

Wetlands

COPY TO: Project File
PREPARED BY: Puget Sound Gateway Program Team
DATE: November, 2017
SUBJECT NEPA Re-evaluation for Phase 1, SR 509 Completion Project

1. Introduction

This memorandum was prepared in support of the Phase 1, SR 509 Completion Project National Environmental Policy Act (NEPA) re-evaluation. It compares the changes to the project and resultant impacts (beneficial and/or adverse) against the Record of Decision (ROD) issued by the Federal Highway Administration (FHWA) in 2003 to determine if Phase 1 of the SR 509 Completion Project would result in any new significant impacts not evaluated in the *SR 509: Corridor Completion/I-5/South Access Road Final Environmental Impact Statement* (2003 FEIS). This Re-evaluation Memo makes many references to the 2003 FEIS, including the maps and mitigation measures that are still relevant to the updated analyses. The SR 509: Corridor Completion/I-5/South Access Road FEIS can be found on WSDOT's website at <http://www.wsdot.wa.gov/Projects/SR509/completion/Library.htm>.

1.1. Project History

The State Route (SR) 509 Completion Project is based on more than two decades of project planning and development. In 1995, Washington State Department of Transportation (WSDOT) released the *Tier I Corridor Draft Environmental Impact Statement* (DEIS), which recommended extending SR 509 from S 188th Street southward to connect with Interstate 5 (I-5) and adding a spur roadway, the South Access Road, to connect with Seattle-Tacoma International Airport (Sea-Tac Airport). Within the SR 509 corridor, three routes and a No Build Alternative were evaluated in a project level (Tier II) Draft EIS published in 2002. The Final EIS (FEIS) and Record of Decision (ROD) issued in 2003 identified a six-lane Preferred Alternative (Alternative C2) that included two general purpose (GP) lanes and one high-occupancy vehicle (HOV) lane northbound and southbound on SR 509. It also included interchange connections at S 188th Street, S 200th Street, 24th/28th Avenue, and I-5 and a new South Access Road. Since the ROD was issued, project progress has included actions such as the purchase of needed right-of-way (ROW), construction of an advanced wetland mitigation site, construction of work elements in coordination with local agencies, and refinements in preliminary design. The project area is shown in Figure 1.

With the passing of the Connecting Washington Transportation Package in 2015 by the state legislature, funding has become available for the first phase of the SR 509 Completion Project (Phase 1 Improvements) to proceed through environmental review, design, and into construction. WSDOT undertook a Practical Solutions design approach for the project which allowed a fresh look at the previous project plans to ensure that the revised project is designed according to actual demand and needs. Part of the Practical Solutions approach included reengaging stakeholders to review design and potential changes. The purpose of this document is to reevaluate the Phase 1 Improvements to determine whether they have the potential to result in any new significant environmental impacts that were not previously evaluated in the 2003 FEIS and 2003 ROD. Table 1 provides a comparison of Alternative C2 with the Phase 1 Improvements.

