	I-405 Bellevue Nickel Project: SE 8th St to I-90 (WSDOT)
43	SR 520: West Sammamish to SR 202 Project (WSDOT)
44	I-405: NE 8th St to SR 520 Braided Crossing (WSDOT)
45	NE 70th St Ext.
46	SR 520 and NE 36th St Project (Redmond)
47	Old Lake Washington Boulevard Right-of-Way
48	SR 520: West Lake Sammamish Parkway to SR 202
49	SR 522: I-5 to I-405 Multi-modal Project
50	SR 900: SE 78th St to Newport Way
51	SR 900: I-90 to Gilman Blvd
52	SR 900: Park and Ride Lot (Newport Way) to I-90 WB Ramp
53	NE 2nd St Ext.
54	NE 118th Ave NE Road Ext.: North of NE 116th St (new) to NE 118th St
55	NE 132nd St Road Improvements: 100th Ave to 132nd Ave
56	119th Ave NE Road Ext.: NE 128th St to NE 130th St
57	NE 130th St Road Ext.: Totem Lake Blvd to 120th Ave NE
58	NE 120th St Road Improvements: Extend NE 120th St to 120th Place
59	120th Ave NE Road Ext.: NE 116th St to NE 120th St
60	NE 4th St Ext.: 116th Ave NE to 120th Ave NE
61	24th St Culvert Fish-friendly culvert
62	I-5 Everett: SR 526 to US 2 HOV Lanes
63	SR 9: SR 522 to 176th St Phases 1B, 2, and 3
64	SR 9: 176th to SR 92
65	SR 18: Issaquah Hobart Road to I-90 Widening
66	I-90: Eastbound Ramp to SR 202
67	SR 161: 176th to 234th St
68	SR 167: I-405 to SE 180th St
69	SR 202: SR 520 to Sahalee Way Widening
70	I-405: SR 181 to SR 167
71	I-405: (I-90 to SE 8th St) and (Main to I-90)
72	I-405: SR 522 to SR 520 (Stage II SR 522 to NE 70th St)
73	I-405 to I-5 to SR 181
74	I-405: I-405/SR 515 Ramp
75	I-405: I-405/NE 132nd Half Diamond - Access Ramps
76	I-405: NE 124th St to SR 522
77	I-405: NE 195th St to SR 527
78	SR 522: Snohomish River Bridge to US 2
127	SR 520, I-5 to Medina: Bridge Replacement and HOV project



- Utility Project
- Roadway or Arterial Project
- Roadway or Arterial Project
- City Limits
- County Boundary



Source: King County (2004) GIS Data (City Limits), WSDOT (2004) GIS Data (State Routes), CH2M HILL (2008) GIS Data (Park), WDOE (2001) GIS Data (Water Bodies). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6f. Reasonably Foreseeable Future Actions
 Medina SR 202: Eastside Transit and HOV Project

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 19, heading after first paragraph

~~What would the~~**How would the project contribute to a cumulative effect on air quality likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 21, heading after second paragraph

~~What would the~~**How would the project contribute to a cumulative effect on cultural resources likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 21, fourth Paragraph

Ecosystems can be divided into three components: wetlands, fish and aquatic habitat, and wildlife. Project construction will directly affect wetlands, streams, and wildlife habitat but all of these effects will be mitigated as part of the project and design (WSDOT 2009i). The project includes beneficial and adverse impacts to wetlands, fish and aquatic habitat, and wildlife. No indirect effects were identified. Adverse effects include: temporary disturbance of approximately ~~1.6~~1.4 acre of wetlands and 0.9 acre of wetland buffer, and permanent fill of approximately 7.0 acres of wetlands and 1.7 acres of wetland buffer; construction will temporarily disturb approximately 14 acres of wildlife habitat and ~~3.0~~2.3 acres of riparian buffer; approximately 65 acres of wildlife habitat and ~~1.7~~2.13 acres of riparian buffer will be permanently disturbed; there will be 0.24 acre of permanent stream channel impact (WSDOT 2009i). Channel realignments and culvert removals and replacements will result in a gain of approximately ~~980~~820 linear feet of open-channel habitat within fish-bearing streams, including opening up approximately ~~860~~787 linear feet of stream channel currently confined to culverts. Project operation will not adversely affect any federal, state, or local sensitive wildlife species. WSDOT will provide mitigation to compensate for any adverse effects on ecosystems. Once completed, the project will improve fish passage and stream alignments, resulting in long-term benefits to habitat quality and quantity for fish and aquatic species.

