

APPENDIX 1 – COMMENTS WITH RESPONSES

This appendix presents all comments received during the public comment period and responses to each comment.

Introduction

The Environmental Assessment (EA) for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) was published on July 2, 2020, and made available to the public for review and comment from July 2, 2020, through August 6, 2020.

The Washington State Department of Transportation (WSDOT) held an online public hearing that was open during the entire comment period. WSDOT invited the public to comment on the EA via the online comment form in the online public meeting, email, phone, and postal mail. WSDOT provided a series of interactive webpages with summary information and graphics about the Project; the I-405 corridor; and the major EA findings for transportation, noise, natural resources, property acquisitions, Section 4(f) and Section 6(f) recreational resources, and environmental justice. The online public meeting website received a total of 1,943 page views (1,546 unique page views).

During the comment period, WSDOT received a total of 35 comments: 16 online comment forms, 5 emails, 7 comments by phone, and 7 comment letters (sent electronically). WSDOT and the Federal Highway Administration (FHWA) reviewed and considered all comments in the development of this Finding of No Significant Impact.

Index to Comments and Responses

Each online comment form, email, phone message transcript, and letter is presented in its entirety in the order shown in the following indices. Comment numbers have been added to the margins of each comment form, hearing transcript, email, and letter to delineate individual comments. WSDOT's and FHWA's responses to the numbered comments follow each of the comment sets.

Index to Online Forms (OF)

Comment ID	Name	Type	Date
OF1	Elizabeth Howe	Private Individual	July 2, 2020
OF2	Clinton W	Private Individual	July 2, 2020
OF3	Michael Moynihan	Private Individual	July 2, 2020
OF4	Jackson Hurst	Private Individual	July 2, 2020
OF5	Kevin Roner	Private Individual	July 2, 2020
OF6	Sarah Fletcher	Private Individual	July 2, 2020
OF7	No name provided	Private Individual	July 3, 2020
OF8	Heather Rathod	Private Individual	July 6, 2020
OF9	Holly Brown	Private Individual	July 7, 2020
OF10	Eric Johnson	Private Individual	July 8, 2020
OF11	Paul	Private Individual	July 9, 2020
OF12	Rick	Private Individual	July 12, 2020
OF13	Dane Larsen	Private Individual	August 3, 2020
OF14	David Levitan	Private Individual	August 6, 2020
OF15	Frances Mack	Private Individual	August 6, 2020
OF16	Johan Jorna	City of Bothell	August 6, 2020

Index to Email Comments (E)

Comment ID	Name	Type	Date
E1	Krishna Susurla	Private Individual	July 7, 2020
E2	Holly Brown	Private Individual	July 10, 2020
E3	Holly Brown	Private Individual	August 4, 2020
E4	Sarah Gustafson	Private Individual	August 4, 2020
E5	Ann Aagaard	Private Individual	August 6, 2020

Index to Phone Comments (P)

Comment ID	Name	Type	Date
P1	Maureen Jackson	Private Individual	July 9, 2020
P2	Rebecca	Private Individual	July 16, 2020
P3	No name provided	Private Individual	July 23, 2020
P4	Charlotte (Ann) Aagaard	Private Individual	July 30, 2020
P5	Rebecca	Private Individual	August 3, 2020
P6	Holly Brown	Private Individual	August 3, 2020
P7	Holly Brown	Private Individual	August 4, 2020

Index to Comment Letters (L)

Comment ID	Name	Type	Date
L1	Juno Therapeutics	Private Business	August 6, 2020
L2	King County Metro	Local Agency	August 4, 2020
L3	Canyon Park Business Center Owner's Association	Private Organization	August 6, 2020
L4	Northshore School District	Local Agency	August 6, 2020
L5	Snohomish County	Local Agency	August 6, 2020
L6	Muckleshoot Indian Tribe Fisheries Division	Tribe	August 6, 2020
L7	U.S. Coast Guard	Federal Agency	August 5, 2020

Comments Received via Online Form (OF)

Comment OF1 – Elizabeth Howe, Private Individual, July 2, 2020

<p>I don't mind the new signalized direct access ramps and inline transit stations on I-405/SR 522, however the two additional signals will greatly disrupt the flow of traffic on SR 522. Signals so close together may seem like they will improve the flow of traffic, but to drivers stuck at back-to-back-to-back lights, it adds length to commutes, emissions to the air, and frustration with our overly constrained infrastructure.</p>	<p>OF1.1</p>
<p>What is the purpose of the transit loop on I-405/SR522? Is there a need for a station there that existing ones along I-405 and SR 522 do not already address? This seems like space that could be better used as greenspace for trees which will help combat CO₂ and noise from these busy highways. Not building a redundant transit loop will reduce the need for an additional signal along SR 522. The current loop for connecting SB I-405/EB SR 522 should be maintained so as not to slow down the current speed of travel.</p>	<p>OF1.2</p>

Comment OF1.1

I don't mind the new signalized direct access ramps and inline transit stations on I-405/SR 522, however the two additional signals will greatly disrupt the flow of traffic on SR 522. Signals so close together may seem like they will improve the flow of traffic, but to drivers stuck at back-to-back-to-back lights, it adds length to commutes, emissions to the air, and frustration with our overly constrained infrastructure.

Response OF1.1

One of the primary purposes of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) is to provide new direct access to the existing express toll lanes (ETLs), including for Sound Transit’s planned I-405 Bus Rapid Transit (BRT) line. WSDOT identified the need for a new direct access ramp at SR 522 in conjunction with local cities, regional transit agencies, and the Federal Highway Administration. The direct access ramp will give travelers in the I-405 ETLs a new option to access SR 522 without needing to exit the ETLs in the center of I-405, merge across the general purpose (GP) lanes, and exit from the right-hand GP ramps, as they do today.

When designing the direct access ramp at SR 522, WSDOT considered numerous different options, ranging from new direct connector flyover ramps to roundabouts to signalized intersections. In this evaluation of options, WSDOT also needed to balance available funding and existing physical constraints in the area. The flyover ramps were eliminated from consideration because there was not sufficient funding to build them, and they would bypass the planned inline transit stations serving BRT. Furthermore, there would be more physical and environmental constraints associated with flyover ramps than other options considered. Roundabouts were eliminated because they would experience challenges with sight distance, traffic operations would not be acceptable, and they would be hard to fit among the columns that hold up I-405 over SR 522. In the end, WSDOT determined that

signalized intersections will provide the best balance between accommodating BRT and transit needs and performance for all other vehicles, within budget constraints. West of the direct access ramps, a signalized intersection is also necessary to allow bus and pick-up/drop-off vehicle entry and exit from the proposed new transit loop (see Response OF1.2 for more information on your question about the transit loop).

Although the three new signals are expected to add approximately 1 minute of delay for through travelers on SR 522 as compared to without the Project, this delay is expected to be offset by the overall travel time benefits of the Project. The Project will deliver faster and more reliable trips on I-405 for most drivers, carpools, and transit riders using both the ETLs and the GP lanes. Morning commuters on southbound I-405 would experience the most noticeable travel time reductions. Please see Section 4.1 of the Environmental Assessment for more details on projected travel times with the Project.

Comment OF1.2

What is the purpose of the transit loop on I-405/SR 522? Is there a need for a station there that existing ones along I-405 and SR 522 do not already address? This seems like space that could be better used as greenspace for trees which will help combat CO₂ and noise from these busy highways. Not building a redundant transit loop will reduce the need for an additional signal along SR 522. The current loop for connecting SB I-405/EB SR 522 should be maintained so as not to slow down the current speed of travel.

Response OF1.2

The transit loop at the I-405/SR 522 interchange is designed to allow bus riders to transfer between bus routes serving this portion of SR 522 and bus routes serving I-405, including the planned I-405 and SR 522 BRT. The transit loop resulted from coordination between WSDOT, Sound Transit, King County Metro, City of Bothell, City of Kirkland, and University of Washington Bothell/Cascadia College. The transit loop will include biking and walking connections between the transit stations and nearby regional trails.

The transit loop is also needed to also serve as the eastern terminus for SR 522 BRT buses, allowing them space to lay over and turn around to restart their route. In addition, the transit loop will provide an area for bus riders to be dropped off and picked up without disrupting the flow of traffic on SR 522.

WSDOT plans to plant vegetation near the transit loop using guidance from Crime Prevention Through Environmental Design (CPTED) standards, which consider the safety and security of pedestrians moving through the area.

Because of the planned transit loop, it is not possible to maintain the current southbound I-405 off-ramp to eastbound SR 522 as currently configured. A traffic signal is needed at this intersection to enable buses to enter and exit the transit loop. As described in Response OF1.1, the Project is expected to improve travel times on I-405 for most trips and will provide new options for direct access between I-405 and SR 522 for vehicles, carpools, and transit.

Comment OF2 – Clinton W, Private Individual, July 2, 2020

Stop with the tolls and add a extra GP lane. You should only allow 2 toll lanes when 3 GP lanes are available because all your doing is forcing people to give you more money without helping with traffic congestion. Not good when people who are not elected officials can be so money hungry without a care about the people it hurts.	OF2.1
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Comment OF2.1

Stop with the tolls and add a extra GP lane. You should only allow 2 toll lanes when 3 GP lanes are available because all your doing is forcing people to give you more money without helping with traffic congestion. Not good when people who are not elected officials can be so money hungry without a care about the people it hurts.

Response OF2.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) is part of the I-405 Corridor Master Plan to address corridor congestion. The Master Plan also includes additional general purpose (GP) capacity for the northern portion of I-405. However, the Legislature has prioritized funding authorization for express toll lanes (ETLs) as the first phase of these improvements.

ETLs allow WSDOT to move vehicles and people more efficiently compared to the untolled GP lanes. On a per lane basis, each ETL carries more vehicles and people than a GP lane during peak commute periods. When drivers choose to leave the GP lanes to use the ETLs instead, they free up space for the other drivers around them. In most places between Bellevue and Lynnwood, the GP lanes are moving faster with ETLs in place than they did before the ETLs opened. Having a toll option moves more vehicles and people overall than just adding another GP lane, which would quickly become another stop-and-go lane. ETLs give drivers the choice to pay a toll for a reliable trip when they need it. They also bring back predictability and speed for carpoolers and transit users, who use the lanes toll-free, by keeping traffic moving reliably.

Please note that the Project will not remove any GP lanes from I-405. The Project will add GP capacity in a few key locations to eliminate bottlenecks and improve the overall system. New GP capacity will be provided on southbound I-405 between the westbound SR 522 and eastbound SR 522 off-ramps, and through the NE 160th Street interchange. In addition, the Project will remove the existing ETL entry and exit point near NE 160th Street, which means there will no longer be large volumes of vehicles changing lanes on I-405 at this location to exit to SR 522. Instead, ETL users traveling to SR 522 will be able to remain in the ETL to exit via the new SR 522 direct access ramp. Because these improvements will eliminate a major bottleneck, GP lane operations are expected to improve not only on southbound I-405, but also on westbound SR 522, southbound SR 525, and I-5 approaching the I-405 interchange in Lynnwood.

The Project will deliver faster and more reliable trips on I-405 for most drivers, carpoolers, and transit riders using both the ETLs and the GP lanes. Morning commuters on

southbound I-405 would experience the most noticeable travel time reductions. During the morning peak period (7 to 10 a.m.) in 2045, a trip between the start of the ETLs (north of SR 527) and NE 116th Street in Kirkland would be about 37 minutes faster in the GP lanes and 6 minutes faster in the ETLs with the Project as compared to travel times if the Project were not built. Please see Section 4.1 of the Project Environmental Assessment for more details.

The ETLs also offer free travel options for drivers. It is assumed that the new ETLs associated with the Project would have the same occupancy requirements as the current Bellevue to Lynnwood ETLs, which means:

- All drivers could travel for free without a *Good to Go!* pass on weekdays from 7 p.m. to 5 a.m. and at all times on weekends and major holidays.
- HOV 2+ could travel for free on weekdays from 9 a.m. to 3 p.m. with a *Good To Go!* pass.
- Transit, HOV 3+, and motorcycles could travel for free on weekdays from 5 a.m. to 7 p.m. with a *Good to Go!* pass.

You can visit <https://www.wsdot.wa.gov/Tolling/405> to learn more about how the ETLs work.

Comment OF3 – Michael Moynihan, Private Individual, July 2, 2020

<p>The loss of the 522 westbound ramp in unexceptionable. Wasteful spending on the eastbound exit of 522 that was just done a few years ago made traffic back up into 405 as cars are not merging efficiently like before. I understand the change was to help eliminate the braiding of traffic and it was a failure. Now this new change will further make this intersection a nightmare. What are the traffic counts of 522 westbound? What are the traffic counts of 522 westbound exit ramp from the northbound 405? I drive this daily and can see how other lanes could be added even though I think it's not worth the cost just to add an additional Toll lane. This is one mistake to cover an older mistake. This will turn out to be mistake after mistake and make this a mess for the future to tear down and start over.</p>	<p>OF3.1</p>
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Comment OF3.1

The loss of the 522 westbound ramp in unexceptionable. Wasteful spending on the eastbound exit of 522 that was just done a few years ago made traffic back up into 405 as cars are not merging efficiently like before. I understand the change was to help eliminate the braiding of traffic and it was a failure. Now this new change will further make this intersection a nightmare. What are the traffic counts of 522 westbound? What are the traffic counts of 522 westbound exit ramp from the northbound 405? I drive this daily and can see how other lanes could be added even though I think it's not worth the cost just to add an additional Toll lane. This is one mistake to cover an older mistake. This will turn out to be mistake after mistake and make this a mess for the future to tear down and start over.

Response OF3.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) will not affect the structural elements (walls and bridge) of the braided ramps built at the NE 160th Street interchange as part of the prior I-405, Bellevue to Lynnwood Widening and Express Toll Lanes Project. Rather, the Project will realign the ramp from northbound I-405 to eastbound and westbound SR 522 starting north of the existing braided ramps.

Improvements will include widening the ramp to eastbound SR 522 to include two lanes. This ramp widening, combined with some traffic now choosing to use the new direct access ramps in the center of I-405 to get to and from SR 522, is expected to help keep traffic moving in the I-405/SR 522 interchange area and prevent vehicles from spilling back onto northbound I-405 as they do today.

To answer your question about traffic counts, the highest traffic volumes from northbound I-405 to westbound SR 522 currently occur during the afternoon peak period and historically have ranged from about 900 to 1,000 vehicles per hour. With the Project, travelers on northbound I-405 will have two options for accessing westbound SR 522: 1) via the general purpose lanes using the new, widened off-ramp, or 2) via the ETLs using a new direct access ramp. Travelers making this trip will experience up to four new intersections, which would result in slightly greater travel times on SR 522. However, travelers will experience shorter travel times on I-405, in particular during the weekday afternoon commute, which will help to offset the changes on SR 522.

Comment OF4 – Jackson Hurst, Private Individual, July 2, 2020

I approve the environmental assessment for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.	OF4.1
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Comment OF4.1

I approve the environmental assessment for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.

Response OF4.1

Thank you for your comment.

Comment OF5 – Kevin Roner, Private Individual, July 2, 2020

Looks like you're removing fly-overs and installing three stop lights. This is going to slow traffic down and increase travel times through the area. This is the opposite of what needs to be done.	OF5.1
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Comment OF5.1

Looks like you're removing fly-overs and installing three stop lights. This is going to slow traffic down and increase travel times through the area. This is the opposite of what needs to be done.

Response OF5.1

One of the primary purposes of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) is to provide new direct access to the existing express toll lanes (ETLs), including for Sound Transit’s planned I-405 Bus Rapid Transit (BRT) line. WSDOT identified the need for a new direct access ramp at SR 522 in conjunction with local cities, regional transit agencies, and the Federal Highway Administration. The direct access ramp will give travelers in the I-405 ETLs a new option to access SR 522 without needing to exit the ETLs in the center of I-405, merge across the general purpose (GP) lanes, and exit from the righthand GP ramps, as they do today.

Although the three new signals are expected to add approximately 1 minute of delay for through travelers on SR 522 as compared to without the Project, this delay is expected to be offset by the overall travel time benefits of the Project. The Project will deliver faster and more reliable trips on I-405 for most drivers, carpools, and transit riders using both the ETLs and the GP lanes. Morning commuters on southbound I-405 would experience the most noticeable travel time reductions. Please see Section 4.1 of the Environmental Assessment for more details on projected travel times with the Project.

The Project will also widen the ramp from northbound I-405 to eastbound SR 522 to include two lanes. This ramp widening, combined with some traffic now choosing to use the new direct access ramps in the center of I-405 to get to and from SR 522, is expected to help keep traffic moving in this area and prevent vehicles from spilling back onto I-405 as they do today.

With the Project, travelers on northbound I-405 will have two options for accessing westbound SR 522: 1) via the general purpose lanes using the new, widened off-ramp, or 2) via the ETLs using a new direct access ramp. Travelers making this trip will experience up to four new intersections, which would result in slightly greater travel times on SR 522. However, travelers will experience shorter travel times on I-405, in particular during the weekday afternoon commute, which will help to offset the changes on SR 522.

Comment OF6 – Sarah Fletcher, Private Individual, July 2, 2020

<p>Good day. you keep stating that the EBT for the poor can be used on paying the Toll, but it can't be used for a toll. This is the EBT site. Show me where it says that those poor people can use their EBT to pay for the toll:</p> <p>https://www.dshs.wa.gov/esa/issuances/electronic-benefit-transfer-ebt</p>	<p>OF6.1</p>
<p>And re: "The new direct access ramp at 17th Avenue SE would change views for some residents of the neighborhood southeast of the park and ride as described below.</p> <p>An existing screening wall and vegetation would be removed to construct the retaining wall that would support the new direct access ramp. The existing vegetation would be removed and there would not be space to replant the trees. The new retaining wall would be consistent with the I-405 Urban Design Criteria, and Boston ivy would be planted at the base of the wall to soften its appearance over time.</p>	<p>OF6.2</p>

<p>These elements would help integrate the new ramp with the suburban character of the neighborhood. However, the new retaining wall would dominate the backyard views for some residents, resulting in adverse impacts on visual quality for the viewers."</p> <p>You might want to warn the people living there that the noise will be terrible, not to mention that their views will be adversely affected. And please do not plant Boston Ivy. The only reason you want to plant it is because it is cheap. It is an invasive and should you plant it, who will be maintaining it?</p>	
<p>And you are not mentioning anything about the impact that Coronavirus will have on traffic. Do you not think that there might not be so many cars on the roads should it be that in the future, more people will be working from home? Is it worth doing this tolling project?</p>	OF6.3
<p>And where does the tolling money go? How much goes to the tolling company and how much to WSDOT?</p>	OF6.4

Comment OF6.1

Good day. you keep stating that the EBT for the poor can be used on paying the Toll, but it can't be used for a toll. This is the EBT site. Show me where it says that those poor people can use their EBT to pay for the toll:

<https://www.dshs.wa.gov/esa/issuances/electronic-benefit-transfer-ebt>

Response OF6.1

Good To Go! customers can use their Electronic Benefit Transfer (EBT) cards to pay for tolls. Though the Washington Department of Social and Health Services (DSHS) website does not specifically mention tolling, Washington Administrative Code 388-412-0046 states that DSHS cash and food assistance benefits may be used to pay a reasonable amount of basic living expenses, including transportation. To use an EBT card to pay for tolls, customers need to visit the *Good To Go!* walk-in center and make a payment in person.

Comment OF6.2

And re: "The new direct access ramp at 17th Avenue SE would change views for some residents of the neighborhood southeast of the park and ride as described below.

An existing screening wall and vegetation would be removed to construct the retaining wall that would support the new direct access ramp. The existing vegetation would be removed and there would not be space to replant the trees. The new retaining wall would be consistent with the I-405 Urban Design Criteria, and Boston ivy would be planted at the base of the wall to soften its appearance over time.

These elements would help integrate the new ramp with the suburban character of the neighborhood. However, the new retaining wall would dominate the backyard views for some residents, resulting in adverse impacts on visual quality for the viewers."

You might want to warn the people living there that the noise will be terrible, not to mention that their views will be adversely affected. And please do not plant Boston Ivy. The only reason you want to plant it is because it is cheap. It is an invasive and should you plant it, who will be maintaining it?

Response OF6.2

WSDOT is committed to meaningful community engagement and considers community concerns in the design and construction of its projects. WSDOT is actively coordinating with homeowners in the vicinity of the new direct access ramp near SR 527 and has received input through meetings and the public comment process for the Environmental Assessment (EA) prepared for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project).

Regarding noise effects, as documented on page 5-103 of Project EA Appendix B, *Noise Discipline Report*, the proposed elevation of the new 17th Avenue SE ramp with a retaining wall and 3.5-foot-tall parapet on top would provide noise shielding to the neighborhood. As a result, traffic noise levels with the Project are not predicted to approach or exceed the federal noise abatement criteria at this location. The EA and appendices are available for review at <https://www.wsdot.wa.gov/projects/i405/sr-522-sr-527/environmental-review>.

Boston ivy is not an invasive species in Washington State, as opposed to English ivy, which is on the noxious weed list. WSDOT plants Boston ivy at the base of the walls where space is limited to plant trees or shrubs in order to help cover the walls and provide seasonal interest with fall color. WSDOT and its contractors will be responsible for maintaining the vegetation after installation.

Comment OF6.3

And you are not mentioning anything about the impact that Coronavirus will have on traffic. Do you not think that there might not be so many cars on the roads should it be that in the future, more people will be working from home? Is it worth doing this tolling project?

Response OF6.3

The transportation analysis in the EA is based on forecasted traffic data for 2025 (year of opening) and 2045, as required by the Federal Highway Administration, and was conducted in 2018. WSDOT is continually monitoring the ETL volumes and use. At this time, it is too early to predict whether there will be a change to the 2025 and 2045 forecasts. While traffic volumes were lower than 2019 volumes when the pandemic restrictions began in spring 2020, volumes are starting to increase.

Furthermore, the region will continue to grow, so it is important to maintain traffic management tools that will provide a reliable trip into the future. Addressing our region's travel demands requires a multifaceted approach including increased teleworking, highway system improvements, moving more people on transit, and bringing jobs and housing closer together. After the COVID-19 pandemic, people will likely continue

teleworking, which has always been an aspect of larger congestion management plans, including the I-405 Corridor Master Plan.

Teleworking is an important aspect of transportation demand management (TDM), which emphasizes using existing transportation infrastructure to enhance mobility and transportation system efficiency. Teleworking/TDM is especially useful in reducing congestion during the peak period travel time (morning and evening rush hour).

WSDOT does not yet have sufficient data to know how many people will return to an on-site working environment or whether they will use transit, drive alone, or carpool. ETLs have the ability to adapt to meet the changing needs and provide a reliable trip during the most congested travel times.

Comment OF6.4

And where does the tolling money go? How much goes to the tolling company and how much to WSDOT?

Response OF6.4

Although a portion of each toll goes to WSDOT's toll vendor to cover the cost to collect, the majority of toll revenue is reinvested back into roadway operations, maintenance, construction, and debt service as directed by the Washington State Legislature.

The most recent tolling annual report shows that when looking at all toll facilities, the average toll rate in 2019 was \$3.83, while the average cost to collect a toll was 67 cents. The cost to collect includes vendor costs for customer service and toll equipment maintenance, mailing and credit card fees, and WSDOT oversight and reporting. You can find more information, including facility-specific financial statements, on our Reports and Resources web page at <https://wsdot.wa.gov/tolling/publications.htm>.

Comment OF7 – No name provided, Private Individual, July 3, 2020

<p>The new interchange design eliminates direct access for drivers traveling from SB I-405 to EB SR 522, and from NB I-405 to WB SR 522. Instead for both routes it will require them to traverse three new traffic lights on a very busy freeway. This is a significant impact to a lot of drivers who take these routes on a daily basis. Further, how will speeds be safely reduced approaching these new traffic lights? Won't this increase accidents and T-Bone accidents if and when drivers don't slow down? Has any consideration been made to preserving these direct access routes to reduce the amount of traffic using these new traffic lights?</p>	<p>OF7.1</p>
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Comment OF7.1

The new interchange design eliminates direct access for drivers traveling from SB I-405 to EB SR 522, and from NB I-405 to WB SR 522. Instead for both routes it will require them to traverse three new traffic lights on a very busy freeway. This is a significant impact to a lot of drivers who take these routes on a daily basis. Further, how will speeds be safely reduced approaching these new traffic lights? Won't this increase accidents and T-Bone

accidents if and when drivers don't slow down? Has any consideration been made to preserving these direct access routes to reduce the amount of traffic using these new traffic lights?

Response OF7.1

As part of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project), the new intersections on SR 522 will be designed to the most current safety standards. WSDOT will install new signs alerting drivers in advance to the new changes in speed on SR 522 near the I-405 interchange. There will also be public outreach and education before the Project opens to traffic in order to prepare drivers for the new roadway configurations, both on SR 522 and on I-405.

With the Project, overall safety performance is expected to improve for the most serious crashes. Adding freeway lanes, widening freeway shoulders, and providing other improvements to the roadway design are all expected to improve safety performance.

Specifically, the redesign of the I-405/SR 522 interchange is expected to address the following current issues with the two I-405 northbound exit ramps to SR 522:

1. Widening the northbound I-405 to eastbound SR 522 ramp from one lane to two lanes is expected to increase capacity and decrease the number of congested-related crashes currently observed on and approaching this ramp.
2. The replacement of the northbound I-405 to westbound SR 522 ramp with a left-turn movement at a new signalized intersection for the combined northbound off-ramp is expected to decrease the speed of turning vehicles. This change would help address the high proportion of fixed-object crashes that occurs in this area.

However, the new signalized intersections at the I-405/SR 522 interchange may result in new crashes at these locations that would not occur without the Project. Intersections naturally introduce conflict points, which are correlated with higher numbers of crashes. Sections 4.4 and 5.5 of Project Environmental Assessment Appendix A, *Transportation Discipline Report*, provide more information on existing and forecasted safety performance with and without the Project.

Please see Responses OF1.1 and OF3.1 for more information about the reasons for WSDOT's proposed redesign of the I-405/SR 522 interchange area and expected effects on travel times on I-405 and SR 522.

Comment OF8 – Heather Rathod, Private Individual, July 6, 2020

<p>Hi,</p> <p>I was trying to understand where noise walls were being constructed and got confused. I saw a noise wall was going to be constructed near the cedar park north community. My question is there one being constructed near the cedar park south community (off 9th Ave SE) and Hilton garden inn? A lot of the residents already hear traffic inside their homes.</p>	<p>OF8.1</p>
<p>Thanks</p> <p>Heather Rathod</p>	

Comment OF8.1

Hi,

I was trying to understand where noise walls were being constructed and got confused. I saw a noise wall was going to be constructed near the cedar park north community. My question is there one being constructed near the cedar park south community (off 9th Ave SE) and Hilton garden inn? A lot of the residents already hear traffic inside their homes.

Response OF8.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) proposes to build a new noise wall along southbound I-405 starting just north of the SR 527 interchange near 9th Avenue SE and connecting to the existing noise wall in this area. This wall, referred to as Wall West 7 in the Environmental Assessment and Finding of No Significant Impact (FONSI), would extend south to the off-ramp from I-405 to SR 527, which would provide protection for the Cedar Park development and the Hilton Garden Inn. The new wall is proposed to be about 1,200 feet long and 12 feet high. Please see Exhibit 2-2, Sheet 5, of the FONSI for the location of this wall.

For more detailed information about this wall, please refer to Appendix B of the EA, *Noise Discipline Report*, available for review at <https://www.wsdot.wa.gov/projects/i405/sr-522-sr-527/environmental-review>. Information about Wall West 7 begins on page 5-98, and a detailed graphic showing the location of the wall is provided on page 5-13 of the report.

Comment OF9 – Holly Brown, Private Individual, July 7, 2020

<p>I have looked at the maps of the project (I downloaded them from the US Army Corp of Engineers notice NWS-2020-235-DOT), and I'm trying to decipher if they affect the property I manage. The property name is Monte Villa Farms, and the address of the property is 3301 - 3307 Monte Villa Parkway. The tax parcels are 008133-0000-1200, 008133-0000-1301, 008133-0000-1302, 008133-0000-1303 and 008133-0000-1500). Can you tell me if a portion of our property (along 405) will be affected, temporarily or permanently? Thank you.</p>	<p>OF9.1</p>
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Comment OF9.1

I have looked at the maps of the project (I downloaded them from the US Army Corp of Engineers notice NWS-2020-235-DOT), and I'm trying to decipher if they affect the property I manage. The property name is Monte Villa Farms, and the address of the property is 3301 - 3307 Monte Villa Parkway. The tax parcels are 008133-0000-1200, 008133-0000-1301, 008133-0000-1302, 008133-0000-1303 and 008133-0000-1500). Can you tell me if a portion of our property (along 405) will be affected, temporarily or permanently? Thank you.

Response OF9.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project will not require acquisition of any of the properties at 3301-3307 Monte Villa Parkway.

Comment OF10 – Eric Johnson, Private Individual, July 8, 2020

<p>Is there a different project to expand the parking spots at the Canyon Park Park and Ride? It is full very early every day and limits people that can use transit from there.</p>	<p>OF10.1</p>
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Comment OF10.1

Is there a different project to expand the parking spots at the Canyon Park Park and Ride? It is full very early every day and limits people that can use transit from there.

Response OF10.1

There are currently no funded plans to expand the amount of parking stalls at the Canyon Park Park and Ride. The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project would relocate a portion of the park and ride to the north but would maintain the same number of parking stalls when the Project is complete.

The City of Bothell's Subarea Plan for the Canyon Park area includes recommendations for further study of additional park and ride capacity in this area. More information is available in the documents provided at: <http://www.ci.bothell.wa.us/1176/Canyon-Park-Visioning>.

Comment OF11 – Paul, Private Individual, July 9, 2020

<p>Toll lanes and carpool lanes continue to create additional traffic in a choked freeway system on I-405 through Bothell that only has 2 mainline lanes, which often include the on-ramp merge. The inability for cars to be able to pass in a two-lane, crowded system has created the traffic that needs to be address currently with vehicles merging continually left and right. Opening all lanes to all traffic and eliminating toll lanes and carpool lanes entirely will allow vehicles to move more freely and allow for easier passing and bypassing. By eliminating multiple merge points on the freeways and continually crisscrossing traffic, flow could be better improved as those passing through an area can stay left and avoid vehicles entering, exiting, or merging. Since tolls seems to be the desired form of recapturing project expenses: The State DOT should consider tolling all on-ramps for all vehicles at a significantly reduced rate rather than creating the so-called “Lexus Lanes” of I-405 such that all vehicles are tolled equally and eliminate the socio-economic divide these toll lanes create.</p>	<p>OF11.1</p>
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Comment OF11.1

Toll lanes and carpool lanes continue to create additional traffic in a choked freeway system on I-405 through Bothell that only has 2 mainline lanes, which often include the on-ramp merge. The inability for cars to be able to pass in a two-lane, crowded system has created the traffic that needs to be address currently with vehicles merging continually left and right. Opening all lanes to all traffic and eliminating toll lanes and carpool lanes entirely will allow vehicles to move more freely and allow for easier passing and bypassing. By eliminating multiple merge points on the freeways and continually crisscrossing traffic, flow could be better improved as those passing through an area can stay left and avoid vehicles entering, exiting, or merging. Since tolls seems to be the desired form of recapturing project expenses: The State DOT should consider tolling all on-ramps for all vehicles at a significantly reduced rate rather than creating the so-called “Lexus Lanes” of I-405 such that all vehicles are tolled equally and eliminate the socio-economic divide these toll lanes create.

Response OF11.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) is part of the *I-405 Master Plan* to address corridor congestion. The *I-405 Master Plan* also includes additional general purpose (GP) capacity in this part of I-405; however, the Legislature has prioritized funding authorization for express toll lanes (ETLs) as the first phase of these improvements. ETLs allow WSDOT to move vehicles and people more efficiently compared to the untolled GP lanes. The current Washington State policy for I-405 is to use ETLs to help manage traffic congestion. It would be up to the Washington State Legislature and the Washington State Transportation Commission to make a change to the tolling policy for I-405.

Comment OF12 – Rick, Private Individual, July 12, 2020

<p>Hello,</p> <p>I am fully supportive of the I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement project, especially the Proposed Noise Wall West 7. The reduced sound as a result of the noise wall west 7 will both benefit the environment in the surrounding wetlands, and also help the numerous school-aged children in the surrounding neighborhood(s) focus on their school work and studies without the distraction of road noise.</p>	<p>OF12.1</p>
<p>Thank you,</p> <p>-Rick</p>	

Comment OF12.1

I am fully supportive of the I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement project, especially the Proposed Noise Wall West 7. The reduced sound as a result of the noise wall west 7 will both benefit the environment in the surrounding wetlands, and also help the numerous school-aged children in the surrounding neighborhood(s) focus on their school work and studies without the distraction of road noise.

Response OF12.1

Thank you for your comment.

Comment OF13 – Dane Larsen, Private Individual, August 3, 2020

<p>At this time, this project appears to be a waste of tax payer dollars as well as a major, negative impact to the people living in The Village Neighborhood.</p> <p>Traffic is light given the number of people who are opting to work from home. It feels that money could be better spent on options for online learning, or PPE for essential workers, or increased ability to test, or anything related to the real problem that is COVID-19.</p>	<p>OF13.1</p>
<p>Regarding the impact to the neighborhood, this project will have a negative impact to home values, across the entirety of the neighborhood.</p> <p>Adding a 25 foot wall, 5 feet from property lines, removing the trees and replacing with ivy is going to kill property values.</p> <p>Also, the increased traffic and zero buffer between residents and the highway, will result in increased noise and pollution these individuals will suffer.</p>	<p>OF13.2</p>
<p>The addition of an extra toll lane appears to be another attempt to create a socioeconomic divide between those who can afford to regularly use the toll lanes and those who cannot.</p> <p>All in all, this is an untimely, wasteful and unnecessary project that puts dollars in the wrong priority and impacts the home values of a large community of people.”</p>	<p>OF13.3</p>

Comment OF13.1

At this time, this project appears to be a waste of tax payer dollars as well as a major, negative impact to the people living in The Village Neighborhood.

Traffic is light given the number of people who are opting to work from home. It feels that money could be better spent on options for online learning, or PPE for essential workers, or increased ability to test, or anything related to the real problem that is COVID-19.

Response OF13.1

Thank you for your comments. WSDOT looks forward to continuing to coordinate with residents of the Village Square neighborhood on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project).

The transportation analysis in the Environmental Assessment is based on forecasted traffic data for 2025 (year of opening) and 2045, as required by the Federal Highway Administration and was conducted in 2018. WSDOT is continually monitoring the express toll lane (ETL) volumes and use. At this time, it is too early to predict whether there will be a change to the 2025 and 2045 forecasts. While traffic volumes were lower than 2019 volumes when the pandemic restrictions began in spring 2020, volumes are starting to increase.

Furthermore, the region will continue to grow, so it is important to maintain traffic management tools that will provide a reliable trip into the future. Addressing our region’s

travel demands requires a multifaceted approach including increased teleworking, highway system improvements, moving more people on transit, and bringing jobs and housing closer together. Following COVID-19, people will likely continue teleworking, which has always been an aspect of larger congestion management plans, including the *I-405 Master Plan*.

Teleworking is an important aspect of transportation demand management (TDM), which emphasizes using existing transportation infrastructure to enhance mobility and transportation system efficiency. Teleworking/TDM is especially useful in reducing congestion during the peak period travel time (morning and evening rush hour).

WSDOT does not yet have sufficient data to know how many people will return to an on-site working environment or whether they will use transit, drive alone or carpool. ETLs have the ability to adapt to meet the changing needs and provide a reliable trip during the most congested travel times.

The funding for the Project comes primarily from I-405 ETL revenue, which is required to be spent on improvements within the I-405 corridor and cannot, by law, be spent on other items such as education and healthcare. Per Revised Code of Washington 47.56.884, I-405 tolls are accounted for in a separate account within the state treasury that is dedicated to the I-405 program. All spending is appropriated by the Washington State Legislature and monitored by the Office of Financial Management. All toll revenue and interest earnings in the I-405 account go toward paying ongoing operating and maintenance costs. Any revenue generated beyond operating costs goes into a dedicated account for I-405 and will be reinvested in the corridor.

Comment OF13.2

Regarding the impact to the neighborhood, this project will have a negative impact to home values, across the entirety of the neighborhood.

Adding a 25 foot wall, 5 feet from property lines, removing the trees and replacing with ivy is going to kill property values.

Also, the increased traffic and zero buffer between residents and the highway, will result in increased noise and pollution these individuals will suffer.

Response OF13.2

Section 4.5 of the EA and Chapter 5 of EA Appendix F, *Visual Impact Assessment*, acknowledge that adverse impacts on visual quality will result because, with the Project, adjacent neighbors will have direct views of the retaining wall on the south side of the new elevated direct access ramp on 17th Avenue SE. WSDOT is working to soften the appearance of this wall as much as possible. Because space is limited to plant trees or shrubs, WSDOT will plan Boston ivy at the base of the walls, which will help cover the wall and provide seasonal interest with fall color.

Regarding noise effects, because of the height of the retaining wall and an additional 3.5--foot-tall parapet on top, the wall would provide noise shielding to the neighborhood,

as documented on page 5-103 of EA Appendix B, *Noise Discipline Report*. Traffic noise levels with the Project are not predicted to approach or exceed the federal noise abatement criteria at this location. The EA and appendices are available for review at <https://www.wsdot.wa.gov/projects/i405/sr-522-sr-527/environmental-review>.

The Project also includes a southerly extension of the existing noise wall between the Village Square community and I-405. This wall, referred to as Wall East 6 in the EA, will extend along the northbound shoulder of I-405, with a portion of the wall on either side of 228th Street SE. Please see Exhibit 2-2, Sheet 5 of the Finding of No Significant Impact (FONSI), for the location of this wall.

For more information, please refer to EA Appendix B, *Noise Discipline Report*. Information about Wall East 6 begins on page 5-88, and a detailed graphic showing the location of the wall is provided on pages 5-11 and 5-12 of the report.

Overall, the Project will have minimal effects on air quality, and emissions of pollutants are expected to decrease in the future with the Project. Section 4.9.2 of the EA and Appendix D, *Air Quality Discipline Report*, provide more details on the air quality analysis. WSDOT will require the contractor to implement Best Management Practices to control and minimize the dispersion of dust and other emissions during construction, as detailed in Section 5.2.11 of the FONSI.

Comment OF13.3

The addition of an extra toll lane appears to be another attempt to create a socioeconomic divide between those who can afford to regularly use the toll lanes and those who cannot.

All in all, this is an untimely, wasteful and unnecessary project that puts dollars in the wrong priority and impacts the home values of a large community of people.”

Response OF13.3

The Project will deliver faster and more reliable trips on I-405 for most drivers, carpoolers, and transit riders using both the ETLs and the GP lanes. Morning commuters on southbound I-405 will experience the most noticeable travel time reductions. During the morning peak period (7 to 10 a.m.) in 2045, a trip between the start of the express toll lanes (north of SR 527) and NE 116th Street in Kirkland is expected to be about 37 minutes faster in the GP lanes and 6 minutes faster in the ETLs with the Project as compared to travel times if the Project were not built.

During the afternoon peak period (4 to 7 p.m.) in 2045, that same trip in the northbound direction is expected to be about 4 minutes faster in the GP lanes with the Project, as compared to without the Project. Please see Section 4.1 of the EA for more details.

The ETLs also offer free travel options for drivers. It is assumed the new ETLs associated with the Project would have the same occupancy requirements as the current Bellevue to Lynnwood ETLs, which means:

- All drivers could travel for free without a *Good to Go!* pass on weekdays from 7 p.m. to 5 a.m. and at all times on weekends and major holidays.

- HOV 2+ could travel for free on weekdays from 9 a.m. to 3 p.m. with a *Good To Go!* pass.
- Transit, HOV 3+, and motorcycles could travel for free on weekdays from 5 a.m. to 7 p.m. with a *Good to Go!* pass.

You can visit <https://www.wsdot.wa.gov/Tolling/405/> to learn more about how the ETLs work.

WSDOT looks forward to continuing coordination with residents of the Village Square community as the Project progresses.

Comment OF14 – David Levitan, Private Individual, August 6, 2020

<p>As a Bothell resident, I am excited to see the addition of the ETL Lane and the creation of inline stations. I look forward to their completion. I do have several comments, primarily related to the bike infrastructure around these improvements.</p> <p>522-405 intersection:</p> <p>The inline station at 522-405 is probably the best of many poor options to serve Bothell and UWB. However, without some work it will not see as much use as possible. The station is on the outskirts of walkability for UWB and is a long walk from downtown Bothell and Woodinville. But it is easily within biking distance and this could provide an excellent way to riders to use the station, particularly given the excellent trail connection. However, for that to occur, I advocate for two key things:</p> <p>1. Ensure speed and safety on the trail connection. Specifically, ensure that the crossing of the entrance to bus loop/dropoff has either grade separation or pedestrian/bike priority. Bikers/pedestrians should not need to stop and press a signal to cross the entrance – they should be able to cross immediately except when a vehicle is entering/exiting the loop. I would also advocate to keep the crossing raised and otherwise marked as being prioritized for non-motorized traffic.</p>	<p>OF14.1</p>
<p>2. Secure bicycle parking. Bike racks are limited and often cumbersome to use. Instead, we need secure parking for a substantial number of bikes. A simple bike rack is not sufficient – video monitoring needs to be the minimum and perhaps some kind of cage with a limited set of users given access.</p>	<p>OF14.2</p>
<p>3. Ensure safety on the crossing of the direct access ramp for pedestrians/bikes - perhaps a no turn on red would help.</p>	<p>OF14.3</p>
<p>527-405 intersection:</p> <p>It is great to see fully separated bike lanes on 17th Ave SE as per the visualization on page 4-23. Similar bike lanes on 220th would be great. I would like to make two suggestions here:</p> <p>1. Ensure pedestrian safety on the roundabout. From my research, it has not been shown that roundabouts improve pedestrian/bike safety (e.g., see https://streets.mn/2017/11/17/are-roundabouts-safer-for-pedestrians/). One key item is to substantially slow down any cars entering the park and ride or anywhere pedestrians/bicyclists are likely to be present. I would strongly advocate that the turn into the park and ride is made to be at a sharp angle to force cars to slow down.</p>	<p>OF14.4</p>
<p>2. Bike parking – again, secure bike parking here is essential to encouraging biking as a "last mile" solution.</p> <p>I am very excited by this project and hope that you make it a success for all users.</p>	<p>OF14.5</p>
<p>Thank you</p> <p>David</p>	

Comment OF14.1

As a Bothell resident, I am excited to see the addition of the ETL Lane and the creation of inline stations. I look forward to their completion. I do have several comments, primarily related to the bike infrastructure around these improvements.

522-405 intersection:

The inline station at 522-405 is probably the best of many poor options to serve Bothell and UWB. However, without some work it will not see as much use as possible. The station is on the outskirts of walkability for UWB and is a long walk from downtown Bothell and Woodinville. But it is easily within biking distance and this could provide an excellent way to riders to use the station, particularly given the excellent trail connection. However, for that to occur, I advocate for two key things:

1. Ensure speed and safety on the trail connection. Specifically, ensure that the crossing of the entrance to bus loop/dropoff has either grade separation or pedestrian/bike priority. Bikers/pedestrians should not need to stop and press a signal to cross the entrance – they should be able to cross immediately except when a vehicle is entering/exiting the loop. I would also advocate to keep the crossing raised and otherwise marked as being prioritized for non-motorized traffic.

Response OF14.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA).

WSDOT is designing all intersections to provide a safe walking and biking experience. The entrance/exit to the transit loop off of SR 522 will be signalized and will include a lighted, marked crosswalk. Before vehicles exiting the transit loop reach this intersection, they will need to travel through a roundabout, which will help slow down their movement prior to reaching the light. Conversely, vehicles traveling from SR 522 will need to slow down as they turn into the transit loop. WSDOT will continue to work with the City of Bothell and other agencies to finalize the design at this intersection and to identify additional refinements to enhance safety and operations for all users.

Comment OF14.2

2. Secure bicycle parking. Bike racks are limited and often cumbersome to use. Instead, we need secure parking for a substantial number of bikes. A simple bike rack is not sufficient – video monitoring needs to be the minimum and perhaps some kind of cage with a limited set of users given access.

Response OF14.2

WSDOT is partnering with Sound Transit on the design of the transit loop and the BRT stations at SR 522 and SR 527. Sound Transit plans to include bicycle parking at all I-405 BRT stations, including the ones at SR 522 and SR 527, and Community Transit will also offer bike parking at the Canyon Park Park and Ride and transit stations associated with

the routes it operates. Quantities and types of bike parking are still being determined. WSDOT is providing space for both racks and lockers in the design for the Project.

Comment OF14.3

3. Ensure safety on the crossing of the direct access ramp for pedestrians/bikes - perhaps a no turn on red would help.

Response OF14.3

The intersection on the SR 522 direct access ramp will be signalized and will only allow left turns with a green arrow (known as “protected only”), which is designed to reduce conflicts between pedestrians and vehicles. The design currently assumes that right turn on red will be allowed, but this approach could be reconsidered prior to opening this new intersection. Other pedestrian safety treatments, such as allowing the pedestrian to start walking prior to vehicles getting a green indication (called a leading pedestrian interval), may also be considered. WSDOT will continue to work with the City of Bothell to finalize the design at this intersection and to identify additional refinements to enhance safety and operations for all users.

Comment OF14.4**527-405 intersection:**

It is great to see fully separated bike lanes on 17th Ave SE as per the visualization on page 4-23. Similar bike lanes on 220th would be great. I would like to make two suggestions here:

1. Ensure pedestrian safety on the roundabout. From my research, it has not been shown that roundabouts improve pedestrian/bike safety (e.g., see <https://streets.mn/2017/11/17/are-roundabouts-safer-for-pedestrians/>). One key item is to substantially slow down any cars entering the park and ride or anywhere pedestrians/bicyclists are likely to be present. I would strongly advocate that the turn into the park and ride is made to be at a sharp angle to force cars to slow down.

Response OF14.4

WSDOT has been coordinating closely with the City of Bothell on bicycle and pedestrian facilities in the Canyon Park area. In addition to the separated bike lanes that you noted on 17th Avenue SE, the current conceptual Project design includes protected bike lanes on the north side of 220th Street SE between 17th Avenue SE and SR 527.

In general, roundabouts provide better safety performance for all modes than traditional stop sign or signalized intersections. Drivers must slow down and yield to traffic before entering a roundabout, which means that collisions in a roundabout occur at low speeds. There are also fewer conflict points between pedestrians and vehicles in intersections with roundabouts. In this case, the speed limit on 17th Avenue SE will be 25 miles per hour (mph), and typically a roundabout functions at about 15 mph. For more information, please see <https://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm>.

As for the roundabout design near the Canyon Park Park and Ride, the images provided in the EA and the online public meeting are conceptual renderings. Final design details for the roundabout, such as entrance/exit angles, will be determined by the design-build contractor. The contractor will be required to follow the design criteria in the WSDOT *Design Manual* (Chapter 1320), which has specific sections devoted to roundabout design treatments for pedestrians and bicycles and elements such as pedestrian crossing locations, pavement markings, signing, lighting, curbs, and ramps. WSDOT will continue to work with the City of Bothell and transit agencies to finalize the design for this roundabout.

Comment OF14.5

2. Bike parking – again, secure bike parking here is essential to encouraging biking as a "last mile" solution.

I am very excited by this project and hope that you make it a success for all users.

Response OF14.5

Please see Response OF14.2 related to bike parking. Thank you.

Comment OF15 – Frances Mack, Private Individual, August 6, 2020

<p>My address is 22429 19th Ave SE in Bothell, which is located in a low-lying area near 405 & off of 228th. Our community is often impacted by flooding, partially caused by poor planning, especially of the park & ride. Any construction project in this area should be required to address this issue, so that run-off is not increased, and our neighborhood is not subjected to increased flooding. It is also my expectation that North Creek is protected from any impacts of this construction. Thank you for your consideration.</p>	<p>OF15.1</p>
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Comment OF15.1

My address is 22429 19th Ave SE in Bothell, which is located in a low-lying area near 405 & off of 228th. Our community is often impacted by flooding, partially caused by poor planning, especially of the park & ride. Any construction project in this area should be required to address this issue, so that run-off is not increased, and our neighborhood is not subjected to increased flooding. It is also my expectation that North Creek is protected from any impacts of this construction. Thank you for your consideration.

Response OF15.1

In general, WSDOT will construct stormwater facilities to provide runoff treatment and detention for increased stormwater runoff resulting from the Project and will also treat some existing paved areas that do not currently receive treatment. The Project improvements will reduce peak flow rates of stormwater discharged to streams, including North Fork of Perry Creek, Queensborough Creek, and North Creek, as compared to existing conditions because the detention design mimics forested land cover.

I-405 and the Canyon Park Park and Ride represent about 5 percent of the basin for the North Fork of Perry Creek. As a result, WSDOT's work as part of the Project to reduce

flows will not noticeably improve the flooding that neighborhood is experiencing because only a small portion of the flows comes from I-405 and the Canyon Park Park and Ride. WSDOT is aware of the flooding at this location and has been coordinating with the City of Bothell.

WSDOT has designed the Project to avoid construction impacts to North Creek.

Comment OF16 – Johan Jorna, City of Bothell, August 6, 2020

<p>Snohomish County Parcel # 27053200401500 is currently a publicly owned park, “North Creek Forest”. Per the Department of Transportation Act (DOT Act) of 1966– Section 4(f) – stipulates that all DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic sites unless there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from use.</p>	<p>OF16.1</p>
<p>Appendix K, Geology, Soils and Groundwater Technical memorandum, Section 4.4, Landslide Hazards: The project identifies potential landslide hazards south of the SR522/SR405 interchange. Slopes over 40 percent inclination and greater than 10 feet in height, and classified as Landslide and Erosion Hazard Areas in accordance with Bothell Municipal Code 14.04, are also present within and adjacent to the Stream 25.0L Culvert replacement area within City of Bothell Parks Department Property (Snohomish County Parcel Identification Number 27053200401500). Alterations to Landslide and Erosion Hazard Areas, including ground disturbance activities associated with Stream 25.0L Culvert replacement. must be completed in accordance with Bothell Municipal Code 14.04.880 Performance Standards- Specific Hazards, general 14.04 requirements, and allowances and conditions as part of an approved City of Bothell Critical Areas Alteration permit for the proposed work.</p>	<p>OF16.2</p>
<p>Appendix L, M, and others: The project proposes daylighting of Stream 25.0L east of SR405 and connection to North Creek within private property east of SR405 at King County Parcel Identification Number 3927000330 and Snohomish County Parcel Identification Numbers 00813300099900 and 0081330001800. All Stream channel restoration work within private property and within construction easements on private property outside of WSDOT limited access must be completed in accordance with a Critical Areas Alteration permit and BMC 14.04 including documentation of proposed flow transfer from the existing Parr Creek outfall to the proposed North Creek outfall.</p>	<p>OF16.3</p>

Comment OF16.1

Snohomish County Parcel # 27053200401500 is currently a publicly owned park, “North Creek Forest”. Per the Department of Transportation Act (DOT Act) of 1966– Section 4(f) – stipulates that all DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic sites unless there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from use.