Figure 1 Project Vicinity

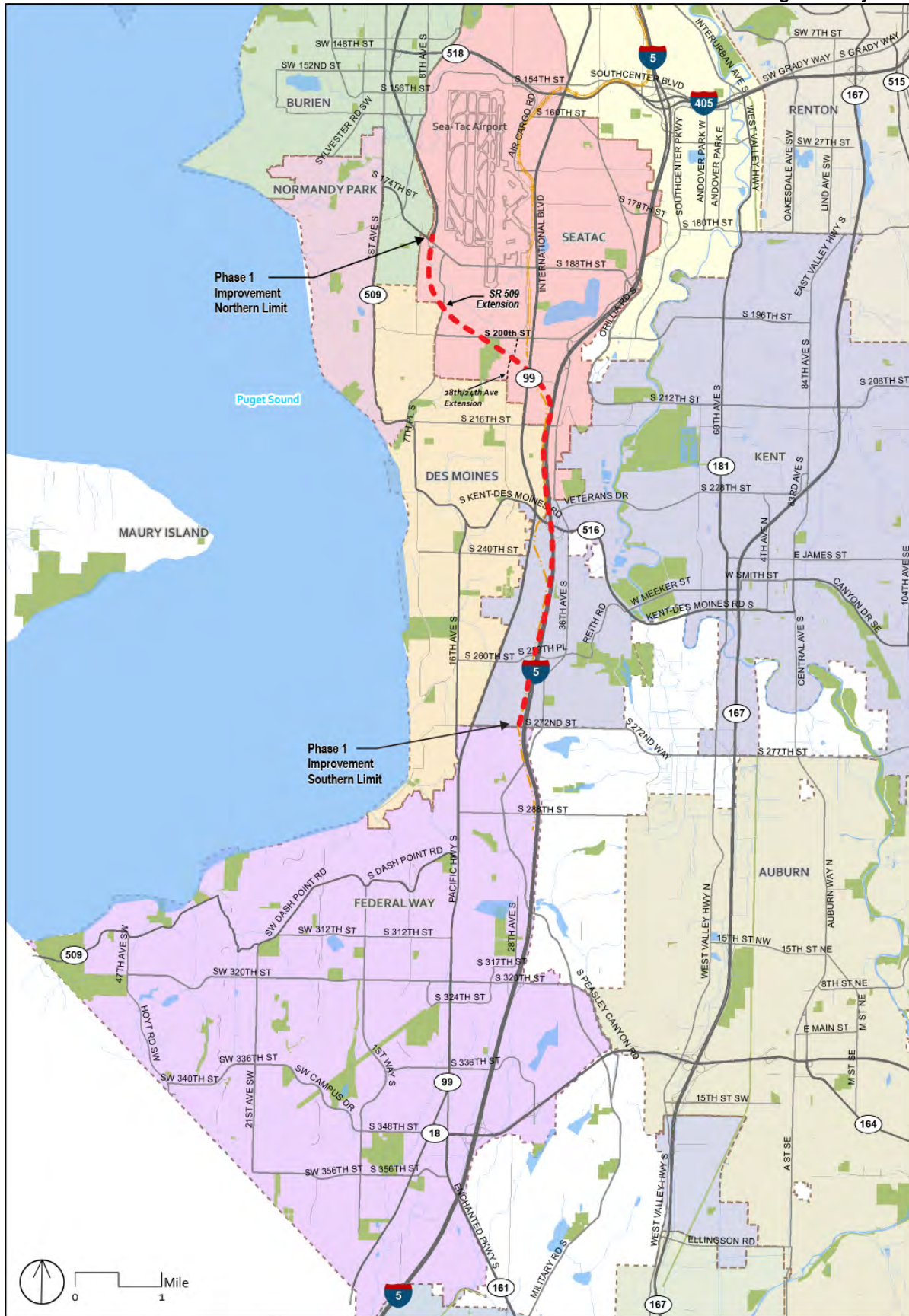


Table 1. Comparison of Design Components		
SR 509	Alternative C2 (2003 FEIS and ROD)	Phase 1 Improvements (Re-evaluation)
SR 509: I-5 to S 188th Street	Six lanes (120 feet), 60 mph – 2 GP lanes in each direction and 1 HOV lane each direction	Four lanes (78 feet), 60 mph – 2 GP lanes in each direction
S 188th Street	Full single-point urban interchange (SPUI)	1/2 diamond (ramps to/from north) – but doesn't preclude future construction of full diamond with additional funding.
S 200th Street	1/2 diamond (to/from north) ^a	None– but doesn't preclude future construction with additional funding
South Access Roadway	Four-lane limited access facility to S 200th Street	None– but doesn't preclude future construction with additional funding
24th Avenue S/28th Avenue S	1/2 diamond (to/from south)	1/2 diamond (ramps to/from south)
Tolling	None	2 GP lanes in each direction
Toll Points	None	One south of 24th Avenue S/28th Avenue S
Interstate 5	Alternative C2 (2003 FEIS and ROD)	Phase 1 Improvements (Re-evaluation)
I-5/SR 509 GP connection	60 mph	50 mph
I-5 SB: SR 516 to SR 509	Southern braid – three-lane C/D	Northern braid and two-lane C/D
I-5 NB: SR 516 to SR 509	two-lane C/D	Auxiliary lane– but doesn't preclude future construction with additional funding
I-5/SR 509 HOV Direct Connection	I-5/SR 509 center-to-center HOV direct access roadway	None – but doesn't preclude future construction with additional funding
I-5/SR 516 Interchange ^b	Full diamond and at grade intersection with Veterans Drive connector	Full diamond and at-grade intersection with Veterans Drive connector
I-5 SB: SR 516 to S 272nd Street	Two auxiliary lanes	One auxiliary lane– but doesn't preclude future construction with additional funding
I-5 SB: 272nd to S 320th Street	One auxiliary lane	None– but doesn't preclude future construction with additional funding
I-5 NB: S 272nd Street to SR 516	One auxiliary lane S 272nd Street to SR 516	None– but doesn't preclude future construction with additional funding

^a 1/2 diamond interchange has an on and off ramp that serves traffic to and from one direction.

^b The Phase 1 Improvements would also maintain pedestrian connections on both sides of the I-5/SR 516 interchange and construct a new pedestrian path from Veterans Drive to SR 516/Kent Des Moines Road, which would help facilitate pedestrian trips to and from the transit centers around this interchange.