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 24, heading before first paragraph

~~What would the~~**How would the project contribute to a cumulative effect on ecosystems likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 25, heading after third paragraph

~~What would the~~How would the project contribute to a cumulative effect on economic activity~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 27, heading after second paragraph

~~What would the~~How would the project contribute to a cumulative effect on energy~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 28, first heading at top of page

~~What would the~~How would the project contribute to a cumulative effect on low-income, minority, or limited-English proficiency populations~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 30, heading after second paragraph

~~What would the~~How would the project contribute to a cumulative effect on geology and soils~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 33, first heading at top of page

~~What would the~~How would the project contribute to a cumulative effect on land use~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 35, first heading at top of page

~~What would the~~How would the project contribute to a cumulative effect on noise~~likely be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 36, heading after second paragraph

~~What is the~~How would the project contribute to a cumulative effect on social elements~~likely to be?~~

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 39, heading after first paragraph

~~What would the~~**How would the project contribute to a cumulative effect on transportation likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 41, heading before last paragraph

~~What would the~~**How would the project contribute to a cumulative effect on visual quality likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 44, heading after second paragraph

~~What would the~~**How would the project contribute to a cumulative effect on water resources likely be?**

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 43, third Paragraph

Under the No Build Alternative, wetlands in the study area would continue to decline with further development; however, increased protection of wetlands through regulation and restoration efforts will offset this decline. Many land development and transportation projects are under construction or planned for construction in the reasonably foreseeable future, as shown in Exhibit 6. Projects that have potential to affect wetlands can be grouped into two basic types: transportation and large-scale residential or commercial land developments. Specific examples include improvements to I-405 and SR 520 from I-5 to Medina and surrounding local streets in Bellevue and the residential and retail development projects. These projects could cumulatively contribute to continuing wetland declines by altering ecosystem processes through filling and shading, changing surface water and groundwater flow, and increasing the total area of impervious surface. These effects, in turn, could alter plant and wildlife species diversity and habitat functions within the remaining wetlands and affect water quality and suitability of spawning and rearing habitat for fish. Regulatory and voluntary efforts to improve habitat will continue with or without the project.

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 43, third Paragraph

Lake Washington appears to be in stable ecological condition with respect to water quality following the pre-sewer diversion period of over-enrichment. Lake Washington

has some of the best water quality for a large lake entirely within a major metropolitan area, anywhere in the world (Tetra Tech ISG, Inc. and Parametrix, Inc. 2003). However, Lake Washington is increasing in average annual water temperature (King County 2010). The primary factor influencing water temperature appears to be air temperature (SPU 2008).

Appendix U, Indirect and Cumulative Effects Discipline Report

Page 46

King County. 2010. King County Major Lakes Monitoring Data – Status and Trends. Table 1. Summary of published lake warming trends. <http://green.kingcounty.gov/lakes/Trends.aspx>. Accessed March 24, 2010.

Seattle Public Utilities and the Army Corps of Engineers. 2008. *Synthesis of Salmon Research and Monitoring: Investigations conducted in the western lake Washington basin.*

Appendix U, Indirect and Cumulative Effects Technical Memorandum

Attachments 1 and 2

- Added Attachments 1 and 2 to Technical Memorandum (not previously attached)