Response OF16.1

Section 4.6 and Appendix H, *Recreational, Section 4(f), and Section 6(f) Resources Technical Memorandum* of the Environmental Assessment disclose that North Creek Forest is a Section 4(f) property and describe WSDOT's proposed activities within an approximately 0.75 acre portion of the property adjacent to I-405. The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) proposes reconstructing and realigning a portion of Stream 25.0L within the North Creek Forest to correct a fish barrier. This work will benefit fish and aquatic species by restoring full anadromous fish access to upstream habitat and replacing the existing stream channel, which is currently in a pipe, with an open stream channel.

Proposed construction activities include clearing existing mature trees and vegetation, regrading soils, and constructing ground improvements. The Project will restore the area with native trees and vegetation after construction is complete. While the fish barrier correction and stream enhancement will improve the natural setting and features within the park, it will take time for replanted vegetation to mature. Because of this, a Section 4(f) *de minimis* determination has been made.

Aside from this comment from City of Bothell, WSDOT received no additional comments about the North Creek Forest or the *de minimis* determination during the EA comment period. Bothell provided concurrence with the *de minimis* determination for the North Creek Forest on May 18, 2021. This concurrence letter is contained in Appendix 5, *Section 4(f) Updates*.

Comment OF16.2

Appendix K, Geology, Soils and Groundwater Technical memorandum, Section 4.4, Landslide Hazards: The project identifies potential landslide hazards south of the SR522/SR405 interchange. Slopes over 40 percent inclination and greater than 10 feet in height, and classified as Landslide and Erosion Hazard Areas in accordance with Bothell Municipal Code 14.04, are also present within and adjacent to the Stream 25.0L Culvert replacement area within City of Bothell Parks Department Property (Snohomish County Parcel Identification Number 27053200401500). Alterations to Landslide and Erosion Hazard Areas, including ground disturbance activities associated with Stream 25.0L Culvert replacement, must be completed in accordance with Bothell Municipal Code 14.04.880 Performance Standards – Specific Hazards, general 14.04 requirements, and allowances and conditions as part of an approved City of Bothell Critical Areas Alteration permit for the proposed work.

Response OF16.2

Comment noted. WSDOT provided the City of Bothell with a Critical Areas Memorandum on July 1, 2020, documenting WSDOT's approach for demonstrating substantive compliance with the City's critical areas regulations (Bothell Municipal Code [BMC] 14.04).

While WSDOT will not obtain City permits for impacts on critical areas managed under the Growth Management Act (Revised Code of Washington [RCW] 36.70A), WSDOT has

documented substantive compliance with the requirements of the City's critical areas regulations. EA Appendix K, *Geology, Soils, and Groundwater Technical Memorandum*, describes WSDOT's practices for managing design and construction issues associated with the geologic, soil, and ground water conditions in the Project area and is intended to meet the substantive reporting requirements for work within Landslide and Erosion Hazard Areas (BMC 13.13.050) within the City's shoreline jurisdiction and per the City's critical areas provisions (BMC 14.04). WSDOT also provided a *Stream 25.0L Improvements: Stability Analysis Technical Memorandum* to the City in spring 2021 that documents substantive compliance with the reporting requirements and performance standards for work within erosion and landslide hazard areas per Bothell Municipal Code (BMC) 14.04.

In addition to coordinating closely with the City through final design and construction, the Project's final design will conform to the following standards:

- American Association of State Highway and Transportation Officials *Load and Resistance Factor Bridge Design Specifications*
- WSDOT *Geotechnical Design Manual*
- WSDOT Standard Specifications for Road, Bridge and Municipal Construction
- WSDOT *Bridge Design Manual*
- WSDOT *Environmental Manual*

Comment OF16.3

Appendix L, M, and others: The project proposes daylighting of Stream 25.0L east of SR405 and connection to North Creek within private property east of SR405 at King County Parcel Identification Number 3927000330 and Snohomish County Parcel Identification Numbers 00813300099900 and 00813300001800. All Stream channel restoration work within private property and within construction easements on private property outside of WSDOT limited access must be completed in accordance with a Critical Areas Alteration permit and BMC 14.04 including documentation of proposed flow transfer from the existing Parr Creek outfall to the proposed North Creek outfall.

Response OF16.3

Please see Response OF16.2 related to review under the City's critical areas regulations.

Regarding the documentation of the Par Creek and North Creek flow transfer, WSDOT provided the City of Bothell with a Flow Redirection Memorandum as part of coordination for the Shoreline Conditional Use Permit process.

Comments Received via Email (E)

Comment E1 – Krishna Susurla, Private Individual, July 7, 2020

E1

From: [krishna.susurla](#)
To: [I405comments](#)
Subject: [EXTERNAL] I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project: Environmental Assessment and Online Public Meeting – Submit a comment or question
Date: Tuesday, July 7, 2020 8:08:31 PM

WARNING: This email originated from outside of WSDOT. Please use caution with links and attachments.

Hi WSDOT team,

I-405, SR 522 Vicinity to SR 527 Express
Toll Lanes Improvement Project:
Environmental Assessment and Online
Public Meeting – Submit a comment or
question

My House address is 1816 225th Street South East right behind exit 26 on 405. I am concerned about the increase in noise levels in general . Would you be consider extending / building a wall to contain the noise. I can see free way traffic from my deck in the backyard. Can I please request measurement of decibel count/loudness levels at my property and do the required . I am sure you have thought this through but just want to request you on the impact my property may have. Please let me know if I can be of any assistance.

Thank You. Krishna

| E1.1

Comment E1.1

My House address is 1816 225th Street South East right behind exit 26 on 405. I am concerned about the increase in noise levels in general. Would you be consider extending/building a wall to contain the noise. I can see free way traffic from my deck in the backyard. Can I please request measurement of decibel count/loudness levels at my property and do the required. I am sure you have thought this through but just want to request you on the impact my property may have. Please let me know if I can be of any assistance.

Response E1.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) will build a new noise wall that extends the existing noise wall that currently ends north of 228th Street SE. Based on the address you provided, this new wall will provide a barrier between your home and I-405. This wall, referred to as Wall East 6 in the Environmental Assessment (EA), will extend along the northbound shoulder of I-405, with a portion of the wall on either side of 228th Street SE. Wall East 6 is proposed to be about 1,800 feet long and 15 to 18 feet tall.

For more information on this wall, please refer to EA Appendix B, *Noise Discipline Report*, available for review at <https://www.wsdot.wa.gov/projects/i405/sr-522-sr-527/environmental-review>. Information about Wall East 6 begins on page 5-88, and a detailed graphic showing the location of the wall is provided on pages 5-11 and 5-12 of the report.

Comment E2 – Holly Brown, Private Individual, July 10, 2020

E2

From: [Holly Brown](#)
To: [1405comments](#)
Subject: [EXTERNAL] I-405 from 522 - 527 expansion
Date: Friday, July 10, 2020 11:32:12 AM

WARNING: This email originated from outside of WSDOT. Please use caution with links and attachments.

I would like to find out if the property I manage will be affected by this project. I received the US Army Corp of Engineers notice and downloaded the project info/maps from NWS-2020-235-DOT, but it was difficult to tell if the project will affect my property. The maps don't show tax parcel lines. I would assume that even if it doesn't physically enter it, there will probably be an impact: run off, etc. The property address is 3301 – 3307 Monte Villa Parkway, Bothell, WA 98021.

The tax parcels are:

- 00-8133-0000-1200
- 00-8133-0000-1301
- 00-8133-0000-1302
- 00-8133-0000-1303
- 00-8133-0000-1500

Thank you for your help.
Holly Brown, RPA
Property Manager
Monte Villa Farms LLC

E2.1

Comment E2.1

I would like to find out if the property I manage will be affected by this project. I received the US Army Corp of Engineers notice and downloaded the project info/maps from NWS-2020-235-DOT, but it was difficult to tell if the project will affect my property. The maps don't show tax parcel lines. I would assume that even if it doesn't physically enter it, there will probably be an impact: run off, etc.

The property address is 3301 – 3307 Monte Villa Parkway, Bothell, WA 98021.

The tax parcels are:

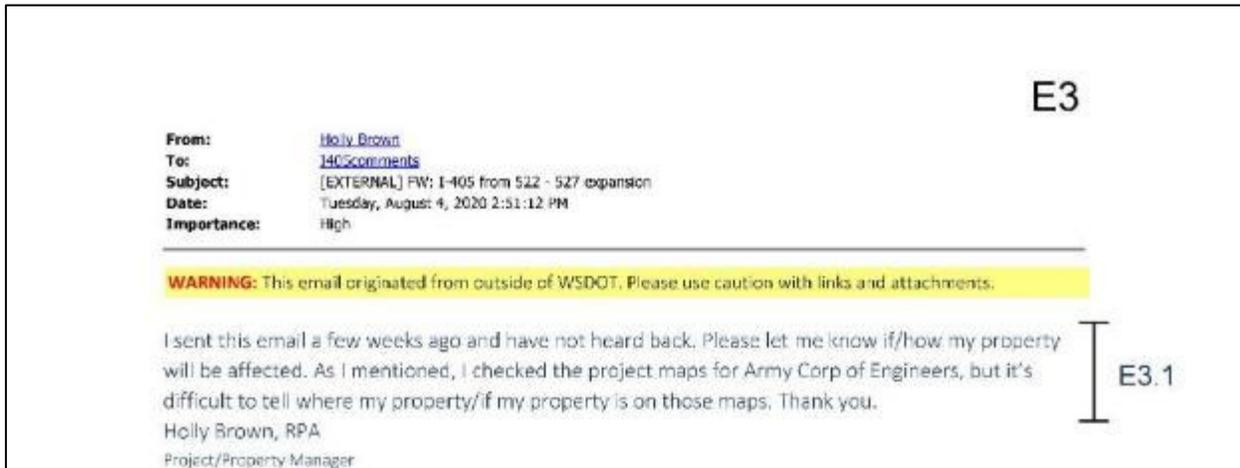
- 00-8133-0000-1200
- 00-8133-0000-1301
- 00-8133-0000-1302
- 00-8133-0000-1303
- 00-8133-0000-1500

Thank you for your help.

Response E2.1

The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project will not require acquisition of any of the properties listed at 3301-3307 Monte Villa Parkway.

Comment E3 – Holly Brown, Private Individual, August 4, 2020



Comment E3.1

I sent this email a few weeks ago and have not heard back. Please let me know if/how my property will be affected. As I mentioned, I checked the project maps for Army Corp of Engineers, but it's difficult to tell where my property/if my property is on those maps. Thank you.

Response E3.1

Please see Response E2.1.

Comment E4 – Sarah Gustafson, Private Individual, August 4, 2020

E4

From: [Sarah Gustafson](#)
To: [1405comments](#)
Subject: [EXTERNAL] Env't Assessment Comments
Date: Tuesday, August 4, 2020 10:35:50 PM

WARNING: This email originated from outside of WSDOT. Please use caution with links and attachments.

Dear Mr. Woeck & WSDOT --
I am a Bothell resident who uses buses and bikes to get around town when I can. In addition, I'm concerned with mitigating climate change and other environmental impacts. The creation of an Express Toll Lane along 405 is something I'm looking forward to!
I have two topics to comment on: 1) pedestrian / bike improvements and 2) use of a "net benefit" standard to mitigate environmental impacts.

Pedestrian/ Bike Improvements to be Made

1. The 522/405 station has excellent trail connections to both UW Bothell and Downtown Bothell. If I were biking, I could use these trail connections to get to Downtown Bothell. However, I want to make sure that it's safe for me to get from the Bus station to the trails. Safe, secure and reliable trail connections would solve the "last mile" problem for me and others. Thus, please enhance trail connections for both bikers and the walkers who are willing to make the hike. **E4.1**
2. At the 522/405 station, the entrance to bus loop/dropoff should have either grade separation or pedestrian/bike priority. Bikers/pedestrians should not need to stop and press a signal to cross the entrance – they should be able to cross immediately except when a vehicle is entering/exiting the loop. I would also advocate to keep the crossing raised and otherwise marked as being prioritized for non-motorized traffic. **E4.2**
3. At the 405/527 station, ensure pedestrian safety on the roundabout. One way to do this: make the turn into the park and ride at a sharp angle to force cars to slow down. **E4.3**
4. At both intersections, we need secure bicycle parking. Bike racks are limited and often cumbersome to use. Instead, we need secure parking for a substantial number of bikes. A simple bike rack is not sufficient – video monitoring needs to be the minimum, with ideally some kind of cage with a limited set of users given access. **E4.4**

Environmental Impact & "Net Benefit" Standard

1. Mitigation for impacts to our local streams (Sammamish, North Creek etc) should result in restoration for years of impacts and result in "net gain" in ecological functions. This is a capital improvement funded by our state and we need to compensate for climate change, impacts to endangered salmon and cumulative impacts from this project and from the past. **E4.5**
2. While the CAO/SMA regulations require "no net loss," major capital fund projects such as I-405/SR527/SR522 with impacts to many wetlands, and major streams should do more and require "net gain." **E4.6**

Thank you,

Sarah Gustafson

Comment E4.1

I am a Bothell resident who uses buses and bikes to get around town when I can. In addition, I'm concerned with mitigating climate change and other environmental impacts. The creation of an Express Toll Lane along 405 is something I'm looking forward to!

I have two topics to comment on: 1) pedestrian / bike improvements and 2) use of a "net benefit" standard to mitigate environmental impacts.

Pedestrian/ Bike Improvements to be Made

1. The 522/405 station has excellent trail connections to both UW Bothell and Downtown Bothell. If I were biking, I could use these trail connections to get to Downtown Bothell. However, I want to make sure that it's safe for me to get from the Bus station to the trails. Safe, secure and reliable trail connections would solve the "last mile" problem for me and others. Thus, please enhance trail connections for both bikers and the walkers who are willing to make the hike.

Response E4.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA).

WSDOT is committed to giving people safe options for using active modes such as walking and bicycling. As part of the Project, WSDOT is building a paved non-motorized connection between the bus station in the center of I-405, the SR 522 transit loop just west of I-405, and the North Creek Trail where it passes under SR 522. WSDOT is working with the University of Washington-Bothell/Cascadia College, Sound Transit, City of Bothell, and other partners to ensure pedestrians and bicyclists have safe, secure, and reliable connections, considering factors like lighting, landscaping, the width of connections, and Crime Prevention Through Environmental Design (CPTED) standards.

Comment E4.2

2. At the 522/405 station, the entrance to bus loop/dropoff should have either grade separation or pedestrian/bike priority. Bikers/pedestrians should not need to stop and press a signal to cross the entrance – they should be able to cross immediately except when a vehicle is entering/exiting the loop. I would also advocate to keep the crossing raised and otherwise marked as being prioritized for non-motorized traffic.

Response E4.2

WSDOT is designing all intersections to provide a safe walking and biking experience. The entrance/exit to the transit loop off of SR 522 will be signalized and will include a lighted, marked crosswalk. In addition, before vehicles exiting the transit loop reach this intersection, they will need to travel through a roundabout, which will help slow down their movement prior to reaching the light. Conversely, vehicles traveling from SR 522 will need to slow down as they turn into the transit loop.

WSDOT will continue to work with the City of Bothell and other agencies to finalize the design at this intersection and to identify additional refinements to enhance safety and operations for all users.

Comment E4.3

3. At the 405/527 station, ensure pedestrian safety on the roundabout. One way to do this: make the turn into the park and ride at a sharp angle to force cars to slow down.

Response E4.3

In general, roundabouts provide better safety performance for all modes than traditional stop sign or signalized intersections. Drivers must slow down and yield to traffic before entering a roundabout, which means that collisions in a roundabout occur at low speeds. There are also fewer conflict points between pedestrians and vehicles in intersections with roundabouts. In this case, the speed limit on 17th Avenue SE will be 25 miles per hour (mph); typically, a roundabout functions at about 15 mph. Please see <https://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm> for more information.

As for the roundabout design near the Canyon Park Park and Ride, the images provided in the EA and the online public meeting are conceptual renderings. Final design details for the roundabout, such as entrance/exit angles, will be determined by the design-build contractor. The contractor will be required to follow the design criteria in the WSDOT *Design Manual* (Chapter 1320), which has specific sections devoted to roundabout design treatments for pedestrians and bicycles and elements such as pedestrian crossing locations, pavement markings, signing, lighting, curbs, and ramps. WSDOT will continue to work with the City of Bothell and transit agencies to finalize the design for this roundabout.

Comment E4.4

4. At both intersections, we need secure bicycle parking. Bike racks are limited and often cumbersome to use. Instead, we need secure parking for a substantial number of bikes. A simple bike rack is not sufficient – video monitoring needs to be the minimum, with ideally some kind of cage with a limited set of users given access.

Response E4.4

WSDOT is partnering with Sound Transit on the design of the transit loop and the bus rapid transit (BRT) stations at SR 522 and SR 527. Sound Transit plans to include bicycle parking at all I-405 BRT stations, including the ones at SR 522 and SR 527, and Community Transit will also offer bike parking at the Canyon Park Park and Ride and transit stops associated with the routes it operates. Quantities and types of bike parking are still being determined. WSDOT is providing space for both racks and lockers in the design for the Project.

Comment E4.5

Environmental Impact & "Net Benefit" Standard

1. Mitigation for impacts to our local streams (Sammamish, North Creek etc) should result in restoration for years of impacts and result in "net gain" in ecological functions. This is a capital improvement funded by our state and we need to compensate for climate change, impacts to endangered salmon and cumulative impacts from this project and from the past.

Response E4.5

The Project will benefit aquatic habitats and species by replacing fish barriers with restored stream connections at Par Creek, Stream 25.0L, North Fork Perry Creek, and two at Queensborough Creek). These fish barrier corrections will restore full anadromous fish access to approximately 24,330 linear feet of upstream habitat.

The Project will also remove existing piers from the Sammamish River and will construct new bridges that will span over the Sammamish River, without piers in the river, to avoid physical impediments in a fish-bearing streams. WSDOT will also plant native vegetation along the Sammamish River and other four streams to provide restoration.

Overall, WSDOT anticipates that the Project will provide a net gain in ecological functions by correcting fish barriers, by removing existing piers and not installing new piers at the Sammamish River, and by replanting native vegetation. These proposed actions are intended to benefit salmon and other aquatic species, and address impacts from the Project and past projects.

Comment E4.6

2. While the CAO/SMA regulations require "no net loss," major capital fund projects such as I-405/SR527/SR522 with impacts to many wetlands, and major streams should do more and require "net gain."

Response E4.6

WSDOT is required to ensure no net loss of wetlands acreage and functions as identified in the Governor's Executive Order 89-10, which is consistent with the City of Bothell Municipal Code. WSDOT will provide wetland mitigation at three locations: the Keller Farm Mitigation Bank, WSDOT Happy Valley Mitigation Site, and on-site mitigation at Wetland 23.81R located along an unnamed tributary to Par Creek. Use of the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will meet ecological goals and objectives that are consistent with the *WRIA 8 Chinook Salmon Conservation Plan*.

Additionally, use of the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will eliminate the temporal loss of functions and reduce the risk of unsuccessful mitigation. These already established mitigation sites (mitigation banks and advanced mitigation sites) also promote more diverse habitat and wetland functions because of their size compared to a smaller, permittee-responsible, mitigation site. With the use of the established mitigation sites and implementing on-site mitigation, WSDOT anticipates that the Project will provide a net gain in ecological functions in Water Resources Inventory Area (WRIA) 8.

Comment E5 – Ann Aagaard, Private Individual, August 6, 2020

E5

From: [Ann Aagaard](#)
To: [1405comments](#)
Subject: [EXTERNAL] I405/SR522/SR527
Date: Thursday, August 6, 2020 4:47:56 PM

WARNING: This email originated from outside of WSDOT. Please use caution with links and attachments.

Dear Mr. Woeck & WSDOT --

Over 40 years we have resided, have been involved and interested in land use and natural resource issues in Bothell, and in particular in the North Creek Valley. We have experienced the increased impacts to I-405/SR522/SR527 The I-405 corridor is utilized for out-of-area trips, and we look forward to the Express Toll Lane along 405 as way of mitigating unacceptable traffic impacts.

We also support the trail connection to both UW Bothell and Downtown Bothell. I supported these trail/ bike connections during the EIS review of the Bothell U.W./ Community College Campus. Please make sure that safe, secure, and reliable trail connections are available to both bikers and walkers.

This latest redevelopment proposal for I-405/SR522/SR527 comes at a time of great concern regarding climate change -- its long term impacts, and its effects on our human well-being. In addition there is the current inability to achieve recovery goals for Puget Sound, and the failure to facilitate the return of Chinook salmon to our streams and rivers, and the resulting lack of food for the Orca. While economic health and quality of life are dependent on adequate transportation system, proper handling of storm waters, and minimizing negative impacts the systems have resulted in continually degraded ecosystem.

While the no net loss of environmental function could be workable if the ecosystem was functional and resilient enough to absorb the additional stress of a given infrastructure project such as this proposed for I-405. However, increased growth in the urban area, past practices and cumulative impacts of projects such as this require looking at public investment and environmental outcomes in a new way. This project requires more than on site restoration, and the the use of mitigation banks in WRIA 8. It requires a " net gain" for such a large scale transportation project into a significantly increased environmental baseline.

Appendix M refers to the Bothell CAO 14.05 allowing mitigation banks. However, the EA fails to consider the BMC 14.04.540 D. which requires demonstration of a higher level of ecological functioning [from an alternative approach] and a requirement that compensatory mitigation should be [a sequence of priorities listed] in same sub-basin[unless this higher level of ecological functioning can be supported]. This higher level of ecological functioning is not discussed or supported in Appendix M.

Page 12, Appendix M refers to Wetlands 24.35L, 25.03R, 26.,13R, and 26.35R , and 26.70R classified as Category II and which are mapped as a priority habitat by WDFW. However, there is no discussion or documentation of a higher level of ecological functioning being provided as priority habitat in wetland mitigation banks on the Keller Farm and Happy Valley which are many miles distant from the impacted wetlands and the species for which

E5.1
E5.2
E5.3
E5.4
E5.5

they provide priority habitat are not detailed or discussed. Please provide the required referenced documentation.

Net gain for infrastructure projects funded by public capital funding must be the standard for such a large investment in public monies.

Thank you for considering and responding to these comments.

Ann Aagaard

E5.5
cont'd

Comment E5.1

Over 40 years we have resided, have been involved and interested in land use and natural resource issues in Bothell, and in particular in the North Creek Valley. We have experienced the increased impacts to I-405/SR522/SR527. The I-405 corridor is utilized for out-of-area trips, and we look forward to the Express Toll Lane along 405 as way of mitigating unacceptable traffic impacts.

We also support the trail connection to both UW Bothell and Downtown Bothell. I supported these trail/bike connections during the EIS review of the Bothell U.W./Community College Campus. Please make sure that safe, secure, and reliable trail connections are available to both bikers and walkers.

Response E5.1

Thank you for comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). WSDOT has found that express toll lanes (ETLs) move more vehicles and people compared to the untolled general purpose (GP) lanes.

WSDOT is committed to giving people safe options for using active modes such as walking and bicycling. As part of the Project, WSDOT is building a paved non-motorized connection between the bus station in the center of I-405, the SR 522 transit loop just west of I-405, and the North Creek Trail where it passes under SR 522. WSDOT is working with the University of Washington-Bothell/Cascadia College, Sound Transit, City of Bothell, and other partners to ensure pedestrians and bicyclists have safe, secure, and reliable connections, considering factors like lighting, landscaping, the width of connections, and Crime Prevention Through Environmental Design (CPTED) standards.

Comment E5.2

This latest redevelopment proposal for I-405/SR522/SR527 comes at a time of great concern regarding climate change -- its long term impacts, and its effects on our human well-being. In addition there is the current inability to achieve recovery goals for Puget Sound, and the

failure to facilitate the return of Chinook salmon to our streams and rivers, and the resulting lack of food for the Orca. While economic health and quality of life are dependent on adequate transportation system, proper handling of storm waters, and minimizing negative impacts the systems have resulted in continually degraded ecosystem.

Response E5.2

WSDOT has avoided and minimized wetland impacts to the greatest extent feasible. During the preliminary engineering phase, WSDOT implemented design changes that reduced potential wetland impacts by more than 1 acre. The design-build contractor may identify further minimization measures through final design and construction of the Project.

WSDOT is also correcting five existing fish barriers as part of the Project, which will require some excavation work during construction for upgrading existing fish barriers to restored stream connections and realignment of the stream channels. Correcting these fish barriers will provide additional access to upstream habitat for Puget Sound Chinook salmon, which are the primary prey for Southern Resident killer whales.

For stormwater, the Project will benefit water quality in the study area by detaining and treating more stormwater runoff. The amount of pavement, also known as pollution-generating impervious surfaces (PGIS), that receives stormwater treatment will change from just over 44 acres to about 91 acres. WSDOT will provide enhanced treatment for an area equivalent to 100 percent of new PGIS created by the Project (about 24 acres), plus about 23 acres of existing untreated PGIS. Proposed stormwater facilities with the Project will reduce loading of total suspended solids, total copper, total zinc, and dissolved zinc compared to existing conditions. In general, this treatment will benefit aquatic habitat within North Creek and the Sammamish River. Please see Section 4.4 of the EA and Section 5 of EA Appendix J, *Water Resources Discipline Report*, for more information about expected stormwater effects from the Project.

Comment E5.3

While the no net loss of environmental function could be workable if the ecosystem was functional and resilient enough to absorb the additional stress of a given infrastructure project such as this proposed for I-405. However, increased growth in the urban area, past practices and cumulative impacts of projects such as this require looking at public investment and environmental outcomes in a new way. This project requires more than on site restoration, and the use of mitigation banks in WRIA 8. It requires a "net gain" for such a large scale transportation project into a significantly increased environmental baseline.

Response E5.3

WSDOT is required to ensure no net loss of wetlands acreage and functions as identified in the Governor's Executive Order 89-10, which is consistent with the City of Bothell Municipal Code. WSDOT will provide wetland mitigation at three locations: the Keller Farm Mitigation Bank, WSDOT Happy Valley Mitigation Site, and on-site mitigation at Wetland 23.81R located along an unnamed tributary to Par Creek. Use of the Keller Farm

Mitigation Bank and the Happy Valley Mitigation Site will meet ecological goals and objectives that are consistent with the WRIA 8 Chinook Salmon Conservation Plan. Additionally, use of the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will eliminate the temporal loss of functions and reduce the risk of unsuccessful mitigation. These already established mitigation sites (mitigation banks and advanced mitigation sites) also promote more diverse habitat and wetland functions because of their size compared to a smaller, permittee-responsible, mitigation site. With the use of the established mitigation sites and implementing on-site mitigation, WSDOT anticipates that the Project will provide a net gain in ecological functions in Water Resources Inventory Area (WRIA) 8.

Comment E5.4

Appendix M refers to the Bothell CAO 14.05 allowing mitigation banks. However, the EA fails to consider the BMC 14.04.540 D. which requires demonstration of a higher level of ecological functioning [from an alternative approach] and a requirement that compensatory mitigation should be [a sequence of priorities listed] in same sub-basin[unless this higher level of ecological functioning can be supported]. This higher level of ecological functioning is not discussed or supported in Appendix M.

Response E5.4

Use of the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will meet ecological goals and objectives that are consistent with the *WRIA 8 Chinook Salmon Conservation Plan*. Wetland functions, including water quality, flood conveyance, and habitat functions, will be improved by proposed re-establishment, rehabilitation, and enhancement activities. The Washington State Department of Ecology, the U.S. Army Corps of Engineers, and other relevant agencies continue to monitor the success of the Keller Farm Mitigation Bank through performance standards and provide oversight on releasing available credits. WSDOT is proposing to use the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site because these sites will have a greater likelihood of success and likely provide equal or improved wetland functions than the impacted wetlands due to their size and a bigger scale of proposed activities. Additionally, use of the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will eliminate the temporal loss of functions and reduce the risk of unsuccessful mitigation.

Comment E5.5

Page 12, Appendix M refers to Wetlands 24.35L, 25.03R, 26.13R, and 26.35R, and 26.70R classified as Category II and which are mapped as a priority habitat by WDFW. However, there is no discussion or documentation of a higher level of ecological functioning being provided as priority habitat in wetland mitigation banks on the Keller Farm and Happy Valley which are many miles distant from the impacted wetlands and the species for which they provide priority habitat are not detailed or discussed. Please provide the required referenced documentation.

Net gain for infrastructure projects funded by public capital funding must be the standard for such a large investment in public monies.

Thank you for considering and responding to these comments.

Response E5.5

Please see Response E5.4 on how both the Keller Farm Mitigation Bank and the Happy Valley Mitigation Site will provide a higher level of ecological functioning. The Keller Farm Mitigation Bank is not currently mapped as priority habitat because it is a new mitigation bank. However, there is a priority habitat polygon immediately adjacent to the Keller Farm Mitigation Bank along Evans Creek. The Keller Farm Mitigation Bank plans to create a similar or better habitat and connect to the adjacent priority habitat.

Parts of the Happy Valley Mitigation Site are already part of priority habitat. Similar to the Keller Farm Mitigation Bank, there are plans to enlarge the existing priority habitat area at the Happy Valley Mitigation Site by making improvements to the remaining area within the mitigation site. Additional information on the functional benefits of the sites and benefits to specific fish and wildlife species are available in Section 6.3 of EA Appendix M, *Wetland and Stream Mitigation Report*, as well as the reference documents *Keller Farm Wetland Mitigation Bank Instrument* (Woodward 2018) and *SR 202, SR 520 to Sahalee Way Improvement Project Wetland and Stream Mitigation Plan* (Entranco Inc. 2005).

As stated in Response E5.3, with the use of the established mitigation sites and implementing on-site mitigation, WSDOT anticipates that the Project will provide a net gain in ecological functions in Water Resources Inventory Area (WRIA) 8.

Comments Received via Phone (P)

Comment P1 – Maureen Jackson, Private Individual, July 9, 2020

Comment P1.1

Hello this is Maureen Jackson. I live in the Village Square, and I got a notice that my property will be affected by this. I'd like to know what's going on. I really haven't heard anything before, so give me a call at XXX-XXX-XXXX. That's my cell.

Response P1.1

WSDOT spoke with Ms. Jackson by phone on July 15, 2020, and held a follow-up meeting with her on July 23, 2020, regarding questions about her property and potential effects from the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.

Comment P2 – Rebecca, Private Individual, July 16, 2020

Comment P2.1

This is Rebecca. Can you please tell me why you're breaking up 522, the bus going from downtown to Woodinville. I got a card saying you're going to split it up. Can you please call me back I'd appreciate it. My phone number is XXX-XXX-XXXX. I do live in Bothell area, but I have a XXX number.

Response P2.1

WSDOT, as part of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project, is not proposing changes to the 522 bus route between Woodinville and downtown Seattle. Sound Transit, as part of the SR 522 Bus Rapid Transit project, is proposing potential route changes.

To respond to this comment, WSDOT called Rebecca and left a message with information about Sound Transit's SR 522 Bus Rapid Transit project, which was also conducting a public involvement process in summer 2020 close to the same as the Environmental Assessment was published for this Project. The phone message explained that Rebecca's comments about SR 522 transit service would be best directed to Sound Transit.

Comment P3 – No name provided, Private Individual, July 23, 2020

Comment P3.1

I'm calling to correct a name and address for the Northshore School District. You have addressed it to a person who is not at the district, nor have they ever been. The letter should be submitted to Dri Ralph, at Northshore School District. Her address is 22105 23rd Drive SE, Bothell 98021. I have no idea where you got the name you addressed it to.

Response P3.1

WSDOT notified Real Estate Services of this issue, as the caller was referencing a letter sent regarding property acquisition needs. Real Estate Services resent the letter to Dri Ralph, as

requested. Please also note that Director Ralph submitted a comment letter (see letter L4 and the accompanying responses) on behalf of the Northshore School District.

Comment P4 – Charlotte Aagaard, Private Individual, July 30, 2020

Comment P4.1

Good afternoon. This is Charlotte Aagaard. I'm calling regarding the comment for the I-405 522-527 project. I was reviewing this online, and I'm particularly interested in the wetland and stream impacts, but it's very complicated, and I was considering buying a copy of the EA if it has all the maps and the mitigation proposed—all the information that is on the wetland and the stream impacts with the maps and charts and background information.

I also need to know how quickly you can get it to me because it's very little time to review it because the comment period ends on August 6. Unfortunately, I did not see the Shoreline CUP NOA by the City of Bothell nor any other information from them until just a couple of days ago, and there is very little time, and I don't know how much time it will take to get to me in the mail. So I need someone to call me today so I can decide if to pay for the document if it can be here, for example, on Saturday, so I have time to carefully review it and provide my comment. Please give me a call at XXX-XXX-XXXX.

Response P4.1

WSDOT called back Ms. Aagaard and discussed her request for additional maps and charts. Based on this discussion, WSDOT followed up by emailing Ms. Aagaard a PDF of Appendix M, *Wetland and Stream Mitigation Report*, and directed her to the maps in Attachment A of the document to help answer her questions.

Ms. Aagaard also submitted a comment via email using the name Ann Aagaard – please See Comment E5 and accompanying responses.

Comment P5 – Rebecca, Private Individual, August 3, 2020

Comment P5.1

I think it's wrong to break up the 522 and to stop at 145th. You should keep having the 522 coming from Seattle all the way to Woodinville. What about the 311 is that still going to stay, and the 312 that goes to Cascade College. Why can't you have the 522 bus stop go from Seattle to Cascade College that would be a lot better? Please give me a call and ask for Becky at XXX-XXX-XXXX.

Response P5.1

See Response P2.1.

Comment P6 – Holly Brown, Private Individual, August 3, 2020

Hello, my name is Holly Brown. I'm the property manager for Monte Villa along 405 near the SR 522 to SR 527 improvement job. We border on 405. I've downloaded the maps from the Army of Corps of Engineers. I'm trying to get a sense, but it's difficult to see if we are

directly or indirectly affected. I have sent an email but I have not heard back. Here are the parcel numbers:

- 00-8133-0000-1200
- 00-8133-0000-1301
- 00-8133-0000-1302
- 00-8133-0000-1303

The address is 3301 to 3307 Monte Villa Parkway, Bothell, WA 98021. If someone can give me a call at XXX-XXX-XXXX. Thank you.

Response P6.1

WSDOT called back Ms. Brown, and let her know that the parcel numbers of interest would not be affected by the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.

Comment P7 – Holly Brown, Private Individual, August 4, 2020

Comment P7.1

Hello, my name is Holly Brown, and I am calling from Monte Villa Farms. I left a message yesterday and then I emailed twice and I haven't heard a response, but I am calling in regard to the impact this project may have on my property and I just wanted to make contact with somebody. So if someone could give me a call back that would be great. I'm at XXX-XXX-XXXX or my cell phone is XXX-XXX-XXXX. Thank you. Goodbye.

Response P7.1

See Response P6.1.

Comments Received via Letter (L)

Comment L1 –Juno Therapeutics, August 6, 2020



L1

Mr. Robert Woeck
I-405/SR 167 Megaprogram Environmental Engineering Manager
WSDOT I-405/SR 167 Megaprogram
600 108th Ave. NE, Suite 405
Bellevue, WA 98004

Via electronic mail: I405Comments@wsdot.wa.gov

August 6, 2020

I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project; WSDOT Parcel Number 1-24753; Comments

Dear Mr. Woeck,

Juno Therapeutics, Inc. (Juno), a Bristol Myers Squibb Company, has reviewed the Environmental Assessment (EA) for the Washington State Department of Transportation (WSDOT) proposed I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as well as the 17th Ave. SE Vic. Right of Way and Limited Access Plan dated December 24, 2019 (collectively, the Project). We appreciate the opportunity to comment on the Project. Our review of the available information indicates an impact to Juno's property located at 1522 217th Place SE, Bothell, Washington and owned by Juno's subsidiary, Jump Holdings LLC (Property). The Property is currently used as a medical research and manufacturing facility with associated office. Juno is evaluating expansion of the Property with approximately 65,000 sf. of new medical manufacturing, research and development and office use as is permitted by the City of Bothell's (City's) development regulations. The Property appears to be immediately adjacent to, and partially within the proposed project limits. The proposed improvements to the intersection of SR 527 and 220th Street SE occur at the southeast corner of the Property (220th Street Intersection Improvements). The proposed project work includes: (i) installation of additional pavement to the northwest side of SR 527; (ii) establishing a new right of way on the Property; (iii) a temporary construction easement, (iv) a sign easement (items (i) - (iv) involving WSDOT acquisition via purchase or eminent domain of approximately 0.09 acres); (v) installation of a retaining wall to the northwest side of SR 527; (vi) and potential effects on existing engineered storm water management facilities located at the Property (i.e., our bioswale). We would appreciate meeting with WSDOT to discuss our comments provided in detail below and to continue the conversation about Project design refinements and mitigation measures that will ensure the continued successful operations of our Property.

Juno raises the following questions/comments and requests additional evaluation and identification of appropriate mitigation measures concerning WSDOT's proposed project:

L1.1

Travis Lynn
Capital Project Manager |
Facilities and Engineering
Cell Therapy Development and
Operations

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Squibb Company
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Bothell, WA 98021
bms.com

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Transportation

- The EA lacks the documented justification for design of the 220th Street Intersection Improvements adjacent to the Property: The technical data presented in the EA did not provide details regarding the final intersection channelization or future operations with and without the proposed 220th Street Intersection Improvements. It is not clear if the projected intersection operations warranted this improvement. While Juno supports the overall Project, WSDOT must ensure that the specific transportation improvements along SR 527/220th Street SE are warranted and improve multi-modal transportation connectivity and pedestrian safety. It is unclear from the data presented in EA that the northwestern leg of 220th Street Intersection Improvements meets this test. WSDOT's subsequent environmental review should identify and evaluate alternatives to the proposed 220th Street Intersection Improvements that may result in lower environmental impact, including but not limited to no additional channelization of northwestern leg of the intersection. Additional mitigation, including but not limited to alternative design scenarios for 220th Street Intersection Improvements, is likely warranted and should be studied.
- WSDOT should evaluate and, if warranted, propose mitigation measures for the 220th Street Intersection Improvements' impacts to pedestrian, bicycle and vehicular users, including but not limited to the following:
 - o Pedestrian implications
 - Longer crosswalk/crossing times along the north and west legs of the intersection.
 - Potential for higher southbound right turning speeds as a result of exclusive lane and larger turning radius.
 - Both of these implications could have negative safety impacts.
 - o Bicycle Implications
 - While an exclusive right-turn lane is generally beneficial along roadways with bicycle lanes (provided that weaving occurs ahead of the intersection resulting in the bicycle lane being positioned between a through lane and a right-turn lane) it is not clear that this would be a beneficial strategy at this location given that two lanes are added along this roadway segment (one through lane, one right-turn lane).
 - o Vehicular Implications
 - Can lead to signal inefficiencies due to increased minimum green time requirements associated with higher pedestrian walk times.
- Construction impacts on pedestrians: Juno operates satellite space at Canyon Road Business Center. Employees frequently walk between the Property and our satellite space for purposes of work-related collaboration. The safety of our employees passing along the construction route is of paramount concern.

L1.2
cont'd

L1.3

L1.4

Page 3/4

WSDOT's subsequent environmental review should specifically identify and evaluate pedestrian safety and circulation routes during construction to ensure safe and uninterrupted paths of travel for pedestrians. Additional mitigation is likely warranted and should be studied prior to final action.

- Traffic and circulation impacts during construction: Juno's operations involve the timely receipt of sensitive patient material (e.g., human blood), processing of that material, and return to the patient, all within a strict timeframe. Therefore, unimpeded access to the Property is critical and delays in this chain resulting from the construction project may impact our ability to treat our patients. WSDOT should ensure that uninterrupted access to the Property is maintained throughout construction and should identify mitigation measures, including enhanced traffic management plans, construction sequencing and/or signage that will ensure that vital deliveries to the Property can occur unimpeded.

L1.4
cont'd

Land Use, Economics and Community Resources

- The EA identifies the Property as one of 11 partial acquisitions under the Project but asserts without support that impacts to land use would be "minimal." EA pg. 62 and Exhibit 4-16 (attached). The EA is inaccurate and fails to evaluate the potential significant adverse land use and economic impacts of the Project at the Property. The 220th Street Intersection Improvements would: (1) acquire 0.09 acres of the Property (Proposed Condemnation Area) that serves critical existing functions for storm water treatment and contains significant trees under the City's development regulations; and (2) construct a significant retaining wall on the southwestern edge of the Property. Juno is evaluating the expansion of the Property with up to 65,000 sf. of medical manufacturing and office development consistent with the City's development regulations. The Proposed Condemnation Area is the most viable location for additional parking to serve Juno's expansion and provides additional benefits under the City's development regulations to achieve permitted densities and landscape/tree retention requirements. The 220th Street Intersection Improvements will directly result in a reduction of the potential development envelope, landscape requirements and parking capacity for the Property due to the need to shift development locations and remove additional significant trees based on the size and location of the Proposed Condemnation Area. The adverse effects outlined in this paragraph and throughout this letter are expected to result in significant land use and economic harm to Juno. WSDOT's subsequent environmental review must evaluate the potential impacts to the Property and identify additional mitigation measures, including but not limited to alternative designs of the northwestern leg of the 220th Street Intersection Improvements that may reduce the significant adverse land use and economic impacts of the Project.

L1.5

Page 4/4

- Impact to existing bioswale for storm water treatment: The Property is currently developed with a bioswale along the southeast side of the Property (in the immediate vicinity of the proposed intersection improvements). Based on the EA discussion, it appears the Property's bioswale will be affected by the construction project. This bioswale is an engineered treatment structure required for storm water management at the Property. Storm water treatment capabilities need to be maintained for our existing development and to treat storm water associated with planned future Property development (described herein). WSDOT's subsequent environmental review must evaluate the potential impacts to the Property relative to the stormwater treatment and identify mitigation measures to ensure that Juno's stormwater management system remain operational and compliant.

L1.6

Hazardous Materials

- The EA indicates that Phase II Environmental Sites Assessments should be considered for certain properties with Historic Recognized Environmental Conditions, Recognized Environmental Conditions, and/or potential groundwater contamination. This recommendation includes the Property. Please clarify why the EA authors suspect presence of Historic Recognized Environmental Conditions, Recognized Environmental Conditions, and/or potential groundwater contamination at the Property. Furthermore, accessing the Property, specifically for purposes of collecting samples of environmental media, requires our prior consent. Please contact the undersigned to arrange consent and access.

L1.7

We look forward to your response on the above matters and working with you to resolve them. If you have questions, please contact the undersigned.

Sincerely,



Travis Lynn
Capital Projects Manager

Enclosure: EA Exhibit 4-16

cc: Ann Lee
Snehal Patel
Bruce Mayer
William Pufko

Aaron Gevers
Ian Morrison

Comment L1.1

Juno Therapeutics, Inc. (Juno), a Bristol Myers Squibb Company, has reviewed the Environmental Assessment (EA) for the Washington State Department of Transportation (WSDOT) proposed I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as well as the 17th Ave. SE Vic. Right of Way and Limited Access Plan dated December 24, 2019 (collectively, the Project). We appreciate the opportunity to comment on the Project. Our review of the available information indicates an impact to Juno's property located at 1522 217th Place SE, Bothell, Washington and owned by Juno's subsidiary, Jump Holdings LLC (Property). The Property is currently used as a medical research and manufacturing facility with associated office. Juno is evaluating expansion of the Property with approximately 65,000 sf. of new medical manufacturing, research and development and office use as is permitted by the City of Bothell's (City's) development regulations. The Property appears to be immediately adjacent to, and partially within the proposed project limits. The proposed improvements to the intersection of SR 527 and 220th Street SE occur at the southeast corner of the Property (220th Street Intersection Improvements). The proposed project work includes: (i) installation of additional pavement to the northwest side of SR 527; (ii) establishing a new right of way on the Property; (iii) a temporary construction easement, (iv) a sign easement (items (i) – (iv) involving WSDOT acquisition via purchase or eminent domain of approximately 0.09 acres); (v) installation of a retaining wall to the northwest side of SR 527; (vi) and potential effects on existing engineered storm water management facilities located at the Property (i.e., our bioswale). We would appreciate meeting with WSDOT to discuss our comments provided in detail below and to continue the conversation about Project design refinements and mitigation measures that will ensure the continued successful operations of our Property.

Response L1.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). WSDOT discussed the issues raised in this letter with representatives from Juno Therapeutics and their development team at a meeting on Sept. 29, 2020 and a follow-up meeting on May 12, 2021. WSDOT recognizes the need to continue this coordination as Juno progresses with development of a new building at their site. WSDOT looks forward to continuing coordination as the respective projects move forward.

Comment L1.2

Juno raises the following questions/comments and requests additional evaluation and identification of appropriate mitigation measures concerning WSDOT's proposed project:

Transportation

The EA lacks the documented justification for design of the 220th Street Intersection Improvements adjacent to the Property: The technical data presented in the EA did not provide details regarding the final intersection channelization or future operations with and without the proposed 220th Street Intersection Improvements. It is not clear if the

projected intersection operations warranted this improvement. While Juno supports the overall Project, WSDOT must ensure that the specific transportation improvements along SR 527/220th Street SE are warranted and improve multi-modal transportation connectivity and pedestrian safety. It is unclear from the data presented in EA that the northwestern leg of 220th Street Intersection Improvements meets this test. WSDOT's subsequent environmental review should identify and evaluate alternatives to the proposed 220th Street Intersection Improvements that may result in lower environmental impact, including but not limited to no additional channelization of northwestern leg of the intersection. Additional mitigation, including but not limited to alternative design scenarios for 220th Street Intersection Improvements, is likely warranted and should be studied.

Response L1.2

WSDOT has been coordinating closely with the City of Bothell on the intersection improvements at 220th Street SE and SR 527, including both motorized and nonmotorized transportation facilities. The Project was designed so the intersection of SR 527 and 220th Street SE would address changing travel patterns resulting from the new direct access ramp at 17th Avenue SE. Widening is proposed at this location because of projected increases in left-turn volumes related to the future I-405 direct access ramp at 17th Avenue SE.

The proposed roadway improvements include reconfiguring eastbound 220th Street SE with left- and right-turn lanes at the intersection of SR 527 and 220th Street SE adjacent to Juno Therapeutics. The Project will provide additional turn lanes on the other three intersection approaches that would improve intersection operations.

The current conceptual Project design also includes protected bike lanes on the north side of 220th Street SE between 17th Avenue SE and SR 527, as well as a protected bike lane on 17th Avenue SE, to improve multimodal connectivity to the Canyon Park Park and Ride.

Sections 4.3 and 5.4 of Appendix A to the Environmental Assessment (EA), *Transportation Discipline Report*, provide more information about existing and forecasted conditions at the intersection of 220th Street SE and SR 527. This intersection currently operates at an overall level of service (LOS) E during the afternoon peak hour, with some legs operating at LOS F, during the afternoon peak hour.

Industry standard practice is to mitigate project impacts to an acceptable LOS or, in the case of already deficient LOS (such as SR 527/220th Street SE), back to the pre-Project condition. With the Project, the 220th Street SE/SR 527 intersection will operate with the same or lower overall vehicle delays and LOS as compared to the No Build Alternative. Please see Attachment E of EA Appendix A, *Transportation Discipline Report*, for more details.

Comment L1.3

WSDOT should evaluate and, if warranted, propose mitigation measures for the 220th Street Intersection Improvements' impacts to pedestrian, bicycle and vehicular users, including but not limited to the following:

- Pedestrian implications

- Longer crosswalk/crossing times along the north and west legs of the intersection.
- Potential for higher southbound right turning speeds as a result of exclusive lane and larger turning radius.
- Both of these implications could have negative safety impacts.
- Bicycle Implications
 - While an exclusive right-turn lane is generally beneficial along roadways with bicycle lanes (provided that weaving occurs ahead of the intersection resulting in the bicycle lane being positioned between a through lane and a right-turn lane) it is not clear that this would be a beneficial strategy at this location given that two lanes are added along this roadway segment (one through lane, one right-turn lane).
- Vehicular Implications
 - Can lead to signal inefficiencies due to increased minimum green time requirements associated with higher pedestrian walk times.

Response L1.3

WSDOT evaluated the potential effects of the proposed channelization changes to 220th Street SE for pedestrians, bicyclists, and vehicles. Please see Section 5.8.2 of EA Appendix A, *Transportation Discipline Report*, for more information on nonmotorized transportation effects during Project operations, and Section 5.4.2 of the same report for more information on intersection effects for vehicles. WSDOT will continue to work with the City of Bothell and other agencies to finalize the design at this intersection and to identify additional refinements to enhance safety and operations for all users.

Regarding the pedestrian implications noted, pedestrian crossing times will be slightly longer across the north and west legs of the intersection with the Project. The signal will be timed to provide enough time for pedestrians to safely cross the intersection. Design details at this intersection, such as signal timing and striping, will be finalized as the design progresses.

Regarding the bicycle implications noted, the proposed design will add one lane in the area noted and not two as described in the comment. This lane will be an exclusive right-turn lane from northbound SR 527 to eastbound 220th Street SE. No new through lanes will be added. The existing design at the SR 527/220th Street SE intersection provides a merge area about 100 feet south of the approach to the intersection where motorists can cross the dashed bicycle transition lane and turn right from northbound SR 527 to eastbound 220th Street SE. The proposed design will shift this merging area for the exclusive right-turn lane so that it will be positioned about 350 feet south of the approach to the intersection of SR 527 and eastbound 220th Street SE. As for bicyclists looking to turn from northbound SR 527 onto eastbound 220th Street SE, the current Project design envisions that all bicyclists on 220th Street SE between SR 527 and 17th Avenue SE will use a two-way shared use path on the north side of 220th Street SE.