C/D = collector/distributor lanes; GP = general purpose; HOV = high-occupancy vehicle; mph = miles per hour; NB = northbound; SB = southbound

2. What are the Phase 1 Improvements and how do they compare with the 2003 FEIS Alternative C2?

The purpose and need of the proposed action remains the same as described in the 2003 FEIS.

- The purpose of the proposed action is to improve regional highway connections with an extension of SR 509 to serve current and future transportation needs in southwest King County and to enhance southern access to Sea-Tac Airport. The project area is shown in Figure 1.
- The proposed action is needed to create system linkages, accommodate travel demand and capacity needs, and improve intermodal relationships. The SR 509 freeway currently terminates at S 188th Street and does not connect to the regional transportation highway system; this leaves a major gap in the system. As a result, local streets and major transportation routes like I-5 are at or over capacity given current travel demand. This situation is expected to worsen as travel demand for Sea-Tac Airport and major roadways increases.

FHWA issued a ROD in 2003 for the SR 509 Project FEIS that analyzed the extension of the SR 509 corridor. The 2003 SR 509 Project ROD selected Alternative C2. Alternative C2 included a six-lane extension of SR 509 from S 188th Street to I-5. New interchange improvements were proposed at four locations: S 188th Street, S 200th Street, 24th Avenue, 28th Avenue S, and I-5. A four-lane limited access roadway (South Access Road) was also proposed to connect SR 509 at 24th Avenue S/28th Avenue S with the Sea-Tac Airport Terminal Drive system, and an interchange on the South Access Road was proposed at S 200th Street. Improvements on I-5 included adding northbound and southbound collector-distributor (C/D) lanes between SR 509 and SR 516, and adding auxiliary lanes between SR 516 and S 320th Street. Interchange improvements which included a new undercrossing of I-5 to connect to Veteran's Drive were also proposed at SR 516.

The Phase 1 Improvements are essentially a subset of the improvements that were proposed in the 2003 FEIS (Table 1 and Figure 2). The Phase 1 Improvements would include a four-lane SR 509 extension (compared to six lanes as analyzed in the 2003 FEIS) from S 188th Street to I-5. Interchange improvements would occur at three locations (compared to four locations as analyzed in the 2003 FEIS): S 188th Street interchange, 24th Avenue S/28th Avenue S, and I-5. In addition, there would be no South Access Road or interchange at S 200th Street, and improvements on I-5 would be less extensive than those proposed in the 2003 FEIS (see Figure 3). The Phase 1 Improvements also assumes that the extension of SR 509 between S 188th Street and I-5 would be fully tolled. A toll point would be located on SR 509 south of the 24th Avenue S/28th Avenue S interchange. Figure 3 provides an overlay comparison of the Phase 1 Improvements and the 2003 FEIS.

Figure 2 – Design Components of FEIS Preferred Alternative (Alternative C2) and Phase 1 Improvements