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
1	Mercer Corridor Improvements	City of Seattle	City of Seattle	Widen Mercer Street between I-5 and Dexter Avenue North to accommodate three lanes in each direction, parking, sidewalks, and left turn lanes to reduce congestion and improve pedestrian safety.	Roadway or Arterial	Complete by 2011	Westside
2	Spokane Street Viaduct Project	City of Seattle	City of Seattle	Add general purpose lane in each direction to reduce congestion, build eastbound off-ramp at 4th Avenue South to improve access to downtown Seattle.	Roadway or Arterial	2008 - 2011	Westside
3	King County <i>Transit Now</i> – Aurora, Ballard, West Seattle, Eastside, and Pacific Highway BRT Corridor	King County Metro	City of Seattle	Provide Bus Rapid Transit (BRT) service on arterial street corridors on high ridership routes in rapidly developing neighborhoods.	Roadway or Arterial	2007 - 2016	Westside
4	I-5: Pierce County Line to Tukwila Stage 4 HOV Program	WSDOT	King County	This project widens I-5 between South 320th Street and the Pierce County line by adding an HOV lane for carpools, vanpools, and buses to both directions of the freeway. This is part of WSDOT's comprehensive plan to add carpool lanes on I-5 south through the Tacoma urban area.	Roadway or Arterial	Complete by 2030	Westside
5	I-5 Improvements: Port of Tacoma Road to the King/Pierce County Line	WSDOT	Pierce County	Widen I-5 for HOV lanes in each direction between the Port of Tacoma Road and the King/Pierce County line. Six bridges crossing Wapato Creek and Hylebos Creek will be widened. Traffic cameras will be added to monitor traffic flows and to inform drivers of traffic conditions. Metering signals will be installed on the northbound and southbound on-ramps at the 54th Avenue Interchange. The on-ramps will also be widened to allow HOV traffic to bypass the ramp metering signals.	Roadway or Arterial	Complete by 2030	Westside
6	I-5: Pierce County Line to South 320th Street	WSDOT	King County	This project extended HOV lanes in both directions of I-5 from downtown Seattle to the Pierce County line and also improved roadway surfaces.	Roadway or Arterial	Complete by 2030	Westside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
7	I-5: 38th Street to Port of Tacoma Road	WSDOT	City of Tacoma	Widen I-5 for HOV lanes in each direction between South 38th Street and Port of Tacoma Road to reduce travel times for transit and HOV.	Roadway or Arterial	2011 - 2017	Westside
8	SR 16: Olympic Drive (Gig Harbor) to Union Avenue (Tacoma)	WSDOT	Pierce County	This project constructs HOV Lanes on SR 16 from Olympic Drive in Gig Harbor to Union Avenue in Tacoma. There are currently four travel lanes that will expand to six lanes throughout the corridor when complete, with additional lanes provided between Union Avenue and 6th Avenue interchanges.	Roadway or Arterial	Complete by 2030	Westside
9	SR 16: I-5 to Union	WSDOT	City of Tacoma	Widen SR 16 for HOV lanes in each direction between I-5 and South Union Avenue to reduce travel times for transit and HOV.	Roadway or Arterial	Complete by 2030	Westside
10	SR 99: South 284th Street to South 272nd Street	WSDOT	City of Federal Way	HOV lanes were built in each direction for carpools, vanpools, and buses between South 284th Street and South 272nd Street on State Route 99 north of Federal Way.	Roadway or Arterial	Complete by 2030	Westside
11	SR 99: (Shoreline) Aurora Avenue North Corridor Transit/HOV Lanes	WSDOT	City of Shoreline	Three miles of Aurora Avenue North will be redesigned and upgraded to increase driver and pedestrian safety and help reduce congestion. These include additional lanes for business access and transit, new sidewalks and crosswalks, lighting, additional signals and left and U-turn pockets for drivers, and undergrounding of overhead power lines.	Roadway or Arterial	Complete by 2030	Westside
12	SR 161: Jovita Boulevard to South 360th Street	WSDOT	King County	This project widened State Route 161 (Enchanted Parkway) to four lanes from Milton Way in Milton to South 360th Street in Federal Way. Also added was a two-way, left-turn lane, sidewalks, and a bike lane in the commercial area from Military Road to Milton Way.	Roadway or Arterial	Complete by 2030	Westside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
13	SR 304: SR 3 to Bremerton Ferry Terminal	WSDOT	City of Bremerton	Traffic congestion between SR 3 and the Bremerton ferry terminal will be reduced by reconstructing and widening the existing roadway and constructing an HOV lane.	Roadway or Arterial	Complete by 2030	Westside
14	SR 518: SeaTac Airport to I-5 /I-405 Interchange	WSDOT	King County	Add eastbound general purpose lane on SR 518 between airport and I-5/ I-405 interchange to reduce congestion and bottleneaking at the interchange.	Roadway or Arterial	Complete by 2030	Westside