Regarding the vehicular implications noted, WSDOT's projections indicate that the intersection would operate better with the Project than if the Project were not constructed, even with the longer pedestrian crossing times needed at this signal.

Comment L1.4

Construction impacts on pedestrians: Juno operates satellite space at Canyon Road Business Center. Employees frequently walk between the Property and our satellite space for purposes of work-related collaboration. The safety of our employees passing along the construction route is of paramount concern. WSDOT's subsequent environmental review should specifically identify and evaluate pedestrian safety and circulation routes during construction to ensure safe and uninterrupted paths of travel for pedestrians. Additional mitigation is likely warranted and should be studied prior to final action.

Traffic and circulation impacts during construction: Juno's operations involve the timely receipt of sensitive patient material (e.g., human blood), processing of that material, and return to the patient, all within a strict timeframe. Therefore, unimpeded access to the Property is critical and delays in this chain resulting from the construction project may impact our ability to treat our patients. WSDOT should ensure that uninterrupted access to the Property is maintained throughout construction and should identify mitigation measures, including enhanced traffic management plans, construction sequencing and/or signage that will ensure that vital deliveries to the Property can occur unimpeded.

Response L1.4

WSDOT is committed to addressing mobility impacts to all road users that may occur during construction. This process begins during project design and continues into construction. WSDOT looks forward to continuing to coordinate with Juno throughout the Project.

WSDOT's proposed mitigation for the Project includes preparing a Transportation Management Plan (TMP) prior to making any changes to traffic flow or lane closures. The TMP will address pedestrian access and safety (including Americans with Disabilities Act [ADA] requirements), maintenance of existing transit stops, bicycle traffic, and vehicular traffic. The TMP is part of the design-builder's contract requirements and will be closely monitored by WSDOT.

Section 6.2.3 of EA Appendix A, *Transportation Discipline Report*, discusses potential construction effects on local streets during Project construction. As noted in that section, access to private businesses will always be maintained during construction. The contractor will be required to minimize lane and roadway closures and to schedule them when there is the least effect on traffic, such as overnight and weekend time periods. Clearly marked detours will be provided for any road, bike lane, or sidewalk closure. The TMP developed by the design-build contractor will identify specific measures to reduce impacts on mobility, including advance notice to affected travelers of changes to traffic flow and lane or roadway closures.

In addition, the design-build contract will have detailed requirements for the contractor regarding maintenance of pedestrian and bicycle access during construction. These provisions include maintaining existing pedestrian access on all sidewalks and at all transit facilities and intersections, as well as detours when necessary.

Comment L1.5

Land Use, Economics and Community Resources

The EA identifies the Property as one of 11 partial acquisitions under the Project but asserts without support that impacts to land use would be “minimal.” EA pg. 62 and Exhibit 4-16 (attached). The EA is inaccurate and fails to evaluate the potential significant adverse land use and economic impacts of the Project at the Property. The 220th Street Intersection Improvements would: (1) acquire 0.09 acres of the Property (Proposed Condemnation Area) that serves critical existing functions for storm water treatment and contains significant trees under the City’s development regulations; and (2) construct a significant retaining wall on the southwestern edge of the Property. Juno is evaluating the expansion of the Property with up to 65,000 sf. of medical manufacturing and office development consistent with the City’s development regulations. The Proposed Condemnation Area is the most viable location for additional parking to serve Juno’s expansion and provides additional benefits under the City’s development regulations to achieve permitted densities and landscape/tree retention requirements. The 220th Street Intersection Improvements will directly result in a reduction of the potential development envelope, landscape requirements and parking capacity for the Property due to the need to shift development locations and remove additional significant trees based on the size and location of the Proposed Condemnation Area. The adverse effects outlined in this paragraph and throughout this letter are expected to result in significant land use and economic harm to Juno. WSDOT’s subsequent environmental review must evaluate the potential impacts to the Property and identify additional mitigation measures, including but not limited to alternative designs of the northwestern leg of the 220th Street Intersection Improvements that may reduce the significant adverse land use and economic impacts of the Project.

Response L1.5

WSDOT is working to acquire a small sliver (about 1 percent of the total acreage) of the Juno property adjacent to SR 527 because the Project proposes to widen SR 527 to add turn lanes and rebuild existing sidewalks adjacent to the widened roadway. Please see Responses L1.2 and L1.3 for further discussion of the reasoning for the design changes at the intersection of 220th Street SE and SR 527.

The existing stormwater features are outside the area of WSDOT’s proposed acquisition and will not be impacted by the Project.

In the conceptual design, WSDOT has elected to construct a retaining wall near the corner of 220th Street SE and SR 527 to minimize impacts on an existing slope and to preserve as many trees as possible. WSDOT will continue to work with Juno and the City of Bothell as the design progresses in order to minimize impacts on trees and Juno’s development plans.

Comment L1.6

Impact to existing bioswale for storm water treatment: The Property is currently developed with a bioswale along the southeast side of the Property (in the immediate vicinity of the proposed intersection improvements). Based on the EA discussion, it appears the Property's bioswale will be affected by the construction project. This bioswale is an engineered treatment structure required for storm water management at the Property. Storm water treatment capabilities need to be maintained for our existing development and to treat storm water associated with planned future Property development (described herein). WSDOT's subsequent environmental review must evaluate the potential impacts to the Property relative to the stormwater treatment and identify mitigation measures to ensure that Juno's stormwater management system remain operational and compliant.

Response L1.6

Thank you for providing information about the location of the bioswale on Juno's property. As stated in Response L1.5, the existing stormwater features are outside the area of WSDOT's proposed acquisition and will not be impacted by the Project.

Comment L1.7

Hazardous Materials

The EA indicates that Phase II Environmental Sites Assessments should be considered for certain properties with Historic Recognized Environmental Conditions, Recognized Environmental Conditions, and/or potential groundwater contamination. This recommendation includes the Property. Please clarify why the EA authors suspect presence of Historic Recognized Environmental Conditions, Recognized Environmental Conditions, and/or potential groundwater contamination at the Property. Furthermore, accessing the Property, specifically for purposes of collecting samples of environmental media, requires our prior consent. Please contact the undersigned to arrange consent and access.

Response L1.7

In the initial *Hazardous Materials Analysis* (EA Appendix G) for the Project, WSDOT identified the Juno Therapeutics site as a Historic Recognized Environmental Condition (HREC) because in the past, the site had impacted groundwater with metals confirmed above Model Toxics Control Act (MTCA) Method A cleanup levels (CULs). The *Hazardous Materials Analysis* recommended conducting further due diligence to obtain information about the contamination and subsequent cleanup and to understand the magnitude and location of the contamination (See Table 7 of EA Appendix G, *Hazardous Materials Analysis*). The recommendation noted that this further research was necessary to determine whether a Phase II Environmental Site Assessment (ESA) was warranted.

WSDOT followed up by requesting additional information about the site from the Washington State Department of Ecology (Ecology). Based on further file research documented in EA Appendix G1, *Hazardous Materials Analysis Addendum*, WSDOT determined that a Phase II ESA was no longer recommended for the site. Rather, WSDOT

will develop contract provisions to limit dewatering and require assessment of any generated fluids prior to disposal.

A follow-up conversation with Ecology in July 2020 clarified that, because WSDOT's proposed acquisition area is outside Ecology's site boundary on the tax parcel, and the site received a No Further Action determination by Ecology, no further site investigation is recommended at this time. WSDOT prepared a follow-up memorandum to document this change in recommendation, as provided in Appendix 6, *Hazardous Materials Update*, of the Finding of No Significant Impact.

Comment L2 –King County Metro, August 4, 2020



Capital Division
Capital Planning & Portfolio Management Section
201 S. Jackson Street
Seattle, WA 98104-3856

L2

August 4, 2020

WSDOT I-405/SR 167 Megaprogram
Attn: Robert Woock, I-405/SR 167 Megaprogram Environmental Engineering Manager
600 108th Ave. NE, Suite 405
Bellevue, WA 98004
(by electronic mail: I405comments@wsdot.wa.gov)

Re: King County Metro Transit's comments on the draft I-405 - SR 522 Vicinity to SR 527
Express Toll Lanes Improvement Project Environmental Assessment

Dear Mr. Woock:

Thank you for the opportunity to provide comments on the draft *I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) Environmental Assessment* (EA).

We would like to thank the Washington State Department of Transportation (WSDOT) for their continued leadership on variable tolling as a tool for congestion management. As population growth has continued to increase in the Puget Sound region, we recognize the need for transportation improvements that reduce congestion and support transit on the I-405 corridor.

As you know, Metro Transit has been working with Sound Transit to plan and implement the I-405 Bus Rapid Transit (BRT) Project. The I-405 BRT will connect communities along I-405 and SR 518 from Lynnwood to Burien with buses running as often as every 10 minutes. It is a complex project that involves work within WSDOT right-of-way, local streets, and at various park-and-rides and transit centers. We have appreciated having the opportunity to work with WSDOT on meeting Metro's objectives of utilizing managed lanes and inline transit stations to promote reliability and short headways for the I-405 BRT.

In general, we do not anticipate adverse impacts to Metro's current operations as a result of the express toll lanes project. However, assuming Route 311 continues to utilize the I-405/SR 522 interchange, we would like to continue working with WSDOT to incorporate measures that will minimize delays forecasted in the EA at the three proposed traffic signals on SR 522.

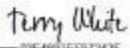
L2.1

Mr. Woeck
August 4, 2020
Page 2

We appreciate WSDOT's commitment to enhancing I-405 as a transit and HOV pathway. We look forward to working with WSDOT as the project moves forward and hope that it can be constructed as soon as possible.

L2.1
cont'd

Sincerely,

DocuSigned by:

00E4693E9F97243F
Terry White, Interim General Manager
King County Metro Transit Department

cc: Brian Macik, Transportation Planner, Metro Transit
Jessica Conquest, Environmental Planner, Metro Transit

Comment L2.1

Thank you for the opportunity to provide comments on the draft I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) Environmental Assessment (EA).

We would like to thank the Washington State Department of Transportation (WSDOT) for their continued leadership on variable tolling as a tool for congestion management. As population growth has continued to increase in the Puget Sound region, we recognize the need for transportation improvements that reduce congestion and support transit on the I-405 corridor.

As you know, Metro Transit has been working with Sound Transit to plan and implement the I-405 Bus Rapid Transit (BRT) Project. The I-405 BRT will connect communities along I-405 and SR 518 from Lynnwood to Burien with buses running as often as every 10 minutes.

It is a complex project that involves work within WSDOT right-of-way, local streets, and at various park-and-rides and transit centers. We have appreciated having the opportunity to work with WSDOT on meeting Metro's objectives of utilizing managed lanes and inline transit stations to promote reliability and short headways for the I-405 BRT.

In general, we do not anticipate adverse impacts to Metro's current operations as a result of the express toll lanes project. However, assuming Route 311 continues to utilize the I-405/SR 522 interchange, we would like to continue working with WSDOT to incorporate measures that will minimize delays forecasted in the EA at the three proposed traffic signals on SR 522.

We appreciate WSDOT's commitment to enhancing I-405 as a transit and HOV pathway. We look forward to working with WSDOT as the project moves forward and hope that it can be constructed as soon as possible.

Response L2.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). WSDOT will continue to work with our partners, including King County Metro, to explore opportunities to operate the signals on SR 522 to minimize delay to all users, including transit.

Comment L3 – Canyon Park Business Center Owner’s Association, August 6, 2020

L3



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August 6, 2020

WSDOT I-405/SR 167 Megaprogram
Attn: Robert Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager
600 108th Avenue NE, Suite 405
Bellevue, WA 98004

Sent by email: I405comments@wsdot.wa.gov

RE: Comments on Environmental Assessment - I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project

Mr. Woeck:

Our firm represents the Canyon Park Business Center Owners Association (“CPBCOA”). The CPBCOA appreciates the opportunity to provide comments to the Washington State Department of Transportation (“WSDOT”) on the Environmental Assessment (“EA”) of the proposed I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (“the Project”).

CPBCOA is comprised of over 30 property owners. There are over 100 businesses within the Canyon Park Business Center (“CPBC” or “Park”), many of which are within the biomedical and life sciences manufacturing and research and development industries. The CPBC is a major employment center within the City and the region, and a vital hub for economic development.

As currently proposed, the Project will have significant adverse impacts on the CPBC, both during construction and once operational. These adverse impacts will affect businesses, employees, residents and property owners within the Park.

Our technical comments are provided in the attached memorandum from TENW.

In sum, the EA is fundamentally flawed in several ways. The EA begins by over stating the growth assumptions for the No Action Alternative. By establishing an artificially high growth baseline against which the Action Alternative is compared, the impacts of the Action Alternative are underestimated and not fully evaluated or mitigated in the EA. This results in insufficient capacity of critical components of the Project, including the intersections of 17th Avenue SE/220th Street SE and 220th Avenue SE/SR527, both of which are located at the primary entrance to the Park. We have repeatedly discussed this with the WSDOT Project team, who has been unable to adequately explain the basis for their growth assumptions. They have asserted

L3.1

L3.2

that they used standard regional growth factors. However, our analysis of WSDOT traffic modeling is that different legs of the same intersections in the Park were modeled with different growth factors. Additionally, the Park is nearly fully developed, and most parcels have high improvements to land value ratios, indicating that redevelopment is unlikely over the planning period. Given these conditions, the regional growth factors do not apply and are not appropriate. Instead, a land capacity analysis should have been performed to develop a local growth percentage for the Park. This is standard procedure for long range growth management planning by local governments in Washington, and it is unclear why WSDOT chose not to use this methodology.

L3.2
cont'd

To date, WSDOT has not designed or sized the intersections of 17th Avenue SE/220th Street SE and 220th Avenue SE/SR527 adequately to accommodate the traffic generated by the Project. Further, a direct result of the insufficient capacity at these two intersections at the primary entrance to the Park will be a significant volume of cut through traffic using the private road system in the Park to avoid congestion and delay. The proposed solution of using signage to direct traffic away from the private road system is inadequate, and the proposed mitigation for the impacts to the 220th Street SE/20th Avenue SE intersection is not identified in the EA. The road system within CPBC remains privately owned, and WSDOT does not have the necessary real estate rights to authorize traffic coming to or from I-405 to utilize the roads within the Park. We have raised this issue repeatedly, but it also has never been resolved.

L3.3

This insufficient capacity will be exacerbated by cumulative impacts from at least two additional concurrent actions: (1) the City of Bothell's update to the Canyon Park Subarea Plan, which intends increase density significantly in the CPBC and surrounding the Canyon Park Regional Growth Center; and (2) Sound Transit's Bus Base North, which will serve the Bus Rapid Transit ("BRT") high capacity buses. The cumulative impacts of these two major projects, in combination with the Project, have not been adequately evaluated in the EA or coordinated with these other agencies.

L3.4

Even with an inflated background growth assumptions used in the traffic modeling and the understatement of impacts of the Project, the mitigation proposed in EA fails to bring the effects of the Project below the threshold of significant impact. This is further exacerbated by inadequate disclosure, analysis and mitigation of significant cumulative impacts. For these reasons, it is not possible for WSDOT to issue a Finding of No Significant Impacts for the Project ("FONSI"). An Environmental Impact Statement ("EIS") must be prepared to identify and evaluate the impacts of the Project.

L3.5

Thank you in advance for considering our comments. We look forward to continued participation in the EIS process to address the impacts to the CPBC.

Sincerely,



Tim McHarg, AICP
Senior Land Use Planner



MEMORANDUM

DATE: August 6, 2020

TO: Tim McHarg, Canyon Park Business Association Owner's Association
c/o Van Ness Feldman, LLP

FROM: Michael Read, PE, Principal, TENW

SUBJECT: WSDOT NEPA Environmental Assessment May 2020
I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement Project
Impacts to Canyon Park Business Center Owner's Association –
TENW Project No. 3696

This memorandum summarizes TENW's comments on the I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement Project, NEPA Environmental Assessment (released June 2020) as it relates to transportation impacts to the Canyon Park Business Center Owner's Association (CPBCOA) properties. These comments reflect the CPBCOA response to WSDOT's mitigation proposal intended to address the traffic impacts of the ELT project on the CPBCOA private property and private roadway system, but have been expanded to review the NEPA EA released by WSDOT in June 2020 noted above.

In review of preliminary materials provided by WSDOT in early 2020 and Appendix A: Transportation Discipline Report of the NEPA EA (May 2020), TENW makes the following comments on WSDOT's transportation assumptions, methodological approach, and analytic techniques underlying its traffic evaluation:

No Action Traffic Forecasts. As a baseline, the mitigation approach in the preliminary traffic operational and queuing analysis provided to TENW is only compared to a future No Action condition. With inflated background growth assumptions, the conclusion regarding ELT impacts to intersection levels of service and vehicle queuing conditions within the CPBCOA are lost in a growth rate that is not applicable to interior private roadways within the existing business park. With a regional aggregate growth rate of more than 40 percent applied to interior private intersections, the added congestion and vehicle queuing that becomes "assumed in the future" (No Action condition) within the business park generates unreasonable "assumed" traffic conditions from WSDOT measures impacts of the WSDOT ELT project within the CPBCOA properties.

Intersection Capacity of 220th Street SE/17th Avenue SE. The projected traffic demand of PM peak hour traffic exiting via 17th Avenue SE by WSDOT is 775 vehicles per hour (vph). This peak directional forecast is a direct result of the proposed ETL Direct Access Ramp and is equivalent to more than 2 turning lanes of left turning capacity (this is regardless of the analytical framework or traffic analysis assumptions presented by WSDOT). At year of opening (2025), the total northbound left turning traffic demand from 17th Avenue SE onto 220th during the PM peak hour is

L3-M1

L3-M2

WSDOT NEPA Environmental Assessment May 2020
 I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement Project
 Impacts to Canyon Park Business Center Owner's Association

forecast by WSDOT in excess of 1,000 vph. As such, basic capacity at this signalized intersection is not provided under the current WSDOT channelization proposal, and would create significant adverse impacts to both traffic flow and safety at this intersection and private driveways along 17th Street SE. We continue to recommend that additional intersection capacity be built at this intersection to mitigate the adverse traffic impacts generated by the proposed ETL Direct Access Ramp through the business park. Specifically, the northbound approach should include additional turning capacity and queuing storage along 17th Street SE.

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In addition, during a meeting between WSDOT and our Team in March 2020, WSDOT confirmed that the traffic operational assumptions (i.e., signal timing/performance) applied in the Action Alternative "would not be implemented" in the field. As such, the level of service and queuing conclusions using WSDOT's proposed intersection geometry and signal parameters in the NEPA EA would not reflect built conditions, but would create significant, but avoidable, transportation impacts to CPBCOA properties, internal access, safety, and general circulation unless otherwise fully mitigated.

City Comments/Concurrence on Study Assumptions and Methods. CPBCOA has yet to receive any concurrence from the City of Bothell on the review and acceptance by the City of WSDOT study assumptions, methods, or conclusions on the ETL Direct Access Ramp project. Given other comprehensive plan amendment, zoning, and private street conversion into public roadways under consideration by the City and CPBCOA, we want to recognize that our Team cannot agree to any mitigation agreement or proposals until we also understand that the City will also accept the proposed public infrastructure that would be converted within the existing private roadway system currently owned by CPBCOA.

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In addition to the absence of City concurrence, neither the City's ongoing Subarea Planning within Canyon Park or WSDOT's analysis of the ETL Direct Access Ramp into the subarea are dependent or relying on each other's work. As an example, WSDOT assumes only currently funded transportation improvements, while as the City's comprehensive planning process allows for assumed additional improvements that do not yet have committed funding. To ensure consistency, at a minimum the City's planning process should only assume those currently funded projects used in WSDOT's ETL Direct Access Ramp project as a "baseline" and then evaluate other potential regional and local projects to support the alternative land use assumptions under consideration in the Subarea. This methodology will also inform both the City and WSDOT on the direct impacts that "new arterial roadway connections" into the CPBCOA that could result as part of ETL Direct Access Ramp project.

L3-M4

Beyond the transportation network inconsistencies, the other significant difference between these two efforts is evaluating impacts of land use assumptions. The City's current Subarea Planning efforts envision significant increases in the density and types of land uses within the CPBCOA itself and the surrounding vicinity. As noted above, WSDOT did not apply any direct land use assumptions within the CPBCOA properties or local vicinity, but only factored local traffic volumes (beyond those directly generated by the new ETL Direct Access Ramp) using a regional growth factor. If any of the currently published land use scenarios or potential variants proposed as part of the Subarea Plan are adopted, the transportation infrastructure as part of the WSDOT ETL Direct

L3-M5



Access Ramp and for the Canyon Park Subarea as a whole would fail any measure of concurrency or mobility performance measure of intersection level of service, congestion, or safety.

L3-M5
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ELT Impacts within the CPBCOA Properties and Cumulative Impacts. According to Appendix A: Transportation Discipline Report of the NEPA EA, all intersections in the CPBC that operate at LOS E or worse with the Build Alternative would also operate at LOS E or worse in the No Build Alternative. One intersection, 26th Place SE and 220th Street SE, would degrade from a "high" LOS E to a "low" LOS F in the 2045 AM peak hour under the Build Alternative. This conclusion however, is flawed and is written to give the impression that actual project impacts would not occur anywhere within the CPBCOA Properties.

As noted in our review of the underlying *No Action Traffic Forecasts, Intersection Capacity Assumptions* at the existing private signalized intersection within the business parking of 220th Street SE/17th Avenue SE, and the avoidance by WSDOT of acknowledging a concurrent *Canyon Park Subarea Plan* near completion by the City of Bothell that drastically increases both population and employment growth by the horizon year studied in the NEPA EA, would result in significant adverse traffic impacts within the CPBCOA Properties. Without consideration for cumulative impacts, the underlying transportation analytical traffic operational analysis concludes the following:

- The proposed geometry of both the 220th Street SE/17th Avenue SE and 220th Street SE/SR 527 signalized intersections and Synchro operational model concludes that nearly all approaches would experience vehicle queuing beyond the capabilities of the model to predict (requiring traffic simulation modeling to be performed to provide adequate lanes and intersection geometry conclusions for design purposes) and that 220th Street SE volume of flow would exceed available capacity during the most congested p.m. peak period. In addition, as noted previously these "ideal signal timing/phasing assumptions" would never be implemented in the field (given the significant allocation of green time to the new ETL Ramp approach), and as such, both the conclusions of the NEPA EA analysis and the actual future Build condition would result in significant vehicle queuing along both 17th Avenue SE, 220th Street SE and throughout the entire business park due to diverted traffic demands. Specifically along 17th Avenue SE, vehicle queuing, overall traffic safety, and conflicting flows with exiting traffic volumes from current business would create an untenable lease or business operational environment for all existing properties associated with the CPBCOA.
- As noted in the NEPA EA: "The Project would increase freeway volumes and, as such, more vehicles would use ramps to enter and exit the freeway." At the existing SR 527 interchange, continuous congestion throughout a typical workday and on most weekend periods afternoon is generated by the at-grade freeway access and egress in the Canyon Park vicinity. Construction of a direct access ramp to the ETL via 17th Street SE will therefore, be a very attractive alternative to waiting at other existing ramp junctions to enter/exit the freeway, and the NEPA EA for the ETL facility into the existing CPBCOA properties clearly concludes the shift in demand will be significant. The issue remains, however, that WSDOT's proposed traffic improvements within the CPBCOA and intersections that immediately serve the CPBCOA properties are limited to several "turn lane additions" as noted in the NEPA EA. However, these limited proposed improvements are intended to mitigate an increased "arterial level directional flow" of nearly 800 vehicles

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L3-M7

WSDOT NEPA Environmental Assessment May 2020
I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement Project
Impacts to Canyon Park Business Center Owner's Association

per hour that would be created by the ETL Project. As such, the nexus between proposed mitigation and Project Impacts remains unacceptable under State or Federal standards.

- Primarily comprised of properties within the CPBCOA, the City of Bothell Canyon Park Subarea Plan contemplates a preferred future land use plan that directs 60 percent more households and 73 percent more employment levels beyond those contemplated within the No Action alternative reviewed in the NEPA EA for the I-405 ETL. Multiple additional arterial and intersection failures will occur throughout the existing primary private arterial system within the CPBCOA properties and regional State and local arterial systems unless appropriate "arterial level capacity" and additional intersection turning capacity is provided as part of the I-405 ETL project within the CPBCOA.
- In total, the critical northbound flow along 17th Avenue SE during the PM peak hour would comprise the following elements under a cumulative assessment:
 - Existing Flow – 320 northbound vehicles.
 - 2045 No Action – 500 northbound vehicles.
 - 2045 With ETL Project – 1,270 northbound vehicles.
 - 2045 With Subarea Plan – 1,800 northbound vehicles.
 - In total, a cumulative increase of over 450 percent is forecast to occur in the design horizon year of the proposed ETL Project on 17th Avenue SE.

Cut-Through Traffic/Diversion of Traffic within the CPBCOA Properties. As WSDOT's own analysis concludes that the westbound approach of 220th Street SE at SR 527 and the northbound approach of 17th Avenue SE at 220th Street would be operating "above capacity" and exceed available queue storage lengths under realistic operational assumptions, significant diversion of trips will occur throughout the CPBCOA properties (i.e., cut through traffic) as drivers attempt to avoid delay. Existing diversion of business park generate trips and other "cutthrough traffic" regularly utilize interior site roadways that connect to private roadways, parking lots, and drive aisles via 20th Avenue SE to the north of 214th Street SE. Signage would be an ineffective measure to control or mitigate for these impacts throughout the existing private roadways, and the current assignment of trips east of 17th Avenue E considered within the Transportation Discipline Report is woefully underrepresented (under 10 percent of all new trips generated by the ETL project). Without a "public roadway system" to accommodate this new demand and without controls to direct public traffic generated by the ETL from the new I-405 lanes, additional significant traffic impacts beyond those identified in the NEPA EA would be created throughout the CPBCOA properties.

If you have any questions regarding the information presented in this memo, please call me at (206) 361-7333 x 101 or mikeread@tenw.com.

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L3-M8

L3-M9

Comment L3.1

Our firm represents the Canyon Park Business Center Owners Association (“CPBCOA”). The CPBCOA appreciates the opportunity to provide comments to the Washington State Department of Transportation (“WSDOT”) on the Environmental Assessment (“EA”) of the proposed I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (“the Project”).

CPBCOA is comprised of over 30 property owners. There are over 100 businesses within the Canyon Park Business Center (“CPBC” or “Park”), many of which are within the biomedical and life sciences manufacturing and research and development industries. The CPBC is a major employment center within the City and the region, and a vital hub for economic development.

As currently proposed, the Project will have significant adverse impacts on the CPBC, both during construction and once operational. These adverse impacts will affect businesses, employees, residents and property owners within the Park.

Our technical comments are provided in the attached memorandum from TENW.

Response L3.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). WSDOT has reviewed the comments and is providing responses to the letter and attached memorandum in the sections below.

Overall, the Project is expected to provide numerous transportation benefits for the traveling public. The Project will deliver faster and more reliable trips on I-405 for most drivers, carpoolers, and transit riders using both the express toll lanes (ETLs) and general purpose (GP) lanes during peak periods. The Project will also provide improved access and reduced vehicle delays for Canyon Park Business Center (CPBC) visitors and employees to and from I-405 because of the new direct access ramp at 17th Avenue SE. The EA acknowledges that some intersections would operate worse with the Project than without the Project, while some intersections (such as the SR 527 and 220th Street SE and 17th Avenue SE and 220th Street SE intersections in the PM peak hour) would operate better due to local roadway improvements and increased intersection capacity. However, with the Project, overall traffic level of service in the CPBC would be similar as compared to the No Build Alternative.

WSDOT and the Federal Highway Administration (FHWA) maintain that the EA and Appendix A, *Transportation Discipline Report*, appropriately disclose Project effects within the CPBC. As part of developing this decision document, FHWA completed a detailed review of the transportation analysis completed by WSDOT, as well as the concerns presented by the Canyon Park Business Center Owners Association (CPBCOA), and has determined that the process followed by WSDOT meets all requirements for a National Environmental Policy Act (NEPA) EA transportation analysis.

Comment L3.2

In sum, the EA is fundamentally flawed in several ways. The EA begins by over stating the growth assumptions for the No Action Alternative. By establishing an artificially high growth baseline against which the Action Alternative is compared, the impacts of the Action Alternative are underestimated and not fully evaluated or mitigated in the EA. This results in insufficient capacity of critical components of the Project, including the intersections of 17th Avenue SE/220th Street SE and 220th Avenue SE/SR527, both of which are located at the primary entrance to the Park. We have repeatedly discussed this with the WSDOT Project team, who has been unable to adequately explain the basis for their growth assumptions. They have asserted that they used standard regional growth factors. However, our analysis of WSDOT traffic modeling is that different legs of the same intersections in the Park were modeled with different growth factors. Additionally, the Park is nearly fully developed, and most parcels have high improvements to land value ratios, indicating that redevelopment is unlikely over the planning period. Given these conditions, the regional growth factors do not apply and are not appropriate.

Instead, a land capacity analysis should have been performed to develop a local growth percentage for the Park. This is standard procedure for long range growth management planning by local governments in Washington, and it is unclear why WSDOT chose not to use this methodology.

Response L3.2

WSDOT and FHWA maintain that the assumptions in the EA analysis are appropriate and consistent with industry standard practices for transportation forecasting, including the FHWA *Interim Guidance on the Application of Travel and Land Use Forecasting in NEPA* and the WSDOT *Design Manual* Chapter 320. As discussed in Response L3.1, FHWA has completed a detailed review of the NEPA analysis and determined that it meets requirements. FHWA asked experts from FHWA's Headquarters and Resource Center to conduct an independent review of the WSDOT's I-405 Traffic Model, specifically the traffic analysis conducted with the model for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project. They reviewed the data, met with project and PSRC staff and determined that the traffic analysis was consistent with FHWA Traffic Analysis guidance and with the PSRC Regional Travel Demand Model. FHWA's independent review concluded that the project would not significantly impact traffic in the vicinity of the CPBC, and that our December 2020 determination of engineering and operational acceptability for design of the I-405/SR 527 interchange is still valid.

WSDOT's growth assumptions are consistent with the City of Bothell's adopted comprehensive land use plan. Furthermore, the No Action Alternative in the City's *Canyon Park Subarea Planned Action Draft and Final Environmental Impact Statements (EIS)* uses the same general land use assumptions as the WSDOT analysis.

WSDOT disagrees with the CPBCOA's assessment that higher background growth rates diminish the potential impacts of the Project. Industry standard practice is to mitigate

Project impacts to an acceptable level of service (LOS), or, in the case of an already deficient LOS intersection (such as SR 527/220th Street SE), back to the pre-Project condition.

WSDOT generated CPBC future year background volumes at road entrances using travel demand outputs from the PSRC model and using standard engineering forecasting techniques. WSDOT used the procedures outlined in National Cooperative Highway Research Program Report 765, *Analytical Travel Forecasting Approaches for Project-Level Planning and Design*, utilizing the difference method. This method takes into account the modeled growth on each leg of an intersection and appropriately adjusts turning movements to match the expected growth. For intersection growth within the CBPC where the travel model does not have network resolution, growth was generated using an areawide growth rate, which is reflective of all growth within the Canyon Park subarea. Volumes were conservatively balanced between intersections.

As noted previously, WSDOT's analysis used the adopted and approved comprehensive plan land use assumptions associated with the Canyon Park subarea. This land use is a projection based on local and regional policies, including the City of Bothell's, as well as each county's adopted growth targets. PSRC uses and recommends these forecasts for planning and modeling work. This methodology is standard practice for roadway and capacity-based projects. Additional information regarding the travel demand modeling process is documented in Attachment C of EA Appendix A, *Transportation Discipline Report*, and FONSI Appendix 7, *Agency Concurrence Documentation*.

Comment L3.3

To date, WSDOT has not designed or sized the intersections of 17th Avenue SE/220th Street SE and 220th Avenue SE/SR527 adequately to accommodate the traffic generated by the Project.

Further, a direct result of the insufficient capacity at these two intersections at the primary entrance to the Park will be a significant volume of cut through traffic using the private road system in the Park to avoid congestion and delay. The proposed solution of using signage to direct traffic away from the private road system is inadequate, and the proposed mitigation for the impacts to the 220th Street SE/20th Avenue SE intersection is not identified in the EA. The road system within CPBC remains privately owned, and WSDOT does not have the necessary real estate rights to authorize traffic coming to or from I-405 to utilize the roads within the Park.

We have raised this issue repeatedly, but it also has never been resolved.

Response L3.3

With the Project, WSDOT will make capacity improvements to the intersections of 17th Avenue SE/220th Street SE and 220th Street SE/SR 527 to meet the projected demand from the new I-405 direct access ramps at 17th Avenue SE. Since the EA was published in July 2020, WSDOT has continued to make design refinements within the Project footprint, including updating turn lane designations and adjusting turn pocket lengths. Improving

existing traffic operation deficiencies within the CPBC is outside of the scope of the Project and is not WSDOT's responsibility.

As noted in Response L3.2, the industry standard practice is to mitigate project impacts to an acceptable LOS or, in the case of already deficient LOS (such as SR 527/220th Street SE), back to the pre-Project condition. With the Project, the 220th Street SE/SR 527 intersection will operate with the same or lower overall vehicle delays and LOS as compared to the No Build Alternative in the PM peak hour. This intersection will continue to operate at LOS D or better in the AM peak with the Project. The 220th Street SE/17th Avenue SE intersection will operate with lower delays with the Project as compared to the No Build Alternative in the PM peak hour. In both the AM and PM peak hour, it the intersection will continue to operate at an acceptable level (LOS D or better). Please see Section 5.4 and Attachment E of EA Appendix A, *Transportation Discipline Report*, as well as FONSI Appendix 2, *Errata to the Environmental Assessment*, for more details.

The proposed signage identified in the EA represents a portion of WSDOT's proposed Project commitments. The intent of this signage is to direct traffic to use public roadways rather than the CPBCOA's private street network. The Project will not direct traffic into the CPBC. However, WSDOT's analysis assumed that some drivers may not follow the proposed signage. As such, WSDOT took a conservative approach with the traffic analysis and did not assume that any mitigation, such as signage, would be in place when modeling the traffic effects in the EA.

The EA and FONSI acknowledge that WSDOT has proposed an agreement to fund additional improvements intended to offset traffic impacts at the intersection of 20th Avenue SE and 220th Street SE, a private street located in the CPBC. Although the proposed mitigation is not assumed in the Project effects and is beyond the scope of what is necessary to complete the NEPA process, WSDOT will continue to work with the CPBC to advance the agreement. WSDOT is also committing to installing signs at key locations outside of the CPBC directing all traffic to or from I 405 to use public streets, as described in Section 6.1.1 of the EA and Section 5.1.1 of the FONSI.

WSDOT has continued to coordinate with the CPBCOA and its traffic consultants, TENW and Transpo Group, including multiple meetings about the project design, traffic analysis, mitigation proposal, and other issues before and after the EA was published. In addition to the comments and memorandum provided by the CPBCOA during the EA comment period, WSDOT reviewed additional information and traffic data provided by TENW in November 2020 and by Transpo Group in April 2021 regarding future simulated queuing projections primarily on 17th Avenue SE. WSDOT also provided the traffic consultants and the CPBCOA with detailed observations about their modeling approach.

As a follow-up to discussions with the CPBCOA and their traffic consultants after the EA was published, WSDOT conducted an additional review of the EA intersection and local street analysis for the CPBC area within the Project footprint. WSDOT confirmed the overall analysis presented in the EA for the CPBC area. In November 2020 and May 2021, WSDOT provided additional information to the CPBCOA about how ongoing project

design refinements would change modeled operations. These design refinements, which are within the Project footprint studied in the EA, included changes to turn lane designations, such as a triple westbound left turn designation at SR 527 and 220th Street SE and increased turn-pocket lengths along several intersection approaches within the CPBC area.

Many of the design refinements and operational inputs were incorporated into this EA, and WSDOT has updated the transportation analysis results. Changes to average vehicle delay and level of service are documented in FONSI Appendix 2, *Errata to the EA*. Most intersections within the Canyon Park area had an overall vehicle delay change of a few seconds in both the No Build and Build Alternatives. Changes in vehicle delay were greater in the vicinity of the SR 527 and 220th Street SE and 17th Avenue SE and 220th Street intersections due to project design refinements and feedback from the CPBCOA traffic consultants. Overall, some intersections had a decrease in delay, while others had an increase.

Furthermore, in 2018, the City of Bothell installed a signal and a pedestrian crossing at the 29th Avenue SE and 228th Street SE intersection. The previous analysis did not account for the north-south pedestrian crossing influence on operations at this intersection and at the adjacent 27th Avenue SE and 228th Street intersection. These corrections required WSDOT to change its LOS reporting methodology from HCM6 to HCM 2000 (see Appendix A, *Transportation Discipline Report*, Section 3.4.3 for further reporting methodology discussion). Previously, the 29th Avenue SE and 228th Street SE intersection operated at LOS D or better in both the No Build and Build alternatives. With this update, the intersection will operate at LOS F in the PM peak hour by 2045 with and without the Project.

In addition to the geometric updates described above, WSDOT has continued to work with CPBCOA and their traffic consultants. Standard WSDOT and FHWA practice for NEPA EA traffic analyses is to report LOS and delay in the opening year and future design year as metrics for comparing intersection performance between the No Build and Build Alternatives. Other more detailed operational metrics, such as 95th percentile queue lengths, are generally not reported in planning level documents such as a NEPA EAs. However, since publication of the EA, at the request of the CPBCOA, WSDOT also modeled effects on 95th percentile queue lengths at intersections of interest within the CPBC under the No Build and Build Alternatives using SimTraffic, a simulation-based tool.

WSDOT also provided information to the CPBCOA about projected traffic operations if a new signal were implemented at the 20th Avenue SE and 220th Street SE Street intersection. This signal is outside the scope of the Project but represents one example of an intersection treatment that the CPBCOA could choose to implement using funds proposed in the WSDOT mitigation agreement.

Comment L3.4

This insufficient capacity will be exacerbated by cumulative impacts from at least two additional concurrent actions: (1) the City of Bothell's update to the Canyon Park Subarea

Plan, which intends increase density significantly in the CPBC and surrounding the Canyon Park Regional Growth Center; and (2) Sound Transit's Bus Base North, which will serve the Bus Rapid Transit ("BRT") high capacity buses. The cumulative impacts of these two major projects, in combination with the Project, have not been adequately evaluated in the EA or coordinated with these other agencies.

Response L3.4

WSDOT has coordinated closely with both the City of Bothell and Sound Transit on the assumptions and cumulative effects of their respective projects.

The City of Bothell agrees with the traffic assumption methodologies used in WSDOT's transportation analysis, as indicated in their September 2020 letter to WSDOT (please see FONSI Appendix 7). See Response L3-M3 for more information on the City's written concurrence with WSDOT's methodology.

WSDOT documented in Chapter 5 of the EA and EA Appendix O, *Cumulative Effects*, that the Canyon Park Subarea Plan was still in development at the time of the Project EA publication. The City had released the *Canyon Park Subarea Planned Action Draft EIS* for public comment, but the preferred alternative and associated impacts were unknown. Per WSDOT's guidance, WSDOT did not include unfunded projects, such as those identified in the City's *EIS*, in the EA analysis. Furthermore, the timelines for construction of any proposed transportation improvements are not specified.

Since the publication of the EA in July 2020, the City has released a *Draft EIS Addendum*, a draft Subarea Plan for Canyon Park, and a *Final EIS*. WSDOT has provided updated information about the status of the Subarea Plan and *Planned Action EIS* in FONSI Appendix 2, *Errata to the EA* and Appendix 8, *Cumulative Effects Updates*. The City's *Canyon Park Subarea Planned Action Final EIS* addresses the cumulative impacts of the City's proposed changes in density and development in that area and includes the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as part of the baseline conditions in both the No Action and Action Alternatives.

Regarding Sound Transit's Bus Base North Project, land use changes proposed at this location are already assumed in the EA's Cumulative Effects analysis (please see Exhibit 5-1 of the EA) and in the traffic analysis as part of the City of Bothell's comprehensive plan growth. Although the land use assumptions in the City's comprehensive plan are not directly associated with the bus base, the bus base is anticipated to generate fewer peak hour trips compared with currently zoned land uses, as documented in Sound Transit's July 2020 State Environmental Policy Act (SEPA) checklist for the Bus Base North Project. Therefore, the impacts associated with the bus base would be lower than what is assumed in the Project EA. Sound Transit's Bus Base North SEPA checklist (p. 38) notes, "The analysis used forecasted traffic volumes for 2042 based on WSDOT future traffic volume projections developed by the WSDOT I-405 Program team to ensure consistency of approach between both of the agency's projects in the area."

Comment L3.5

Even with an inflated background growth assumptions used in the traffic modeling and the understatement of impacts of the Project, the mitigation proposed in EA fails to bring the effects of the Project below the threshold of significant impact. This is further exacerbated by inadequate disclosure, analysis and mitigation of significant cumulative impacts. For these reasons, it is not possible for WSDOT to issue a Finding of No Significant Impacts for the Project (“FONSI”). An Environmental Impact Statement (“EIS”) must be prepared to identify and evaluate the impacts of the Project.

Thank you in advance for considering our comments. We look forward to continued participation in the EIS process to address the impacts to the CPBC.

Response L3.5

Thank you for bringing your concerns to WSDOT’s attention. FHWA has determined that a Finding of No Significant Impact is appropriate for the Project. FHWA considered the overall context and intensity of the Project’s transportation effects as required by NEPA and concluded that the effects identified within the CPBC do not rise to a level of significance under NEPA when looking at the project as a whole. The EA acknowledges that some intersections would operate worse with the Project than without the Project, while some intersections (such as the SR 527 and 220th Street SE intersection) would operate better due to local roadway improvements and increased intersection capacity. However, with the Project, overall traffic level of service in the CPBC would be similar as compared to the No Build Alternative.

Please see Responses L3-M1 through L3-M9 for additional responses to the TENW technical memorandum. As noted in Response L3.3, WSDOT has coordinated regularly with CPBCOA throughout the Project development, has shared traffic and other Project information on multiple occasions, and will continue to work with the CPBCOA as the Project progresses.

Comment L3-M1

This memorandum summarizes TENW’s comments on the I-405 SR522 Vicinity to SR527 Express Toll Lanes Improvement Project, NEPA Environmental Assessment (released June 2020) as it relates to transportation impacts to the Canyon Park Business Center Owner’s Association (CPBCOA) properties. These comments reflect the CPBCOA response to WSDOT’s mitigation proposal intended to address the traffic impacts of the ELT project on the CPBCOA private property and private roadway system, but have been expanded to review the NEPA EA released by WSDOT in June 2020 noted above.

In review of preliminary materials provided by WSDOT in early 2020 and Appendix A: Transportation Discipline Report of the NEPA EA (May 2020), TENW makes the following comments on WSDOT’s transportation assumptions, methodological approach, and analytic techniques underlying its traffic evaluation:

No Action Traffic Forecasts. As a baseline, the mitigation approach in the preliminary traffic operational and queuing analysis provided to TENW is only compared to a future

No Action condition. With inflated background growth assumptions, the conclusion regarding ELT impacts to intersection levels of service and vehicle queuing conditions within the CPBCOA are lost in a growth rate that is not applicable to interior private roadways within the existing business park.

With a regional aggregate growth rate of more than 40 percent applied to interior private intersections, the added congestion and vehicle queuing that becomes "assumed in the future" (No Action condition) within the business park generates unreasonable "assumed" traffic conditions from WSDOT measures impacts of the WSDOT ELT project within the CPBCOA properties.

Response L3-M1

Please see Response L3.2.

Comment L3-M2

Intersection Capacity of 220th Street SE/17th Avenue SE. The projected traffic demand of PM peak hour traffic exiting via 17th Avenue SE by WSDOT is 775 vehicles per hour (vph). This peak directional forecast is a direct result of the proposed ETL Direct Access Ramp and is equivalent to more than 2 turning lanes of left turning capacity (this is regardless of the analytical framework or traffic analysis assumptions presented by WSDOT). At year of opening (2025), the total northbound left turning traffic demand from 17th Avenue SE onto 220th during the PM peak hour is forecast by WSDOT in excess of 1,000 vph. As such, basic capacity at this signalized intersection is not provided under the current WSDOT channelization proposal, and would create significant adverse impacts to both traffic flow and safety at this intersection and private driveways along 17th Street SE. We continue to recommend that additional intersection capacity be built at this intersection to mitigate the adverse traffic impacts generated by the proposed ETL Direct Access Ramp through the business park. Specifically, the northbound approach should include additional turning capacity and queuing storage along 17th Street SE.

In addition, during a meeting between WSDOT and our Team in March 2020, WSDOT confirmed that the traffic operational assumptions (i.e., signal timing/performance) applied in the Action Alternative "would not be implemented" in the field. As such, the level of service and queuing conclusions using WSDOT's proposed intersection geometry and signal parameters in the NEPA EA would not reflect built conditions, but would create significant, but avoidable, transportation impacts to CPBCOA properties, internal access, safety, and general circulation unless otherwise fully mitigated.

Response L3-M2

WSDOT's intersection capacity analysis followed the procedures outlined in the *Highway Capacity Manual, 6th Edition*, which is the latest approved and industry standard manual used for traffic analyses. WSDOT used Synchro to model intersections using these methodologies. The *Highway Capacity Manual* takes into account several key elements that improve the efficiency of the 220th Street SE/17th Avenue SE intersection, including the low-volume driveway on the north leg of the intersection and coordination with adjacent

signals. WSDOT has previously provided these Synchro traffic analysis files to CPBCOA traffic consultants for their information.

WSDOT continues to coordinate with the City of Bothell, the CPBCOA, and other Project stakeholders to identify optimizations at this intersection. As noted in Response L3.3, since the EA was published in July 2020, WSDOT has made design refinements within the Project footprint. As part of ongoing coordination with the CPBCOA, WSDOT provided additional traffic analysis files reflecting these refinements to the CPBCOA traffic consultants in November 2020 and May 2021. Additional discussions with the CPBCOA traffic consultants have resulted in further updates to the traffic models to provide more detail on queuing. Please see Response L3-M6 for a summary of queuing findings developed at the request of the CPBCOA.

The statement in Comment L3-M2 regarding field implemented signal timing is incorrect. The signal timing and operational assumptions used in the analysis follow industry best practices and the best available information for 5-year and 25-year forecasts.

Comment L3-M3

City Comments/Concurrence on Study Assumptions and Methods. CPBCOA has yet to receive any concurrence from the City of Bothell on the review and acceptance by the City of WSDOT study assumptions, methods, or conclusions on the ETL Direct Access Ramp project. Given other comprehensive plan amendment, zoning, and private street conversion into public roadways under consideration by the City and CBCOA, we want to recognize that our Team cannot agree to any mitigation agreement or proposals until we also understand that the City will also accept the proposed public infrastructure that would be converted within the existing private roadway system currently owned by CPBCOA.

Response L3-M3

The City of Bothell indicated concurrence with WSDOT's study assumptions, methods, and conclusions in a letter to the CPBCOA on August 4, 2020, on which WSDOT was carbon-copied. That letter states in the fourth paragraph:

The City of Bothell has been working very closely with WSDOT through the analysis and development of the ETL Project elements and associated improvements needed to mitigate impacts related to the additional traffic generated by the new Direct Access Ramp. The methodology used by WSDOT in their efforts has also been coordinated with the City's current effort on the Canyon Park Subarea Plan transportation analyses efforts to ensure that assumptions are reasonable and accurate to develop future traffic conditions. WSDOT's analysis is based on adopted Comp Plan built scenario and City's subarea plan is based on analysis for several alternatives of proposed land use scenarios.

In a Sept. 17, 2020, letter to WSDOT, the City confirmed concurrence with WSDOT's assumptions, methods, and conclusions. The second paragraph of that letter states:

The City of Bothell has been working very closely with WSDOT throughout the analysis and development of the ETL Project elements and associated improvements needed to mitigate impacts related to the additional traffic generated by the new Direct Access Ramp. The methodology used by

WSDOT in their efforts has also been coordinated with the City's current effort on the Canyon Park Subarea Plan transportation analyses efforts to ensure that assumptions are reasonable and accurate to develop future traffic conditions. WSDOT's analysis is based on adopted Comp Plan built scenario and City's subarea plan update is based on analysis for several alternatives of proposed land use scenarios.

PSRC also provided written concurrence with WSDOT's traffic modeling methodology for the Project. Please see FONSI Appendix 7 for the full text of the documentation from City of Bothell and PSRC.

Comment L3-M4

In addition to the absence of City concurrence, neither the City's ongoing Subarea Planning within Canyon Park or WSDOT's analysis of the ETL Direct Access Ramp into the subarea are dependent or relying on each other's work. As an example, WSDOT assumes only currently funded transportation improvements, while as the City's comprehensive planning process allows for assumed additional improvements that do not yet have committed funding. To ensure consistency, at a minimum the City's planning process should only assume those currently funded projects used in WSDOT's ETL Direct Access Ramp project as a "baseline" and then evaluate other potential regional and local projects to support the alternative land use assumptions under consideration in the Subarea. This methodology will also inform both the City and WSDOT on the direct impacts that "new arterial roadway connections" into the CPBCOA that could result as part of ETL Direct Access Ramp project.

Response L3-M4

Please see Response L3-M3. WSDOT has been coordinating closely with the City throughout the development of the agencies' respective environmental documents. As stated in the City's letters both to the CPBCOA and to WSDOT (see FONSI Appendix 7), "WSDOT's analysis is based on adopted Comp Plan built scenario and City's subarea plan update is based on analysis for several alternatives of proposed land use scenarios."

The City's *Canyon Park Subarea Planned Action Draft EIS*, Addendum, and *Final EIS* all assume WSDOT's I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as a background assumption in their No Action Alternative. The number of trips in the City's No Action Alternative was similar to WSDOT's Build Alternative forecast, indicating that the analyses are closely aligned.

Section 5.1 and Appendix O, *Cumulative Effects*, of the Project EA acknowledge the City of Bothell's subarea planning effort. As described in the EA, WSDOT evaluated cumulative effects by using the process identified in WSDOT's *Guidance on Preparing Cumulative Impact Analysis*. Based on that guidance, WSDOT identified current and reasonably foreseeable future actions, which include "planned and funded transportation improvements and projected land use in local or regional comprehensive plans," as part of the cumulative effects analysis for the EA. Per WSDOT's guidance, WSDOT did not include unfunded projects, such as those identified in the City's *EIS*. WSDOT has provided updated

information about the status of the Subarea Plan and Planned Action EIS in FONSI Appendix 2, *Errata to the EA* and FONSI Appendix 8, *Cumulative Effects Updates*.