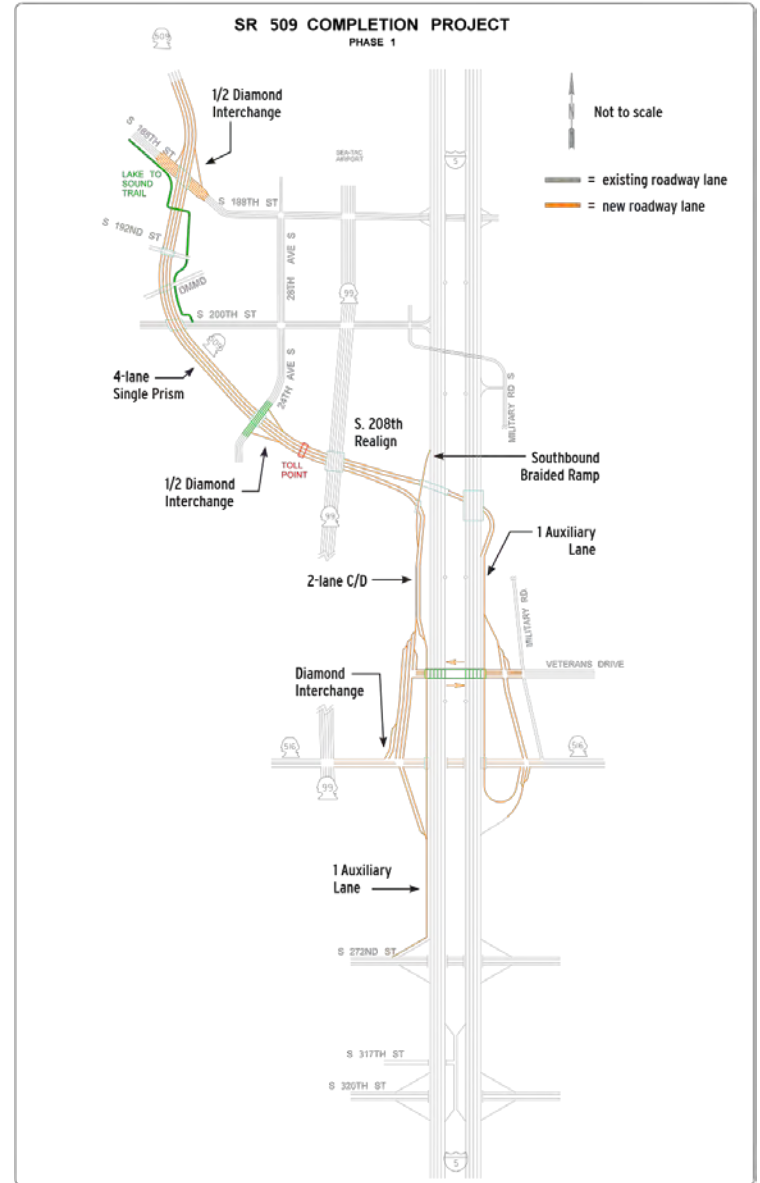
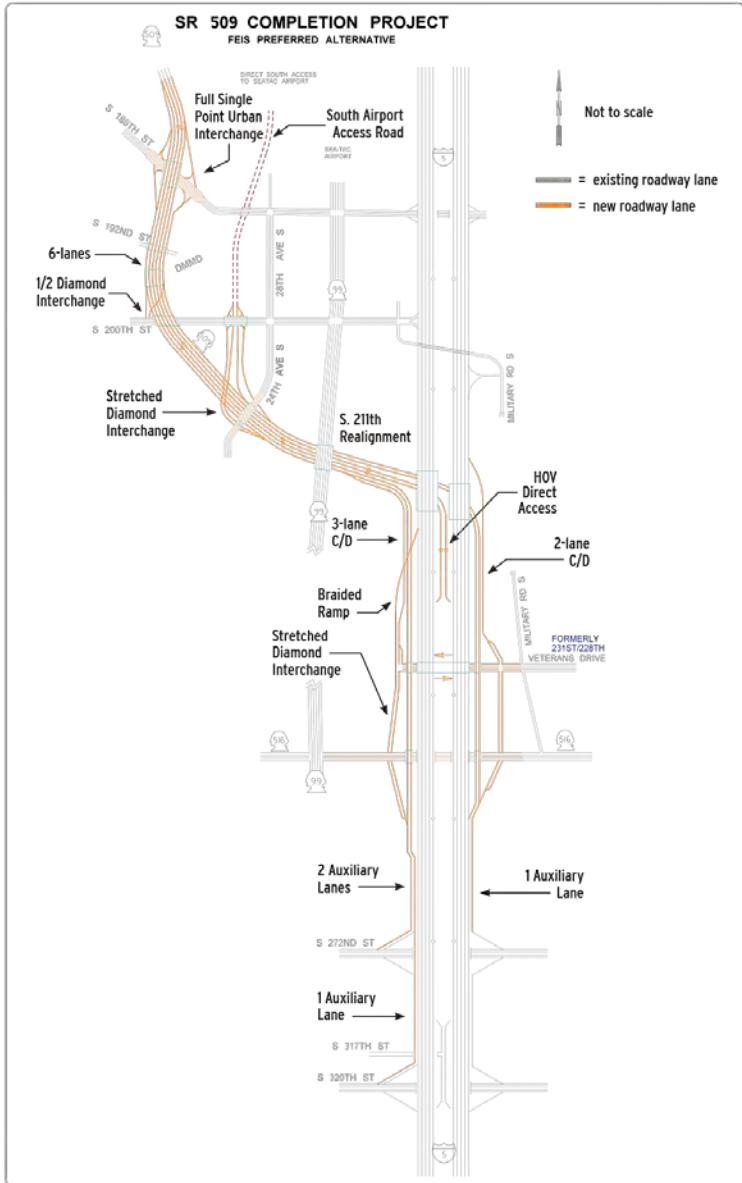
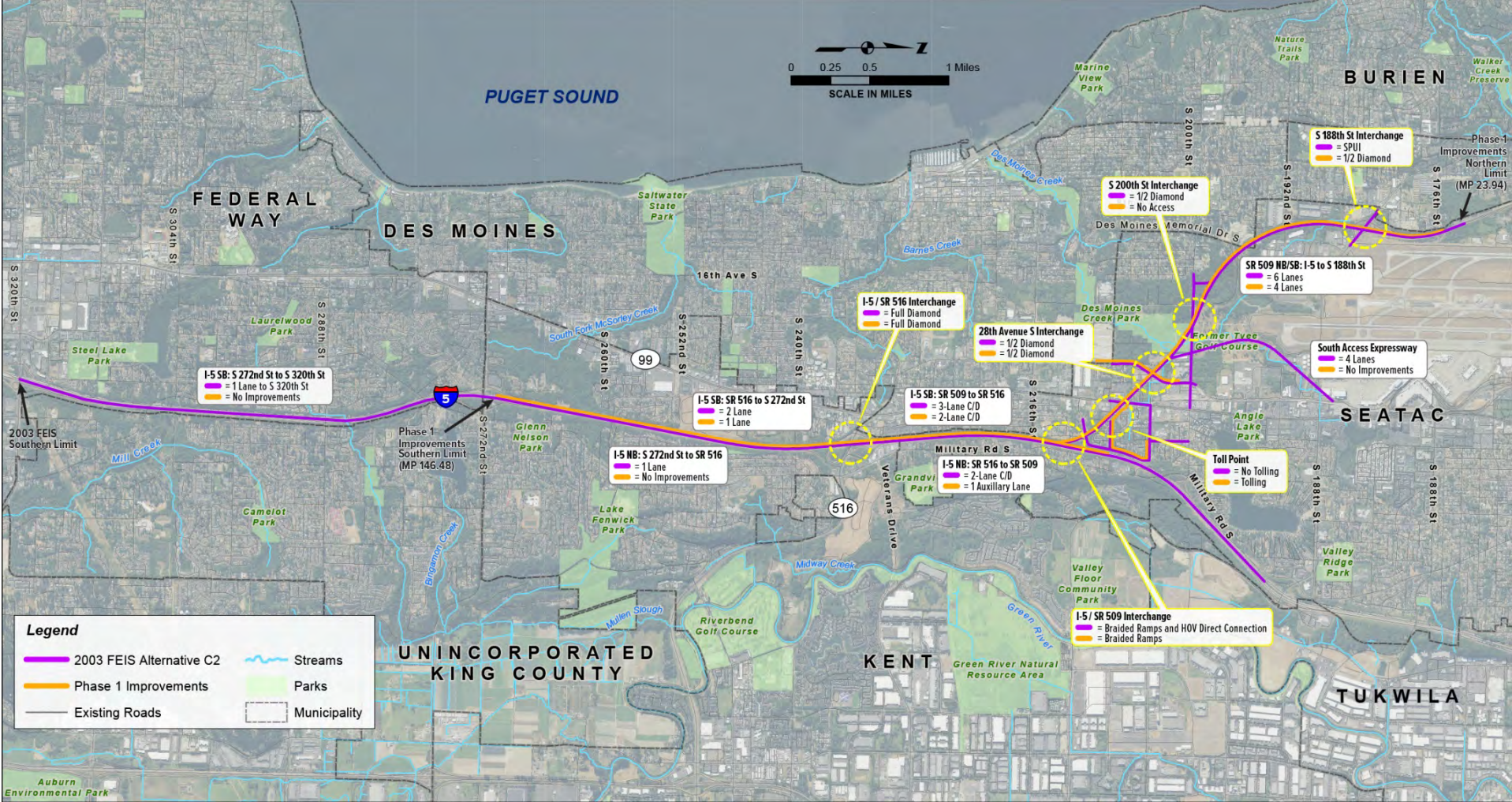