15	Sound Transit – Light rail between SeaTac Airport and Northgate	Sound Transit	King County	Provide light rail transit service between SeaTac Airport and Northgate Transit Center. This project has been broken into three distinctive segments: Central Link (SeaTac to Downtown), University Link (Downtown to UW), and North Link (UW to Northgate). The Central Link segment was completed in December 2008.	Transit	2009 - 2015 (University Link), Construction TBD (North Link)	Westside
16	Seattle Streetcar	Sound Transit	City of Seattle	Provide streetcar service between Seattle waterfront and South Lake Union neighborhood.	Roadway or Arterial	Completed in October 2007	Westside
17	North Link Light Rail Station at Husky Stadium	Sound Transit	City of Seattle	Provide light rail service between Downtown Seattle and University of Washington.	Transit	Complete by 2030	Westside
18	Sound Transit – Sounder Commuter Rail from Everett to Seattle	Sound Transit	King/Snohomish County	As of 2000, commuter rail service has been provided between Everett and Seattle as part of Sound Move Program (1996); as of February 2009, plans for signal and track upgrades by 2010 are currently under environmental review.	Transit	TBD	Westside
19	Sound Transit – Sounder Commuter Rail from Lakewood to Seattle	Sound Transit	Pierce/King County	As of 2000, commuter rail service has been provided between Tacoma and Seattle as part of the Sound Move Program (1996). As of February 2009, alternatives for planned service between Tacoma and Lakewood are currently under evaluation and conceptual design stages with construction estimated to occur by 2012.	Transit	2012 - TBD	Westside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
20	WSDOT Ferries: Bainbridge – Seattle Auto Ferry	WSDOT	King/Kitsap County	Operate two auto-capacity vessels year round.	Transit		Westside
21	I-5: NE 175th Street to NE 205th Street – Northbound Auxiliary Lane	WSDOT	King County	This project constructed an additional lane on I-5 between the northbound NE 175th Street on-ramp and NE 205th Street exit in Shoreline. Widened the northbound NE 175th Street on-ramp to provide another metered lane; added a Washington State Patrol enforcement area, built sound walls, and created a stormwater collection and filtering system.	Roadway or Arterial	Complete by 2030	Westside
22	SR 167: 15th Street SW to 15th Street NW	WSDOT	City of Auburn	This project added a northbound HOV lane and metered on-ramps from the Auburn Super Mall to Interstate 405 in Renton to address safety and reduce congestion along the corridor.	Roadway or Arterial	Completed in October 2008	Westside
23	SR 167: SR 410 to 15th Street SW	WSDOT	Pierce County	Extend HOV lanes from 15th Street SW to SR 410 to add capacity and improve safety.	Roadway or Arterial	Complete by 2030	Westside
24	Alaskan Way Viaduct and Sea Wall Replacement Project	WSDOT	City of Seattle	This project is intended to repair, rebuild, or remove sections of the Alaskan Way Viaduct by 2012. Options for the central waterfront segment are currently being evaluated.	Roadway or Arterial	2009	Eastside
25	SR 519 Intermodal Access Project, Phase 2: South Atlantic Corridor (WSDOT)	WSDOT	City of Seattle	The intent of these improvements to SR 519 is to separate car, freight, pedestrian, and rail traffic to improve traffic flow and reduce the risk of collisions.	Roadway or Arterial	2008	Eastside
40	I-90 Two-Way Transit and HOV Operations (WSDOT and Sound Transit)	WSDOT	Interstate-90 (King County)	The project will provide full-time HOV lanes for eastbound and westbound traffic on the outer I-90 roadways and will retain the existing reversible lane operations in the center roadway (Implementation of Alternative R-8A).	Roadway or Arterial	Stage 1 (2007), Stage 2 (unknown), Stage 3 (unknown)	Eastside
41	I-405 NE 10th Street Extension (WSDOT)	WSDOT	City of Bellevue	Phase 2 of the NE 10th Street Extension – WSDOT will construction the portion of the bridge over I-405.	Roadway or Arterial	Under construction	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
42	I-405 Bellevue Nickel Project: SE 8th to I-90 (WSDOT)	WSDOT	City of Bellevue	Addition of one new general-purpose lane in each direction along I-405 between SE 8th Street and I-90. Extend the southbound HOV lane from I-90 to SE 8th Street.	Roadway or Arterial	Under construction	Eastside
43	SR 520 /West Lake Sammamish to SR 202 Project (WSDOT)	WSDOT	City of Redmond	Project to widen SR 520 in Redmond from two to four lanes in each direction and build a new ramp from westbound SR 202 to westbound SR 520.	Roadway or Arterial	Under construction	Eastside
44	I-405 NE 8th Street to SR 520 Braided Crossing (WSDOT)	WSDOT	City of Bellevue	Construct new structures to separate northbound traffic exiting to SR 520 from traffic entering I-405 in Bellevue. The project also adds a new eastbound collector distributor lane along SR 520 to separate the on- and off-ramps between I-405 and 124th Avenue NE traffic and a new on ramp at NE 10th Street to SR 520.	Roadway or Arterial	2009	Eastside