Comment L3-M5

Beyond the transportation network inconsistencies, the other significant difference between these two efforts is evaluating impacts of land use assumptions. The City's current Subarea Planning efforts envision significant increases in the density and types of land uses within the CPBCOA itself and the surrounding vicinity. As noted above, WSDOT did not apply any direct land use assumptions within the CPBCOA properties or local vicinity, but only factored local traffic volumes (beyond those directly generated by the new ETL Direct Access Ramp) using a regional growth factor. If any of the currently published land use scenarios or potential variants proposed as part of the Subarea Plan are adopted, the transportation infrastructure as part of the WSDOT ETL Direct Access Ramp and for the Canyon Park Subarea as a whole would fail any measure of concurrency or mobility performance measure of intersection level of service, congestion, or safety.

Response L3-M5

Please see Response L3.2 for more explanation of the assumptions and methodology that WSDOT used.

Comment L3-M6

ELT Impacts within the CPBCOA Properties and Cumulative Impacts. According to Appendix A: Transportation Discipline Report of the NEPA EA, all intersections in the CPBC that operate at LOS E or worse with the Build Alternative would also operate at LOS E or worse in the No Build Alternative. One intersection, 26th Place SE and 220th Street SE, would degrade from a "high" LOS E to a "low" LOS F in the 2045 AM peak hour under the Build Alternative. This conclusion however, is flawed and is written to give the impression that actual project impacts would not occur anywhere within the CPBCOA Properties.

As noted in our review of the underlying No Action Traffic Forecasts, Intersection Capacity Assumptions at the existing private signalized intersection within the business parking of 220th Street SE/17th Avenue SE, and the avoidance by WSDOT of acknowledging a concurrent Canyon Park Subarea Plan near completion by the City of Bothell that drastically increases both population and employment growth by the horizon year studied in the NEPA EA, would result in significant adverse traffic impacts within the CPBCOA Properties. Without consideration for cumulative impacts, the underlying transportation analytical traffic operational analysis concludes the following:

- The proposed geometry of both the 220th Street SE/17th Avenue SE and 220th Street SE/SR 527 signalized intersections and Synchro operational model concludes that nearly all approaches would experience vehicle queuing beyond the capabilities of the model to predict (requiring traffic simulation modeling to be performed to provide adequate lanes and intersection geometry conclusions for design purposes) and that 220th Street SE volume of flow would exceed available capacity during the

most congested p.m. peak period. In addition, as noted previously these “ideal signal timing/phasing assumptions” would never be implemented in the field (given the significant allocation of green time to the new ETL Ramp approach), and as such, both the conclusions of the NEPA EA analysis and the actual future Build condition would result in significant vehicle queuing along both 17th Avenue SE, 220th Street SE and throughout the entire business park due to diverted traffic demands. Specifically along 17th Avenue SE, vehicle queuing, overall traffic safety, and conflicting flows with exiting traffic volumes from current business would create an untenable lease or business operational environment for all existing properties associated with the CPBCOA.

Response L3-M6

WSDOT and FHWA maintain that the EA appropriately discloses Project impacts within the CPBC. EA Appendix A, *Transportation Discipline Report*, states on page 5-19, “The direct access ramps south of SR 527 at 17th Avenue SE would lead to a small increase in traffic volumes through the CPBC, mainly along 29th Drive SE and 220th Street SE. As a result, a slight increase in intersection average vehicle delay is expected.” Attachment E of EA Appendix A provides more detailed forecasts of expected delay at intersections in the study area.

Please see Responses L3-M3 and L3-M4 for more information about coordination between WSDOT and the City on assessing the impacts of the Project and the City’s Canyon Park Subarea Planned Action.

WSDOT’s traffic modeling indicates that with the Project, the 220th Street SE/SR 527 intersection will operate with the same or lower overall vehicle delays and LOS as compared to the No Build Alternative in the PM peak hour and would operate at LOS D or better in the AM peak hour. The 220th Street SE/17th Avenue SE intersection will operate with slightly higher delay with the Project as compared to the No Build Alternative in the AM peak hour. In the PM peak hour, the intersection will operate better than the No Build Alternative. In both peak hours, the intersection will still operate at an acceptable level (LOS D or better) with the Project.

The allocation of green time assumed at the 220th Street SE/17th Avenue SE intersection is appropriate for the travel volumes on the critical approaches.

Standard WSDOT and FHWA practice for NEPA EA traffic analyses is to report LOS and delay in the opening year and future design year as metrics for comparing intersection performance between the No Build and Build Alternatives. Other more detailed operational metrics, such as 95th percentile queue lengths, are generally not reported in planning level documents such as a NEPA EAs. However, since publication of the EA, at the request of the CPBCOA, WSDOT also modeled effects on 95th percentile queue lengths at intersections of interest within the CPBC under the No Build and Build Alternatives using SimTraffic, a simulation-based tool.

This additional analysis found that overall, at all intersections studied within the Canyon Park Business Center, the total 95th percentile queue lengths would decrease by

approximately 16 percent with the Project during the 2025 afternoon peak period. During the 2025 afternoon peak period, queue lengths on westbound 220th Street SE and along 26th Avenue SE would be shorter under the Build Alternative than the No Build Alternative. Queue lengths on northbound 17th Avenue SE would be minimally longer under the Build Alternative than the No Build Alternative during the 2025 afternoon peak period.

The analysis found that in 2045, in general, there would be longer queue lengths under both the No Build and Build Alternatives because of overall projected growth in traffic volumes on nearby roadways and within the CPBC. There would be some marginal improvements to queue lengths on 220th Street SE and 26th Avenue SE under the Build Alternative compared to the No Build Alternative, amounting to an approximately 8 percent and 27 percent reduction in the 2045 afternoon peak period, respectively.

Comment L3-M7

- As noted in the NEPA EA: “The Project would increase freeway volumes and, as such, more vehicles would use ramps to enter and exit the freeway.” At the existing SR 527 interchange, continuous congestion throughout a typical workday and on most weekend periods afternoon is generated by the at-grade freeway access and egress in the Canyon Park vicinity. Construction of a direct access ramp to the ETL via 17th Street SE will therefore, be a very attractive alternative to waiting at other existing ramp junctions to enter/exit the freeway, and the NEPA EA for the ETL facility into the existing CPBCOA properties clearly concludes the shift in demand will be significant. The issue remains, however, that WSDOT’s proposed traffic improvements within the CPBCOA and intersections that immediately serve the CPBCOA properties are limited to several “turn lane additions” as noted in the NEPA EA. However, these limited proposed improvements are intended to mitigate an increased “arterial-level directional flow” of nearly 800 vehicles per hour that would be created by the ETL Project. As such, the nexus between proposed mitigation and Project Impacts remains unacceptable under State or Federal standards.

Response L3-M7

Please see Response L3.3.

Comment L3-M8

- Primarily comprised of properties within the CPBCOA, the City of Bothell Canyon Park Subarea Plan contemplates a preferred future land use plan that directs 60 percent more households and 73 percent more employment levels beyond those contemplated within the No Action alternative reviewed in the NEPA EA for the I-405 ETL. Multiple additional arterial and intersection failures will occur throughout the existing primary private arterial system within the CPBCOA properties and regional State and local arterial systems unless appropriate “arterial

level capacity” and additional intersection turning capacity is provided as part of the I-405 ETL project within the CPBCOA.

- In total, the critical northbound flow along 17th Avenue SE during the PM peak hour would comprise the following elements under a cumulative assessment:
 - Existing Flow - 320 northbound vehicles.
 - 2045 No Action - 500 northbound vehicles.
 - 2045 With ETL Project - 1,270 northbound vehicles.
 - 2045 With Subarea Plan - 1,800 northbound vehicles.
 - In total, a cumulative increase of over 450 percent is forecast to occur in the design horizon year of the proposed ETL Project on 17th Avenue SE.

Response L3-M8

Additional growth in the Canyon Park subarea and subsequent impacts on the transportation system are addressed in the City of Bothell’s *Subarea Planned Action Draft EIS*, Addendum, and *Final EIS*, as noted in Response L3-M4.

Comment L3-M9

Cut-Through Traffic/Diversion of Traffic within the CPBCOA Properties. As WSDOT’s own analysis concludes that the westbound approach of 220th Street SE at SR 527 and the northbound approach of 17th Avenue SE at 220th Street would be operating “above capacity” and exceed available queue storage lengths under realistic operational assumptions, significant diversion of trips will occur throughout the CPBCOA properties (i.e., cut through traffic) as drivers attempt to avoid delay. Existing diversion of business park generate trips and other “cut-through traffic” regularly utilize interior site roadways that connect to private roadways, parking lots, and drive aisles via 20th Avenue SE to the north of 214th Street SE. Signage would be an ineffective measure to control or mitigate for these impacts throughout the existing private roadways, and the current assignment of trips east of 17th Avenue E considered within the Transportation Discipline Report is woefully underrepresented (under 10 percent of all new trips generated by the ETL project). Without a “public roadway system” to accommodate this new demand and without controls to direct public traffic generated by the ETL from the new I-405 lanes, additional significant traffic impacts beyond those identified in the NEPA EA would be created throughout the CPBCOA properties.

If you have any questions regarding the information presented in this memo, please call me at (206) 361-7333 x 101 or mikeread@tenw.com.

Response L3-M9

Please see Response L3-M6 for a summary of projected operations at the 220th Street SE/SR 527 and 220th Street SE/17th Avenue SE intersections. In summary, the direct access ramps south of SR 527 at 17th Avenue SE would lead to a small increase in traffic volumes through

the CPBC, mainly along 29th Drive SE and 220th Street SE. Attachment E of EA Appendix A provides more detailed forecasts of expected delay at intersections in the study area.

Additional diversion with the Build Alternative is expected to be minimal on CPBCOA private roadways east of 17th Avenue S, including 220th Street and 29th Avenue SE as compared to the No Build Alternative. As previously stated, delays at the SR 527/220th Street intersection would be lower with the Build Alternative than with the No Build Alternative.

Comment L4 – Northshore School District, August 6, 2020

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L4



Northshore
School District

Capital Projects

22105 23rd Drive S.E.
Bohelli, WA 98021-4409
(425)408-7850

August 6, 2020

WSDOT I-405/SR 167 Megaprogram
Attn: Robert Woeck
I-405/SR167 Megaprogram Environmental Engineer Manager
600 108th Avenue NE, Suite 405
Bellevue, WA 98004

**Re: Northshore School District – Area Properties (Schools/Support Facilities)
I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
WSDOT Parcel Number 1-24771**

Dear Mr. Woeck,

This letter is submitted on behalf of the Northshore School District (District) and is in response to the WSDOT Express Toll Lanes Improvement Project (Project). The District received a letter dated July 1, 2020 signed by Rosalia A. Jennifer; however, the letter was addressed to someone not employed by the District. As a result, the letter was not received until July 22, 2020 by our department. This oversight highlights the need to directly involve the District through the Environmental Assessment (EA) process in a timely manner. Comments provided in this letter are related to the Build Alternative (Project) only.

As described in the EA, the Project includes improvements to I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (milepost 21.79 to 27.06), which proposes roadway, structural, non-motorized, and transit improvements on Interstate 405 (I-405) between south of State Route (SR) 522 and SR 527 and other local road improvements. As outlined in the EA, the improvements would reduce travel times and increase safety. As stated in the EA, “The Project would deliver faster and more reliable trips on I-405 for most drivers, carpools, and transit riders using both the ETLs and general purpose (GP) lanes.” The District owns several facilities within the location of the Project area as well as the District’s Transportation Center, which is adjacent to the Canyon Park Business Center. The District’s 150 drivers transport 17,000 students to and from school on a daily basis. Transportation covers approximately 1.5 million miles in buses and 150,000 miles in cars and vans each year. It is critical to the District, that impacts be minimized as District vehicles travel to and from the Transportation Center transporting students throughout the school day. Bus routes are timed closely with school start and end times and potential road delays from construction or changed road systems could impact schools and service districtwide.

The District’s plan is to open this coming school year with 100% Distance Learning. The implementation team at the District is also working on the “stage” model where over time students

L4.1

L4.2

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will return to campuses for face-to-face instruction. With construction of the Project planned for 2021-2025 timeframe, school facilities will at some point be in operation. The EA discusses the need for agency coordination and input, but there is limited discussion about the District facilities and no discussion about potential impacts to the District Transportation Center. WSDOT acknowledges impacts to the Canyon Park Business Center (CPBC) and that there will be an increase in traffic volumes in the CPBC. As stated in the EA, "Canyon Park area would operate worse with the Project, and WSDOT is determining potential mitigation. WSDOT also worked with Bothell to reach agreement on appropriate assumptions about future population growth and land uses in Canyon Park." As potential mitigation for increased traffic, WSDOT should consider improvements to 214th St SE and 20 Ave SE. The District's Support Services Center, Secondary Academy for Success and the new Innovation Lab High School are located within CPBC. While the District encourages continual coordination with the Canyon Park Business Center Owners Association (CPBCOA), WSDOT should be working directly with the District to better understand and mitigate impacts to the District. Section 6.2.1 Transportation of the EA makes the following comment:

L4.2
cont'd

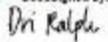
- *Maintain existing capacity during construction activities to the extent possible. Lane or roadway closures will be minimized and scheduled to occur when there is the least effect on traffic in the study area, such as overnight and weekend time periods.*
- *Coordinate with the local agencies and other projects to prepare a Traffic Management Plan prior to making any changes to the traffic flow or lane closures. Local agencies, the public, school districts, emergency service providers, and transit agencies will be informed of the changes in advance through the media, the Project website, and an email listserv. Pedestrian and bicycle circulation will be maintained as much as possible during construction. For any road, bicycle lane, and/or sidewalk closure, clearly marked detours will be provided.*

The District should be included in the discussion related to the Traffic Management Plan and not just be notified prior to a media circulation.

I encourage direct contact and discussion with the District on the Project. All contact and information should be sent to me; contact information is included in this letter. The District appreciates the opportunity to comment on the EA and looks forward to further conversation with WSDOT as this moves forward. Should you have any questions or need further clarification, you may contact me directly at 425.408.7864.

L4.3

Sincerely,

DocuSigned by:

7407E96346784EE...

Dri Ralph
Capital Projects Director
dralph@nsd.org
425.408.7864

Comment L4.1

This letter is submitted on behalf of the Northshore School District (District) and is in response to the WSDOT Express Toll Lanes Improvement Project (Project). The District received a letter dated July 1, 2020 signed by Rosalia A. Jennifer; however, the letter was addressed to someone not employed by the District. As a result, the letter was not received until July 22, 2020 by our department. This oversight highlights the need to directly involve

the District through the Environmental Assessment (EA) process in a timely manner. Comments provided in this letter are related to the Build Alternative (Project) only.

As described in the EA, the Project includes improvements to I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (milepost 21.79 to 27.06), which proposes roadway, structural, non-motorized, and transit improvements on Interstate 405 (I-405) between south of State Route (SR) 522 and SR 527 and other local road improvements. As outlined in the EA, the improvements would reduce travel times and increase safety. As stated in the EA, "The Project would deliver faster and more reliable trips on I-405 for most drivers, carpools, and transit riders using both the ETLs and general purpose (GP) lanes." The District owns several facilities within the location of the Project area as well as the District's Transportation Center, which is adjacent to the Canyon Park Business Center. The District's 150 drivers transport 17,000 students to and from school on a daily basis. Transportation covers approximately 1.5 million miles in buses and 150,000 miles in cars and vans each year. It is critical to the District, that impacts be minimized as District vehicles travel to and from the Transportation Center transporting students throughout the school day. Bus routes are timed closely with school start and end times and potential road delays from construction or changed road systems could impact schools and service districtwide.

Response L4.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). WSDOT apologizes for any inconvenience caused by the mistake in recipient information for the letter mailed by our Real Estate Services group. We corrected the error upon notification by the Northshore School District and resent a letter to Director Ralph in July 2020. WSDOT will continue to designate Director Ralph as the primary point of contact per the district's instructions.

WSDOT is aware of the facilities owned and operated by the Northshore School District in the vicinity of the Project. WSDOT is committed to addressing mobility impacts to all road users, including school buses, that may occur during construction. As discussed at a meeting with the Northshore School District on October 5, 2020, WSDOT looks forward to continued coordination with the district as Project design and construction move forward.

Comment L4.2

The District's plan is to open this coming school year with 100% Distance Learning. The implementation team at the District is also working on the "stage" model where over time students will return to campuses for face-to-face instruction. With construction of the Project planned for 2021-2025 timeframe, school facilities will at some point be in operation. The EA discusses the need for agency coordination and input, but there is limited discussion about the District facilities and no discussion about potential impacts to the District Transportation Center. WSDOT acknowledges impacts to the Canyon Park Business Center (CPBC) and that there will be an increase in traffic volumes in the CPBC. As stated in the EA, "Canyon Park area would operate worse with the Project, and WSDOT is determining potential mitigation. WSDOT also worked with Bothell to reach agreement

on appropriate assumptions about future population growth and land uses in Canyon Park.” As potential mitigation for increased traffic, WSDOT should consider improvements to 214th St SE and 20 Ave SE. The District’s Support Services Center, Secondary Academy for Success and the new Innovation Lab High School are located within CPBC. While the District encourages continual coordination with the Canyon Park Business Center Owners Association (CPBCOA), WSDOT should be working directly with the District to better understand and mitigate impacts to the District. Section 6.2.1 Transportation of the EA makes the following comment:

- Maintain existing capacity during construction activities to the extent possible. Lane or roadway closures will be minimized and scheduled to occur when there is the least effect on traffic in the study area, such as overnight and weekend time periods.
- Coordinate with the local agencies and other projects to prepare a Traffic Management Plan prior to making any changes to the traffic flow or lane closures. Local agencies, the public, school districts, emergency service providers, and transit agencies will be informed of the changes in advance through the media, the Project website, and an email listserv. Pedestrian and bicycle circulation will be maintained as much as possible during construction. For any road, bicycle lane, and/or sidewalk closure, clearly marked detours will be provided.

Response L4.2

For the Project EA, WSDOT considered effects on local street intersections, including several intersections in and around the Canyon Park Business Center, and compared these effects in the future if the Project were built (Build Alternative) and not built (No Build Alternative). Refer to Section 5.4.2 of EA Appendix A, *Transportation Discipline Report*, including Exhibits 5-13 and 5-14, for more detailed findings for each intersection studied. One key intersection, 220th Street SE and SR 527, will be expanded with the Project and is expected to operate better than if the Project were not built.

At this time, no improvements are proposed at the 214th Street SE/20th Avenue SE intersection through this Project. The Transportation Management Plan (TMP) will be developed later in the design process, and WSDOT will coordinate with the Northshore School District as part of developing the TMP. Please see responses L4.1 and L4.3 for further information about coordination with the Northshore School District.

Comment L4.3

The District should be included in the discussion related to the Traffic Management Plan and not just be notified prior to a media circulation.

I encourage direct contact and discussion with the District on the Project. All contact and information should be sent to me; contact information is included in this letter. The District appreciates the opportunity to comment on the EA and looks forward to further conversation with WSDOT as this moves forward. Should you have any questions or need further clarification, you may contact me directly at 425.408.7864.

Response L4.3

WSDOT looks forward to further coordination with Northshore School District as the Project progresses. As noted in Response L4.2, the TMP will be developed by the design-build contractor later in the design process prior to Project construction. WSDOT will coordinate with the Northshore School District and other stakeholders in the Project area as the plan is developed.

Comment L5 –Snohomish County, August 6, 2020

L5


Snohomish County
Public Works
Transportation & Environmental Services

3000 Rockefeller Ave., M/S 607
Everett, WA 98201-4046
(425) 388-3464
www.snoco.org

Dave Somers
County Executive

August 6, 2020

WSDOT I-405/SR 167 Megaprogram
ATTN: Attn: Robert Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager
600 108th Ave NE, Suite 405
Bellevue, WA 98004
I405comments@wsdot.wa.gov

Subject: I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project - Environmental Assessment

To whom it may concern:

Snohomish County Public Works has reviewed the above subject project.

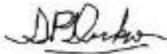
In reviewing the plan, we offer the following comments/recommendations:

This project will provide a number of important benefits for Snohomish County. These include addressing bottlenecks at Canyon Park, improving vehicle speed, throughput, and reliability on I-405, improving transit speed and reliability on this section of I-405, providing a direct transit/carpool connection to the Canyon Park Park and Ride Lot from I-405 that does not exist today, and providing a direct transfer connection between the Swift Green Line and the future I-405 BRT system providing continuous BRT service from McCollum Park and Ride to Renton.

One concern we have is that the project will impact the intersection of SR 524/SR 527, which is already operating at Level of Service F in the pm and the EA shows it will continue to degrade in the build years of 2025 and 2045. We request that WSDOT evaluate and consider including improvements to this intersection as part of the mitigation measures for this I-405 express toll lane project.

If you have any questions concerning these comments, please feel free to contact Max Phan, Engineering Manager, Transportation and Environmental Services, at 425.388.3109 or MPhan@co.snohomish.wa.us.

Sincerely,



Stephen Dickson
Director – Transportation and Environmental Services

L5.1

Comment L5.1

Snohomish County Public Works has reviewed the above subject project.

In reviewing the plan, we offer the following comments/recommendations:

This project will provide a number of important benefits for Snohomish County. These include addressing bottlenecks at Canyon Park, improving vehicle speed, throughput, and reliability on I-405, improving transit speed and reliability on this section of I-405, providing a direct transit/carpool connection to the Canyon Park Park and Ride Lot from I-405 that does not exist today, and providing a direct transfer connection between the Swift Green Line and the future I-405 BRT system providing continuous BRT service from McCollum Park and Ride to Renton.

One concern we have is that the project will impact the intersection of SR 524/SR 527, which is already operating at Level of Service F in the pm and the EA shows it will continue to degrade in the build years of 2025 and 2045. We request that WSDOT evaluate and consider including improvements to this intersection as part of the mitigation measures for this I-405 express toll lane project.

If you have any questions concerning these comments, please feel free to contact Max Phan, Engineering Manager, Transportation and Environmental Services, at 425.388.3109 or MPhan@co.snohomish.wa.us.

Response L5.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA).

Regarding the intersection of SR 527 and SR 524, as noted, the EA shows that this intersection currently operates at level of service (LOS) F and will continue to operate at LOS F in the afternoon with or without the Project in the future. Overall, WSDOT expects that this intersection will perform the same or slightly better with the Project during the afternoon peak period. The City of Bothell has identified several future transportation improvements at this location that are outside the scope of the Project.

WSDOT looks forward to continued coordination with Snohomish County regarding the Project.

Comment L6 –Muckleshoot Indian Tribe Fisheries Division, August 6, 2020

L6



**MUCKLESHOOT INDIAN TRIBE
Fisheries Division**

39015 - 172nd Avenue SE • Auburn, Washington 98092-9763
Phone: (253) 939-3311 • Fax: (253) 931-0752



August 6, 2020

Ms. Megan White
Director Environmental Services Office
Washington State Department of Transportation
P.O. Box 47331
Olympia, WA 98504

Ms. Lindsey Handel
Urban Transportation Engineer
Federal Highways Administration
711 South Capitol Way, Suite 501
Olympia, WA 98501

RE: I-405, SR 522 Vicinity to SR 527, Express Toll Lanes Improvement Project, Environmental Assessment under NEPA

Dear Ms. White and Ms. Handel:

Our Habitat Program staff have reviewed the NEPA Environmental Assessment and appendices for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project. We offer the following comments in the interest of protecting and restoring the Tribe's treaty-protected fisheries resources.

WSDOT provided us with early coordination on this project with respect to stream classification and review of culvert assessments. We were also given the opportunity to review discipline reports in advance of the EA. We appreciate these opportunities. We expect continued coordination as we work through our comments and project permitting with both WSDOT and FHWA.

Our specific comments to the EA and the relevant discipline reports are attached. It is our preference that we discuss these comments further before any changes to these materials or the FONSI is completed. Please send me an email to set up this discussion at karen.walter@muckleshoot.nsn.us.

Sincerely,

Karen Walter (digital signature)

Karen Walter
Watersheds and Land Use Team Leader

Cc: Sandra Manning, USACOE, Seattle District
Michael McDonald, NMFS

L6.1

Muckleshoot Indian Tribe Fisheries Division Habitat Program
Comments to I-405 Bellevue ETL SR 522 to SR 527 NEPA EA

August 6, 2020
Page 2 of 12

Environmental Assessment and Project Concerns

1. Fish Barrier Culverts

a. Project culverts

The EA states:

This Project would restore stream connections at 5 fish barriers; retain 1 of the fish barriers as a hydraulic crossing, and restore the 2 remaining barriers as part of separate projects in the I-405 corridor.

Please clarify which culverts on which streams this statement applies.

L6.2

b. I-405 NE 85th Street Interchange

The EA states:

I-405, NE 85th Street Interchange and Inline Station Project (in preliminary engineering), funded by Sound Transit, would build a new inline transit station, direct access ramps, and interchange improvements at NE 85th Street in Kirkland to support Sound Transit's planned I-405 BRT system and address a fish barrier.

Please clarify which fish barrier on which stream would be addressed with this project and clarify which state agency is responsible for this project. Finally, please clarify when this barrier would be addressed.

L6.3

c. Culvert 998602 on Juanita Creek

The Ecosystems Report states:

998602, Juanita Creek at I-405 MP 21.94 – The identified barrier is located within the Project limits; however, the only Project activity that will occur at this crossing is restriping of the existing pavement and installing signage. As a result, this barrier will not be corrected as part of this Project, but it will be considered as part of a currently funded project on the I-405 corridor.

Please clarify which "currently funded project on I-405 corridor" this is and when this culvert will be replaced.

L6.4

d. Culvert 102 N128 on 228th Street SE, South Fork Perry Creek

We understand that this culvert is not a WSDOT-owned culvert. However, since there are improvements in the area occurring, including planned CIP's by Bothell, WSDOT should be working with Bothell to get this culvert replaced as part of this project to maximize fish passage benefits in Perry Creek.

L6.5

e. Stream 66 culvert on I-405

L6.6

The EA states:

Coordination with the Muckleshoot Indian Tribe is ongoing to develop an alternate solution for the barrier at Stream 66 by restoring the connection between Stream 25.0L and North Creek to provide greater fisheries and fish habitat benefits than the minimum design required by the Injunction.

WSDOT needs to describe this culvert in the context of the federal court injunction and how the project is meeting its obligations under those requirements. For example, will this culvert be modified in any shape or form as part of this project? Does a culvert replacement project meet extraordinary site conditions? More information is needed before the Tribe can realistically evaluate any "alternative solutions" that WSDOT may develop. At this time, the Tribe has not agreed to forego the federal court injunction requirements to make the Stream 66 culvert fish passable and any statements to the contrary are inaccurate.

Also, please explain the statement in the Appendix N1: Biological Assessment Update:

The barrier at Stream 66 will not be corrected.

f. Crystal Creek culvert #934994

The Ecosystem Report states:

934994, Crystal Creek at I-405 MP 26.74 – The identified barrier is located within the Project limits; however, this barrier will be corrected as part of a separate project, so that WSDOT can develop an improved stream connection that better aligns with its historical connection to Crystal Creek and provides equivalent or better fish passage and fisheries habitat benefits. Construction of the fish barrier correction at Crystal Creek is expected in the same timeframe as the Project.

Please explain exactly what separate project is referred to here where the I-405 Crystal Creek culvert will be replaced with a fish passable structure.

2. Sammamish River impacts

a. Construction impact concerns

As noted in the EA, the project proposed to remove two existing bridges (and their piers). The inwater work in the Sammamish River could require the construction of temporary work bridges and would require in-water work, which may include temporary use of cofferdams and a work barge, depending on the contractors' chosen means and methods.

This inwater work is expected to occur over 16 weeks. The EA and appendices fail to consider potential construction impacts to returning adult salmon

The EA states:

Temporary noise impacts would occur during Project construction due to the use of a vibratory

L6.6
cont'd

L6.7

L6.8

Muckleshoot Indian Tribe Fisheries Division Habitat Program
Comments to I-405 Bellevue ETL SR 522 to SR 527 NEPA EA

August 6, 2020
Page 4 of 12

hammer for installation of the sheet piles around the four piers in the Sammamish River during the approved in-water work window. No impact pile driving is anticipated to occur as a result of the Project. Noise impacts are expected to take approximately 80 hours over a single construction season. In-water work would only occur during the approved in-water work window for fisheries. The underwater sound for installation of the sheet piles is unlikely to result in injury to juvenile anadromous salmonids as they are less likely to be present in the Sammamish River during the in-water work window.

L6.8
cont'd

This assessment clearly ignores potential impacts to returning adult salmon. Further, the BA states that:

"Up to 5 acres of the Sammamish River may be exposed to underwater noise above background levels from vibratory pile driving or removal."

With the exception of the few Chinook heading to Swamp Creek, the vast majority of adult Chinook and sockeye returning to the Sammamish River to migrate to spawning habitats must pass through the project area. These adult salmon experience existing lethal and sublethal water temperature and dissolved oxygen conditions starting from their entrance into the Ship Canal above the Ballard Locks and continues as they migrate through Lake Washington, the Sammamish River, and Lake Sammamish. This information stems from a number of studies. The MIT has tagged adult Chinook and sockeye at the Locks over various years starting in 1998 (Fresh et al 1999). The U.S. Fish and Wildlife Service found pre-spawning mortality occurring in adult Chinook in the Sammamish River in 2001 (Tabor 2002). Pre-spawning mortality and other impacts to adult Chinook and sockeye were described in the Sammamish River Action Plan (Tetra Tech 2002):

Elevated temperature is likely the most significant limiting factor to salmon species in the Sammamish River because it is well within the range of causing adverse physiological and behavioral effects, and frequently in the lethal range. High temperatures in the Sammamish River can affect the reproductive health and survival of all adult salmon entering the Sammamish Watershed and potentially affect smoltification, smolt migration, and habitat suitability for juvenile rearing. Adult chinook and sockeye salmon are the primary species and age group likely to be adversely affected by elevated water temperatures (Martz, et al. 1999).

L6.9

This is because adults of these species enter the basin in August and September when temperature is typically highest. This migration pattern coincides with temperatures that have both lethal and sub-lethal effects, including death, disorientation, egg retention, production of abnormal embryos or alevins, high fry or alevin mortality, increased vulnerability to disease of adults and offspring, and other physiological problems (Berman & Quinn 1991 and 1989).

The Muckleshoot Tribe also commissioned a study to look at existing adult holding conditions and ways to improve them (R2, 2010). Finally, King County funded R2 to do a pre-spawning mortality study in the Sammamish River in 2015 (R2 2016). This study states:

*Elevated water temperatures in the Sammamish River during the July-September period have been identified as a significant factor limiting production of Chinook salmon (*Oncorhynchus tshawytscha*) and other anadromous salmonid species during their spawning migration to Issaquah Creek, the Washington Department of Fish and Wildlife (WDFW) Issaquah Creek Hatchery, Bear Creek, and other tributaries downstream (WRIA 8 Steering Committee 2005). Daily maximum temperatures frequently exceed 20°C near the Lake Sammamish outlet during this period and have exceeded 26.6°C (King County online data).*

Elevated water temperatures may also adversely affect the fitness of adult Chinook salmon, delay their arrival at spawning grounds, or increase their susceptibility to disease/parasites (McCullough et al. 2001). Analyses of tracking data collected collaboratively by Washington Department of Fish and Wildlife (WDFW), the Muckleshoot Indian Tribe Fisheries Division (MITFD), the U.S. Fish and Wildlife Service (USFWS), and King County indicate that adult Chinook delay entry into the Sammamish River until water temperatures become more tolerable, or alternatively enter the river beginning in mid to late August and hold in localized cooler pockets associated with groundwater and at the confluences of cooler tributaries (Fresh et al. 1999). Water temperatures during this period can be within the range of those causing adverse physiological and behavioral effects. Acoustic-telemetered Chinook salmon were found to spend an average of 9 days in the Sammamish River in 1998 and showed a preference for pools with a maximum residence time in a single pool of 24 days. Temperatures during that period were often near lethal levels (Fresh et al. 1999).

L6.9
cont'd

These impacts occur without any projects having inwater effects in the Sammamish River. Any delays in migration due to inwater noise, construction and general disturbance should be viewed as a significant adverse impact to these returning adult Chinook and sockeye and be mitigated accordingly.

Also, please note that the Muckleshoot Tribe may be actively tracking tagged adult salmon in the Sammamish River during this project and will need to be able to do so without interference. We request that WSDOT and FHWA coordinate with us on this issue to ensure this outcome occurs.

b. Permanent Impacts

The project proposes to replace the two existing bridges over the Sammamish River with three new larger bridges that would “increase overwater shading by about 13,000 square feet (0.3 acre).”

Bridge shading impacts are not the only consideration. A wider bridge structure precludes the reestablishment of trees needed not only for shade, but future wood recruitment, leaf litter and other riparian functions. The EA fails to consider this or proposed mitigation for these permanent impacts to the Sammamish River riparian corridor.

L6.10

Similarly, please clarify this statement:

Muckleshoot Indian Tribe Fisheries Division Habitat Program
Comments to I-405 Bellevue ETL SR 522 to SR 527 NEPA EA

August 6, 2020
Page 6 of 12

Restoration of temporarily disturbed areas along the Sammamish River and fish barrier correction locations after construction of the Project will improve riparian habitat by replacing non-native species with native woody species.

L6.10
cont'd

c. Sammamish River outfall concerns

Please clarify if the location of the new Sammamish River outfall is in the same location where King County recently did a bank stabilization project. If so, this project had habitat and riparian mitigation requirements for its HPA that will need to be replaced if impacted by this project.

L6.11

3. Other stream and stream impact concerns

a. Stream classification

Stream KL14 as shown in Table 4 of the Wetland and Stream Report is incorrectly classified. It is Type F waters based on the 2019 field review that we did with WDFW and Bothell staff. The stream met the physical criteria for presumed fish habitat under WAC 222-16-031.

L6.12

Also, the project website was missing all of the appendices referenced for the Wetland and Stream Assessment Report (Appendix L). We would appreciate it if WSDOT would make these appendices available.

L6.13

b. Stream and stream buffer impacts

The EA states:

The Project would result in permanent effects of about 16,600 square feet (0.37 acre) on streams and 15,900 square feet (0.36 acre) of stream buffers. Some trees to be removed at stream crossings.

The Project would temporarily disturb up to 4 acres of stream buffers because of fish barrier corrections and site access needs. Most of the temporary stream impacts will be mitigated on site by installing restored stream crossings and restoring native riparian vegetation wherever possible. Disturbance of the streambed and banks would be limited to those necessary to construct new outfalls.

L6.14

Currently, there is no mitigation proposed for the permanent impacts to streams. We expect to see wood added to all impacted streams consistent with the Fox and Bolton (2007) metrics as one mitigation measure for permanent impacts to streams and their buffers.

The EA also states:

L6.15

Construction would result in approximately 5,700 square feet (0.13 acre) of temporary stream impacts and approximately 143,400 square feet (3.3 acres) of temporary stream buffer impacts. The Project's temporary stream and stream buffer impacts would result from the five proposed restored stream connections, channel regrading, roadway widening, and installing bridge abutments and retaining walls.

L6.15
cont'd

The temporary stream impacts are underestimated as they don't account for instream work to be done on the 7+ streams where culverts will be replaced. Culvert projects generally include stream graded and stream fill and should be quantified accordingly. In fact, the BE states:

Typical work for restoring stream connection includes excavation, removal of the existing fish barrier, installation of the fish barrier replacement, and backfilling. Realignment of the stream channel may be required depending on configuration of the existing channel alignment.

The Ecosystems Report states:

None of the road widening or barrier corrections would result in a net loss of in-stream habitat due to the improved access to upstream habitat.

L6.16

Please clarify this statement. Without adding wood and habitat features and since only two culverts are proposed to be shorter than current lengths, this statement is invalid. Most of the streams in the BE do not show instream habitat improvement estimates. Further, when considering additional riparian areas permanently impacted by the widened roadway; stormwater facilities and other built features, then there will likely be net loss of instream habitat due to the limitations these facilities have to maintain natural stream and riparian processes.

4. Stormwater, stream flows, and salmon concerns

a. Stormwater impact concerns

1. Dissolved oxygen increases

There would be an increase in dissolved copper across 11 of the Threshold Discharge Areas in the Sammamish River and North Creek. The EA dismisses potential impacts from these increases without fully evaluating them against potential impacts to salmon. (See <http://www.nwfsc.noaa.gov/research/divisions/efs/ecotox/ecoiimpacts.cfm> for more information about this research and links to published scientific literature. The increases in dissolved copper does not consider the existing baseline water quality which could exceed the sublethal levels for juvenile salmon from dissolved copper.

More information is needed to demonstrate the project will not adversely affect salmon production and

L6.17

survival.

L6.17
cont'd

2. Water temperature

Another concern is the proposed new stormwater outfall discharging to the Sammamish River. Elevated water temperatures are a threat to salmon in the Sammamish River, with daily maximum temperatures that frequently exceed 20 °C near the Lake Sammamish outlet and have exceeded 26.6 °C. Adult Chinook and sockeye salmon enter the Sammamish River beginning in mid to late August, when elevated temperatures are within the range of those causing adverse physiological and behavioral effects. Pre-spawn mortality of Chinook salmon was documented in 1998 and 1999 and is presumed to be the result of high temperatures (Fresh et al. 2000). In most years, water temperatures in the Sammamish River are warm enough to create severe thermal stress on migrating adult chinook and sockeye (U.S. Army Corps of Engineers et al. 2002). The Sammamish River is listed as water quality impaired for temperature and dissolved oxygen on Washington's 303(d) list. Thermal refuge for adult salmon is already limited; therefore, we are concerned that new stormwater discharges from the project may make the existing condition worse. The new stormwater ponds and outfalls should be set back from the Sammamish River, the new pond fully shaded and the conveyance trenches from the setback outfalls should also be shaded to further cool any stormwater discharges to the Sammamish River. This approach would also reduce in-water impacts to the Sammamish River.

L6.18

3. Stormwater discharge water quantity concerns

The project also proposes to construct three new stormwater outfalls: one on the Sammamish River and two on the North Fork of Perry Creek.

The EA and Discipline reports fail to consider potential impacts from these stormwater discharges to juvenile salmon. Stormwater discharges can adversely affect juvenile salmon in a variety of ways, including increasing water velocities in margins and other rearing habitats (See www.nwr.noaa.gov/1habcon/habweb/habguide/stormwater_032003.pdf) for a summary of these impacts; also Moscrip and Montgomery (1997)). Furthermore, the WDOE Stormwater Management Manual acknowledges that the engineered stormwater conveyance, treatment, and detention systems can reduce the water quality and hydrology impacts, but they cannot replicate the natural hydrologic functions of the natural watershed that existed before development, nor can they remove sufficient pollutants to replicate the water quality of pre-development conditions. The project's stormwater should be managed to avoid increases in flow frequencies and durations to receiving waters that contain salmon to avoid these potential impacts. The amount of infiltrated stormwater that could be infiltrated is unknown; therefore, the potential impact to salmon from discharged stormwater that increases instream water velocities is unknown. Additional information is needed. In areas where stormwater cannot be infiltrated and must be discharged to streams, then additional mitigation may be necessary to avoid adversely affecting salmon in the receiving waters. In these cases, we recommend that instream wood be added to the receiving waterbody to reduce water velocities and create refugia habitat.

L6.19

Also, none of the documents we reviewed considered the impacts to stream baseflows from the permanent loss of vegetation and the increase in impervious surfaces. There is no data and analysis assessing the impacts from the 23 additional acres of impervious surfaces, and the 24 acres of trees to be removed (from BE), and 15.5 acres of cleared vegetation to stream baseflows. Part of this analysis should discuss how much existing impervious surface exists in each basin and how much will be added as a result of the project and if the existing watershed already experiences a reduction in baseflows without the project. Potential project mitigation measures including infiltration should also be part of this discussion. From all of this information, a detailed and informed environmental assessment for each impacted basin can be determined.

L6.19
cont'd

5. Artificial Lighting potential impacts

Another project impact that is not adequately assessed is artificial lighting and increases in juvenile salmon predation. Artificial lighting is noted to increase with the expanded bridge, including more lighting on water surfaces. There are several published papers from the Lake Washington basin (Tabor et al. 2004), as well as, other scientific research describing the environmental effects from artificial lighting. These potential impacts were not fully discussed or analyzed in the materials we reviewed. The project needs to minimize artificial lighting during construction and reduce existing artificial lighting conditions post construction to reduce juvenile salmon predation. More information and full lighting details need to be provided.

L6.20

6. Wetland Impacts and mitigation concerns

The EA states:

Project would result in up to 6 acres of permanent effects on wetlands and up to 4 acres of permanent effects on wetland buffer. Project construction would temporarily affect about 0.25 acre of wetlands and up to 1 acre of wetland buffers in the study area.

Please clarify where unavoidable wetland impacts will be mitigated. The BA says that

Permanent impacts to wetlands and wetland buffers are proposed to be mitigated both on-site and off-site. WSDOT plans to provide compensatory wetland mitigation by purchasing credits from the Keller Farm Mitigation Bank, and on-site mitigation is currently proposed along Par Creek.

However, the mitigation report says

Currently, WSDOT plans to provide compensatory wetland mitigation at the Happy Valley Mitigation Site and the Keller Farm Mitigation Bank.

Also, if the project is impacted wetlands along the Sammamish River, we expect those impacts to be mitigated at wetlands along the Sammamish River. There are plenty of opportunities to do wetland mitigation along the Sammamish, particularly in the Kenmore area where areas are publically owned.

L6.21

L6.22

Similarly with Wetland 24.00L along North Creek at the UWA Bothell site. This wetland is noted to be a mitigation site. The project will partially fill this wetland and its buffer will be partially filled because of the widening of southbound I-405 and the associated embankment. These impacts should be mitigated elsewhere in North Creek basin to compensate for impacting a compensatory mitigation site and ensure no net loss in this subbasin.

L6.23

For those wetlands that fall within Lake Washington Service Area as defined by King County's ILF program should be mitigated in that program.

L6.24

We do not support the use of the Happy Valley mitigation site for this project. We never agreed to advance mitigation or additional crediting at this site and it is too far removed from project impacts and the salmon resources in those subbasins.

L6.24

The wetland buffer impacts should occur where there are wetlands that will remain. The mitigation plans to port all of the wetland buffer impacts to Par Creek area. Instead, wetland buffers should be mitigated at Wetlands 26.70R, 26.77R and 26.78R along Queensborough Creek and wetland 26.55L along North Fork Perry Creek.

L6.25

7. Cumulative Impacts concerns

The cumulative impact area of analysis of 0.5 miles is too low when considering anadromous salmon. In fact, the BE notes that "*Up to 5 acres of the Sammamish River may be exposed to underwater noise above background levels from vibratory pile driving or removal*" which exceeds the 0.5 mile assessment for cumulative impacts. This is important because there are other Sammamish River projects ongoing or will start that will also affect adult and juvenile salmon that have not been sufficiently considered in total. For example, Kenmore is currently replacing the western half of the 68th Avenue NE Bridge crossing on the Sammamish River. Sound Transit will be starting its project with a new bridge crossing over the Sammamish River near SR 520. These projects will likely have some overlap in construction periods, thus affecting the same returning adult salmon and outmigrating juvenile salmon.

L6.26

8. Environmental Justice concerns

The EA also lacks discussion regarding the potential impacts to the Muckleshoot Indian Tribe's treaty-protected fisheries resources. We raised this concern in our October 24, 2001 comment letter to the corridor-wide DEIS for I-405. WSDOT concurred with the Tribe's comments and re-drafted the Environmental Justice section in the I-405 Master Program FEIS as a result. The extent of this project's impacts in combination with other projects and previous I-405 projects in the Lake Washington basin has implications for fish production and survival and potentially opportunities for Muckleshoot members to exercise their treaty fishing rights. Muckleshoot Tribal members are a minority group that can be uniquely and disproportionately impacted. If treaty-resources are impacted by this project, such as decreases in stream and wetland functions, then there is a potential for the Muckleshoot Indian Tribe to be disproportionately

L6.27

Muckleshoot Indian Tribe Fisheries Division Habitat Program
Comments to I-405 Bellevue ETL SR 522 to SR 527 NEPA EA

August 6, 2020
Page 11 of 12

impacted by a loss of fishing opportunities. This concern was not considered in the EA as an environmental justice issue. For example, salmon counts from the Ballard Locks this year (2020) indicate that the sockeye run is complete with less than 23,000 passing through the Locks – another alarmingly low run. Chinook numbers appear to be tracking the 10-year average at this time which is still too low for any fishing opportunities. Therefore, we disagree with this statement:

The Project would not result in disproportionately high and adverse operational effects on environmental justice populations; therefore, no specific environmental justice mitigation is required.

The project needs to address the natural resources impacts and mitigation issues identified above to ensure that the Tribe and its treaty protected fisheries resources are not adversely affected by this project.

L6.27
cont'd

References

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- Fox, M. and S. Bolton. 2007. A Regional and Geomorphic Reference for Quantities and Volumes of Instream Wood in Unmanaged Forested Basins of Washington State. *North American Journal of Fisheries Management* 27:342-359.
- Fresh, K.L., E. Warner, R. Tabor, and D. Houck. 2000. Migratory behavior of adult Chinook salmon spawning in the Lake Washington watershed in 1998 and 1999 as determined with ultrasonic telemetry. Extended abstract and presentation for the Lake Washington Chinook Salmon Workshop, November.
- Moscrip, A.L. and D.R. Montgomery 1997. Urbanization, Flood Frequency, and Salmon Abundance in Puget Lowland Streams. *Journal of the American Water Resources Association*. 33(6): 1289-1297.
- U.S. Army Corps of Engineers, King County and Tetra Tech 2002. *Sanmamish River Corridor Action Plan*

Muckleshoot Indian Tribe Fisheries Division Habitat Program
Comments to I-405 Bellevue ETL SR 522 to SR 527 NEPA EA

August 6, 2020
Page 12 of 12

Comment L6.1

Our Habitat Program staff have reviewed the NEPA Environmental Assessment and appendices for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project. We offer the following comments in the interest of protecting and restoring the Tribe's treaty-protected fisheries resources.

WSDOT provided us with early coordination on this project with respect to stream classification and review of culvert assessments. We were also given the opportunity to review discipline reports in advance of the EA. We appreciate these opportunities. We expect continued coordination as we work through our comments and project permitting with both WSDOT and FHWA.

Our specific comments to the EA and the relevant discipline reports are attached. It is our preference that we discuss these comments further before any changes to these materials or the FONSI is completed. Please send me an email to set up this discussion at karen.walter@muckleshoot.nsn.us.

Response L6.1

Thank you for reviewing the Environmental Assessment (EA) and discipline reports for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) and providing detailed comments. WSDOT and the Federal Highway Administration (FHWA) appreciate the ongoing consultation with the Muckleshoot Indian Tribe regarding stream classification, culvert assessments, fish barrier corrections, and other issues of interest for the Project. WSDOT and FHWA appreciated the opportunity to discuss these draft comments with the Muckleshoot Indian Tribe on October 2, 2020. We look forward to continuing this consultation as the Project moves forward with environmental review, design, and construction.

Comment L6.2

Environmental Assessment and Project Concerns

1. Fish Barrier Culverts

a. Project culverts

The EA states:

This Project would restore stream connections at 5 fish barriers; retain 1 of the fish barriers as a hydraulic crossing, and restore the 2 remaining barriers as part of separate projects in the I-405 corridor.

Please clarify which culverts on which streams this statement applies.

Response L6.2

WSDOT is committed to complying with the terms of the 2013 United States District Court Injunction (*United States et al. vs. Washington et al.* No C70-9213, Subproceeding No. 01-1, dated March 29, 2013) regarding correction of fish barriers. WSDOT identified fish barriers within the Project limits in coordination with the Muckleshoot Indian Tribe and the Washington Department of Fish and Wildlife (WDFW) during Project development, as summarized in Section 4.3.1 of the EA and described in more detail in Sections 3.3.2, 4.2.1, and 5.2.2 of Appendix I, *Ecosystems Discipline Report*. The three parties conducted joint field surveys at 45 locations and identified a total of 8 WSDOT-owned barriers within the Project study area.

This statement from the EA references those 8 WSDOT-owned barriers, with details as follows:

restore stream connections at 5 fish barriers

This phrase refers to:

1. Par Creek (WDFW ID 993083)
2. Stream 25.0L (WDFW ID 993104)
3. North Fork of Perry Creek (WDFW ID 08.0070 A 0.25)
4. Queensborough Creek (WDFW ID 993084)
5. Queensborough Creek (WDFW ID 993109)

retain 1 of the fish barriers as a hydraulic crossing

This phrase refers to the culvert under I-405 at Stream 66 (WDFW ID 993106). Please see Response L6.6 for more information on this fish barrier.

restore the 2 remaining barriers as part of separate projects in the I-405 corridor

This phrase refers to (1) the culvert at Juanita Creek (WDFW ID 998602) and (2) the culvert at Crystal Creek (WDFW ID 934994). Please see Responses L6.4 and L6.7 for more information on these fish barriers.

Comment L6.3

b. I-405 NE 85th Street Interchange

The EA states:

I-405, NE 85th Street Interchange and Inline Station Project (in preliminary engineering), funded by Sound Transit, would build a new inline transit station, direct access ramps, and

interchange improvements at NE 85th Street in Kirkland to support Sound Transit's planned I-405 BRT system and address a fish barrier.

Please clarify which fish barrier on which stream would be addressed with this project and clarify which state agency is responsible for this project. Finally, please clarify when this barrier would be addressed.

Response L6.3

This statement refers to the fish barrier at Unnamed Tributary (UNT) to Everest Creek (WDFW ID WDFW ID 935006). WSDOT is the state agency responsible for correcting this fish barrier and anticipates addressing it as part of the I-405, NE 85th Street Interchange and Inline Station Project. The Project is currently funded by Sound Transit, and the construction timeline is being assessed. WSDOT will continue to consult with the Muckleshoot Indian Tribe on the approach for this fish barrier correction.

Comment L6.4

c. Culvert 998602 on Juanita Creek

The Ecosystems Report states:

998602, Juanita Creek at I-405 MP 21.94 – The identified barrier is located within the Project limits; however, the only Project activity that will occur at this crossing is restriping of the existing pavement and installing signage. As a result, this barrier will not be corrected as part of this Project, but it will be considered as part of a currently funded project on the I-405 corridor.