Figure 3 Overlay Comparison of Alternative C2 and the Phase 1 Improvements



3. What has changed in the affected environment since 2003?

The wetlands affected environment was described in Section 3.6.2 of the 2003 FEIS. Figure 3.6-2 and 3.6-4 from the 2003 FEIS show the wetlands along 2003 FEIS Alternative C2 (see Attachment A).

Wetlands

Wetlands within the Phase 1 Improvements footprint were analyzed using a variety of methods, including comparative aerial photo interpretation, review of CAD drawings depicting delineated wetland boundaries, and some field verification. Field reviews were conducted in January and February 2017 to confirm that wetland areas mapped in the 2003 FEIS had not been impacted by development and were still supporting wetland vegetation. Soils and hydrology were not taken into account for this analysis.

The wetlands discussion in the 2003 FEIS remains applicable to the Phase 1 Improvements, and there are no new sensitive areas identified within the project area; however, there have been some changes to wetland boundaries. Wetlands 21 and 22 appear to have been filled by a private development. These wetlands would not have been impacted by Alternative C2 nor would they be by the Phase 1 Improvements. Wetlands K and L which were located near the S. 208th Street realignment on private property are no longer present. A field visit, conducted on June 28, 2017, confirmed that there is now a stormwater detention facility where those wetlands were originally identified. The wetlands are shown on Figure 3.6-2 and 3.6-4 (Attachment A) and described on pages 3.6-2 through 3.6-20 of the 2003 FEIS.