45	NE 70th Street Extension	City of Redmond	City of Redmond	Construct new NE 70th Street from Redmond Way to 180th Avenue NE. Improvements include one through lane in each direction, left turn lanes, sidewalks, street lights, and storm drainage.	Roadway or Arterial	Unknown	Eastside
46	SR 520 and NE 36th Street Project (Redmond)	City of Redmond	City of Redmond	Microsoft and the City of Redmond have partnered to construct a bridge across SR 520 connecting NE 31st Street to NE 36 Street.	Roadway or Arterial	2008	Eastside
47	Old Lake Washington Boulevard Right-of-Way	City of Clyde Hill	City of Clyde Hill	Work with the City of Bellevue to formalize or better maintain this area for a walking/biking trail from Bellevue Way and possibly connection to the proposed Expressway Nature Trail.	Roadway or Arterial	Complete by 2023	Eastside
48	SR 520: West Lake Sammamish Parkway to SR 202	WSDOT	City of Redmond	Add two lanes in each direction on SR 520 from West Lake Sammamish Parkway to SR 202 to reduce congestion and improve safety.	Roadway or Arterial	Complete by 2030	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
49	SR 522: I-5 to I-405 Multi-modal Project	WSDOT	City of Lake Forest Park	Installed signal, crosswalk, and transit pull-out at NE 153rd Street. Replaced two-way left-turn lanes with raised medians and designated turn pockets to improve pedestrian safety.	Roadway or Arterial	Completed in October 2007	Eastside
50	SR 900: SE 78th Street to Newport Way	WSDOT	City of Issaquah	Add one lane in each direction on SR 900 between Newport Way to SE 78th Street to eliminate the chokepoint at Newport Way and improve traffic flow through Issaquah to I-90.	Roadway or Arterial	Complete by 2030	Eastside
51	SR 900: I-90 to Gilman Blvd	WSDOT	City of Issaquah	Add southbound general purpose lane, southbound dedicated bus lane, and northbound HOV lane to reduce travel time for transit and reduce congestion on SR 900.	Roadway or Arterial	Complete by 2030	Eastside
52	SR 900: Park and Ride Lot (Newport Way) to I-90 WB Ramp	WSDOT	City of Issaquah	Add HOV lane to improve access to I-90 and reduce travel time for transit.	Roadway or Arterial	Complete by 2030	Eastside
53	NE 2nd Street Extension	WSDOT	City of Bellevue	Extend NE 2nd Street across I-405 with ramps to and from the south to improve access to downtown Bellevue.	Roadway or Arterial	Complete by 2030	Eastside
54	118th Avenue NE Road Extension – north of NE 116th (new) to NE 118th Street	City of Kirkland	City of Kirkland	Extend approximately 450 feet of new 28-foot-wide roadway. Project requires obtaining approximately 22,500 square feet of right-of-way. Includes construction of 650 square feet retaining wall and a new 3-leg signal at NE 116th Street.	Roadway or Arterial	2009 - 2014	Eastside
55	NE 132nd Street Road Improvements – 100th Avenue to 132nd Avenue	City of Kirkland	City of Kirkland	Widen NE 132nd Street to accommodate two lanes in each direction, a center turn lane, and raised sidewalks to reduce congestion and improve pedestrian safety. New lanes could be converted to HOV lanes pending transit project at Totem Lake.	Roadway or Arterial	2009 - 2014	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
56	119th Avenue NE Road Extension – NE 128th Street to NE 130th Street	City of Kirkland	City of Kirkland	Extend approximately 600 feet of new 28-foot-wide roadway. Includes obtaining approximately 55,000 square feet of right-of-way. Project will include bicycle lanes, curb, gutter, and sidewalks.	Roadway or Arterial	2009 - 2014	Eastside
57	NE 130th Street Road Extension – Totem Lake Boulevard to 120th Avenue NE	City of Kirkland	City of Kirkland	Extend approximately 1,100 feet of new 28-foot-wide roadway. Includes obtaining approximately 72,000 square feet of right-of-way. Project will include bicycle lanes, curb, gutter, and sidewalks. Connect to access on the north side of Evergreen Hospital.	Roadway or Arterial	2009 - 2014	Eastside
58	NE 120th Street Road Improvements – extend NE 120th Street to 120th Place	City of Kirkland	City of Kirkland	Install up to 44-foot (curb-to-curb) roadway with 5-foot planter strips and 5-foot sidewalks, new traffic signal at 124th Avenue NE/NE 120th Street, and signal modifications at Slater Avenue NE/NE 120th Street.	Roadway or Arterial	2009 - 2014	Eastside
59	120th Avenue NE Road Extension – NE 116th Street to NE 120th Street	City of Kirkland	City of Kirkland	Install 1,450 feet of new roadway along an alignment north of the NE 116th Street/I-405 off-ramp. The project will include signal modifications.	Roadway or Arterial	2009 - 2014	Eastside
60	NE 4th Street Extension – 116th Avenue NE to 120th Avenue NE	City of Bellevue	City of Bellevue	Extend NE 4th Street from 116th Avenue NE to 120th Avenue NE to improve access to Downtown Bellevue.	Roadway or Arterial	Complete by 2030	Eastside