Please clarify which “currently funded project on I-405 corridor” this is and when this culvert will be replaced.

Response L6.4

The fish barrier correction for the Juanita Creek culvert (WDFW ID 998602) under I-405 will be corrected as part of the I-405, Brickyard Inline Station Project. Although that project is currently funded by Sound Transit for preliminary engineering and environmental review, the construction funding and timeline are still being determined.

Comment L6.5

d. Culvert 102 N128 on 228th Street SE, South Fork Perry Creek

We understand that this culvert is not a WSDOT-owned culvert. However, since there are improvements in the area occurring, including planned CIP's by Bothell, WSDOT should be working with Bothell to get this culvert replaced as part of this project to maximize fish passage benefits in Perry Creek.

Response L6.5

The referenced culvert, Culvert 102 N128 under 228th Street SE on South Fork of Perry Creek, is currently listed in the WDFW Washington State Fish Passage database as 100 percent fish passable. Culvert 102 N128 is on a different tributary and is not downstream

from the barrier that WSDOT is replacing on North Fork of Perry Creek (WDFW ID 08.0070 A 0.25).

Comment L6.6

e. Stream 66 culvert on I-405

The EA states:

Coordination with the Muckleshoot Indian Tribe is ongoing to develop an alternate solution for the barrier at Stream 66 by restoring the connection between Stream 25.0L and North Creek to provide greater fisheries and fish habitat benefits than the minimum design required by the Injunction.

WSDOT needs to describe this culvert in the context of the federal court injunction and how the project is meeting its obligations under those requirements. For example, will this culvert be modified in any shape or form as part of this project? Does a culvert replacement project meet extraordinary site conditions? More information is needed before the Tribe can realistically evaluate any “alternative solutions” that WSDOT may develop. At this time, the Tribe has not agreed to forego the federal court injunction requirements to make the Stream 66 culvert fish passable and any statements to the contrary are inaccurate.

Also, please explain the statement in the Appendix N1: Biological Assessment Update:

The barrier at Stream 66 will not be corrected.

Response L6.6

WSDOT recognizes that consultation with the Muckleshoot Indian Tribe regarding the fish barrier correction approach for Stream 66 is ongoing. WSDOT provided a proposal regarding Stream 66 for the Muckleshoot Indian Tribe’s consideration in an October 10, 2019, memo. WSDOT proposes to meet the Stream 66 Injunction obligation by addressing the downstream portion of Stream 25.0L, which is outside of state-owned property and thus not required to be corrected under the Injunction. Pending input from the Muckleshoot Indian Tribe, WSDOT would not modify the Stream 66 culvert as part of the Project and would leave the culvert as a hydraulic crossing.

The intent of this proposal is to comply with guidance from Paragraph 9 of the federal permanent Injunction, which reads (emphasis added), “Nothing in this injunction shall prevent the Defendants from developing and using designs other than bridges or stream simulation in the future if the Defendants can demonstrate that those future designs provide equivalent or better fish passage and fisheries habitat benefits than the designs required in this injunction.”

The referenced statement in EA Appendix N1, *Biological Assessment Update*, also refers to WSDOT’s proposal for a more comprehensive fish barrier correction at Stream 25.0L to meet WSDOT’s Injunction obligation at Stream 66. As noted further on pages 4 and 5 of EA Appendix N1, WSDOT acknowledges that this approach is a proposal subject to further review and agreement by the Muckleshoot Indian Tribe. WSDOT recognizes that further

consultation with the Muckleshoot Indian Tribe is needed before moving forward with this proposal.

Comment L6.7

f. Crystal Creek culvert #934994

The Ecosystem Report states:

934994, Crystal Creek at I-405 MP 26.74 – The identified barrier is located within the Project limits; however, this barrier will be corrected as part of a separate project, so that WSDOT can develop an improved stream connection that better aligns with its historical connection to Crystal Creek and provides equivalent or better fish passage and fisheries habitat benefits. Construction of the fish barrier correction at Crystal Creek is expected in the same timeframe as the Project.

Please explain exactly what separate project is referred to here where the I-405 Crystal Creek culvert will be replaced with a fish passable structure.

Response L6.7

WSDOT committed to constructing the fish barrier correction at Crystal Creek (ID 934994) in the same timeframe as the overall Project, as documented in Section 6.1.3 of the EA. Correcting the fish barrier at Crystal Creek will be a separate project. WSDOT intends to conduct design and permitting for the Crystal Creek fish barrier correction separately from the Project because the proposed stream realignment work falls outside of the limits for the Project. The Crystal Creek fish barrier correction is funded for engineering, right of way, and construction as part of the Project, and WSDOT will consult with the Muckleshoot Indian Tribe on this fish barrier correction.

Comment L6.8

2. Sammamish River impacts

a. Construction impact concerns

As noted in the EA, the project proposed to remove two existing bridges (and their piers). The inwater work in the Sammamish River could require the construction of temporary work bridges and would require in-water work, which may include temporary use of cofferdams and a work barge, depending on the contractors' chosen means and methods.

This inwater work is expected to occur over 16 weeks. The EA and appendices fail to consider potential construction impacts to returning adult salmon.

The EA states:

Temporary noise impacts would occur during Project construction due to the use of a vibratory hammer for installation of the sheet piles around the four piers in the Sammamish River during the approved in-water work window. No impact pile driving is anticipated to occur as a result of the Project. Noise impacts are expected to take approximately 80 hours over a single construction season. In-water work would only occur during the approved in-

water work window for fisheries. The underwater sound for installation of the sheet piles is unlikely to result in injury to juvenile anadromous salmonids as they are less likely to be present in the Sammamish River during the in-water work window.

This assessment clearly ignores potential impacts to returning adult salmon. Further, the BA states that:

“Up to 5 acres of the Sammamish River may be exposed to underwater noise above background levels from vibratory pile driving or removal.”

Response L6.8

FHWA and WSDOT prepared a Biological Assessment (BA) for the Project and considered all potential effects on listed salmonids for both juvenile and adult salmonids. Please see Section 8.1.2, Direct Effects to Aquatic Species, of EA Appendix N, *Biological Assessment*, and Section 5.2.2 of EA Appendix I, Ecosystems Discipline Report, for this analysis. Section 8.1.2 of Appendix N includes subsections describing analysis on the following topics:

- Exposure to construction-related sediment and turbidity (pp. 67-68)
- Underwater noise (pp. 68-69)
- Dewatering and fish salvage (pp. 69-70)
- Stormwater input (pp. 70-81)
- Habitat alteration, including in-stream and riparian habitat (pp. 81-82)

As stated in Section 4.3.2 of the EA and further described in the mitigation and avoidance measures listed in Section 6.2.3 under the Streams and Aquatic Resources heading, in-water construction work will be conducted in accordance with in-water work windows specified in Project permits. In-water work will be prohibited except during seasonal work windows established as a condition in the Hydraulic Project Approval.

National Oceanic and Atmospheric Administration (NOAA) Fisheries issued a Biological Opinion (BO) for the Project on June 16, 2020. Specific to underwater noise, the BO states that NOAA Fisheries:

... does not consider vibratory noise to be injurious to fish but would disturb them or dissuade them within 1,200 feet downstream and 900 feet upstream; thus, delaying them during migration. However, the migration instinct to move upstream or downstream may outweigh the avoidance behavior in some individuals, and others may be swept through the area of acoustic effect by the current.

Comment L6.9

With the exception of the few Chinook heading to Swamp Creek, the vast majority of adult Chinook and sockeye returning to the Sammamish River to migrate to spawning habitats must pass through the project area. These adult salmon experience existing lethal and sublethal water temperature and dissolved oxygen conditions starting from their entrance into the Ship Canal above the Ballard Locks and continues as they migrate through Lake

Washington, the Sammamish River, and Lake Sammamish. This information stems from a number of studies. The MIT has tagged adult Chinook and sockeye at the Locks over various years starting in 1998 (Fresh et al 1999). The U.S. Fish and Wildlife Service found pre-spawning mortality occurring in adult Chinook in the Sammamish River in 2001 (Tabor 2002). Pre-spawning mortality and other impacts to adult Chinook and sockeye were described in the Sammamish River Action Plan (Tetra Tech 2002):

Elevated temperature is likely the most significant limiting factor to salmon species in the Sammamish River because it is well within the range of causing adverse physiological and behavioral effects, and frequently in the lethal range. High temperatures in the Sammamish River can affect the reproductive health and survival of all adult salmon entering the Sammamish Watershed and potentially affect smoltification, smolt migration, and habitat suitability for juvenile rearing. Adult chinook and sockeye salmon are the primary species and age group likely to be adversely affected by elevated water temperatures (Martz, et al. 1999).

This is because adults of these species enter the basin in August and September when temperature is typically highest. This migration pattern coincides with temperatures that have both lethal and sub-lethal effects, including death, disorientation, egg retention, production of abnormal embryos or alevins, high fry or alevin mortality, increased vulnerability to disease of adults and offspring, and other physiological problems (Berman & Quinn 1991 and 1989).

The Muckleshoot Tribe also commissioned a study to look at existing adult holding conditions and ways to improve them (R2, 2010). Finally, King County funded R2 to do a pre-spawning mortality study in the Sammamish River in 2015 (R2 2016). This study states:

*Elevated water temperatures in the Sammamish River during the July-September period have been identified as a significant factor limiting production of Chinook salmon (*Oncorhynchus tshawytscha*) and other anadromous salmonid species during their spawning migration to Issaquah Creek, the Washington Department of Fish and Wildlife (WDFW) Issaquah Creek Hatchery, Bear Creek, and other tributaries downstream (WRIA 8 Steering Committee 2005). Daily maximum temperatures frequently exceed 20°C near the Lake Sammamish outlet during this period and have exceeded 26.6°C (King County online data).*

Elevated water temperatures may also adversely affect the fitness of adult Chinook salmon, delay their arrival at spawning grounds, or increase their susceptibility to disease/parasites (McCullough et al. 2001). Analyses of tracking data collected collaboratively by Washington Department of Fish and Wildlife (WDFW), the Muckleshoot Indian Tribe Fisheries Division (MITFD), the U.S. Fish and Wildlife Service (USFWS), and King County indicate that adult Chinook delay entry into the Sammamish River until water temperatures become more tolerable, or alternatively enter the river beginning in mid to late August and hold in localized cooler pockets associated with groundwater and at the confluences of cooler tributaries (Fresh et al. 1999). Water temperatures during this period can be within the range of those causing adverse physiological and behavioral effects. Acoustic-telemetered

Chinook salmon were found to spend an average of 9 days in the Sammamish River in 1998 and showed a preference for pools with a maximum residence time in a single pool of 24 days. Temperatures during that period were often near lethal levels (Fresh et al. 1999).

These impacts occur without any projects having inwater effects in the Sammamish River. Any delays in migration due to inwater noise, construction and general disturbance should be viewed as a significant adverse impact to these returning adult Chinook and sockeye and be mitigated accordingly.

Also, please note that the Muckleshoot Tribe may be actively tracking tagged adult salmon in the Sammamish River during this project and will need to be able to do so without interference. We request that WSDOT and FHWA coordinate with us on this issue to ensure this outcome occurs.

Response L6.9

Thank you for sharing information on this topic. The Project BA determined that the Project may affect some adult Chinook salmon during construction. Please see Section 8.1.2 of EA Appendix N, *Biological Assessment*, for more details. FHWA and WSDOT are working with NOAA Fisheries on implementing reasonable and prudent measures for the Project, as established in the BO.

Thank you for letting us know about the planned salmon-tracking activities. WSDOT will collaborate with the Muckleshoot Indian Tribe on potential measures to avoid and minimize impacts to these tracking activities during WSDOT's planned construction activities.

Comment L6.10

b. Permanent Impacts

The project proposes to replace the two existing bridges over the Sammamish River with three new larger bridges that would “increase overwater shading by about 13,000 square feet (0.3 acre).”

Bridge shading impacts are not the only consideration. A wider bridge structure precludes the reestablishment of trees needed not only for shade, but future wood recruitment, leaf litter and other riparian functions. The EA fails to consider this or proposed mitigation for these permanent impacts to the Sammamish River riparian corridor.

Similarly, please clarify this statement:

Restoration of temporarily disturbed areas along the Sammamish River and fish barrier correction locations after construction of the Project will improve riparian habitat by replacing non-native species with native woody species.

Response L6.10

As described in Section 2.8.2 of EA Appendix N, *Biological Assessment*, the banks of the Sammamish River in the Project vicinity are mostly vegetated with Himalayan blackberry and reed canarygrass. The right bank of the river lacks trees and has a narrow area of

riparian vegetation due to the presence of the Sammamish River Trail. The left bank of the river consists of some deciduous trees, including red alder and black cottonwood trees. Some of these trees will be removed if they are directly under the new bridges.

As described in Chapter 5 of EA Appendix M, *Draft Wetland and Stream Mitigation Report*, the Project will temporarily affect 2.38 acres of stream buffers at the Sammamish River to provide construction access during the demolition of the existing bridges and construction of the new bridges. WSDOT will replant approximately 2.38 acres of riparian vegetation along the Sammamish River once the bridge demolition and construction are complete.

WSDOT has developed a riparian plant mix for this Project, which includes evergreen trees such as western red cedar and native shrubs such as red-osier dogwood. WSDOT will plant trees on the banks of the Sammamish River where feasible, except it will not be possible to plant trees directly below or within 15 feet of the edges of the new bridges for maintenance reasons. WSDOT will replant areas under the new bridges with low-growing vegetation. When finalizing tree planting areas on the south-facing bank adjacent to the Sammamish River Trail, WSDOT will consider whether these locations are compatible with the Master Plan for I-405 in this area, as well as consistency with Crime Prevention Through Environmental Design principles for the security of trail users.

Additionally, WSDOT will enhance 1.06 acres of riparian habitat along Par Creek between SR 522 and the Sammamish River Trail, which is located approximately 700 feet upstream of the new off-ramp from northbound I-405 to eastbound SR 522.

Based on the proposed restoration and enhancement activities at both the Sammamish River and downstream of the Par Creek crossing, WSDOT anticipates that these activities will mitigate for the loss of trees under the new bridges and improve the overall riparian condition along this segment of the river, especially along the right bank, by replacing non-native vegetation with native woody vegetation, which will provide future wood recruitment, leaf litter, and other riparian functions.

For the fish barrier correction locations, the areas upstream and downstream of the restored stream crossing will be graded to tie in with the new fish-passable structure. Once the new fish-passable structure is constructed and the upstream and downstream channels are realigned, the adjacent riparian areas will be replanted with native vegetation.

Approximately 0.7 acre of stream buffers at fish barrier correction locations (0.093 acre along Par Creek, 0.26 acre along Stream 25.0L, 0.006 acre along North Fork Perry Creek, and 0.34 acre along Queensborough Creek) will be planted with native evergreen trees and shrubs.

In addition, approximately 0.39 acre of wetland buffers (0.07 acre at Stream 25.0L, 0.2 acre at North Fork Perry Creek, and 0.12 acre at Queensborough Creek) at fish barrier correction locations will also be planted with native evergreen trees and shrubs.

Comment L6.11

c. Sammamish River outfall concerns

Please clarify if the location of the new Sammamish River outfall is in the same location where King County recently did a bank stabilization project. If so, this project had habitat and riparian mitigation requirements for its HPA that will need to be replaced if impacted by this project.

Response L6.11

The new Sammamish River outfall will be located in the same vicinity as the western portion of the King County bank stabilization project. In addition, WSDOT will construct bridge piers for the new ramp from northbound I-405 to SR 522 in this area. WSDOT will require the design-build contractor to replace any plants that are removed or damaged by the Project. WSDOT coordinates regularly with King County on the Project design.

Comment L6.12

3. Other stream and stream impact concerns

a. Stream classification

Stream KL14 as shown in Table 4 of the Wetland and Stream Report is incorrectly classified. It is Type F waters based on the 2019 field review that we did with WDFW and Bothell staff. The stream met the physical criteria for presumed fish habitat under WAC 222-16-031.

Response L6.12

WSDOT, the Muckleshoot Indian Tribe (Martin Fox), and WDFW conducted a joint site visit at this location (WDFW ID 934920) on May 20, 2019. During that site visit, the group evaluated conditions on the downstream end of the I-405 crossing and determined that physical criteria was met to indicate potential fish use up to the outlet of the culvert. However, the group walked the area on the upstream side of I-405 extensively and could not locate anything that resembled a channel with measurable features. WSDOT also reviewed historical maps, which indicated that the stream's historic headwaters were located in the middle of what is now I-405. As a result of the joint site visit and lack of evidence of an upstream channel, potential fish use was deemed to stop at the outlet of the culvert, making the crossing at this location Type Np. After the site visits, WSDOT provided the attendees with site visit notes and a watercourse matrix that outlined each location that was visited and the outcomes of those evaluations.

Comment L6.13

Also, the project website was missing all of the appendices referenced for the Wetland and Stream Assessment Report (Appendix L). We would appreciate it if WSDOT would make these appendices available.

Response L6.13

WSDOT was unable to provide these appendices on the website because of their large file size. After receiving this comment letter, Rob Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager, emailed Karen Walter a link to an FTP site to

download the requested appendices on August 16, 2020, with a follow-up on August 25, 2020.

Comment L6.14**b. Stream and stream buffer impacts**

The EA states:

The Project would result in permanent effects of about 16,600 square feet (0.37 acre) on streams and 15,900 square feet (0.36 acre) of stream buffers. Some trees to be removed at stream crossings.

The Project would temporarily disturb up to 4 acres of stream buffers because of fish barrier corrections and site access needs. Most of the temporary stream impacts will be mitigated on site by installing restored stream crossings and restoring native riparian vegetation wherever possible. Disturbance of the streambed and banks would be limited to those necessary to construct new outfalls.

Currently, there is no mitigation proposed for the permanent impacts to streams. We expect to see wood added to all impacted streams consistent with the Fox and Bolton (2007) metrics as one mitigation measure for permanent impacts to streams and their buffers.

Response L6.14

All of the Project's permanent stream impacts are associated with the fish barrier corrections that WSDOT will construct to comply with the Injunction. These permanent impacts will be mitigated on site by constructing restored stream connections and realigning channels at the crossings.

There will be no net loss of stream habitat, and the Project will result in approximately 24,330 linear feet of upstream habitat gain for fish access, as documented in Section 4.3.1 of the EA.

The Project will install large woody materials at each restored stream connection. Please see the Preliminary Hydraulic Design reports for each fish barrier correction location, which WSDOT has previously provided for tribal review, for further discussion of placement of large woody materials using Fox and Bolton metrics.

Comment L6.15

The EA also states:

Construction would result in approximately 5,700 square feet (0.13 acre) of temporary stream impacts and approximately 143,400 square feet (3.3 acres) of temporary stream buffer impacts. The Project's temporary stream and stream buffer impacts would result from the five proposed restored stream connections, channel regrading, roadway widening, and installing bridge abutments and retaining walls.

The temporary stream impacts are underestimated as they don't account for instream work to be done on the 7+ streams where culverts will be replaced. Culvert projects generally

include stream graded and stream fill and should be quantified accordingly. In fact, the BE states:

Typical work for restoring stream connection includes excavation, removal of the existing fish barrier, installation of the fish barrier replacement, and backfilling. Realignment of the stream channel may be required depending on configuration of the existing channel alignment.

Response L6.15

Any construction activities that will result in altering the stream channel for a fish barrier correction—including excavation, removal of the existing fish barrier, installation of the fish barrier replacement, backfilling, and realignment of the stream channel—are considered to be permanent stream impacts. As a result, none of the fish barrier correction activities are considered to be temporary stream impacts. Please see Response L6.14 for more information about WSDOT's plans for mitigating permanent stream impacts on site.

For the Project, temporary stream impacts are expected to occur at the Sammamish River (0.079 acre) and unnamed tributary (UNT) to Par Creek (0.049 acre) due to demolition of the existing piers at the Sammamish River and construction access near UNT to Par Creek.

Comment L6.16

The Ecosystems Report states:

None of the road widening or barrier corrections would result in a net loss of in-stream habitat due to the improved access to upstream habitat.

Please clarify this statement. Without adding wood and habitat features and since only two culverts are proposed to be shorter than current lengths, this statement is invalid. Most of the streams in the BE do not show instream habitat improvement estimates. Further, when considering additional riparian areas permanently impacted by the widened roadway; stormwater facilities and other built features, then there will likely be net loss of instream habitat due to the limitations these facilities have to maintain natural stream and riparian processes.

Response L6.16

To clarify the statement referenced in this comment, WSDOT has revised the statement in EA Appendix I, *Ecosystems Discipline Report*, to the following:

The proposed road widening would not have direct effects to in-stream habitat; however, the proposed fish barrier corrections for this Project would affect in-stream habitat. Direct impacts due to barrier correction will be mitigated on site by constructing restored stream connections, realigning channels at the crossings, installing large woody materials, and planting riparian areas. The fish barrier corrections would also improve fish access to upstream habitat.

As discussed in Responses L6.10 and L6.14, WSDOT will incorporate large woody material and will plant riparian areas at each restored stream connection.

Restoring stream connections at four streams and removing existing piers from the Sammamish River will benefit streams and stream habitat. Replacing existing fish barriers with restored stream connections and realigning existing stream channels will provide additional access to approximately 24,330 linear feet of upstream habitat for fish. Removing four bridge piers within the Sammamish River will also benefit the overall habitat in the Sammamish River by reducing predation risks.

Comment L6.17

4. Stormwater, stream flows, and salmon concerns

a. Stormwater impact concerns

1. Dissolved oxygen increases

There would be an increase in dissolved copper across 11 of the Threshold Discharge Areas in the Sammamish River and North Creek. The EA dismisses potential impacts from these increases without fully evaluating them against potential impacts to salmon. (See <http://www.nwfsc.noaa.gov/research/divisions/efs/ecotox/ecoimpacts.cfm> for more information about this research and links to published scientific literature. The increases in dissolved copper does not consider the existing baseline water quality which could exceed the sublethal levels for juvenile salmon from dissolved copper.

More information is needed to demonstrate the project will not adversely affect salmon production and survival.

Response L6.17

The EA is intended to provide a high-level summary of findings from associated technical reports. More detailed information about potential effects on salmon from dissolved copper and other pollutants is described in Section 8.1.2.4 of EA Appendix N, *Biological Assessment*.

The dilution assessment using the HI-RUN model demonstrated that dissolved copper levels will be below effects thresholds on fish at the same or a shorter distance than the distance under existing conditions. As a result, the model predicts that there will be no change in biological effects.

Comment L6.18

2. Water temperature

Another concern is the proposed new stormwater outfall discharging to the Sammamish River. Elevated water temperatures are a threat to salmon in the Sammamish River, with daily maximum temperatures that frequently exceed 20 °C near the Lake Sammamish outlet and have exceeded 26.6 °C. Adult Chinook and sockeye salmon enter the Sammamish River beginning in mid to late August, when elevated temperatures are within the range of those causing adverse physiological and behavioral effects. Pre-spawn mortality of Chinook salmon was documented in 1998 and 1999 and is presumed to be the result of high temperatures (Fresh et al. 2000). In most years, water temperatures in the Sammamish River are warm enough to create severe thermal stress on migrating adult

chinook and sockeye (U.S. Army Corps of Engineers et al. 2002). The Sammamish River is listed as water quality impaired for temperature and dissolved oxygen on Washington's 303(d) list. Thermal refuge for adult salmon is already limited; therefore, we are concerned that new stormwater discharges from the project may make the existing condition worse. The new stormwater ponds and outfalls should be set back from the Sammamish River, the new pond fully shaded and the conveyance trenches from the setback outfalls should also be shaded to further cool any stormwater discharges to the Sammamish River. This approach would also reduce in-water impacts to the Sammamish River.

Response L6.18

No new stormwater ponds and conveyance trenches are proposed near the Sammamish River and SR 522 interchange area for the Project. The Project will construct compost-amended vegetated bioswales (CABS) inside the loop ramp from eastbound SR 522 to northbound I-405 and an outfall from the CABS to the Sammamish River. After being infiltrated through the CABS, stormwater runoff will be discharged into the river through an underground pipe.

The new outfall at the Sammamish River will be constructed outside of the ordinary high water mark of the river, as discussed in Section 2.11 of Appendix N, *Biological Assessment*; therefore, no in-water work is proposed for construction of the outfall.

Comment L6.19

3. Stormwater discharge water quantity concerns

The project also proposes to construct three new stormwater outfalls: one on the Sammamish River and two on the North Fork of Perry Creek.

The EA and Discipline reports fail to consider potential impacts from these stormwater discharges to juvenile salmon. Stormwater discharges can adversely affect juvenile salmon in a variety of ways, including increasing water velocities in margins and other rearing habitats (See www.nwr.noaa.gov/1habcon/habweb/habguide/stormwater_032003.pdf) for a summary of these impacts; also Moscrip and Montgomery (1997)). Furthermore, the WDOE Stormwater Management Manual acknowledges that the engineered stormwater conveyance, treatment, and detention systems can reduce the water quality and hydrology impacts, but they cannot replicate the natural hydrologic functions of the natural watershed that existed before development, nor can they remove sufficient pollutants to replicate the water quality of pre-development conditions. The project's stormwater should be managed to avoid increases in flow frequencies and durations to receiving waters that contain salmon to avoid these potential impacts. The amount of infiltrated stormwater that could be infiltrated is unknown; therefore, the potential impact to salmon from discharged stormwater that increases instream water velocities is unknown. Additional information is needed. In areas where stormwater cannot be infiltrated and must be discharged to streams, then additional mitigation may be necessary to avoid adversely affecting salmon in the receiving waters. In these cases, we recommend that instream wood be added to the receiving waterbody to reduce water velocities and create refugia habitat.

Also, none of the documents we reviewed considered the impacts to stream baseflows from the permanent loss of vegetation and the increase in impervious surfaces. There is no data and analysis assessing the impacts from the 23 additional acres of impervious surfaces, and the 24 acres of trees to be removed (from BE), and 15.5 acres of cleared vegetation to stream baseflows. Part of this analysis should discuss how much existing impervious surface exists in each basin and how much will be added as a result of the project and if the existing watershed already experiences a reduction in baseflows without the project. Potential project mitigation measures including infiltration should also be part of this discussion. From all of this information, a detailed and informed environmental assessment for each impacted basin can be determined.

Response L6.19

As documented in Section 4.3.1 on page 4-14 of the EA and Section 8.1.2.4 of EA Appendix N, *Biological Assessment*, the Project is expected to reduce peak flows from I-405 into streams, except for the Sammamish River, which is a flow-control-exempt waterbody. The Project will keep the existing facilities to detain flows from the existing pollution-generating impervious surfaces (PGIS). The proposed facilities will detain runoff from the new PGIS in threshold discharge areas where flow controls are required. The Project proposes to provide detention for stormwater discharges to North Creek, Stream 25.0L, North Fork Perry Creek, and Queensborough Creek. Overall, no effects on water quantity are anticipated to occur from the Project.

The Sammamish River is a wide, slow-moving river and does not have high velocity. Runoff energy is expected to be dissipated through a CABS or other enhanced treatment Best Management Practices (BMP) before the water discharges into the Sammamish River. This discharge is not expected to cause noticeable effects in Sammamish River flows because this flow is small compared to the amount of overall flow in the river.

According to stream gage data, the average monthly flow in the Sammamish River ranges from 100 cubic feet per second (cfs) in the dry season to 680 cfs in the wet season. Average monthly discharge from all WSDOT facilities in the wet season is modeled to be less than 0.5 cfs. Overall, discharge from the proposed new outfall location is considered small compared to the amount of flow in the Sammamish River and will not affect velocity.

Table 9 of EA Appendix N, *Biological Assessment*, lists existing PGIS and new PGIS in each threshold discharge area within the Sammamish River and North Creek basins, as well as proposed and existing stormwater treatment facilities in the Project study area. To clarify, the Project will provide enhanced treatment for the equivalent of 100 percent of all new PGIS added (about 24 acres) and will also treat about 23 acres of existing untreated PGIS. In total, with the Project, WSDOT will treat about 91 acres of PGIS, as opposed to 44 acres without the Project. Stormwater will be infiltrated through a CABS or other enhanced treatment BMPs before discharging into the Sammamish River, North Fork of Perry Creek, and Queensborough Creek.

WSDOT's policy for disturbed vegetation encourages the contractor to minimize the footprint needed for construction. Trees will be replaced in accordance with the WSDOT

Roadside Policy Manual, which aims to replant trees within the Project limits where feasible and uses a ratio that considers the existing size of the trees.

For upland tree removal areas, approximately 11.2 acres are located in the Sammamish River basin, and approximately 12.5 acres are located in the North Creek basin, totaling about 24 acres. Please see the table below for a comparison of existing PGIS, new PGIS, upland tree removal areas, and proposed tree planting areas in the Sammamish River and North Creek basins. As shown in the table, a total of 32 acres of areas are proposed to be planted with native trees and shrubs along the I-405 corridor to offset for the removal of existing trees, in addition to the proposed mitigation for wetlands and buffers. These numbers are preliminary and are subject to change; however, WSDOT does not anticipate that the Project will significantly alter baseflows in the watershed from the proposed tree removal activities.

Basin	Existing PGIS (acre)	New PGIS (acre)	Upland Tree Impact Area (acre)	Tree Planting Area (acre)
Sammamish River	59.82	15.92	11.15	13.26
North Creek	68.55	8.18	12.49	18.34
Total	128	24	23.64	32

Comment L6.20

5. Artificial Lighting potential impacts

Another project impact that is not adequately assessed is artificial lighting and increases in juvenile salmon predation. Artificial lighting is noted to increase with the expanded bridge, including more lighting on water surfaces. There are several published papers from the Lake Washington basin (Tabor et al. 2004), as well as, other scientific research describing the environmental effects from artificial lighting. These potential impacts were not fully discussed or analyzed in the materials we reviewed. The project needs to minimize artificial lighting during construction and reduce existing artificial lighting conditions post construction to reduce juvenile salmon predation. More information and full lighting details need to be provided.

Response L6.20

FHWA and WSDOT considered artificial lighting impacts on juvenile salmonids in the Project BA. Please see Section 8.2.1.5, Habitat Alteration, Artificial Lighting, on page 82 of EA Appendix N, *Biological Assessment*, for more information. The BA states:

The Project will install new light fixtures over the two ramp bridges, and if nighttime work is necessary for bridge construction, temporary nighttime lighting will be used. Artificial lighting has the potential to affect listed species, especially juvenile salmonids. Artificial lighting could potentially increase predation opportunities of juvenile salmon as it serves as an attractant to juvenile salmonids and their predators. The Project will use individual

“cobra head” or similar lamps to the extent feasible to limit ambient lighting to the stream. All permanent and temporary light fixtures will be directed away from the Sammamish River wherever practical. Use of lights at the Sammamish River will also be minimized as much as possible.

Consistent with commitments made for the I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project, WSDOT has previously consulted with Roger Tabor and will incorporate his recommendations for lighting into the EA’s mitigation commitments and the final contract for this Project. These recommendations include using directional lighting and avoiding use of LEDs.

Specifically, the EA commits to “direct lighting away from streams and waterbodies wherever possible” in relation to operational Project effects and “limit construction lighting for this project, particularly at night, to the amount necessary to complete the work” in relation to potential construction effects. Since publishing the EA in July 2020, WSDOT has added additional language to the commitment in Section 6.1.3, so it now states: “Direct lighting away from streams and waterbodies wherever possible. Luminaires that are above or adjacent to streams or rivers shall have high pressure sodium lamps. Use of light-emitting diode (LED) lighting above or adjacent to streams or rivers is prohibited.”

These statements from Section 6.1.3 and 6.2.3 of the EA will be incorporated into the environmental commitments list in the contract, and the contractor will be required to follow these commitments.

The resulting BO issued by NOAA Fisheries stated the following:

The annual numbers of juvenile salmonids that would experience measurably reduced likelihood of survival due to bridge lighting is unquantifiable with any degree of certainty. However, the proportion of any year’s cohort that would be exposed to the bridge’s lighting would be extremely small because the majority would pass through the action area during the day, when artificial light would cause no effect. Further, only a small portion of the exposed individuals would experience reduced likelihood of survival. Therefore, the numbers of either species that would experience reduced likelihood of survival due to artificial lighting would be too low to cause any detectable population-level effects.

Comment L6.21

6. Wetland Impacts and mitigation concerns

The EA states:

Project would result in up to 6 acres of permanent effects on wetlands and up to 4 acres of permanent effects on wetland buffer. Project construction would temporarily affect about 0.25 acre of wetlands and up to 1 acre of wetland buffers in the study area.

Please clarify where unavoidable wetland impacts will be mitigated. The BA says that

Permanent impacts to wetlands and wetland buffers are proposed to be mitigated both on-site and off-site. WSDOT plans to provide compensatory wetland mitigation by purchasing

credits from the Keller Farm Mitigation Bank, and on-site mitigation is currently proposed along Par Creek.

However, the mitigation report says

Currently, WSDOT plans to provide compensatory wetland mitigation at the Happy Valley Mitigation Site and the Keller Farm Mitigation Bank.

Response L6.21

WSDOT will provide wetland mitigation at three locations: Keller Farm Mitigation Bank, WSDOT Happy Valley Mitigation Site, and on-site mitigation at Wetland 23.81R along UNT to Par Creek. WSDOT is working with the Corps and the Muckleshoot Indian Tribe to make modifications to and finalize the mitigation plan for this Project.

Comment L6.22

Also, if the project is impacted wetlands along the Sammamish River, we expect those impacts to be mitigated at wetlands along the Sammamish River. There are plenty of opportunities to do wetland mitigation along the Sammamish, particularly in the Kenmore area where areas are publically owned.

Response L6.22

The Project will not impact wetlands along the Sammamish River.

Comment L6.23

Similarly with Wetland 24.00L along North Creek at the UWA Bothell site. This wetland is noted to be a mitigation site. The project will partially fill this wetland and its buffer will be partially filled because of the widening of southbound I-405 and the associated embankment. These impacts should be mitigated elsewhere in North Creek basin to compensate for impacting a compensatory mitigation site and ensure no net loss in this subbasin.

Response L6.23

The Project will not impact the mitigation site at University of Washington Bothell/Cascadia College. Wetland 24.00L is separated from the mitigation site by a berm, as described in the buffer condition summary of Table 11 in EA Appendix M, *Draft Wetland and Stream Mitigation Report*. Wetland 24.00L is located immediately east of the wetland restoration boundary, according to the as-built grading plan in the *2002 Baseline Monitoring Report for the University of Washington-Bothell, Cascadia Community College Campus North Creek and Floodplain Ecosystem Restoration Project*.

Comment L6.24

For those wetlands that fall within Lake Washington Service Area as defined by King County's ILF program should be mitigated in that program.

We do not support the use of the Happy Valley mitigation site for this project. We never agreed to advance mitigation or additional crediting at this site and it is too far removed from project impacts and the salmon resources in those subbasins.

Response L6.24

No wetlands impacted by the Project fall within the Lake Washington Service Area. Within King County, the impacted wetlands are within the Sammamish River Service Area. The mitigation site currently offered by King County's Mitigation Reserves Program for the Sammamish River Service Area is at Issaquah Creek, which appears to be too far away from Project impacts to be used for the Project. Both the Happy Valley Mitigation Site and the Keller Farm Mitigation Bank are also in the Sammamish River Service Area.

WSDOT is coordinating closely with federal, state and local jurisdictions regarding appropriate mitigation for wetland impacts. WSDOT's proposed wetland mitigation for this Project includes off-site mitigation at the Happy Valley Mitigation Site and Keller Farm Mitigation Bank, and in-watershed improvements at Par Creek, Stream 25.0L, North Fork Perry Creek, and Queensborough Creek. WSDOT is aware of the Muckleshoot Indian Tribe's concerns with the Happy Valley Mitigation Site and will continue to consult with the tribe on these issues as part of the permitting process with the U.S. Army Corps of Engineers.

Comment L6.25

The wetland buffer impacts should occur where there are wetlands that will remain. The mitigation plans to port all of the wetland buffer impacts to Par Creek area. Instead, wetland buffers should be mitigated at Wetlands 26.70R, 26.77R and 26.78R along Queensborough Creek and wetland 26.55L along North Fork Perry Creek.

Response L6.25

All temporary buffer impacts, including the buffers of Wetlands 26.55L, 26.70R, 26.77R, and 26.78R, will be restored on site, and WSDOT will plant trees, shrubs, and groundcovers in accordance with WSDOT's *Roadside Policy Manual*. The Project will not have permanent buffer impacts on Wetlands 26.55L, 26.77R, and 26.78R.

WSDOT's preliminary planting plan includes planting native vegetation around eight wetlands (26.70R, 26.35R, 26.15L, 26.13R, 26.10L, 25.34L, 24.00L, and 22.85L) where portions of the buffers will be permanently impacted. These areas are considered impacted due to expansion of roadway fill. However, WSDOT will plant native vegetation on the fill prism to the extent practicable so that they provide similar functions (shading, screening, limiting erosion, etc.) to what the buffers typically provide. For other wetland buffer areas, no planting is proposed because there are limited opportunities present in the remaining wetland buffer areas (already good native vegetation coverage) or WSDOT needs to maintain line of sight for safety reasons.

Comment L6.26

7. Cumulative Impacts concerns

The cumulative impact area of analysis of 0.5 miles is too low when considering anadromous salmon. In fact, the BE notes that “Up to 5 acres of the Sammamish River may be exposed to underwater noise above background levels from vibratory pile driving or removal” which exceeds the 0.5 mile assessment for cumulative impacts. This is important because there are other Sammamish River projects ongoing or will start that will also affect adult and juvenile salmon that have not been sufficiently considered in total. For example, Kenmore is currently replacing the western half of the 68th Avenue NE Bridge crossing on the Sammamish River. Sound Transit will be starting its project with a new bridge crossing over the Sammamish River near SR 520. These projects will likely have some overlap in construction periods, thus affecting the same returning adult salmon and outmigrating juvenile salmon.

Response L6.26

The study area for the cumulative effects analysis for the EA varies depending on the resource, as described in Exhibit 1 of EA Appendix O, *Cumulative Effects*. However, the BA analyzed potential cumulative impacts on species listed under the federal Endangered Species Act in an action area within 1.9 miles from the Project footprint, consistent with WSDOT’s guidance for preparing BAs. The City of Kenmore’s Sammamish River Bridge Replacement project is outside of the action area. The referenced bridge crossing that is part of the Sound Transit Downtown Redmond Link Extension project is also outside of the Project action area. For more information on the projects considered in the cumulative effects analysis for the BA, please see Section 8.4, Cumulative Effects, of EA Appendix N, *Biological Assessment*.

In its BO, NOAA Fisheries determined that the proposed action and the effects of other activities caused by cumulative effects are not likely to jeopardize the continued existence of Puget Sound Chinook salmon and Puget Sound steelhead. NOAA Fisheries concurred that the Project is “likely to adversely affect” Chinook salmon and steelhead due to their known or presumed presence within the action area and Project activities that would result in temporary increase in sediment and turbidity during construction, a temporary increase in underwater noise during construction, dewatering and fish salvage, changes in water quality, and habitat alteration.

Comment L6.27

8. Environmental Justice concerns

The EA also lacks discussion regarding the potential impacts to the Muckleshoot Indian Tribe’s treaty-protected fisheries resources. We raised this concern in our October 24, 2001 comment letter to the corridor-wide DEIS for I-405. WSDOT concurred with the Tribe’s comments and re-drafted the Environmental Justice section in the I-405 Master Program FEIS as a result. The extent of this project’s impacts in combination with other projects and previous I-405 projects in the Lake Washington basin has implications for fish production and survival and potentially opportunities for Muckleshoot members to exercise their treaty fishing rights. Muckleshoot Tribal members are a minority group that can be uniquely and disproportionately impacted by this project, such as

decreases in stream and wetland functions, then there is a potential for the Muckleshoot Indian Tribe to be disproportionately impacted by a loss of fishing opportunities. This concern was not considered in the EA as an environmental justice issue. For example, salmon counts from the Ballard Locks this year (2020) indicate that the sockeye run is complete with less than 23,000 passing through the Locks – another alarmingly low run. Chinook numbers appear to be tracking the 10-year average at this time which is still too low for any fishing opportunities. Therefore, we disagree with this statement:

The Project would not result in disproportionately high and adverse operational effects on environmental justice populations; therefore, no specific environmental justice mitigation is required.

The project needs to address the natural resources impacts and mitigation issues identified above to ensure that the Tribe and its treaty protected fisheries resources are not adversely affected by this project.

Response L6.27

WSDOT considered potential impacts to the Muckleshoot Indian Tribe's treaty-protected fishing resources when developing the environmental justice analysis for the Project EA.

Section 4.5 of EA Appendix C, *Community Impact Assessment and Environmental Justice Discipline Report*, discusses WSDOT's Government-to-Government responsibility under RCW 43.376 for coordinating with federally recognized Native American tribes and summarizes ongoing coordination with the Muckleshoot Indian Tribe and other tribes on issues related to natural and cultural resources. Section 4.5 of EA Appendix C and Section 2.3.2 of the EA also note that the Muckleshoot Indian Tribe have Usual and Accustomed fishing rights in the study area.

Exhibit 4-17 of the EA and Exhibit 5-4 of Appendix C summarize Project effects on environmental justice populations by resource, including natural resources. The analysis summarized the permanent effects on wetlands, wetland buffers, vegetation, streams, and stream buffers in the study area, and further information about these impacts is discussed in Section 4.3.1 of the EA and EA Appendix I, *Ecosystems Discipline Report*. All permanent impacts will be mitigated in accordance with local, state, and federal regulations.

Overall, the Project would have no adverse effects on environmental justice populations. There would be beneficial effects because the Project would correct five fish barriers, which would restore anadromous fish access to about 24,330 linear feet of upstream habitat. Although the Project will create about 24 acres of new pollution-generating impervious surface (PGIS), the Project will treat an area equivalent to 100 percent of that new PGIS. Overall, the Project will treat a larger area of pollution-generating impervious surface compared to the No Build Alternative, improving water quality. Section 5.2.4 of Appendix C further notes:

The Build Alternative would result in additional benefits compared to the No Build Alternative including:

- *Replacing five fish barriers with restored stream crossings to improve aquatic habitat and provide ecological and cultural benefits.*
- *Providing new stormwater runoff treatment to improve local water quality.*

The Ecosystems section (starting on page 8) of EA Appendix O, *Cumulative Effects*, discusses the trend of declines in wetland resources, native vegetation, and habitat for wildlife and aquatic organisms as the human population and extent of development in the study area have increased. The analysis acknowledges that as the human population and extent of development have increased, the area of native vegetation has decreased and habitat for wildlife and aquatic organisms has been degraded and/or eliminated. As stated in Appendix O, natural habitat alteration has taken the form of forest cover and stream-side vegetation removal, channel modification, stream bank armoring, removal of woody debris from streams, routing of streams through culverts, alteration of natural stream flow regimes, and construction of barriers to fish passage. The analysis acknowledges that these habitat changes have contributed to declining wildlife and fish populations, which in some cases have led to the species being protected under the Endangered Species Act. The cumulative effects analysis concluded that, when combined with other reasonably foreseeable future projects, the Project would have a positive contribution to cumulative effects on wetlands and aquatic habitat because the Project would mitigate wetland impacts to wetlands with lower quality functions, with high-quality wetlands; fish barrier corrections would restore anadromous fish access to 24,330 linear feet of additional habitat, water quality would improve to improved stormwater treatment. The Project will have a small negative contribution to cumulative effects to vegetation and wildlife because small areas of low-quality vegetation would be affected.

Based on the Muckleshoot Indian Tribe's comment letter (Comments L6.9 and L6.27), WSDOT has added text to the EA and several sections of Appendix C to clarify the Muckleshoot Indian Tribe's treaty-protected rights in the study area, as well as to discuss the Project effects in this context. Please see Section 4.12, Environmental Justice Finding, of the Finding of No Significant Impact, and FONSI Attachment 2, Errata to the EA, for this additional text.

These findings support the conclusion in the EA that the Project will not result in disproportionately high and adverse operational effects on environmental justice populations.

Comment L7 – U.S. Coast Guard, August 5, 2020

L7

U.S. Department of Homeland Security
United States Coast Guard



2703 Martin Luther King Jr. Avenue
SE Stop 7418
Washington, DC 20593-7418
Phone: (202) 372-1511
Fax: (202) 372-1914

16591
5 August 2020

MEMORANDUM

From: Shelly H. Sugarman
COMDT (CG-BRG-2)

SUGARMAN, SHELLY.H.12
73013756

Digitally signed by SUGARMAN, SHELLY.H.12
DN: cn=SHELLY.H.12, o=USCG, ou=CG, email=SHELLY.H.12@uscg.mil, c=US

Reply to: CG-BRG-2
Attn of: S. Sugarman
(202) 372-1521

To: CGD THIRTEEN (dpb)

Subj: REVIEW OF THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT

1. We have completed our review of the DEA prepared by the U.S. Department of Transportation, Federal Highway Administration, as lead federal agency, and the Washington State Department of Transportation and have the following comments.
2. Please include a description of eagles within the project area. If eagles are not known to inhabit the study area, measures to avoid, minimize, or mitigate effects to eagles should still be included in Chapter 6. The United States Coast Guard (USCG) must comply with the provisions of the Bald and Golden Eagle Protection Act.
3. Please provide final coordination documents with the United States Army Corps of Engineers (USACE) regarding the final Section 404/10 Individual Permit and Section 408 Permission with the final Bridge Permit Application.
4. Pending final design, coordination regarding the Floodplain Development Permit should be included in the final Bridge Permit Application as well.

#

L7.1
L7.2
L7.3

Comment L7.1

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2. Please include a description of eagles within the project area. If eagles are not known to inhabit the study area, measures to avoid, minimize, or mitigate effects to eagles should still be included in Chapter 6. The United States Coast Guard (USCG) must comply with the provisions of the Bald and Golden Eagle Protection Act.

Response L7.1

Thank you for your comments on the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA).

Regarding eagles in the Project area, Project biologists conducted a geographic information systems (GIS) desktop review of bald eagle nest locations documented by the Washington Department of Fish and Wildlife (WDFW) in February 2020. The GIS database contains no WDFW-documented bald eagle nests within one mile of proposed activities for the Project. After the desktop survey, Project biologists conducted a site visit of the Project area on February 18, 2020, and confirmed there are no active bald eagle nests within 660 feet of the Project area.

During the site visit, biologists looked for signs of nests, nesting habitat, and breeding or nesting behavior by bird species protected under the Migratory Bird Treaty Act (MBTA). Project biologists observed remnants of swallows' nests on some pillars supporting the I-405/SR 522 interchange, as well as on the I-405/Sammamish River bridge structures. At the time of the site visit, the swallow nests were not active and no birds were observed carrying nesting material or displaying territorial behavior within the Project area. Although no active nesting sites were observed, the existing I-405 bridges in the Project area, including those at the I-405/SR 522 interchange, were identified as suitable nesting support structure habitat. Due to these suitable conditions, precautions should be taken by the contractor to prevent new nests from being constructed on bridges or other structures that would be demolished, modified, or disturbed by Project construction.

Based on the GIS desktop review and February 2020 site visit, Project biologists determined that the Project will not affect bald eagle nesting or roosting sites, migratory birds, or their nests. Therefore, construction timing restrictions intended to reduce impacts on species protected under the MBTA and Bald and Golden Eagle Protection Act are not expected.

Project biologists will conduct another site visit prior to Project construction to confirm that no additional signs of nests, nesting habitat, or breeding or nesting behavior by MBTA-protected bird species are present in the Project area and that there are no active bald eagle nests within 660 feet of the Project area.

WSDOT prepared a memo summarizing these findings for the Project record. If new information becomes available indicating the potential for previously unidentified impacts on protected bird species, WSDOT will update the memo as needed.

Comment L7.2

3. Please provide final coordination documents with the United States Army Corps of Engineers (USACE) regarding the final Section 404/10 Individual Permit and Section 408 Permission with the final Bridge Permit Application.

Response L7.2

Comment noted. WSDOT will provide the requested documentation regarding U.S. Army Corps of Engineers permits to the U.S. Coast Guard when available.

Comment L7.3

4. Pending final design, coordination regarding the Floodplain Development Permit should be included in the final Bridge Permit Application as well.

Response L7.3

Work within the floodplain is within the City of Bothell's shoreline jurisdiction and will be reviewed and permitted under the City's Shoreline Conditional Use Permit application (SHR2020-16067), consistent with the City's Shoreline Master Program frequently flooded areas provisions (Bothell Municipal Code 13.13.040).

APPENDIX 2 – ERRATA TO THE ENVIRONMENTAL ASSESSMENT

The following revisions apply to the Environmental Assessment (EA) and accompanying appendices for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project, which was issued on July 2, 2020. Changes to the EA text are identified by their corresponding page number in the document’s original published edition.

Page 1-2, Section 1.4, second to last paragraph

During a follow-up workshop in November 2017 with transit and local agencies and FHWA, the group reviewed potential locations for the proposed direct access ramp in the SR 527 vicinity, including at 9th Avenue SE, SR 527, and 228th Street SE. In preliminary design, 17th Avenue SE was selected for inclusion in the Build Alternative because the other options had challenges with access to the ETLs and the Canyon Park Park and Ride, transit connectivity, traffic operations, and consistency with local planning efforts. There was agreement that locating the direct access ramp at 17th Avenue SE would not preclude future potential extension of the direct access ramp to the south at 228th Street SE. The stakeholders agreed to prioritize ~~The first phase of these improvements is the Project described in this EA as the first phase of improvements in this vicinity.~~

Page 2-1, Exhibit 2-1, Local column

Add Puget Sound Regional Council to the list of agencies under the “Local” column.

Page 2-3, Section 2.3.2, first sentence

WSDOT has Government-to-Government responsibility under Revised Code of Washington (RCW) 43.376 for coordinating with federally recognized Native American tribes.

Page 2-4, Section 2.4, last sentence of second bullet

WSDOT also worked with Bothell to reach agreement on appropriate assumptions about future population growth and land uses in Canyon Park and coordinated with Puget Sound Regional Council on development of the Project traffic model and forecasts.