Critical Areas Regulations

Since the 2003 FEIS, the cities of SeaTac and Des Moines have updated their Critical Area Ordinances and all buffer widths for wetlands in the project area have increased. Buffer widths are based ratings derived from the *Washington State Wetland Rating System for Western Washington, 2014 Update*. Wetlands in the study area cannot be rated without extensive fieldwork. For this analysis, the maximum buffer width of 165 feet was assumed for all impacted wetland buffers.

4. Would the Phase 1 Improvements result in any new significant adverse impacts?

The 2003 FEIS calculated direct effects on the wetlands and their buffer areas. Direct effects, which are summarized in Table 2, were considered the permanent fill or dredge from cut-and-fill slopes and did not assume any offsets. For the Phase 1 Improvements, the permanent impacts were conservatively estimated by calculating the wetland and wetland buffer areas within a Permanent Impact area line based on a 5-foot offset from any cut slope or retaining wall and a 20-foot offset from any fill slope. The permanent impacts were calculated based on the wetland and buffer boundaries delineated in 2000 and used CAD software (see Table 2).

As noted in Section 3, the wetland buffer widths have increased since the 2003 FEIS. If the Phase 1 Improvements move forward to permit acquisition, a full verification will be required and include delineation using the current standards as determined by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*.

The anticipated permanent impacts from the Phase 1 Improvements are shown in Table 2 and would total approximately 0.3 acre of wetland and 6.1 acre of wetland buffer. The main difference between the Phase 1 Improvements and Alternative C2 would be in the amount of wetland buffer impacts. Buffer impacts with the Phase 1 Improvements would be below the 7.1 acres described in the 2003 FEIS because there would be no South Access Road and improvements on I-5 would not occur south of S 272nd Street.

Table 2. Summary of Potential Wetland Impacts (Acres)

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2003 FEIS					Alternative C2 Direct Impacts			Phase 1 Improvements Permanent Impacts		
Name	Size (acres)	USFWS Classification	Ecology Rating	Wetland Rating	Wetland	Wetland Buffer	Buffer Width	Wetland	Wetland Buffer	Buffer Width
Wetland A	16.0	PFO, PSS	2	1	0.10	0.90	100	0.09	1.55	165-feet
Wetland B	6.6	PFO, PSS, PEM	2	1	0.01	1.8	100	0.01	1.78	165-feet
Wetland D	4.9	PFO, PSS, PEM	2	2	0	1.7	100	0	0	N/A
Wetland F	28.8	PFO, PSS, PEM, POW	2	1	0	0.01	100	0	0.59	165-feet
Wetland G	7.9	PSS, PEM	2	2	0	0.20	100	0	0	N/A
Wetland K1	0.09	PEM	3	3	0	0	25	0	0	N/A
Wetland L1	0.2	PEM	3	3	0	0	25	0	0	N/A
Wetland M	0.1	PSS	3	3	0.06	0.50	50	0.1	1.54	165-feet
Wetland N	0.1	PSS	3	3	0.1	0.60	50	0.1	0.64	165-feet
Wetland 15	0.2	PFO	3	3	0	0.05	50	0	0	N/A
Wetland 16	0.04	PFO	3	3	0.04	0.40	50	0	0	N/A
Wetland 17	0.06	PFO	3	3	0	0.05	50	0	0	N/A
Wetland 23	0.01	PEM	4	3	0.01	0.10	25	0	0	N/A
Wetland I-7	0.06	PEM	3	3	0	0.05	50	0	0	N/A
Wetland I-10	0.05	PEM, PSS	3	3	0	0.03	50	0	0	N/A
Wetland I-11	0.2	PFO, PSS	3	3	0	0.04	50	0	0	N/A
Wetland I-12	0.3	PEM, PSS	3	3	0	0.10	50	0	0	N/A
Wetland I-13	0.2	PFO	3	3	0	0.03	50	0	0	N/A
Wetland I-19	78.5	PFO	1	1	0	0.60	200	0	0	N/A
Total					0.32	7.16		0.3	6.1	

As described in the 2003 FEIS, there would be bridges over wetlands A and B. The height of these bridges would be the same as described for Alternative C2 and would help to ensure the preservation of wetland function and health beneath the structures. The impacts to Wetlands A and B described in the 2003 FEIS remain applicable to the Phase 1 Improvements, except that the bridge over Wetland A and the bridge over Wetland B would be narrower and constructed on one structure. Table 3 compares the bridge height and width differences between Alternative C2 and Phase 1 Improvements.