61	24th Street Culvert Fish-friendly culvert	City of Medina	City of Medina	Removal of fish passage barrier and replacement of open-bottom box culvert.	Roadway or Arterial	2011 - 2012	Eastside
62	I-5: Everett – SR 526 to US 2 HOV Lanes	WSDOT	Snohomish County	Widened the northbound and southbound freeway lanes to include an extra merging lane between 41st and US 2. This included adding 10 miles of new HOV lanes on I-5 from Boeing Freeway (SR 526) to US 2 (Hewitt Avenue Trestle), as well as making several other safety and traffic flow improvements. Crews also built a new, wider 41st Street bridge with a new, northbound I-5 exit, a new southbound	Roadway or Arterial	Complete by 2030	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
				I-5 entrance and new signals.			
63	SR 9: SR 522 to 176th Street Phases 1B, 2, and 3	WSDOT	Snohomish County	Double the number of through lanes on SR 9, provide additional turn lanes at the 180th Street SE intersection, add a raised median to separate oncoming traffic, and limit access points for turning drivers.	Roadway or Arterial	2011 - 2017	Eastside
64	SR 9: 176th to SR92	WSDOT	Snohomish County	Widen more than 2 miles of State Route 9 from a two-lane road to a four-lane divided highway from SR 524 north of Bothell to 176th Street SE in the community of Clearview.	Roadway or Arterial	2011 - 2017	Eastside
65	SR 18: Issaquah Hobart Road to I-90 Widening	WSDOT	King County	Developing plans to widen SR 18 to two lanes in each direction between Issaquah Hobart Road and I-90 and to rebuild the I-90/SR 18 interchange.	Roadway or Arterial	Complete by 2030	Eastside
66	I-90: Eastbound Ramp to SR 202	WSDOT	King County	Built a two-lane roundabout at the I-90/SR 202 interchange in North Bend to help improve safety and reduce congestion at this busy interchange.	Roadway or Arterial	Completed in October 2007	Eastside
67	SR 161: 176th to 234th Street	WSDOT	King County	Added signals and modified existing signals while widening the roadway. Additionally, the project included more street lights and improved traffic flow to address safety issues in the area.	Roadway or Arterial	Completed in October 2005	Eastside
68	SR 167: I-405 to SE 180th Street	WSDOT	King County	Construct an additional southbound auxiliary lane on SR 167 between the I-405 interchange and SE 180th Street as part of the larger I-5 to SR 169 Widening Project.	Roadway or Arterial	Complete by 2030	Eastside
69	SR 202: 520 to Sahalee Way Widening	WSDOT	King County	Added an additional lane in both directions, improved flow at intersections with the installation of new or revised signals and left-turn lanes.	Roadway or Arterial	Completed in September 2008	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
70	I-405: SR 181 to SR 167	WSDOT	King County	One northbound and one southbound lane will be added to I-405 between I-5 and SR 167. One additional southbound lane on SR 167 between I-405 and SW 41st Street will also be built, and the southbound SR 167 HOV lane from I-405 will be extended to the existing start of the HOV lane.	Roadway or Arterial	Complete by 2030	Eastside
71	I-405 - (I-90 to SE 8th) and (Main to I-90)	WSDOT	King County	Realign existing HOV lanes to connect with HOV lanes on I-90.	Roadway or Arterial	Complete by 2030	Eastside
72	I-405: SR-522 to SR 520 (Stage II SR522 to NE 70th Street)	WSDOT	King County	This project will add one continuous north and southbound lane between NE 70th Street in Kirkland and SR 522 in Bothell. This project will also add a northbound lane between NE 195th Street and SR 527 and build a bridge at NE 132nd Street. It also constructs a grade-separated ramp northbound between the NE 160th Street on-ramp and I-405 traffic exiting SR 522 to alleviate the existing weave.	Roadway or Arterial	Complete by 2030	Eastside
73	I-405: I-5 to SR 181	WSDOT	King County	Add general purpose lane in each direction as part of the Stage 1 Widening Project.	Roadway or Arterial	Complete by 2030	Eastside
74	I-405: I-405/SR 515 Ramp	WSDOT	King County	Construct a new half-diamond interchange at SR 515 (Talbot Road) as part of the Stage 2 Widening Project.	Roadway or Arterial	Complete by 2030	Eastside
75	I-405: I-405/NE 132nd Half Diamond – Access Ramps	WSDOT	King County	Construct a new half-diamond interchange to and from the north at NE 132nd Street in Kirkland.	Roadway or Arterial	Complete by 2030	Eastside
76	I-405: NE 124th Street to SR 522	WSDOT	King County	Add northbound lane on I-405 between NE 124th Street to SR 522 to eliminate weaving traffic.	Roadway or Arterial	Complete by 2030	Eastside
77	I-405: NE 195th Street to SR 527	WSDOT	King County	Add northbound lane on I-405 between NE 195th Street and SR 527 to increase general purpose capacity by 50 percent.	Roadway or Arterial	Complete by 2030	Eastside