Page 2-4, Exhibit 2-2, Required Permits column

Change the second to last bullet under the Required Permits column to read:

- ~~Shoreline Substantial Conditional Use Permit, and Shoreline Substantial Development Permit, and Shoreline Variance,~~ Bothell

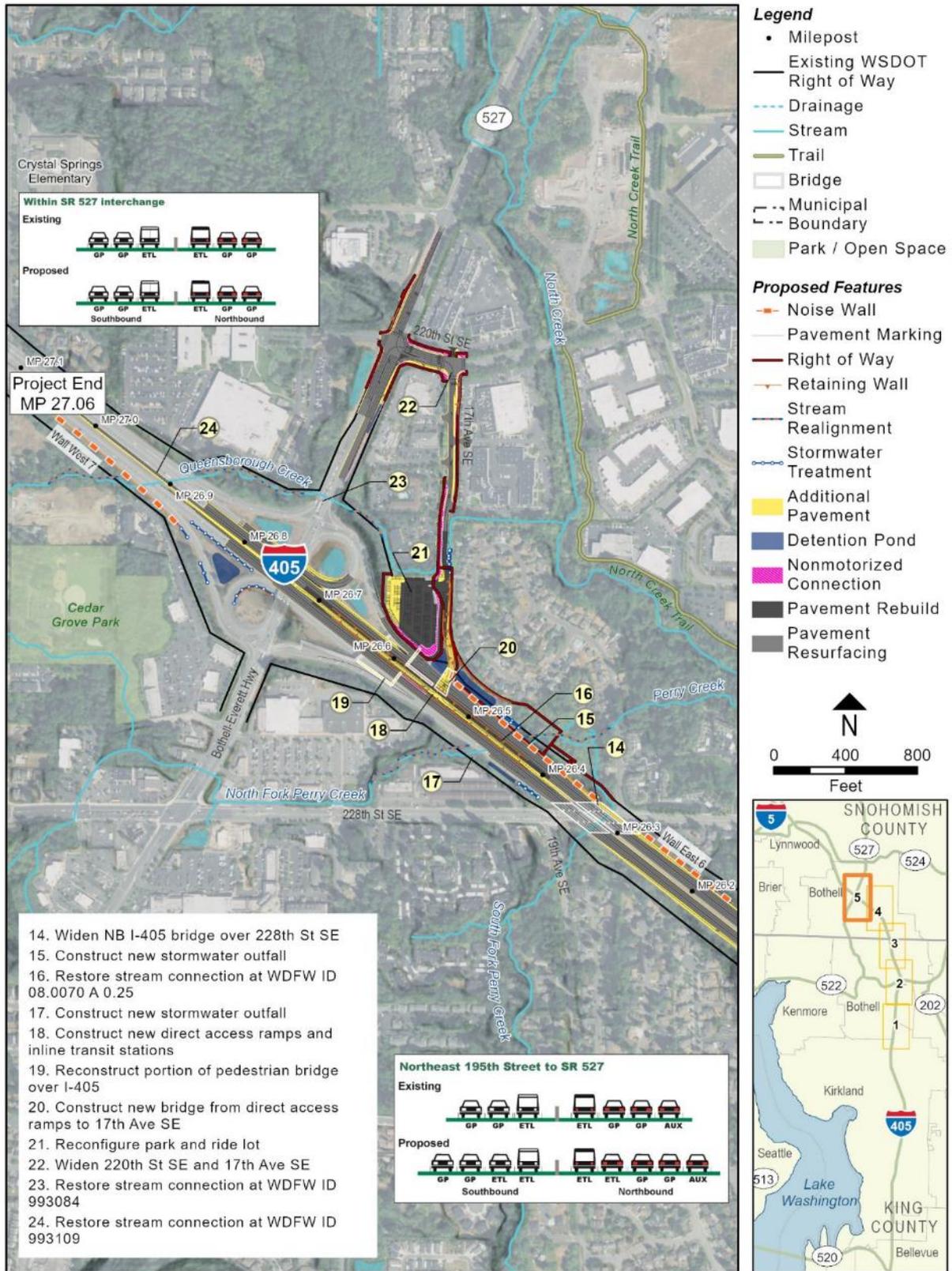
Page 3-3, Exhibit 3-2, Sheet 5

Sheet 5 was updated to add a missing label for a noise wall, Wall West 7.

Note: The same changes also apply to:

- Exhibit 2-2, Sheet 5, in EA Appendices A through D; F, and H through K.
- EA Appendix G1, Figure 1, Sheet 5

**Exhibit 3-2. I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
 (Sheet 5 of 5)**



Page 3-8, Section 3.3, second paragraph

Construction will generally occur between 2021 and 2025, but construction activities in some areas will be complete prior to 2025. Once a contractor is selected for the Project, they could use multiple work crews in multiple locations to reduce the overall construction period. Work will include activities such as removing existing asphalt and concrete surfaces, clearing and grading adjacent areas, laying the aggregate roadway foundation, placing new asphalt and concrete surfaces, replacing culverts, building noise walls and retaining walls, and building and demolishing bridges. Removing bridge piers from the Sammamish River could require the construction of temporary work bridges and will require in-water work, which may include temporary use of cofferdams and a work barge, depending on the contractor’s chosen means and methods. ~~Realigning the I-405 mainline~~ The Project will require approximately ~~170,000~~ 112,000 cubic yards of excavation and ~~166,000~~ 182,000 cubic yards of fill.

- *Note:* The same changes apply to the second paragraph of Section 2.3 in EA Appendices A through D; F, and H through K.

Page 3-8, Section 3.3, third paragraph

Construction equipment ~~will include~~ such as backhoes, excavators, front-end loaders, pavement grinders, jack hammers, pile drivers, trucks, vactor trucks, cranes, drilling rigs and augers, concrete pumping equipment, and slurry processing equipment would be used. Specific haul routes and the number of construction vehicles will not be known until a construction contract is signed. When possible, the work sites will be accessed from I-405 and SR 522. Construction staging areas for employee parking, large equipment storage, and material stockpiles will be located within WSDOT and Bothell right of way to the extent possible. The contractor may also find other locations for construction staging.

- *Note:* The same changes apply to the third paragraph of Section 2.3 in EA Appendices A through D; F, and H through K.

Page 4-5, Section 4.1.2, Exhibit 4-6

Replace Exhibit 4-6 with the following exhibit:

Exhibit 4-1. Number of Occurrences of Peak Hour Level of Service E or Worse

Time of Day	Existing	2025 No Build	2025 Build	2045 No Build	2045 Build
Overall Intersections Operating at LOS E or Worse					
AM peak hour	4	5	5	8	9
PM peak hour	5	5	4	8	9
Intersections with One or More Approaches Operating at LOS E or Worse					
AM peak hour	429	451	19	49	22
PM peak hour	42	44	19	19	22

LOS = level of service

Page 4-12, Section 4.2.3, first paragraph

Construction creates temporary noise that varies depending on the type and location of activities and the type of equipment used. The most constant noise source at construction sites is usually engine noise. Mobile equipment generally operates intermittently or in cycles of operation, while stationary equipment, such as generators and compressors, generally operates at fairly constant sound levels. Trucks are present during most phases of construction and are not confined to one area, so noise from trucks may affect more receivers than other construction noise. Other common noise sources typically include impact equipment, such as jackhammers and pile drivers.

Page 4-13, Section 4.3.1, under Fish Barrier Correction and Related Improvements heading, first paragraph, last sentence

Pending further consultation with the MIT, this Project would restore stream connections at 5 fish barriers; and retain 1 of the fish barriers as a hydraulic crossing, and WSDOT would restore the 2 remaining barriers as part of separate projects in the I-405 corridor.

Page 4-13, Section 4.3.1, under Fish Barrier Correction and Related Improvements heading, second paragraph, first sentence

The Project would benefit aquatic habitats and species by replacing five WSDOT-owned fish barriers with restored stream connections at Par Creek (WDFW ID 993063), Stream 25.0L (WDFW ID 993104), North Fork of Perry Creek (WDFW ID 08.0070 A 0.25), and two fish barriers at Queensborough Creek (WDFW IDs 993084 and 993109).

Page 4-15, Section 4.3.1, under Threatened and Endangered Species

Based on the effects and exposure analyses and implementation of all best management practices (BMPs), WSDOT has determined that the Project may affect listed species under the Endangered Species Act as summarized in Exhibit 4-8. National Oceanic and Atmospheric Administration (NOAA) Fisheries concurred with the determinations for Chinook salmon and steelhead on June 16, 2020. NOAA Fisheries concurred that the Project is “likely to adversely affect” Chinook salmon and steelhead due to their known or presumed presence within the action area and Project activities that would result in temporary increase in sediment and turbidity during construction, a temporary increase in underwater noise during construction, dewatering and fish salvage, changes in water quality, and habitat alteration. In addition, NOAA Fisheries concurred that the Project would have an adverse effect on essential fish habitat for Pacific Coast Salmon. NOAA Fisheries also assessed the effects on Southern Resident Killer Whales due to the potential reduction of prey, primarily Chinook salmon, and concluded the Project may affect, but is not likely to adversely affect Southern Resident Killer Whales. The U.S Fish and Wildlife Service concurred with these determinations for bull trout and cuckoo on November 27, 2019.

Page 4-18, Section 4.4.1, Exhibit 4-9

The following updates were made to new/treated PGIS in TDA NW02 and the total proposed new/treated PGIS.

- *Note:* This change also applies to Appendix J, *Water Resources Discipline Report*, Exhibit 5-2, on pages 5-8 and 5-9.

Exhibit 4-2. Existing and Proposed Stormwater Treatment and Facilities

Sub-watershed	Receiving Waterbody	TDA	Existing I-405 PGIS (acres)	Existing Type of Facility	Existing I-405 PGIS Treatment (acres)	Proposed New PGIS (acres)	Proposed Type of Facility	Proposed Treated PGIS (acres)
Sammamish River	Stream KL14	F2	4.11	None	0	0.06	None	0
	Stream 42	F3	1.40	None	0	0	None	0
	Sammamish River	G2	52.98	CABS MFD Wet Vault	10.65 3.02 3.30		CABS MFD	45.19 4.28
	North Creek Confluence	G4	4.85	None	0	0	MFD	0.43
North Creek	North Creek	I1	21.36	MFD	3.52	1.88	MFD CABS	2.27 3.62
	Stream 66	I2	3.76	MFD	0.55	0.46	MFD CABS	0.63 1.03
	Stream 25.0L	I3	2.61	MFD	0.91	0.41	MFD	1.85
	Stream 70	I4	4.51	MFD	1.26	0.75	MFD CABS	1.51 1.47
	Stream C-77	J1	4.01	MFD CSW	1.21 0.89	0.70	MFD CABS CSW	1.67 0.50 0.89
	North Fork Perry Creek	J2	10.50	Bioswale Wet Vault	2.16 4.45	1.43	CABS	11.51
	North Creek	NW01	1.92	None	0	0.11	None	0
	Queensborough Creek	NW02	19.86	Wet Pond MFD Bioswale	9.35 0.37 2.45	2.36 2.39	Wet Pond CABS MFD MF	8.14 4.89 0.82 0.76 <u>0.79</u>
	North Creek	NW03	0.39	None	0	0.11	None	0
Totals			132.26		44.09	<u>24.02</u> <u>24.05</u>		<u>91.46</u> <u>91.49</u>

CABS = compost amended biofiltration swale; CSW = constructed stormwater wetland; MF = media filter; MFD = media filter drain; PGIS = pollution-generating impervious surface; PS = Puget Sound; TDA = threshold discharge area

Page 4-18, Section 4.4.1, Exhibit 4-10

The total suspended solids expected for the Build Alternative was updated.

Exhibit 4-3. Comparison of Pollutant Loading in No Build and Build Alternatives

	Total Suspended Solids (lb/yr)	Total Copper (lb/yr)	Dissolved Copper (lb/yr)	Total Zinc (lb/yr)	Dissolved Zinc (lb/yr)
No Build Alternative	71,683	15.9	4.8	96	34
Build Alternative	54,727 54,729	13.4	5.2	79	32

lb = pounds; yr = year

Page 4-27, Section 4.6.2, North Creek Forest bullet

Construction activities would be located within an area of approximately 0.75 acres and would include clearing existing mature trees and vegetation, regrading soils, and constructing ground improvements ~~by driving untreated timber piles~~ to stabilize steep slopes.

Page 4-34, Section 4.8.1

Add the following new paragraph as the last paragraph of this section:

The Project would benefit water resources and aquatic habitat in the study area, which is located within treaty-protected fishing areas of the Muckleshoot Indian Tribe. The Project would correct fish barriers at five stream crossings in compliance with the terms of the 2013 United States District Court Injunction (*United States et al. vs. Washington et al.* No C70-9213, Subproceeding No. 01-1, dated March 29, 2013), restoring full anadromous fish access to about 24,330 linear feet of upstream habitat. The Project would also improve water quality in the study area by detaining and treating more stormwater runoff as compared to the No Build Alternative.

Page 4-34, Section 4.8.2

Construction activities would have a disproportionate effect on minority populations in the Fitzgerald/35th SE and Canyon Park neighborhoods ~~because of the high percentage of~~ there is a predominantly minority population in these neighborhoods. However, because all populations in neighborhoods close to construction would be affected by construction to the same degree, ~~and~~ there would be no disproportionately high and adverse effects on minority populations during construction.

Project construction would include work in the Sammamish River during the approved in-water work window for fisheries. The Muckleshoot Indian Tribe has informed WSDOT that they may be actively tracking tagged adult salmon in the Sammamish River during Project construction. WSDOT will consult with the Muckleshoot Indian Tribe on measures to avoid and minimize conflicts with the tracking activities during WSDOT's planned construction activities.

Page 4-37, Section 4.9.5

Make the following changes to the bullet points in this section:

- ~~Nine-Eleven~~ sites have a low anticipated level of impact on the Project. Of these low-impact sites, two have the potential to become a moderate impact risk.

- The remaining ~~nine~~ seven sites have a moderate anticipated level of impact on the Project. Of these moderate impact sites, two have the potential to become a high impact risk due to the potential for migration of contaminated groundwater.

Page 5-1, Section 5.3, Page 5-4, First Full Paragraph After Exhibit 5-1

In addition to projects listed in Exhibit 5-1, Bothell ~~is proposing~~ proposed to update its subarea plan for the Canyon Park neighborhood located in the study area near SR 527. This area was designated as a Regional Growth Center by PSRC in VISION 2040 (PSRC 2009). Regional Growth Centers are designated areas where population and employment growth are expected to occur in the future. In December 2019, Bothell published the *Canyon Park Subarea Planned Action Draft EIS* (Bothell 2019a). The *Draft EIS* evaluated ~~s~~ a no action alternative that would maintain growth established in the City's currently adopted comprehensive plan, *Imagine Bothell* (Bothell 2015) and three build alternatives that would increase development densities over currently planned growth. The *Draft EIS* identified ~~s~~ possible transportation improvements that may be needed to accommodate growth beyond the City's currently adopted comprehensive plan. The *Draft EIS* ~~does~~ did not identify a preferred alternative. Since the publication of the EA in July 2020, the City has released a *Draft EIS Addendum* and a draft *Canyon Park Subarea Plan*, responded to comments on the Draft EIS, and issued the *Canyon Park Subarea Planned Action Final EIS*, which identified a preferred alternative. On December 15, 2020, the Bothell City Council voted to adopt the updated *Canyon Park Subarea Plan*, zoning and development regulation amendments within the Bothell Municipal Code and a planned action ordinance. The development regulations and planned action ordinance took effect on January 1, 2021, and implementation will be ongoing for the life of the plan. The City plans to pursue certification of the subarea plan from the PSRC in 2021 in order to retain the Regional Growth Center designation for Canyon Park. The outcome of Bothell's *Draft EIS* and comprehensive plan update process is currently unknown.

~~Per the *Draft EIS*, the following City of Bothell actions would be required before any of the build alternatives could be implemented:~~

- ~~▪ Select a preferred alternative, respond to comments on the Draft EIS and issue a Final EIS.~~
- ~~▪ Adopt the updated Canyon Park Subarea Plan as part of Imagine Bothell.~~
- ~~▪ Adopt zoning and development regulation amendments within the Bothell Municipal Code.~~
- ~~▪ Adopt a planned action ordinance.~~

As documented in the Draft EIS, the City plans to select a preferred alternative and issue a Final EIS in the first half of 2020. The timeline for other the actions listed above is currently unknown, but would be expected to occur after the Final EIS is issued. Because the outcome of the City's planning process for the Canyon Park Subarea ~~is currently~~ was unknown when the analysis for WSDOT's EA was completed, this EA evaluates land use densities in Bothell's currently approved and adopted comprehensive plan, *Imagine Bothell* (Bothell 2015). WSDOT and the City agreed on assumptions for their respective environmental analyses, and the City provided a letter to WSDOT confirming concurrence with this approach in September 2020.

The City's Canyon Park Subarea Planned Action Final EIS addresses the cumulative impacts of the City's proposed changes in density and development in that area by including the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as part of the baseline conditions in both the No Action and Action Alternatives. Throughout the development of this EA, WSDOT has been coordinating with Bothell on the Canyon Park Subarea Plan update and *Draft and Final EIS* and will continue to do so as the City's plans progress. The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project would not preclude the City's proposal to increase land use densities in the Canyon Park Subarea.

Page 5-5, Exhibit 5-2, Environmental Justice row

Revise the environmental justice summary text in this table to read:

The Project would provide a number of benefits for all people living in, working in, and visiting the study area and would not result in disproportionately high and adverse effects on persons who identify as minority or persons who identify as low-income. While projected job and population growth in the region is likely to increase traffic congestion, the continued operation of ETLs – in conjunction with other reasonable and foreseeable transportation investments in the Project study area – would result in a number of transportation benefits for all I-405 users, including environmental justice populations. The ETLs would disproportionately affect low-income populations because the cost to use the ETLs would represent a higher proportion of their household income than middle- and high-income users. In combination with the trend of rising housing costs in the I-405 travelshed and Washington's regressive tax system, the ETLs would make a negative contribution to cumulative effects on the economic burdens of low-income users of I-405. The operation of ETLs could continue to disproportionately affect persons with limited English proficiency, who may have difficulty understanding and using all-electronic tolling. These effects would be offset by improved travel times and increased travel speeds for most users of I-405, including travelers using the toll-free general purpose lanes, due to added freeway capacity (a second ETL).

Page 6-1, Section 6.1.1, first bullet

- WSDOT is proposing mitigation to offset traffic impacts at the intersection of 20th Avenue SE and 220th Street SE, a private street located in the Canyon Park Business Center (CPBC). This intersection currently operates poorly and would continue to operate poorly with the Build Alternative. ~~Final mitigation will be determined by WSDOT with input from the Canyon Park Business Center Owners Association.~~ Overall traffic level of service in the CPBC would be similar with the Build Alternative as compared to the No Build Alternative. An agreement outside the Project scope is being discussed but is not necessary to mitigate Project effects; WSDOT will continue to work with the CPBC to advance the agreement.

Note: The same changes also apply to Appendix A, *Transportation Discipline Report*, page 7-1, Section 7.1, first bullet.

Page 6-1, Section 6.1.3, first bullet

- Prepare and implement a revegetation plan in accordance with WSDOT's Roadside Policy Manual (WSDOT 2015) and minimize the amount of vegetation clearing to retain as many trees as practicable to minimize impacts. Replant areas where vegetation is

cleared temporary impacts with appropriate native species, including grasses, forbs, and shrubs adjacent to the roadway, and trees where a suitable setback from the roadway exists.

Note: The same changes also apply to:

- page 6-5, Section 6.2.3, first bullet
- Appendix I, *Ecosystems Discipline Report*, page 6-1, Section 6.1, first bullet
- Appendix I, *Ecosystems Discipline Report*, page 6-1, Section 6.2, first bullet

Page 6-2, Section 6.1.3, second bullet under Streams and Aquatic Resources

- Direct lighting away from streams and waterbodies wherever possible. Luminaires that are above or adjacent to streams or rivers shall have high pressure sodium lamps. Use of light-emitting diode (LED) lighting above or adjacent to streams or rivers is prohibited.

Note: The same changes apply to Appendix I, *Ecosystems Discipline Report*, page 6-1, Section 6.1.2, second bullet.

Page 6-4, Section 6.2.1

- Coordinate with the local agencies and other projects to prepare a Traffic Transportation Management Plan prior to making any changes to the traffic flow or lane closures. Local agencies, the public, school districts, emergency service providers, and transit agencies will be informed of the changes in advance through the media, the Project website, and an email listserv. Pedestrian and bicycle circulation will be maintained as much as possible during construction. For any road, bicycle lane, and/or sidewalk closure, clearly marked detours will be provided.

Note: The same changes also apply to Appendix A, *Transportation Discipline Report*, page 7-1, Section 7.2, last bullet.

Page 6-5, Section 6.2.3

Add the following as the fourth bullet point under the Wetlands header:

- Develop a Water Quality Monitoring and Protection Plan that provides specific information on activities that will be performed within and/or over waters of the State in accordance with the Project's CWA Section 401 Water Quality Certification.

Note: The same changes also apply to Appendix I, *Ecosystems Discipline Report*, page 6-2, Section 6.2.1.

Page 6-8, Section 6.2.8

Change heading title to "Environmental Justice and Limited English Proficiency."

Add the following as the third bullet point:

- Consult with the Muckleshoot Indian Tribe on measures to avoid and minimize conflicts to their planned salmon-tracking activities in the Sammamish River.

Note: The same changes also apply to Appendix C, *Community Impact Assessment and Environmental Justice Discipline Report*, page 6-4, Section 6.2.4.

Page 6-12, Section 6.2.12

At the end of this section, in the second and third bullet points under “The following additional mitigation measures will be required at specific sites,” the following changes were made:

- Prior to demolition of the I-405 off-ramp bridges at the SR 522 interchange, ~~the building on the Hallett property,~~ and the building on the Bothell City Shop/Public Works UST property, a certified AHERA Building Inspector should conduct a Good Faith Asbestos and Hazardous Materials Survey ~~on the existing bridges/structures/buildings associated with the Project,~~ complying with and providing an AHERA-level assessment in accordance with U.S. Environmental Protection Agency, 40 Code of Federal Regulations 763, and Washington State Department of Labor and Industries standards, Washington Administrative Code 296-62-07721(2)(b)(ii).
- For proposed partial acquisitions and temporary construction easements of properties with Historical Recognized Environmental Conditions and Recognized Environmental Conditions, a Phase II Environmental Site Assessment (ESA) should be considered prior to any purchase agreement, based on proposed Project activities on these properties. A Phase II ESA should be conducted where excavations are proposed near adjoining sites of concern with potential groundwater contamination.
 - ~~Sites to be considered for a~~ A Limited Phase II ESA was completed for include the Chevron 93299 the Former Excell Cleaners site in March 2021, June Therapeutics, and WSDOT will develop General Special Provisions (GSPs) and Special Provisions (SPs) to limit dewatering and require assessment of any generated fluids prior to disposal.
 - A Phase II ESA was completed for the Bothell City Shop/Public Works UST/King County parcel 0926059013 in May 2020. A Hazardous Materials Management Plan will be required for this site to address known and unknown contamination in the work area.
 - A limited Phase II ESA was completed for the Chevron 93299 site in November 2020. WSDOT will develop GSPs and SPs to limit dewatering and require assessment of any generated fluids prior to disposal.
 - For the King County Parks/Former BNSF rail line site, if the contractor proposes construction activities that would require any excavation at this site, soil should be sampled and pre-characterized to determine baseline conditions.
 - For the AT&T Wireless site, if the contractor plans to excavate into shallow groundwater, the groundwater should be sampled and pre-characterized for disposal purposes.

Appendix A, Transportation Discipline Report, page 3-5, Section 3.3.3, last paragraph

~~The City of Bothell is currently~~ has been in the process of updating the Canyon Park Subarea Plan to guide redevelopment and infrastructure planning in the Canyon Park regional growth center, which is located in the study area east of SR 527 and north of I-405 and 228th Street SE. The plan is designed to facilitate opportunities for employment, residential, and mixed-use development. The City describes the community’s vision for Canyon Park as a regional

economic driver, a multifaceted neighborhood, and a transportation hub with connections to the natural environment (City of Bothell 2019). In December 2019, Bothell published the *Canyon Park Subarea Planned Action Draft EIS* (City of Bothell 2019). The *Draft EIS* evaluated ~~ds~~ a no action alternative that would maintain growth established in the city's currently adopted comprehensive plan, *Imagine Bothell* (City of Bothell 2015) and three build alternatives that would increase development densities over currently planned growth. The *Draft EIS* also identified ~~ds~~ possible transportation improvements that may be needed to accommodate growth beyond currently adopted comprehensive plan. The *Draft EIS* ~~does~~ did not identify a preferred alternative.

Since the publication of the EA in July 2020, the City has released a *Draft EIS Addendum* and a *draft Canyon Park Subarea Plan*, responded to comments on the *Draft EIS*, and issued the *Canyon Park Subarea Planned Action Final EIS*, which identified a preferred alternative. On December 15, 2020, the Bothell City Council voted to adopt the updated *Canyon Park Subarea Plan*, zoning and development regulation amendments within the Bothell Municipal Code and a planned action ordinance. The development regulations and planned action ordinance took effect on January 1, 2021, and implementation will be ongoing for the life of the plan. The City plans to pursue certification of the subarea plan from the Puget Sound Regional Council in 2021 in order to retain the Regional Growth Center designation for Canyon Park. The outcome of Bothell's *Draft EIS* and comprehensive plan update process is currently unknown.

~~Per the *Draft EIS*, the following City of Bothell actions would be required before any of the build alternatives could be implemented:~~

- ~~▪ Select a preferred alternative, respond to comments on the *Draft EIS* and issue a *Final EIS*.~~
- ~~▪ Adopt the updated *Canyon Park Subarea Plan* as part of *Imagine Bothell*.~~
- ~~▪ Adopt zoning and development regulation amendments within the Bothell Municipal Code.~~
- ~~▪ Adopt a planned action ordinance.~~

As documented in the *Draft EIS*, the City plans to select a preferred alternative and issue a *Final EIS* in the first half of 2020. The timeline for other the actions listed above is currently unknown, but would be expected to occur after the *Final EIS* is issued. Because the outcome of the City's planning process for the *Canyon Park Subarea* is ~~currently~~ was unknown when this report was developed, this EA evaluates land use densities in Bothell's currently approved and adopted comprehensive plan, *Imagine Bothell* (Bothell 2015). WSDOT and the City agreed on assumptions for their respective environmental analyses, and the City provided a letter to WSDOT confirming concurrence with this approach in September 2020. The City's *Canyon Park Subarea Planned Action Final EIS* addresses the cumulative impacts of the City's proposed changes in density and development in that area by including the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as part of the baseline conditions in both the No Action and Action Alternatives. Throughout the development of this EA, WSDOT has been coordinating with Bothell on the *Canyon Park Subarea Plan* update and *Draft and Final EIS* and will continue to do so as the City's plans progress. The I-405, SR 522 Vicinity to SR 527 Express

Toll Lanes Improvement Project would not preclude the City's proposal to increase land use densities in the Canyon Park Subarea.

Appendix A, Transportation Discipline Report, page 4-7 and 4-8, Section 4.3, 2nd and 3rd paragraphs

In the AM peak period, four intersections currently operate at LOS E or worse. The intersection of NE 160th Street and 116th Avenue NE operates at LOS F because left-turning vehicles from 116th Avenue NE struggle to find adequate gaps in opposing traffic. The all-way stop controlled intersection of 23rd Drive SE and 220th Street SE in the Canyon Park Business Center (CPBC) operates at LOS E due to a single through lane that serves high traffic volumes on the eastbound approach. The intersection of Bothell Everett Highway and 228th Street SE operates at LOS E due to heavy north-south volume. The intersection of SR 527 and 214th Street SE operates at LOS E due to high southbound through and left-turn volumes.

~~Twelve~~Nine intersections in the study area operate with at least one approach at LOS E or worse, while the remaining intersections operate at LOS D or better for all approaches.

In the PM peak period, five intersections currently operate at LOS E or worse. Similar to the AM peak period, left-turning vehicles at the NE 160th Street and 116th Avenue NE intersection struggle to find adequate gaps in the opposing traffic. In the CPBC, the all-way stop controlled 20th Avenue SE and 220th Street SE intersection currently operates at LOS F with several approaches over capacity. Three of these intersections are located along SR 527/Bothell Everett Highway, where traffic volumes are high and the intersections are operating over capacity.

~~Twelve~~Thirteen intersections operate with at least one approach at LOS E or worse while the remaining intersections operate at LOS D or better for all approaches.

Appendix A, Transportation Discipline Report, pages 4-10 and 4-11, Section 4.3, Exhibit 4-4

Since the EA was published, WSDOT has continued to refine the conceptual design for the Project and updated the transportation analysis with the following minor changes:

- Additional design refinements within the Canyon Park Business Center (including triple westbound left turn designation at SR 527 and 220th Street SE and increased turn-pocket lengths along several intersection approaches within the CPBC area)
- City of Bothell's addition of a pedestrian crossing at the 29th Avenue SE and 228th Street SE intersection in 2018, which was not originally reflected in the analysis for this area.
- Minor refinements to model parameters such as pedestrian crossing times, lane change distances, and intersection turning speeds in coordination with the CPBC Owner's Association.
- Updated coordinated signal timings to reflect changes described above.

These refinements resulted in minor changes to LOS and delay at several intersections in the Canyon Park area (a mixture of increases and decreases depending on the intersection, year, and time of day) but no substantial changes in overall effects as disclosed in the EA.

Replace Exhibit 4-4, Sheets 2 and 3, with the following updated graphics:

Exhibit 4-4. Existing Intersection Analysis Results, Sheet 2 of 3

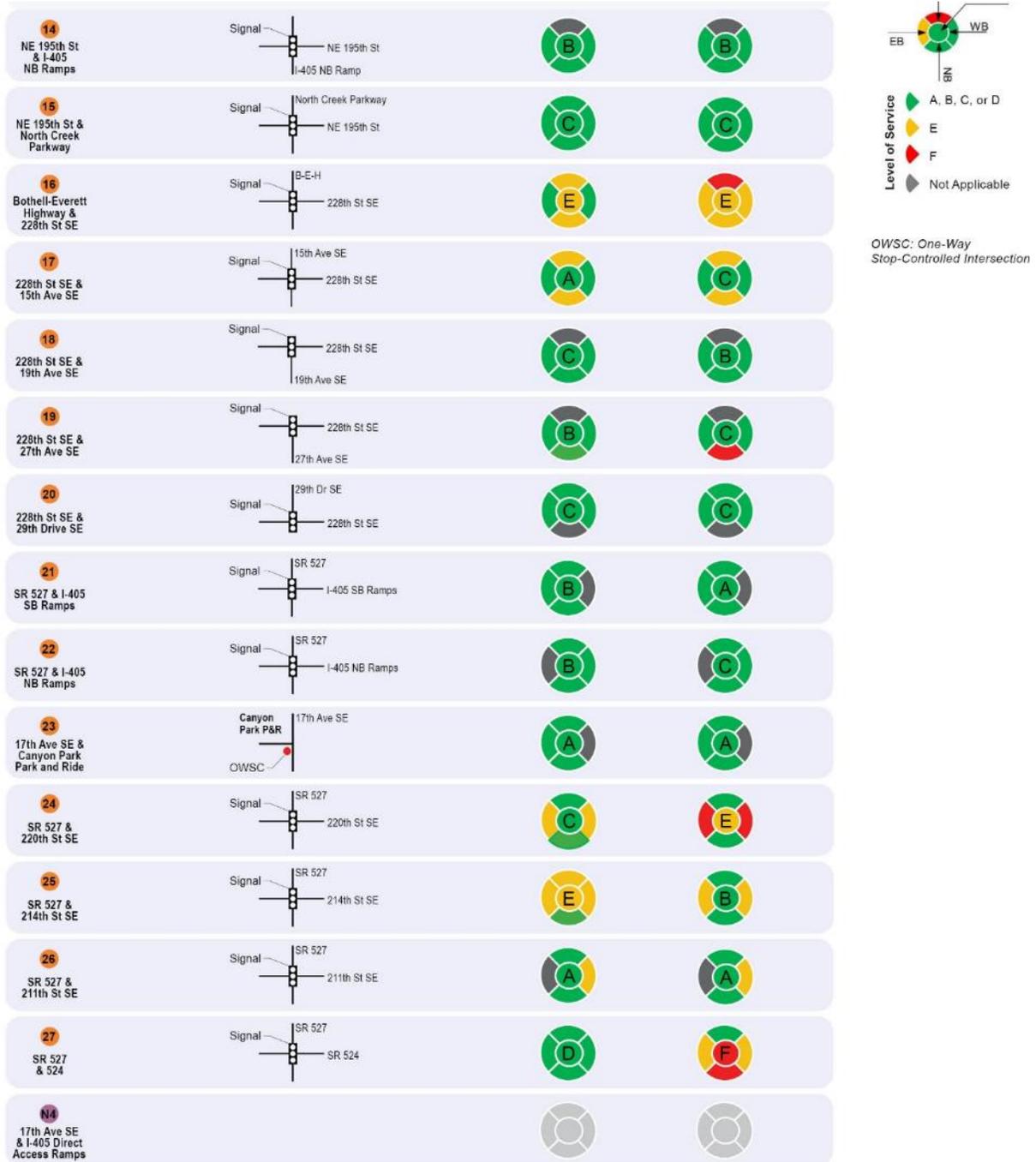


Exhibit 4-4. Existing Intersection Analysis Results, Sheet 3 of 3



Appendix A, Transportation Discipline Report, pages 5-16 and 5-17, Section 5.4.1, 3rd and 4th paragraphs

For the No Build Alternative in the 2025 AM peak hour, five intersections would operate at LOS E or worse. These intersections all operate at LOS E or worse in existing conditions (see Section 4.3) with one exception, 20th Avenue SE and 220th Street SE. This Canyon Park Business Center (CPBC) intersection would operate at LOS E due to increased volume and limited capacity for eastbound traffic. Additionally, ~~15~~11 intersections would operate with at least one approach at LOS E or worse. The remaining intersections would operate at LOS D or better. In the 2045 AM peak hour, eight intersections would operate at LOS E or worse, and ~~19~~18 intersections would have at least one approach operating at LOS E or worse. The intersections that degrade to LOS E or worse in 2045 are located in the SR 527 interchange area, primarily located along SR 527, 228th Avenue SE, and 220th Street SE. These corridors have high forecasted traffic volumes and do not have planned improvement projects. The remaining intersections would operate at LOS D or better.

In the 2025 PM peak hour, ~~five~~seven intersections would operate at LOS E or worse, ~~which is the same as existing conditions.~~ ~~Fourteen~~Fifteen intersections would have at least one approach operating at LOS E or worse. The remaining intersections would operate at LOS D or better. In the 2045 PM peak hour, ~~eight~~nine intersections would operate at LOS E or worse (~~three~~two more than 2025), and 19 intersections would have at least one approach operating at LOS E or worse. Two intersections in the CPBC would operate at LOS E or worse in 2045 along 220th Street SE. The remaining intersections would operate at LOS D or better.

Appendix A, Transportation Discipline Report, page 5-17, Section 5.4.2, 4th and 5th paragraphs

Exhibit 5-12 summarizes the locations where the peak hour intersection LOS would be E or worse. With the Build Alternative in the 2025 AM peak hour, ~~five~~six intersections would operate at LOS E or worse, and 19 intersections would have at least one approach operating at LOS E or worse. In the 2045 AM peak hour, ~~nine~~ten intersections would operate at LOS E or worse, and 22 intersections would have at least one approach operating at LOS E or worse.

In the 2025 PM peak hour, ~~four~~ six intersections would operate at LOS E or worse and 19 intersections would have at least one approach operating at LOS E or worse. In the 2045 PM peak hour, ~~eight~~ ten intersections would operate at LOS E or worse and 22 intersections would have at least one approach operating at LOS E or worse.

Appendix A, Transportation Discipline Report, page 5-18, Section 5.4.2, Exhibit 5-12

Replace Exhibit 5-12 with the following exhibit:

Exhibit 5-4. Number of Occurrences of Peak Hour Level of Service E or Worse

Time of Day	Existing	2025 No Build	2025 Build	2045 No Build	2045 Build
Overall Intersections Operating at LOS E or Worse					
AM peak hour	4	5	5 <u>6</u>	8	9 <u>10</u>
PM peak hour	5	5 <u>7</u>	4 <u>6</u>	8 <u>9</u>	9 <u>10</u>
Intersections with One or More Approaches Operating at LOS E or Worse					
AM peak hour	12 <u>9</u>	15 <u>11</u>	19	19 <u>18</u>	22
PM peak hour	12 <u>13</u>	14 <u>15</u>	19	19	22

LOS = level of service

Appendix A, Transportation Discipline Report, page 5-19, Section 5.4.2, last paragraph

All intersections in the CPBC that operate at LOS E or worse with the Build Alternative would also operate at LOS E or worse in the No Build Alternative. ~~One intersection, 26th Place SE and 220th Street SE, would degrade from a “high” LOS E to a “low” LOS F in the 2045 AM peak hour under the Build Alternative.~~ The direct access ramps south of SR 527 at 17th Avenue SE would lead to a small increase in traffic volumes through the CPBP, mainly along 29th Drive SE and 220th Street SE. As a result, a slight increase in intersection average vehicle delay is expected (see Attachment E).

Appendix A, Transportation Discipline Report, page 5-21 to 5-25, Exhibits 5-13 and 5-14

Since the EA was published, WSDOT has continued to refine the conceptual design for the Project and updated the transportation analysis with the following minor changes:

- Additional design refinements within the Canyon Park Business Center (including triple westbound left turn designation at SR 527 and 220th Street SE and increased turn-pocket lengths along several intersection approaches within the CPBC area)
- City of Bothell’s addition of a pedestrian crossing at the 29th Avenue SE and 228th Street SE intersection in 2018, which was not originally reflected in the analysis for this area.
- Minor refinements to model parameters such as pedestrian crossing times, lane change distances, and intersection turning speeds in coordination with the CPBC Owner’s Association.
- Updated coordinated signal timings to reflect changes described above.

These refinements resulted in minor changes to LOS and delay at several intersections in the Canyon Park area (a mixture of increases and decreases depending on the intersection, year, and time of day) but no substantial changes in overall effects as disclosed in the EA.

Replace Exhibit 5-13, Sheets 2 and 3, and Exhibit 5-15, Sheets 2 and 3, with the following updated graphics:

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
 FINDING OF NO SIGNIFICANT IMPACT

Exhibit 5-13. AM Peak Hour Intersection Level of Service Results, Sheet 2 of 3

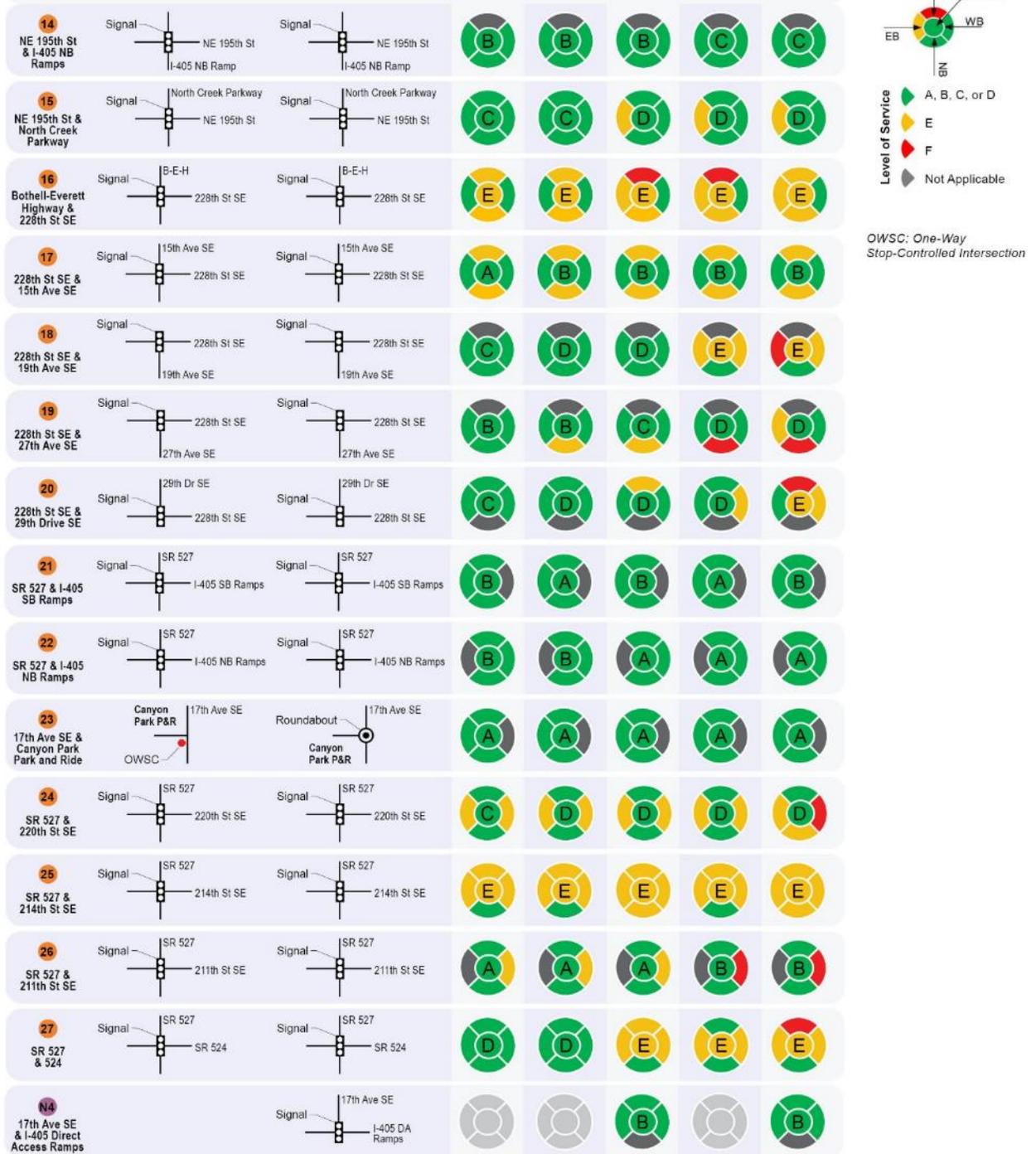


Exhibit 5-13. AM Peak Hour Intersection Level of Service Results, Sheet 3 of 3

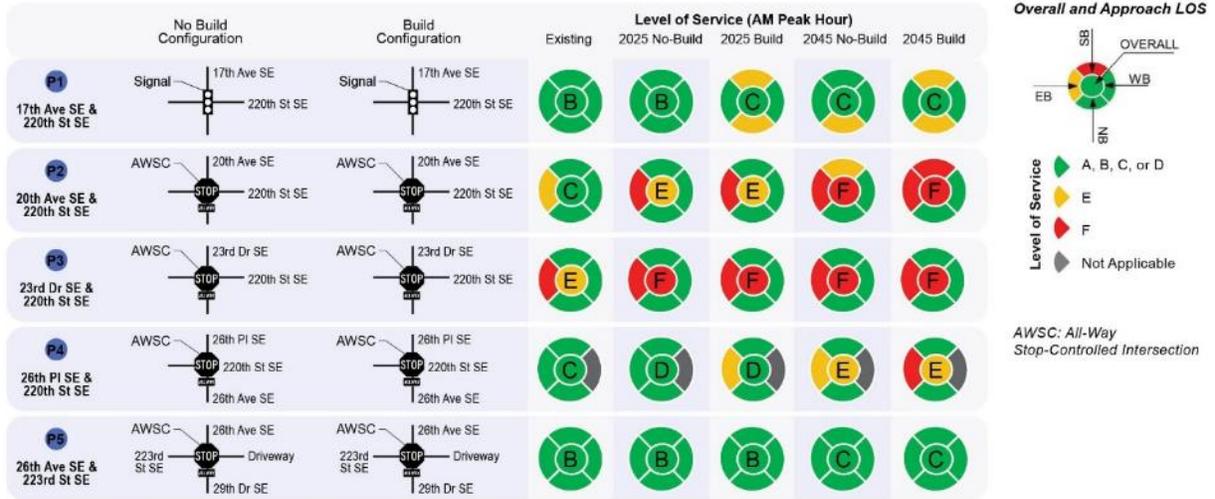


Exhibit 5-14. PM Peak Hour Intersection Level of Service Results, Sheet 2 of 3

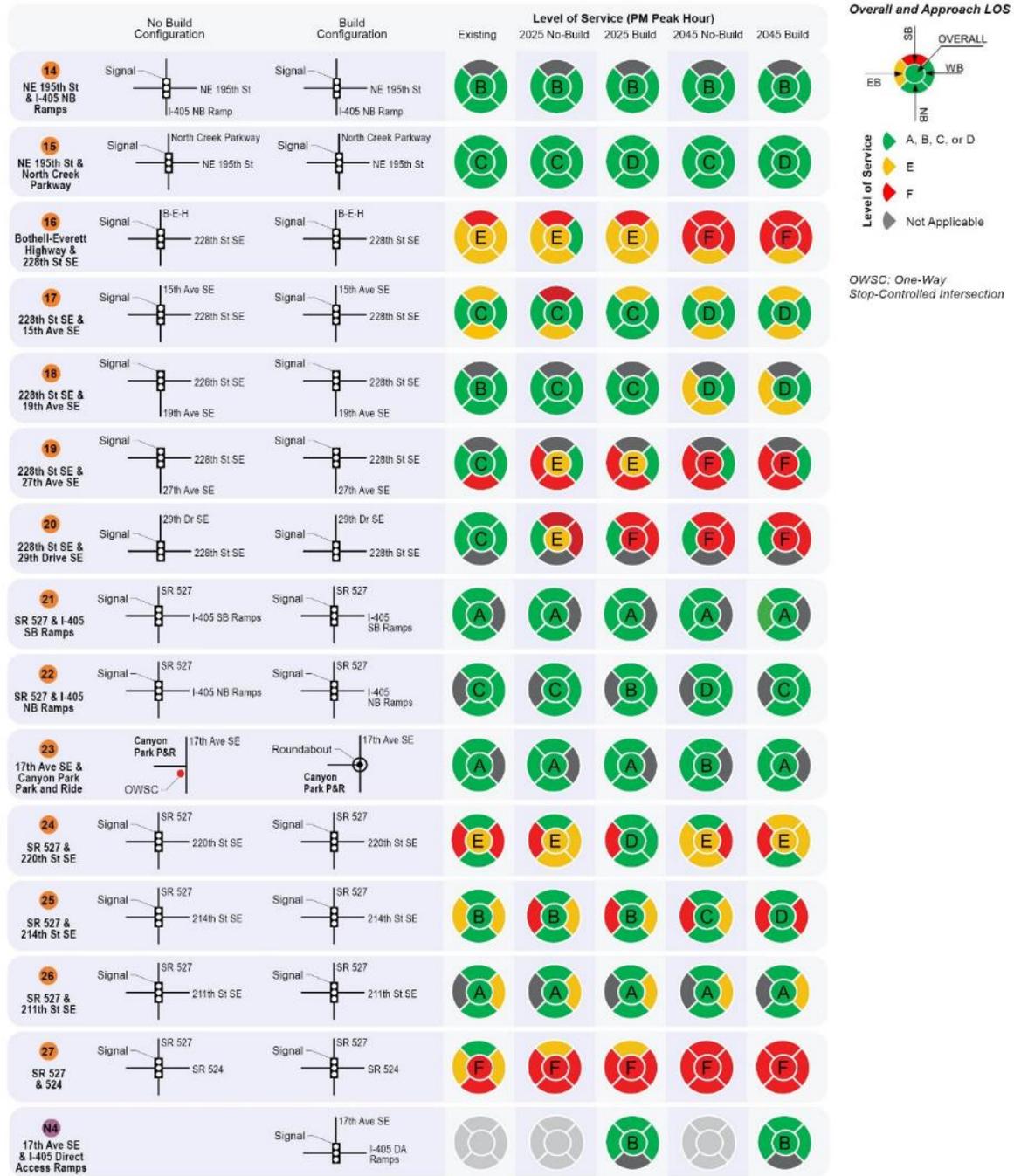
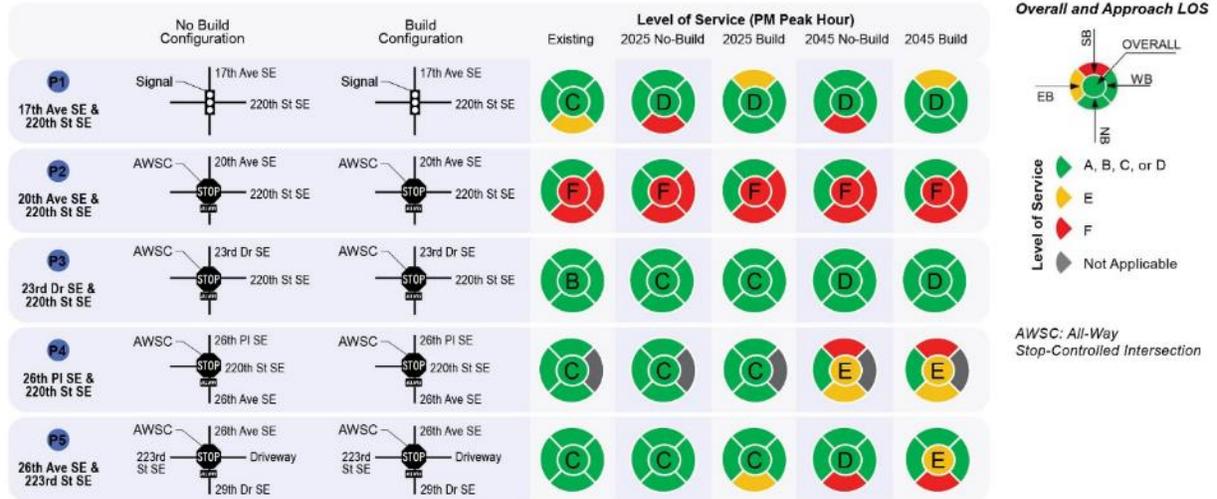


Exhibit 5-14. PM Peak Hour Intersection Level of Service Results, Sheet 3 of 3



Appendix A, Transportation Discipline Report, page 6-1, Section 6.2.1, last paragraph

WSDOT will work with the contractor on the development of a Traffic Transportation Management Plan to identify potential construction haul routes, staging areas, detour routes, lane closures, and construction techniques among other elements. The Traffic Transportation Management Plan would require the WSDOT’s approval for impacts on freeway facilities; impacts on local streets would require the review and approval of affected jurisdictions. This approval is required prior to the start of any construction activity that affects traffic and must be updated as the project progresses.