	Bridge Structure	Alternative C2	Phase 1 Improvements
Wetland A	Width	Two separate 60-foot-wide elevated structures with 30- to 40-foot space between the structures	One 82-foot-wide elevated structure
	Height	Varies between 30 and 46 feet	Varies between 30 and 46 feet
Wetland B	Width	Two separate 60-foot-wide elevated structures with 30- to 40-foot space between the structures	One 82-foot-wide elevated structure
	Height	Northbound roadway varies between 23 and 32 feet Southbound roadway varies between 38 and 41 feet	Varies between 30 and 50 feet

5. How would mitigation measures compare to the 2003 FEIS Alternative C2?

Since 2003, WSDOT has constructed a mitigation site in the upper Des Moines Creek watershed in the form of wetland re-establishment, wetland enhancement, and wetland buffer establishment. The 509 AMB Property mitigation site is located just south of the Sea-Tac Airport (see Figure 8). It was constructed in 2004 to contain 2.31 acre of wetland re-establishment, 0.31 acre of wetland enhancement, 0.76 acres of wetland preservation, and 0.28 acres of high-quality buffer. This mitigation accommodates all wetland impacts associated with the Phase 1 Improvements; however, additional mitigation to compensate for buffer impacts in accordance with local Critical Areas Ordinances may be needed. Additional buffer mitigation would be negotiated with local jurisdictions at the time of permitting.

6. Conclusion

The Phase 1 Improvements would result in fewer wetland impacts than those identified in the 2003 FEIS. There may be nominal changes in buffer impacts that would require additional mitigation in accordance with the current local Critical Areas Ordinances, but these changes would not rise to the level of significance. No new significant impacts to wetlands would occur as a result of the Phase 1 Improvements that were not previously identified in the 2003 FEIS.

References

SeaTac Municipal Code: Chapter 15.700 Critical Areas

Des Moines Municipal Code: Chapter 16.10 Environmentally Critical Areas

Attachments

141012.AB.J1.03_T1220020056EA / SR 509 Final Notebook / / Fig 3.6-1 Wetlands Along Alt B / 12-31-02 / LW