Attachment 1. Reasonably Foreseeable Future Actions—Transportation-Related Projects

Map ID	Project	Proponent	Location	Purpose	Project Type	Expected Construction Time Frame	Corridor Location
78	SR 522: Snohomish River Bridge to US 2	WSDOT	King County	Widen SR 522 to two lanes in each direction to reduce travel times and built ramp from eastbound SR 522 to eastbound US 2 to improve access and reduce congestion.	Roadway or Arterial	Unknown	Eastside
126	Pontoon Construction Project	WSDOT	Grays Harbor County	WSDOT is advancing pontoon construction to restore the SR 520 floating bridge in the event of a catastrophic failure. Crews would construct and store pontoons until they were needed for a recovery effort. If the pontoons are not needed for emergency use, they would be used for the planned replacement of the SR 520 bridge.	Roadway or Arterial	2009 – 2012	Grays Harbor County
127	SR 520 Bridge Replacement and HOV Program: I-5 to Medina	WSDOT	King County	The Bridge Replacement and HOV Project will improve mobility of people and good across Lake Washington by completing the HOV system, improving transit time and reliability, enhancing public safety, and other environmental and community benefits.	Roadway or Arterial	2012-2018	Westside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
26	Car Top Boat Launch and Portage Bay Vista	University of Washington	1409 NE Boat Street	The car-top boat launch is the result of an agreement between the City of Seattle and the University of Washington that allowed UW to vacate a portion of 15th Avenue as part of its Campus Master Plan, and relocate the renovated marina to 1401 NE Boat Street.	Due to the site location's proximity to Sound Transit's University Link alignment, the City of Seattle and UW have agreed to complete construction within 18 months of completion of the University Link Project.	Westside
27	University of Washington Medical Center Master Plan	University of Washington	City of Seattle	Construct new in-patient tower to increase bed capacity, provide additional teaching space and diagnostic imaging capacity; the new tower allows for greater NICU bed capacity which is critical for preserving the option for a joint prenatal program with Children's Regional Hospital and Medical Center.	TBD	Westside
28	Mixed Use development	Community Birth and Health LLC	2200 24 th Avenue East	This proposal is for a 3-story building with 5 residential units and 11,140 square feet of medical service, a community center and institute for advanced studies, and a restaurant along with 2,832 square feet of retail at ground floor. Parking for 43 vehicles will be located in below-grade garage.	2006 – Present	Westside
29	Mixed Use development	Private Development	City of Seattle (4301 Roosevelt Way NE)	Construct a 6-story mixed use development with parking at-grade and below-grade for approximately 152 cars on 43rd Avenue NE between Roosevelt Way NE and 9th Avenue NE.	2004 - Present	Westside
30	Mixed Use development	Private Development	400 NE 45th Street, City of Seattle	Convert existing hotel to mixed use building with 84 units.	2004 - Present	Westside
31	Mixed Use development	Private Development	4201 15th Avenue NE, City of Seattle	The proposal is for a 6-story residential (c. 48 units) and commercial structure with accessory parking at northeast corner of NE 42nd and 15th Avenue NE.	2005 - Present	Westside
32	Mixed Use development	Private Development	5611 University Way NE	The proposal is for a 4-story building containing 2,100 square feet of retail at ground level with 12 apartments units on levels one through four; parking for 15 vehicles to be provided in one level below	2005 - Present	Westside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
				grade. The project includes future demolition of existing structures		
33	Mixed Use development	Private Development	4730 University Way NE	Master Use permit to establish use for future construction of a 7-story building containing 8,000 square feet of retail at ground level; 13,000 square feet of administrative offices on the second level; 125 apartment units on levels 3-7 with 88 existing units to remain; parking for 161 vehicles to be provided in four levels at and below grade.	2005 - Present	Westside
34	University of Washington Campus Master Plan	University of Washington	City of Seattle	The Campus Master Plan has been implemented since 2001 and responds to the reporting requirements as directed by Ordinance 121193 (City of Seattle). The 2007-2009 Capital Facilities Update plans for the development of approximately 1.35 million gross square feet between 2007 and 2013 within the University Campus boundaries.	2002 - 2013 (2007-2009 Campus Facility Update)	Westside
35	Town Center District Plan	City of Mercer Island	City of Mercer Island	To support the development of the Town Center District as the primary urban center for Mercer Island.	Currently being implemented	Westside
36	Aljoia at Mercer Island (ERA Living Senior Housing)	Private Development	City of Mercer Island	112 independent and assisted-living units; 24,829 square feet resident amenities	Under construction	Westside
37	7800 Plaza	Private Development	City of Mercer Island	9,181 square feet commercial; 24 units	Under construction	Eastside
38	7700 Central	Private Development	City of Mercer Island	18,000 square feet retail; 189 units	In design	Westside
39	BRE	Private Development	City of Mercer Island	14,100 square feet commercial; 165 units	In review	Westside
79	Downtown Implementation and Subarea Plan	City of Bellevue	City of Bellevue	This plan will support the development of downtown Bellevue as the primary urban center of the Eastside.	Document completed 2006, implementation ongoing	Eastside
80	Bel-Red Corridor Plan	City of Bellevue	City of Bellevue	The proposed action is the adoption of amendments to various City planning documents to designate new land uses and identify supporting transportation improvements for redevelopment of the Bel-	Document completed 2007, implementation ongoing	Eastside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
				Red corridor.		
81	Ashwood II	Private Development	City of Bellevue	274 residential units	Under construction	Eastside
82	Belcarra Apartments	Private Development	City of Bellevue	320 apartments; 11,500 square feet retail	Under construction	Eastside
83	Bellevue Place Hyatt Hotel	Private Development	City of Bellevue	350 hotel rooms; 130,000 square feet exhibition	Under construction	Eastside
84	Bravern	Private Development	City of Bellevue	620,000 square feet office; 240,000 square feet retail; 456 residential units	Under construction	Eastside