Appendix A, Transportation Discipline Report, Attachment E, Peak Hour Intersection Analysis Results

Since the EA was published, WSDOT has continued to refine the conceptual design for the Project and updated the transportation analysis with the following minor changes:

- Additional design refinements within the Canyon Park Business Center (including triple westbound left turn designation at SR 527 and 220th Street SE and increased turn-pocket lengths along several intersection approaches within the CPBC area)
- City of Bothell's addition of a pedestrian crossing at the 29th Avenue SE and 228th Street SE intersection in 2018, which was not originally reflected in the analysis for this area.
- Minor refinements to model parameters such as pedestrian crossing times, lane change distances, and intersection turning speeds in coordination with the CPBC Owner's Association.
- Updated coordinated signal timings to reflect changes described above.

These refinements resulted in minor changes to LOS and delay at several intersections in the Canyon Park area (a mixture of increases and decreases depending on the intersection, year, and time of day) but no substantial changes in overall effects as disclosed in the EA.

The following updated data tables replace all of the original data tables in Attachment E:

Existing AM

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	7	A	5	C	28	C	35	A	7
2	NE 160th Street and I-405 Southbound Ramps	Signal	D	46	C	22	NA	NA	D	46	D	37
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	28	B	16	D	49	NA	NA	C	25
4	NE 160th Street and 116th Avenue NE	TWSC	B	EB L-13	A	WBL-9	F	NBLTR-63	F	SB LT-162	F	SB LT 162
5	131st Avenue NE and NE 175th Street	Signal	D	41	D	45	D	36	B	18	C	31
6	131st Avenue NE and NE 177th Place	Signal	D	50	D	48	A	6	A	1	A	6
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	56	NA	NA	A	0	A	7	A	8
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	D	53	C	33	D	37	D	38
9	132nd Avenue NE and NE 180th Street	Signal	D	44	NA	NA	D	39	A	7	C	25
10	SR 522 and Campus Way NE	Signal	C	30	B	18	D	40	D	39	C	27
11	NE 195th Street and 110th Avenue NE	Signal	A	9	A	4	D	39	D	37	B	10
12	NE 195th Street and 112th Avenue NE	Signal	A	5	B	12	NA	NA	B	20	A	10
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	12	B	18	NA	NA	C	34	B	18
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	6	A	10	C	33	NA	NA	B	14

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	D	41	B	17	C	25	C	32	C	29
16	Bothell-Everett Highway and 228th Street SE	Signal	D	40	D	52	E	63	E	68	E	56
17	228th Street SE and 15th Avenue SE	Signal	A	2	A	6	E	62	E	64	A	9
18	228th Street SE and 19th Avenue SE	Signal	D	37	B	19	D	41	NA	NA	C	32
19	228th Street SE and 27th Avenue SE	Signal	B	15	A	1	D	54	NA	NA	B	13
20	228th Street SE and 29th Drive SE	Signal	B	17	C	26	NA	NA	D	46	C	25
21	SR 527 and I-405 Southbound Ramps	Signal	C	25	NA	NA	B	14	A	3	B	13
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	15	A	3	B	19	B	12
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	A	EB L-9	NA	NA	A	0	A	0	A	EB L-9
24	SR 527 and 220th Street SE	Signal	E	67	E	77	C	29	C	30	C	34
25	SR 527 and 214th Street SE	Signal	E	69	E	65	D	47	E	72	E	66
26	SR 527 and 211th Street SE	Signal	NA	NA	E	75	A	0	A	5	A	6
27	SR 527 and SR 524	Signal	D	50	D	47	C	28	C	32	D	37
P1	17th Avenue SE and 220th Street SE	Signal	B	13	A	9	C	26	C	20	B	14
P2	220th St SE and 20th Ave SE	AWSC	E	43	B	14	B	15	C	25	D	33

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
 FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	F	53	A	9	B	10	B	10	E	43
P4	220th St SE and 26th Pl SE	AWSC	D	26	NA	NA	B	11	A	10	C	23
P5	223rd St SE and 26th Ave SE	AWSC	B	13	A	9	B	13	B	11	B	12

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC: All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

Existing PM

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	6	A	1	C	29	C	35	A	5
2	NE 160th Street and I-405 Southbound Ramps	Signal	C	21	B	13	NA	NA	D	45	C	26
3	NE 160th Street and I-405 Northbound Ramps	Signal	D	39	C	25	D	49	NA	NA	D	35
4	NE 160th Street and 116th Avenue NE	TWSC	C	EB L-15	A	WBL-10	F	NBLTR-91	F	SB LT-203	F	SB LT-203
5	131st Avenue NE and NE 175th Street	Signal	D	55	E	60	D	43	C	32	D	46
6	131st Avenue NE and NE 177th Place	Signal	D	50	D	49	B	16	A	5	B	16
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	57	NA	NA	A	1	B	14	A	9
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	58	B	20	C	34	C	26
9	132nd Avenue NE and NE 180th Street	Signal	A	9	NA	NA	A	7	A	10	A	8
10	SR 522 and Campus Way NE	Signal	B	20	B	18	D	46	D	39	C	22
11	NE 195th Street and 110th Avenue NE	Signal	B	14	B	12	C	35	D	40	B	20
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	11	NA	NA	C	29	A	9
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	14	B	18	NA	NA	D	43	C	20
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	6	A	1	D	42	NA	NA	B	11

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	A	8	C	23	D	44	D	47	C	25
16	Bothell-Everett Highway and 228th Street SE	Signal	E	73	E	56	E	56	F	90	E	72
17	228th Street SE and 15th Avenue SE	Signal	C	27	B	10	E	56	E	59	C	22
18	228th Street SE and 19th Avenue SE	Signal	B	19	A	3	C	27	NA	NA	B	12
19	228th Street SE and 27th Avenue SE	Signal	C	21	A	9	F	84	NA	NA	C	26
20	228th Street SE and 29th Drive SE	Signal	A	4	B	17	NA	NA	D	44	C	22
21	SR 527 and I-405 Southbound Ramps	Signal	C	20	NA	NA	A	5	A	3	A	7
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	19	B	20	C	31	C	25
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	A	EB L-10	NA	NA	A	0	A	0	A	EB L-10
24	SR 527 and 220th Street SE	Signal	F	155	F	83	D	55	D	38	E	64
25	SR 527 and 214th Street SE	Signal	E	74	E	62	B	15	B	13	B	19
26	SR 527 and 211th Street SE	Signal	NA	NA	E	68	A	0	A	10	A	7
27	SR 527 and SR 524	Signal	E	69	E	72	F	187	D	42	F	114
P1	17th Avenue SE and 220th Street SE	Signal	A	10	A	10	E	72	C	20	C	25
P2	220th St SE and 20th Ave SE	AWSC	C	17	F	127	F	62	B	13	F	83

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	ControlType	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	B	10	C	16	B	10	A	10	B	14
P4	220th St SE and 26th Pl SE	AWSC	B	11	NA	NA	C	17	C	16	C	16
P5	223rd St SE and 26th Ave SE	AWSC	A	10	A	9	C	20	A	9	C	15

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC; All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 11, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2025 No Build Alternative AM

ID	Intersection	Control Type	Eastbound		Westbound		Northbound		Southbound		Overall	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	7	A	5	C	29	C	35	A	7
2	NE 160th Street and I-405 Southbound Ramps	Signal	D	46	C	21	NA	NA	D	47	D	37
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	22	B	16	D	49	NA	NA	C	21
4	NE 160th Street and 116th Avenue NE	TWSC	B	EB L-13	A	WBL-9	F	NBLTR-102	F	SB LT-221	F	SB LT-221
5	131st Avenue NE and NE 175th Street	Signal	D	40	D	48	D	37	C	22	C	33
6	131st Avenue NE and NE 177th Place	Signal	D	49	D	47	A	6	A	2	A	7
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	56	NA	NA	A	0	A	7	A	8
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	57	B	20	D	43	C	35
9	132nd Avenue NE and NE 180th Street	Signal	D	46	NA	NA	C	35	A	8	C	25
10	SR 522 and Campus Way NE	Signal	C	34	C	25	D	48	D	41	C	32
11	NE 195th Street and 110th Avenue NE	Signal	B	14	A	7	C	33	D	38	B	14
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	12	NA	NA	C	22	A	9
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	11	B	15	NA	NA	C	34	B	16
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	7	B	13	D	35	NA	NA	B	18

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	Eastbound		Westbound		Northbound		Southbound		Overall	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	D	41	B	17	C	25	C	33	C	30
16	Bothell-Everett Highway and 228th Street SE	Signal	D	44	D	41	E	64	E	73	E	56
17	228th Street SE and 15th Avenue SE	Signal	A	3	A	9	E	58	E	65	B	12
18	228th Street SE and 19th Avenue SE	Signal	D	43	C	27	D	47	NA	NA	D	39
19	228th Street SE and 27th Avenue SE	Signal	C	23	A	6	E	61	NA	NA	B	19
20	228th Street SE and 29th Drive SE	Signal	C	22	D	43	NA	NA	D	51	D	37
21	SR 527 and I-405 Southbound Ramps	Signal	C	24	NA	NA	A	10	A	2	A	10
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	15	A	8	B	12	B	12
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	A	EB L9	NA	NA	A	0	A	0	A	EB L-9
24	SR 527 and 220th Street SE	Signal	E	63	E	69	B	20	D	42	D	36
25	SR 527 and 214th Street SE	Signal	E	70	E	65	D	34	E	74	E	65
26	SR 527 and 211th Street SE	Signal	NA	NA	E	75	A	9	A	5	A	9
27	SR 527 and SR 524	Signal	D	54	D	52	C	33	D	46	D	46
P1	17th Avenue SE and 220th Street SE	Signal	B	17	B	12	C	24	B	18	B	17
P2	220th St SE and 20th Ave SE	AWSC	F	51	C	15	C	16	D	33	E	39

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
 FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	Eastbound		Westbound		Northbound		Southbound		Overall	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	F	75	A	9	B	11	B	11	F	59
P4	220th St SE and 26th Pl SE	AWSC	D	34	NA	NA	B	12	A	10	D	29
P5	223rd St SE and 26th Ave SE	AWSC	B	14	A	9	B	14	B	11	B	13

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC: All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2025 No Build Alternative PM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	7	A	1	C	30	C	35	A	6
2	NE 160th Street and I-405 Southbound Ramps	Signal	C	22	D	37	NA	NA	D	48	D	35
3	NE 160th Street and I-405 Northbound Ramps	Signal	B	19	C	25	D	53	NA	NA	C	27
4	NE 160th Street and 116th Avenue NE	TWSC	D	EB L-29	A	WBL-9	F	NBLTR->300	F	SB L->300	F	NBLTR->300
5	131st Avenue NE and NE 175th Street	Signal	E	56	E	68	D	43	D	41	D	51
6	131st Avenue NE and NE 177th Place	Signal	D	49	D	47	C	22	A	7	B	19
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	65	NA	NA	A	1	B	15	B	12
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	65	B	17	D	50	C	30
9	132nd Avenue NE and NE 180th Street	Signal	A	8	NA	NA	A	9	B	12	A	9
10	SR 522 and Campus Way NE	Signal	C	24	C	23	E	56	D	48	C	28
11	NE 195th Street and 110th Avenue NE	Signal	C	20	B	18	C	34	D	39	C	23
12	NE 195th Street and 112th Avenue NE	Signal	A	3	B	11	NA	NA	C	29	A	9
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	14	C	21	NA	NA	D	42	C	23
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	5	A	1	D	42	NA	NA	B	10

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	A	9	C	23	D	44	D	47	C	26
16	Bothell-Everett Highway and 228th Street SE	Signal	E	76	D	50	E	65	F	95	E	74
17	228th Street SE and 15th Avenue SE	Signal	A	3	C	21	E	55	F	66	C	20
18	228th Street SE and 19th Avenue SE	Signal	C	30	B	10	D	44	NA	NA	C	24
19	228th Street SE and 27th Avenue SE	Signal	F	105	C	23	F	116	NA	NA	E	74
20	228th Street SE and 29th Drive SE	Signal	C	24	F	116	NA	NA	F	82	E	70
21	SR 527 and I-405 Southbound Ramps	Signal	C	26	NA	NA	A	5	A	4	A	9
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	C	26	B	19	C	34	C	28
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	A	EB L-10	NA	NA	A	0	A	0	A	EB L-10
24	SR 527 and 220th Street SE	Signal	F	89	E	72	E	73	D	54	E	69
25	SR 527 and 214th Street SE	Signal	F	102	E	69	A	10	A	7	B	18
26	SR 527 and 211th Street SE	Signal	NA	NA	E	77	A	1	A	10	A	7
27	SR 527 and SR 524	Signal	F	115	F	99	F	220	E	63	F	148
P1	17th Avenue SE and 220th Street SE	Signal	C	21	C	23	F	143	B	15	D	52
P2	220th St SE and 20th Ave SE	AWSC	C	20	F	201	F	111	B	14	F	132

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	B	11	C	18	B	10	A	10	C	16
P4	220th St SE and 26th Pl SE	AWSC	B	11	NA	NA	C	21	C	20	C	19
P5	223rd St SE and 26th Ave SE	AWSC	B	10	A	10	D	26	A	10	C	19

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC; All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2045 No Build Alternative AM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	9	A	5	C	29	C	35	A	9
2	NE 160th Street and I-405 Southbound Ramps	Signal	E	70	C	21	NA	NA	D	45	D	52
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	34	B	17	D	49	NA	NA	C	28
4	NE 160th Street and 116th Avenue NE	TWSC	B	EB L-14	A	WBL-9	F	NBL->300	F	SB L->300	F	SB L->300
5	131st Avenue NE and NE 175th Street	Signal	D	39	D	49	D	37	C	26	C	35
6	131st Avenue NE and NE 177th Place	Signal	D	48	D	46	A	8	A	3	A	8
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	D	55	NA	NA	A	0	A	8	A	8
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	57	B	16	E	71	D	46
9	132nd Avenue NE and NE 180th Street	Signal	D	55	NA	NA	C	34	A	9	C	28
10	SR 522 and Campus Way NE	Signal	E	59	C	27	D	48	D	43	D	50
11	NE 195th Street and 110th Avenue NE	Signal	B	17	A	8	D	37	D	41	B	17
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	13	NA	NA	C	23	A	10
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	12	B	16	NA	NA	C	34	B	17
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	9	B	16	D	38	NA	NA	C	21

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	E	62	B	18	C	26	C	34	D	39
16	Bothell-Everett Highway and 228th Street SE	Signal	E	57	D	41	E	73	F	82	E	65
17	228th Street SE and 15th Avenue SE	Signal	A	6	B	12	E	65	E	73	B	17
18	228th Street SE and 19th Avenue SE	Signal	E	68	E	67	D	49	NA	NA	E	65
19	228th Street SE and 27th Avenue SE	Signal	D	53	B	12	F	80	NA	NA	D	40
20	228th Street SE and 29th Drive SE	Signal	C	31	D	54	NA	NA	E	76	D	51
21	SR 527 and I-405 Southbound Ramps	Signal	C	25	NA	NA	A	8	A	4	A	9
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	20	A	4	A	7	A	9
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	A	EB L-9	NA	NA	A	0.0	A	0.0	A	EB L-9
24	SR 527 and 220th Street SE	Signal	E	69	E	68	C	30	D	48	D	43
25	SR 527 and 214th Street SE	Signal	E	76	E	70	D	49	E	72	E	67
26	SR 527 and 211th Street SE	Signal	NA	NA	F	87	B	19	A	7	B	13
27	SR 527 and SR 524	Signal	E	72	E	76	D	42	D	53	E	59
P1	17th Avenue SE and 220th Street SE	Signal	B	18	B	13	E	62	C	20	C	25
P2	220th St SE and 20th Ave SE	AWSC	F	78	C	17	C	17	E	48	F	58

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	F	128	A	10	B	11	B	11	F	97
P4	220th St SE and 26th Pl SE	AWSC	E	48	NA	NA	B	13	B	10	E	39
P5	223rd St SE and 26th Ave SE	AWSC	C	18	A	10	C	16	B	12	C	15

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC: All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2045 No Build Alternative PM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	9	A	1	C	28	C	35	A	7
2	NE 160th Street and I-405 Southbound Ramps	Signal	C	26	D	39	NA	NA	D	49	D	37
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	27	C	33	D	50	NA	NA	C	33
4	NE 160th Street and 116th Avenue NE	TWSC	F	EB L-76	A	WBL-10	F	NBLTR->300	F	SB LT->300	F	NBLTR->300
5	131st Avenue NE and NE 175th Street	Signal	F	86	E	72	D	44	D	44	E	62
6	131st Avenue NE and NE 177th Place	Signal	D	45	E	60	D	49	B	16	D	38
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	69	NA	NA	A	2	C	20	B	16
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	71	B	19	E	79	D	40
9	132nd Avenue NE and NE 180th Street	Signal	A	8	NA	NA	A	10	B	14	B	10
10	SR 522 and Campus Way NE	Signal	C	29	C	24	E	62	D	54	D	32
11	NE 195th Street and 110th Avenue NE	Signal	C	22	B	18	C	34	D	41	C	24
12	NE 195th Street and 112th Avenue NE	Signal	A	3	B	12	NA	NA	C	30	A	9
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	15	C	21	NA	NA	D	42	C	23
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	6	A	1	D	41	NA	NA	B	10

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	B	11	C	26	D	43	D	47	C	28
16	Bothell-Everett Highway and 228th Street SE	Signal	F	122	F	88	E	77	F	97	F	95
17	228th Street SE and 15th Avenue SE	Signal	C	28	C	31	E	58	E	72	D	36
18	228th Street SE and 19th Avenue SE	Signal	E	57	D	36	E	69	NA	NA	D	50
19	228th Street SE and 27th Avenue SE	Signal	F	187	C	25	F	217	NA	NA	F	131
20	228th Street SE and 29th Drive SE	Signal	C	30	F	159	NA	NA	F	115	F	96
21	SR 527 and I-405 Southbound Ramps	Signal	C	21	NA	NA	A	4	A	4	A	7
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	D	42	B	17	D	49	D	38
23	17th Avenue SE and Canyon Park Park and Ride	TWSC	B	EB L-10	NA	NA	A	0	A	0	B	EB L-10
24	SR 527 and 220th Street SE	Signal	E	80	F	118	E	67	D	53	E	74
25	SR 527 and 214th Street SE	Signal	F	124	E	79	B	16	B	13	C	26
26	SR 527 and 211th Street SE	Signal	NA	NA	E	71	A	1	B	12	A	9
27	SR 527 and SR 524	Signal	F	172	F	101	F	227	F	82	F	167
P1	17th Avenue SE and 220th Street SE	Signal	C	26	C	29	F	140	B	16	D	55
P2	220th St SE and 20th Ave SE	AWSC	D	31	F	329	F	220	C	16	F	215

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P3	220th St SE and 23rd Dr SE	AWSC	B	12	D	31	B	11	B	11	D	26
P4	220th St SE and 26th Pl SE	AWSC	B	13	NA	NA	E	36	F	50	E	40
P5	223rd St SE and 26th Ave SE	AWSC	B	12	B	10	F	52	B	11	D	33

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC: All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2025 Build Alternative AM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	7	A	5	C	29	C	35	A	7
2	NE 160th Street and I-405 Southbound Ramps	Signal	D	45	C	21	NA	NA	D	46	D	37
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	20	B	15	D	49	NA	NA	C	21
4	NE 160th Street and 116th Avenue NE	TWSC	B	EB L-13	A	WBL-9	F	NB LTR-124	F	SB LT-260	F	SB LT-260
5	131st Avenue NE and NE 175th Street	Signal	D	40	D	48	D	38	C	23	C	33
6	131st Avenue NE and NE 177th Place	Signal	D	49	D	47	A	7	A	2	A	7
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	56	NA	NA	A	0	A	8	A	8
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	59	C	26	D	46	D	40
9	132nd Avenue NE and NE 180th Street	Signal	D	46	NA	NA	C	35	A	8	C	25
10	SR 522 and Campus Way NE	Signal	C	32	C	28	D	52	D	47	C	31
11	NE 195th Street and 110th Avenue NE	Signal	B	15	A	7	C	33	D	39	B	14
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	12	NA	NA	C	23	A	10
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	13	B	17	NA	NA	C	33	B	18
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	8	B	14	D	36	NA	NA	B	19

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	E	55	B	18	C	26	C	33	D	36
16	Bothell-Everett Highway and 228th Street SE	Signal	E	61	D	36	E	59	F	96	E	69
17	228th Street SE and 15th Avenue SE	Signal	A	4	A	9	E	58	E	66	B	12
18	228th Street SE and 19th Avenue SE	Signal	D	53	C	31	D	48	NA	NA	D	46
19	228th Street SE and 27th Avenue SE	Signal	C	25	A	9	E	67	NA	NA	C	23
20	228th Street SE and 29th Drive SE	Signal	C	24	D	49	NA	NA	E	57	D	42
21	SR 527 and I-405 Southbound Ramps	Signal	C	23	NA	NA	B	11	A	3	B	11
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	14	A	4	A	6	A	7
23	17th Avenue SE and Canyon Park Park and Ride	Roundabout	B	13	NA	NA	A	5	A	5	A	6
24	SR 527 and 220th Street SE	Signal	E	66	E	80	D	37	C	26	D	38
25	SR 527 and 214th Street SE	Signal	E	70	E	65	E	59	E	68	E	66
26	SR 527 and 211th Street SE	Signal	NA	NA	E	79	A	1	A	7	A	8
27	SR 527 and SR 524	Signal	E	73	E	72	D	42	E	58	E	60
P1	17th Avenue SE and 220th Street SE	Signal	C	24	B	11	E	60	E	62	C	30
P2	220th St SE and 20th Ave SE	AWSC	F	70	C	16	C	18	D	34	E	49
P3	220th St SE and 23rd Dr SE	AWSC	F	85	A	9	B	11	B	11	F	67

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P4	220th St SE and 26th Pl SE	AWSC	E	38	NA	NA	B	12	A	10	D	32
P5	223rd St SE and 26th Ave SE	AWSC	C	15	A	10	B	15	B	11	B	14
N1	SR 522 and I-405 Southbound Ramps	Signal	B	13	A	3	D	48	E	61	B	11
N2	SR 522 and I-405 Direct Access Ramps	Signal	C	32	B	18	E	68	E	74	C	28
N3	SR 522 and I-405 Northbound Ramps	Signal	A	3	C	20	E	58	NA	NA	B	15
N4	17th Avenue SE and I-405 Direct Access Ramps	Signal	B	18	B	19	NA	NA	B	11	B	13

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC; All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2025 Build Alternative PM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	7	A	1	C	29	C	35	A	6
2	NE 160th Street and I-405 Southbound Ramps	Signal	C	24	D	37	NA	NA	D	48	D	36
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	29	D	37	D	50	NA	NA	D	36
4	NE 160th Street and 116th Avenue NE	TWSC	E	EB L-41	A	WBL-10	F	NB LTR->300	F	SB L->300	F	NB LTR->300
5	131st Avenue NE and NE 175th Street	Signal	E	56	E	70	D	44	D	42	D	52
6	131st Avenue NE and NE 177th Place	Signal	D	44	E	61	D	35	C	23	C	34
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	64	NA	NA	A	10	B	18	B	18
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	60	B	13	D	51	C	27
9	132nd Avenue NE and NE 180th Street	Signal	A	8	NA	NA	A	9	B	12	A	9
10	SR 522 and Campus Way NE	Signal	C	26	E	59	E	69	E	61	D	46
11	NE 195th Street and 110th Avenue NE	Signal	C	20	B	18	C	34	D	39	C	23
12	NE 195th Street and 112th Avenue NE	Signal	A	3	B	11	NA	NA	C	30	A	9
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	14	C	28	NA	NA	D	42	C	26
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	7	A	7	D	44	NA	NA	B	15

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	D	37	C	26	D	54	D	45	D	38
16	Bothell-Everett Highway and 228th Street SE	Signal	E	64	E	70	E	67	F	101	E	80
17	228th Street SE and 15th Avenue SE	Signal	A	4	C	22	D	53	E	65	C	21
18	228th Street SE and 19th Avenue SE	Signal	C	29	B	10	D	44	NA	NA	C	24
19	228th Street SE and 27th Avenue SE	Signal	F	100	C	22	F	139	NA	NA	E	76
20	228th Street SE and 29th Drive SE	Signal	C	23	F	146	NA	NA	F	97	F	85
21	SR 527 and I-405 Southbound Ramps	Signal	B	18	NA	NA	A	2	A	3	A	5
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	C	28	B	12	B	18	B	19
23	17th Avenue SE and Canyon Park Park and Ride	Roundabout	B	14	NA	NA	B	11	A	5	A	9
24	SR 527 and 220th Street SE	Signal	F	89	D	39	D	40	D	47	D	46
25	SR 527 and 214th Street SE	Signal	F	112	E	72	A	7	A	9	B	17
26	SR 527 and 211th Street SE	Signal	NA	NA	E	76	A	1	B	10	A	7
27	SR 527 and SR 524	Signal	F	117	F	104	F	227	E	64	F	153
P1	17th Avenue SE and 220th Street SE	Signal	B	11	C	28	D	53	E	61	D	36
P2	220th St SE and 20th Ave SE	AWSC	C	21	F	222	F	151	B	15	F	149
P3	220th St SE and 23rd Dr SE	AWSC	B	11	C	19	B	11	A	10	C	17

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P4	220th St SE and 26th Pl SE	AWSC	B	11	NA	NA	C	21	C	22	C	20
P5	223rd St SE and 26th Ave SE	AWSC	B	12	B	10	E	36	B	10	C	24
N1	SR 522 and I-405 Southbound Ramps	Signal	C	30	B	13	D	46	E	66	C	24
N2	SR 522 and I-405 Direct Access Ramps	Signal	C	24	C	30	E	70	E	67	C	31
N3	SR 522 and I-405 Northbound Ramps	Signal	A	8	B	15	D	54	NA	NA	B	17
N4	17th Avenue SE and I-405 Direct Access Ramps	Signal	C	26	A	8	NA	NA	C	25	B	18

Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC: All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2045 Build Alternative AM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	10	A	6	C	28	C	35	A	9
2	NE 160th Street and I-405 Southbound Ramps	Signal	E	72	C	24	NA	NA	D	43	D	52
3	NE 160th Street and I-405 Northbound Ramps	Signal	C	34	B	17	D	49	NA	NA	C	29
4	NE 160th Street and 116th Avenue NE	TWSC	B	EB L-14	A	WBL-10	F	NB LTR->300	F	SB LT->300	F	NB LTR->300
5	131st Avenue NE and NE 175th Street	Signal	D	39	D	49	D	38	C	30	D	36
6	131st Avenue NE and NE 177th Place	Signal	D	48	D	46	A	8	A	3	A	8
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	55	NA	NA	A	0	B	11	A	10
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	75	D	47	E	75	E	64
9	132nd Avenue NE and NE 180th Street	Signal	D	49	NA	NA	C	33	B	10	C	27
10	SR 522 and Campus Way NE	Signal	E	56	C	33	D	55	D	50	D	47
11	NE 195th Street and 110th Avenue NE	Signal	B	20	A	9	C	33	D	42	B	18
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	13	NA	NA	C	26	B	11
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	15	B	16	NA	NA	C	32	B	19
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	10	B	17	D	41	NA	NA	C	23

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	E	79	B	18	C	26	C	34	D	48
16	Bothell-Everett Highway and 228th Street SE	Signal	E	68	D	41	E	74	E	78	E	68
17	228th Street SE and 15th Avenue SE	Signal	A	7	B	11	E	77	E	73	B	18
18	228th Street SE and 19th Avenue SE	Signal	F	84	E	71	D	50	NA	NA	E	75
19	228th Street SE and 27th Avenue SE	Signal	E	69	B	12	F	82	NA	NA	D	49
20	228th Street SE and 29th Drive SE	Signal	D	36	E	57	NA	NA	F	87	E	56
21	SR 527 and I-405 Southbound Ramps	Signal	C	25	NA	NA	B	13	A	7	B	14
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	B	19	A	5	A	8	A	9
23	17th Avenue SE and Canyon Park Park and Ride	Roundabout	B	13	NA	NA	A	5	A	5	A	5
24	SR 527 and 220th Street SE	Signal	E	71	F	85	E	60	C	31	D	51
25	SR 527 and 214th Street SE	Signal	E	76	E	71	E	57	E	77	E	72
26	SR 527 and 211th Street SE	Signal	NA	NA	F	84	A	1	A	9	B	10
27	SR 527 and SR 524	Signal	E	80	E	79	D	48	F	89	E	78
P1	17th Avenue SE and 220th Street SE	Signal	C	28	B	18	E	62	E	67	C	34
P2	220th St SE and 20th Ave SE	AWSC	F	121	C	19	C	21	F	54	F	81
P3	220th St SE and 23rd Dr SE	AWSC	F	158	A	10	B	11	B	12	F	120

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P4	220th St SE and 26th Pl SE	AWSC	F	60	NA	NA	B	13	B	10	E	49
P5	223rd St SE and 26th Ave SE	AWSC	C	21	B	10	C	18	B	12	C	18
N1	SR 522 and I-405 Southbound Ramps	Signal	B	14	A	4	D	50	E	62	B	13
N2	SR 522 and I-405 Direct Access Ramps	Signal	D	52	C	21	E	66	E	76	D	38
N3	SR 522 and I-405 Northbound Ramps	Signal	A	3	C	22	E	58	NA	NA	B	16
N4	17th Avenue SE and I-405 Direct Access Ramps	Signal	B	20	C	31	NA	NA	B	14	B	16

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC; All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

2045 Build Alternative PM

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	NE 160th Street and Brickyard Park and Ride	Signal	A	9	A	1	C	28	C	35	A	7
2	NE 160th Street and I-405 Southbound Ramps	Signal	C	29	D	39	NA	NA	D	49	D	38
3	NE 160th Street and I-405 Northbound Ramps	Signal	D	52	E	58	D	51	NA	NA	D	54
4	NE 160th Street and 116th Avenue NE	TWSC	F	EB L-122	B	WBL-10	F	NB LTR->300	F	SB LT->300	F	NB LTR->300
5	131st Avenue NE and NE 175th Street	Signal	F	88	E	74	D	45	D	45	E	63
6	131st Avenue NE and NE 177th Place	Signal	D	45	E	58	D	53	C	33	D	46
7	131st Avenue NE and SR 522 Eastbound Ramps	Signal	E	68	NA	NA	B	17	C	24	C	26
8	131st Avenue NE and SR 522 Westbound Ramps	Signal	NA	NA	E	64	B	12	E	74	C	34
9	132nd Avenue NE and NE 180th Street	Signal	A	8	NA	NA	A	10	B	14	B	10
10	SR 522 and Campus Way NE	Signal	D	39	E	57	E	76	E	64	D	51
11	NE 195th Street and 110th Avenue NE	Signal	C	22	B	18	C	34	D	41	C	24
12	NE 195th Street and 112th Avenue NE	Signal	A	4	B	12	NA	NA	C	31	A	10
13	NE 195th Street and I-405 Southbound Ramps	Signal	B	16	C	21	NA	NA	D	42	C	23
14	NE 195th Street and I-405 Northbound Ramps	Signal	A	10	B	11	D	41	NA	NA	B	18

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)
FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
15	NE 195th Street and North Creek Parkway	Signal	D	37	C	27	D	43	D	47	D	37
16	Bothell-Everett Highway and 228th Street SE	Signal	F	133	F	86	E	79	F	113	F	103
17	228th Street SE and 15th Avenue SE	Signal	D	39	C	32	E	58	E	71	D	41
18	228th Street SE and 19th Avenue SE	Signal	E	58	D	36	E	68	NA	NA	D	51
19	228th Street SE and 27th Avenue SE	Signal	F	189	C	25	F	228	NA	NA	F	134
20	228th Street SE and 29th Drive SE	Signal	C	30	F	186	NA	NA	F	132	F	111
21	SR 527 and I-405 Southbound Ramps	Signal	B	18	NA	NA	A	3	A	3	A	5
22	SR 527 and I-405 Northbound Ramps	Signal	NA	NA	C	35	B	15	D	41	C	32
23	17th Avenue SE and Canyon Park Park and Ride	Roundabout	B	13	NA	NA	A	9	A	5	A	8
24	SR 527 and 220th Street SE	Signal	F	96	E	71	D	49	E	59	E	63
25	SR 527 and 214th Street SE	Signal	F	124	F	108	C	27	B	15	D	36
26	SR 527 and 211th Street SE	Signal	NA	NA	E	74	A	1	B	17	A	10
27	SR 527 and SR 524	Signal	F	172	F	103	F	261	F	85	F	186
P1	17th Avenue SE and 220th Street SE	Signal	C	28	C	33	D	52	E	61	D	40
P2	220th St SE and 20th Ave SE	AWSC	D	33	F	343	F	277	C	17	F	231
P3	220th St SE and 23rd Dr SE	AWSC	B	13	D	32	B	11	B	11	D	26

I-405, SR 522 VICINITY TO SR 527 EXPRESS TOLL LANES IMPROVEMENT PROJECT (MP 21.79 TO 27.06)

FINDING OF NO SIGNIFICANT IMPACT

ID	Intersection	Control Type	EB	EB	WB	WB	NB	NB	SB	SB	Overall	Overall
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
P4	220th St SE and 26th Pl SE	AWSC	B	13	NA	NA	E	39	F	54	E	42
P5	223rd St SE and 26th Ave SE	AWSC	B	13	B	11	F	78	B	11	E	47
N1	SR 522 and I-405 Southbound Ramps	Signal	D	37	B	16	D	49	E	67	C	29
N2	SR 522 and I-405 Direct Access Ramps	Signal	D	52	C	39	E	74	E	69	D	48
N3	SR 522 and I-405 Northbound Ramps	Signal	A	9	B	15	D	54	NA	NA	B	17
N4	17th Avenue SE and I-405 Direct Access Ramps	Signal	C	28	A	8	NA	NA	C	27	B	19

NA = Not Applicable; LOS = Level of service; NB = northbound; SB = southbound; EB = eastbound, WB = westbound; AWSC; All-Way Stop Controlled; TWSC: Two-Way Stop Controlled; LOS at these locations is reported for the worst movement [identified in brackets]

Estimates of delay per vehicle are rounded to nearest whole second.

Intersection LOS and delay are reported using HCM 6 methodology, except for intersections 1, 10, 11, 18, 19, 20, 21, 22, and 24 which are reported using HCM 2000 methodology.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 1-2, Section 1.3

Add the following new paragraph to the end of this section:

The study area is located within recognized and affirmed treaty fishing rights areas for the Muckleshoot Indian Tribe and the Yakama Nation. The Yakama Nation deferred to the Muckleshoot Indian Tribe, and WSDOT is engaging in Government-to-Government consultation with the Muckleshoot Indian Tribe for this Project.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 1-5, Section 1.4.2

Add the following new paragraph as the second to last paragraph under the Operational Effects subheading:

The Build Alternative would benefit water resources and aquatic habitat in the study area, which is located within treaty-protected fishing areas of the Muckleshoot Indian Tribe. The Build Alternative would correct fish barriers at five stream crossings in compliance with the terms of the 2013 United States District Court Injunction (*United States et al. vs. Washington et al.* No C70-9213, Subproceeding No. 01-1, dated March 29, 2013), restoring full anadromous fish access to about 24,330 linear feet of upstream habitat. The Build Alternative would also improve water quality in the study area by detaining and treating more stormwater runoff as compared to the No Build Alternative.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 4-1, Section 4.1

Make the following changes to the last paragraph on this page:

Exhibit 4-2 shows a map of zoning designations, which have been generalized for consistency among the three cities. Other than in the Canyon Park neighborhood, these zoning designations generally correspond with the local land use designations. In December 2020, ~~the City of Bothell recently began the process of updating~~ approved an update to the Canyon Park subarea plan to change zoning and increase densities within the Canyon Park neighborhood, including its designated Regional Growth Center (RGC). RGCs are dense, walkable, and mixed use areas established by the Puget Sound Regional Council (PSRC) as part of *VISION 2040* and the Regional Growth Strategy (PSRC 2009). The plan update was ~~is~~ required to help Bothell meet the framework for numbers of employees and residents in RGCs. The process for updating the subarea plan included s consideration of alternatives that would allow a range of land uses, including employment, residential, and mixed uses, through changes in building heights and densities that would meet the PSRC RGC criterion for adding over 20,000 employees and residents to the neighborhood.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 5-12, Section 5.2.4

Add the following new paragraph as the second paragraph under the Construction Effects subheading:

Project construction would include work in the Sammamish River during the approved in-water work window for fisheries. The Muckleshoot Indian Tribe has informed WSDOT that

they may be actively tracking tagged adult salmon in the Sammamish River during Project construction. WSDOT will consult with the Muckleshoot Indian Tribe on measures to avoid and minimize conflicts with the tracking activities during WSDOT's planned construction activities.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 5-14, Section 5.2.4

Make the following changes to the end of the Project Benefits subsection:

~~The Build Alternative would result in additional benefits compared to the No Build Alternative including:~~

- ~~▪ Replacing five fish barriers with restored stream crossings to improve aquatic habitat and provide ecological and cultural benefits.~~
- ~~▪ Providing new stormwater runoff treatment to improve local water quality.~~

The Build Alternative would also benefit water resources and aquatic habitat in the study area, which is located within Usual and Accustomed fishing areas of the Muckleshoot Indian Tribe. The Build Alternative would correct fish barriers at five stream crossings in compliance with the terms of the 2013 United States District Court Injunction (*United States et al. vs. Washington et al.* No C70-9213, Subproceeding No. 01-1, dated March 29, 2013), restoring full anadromous fish access to about 24,330 linear feet of upstream habitat. The Build Alternative would also improve water quality in the study area by detaining and treating more stormwater runoff as compared to the No Build Alternative. Please see Section 5.2.2 of Appendix I, *Ecosystems Discipline Report*, and Section 5 of Appendix J, *Water Resources Discipline Report*, for more detailed information on effects expected with the Build Alternative.

Appendix C, Community Impact Assessment and Environmental Justice Discipline Report, page 5-16, Section 5.3.2

Make the following changes to the second to last paragraph on this page:

The Project would not induce unplanned growth in the region. Although the study area is primarily built out, development and growth are expected to continue per local and regional comprehensive plans. In December 2020, the City of Bothell is updating approved an update to the subarea plan for the Canyon Park neighborhood, including the neighborhood's Regional Growth Center (RGC), to comply with criteria from the Puget Sound Regional Council. The subarea plan calls for focusing mixed-use redevelopment in the RGC and identifies inadequate transportation infrastructure and a lack of transit as challenges for future growth. As part of the subarea plan updates, the City of Bothell published a planned action State Environmental Policy Act Environmental Impact Statement in 2019-2020 that analyzed the effects and proposed mitigation measures related to increasing land use densities in the Canyon Park subarea. It is expected that any future development would be done in accordance with local zoning regulations and local land use plans in place at the time.

Appendix G, Hazardous Materials Analysis Technical Memorandum, and Appendix G1, Hazardous Materials Analysis Addendum, Table 7

Replace Table 7 in both reports with the following updated table. Appendix 6, *Hazardous Materials Update*, of the Finding of No Significant Impact contains this updated table and additional text updates for both reports.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
1	AT&T Wireless NR5 Bothell 920307 (aka Cingular Wireless) (3706871)/AT&T Mobility Phase I Main Building (98437662)	TCE	20307 North Creek Parkway Bothell Adjoining to east	Southeast and southwest	Excavation adjacent to the site for retaining wall a long NB I-405 and a fish barrier correction/ stream channel creation at Stream 25.0L. A TCE will be needed for clearing existing vegetation on the north bank of the wetland and replanting with native vegetation	ALLSITES, CSCSL, UST, VCP	TPH-D, TPH-O	Soil Groundwater	In 2008, ~10,000 gallons of diesel fuel were released from an AST into a storm drain and soil. Emergency response actions contained the spill within the property boundaries. In 2013 a remediation system to recover oil from groundwater was installed. Groundwater monitoring in 2017 indicated impacted groundwater is not leaving site. Status is clean up started.	Moderate. High impact risk if contaminated groundwater plume migrates off-site to Project limits.	<u>WSDOT will include RFP language stating that if excavation for the retaining wall extends into the shallow groundwater, the contractor shall conduct sampling and pre-characterizing the groundwater for disposal purposes is recommended.</u>
2	Dry Clean US (5125580)	No	22833 Bothell Everett Highway Bothell 900 feet to south	North-northeast	Stream alignment, stormwater treatment	ALLSITES, CSCSL, ECHO, FINDS, HSL, VCP	PCE, HVOCs	Soil Groundwater Air	A dry cleaner operated on site beginning in 1992. Environmental assessments were conducted beginning in 2005. PCE present in soil and groundwater. Impacted soil removed in 2007 and 2009. Subsequent sampling of groundwater, soil gas, and indoor air found PCE and HVOCs above CULs. Soil vapor extraction system (SVE) pilot studies and a air sparge study conducted in 2016. No additional work was completed, and current status is clean up started. Groundwater was found between 3 to 8 feet bgs, but down-gradient monitoring well did not contain PCE above CULs in 2017. Status is clean up started.	Moderate. High impact risk if contaminated groundwater plume migrates off-site to Project limits.	No action. The site is 900 feet away from planned construction activities.
3	Canyon Park Cleaners (77714595)	No	22615 Bothell Everett Highway Bothell Adjoining to south	Estimated to south	Excavation for detention pond, pavement resurfacing, additional pavement, retaining wall, fish barrier correction	ALLSITES, ECHO, FINDS, Historic cleaner, Inactive dry cleaner, RCRA NonGen	Potential HVOCs	Unknown	Dry cleaners from 1987 to 2001. No known environmental releases; no investigations conducted.	Moderate	No action. The site is more than 500 feet away from planned intrusive work. Large scale dewatering not expected.

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
4	Former Excell Cleaners/Shurgard / Canyon Park, Self-Storage Limited Partnership	TCE	1715 228th Street SE Bothell Adjoining to west	Estimated to north toward North Fork Perry Creek	TCE, Excavation for detention pond, storm water treatment, storm water outfall, stream alignment, pavement resurfacing, additional pavement, retaining wall, fish barrier correction	Historic cleaner	Potential HVOCs	Unknown	Dry cleaners from 1994 to 1996. No known environmental releases; no investigations conducted. (Snohomish County parcel 270530000401600)	Moderate	WSDOT would <u>will</u> develop language as part of TCE acquisition to limit liability. Conduct WSDOT conducted a Limited Phase II ESA in March 2021. WSDOT <u>will develop GSPs and SPs to limit dewatering and require a assessment of any generated fluids prior to disposal.</u>
5	Jacksons 615/Shell 120935 (53947398)	No	22802 Bothell Everett Highway Bothell 650 feet to southwest	Northeast	Storm water treatment	ALLSITES, CSCSL, ECHO, FINDS, ICR, LUST, Manifest, RCRA-NonGen, UST, VCP	TPH-G, Benzene	Soil Groundwater	A LUST with releases to soil and groundwater was reported to Ecology in 1990. Petroleum-impacted soil was excavated and disposed of off-site in 1991. Approximately 15,000 gallons of groundwater was removed, treated, and disposed of. A soil vapor extraction (SVE) and groundwater treatment system was installed and operated from 1993 through 2001. The site entered the VCP in 2009. Status is cleanup started.	Moderate	No action. The site is 650 feet away from planned construction activities.
6	King County Parks/Former BNSF Rail Line	Air Space TCE	King County Parcel# 0926059170 Project	Estimated north to Sammamish River	Permanent easement (Air Space only), TCE, construct new bridge for NB off-ramp		TPH, Creosote, Metals	Suspected in soil	Based on history of rail lines, any work in and around rail lines can encounter contamination.	Moderate <u>Low</u>	As part of obtaining the air space lease and TCE, WSDOT would <u>will</u> develop language to limit liability. WSDOT will develop WSDOT will develop GSPs and SPs to address <u>the</u> risk of encountering contamination in <u>the</u> work area. As part of developing the RFP, <u>WSDOT will specify in the contract that the contractor must sample and pre-characterize soil to determine baseline conditions if the contractor proposes construction activities that would require any excavation on the site.</u>
7	WSDOT NE Woodinville Dr UST (23108)	Existing WSDOT ROW	NE Woodinville Drive and NB I-405, SE Corner Bothell Project	Estimated north to Sammamish River	Retaining wall, additional pavement, construct new bridge for NB off ramps	ALLSITES, CSCSL NFA	TPH-D	Soil	A heating oil UST was discovered during the I-405 Express Lanes Project when a drainage system was installed in 2015. The UST had leaked into the soil, and the petroleum contaminated soil was excavated and removed off-site. The site received an NFA in 2017.	Moderate <u>Low</u>	WSDOT will develop WSDOT will develop GSPs and SPs to address risk of encountering contamination in work area during construction.

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
8	Chevron 93299 (94213842)	No	15900 116th Ave NE Bothell Adjoining to east of ROW and a proposed noise wall	West	Pavement resurfacing, noise wall, retaining wall	ALLSITES, CSCSL, ECHO, Financial Assurance, FINDS, HSL, ICR, LUST, Manifest, RCRA-LQG, UST	TPH-G, Benzene	Soil Groundwater	Gasoline service station in operation since 1987. In 1993, an LUST was reported. TPH-G and benzene found in soil and groundwater above CULs in 1995. Depth to groundwater is approximately 12 feet bgs. Status is a waiting cleanup.	Moderate	WSDOT Conducted conducted a limited Phase II ESA to determine soil and groundwater quality at the location of the proposed noise wall adjoining the site in <u>November 2020</u> . WSDOT will develop GSPs and SPs to limit dewatering and require a assessment of any generated fluids prior to disposal.
9	Juno Therapeutics (former Sonus Pharmaceuticals Bothell) (28356548)	A	1522 217th Place SE Bothell Project	East	Partial acquisition, pavement resurfacing, signage	ALLSITES, CSCSL, NFA, Manifest, RCRA NonGen, VCP	Metals (arsenic and manganese)	Groundwater	Metals (arsenic and manganese) in groundwater confirmed above MTCAs CULs. Groundwater present between 0.35 and 4.18 feet bgs. The site received an NFA from Ecology in 2006, as the metals exceedances appeared to be naturally occurring. (Snohomish County parcel 27053000104100)	Low. Moderate impact risk if Project activities on the site require dewatering.	WSDOT contacted Ecology and confirmed that the proposed acquisition is outside the Site boundary. No additional investigation is required. Contact Ecology for a written opinion on the NFA and associated conclusions related to arsenic as it pertains to the property acquisition and construction activities (dewatering and discharge). WSDOT will develop language as part of the property acquisition to limit liability. WSDOT will develop GSPs and SPs to limit intrusive work to limit dewatering and require a assessment of any generated fluids prior to disposal.
10	Texaco Star Mart/Jacksons 616/Texaco #632321469/Shell 120531 (63265631)	No	11700 NE 160th Street Bothell Adjoining to east of ROW, 400 feet from I-405	Variable, but likely to southwest	Pavement resurfacing	ALLSITES, CSCSL, ECHO, FINDS, Historic Auto, ICR, LUST, Manifest, RCRA-NonGen, UST, VCP	TPH-G, TPH-D, BTEXN	Soil Groundwater	Site has been a gas service station since 1972. Leaks and spills from the USTs and pipes were reported to Ecology in 1991. In 1991, 1,740 cy of contaminated soil was excavated and removed. Contaminated soil remained, and groundwater was impacted. Additional investigations were conducted between 1992 and 2019. Groundwater depth varied between 9.95 to 39.8 feet bgs, with variable flow direction. Groundwater may migrate to stormwater drainage swale, which is connected to a culvert which flows to the I-405 ROW to a bioswale. Site status is cleanup started.	Low. Moderate impact risk if Project activities include excavation to groundwater level.	WSDOT will develop GSPs and SPs to limit dewatering and require a assessment of any generated fluids prior to disposal.
11	Autosmith/Bothell North/One Hour Electric (91249646)	No	2326 228th Street SE Bothell ~400 feet to northeast	Estimated north to Perry Creek	Pavement resurfacing and additional pavement	ALLSITES, Historic auto, Historic cleaner, UST	Potential HVOCs, TPH-D	Unknown	UST removed in 1978. Transmission repair shop from 2007 to 2009. Drycleaning from 2006 to 2011. No records of releases to soil or groundwater.	Low	No action. The site is 400 feet away from planned construction activities.

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
12	Bang Property (59898498)	No	12631 & 12633 NE Woodinville Drive, Woodinville 0.31 miles to south	Northeasterly to Sammamish River	None	ALLSITES, CSCSL, FINDS, HSL	TPH-G, TPH-D, BTEXN	Soil Groundwater	In 2001, petroleum contaminated soil was found in the ROW of NE Woodinville Drive. Two LUSTs from a former gasoline service station were removed in 2015 to minimize migration onto the down-gradient Ferndale Grain site. Contaminated soil was excavated and removed and biological treatment slurry was placed in the excavation. Confirmation samples indicated TPH and BTEXN still present in sidewalls. Groundwater was not tested, and is suspected of contamination. Status is cleanup started.	Low	No action. The site is more than 0.25 mile from planned construction activities.
13	Bothell City Shop/Public Works UST 2391 (21681545) and City of Bothell King County parcel 0926059013	A	17555 120th Ave NE/17555 Brickyard Road NE, Bothell Project	Estimated north to Sammamish River	Partial acquisition, retaining wall, additional pavement, construct new bridge for NB off ramps, demolish a building Full Acquisition	ALLSITES, CSCSL NFA, ECHO, FINDS, ICR, LUST, RCRA-NonGen, UST	TPH-G, TPH-D, Benzene, Metals, Solvents	Soil	One diesel UST and one gasoline UST, installed in 1977, were removed from the site in July 1993 due to failing a tightness test. Leaking petroleum products contaminated the soil, and Ecology received notification of a LUST in 1993. Approximately 130 cubic yards of petroleum contaminated soil was removed in August 1993. Groundwater was reported as not affected. The site was cleaned up and received an NFA in 2012. If residual contamination is present, cleanup will be straightforward. (King County parcel 0926059001) King County parcel 0926059013: Adjoining parcel to Bothell City Shop parcel. Operational activities from Bothell City Shop may have occurred on this parcel.	Moderate	WSDOT conducted Conduct a Phase II ESA to determine soil and groundwater quality at the site in May 2020. As part of property acquisition, WSDOT will develop language for a acquisition limiting liability. WSDOT will develop GSPs and SPs to address risk of encountering contamination in work area. Building assessments for asbestos and lead based paint is required as part of WSDOT's ROW acquisition process.
14	Ferndale Grain Woodinville (32147851)	No	12800 NE Woodinville Drive Woodinville 0.25 miles to southeast	Northeasterly to Sammamish River	Storm water treatment	ALLSITES, CSCSL	TPH-O, TPH-G, TPH-D, Benzene, Xylenes	Soil Groundwater	The site was historically operated as a feed mill, until 1997. Subsurface soil and groundwater investigations in 1994 and 1995 were followed by installation of in-situ remediation system in 1996 which has been continuously operating. An upgradient off-site source from LUSTS at a former gasoline station (Bang Property, currently Twisted Cafe) has continued to impact the site. Ferndale removed the LUSTs from the off-site source in 2015 and has conducted quarterly groundwater monitoring. Status is cleanup started.	Low	No action. The site is 0.25 mile from planned construction activities.
15	Securite Gun Club/Dirt Lorde Property (11796)	No	12024 Woodinville Drive Bothell 150 feet to south	North and west to Sammamish River	Storm water treatment, stream alignment north of Sammamish River	ALLSITES, CSCSL NFA, NPDES	TPH-D, TPH-O	Soil Groundwater	Releases of heating oil to soil and groundwater were found in 2016. Remediation conducted in 2017 removed impacted soil and groundwater. Three monitoring wells were installed in 2017 and groundwater was measured between 9.67 and 18.23 feet bgs in perched groundwater lenses. Following remediation, soil and groundwater concentrations of TPH-D and TPH-O were below applicable MTCA CULs. The site received an NFA in 2017.	Low	No action. The site is 150 feet from planned construction activities.