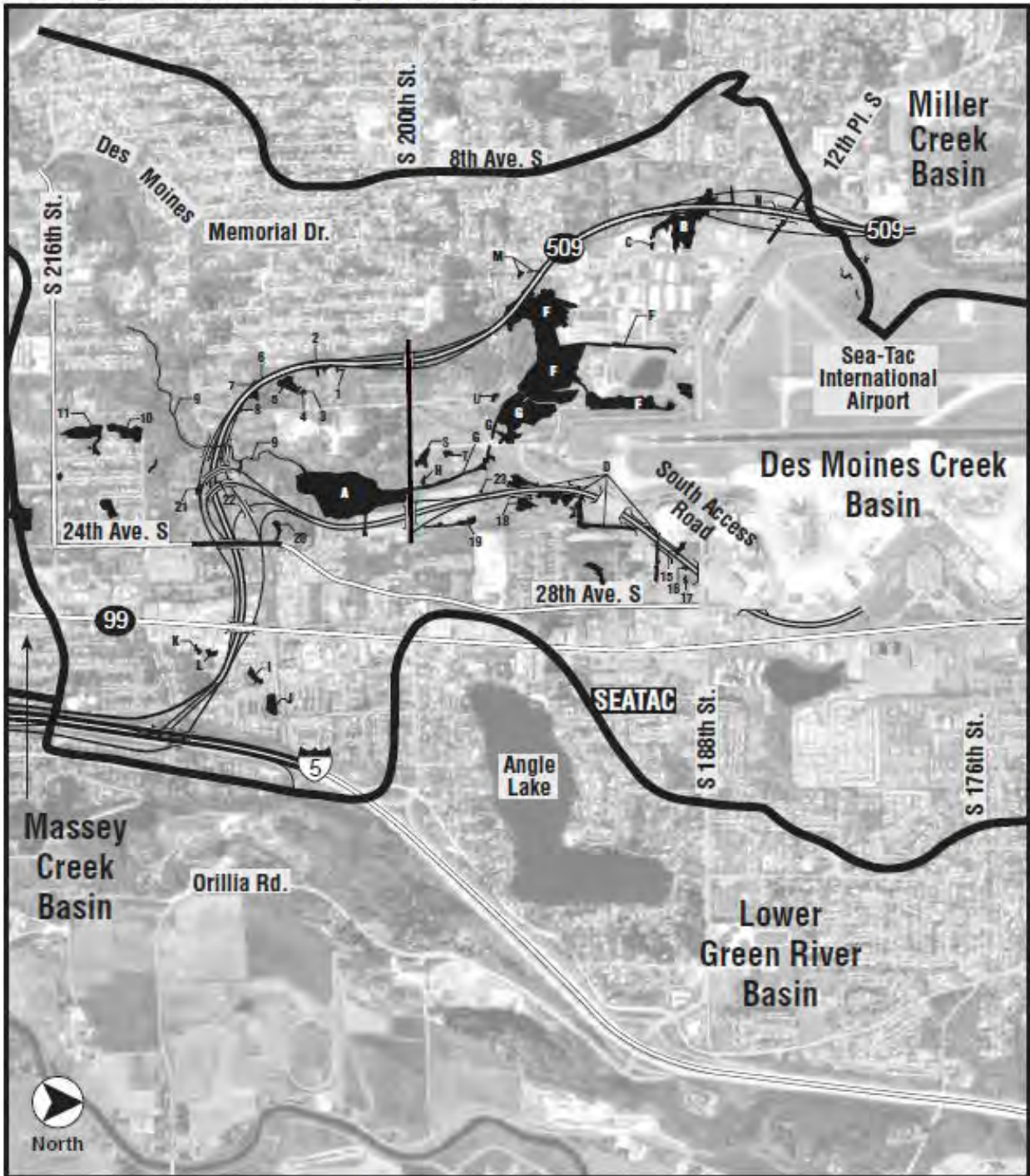


FIGURE 3.6-1
Wetlands Along Alternative B Alignment

SR 509: Corridor Completion/I-5/South Access Road
Environmental Impact Statement

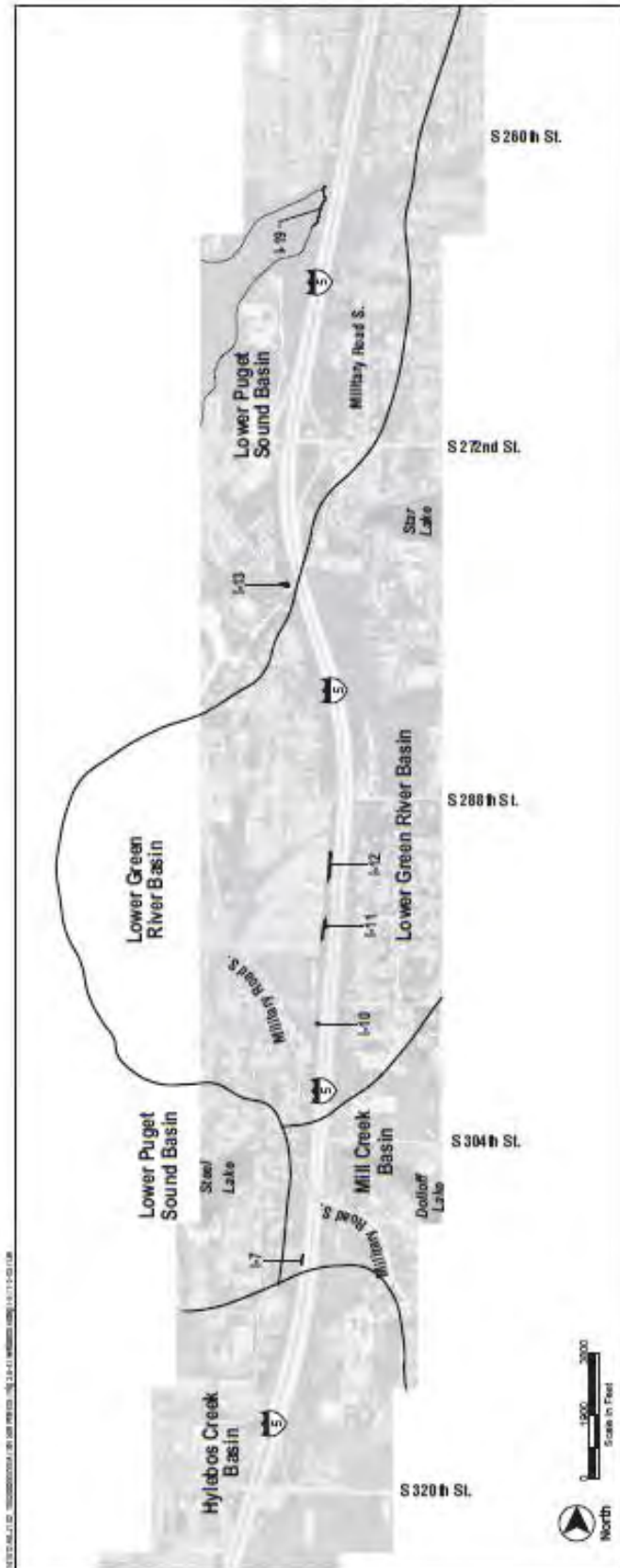


FIGURE 3.6-4
Wetlands Along I-5
 SR 509: Corridor Completion/I-5/South Access Road
 Environmental Impact Statement