85	City Center East	Private Development	City of Bellevue	700,000 square feet office and retail	Under construction	Eastside
86	Bellevue Towers	Private Development	City of Bellevue	480 condos; 22,500 square feet retail	Under construction	Eastside
87	The Ashton	Private Development	City of Bellevue	202 residential units; 2,000 square feet retail	Under construction	Eastside
88	Metro 112	Private Development	City of Bellevue	300 apartments; 25,000 square feet commercial	Under construction	Eastside
89	Meydenbauer Inn	Private Development	City of Bellevue	68 apartments	Under construction	Eastside
90	One Main	Private Development	City of Bellevue	62 residential units; 4,800 square feet retail	Under construction	Eastside
91	The Summit Building C	Private Development	City of Bellevue	300,000 square feet office	Under construction	Eastside
92	Avalon at NE 10th Street	Private Development	City of Bellevue	400 residential units; 8,000 square feet retail	In review	Eastside
93	Bellevue at Main Street	Private Development	City of Bellevue	138 apartments; 33,000 square feet retail	In review	Eastside
94	Bellevue Plaza	Private Development	City of Bellevue	800 residential units; 160,000 square feet retail	In review	Eastside
95	Euro Tower I	Private Development	City of Bellevue	18 residential units	In review	Eastside
96	Hanover Bellevue Cadillac	Private Development	City of Bellevue	312 residential units; 18,000 square feet retail	In review	Eastside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
97	Marriott Hotel	Private Development	City of Bellevue	376 rooms	In review	Eastside
98	Legacy Apartments	Private Development	City of Bellevue	250 apartments; 11,000 square feet retail	In review	Eastside
99	Lincoln Square II	Private Development	City of Bellevue	120-room hotel; 200 residential units; 500,000 square feet office; 392,000 square feet retail	In review	Eastside
100	8th Street Office Highrise	Private Development	City of Bellevue	800,000 square feet office; 10,000 square feet retail	In review	Eastside
101	The Essex	Private Development	City of Bellevue	40 residential units	In review	Eastside
102	Vida Condominiums	Private Development	City of Bellevue	241 residential units; 8,000 square feet retail	In review	Eastside
103	Vantana on Main	Private Development	City of Bellevue	68 apartments	In review	Eastside
104	Pacific Regent Phase II	Private Development	City of Bellevue	Senior housing, 168 units	In review	Eastside
105	NE 12th Substation	Private Development	City of Bellevue	Upgrade of Puget Sound Energy substation on NE 12th Street	Unknown	Eastside
106	Overlake Neighborhood Plan Update and Implementation (Redmond)	City of Redmond	City of Redmond	The updated Overlake Neighborhood Plan includes land use changes and public investments for the Overlake Neighborhood through 2030.	Plan approved in 2007, implementation ongoing	Eastside
107	Redmond Downtown Neighborhood Plan	City of Redmond	City of Redmond	The Downtown Neighborhood Plan includes land use changes and public investment for the Downtown Neighborhood through 2022.	Plan approved in 2006, implementation ongoing	Eastside
108	Microsoft Expansion (Microsoft/Redmond)	Private Development	City of Redmond	Microsoft is expanding its Redmond Campus to include an additional 3.1 million square feet of new office to accommodate an additional roughly 12,000 employees.	Under construction	Eastside
109	Group Health Property	Private Development	City of Redmond	665,000 square feet of office; 190,000 square feet of retail; 290 room hotel; 1,445 residential units; 5,152 parking stalls	Master Planning, 2008	Eastside
110	Redmond River Park	Private Development	City of Redmond	316 apartments; 145 room hotel; 108,600 square feet office; 18,800 square feet retail	Under construction	Eastside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
111	Cleveland Street West	Private Development	City of Redmond	135 condos; 6,000 square feet retail	In review	Eastside
112	Cleveland Street East	Private Development	City of Redmond	115 condos; 6,500 square feet retail	In review	Eastside
113	Portula'ca	Private Development	City of Redmond	24 town homes	Under construction	Eastside
114	Center Pointe	Private Development	City of Redmond	130 condos; 15,000 square feet retail	In review	Eastside
115	Tudor Manor	Private Development	City of Redmond	9 townhouses	2008	Eastside
116	Perrigo Park	Private Development	City of Redmond	15 condos	In review	Eastside
117	White Swan	Private Development	City of Redmond	38 condos; 12,000 square feet retail	Under construction	Eastside
118	Redmond Court	Private Development	City of Redmond	21 townhomes	Under construction	Eastside
119	Parkside Apartments	Private Development	City of Redmond	60 apartments	In review	Eastside
120	Bellevue/Redmond Overlake Transportation Study (BROTS) (Bellevue/Redmond)	City of Redmond/City of Bellevue	City of Redmond/City of Bellevue	The objective of BROTS is to jointly manage land use and traffic congestion in the Overlake neighborhood and Bel-Red Corridor.	Ongoing; adoption of successor agreement targeted for 2008	Eastside
121	Redmond Transit Oriented Development	King County	City of Redmond	Three-story parking garage; 324 apartments; 15,000 square feet retail	Under construction	Eastside
122	Expressway Nature Trail	City of Clyde Hill	City of Clyde Hill	Acquire two wooded parcels of land from the State Department of Transportation to develop a simple nature trail along SR 520 from 92nd Avenue NE to 96th Avenue NE. The trail could connect to other trails in Clyde Hill, Medina, and Hunts Point. Development of the trail segment could involve the State's help in installing an earthen berm along the right-of-way to help buffer the trail and reduce traffic noise.	Complete by 2022	Eastside
123	Fairweather Nature Preserve Long Range	City of Medina	City of Medina	The 11-acre Fairweather Park and Nature Preserve is located off Evergreen Point Road	2020	Eastside

Attachment 2. Reasonably Foreseeable Future Actions—Land Use Plans or Projects

Map ID	Project	Proponent	Location	Purpose	Expected Construction Time Frame	Corridor Location
	Park Improvements			and is adjacent to the north side of SR 520. The City of Medina will work to continue the establishment of a long-term landscaping, maintenance, and usage plan that will maintain this site in a manner that is consistent with and enhances public use.		
124	Overlake Hospital Master Plan	City of Bellevue	City of Bellevue	The Overlake Hospital Master Development Plan (and 2005 amendments) are intended to provide for the development of the Overlake Hospital campus over the next 25 years, and encourage comprehensive long-term master development planning for the existing campus and surrounding area.	Implementation ongoing	Eastside