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
16	Siemens Transmission/ Cepheid Bothell (3322)/Terminix Branch 2141 (11122292)	A	22121 17th Ave SE Bothell Project	Estimated south to Queensborough Creek	Partial acquisition, additional pavement	ALLSITES, ASBESTOS, ECHO, FINDS, Historic auto, Manifest, NPDES, RCRA-NonGen	Potential TPH, solvents, pesticides	Unknown	Two buildings were constructed in 1985 with several commercial businesses in operation. Siemens transmission repair shop operated from 2001 to 2004. Terminix, a pest control company, operated from at least 2000 to 2002. Cepheid, a molecular diagnostics company, was located at the same address. There has been no indication of releases of hazardous materials to soil or groundwater. ACM removed during remodeling of one of the buildings in 2017. (Snohomish County parcel 27053000403900)	Low	As part of property acquisition, WSDOT would will develop language for acquisition limiting liability.
17	Snohomish County Fire Station 45 (97654)	No	1608 217th Place SE Bothell Adjacent	Estimated west toward North Creek	Additional pavement/ sidewalk	ALLSITES, UST	Potential TPH	Unknown	Two USTs removed in 1996. No releases reported.	Low	No action. The site is 150 feet from planned construction activities.
18	Tan & Yang Property (8389076)	No	727 228th Street SE Bothell 0.28 mile to west	Estimated to east and northeast to Perry Creek	None	ALLSITES, CSCSL	TPH	Soil Groundwater	Private residence. TPH was confirmed in soil and suspected in groundwater in 2006. Status is a waiting cleanup.	Low	No action. The site is located more than 0.25 mile from planned construction activities.

Appendix H, Recreational, Section 4(f), and Section 6(f) Resources Technical Memorandum, page 1-4, Section 1.4.2, North Creek Forest bullet

Construction activities would be located within an area of approximately 0.75 acres and would include clearing existing mature trees and vegetation, regrading soils, and constructing ground improvements ~~by driving untreated timber piles~~ to stabilize steep slopes.

Appendix H, Recreational, Section 4(f), and Section 6(f) Resources Technical Memorandum, page 5-9, Section 5.2.3, first paragraph

Construction activities for this fish barrier correction would be located within an area of approximately 0.75 acres and would include clearing of existing mature trees and vegetation and constructing ground improvements, ~~such as regrading soils and drive untreated timber piles up to 25 feet deep~~ to stabilize steep slopes.

Appendix H, Recreational, Section 4(f), and Section 6(f) Resources Technical Memorandum, page 5-7, first bullet

- The transportation use of the Section 4(f) resource, together with any ~~effect~~-avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

Appendix H, Recreational, Section 4(f), and Section 6(f) Resources Technical Memorandum, page 5-9, first bullet

- The transportation use of the Section 4(f) resource, together with any ~~effect~~-avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

Appendix I, Ecosystems Discipline Report, page 1-3, Section 1.4.2, first paragraph

The Project would result in permanent effects on 21 wetlands (up to 6 acres) and associated wetland buffers (up to 4 acres). ~~Additionally, the Project would result in up to 1 acre of permanent indirect wetland impacts.~~ Where feasible, design modifications were made to the Project footprint to avoid or minimize permanent effects on wetlands and wetland buffers. All permanent impacts will be mitigated in accordance with local, state, and federal regulations.

Appendix I, Ecosystems Discipline Report, page 1-3, Section 1.4.2, second paragraph

The Project would benefit aquatic habitats and species by removing four existing bridge piers in the Sammamish River, ~~replacing~~ The Project would replace five WSDOT-owned fish barriers with restored stream connections at Par Creek (WDFW ID 993063), Stream 25.0L (WDFW ID 993104), North Fork of Perry Creek (WDFW ID 08.0070 A 0.25), and two fish barriers at Queensborough Creek (WDFW IDs 993084 and 993109). In addition, WSDOT would correct a fish barrier at Crystal Creek (WDFW ID 934994) as part of a separate project. WSDOT intends to construct the Crystal Creek fish barrier correction in the same timeframe as this Project. The five fish barrier corrections included in this Project would result in improved restore full anadromous fish access to approximately 24,330 linear feet of upstream habitat. The Project would result in up to 16,600 square feet of permanent stream impacts and up to 15,900 square feet of permanent stream buffer impacts. Aquatic ecosystems in the study area would receive

increased stormwater runoff through three new stormwater outfalls. Water from those outfalls would be treated before discharging into the selected streams.

Appendix I, Ecosystems Discipline Report, page 5-1, Section 5.2.1, second paragraph under operational effects

The Project would permanently impact up to 6 acres of wetlands (up to 1 acre of Category IV wetlands, up to 4.5 acres of Category III wetlands, and 0.5 acres of Category II wetlands). ~~Additionally, the Project would result in up to 1 acre of permanent indirect wetland impacts as a result of the relocation of Stream 25.0L.~~ Up to 4 acres of wetland buffers would be permanently affected. All permanently impacted wetlands and their associated buffers are located within and regulated by the City of Bothell and will be mitigated in accordance with federal, state, and the City of Bothell regulations. Section 6 provides further discussion on mitigation.

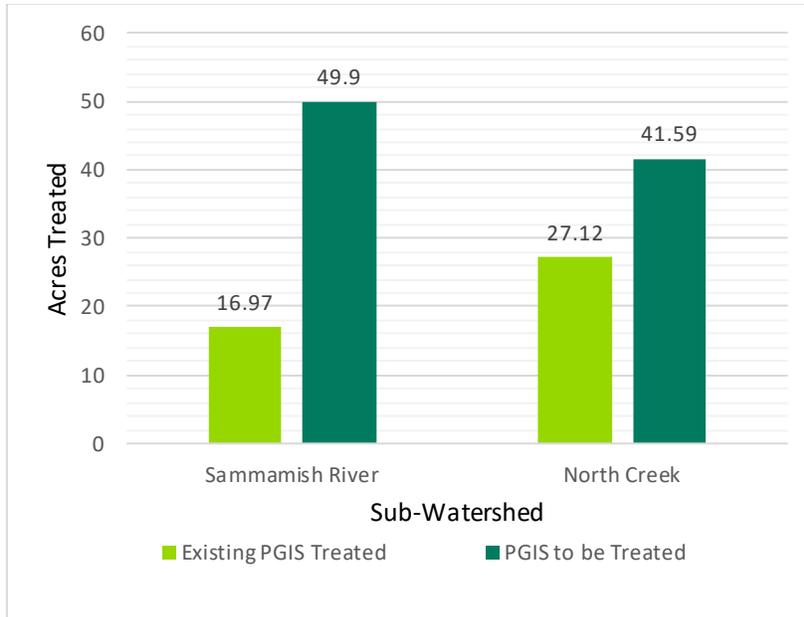
Appendix I, Ecosystems Discipline Report, page 5-1, Section 5.2.2, under Fish Barrier Correction and Other Improvements heading, last paragraph before Exhibit 5-1

Exhibit 5-1 summarizes the permanent impacts by stream. Streams not listed in the exhibit are not anticipated to have any operational effects. The proposed road widening would not have direct effects to in-stream habitat; however, the proposed fish barrier corrections for this Project would affect in-stream habitat. Direct impacts due to barrier correction will be mitigated on site by constructing restored stream connections, realigning channels at the crossings, installing large woody materials, and planting riparian areas. The fish barrier corrections would also improve fish access to upstream habitat. None of the road widening or barrier corrections would result in a net loss of in-stream habitat due to the improved access to upstream habitat.

Appendix J, Water Resources Discipline Report, page 5-9, Exhibit 5-3

Replace Exhibit 5-3 with the following exhibit (updates PGIS acres to be treated in North Creek basin from 41.56 to 41.59 acres):

Exhibit 5-3. Comparison of Existing and Build Alternative Runoff Treatment



PGIS = pollution-generating impervious surface

Appendix J, Water Resources Discipline Report, page 5-10, Exhibit 5-4

Replace Exhibit 5-4 with the following exhibit:

Exhibit 5-4. Changes in Pollutant Loading by Threshold Discharge Area

Basin	Receiving Waterbody	TDA	Total Suspended Solids	Total Copper	Dissolved Copper	Total Zinc	Dissolved Zinc
Sammamish River	KL14	F2	2%	2%	2%	2%	2%
	Stream 44	F3	0%	0%	0%	0%	0%
	Sammamish River	G2	-45%	-32%	7%	-35%	-14%
	North Creek Confluence	G4	-8%	-7%	-2%	-7%	-5%
North Creek	North Creek	I1	-1%	1%	6%	0%	3%
	Stream 66	I2	-16%	-11%	5%	-12%	-4%
	Stream 25.0L	I3	-23%	-15%	7%	-17%	-5%
	Stream 70	I4	-23%	-15%	8%	-17%	-5%
	Stream C-77	J1	-7%	-1%	13%	-2%	6%
	Perry Creek	J2	-63%	-41%	2%	-46%	-18%
	North Creek	NW01	6%	6%	6%	6%	6%
	Queensborough Creek	NW02	2%	5%	10% 11%	4%	8%
North Creek	NW03	28%	28%	28%	28%	28%	
Overall Average			-24%	-16%	7%	-18%	-6%

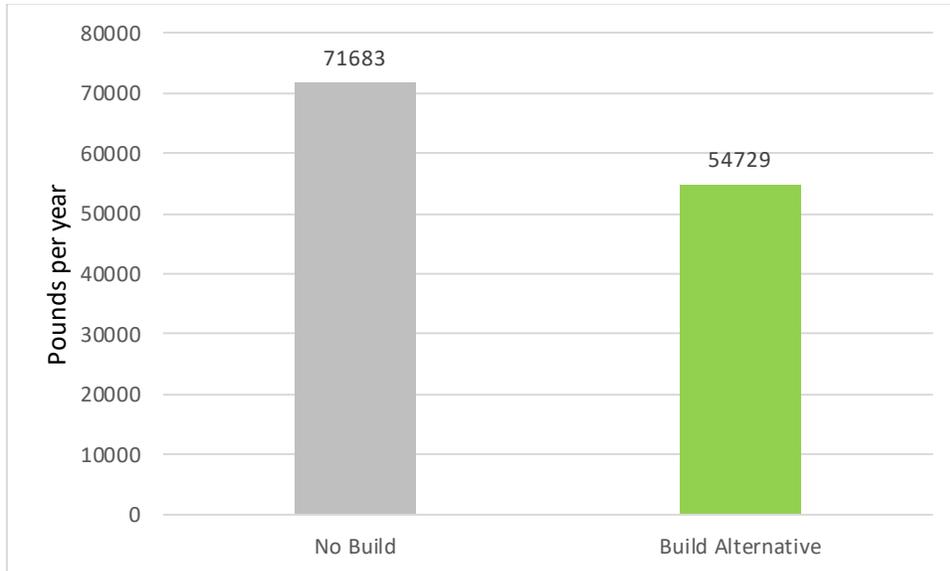
TDA = threshold discharge area

Source: WSDOT conceptual design as of ~~February~~ August 2020

Appendix J, Water Resources Discipline Report, page 5-10, Exhibit 5-4

Replace Exhibit 5-5 with the following exhibit (updates total suspended solids in the Build Alternative from 54,727 to 54,729):

Exhibit 5-5. Comparison of Total Suspended Solids



Appendix O, Cumulative Effects

Please see FONSI Appendix 8, *Cumulative Effects Update*, for updated information on the City of Bothell Canyon Park subarea planning process since the EA was published in July 2020.

APPENDIX 3 – NOTICES

This appendix provides the notices prepared for the Determination of Nonsignificance (DNS) under the Washington State Environmental Policy Act, and the Environmental Assessment and Finding of No Significant Impact under the National Environmental Policy Act.



I-405/SR 167 Megaprogram
600-108th Avenue NE Ste. 405
Bellevue, WA 98004
425-456-8582
TTY: 1-800-833-6388
www.wsdot.wa.gov

July 2, 2020

SUBJECT: SEPA Determination of Nonsignificance (DNS) for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06), Adoption of Environmental Assessment

Dear Environmental Assessment Recipient:

Attached is Washington State Department of Transportation's (WSDOT) I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) Environmental Assessment (EA). This document is adopted as WSDOT's State Environmental Policy Act (SEPA) environmental checklist for this project.

After reviewing our EA and other information on file with WSDOT, we have determined that this proposal, the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project, will not have a probable significant adverse impact on the environment. A copy of the determination of nonsignificance for this proposal is attached.

You are invited to comment on this DNS by submitting written comments no later than July 17, 2020, to Attn: Robert Woeck at the I-405/SR 167 Megaprogram Office, WSDOT, 600 108th Avenue NE, Suite 405, Bellevue, WA 98004, or by email at I405comments@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Margaret Kucharski'.

Margaret Kucharski
WSDOT Megaprograms Environmental Manager

Enclosure

**DETERMINATION OF NONSIGNIFICANCE (DNS) AND
ADOPTION OF ENVIRONMENTAL ASSESSMENT**

Project Title: I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project

Description of Current Proposal:

The Project is mostly located in Bothell, Washington and proposes to make roadway, structural, trail, and transit infrastructure improvements to I-405 from milepost (MP) 21.79 to MP 27.06. The Project proposes to create a dual express toll lane (ETL) system by restriping existing lanes from MP 21.79 to MP 22.30 and widening I-405 to add one ETL in each direction between MP 22.30 and MP 26.30. At the SR 522 interchange, the Project would construct direct access ramps to and from the ETL, inline transit stations in the I-405 median, and three new signalized intersections on SR 522, which would change where the freeway portion of SR 522 begins and ends. Just south of the SR 527 interchange at 17th Avenue SE, the Project would construct direct access ramps to and from the ETL and inline transit stations in the I-405 median. The Project would also reconstruct new bridges over the Sammamish River, build three new noise walls, construct bicycle and pedestrian facilities, reconfigure local streets, correct five fish barriers, and make stormwater improvements.

Proponent: Washington State Department of Transportation (WSDOT)

Location of Current Proposal:

The Project is located primarily in Bothell on I-405 between MP 21.79 and MP 27.06. The Project begins south of the I-405/SR 522 interchange in Kirkland and continues to just north of the I-405/SR 527 interchange in Bothell.

Name of Lead Agency/Agency Adopting the Document: WSDOT

Title of Document Being Adopted: I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Environmental Assessment

Date the Adopted Document was Prepared: July 2, 2020

Description of Document Being Adopted: Washington State Department of Transportation, the lead agency for this proposal, has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). The EA and all associated documents are available to be read at <http://www.wsdot.wa.gov/Projects/i405/sr-522-sr-527/environmental-review>. A printed copy of the EA is available for purchase for \$24.67 by calling 425-456-8697, or you may make an appointment to read a printed copy of the EA in WSDOT's office in Bellevue by calling 425-456-8697.

We have identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decision maker.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal until after July 17, 2020. Comments must be submitted by July 17, 2020. Please submit comments by email to I405comments@wsdot.wa.gov or by postal mail to:

I-405/SR 167 Megaprogram
Attn: Robert Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager
Washington State Department of Transportation
600 108th Avenue NE, Suite 405
Bellevue, Washington 98004

Responsible Official: Margaret Kucharski

Position/Title: WSDOT Megaprograms Environmental Manager

Address: 999 Third Avenue, Suite 2200 Seattle, WA 98104

Phone: 206-770-3540

Date: 7/2/2020 **Signature:** 

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT AND PUBLIC MEETING

I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06)

PURPOSE OF NOTICE

The Washington Department of Transportation (WSDOT) will issue an Environmental Assessment (EA) on July 2, 2020, for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project). The intent of this notice and the online public meeting is to provide information to the public regarding the effects of the proposed project on the community and the environment and to provide the public with the opportunity to comment on the proposal. This notice is being published in accordance with and pursuant to the National Environmental Policy Act (NEPA) and the Federal Highway Act (Title 23 U.S.C., 101 et. Seq.) and amendments.

PROJECT DESCRIPTION:

The Project is mostly located in Bothell, Washington and proposes to make roadway, structural, trail, and transit infrastructure improvements to I-405 from milepost (MP) 21.79 to MP 27.06. The Project proposes to create a dual express toll lane (ETL) system by restriping existing lanes from MP 21.79 to MP 22.30 and widening I-405 to add one ETL in each direction between MP 22.30 and MP 26.30. At the SR 522 interchange, the Project would construct direct access ramps to and from the ETL, inline transit stations in the I-405 median, and three new signalized intersections on SR 522, which would change where the freeway portion of SR 522 begins and ends. Just south of the SR 527 interchange at 17th Avenue SE, the Project would construct direct access ramps to and from the ETL and inline transit stations in the I-405 median. The Project would reconstruct new bridges over the Sammamish River, build three new noise walls, construct bicycle and pedestrian facilities, reconfigure local streets, correct five fish barriers, and make stormwater improvements.

The purpose for the Project is to:

- Provide a reliable trip for I-405 users using the express toll lanes.
- Provide new direct access for users of the existing ETLs, including bus rapid transit.
- Increase vehicle capacity and person throughput.
- Improve reliability for transit riders.

PROPONENT: Washington State Department of Transportation

FEDERAL LEAD AGENCY: Federal Highway Administration

CONTACT AGENCY:

WSDOT I-405/SR 167 Megaprogram
Robert Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager
Washington State Department of Transportation
600 108th Avenue NE, Suite 405
Bellevue, Washington 98004

425-456-8697

EA ISSUED: The Environmental Assessment (EA) was prepared to meet National Environmental Policy Act (NEPA) requirements and was issued July 2, 2020, initiating a 30-day comment period. The EA describes potential environmental impacts that could result from the proposed project and suggests mitigation measures that could prevent or minimize these impacts. The EA and all associated documents are available at <http://www.wsdot.wa.gov/Projects/i405/sr-522-sr-527/environmental-review/>. A printed copy of the EA is available for purchase for \$24.67 by calling 425-456-8697. You may make an appointment to view a printed copy of the EA in WSDOT's office in Bellevue by calling 425-456-8697.

PUBLIC MEETING: An online public meeting to learn more about the EA and information contained within it will be held from July 2, 2020 through August 6, 2020. The online public meeting will provide people with an opportunity to view information about the proposed Project, its environmental effects, submit questions, and submit formal comments. The online public meeting can be accessed at engage.wsdot.wa.gov/522-527-ea.

COMMENTING: Comments on the EA are requested and will be accepted until August 6, 2020. Comments can be submitted by email to I405comments@wsdot.wa.gov, by phone at 425-456-8697, or by postal mail to:

I-405/SR 167 Megaprogram
Attn: Robert Woeck, I-405/SR 167 Megaprogram Environmental Engineering Manager
Washington State Department of Transportation
600 108th Avenue NE, Suite 405
Bellevue, Washington 98004

All comments received or postmarked by August 6, 2020 will be considered by WSDOT/FHWA in preparing the final NEPA determination.

TITLE IV NOTICE TO THE PUBLIC

It is the Washington State Department of Transportation's policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.

AMERICANS WITH DISABILITIES ACT (ADA) INFORMATION

This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

NOTICE OF AVAILABILITY FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND ERRATA

I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06)

PURPOSE OF NOTICE:

The Washington State Department of Transportation (WSDOT) issued a FONSI and Errata on July 29, 2021, for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) (Project). The FONSI explains the determination by the Federal Highway Administration (FHWA) that the Project proposed by WSDOT in Bothell, Washington, is not likely to have a significant adverse impact on the environment.

This finding is based on the evaluation of the Environmental Assessment (EA), issued on July 2, 2020, and stakeholder input during the public comment period. The public comment period included an online public meeting held from July 2 to August 6, 2020. The FONSI has been prepared by FHWA and WSDOT to comply with the National Environmental Policy Act of 1969 (42 U.S.C § 4321) (NEPA), FHWA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 6, 1999), and other related laws.

DESCRIPTION OF PROPOSAL:

The Project is mostly located in Bothell, Washington and proposes to make roadway, structural, trail, and transit infrastructure improvements to I-405 from milepost (MP) 21.79 to MP 27.06. The Project proposes to create a dual express toll lane (ETL) system by restriping existing lanes from MP 21.79 to MP 22.30 and widening I-405 to add one ETL in each direction between MP 22.30 and MP 26.30. At the SR 522 interchange, the Project would construct direct access ramps to and from the ETL, inline transit stations in the I-405 median, and three new signalized intersections on SR 522, which would change where the freeway portion of SR 522 begins and ends. Just south of the SR 527 interchange at 17th Avenue SE, the Project would construct direct access ramps to and from the ETL and inline transit stations in the I-405 median. The Project would reconstruct new bridges over the Sammamish River, build three new noise walls, construct bicycle and pedestrian facilities, reconfigure local streets, correct five fish barriers, and make stormwater improvements.

The purpose for the Project is to:

- Provide a reliable trip for I-405 users using the express toll lanes.
- Provide new direct access for users of the existing ETLs, including bus rapid transit.
- Increase vehicle capacity and person throughput.
- Improve reliability for transit riders.

PROPONENT: Washington State Department of Transportation

FONSI ISSUED: The FONSI was prepared to meet NEPA requirements and was issued July 29, 2021. The FONSI and all associated NEPA documents are available at: <http://www.wsdot.wa.gov/Projects/i405/sr-522-sr-527/environmental-review/>. Please call 425-456-8585 with questions, to schedule an appointment to view the FONSI, or to order a paper

copy of the FONSI. Paper copies of the FONSI are available at a cost to cover printing and mailing.

CONTACT AGENCY:

Robert Woeck, I-405/SR 167 Megaprogram Deputy Program Administrator
Washington State Department of Transportation
600 108th Avenue NE, Suite 405
Bellevue, Washington 98004
425-456-8585

Please contact Robert Woeck with the above contact information if you have any questions.

TITLE IV NOTICE TO THE PUBLIC

It is the Washington State Department of Transportation's policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.

AMERICANS WITH DISABILITIES ACT (ADA) INFORMATION

This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

APPENDIX 4 – FONSI DISTRIBUTION LIST

To promote communication and enhance interagency coordination, we acknowledge that this Finding of No Significant Impact (FONSI) is a public document and that the Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) have involved the public, agencies, and tribes in implementing the National Environmental Policy Act (NEPA) procedures. Notices of availability of the FONSI with links to the online document were sent to the following government agencies:

Federal Agencies

- Federal Highway Administration
- National Oceanic and Atmospheric Administration Fisheries
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Environmental Protection Agency, Region 10
- U.S. Fish and Wildlife Service

Tribal Governments

- Confederated Tribes and Bands of the Yakama Nation
- Duwamish Tribe
- Muckleshoot Indian Tribe
- Sauk-Suiattle Tribe
- Snoqualmie Tribe
- Stillaguamish Tribe

State Agencies

- Washington State Attorney General's Office
- Washington State Department of Archaeology and Historic Preservation
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife

Regional Agencies

- Community Transit
- Puget Sound Regional Council
- Sound Transit

Local Agencies

- City of Bothell
- City of Kirkland
- City of Woodinville
- King County
- Snohomish County

APPENDIX 5 – SECTION 4(F) UPDATES

This appendix contains the Section 4(f) concurrence documentation from City of Bothell and King County.



May 5, 2021

Erin Leonhart
Interim City Manager, City of Bothell
21233 20th Avenue SE
Bothell, WA 98021

Re: Letter to the City of Bothell Parks and Recreation Department Requesting Section 4(f) Concurrence for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Project

Dear Ms. Leonhart:

Washington State Department of Transportation (WSDOT) is proposing to make roadway, structural, drainage, fish barrier correction, nonmotorized, and transit improvements as part of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project). The proposed transportation project is subject to the requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966, which affords protection to publicly-owned parks, recreation areas, and wildlife and waterfowl refuges.

WSDOT has evaluated the effects of the Project on Section 4(f) resources that are within the City of Bothell's jurisdiction. We ask that you review the findings and provide us with written concurrence on the Section 4(f) determination for the following resource:

- North Creek Forest – *de minimis* impact as described in 23 CFR 774.3(b) and 23 CFR 774.17.

Description of Proposed Activities

WSDOT proposes to provide improvements for fish and aquatic species habitat by constructing a restored stream connection at Stream 25.0L within a portion of the North Creek Forest, which is protected under Section 4(f). The Project would replace the existing stream channel, which currently includes piped segments, with an open stream channel within the North Creek Forest. The proposed improvements would be consistent with natural features in the North Creek Forest and would enhance the natural environment. The proposed work within the North Creek Forest is part of WSDOT's comprehensive efforts to restore the connection between Stream 25.0L and North Creek across I-405 and allow full anadromous fish access to upstream habitat.

The work proposed within North Creek Forest would require a temporary construction easement from the City. WSDOT would not permanently acquire land from North Creek Forest and would not convert property from an existing use to a transportation use or change the existing use of the property.

Construction activities would be located within an area of approximately 0.75 acres within the North Creek Forest and would include:

- Removing an existing buried culvert and regrading soils to construct a new stream channel that connects to a replacement culvert under I-405.
- Making ground improvements to reinforce steep slopes adjacent to the new stream channel. Reinforcement of a 1.5H:1V slope was selected to minimize impacts to mature native forest and preserve the maximum number of mature trees.
 - WSDOT has provided a *Stream 25.0L Improvements: Stability Analysis Technical Memorandum* that documents substantive compliance with the reporting requirements and performance standards for work within erosion and landslide hazard areas per Bothell Municipal Code (BMC) 14.04. This analysis establishes that it is feasible to construct a soil nail system to stabilize the cut at a 1.5H:1V slope. However, because the Project is being delivered by the design-build method, the design-builder in consultation with WSDOT and the City may choose to evaluate multiple slope stabilization options in the final design process. These options may include changes to geometry of the slope, reinforcement of the soil, and buttressing, or some combination of these options. These options can be enhanced with the addition of erosion control measures.
- Removing existing native and non-native vegetation. A tree protection plan will be required in accordance with WSDOT's *Roadside Policy Manual* to minimize vegetation clearing and retain as many trees as practicable.
- Replanting disturbed areas with appropriate native trees and vegetation for the area. WSDOT will be responsible for 10 years for plant establishment and monitoring, as well as visual slope inspections and maintenance to address sloughing, in the restored area. WSDOT will also establish an informal pedestrian pathway across the final slope through the use of slope rounding or other methods.

Section 4(f) Determination – *De minimis* impact

Overall, the proposed activities represent an enhancement to the North Creek Forest because they would improve habitat for fish and aquatic species and are consistent with existing uses of this property as a natural open space. However, because the new trees and vegetation replanted in the construction area would take time to mature, WSDOT has made a *de minimis* determination for this Section 4(f) resource. A *de minimis* determination means that after incorporation of mitigation measures, the Project will not adversely affect the activities, features, and attributes of the significant park facilities.

A *de minimis* determination under Section 4(f) may be made when all three of the following criteria are satisfied:

- The transportation use of the Section 4(f) resource, together with any effect avoidance, minimization, and mitigation or enhancement measures incorporated

into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

- The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource.
- The official(s) with jurisdiction over the property are informed of USDOT's intent to make the *de minimis* effect determination based on their written concurrence that the project would not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Refer to the attached North Creek Forest *De Minimis* Determination form for more information on the *de minimis* finding.

WSDOT requests that the City of Bothell sign below concurring with the Section 4(f) *de minimis* finding for the North Creek Forest as described in the attachment and above.

If further questions or clarifications are needed, please contact me at woeckro@wsdot.wa.gov or 425-450-2534.

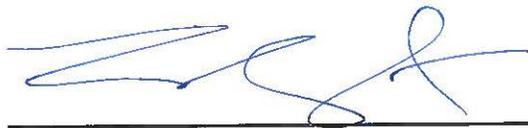
Sincerely,



Digitally signed by
Robert Woeck
Date: 2021.05.05
12:16:04 -07'00'

Robert Woeck
I-405/SR 167 Megaprogram Deputy Program Administrator

Erin Leonhart
City of Bothell
Interim City Manager



5/18/21 (Signature/Date)

Enclosure
Section 4(f) *De Minimis* Impact Determination form

cc: Project File

Section 4(f) *De Minimis* Impact Determination (per 23 CFR 771)

Summary Table

Date:	May 5, 2021
WSDOT Region:	Megaprograms
Project Number:	The Project has no federal funds. The WSDOT project number is XL 5446.
Project:	I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
Project Description:	<p>The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes (ETL) Improvement Project (Project) would provide additional capacity and improve ETL performance along I-405 between SR 522 and I-5. The Project is located mostly in Bothell on I-405 between just south of the I-405/SR 522 interchange at milepost (MP) 21.79 to north of the I-405/SR 527 interchange at MP 27.06.</p> <p>The proposed Project includes:</p> <ul style="list-style-type: none"> • Adding one new ETL in each direction of I 405 between south of SR 522 and SR 527 to create a dual ETL. • Building new direct access ramps and inline transit stations in the I-405 median at SR 522 and at 17th Avenue SE just south of SR 527. • Constructing other associated Project elements, including transit and nonmotorized facilities, local roadway improvements, fish barrier corrections, noise walls, retaining walls, and new stormwater facilities.
Section 4(f) Resource:	North Creek Forest
Type of 4(f) Resource:	Public Open Space
Size of the <i>de minimis</i> use of the 4(f) Resource (in acres):	An approximately 0.75-acre area within the 64-acre open space would be affected by construction of a fish barrier correction.
Primary Purpose/Function of the 4(f) Resource:	Open Space

De minimis Documentation

- 1. Describe the Section 4(f) property and the attributes and features that qualify it to Section 4(f) protection, attach a map showing the boundaries of the resource, the locations of key features (e.g. ball fields, structures) and the area to be used.**

North Creek Forest is an approximately 64-acre undeveloped forest owned and maintained by the City of Bothell. It is located west of I-405 approximately 100 feet from the Project footprint and split by the King and Snohomish County borders. The North Creek Forest includes wetlands and streams that provide wildlife habitat for a number of avian and terrestrial species. The

Attachment 1
Section 4(f) Concurrence Letter to City of Bothell

public is allowed access to the open space, and organizations provide research and learning opportunities related to the ecological functions within the open space. There are informal unmaintained paths within the forest. Exhibit 1 illustrates the location of the North Creek Forest.

Exhibit 1 – Vicinity Map/Project Location



2. Describe the impacts to the Section 4(f) property, and any avoidance, minimization and mitigation or enhancement measures, and why they are considered *de minimis* as defined in 23 CFR 771.17.

WSDOT proposes to provide enhancements for fish and aquatic species habitat by constructing a restored stream connection at Stream 25.0L within a portion of the North Creek Forest protected under Section 4(f). The Project would replace the existing stream channel, which currently includes piped segments, with an open stream channel within the North Creek Forest. The proposed improvements would be consistent with natural features in the North Creek Forest and would enhance the natural environment. Construction activities would be located within an area of approximately 0.75 acres and would include:

- Removing an existing buried culvert and regrading soils to construct a new stream channel that connects to a replacement culvert under I-405. The profile of the channel would be lowered up to 18 feet in some locations in order to restore the grade to more natural conditions and provide an improved channel grade under I-405. Spawning habitat would occur through the higher and steeper portions of the new stream profile.
- Making ground improvements to stabilize steep slopes adjacent to the new stream channel. Reinforcement of the slope was selected to minimize impacts to mature native forest and preserve the maximum number of mature trees. A less-steep slope would require a larger area of mature trees and native vegetation to be cleared. See the "Slope Stabilization" section below for more information.
- Removing existing non-native vegetation such as Himalayan blackberry and reed canarygrass, noxious weeds if present, and native trees and vegetation. A tree protection plan will be required in accordance with WSDOT's *Roadside Policy Manual* to minimize vegetation clearing and retain as many trees as practicable.
- Replanting disturbed areas with appropriate native trees and vegetation for the area. See the "Plant Establishment and Monitoring" section below for more information.
- Establishing an informal pedestrian pathway across the final slope through the use of slope rounding or other methods.

The work proposed within North Creek Forest would require a temporary construction easement from the City. WSDOT would not permanently acquire land from North Creek Forest and would not convert property from an existing use to a transportation use, or change the existing use of the property. The area within North Creek Forest affected by the Project is shown in Exhibit 2.

Exhibit 2 – Area of Construction



Legend

-  Trail
-  Existing WSDOT Right of Way
-  Proposed Improvements
-  Stream Realignment
-  City Boundary

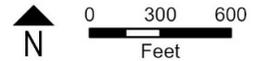


Exhibit 3 shows existing conditions, looking north, in a portion of the area adjacent to I-405 where the new stream channel would be constructed. The area contains a mix of mature trees and non-native vegetation, such as reed canarygrass and Himalayan blackberry.

Exhibit 3 – Existing Conditions in Proposed Construction Area of North Creek Forest



Noise levels would increase with the Project in portions of the forest but would not result in a constructive use per 23 CFR 774.15(f)(3). The increase in noise levels compared to the No Build Alternative would be less than 1 dBA and not perceptible.

Avoidance, Minimization, and Mitigation or Enhancement Measures

Measures to avoid, minimize, and mitigate impacts to North Creek Forest include:

- Complete construction of improvements in the North Creek Forest in a total of six months or less. The construction time does not include follow-up visits to inspect Project improvements, such as fish barrier correction or proposed plantings.
- Coordinate with the City of Bothell to replant areas that are disturbed during construction with native trees and vegetation as part of the stream restoration planned for this area. Remove invasive species and noxious weeds, if present, prior to planting native vegetation.

Plant Establishment and Monitoring

WSDOT will be responsible for 10 years for plant establishment and monitoring, as well as visual slope inspections and maintenance to address sloughing, in the restored area. The contract will require that 100 percent of the plants be alive, healthy, and vigorously growing. All dead, dying, or unhealthy plants shall be replaced. At the end of the first year of the plant establishment period, if more than 20 percent of the plants are not healthy or dying, the plant establishment period will be extended to include an additional year. Required plant establishment activities include watering, maintaining sufficient water in the soils for emergent and aquatic vegetation, mulching, pruning, erosion control, weed control, and litter control.

Slope Stabilization

WSDOT has prepared a *Geology, Soils, and Groundwater Technical Memorandum* (National Environmental Policy Act Environmental Assessment, Appendix K), which describes WSDOT's practices for managing design and construction issues associated with the geologic, soil, and groundwater conditions in the Project area. Furthermore, WSDOT prepared a geotechnical memorandum for the Stream 25.0L fish barrier correction design for work within the City's geologically hazardous areas for erosion and landslide hazards as defined in the City's critical areas regulations (BMC 14.04). The *Stream 25.0L Improvements: Stability Analysis Technical Memorandum* documents substantive compliance with the reporting requirements and performance standards for work within erosion and landslide hazard areas per BMC 14.04.

The memorandum notes that through ground improvements and reinforcement, it is feasible to comply with the BMC requirements and stabilize the cut at a 1.5 horizontal to 1 vertical slope adjacent to the new stream channel. Reinforcement options found to be feasible in the analysis include a soil nail system, timber piles, auger-cast concrete piles, and steel micro-piles. The final choice of slope reinforcement measures will be the design-builder's responsibility and reviewed for contract compliance by WSDOT before construction.

In addition to coordinating closely with the City through final design and construction, the Project's final design will conform to the following standards:

- American Association of State Highway and Transportation Officials *Load and Resistance Factor Bridge Design Specifications*
- WSDOT *Geotechnical Design Manual*
- WSDOT Standard Specifications for Road, Bridge and Municipal Construction
- WSDOT *Bridge Design Manual*
- WSDOT *Environmental Manual*

Furthermore, because Stream 25.0L is being constructed to meet the requirements for a fish-bearing stream, WSDOT will perform maintenance as needed to ensure that the stream continues to function as designed, regardless of property ownership.

De Minimis Determination

Construction and operation of the Project would result in a *de minimis* impact to the North Creek Forest for the following reasons:

- There would be no physical changes to the park size and general location. The Project would improve the natural environment by restoring the stream connection at Stream 25.0L and improving fish and aquatic species habitat. These improvements would be consistent with the natural features of the North Creek Forest.
- Disturbed areas would be replanted with native trees and vegetation but would take time to mature.

3. For parks, recreational facilities, and wildlife and waterfowl sanctuaries:

a. Describe the public outreach that has been or is being conducted (leave blank for historic sites).

The Project team has met with the City of Bothell on multiple occasions during 2020 and 2021 to discuss the Project and the effects on the North Creek Forest. WSDOT has provided information about the preliminary project design concepts for the improvements to Stream 25.0L, including the *Stream 25.0L Improvements: Stability Analysis Technical Memorandum* and written responses to the City's questions about the analysis. WSDOT will continue to coordinate with the City as the design progresses.

The public review and comment period for the Project EA occurred from July 2 to August 6, 2020, and included the opportunity for public comment on this *de minimis* finding. WSDOT distributed notices informing the public and agencies of the availability of the *de minimis* finding and the opportunity to review and comment. The online public meeting for the Project EA included a page describing proposed activities within the North Creek Forest and the *de minimis* determination. WSDOT received one comment about the Section 4(f) status of the North Creek Forest from the City of Bothell and no comments on the *de minimis* determination from any other sources.

b. Attach written concurrence of the official with jurisdiction over the 4(f) resource with the *de minimis* determination.

The Project team has coordinated with the City of Bothell (official with jurisdiction) to address the impacts to the North Creek Forest and discuss the *de minimis* determination. Written concurrence from the City of Bothell was received on May 18, 2021 (attached).

- 4. For historic resource, attach Section 106 documentation (include SHPO concurrence in project-level findings (DOEs and or FOEs) and Programmatic Agreement Memos for archaeological resources).

Not applicable.

Request for Approval

Based upon this analysis we request FHWA approval that the use of the Section 4(f) resource described above is *de minimis* as defined in 23 CFR 774.17.

Robert Woeck, I-405/SR 167 Megaprogram Deputy Program Administrator



Digitally signed by Robert Woeck
Date: 2021.05.19 09:10:27 -07'00'

WSDOT

Date

FHWA Approval

Lindsey Handel, P.E., Urban Transportation Engineer

LINDSEY L HANDEL

Digitally signed by LINDSEY L HANDEL
Date: 2021.06.17 12:16:35 -07'00'

FHWA Washington Division

Date



**Washington State
Department of Transportation**

I-405/SR 167 Megaprogram
600-108th Avenue NE Ste. 405
Bellevue, WA 98004
425-456-8582
TTY: 1-800-833-6388
www.wsdot.wa.gov

March 4, 2021

Warren Jimenez
Director, King County Parks and Recreation Division
201 S Jackson Street, KSC-NR-0700
Seattle, WA 98104

Re: Letter to King County Parks Requesting Section 4(f) Concurrence for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Project

Dear Director Jimenez:

Washington State Department of Transportation (WSDOT) is proposing to make roadway, structural, drainage, fish barrier correction, nonmotorized, and transit improvements as part of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project).

The proposed transportation project is subject to the requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966, which affords protection to publicly owned parks, recreation areas, and wildlife and waterfowl refuges. WSDOT has evaluated the effects of the Project on Section 4(f) resources that are within King County Parks' jurisdiction. We ask that you review the findings and provide us with written concurrence on the Section 4(f) determinations for the following resources:

- Sammamish River Trail – *de minimis* impact as described in [23 CFR 774.3\(b\)](#) and [23 CFR 774.17](#).
- West Sammamish River Trail – temporary occupancy as described in [23 CFR 774.13\(d\)](#).

Sammamish River Trail Section 4(f) Determination – *De minimis* impact

WSDOT proposes a temporary realignment of the Sammamish River Trail and short-term, temporary closures of the trail to allow for construction of three new bridges and demolition of two existing bridges over the Sammamish River. In addition, a portion of the trail may need to be permanently realigned outside of its existing footprint to maintain King County Parks trail specifications and/or improve sight distance. Both the temporary and potential permanent trail realignments are expected to occur within WSDOT's existing right of way. However, it is possible that some of the temporary and/or permanent realignment may take place on property owned by King County Parks.

Because of this possibility, WSDOT believes Section 4(f) *de minimis* determination is an appropriate determination for this Section 4(f) resource. A *de minimis*

King County Parks
March 4, 2021
Page 2

determination means that after incorporation of mitigation measures, the Project will not adversely affect the activities, features, and attributes of the significant park facilities.

A *de minimis* determination under Section 4(f) may be made when all three of the following criteria are satisfied:

- The transportation use of the Section 4(f) resource, together with any effect avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).
- The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource.
- The official(s) with jurisdiction over the property are informed of USDOT's intent to make the *de minimis* effect determination based on their written concurrence that the project would not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Refer to Attachment 1, Sammamish River Trail *De Minimis* Determination, for information on the *de minimis* finding.

West Sammamish River Trail Section 4(f) Determination – Temporary Occupancy

The Project would construct a new I-405 bridge, requiring WSDOT to obtain an airspace lease from King County Parks, but there would be no negative effects on the proposed trail because adequate clearance would be maintained. In addition, the Project would require a temporary construction easement on King County Parks property associated with the planned West Sammamish River Trail. This temporary construction easement would be needed to remove existing vegetation, including cottonwood trees and noxious weeds, to allow for the construction of a new bridge over the Sammamish River. In addition, the property would be used during construction to provide a staging area for equipment and materials and construction activities. This temporary construction easement would meet the Section 4(f) temporary occupancy exemption listed in 23 CFR 774.13(d) because the following conditions would be satisfied:

- The duration is temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land.
- The scope of the work is minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal.
- There are no anticipated permanent adverse physical effects, nor would there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.
- The land being used would be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the Project.

King County Parks
March 4, 2021
Page 3

- There would be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

With mitigation, WSDOT has made the determination that the temporary construction easement needed on the King County Parks property meets the conditions listed above for temporary occupancy. Refer to Attachment 2, West Sammamish River Trail Temporary Occupancy Determination, for information on the determination.

WSDOT requests that King County Parks sign below concurring with the findings for the Sammamish River Trail and West Sammamish River Trail as described in the attachments and above.

If further questions or clarifications are needed, please contact Rob Woeck at 425-450-2534.

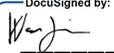
Sincerely,



Digitally signed by Robert
Woeck
Date: 2021.03.04 11:00:46
-08'00'

Robert Woeck
I-405/SR 167 Megaprogram Deputy Program Administrator

Warren Jimenez
King County Parks and Recreation Division Director

DocuSigned by:

A1498C6DA09E46F...

4/6/2021

(Signature/Date)

Enclosures

Attachment 1: Sammamish River Trail *De Minimis* Determination

Attachment 2: West Sammamish River Trail Temporary Occupancy Determination

cc: Project File

Section 4(f) *De Minimis* Impact Determination (per 23 CFR 771)

Summary Table

Date:	March 4, 2021
WSDOT Region:	Megaprograms
Project Number:	The Project has no federal funds. The WSDOT project number is XL 5446.
Project:	I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
Project Description:	<p>The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes (ETL) Improvement Project (Project) would provide additional capacity and improve ETL performance along I-405 between SR 522 and I-5. The Project is located mostly in Bothell on I-405 between just south of the I-405/SR 522 interchange at milepost (MP) 21.79 to north of the I-405/SR 527 interchange at MP 27.06.</p> <p>The proposed Project includes:</p> <ul style="list-style-type: none"> • Adding one new ETL in each direction of I 405 between south of SR 522 and SR 527 to create a dual ETL. • Building new direct access ramps and inline transit stations in the I-405 median at SR 522 and at 17th Avenue SE just south of SR 527. • Constructing other associated Project elements, including transit and nonmotorized facilities, local roadway improvements, fish barrier corrections, noise walls, retaining walls, and new stormwater facilities. <p>In addition, the Project includes the demolition of two bridges and construction of three new bridges over the Sammamish River.</p>
Section 4(f) Resource:	Sammamish River Trail
Type of 4(f) Resource:	Public Park or Recreational Area
Size of the <i>de minimis</i> use of the 4(f) Resource (in acres):	During construction, less than 600 feet of an approximately 11-mile bike path and recreational trail would be affected by occasional nighttime closures. During and after construction, the trail alignment may shift from its current location, but in its final configuration, the trail would meet King County Parks trail standards and would be located near its existing location, and the use of the trail would be maintained.
Primary Purpose/Function of the 4(f) Resource:	Regional Trail

De minimis Documentation

- 1. Describe the Section 4(f) property and the attributes and features that qualify it to Section 4(f) protection, attach a map showing the boundaries of the resource, the locations of key features (e.g. ball fields, structures) and the area to be used.**

The Sammamish River Trail is an approximately 11-mile-long regional trail owned and maintained by King County Parks and is part of the King County Regional Trails System. The trail follows the Sammamish River from Kenmore and through Bothell and Woodinville to Marymoor Park in Redmond (see Exhibit 1 – Vicinity Map). Commuters as well as recreational bicyclists, joggers, and walkers use the trail. Other trails connecting with the Sammamish River Trail include the Burke Gilman Trail in Kenmore, East Lake Sammamish Trail in Redmond, and the North Creek Trail and Tolt Pipeline Trail in Bothell. The Sammamish River Trail also connects with parks in the Project area including the Sammamish River Park in Bothell. Exhibit 1 illustrates the location of the trail system affected by the Project.

The trail is 12 feet wide and paved with a soft-surface shoulder for its entire length. Within the Project area, the Sammamish River Trail travels under the existing I-405 and SR 522 interchange where several overhead structures extend to the north and south. Exhibit 2 shows the existing conditions of the Sammamish River Trail looking west toward the I-405/SR 522 elevated interchange.

Exhibit 1 – Vicinity Map/Project Location

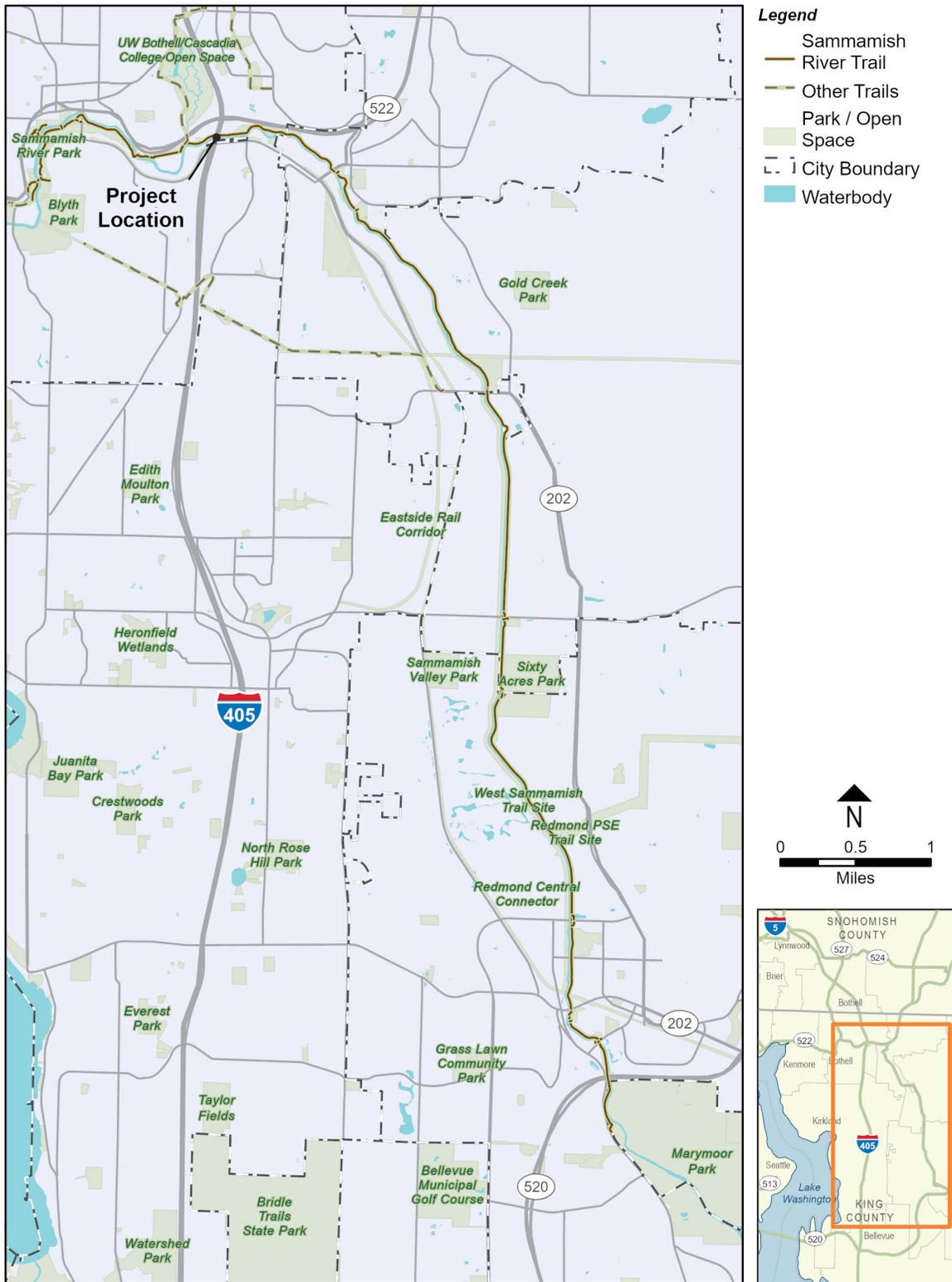


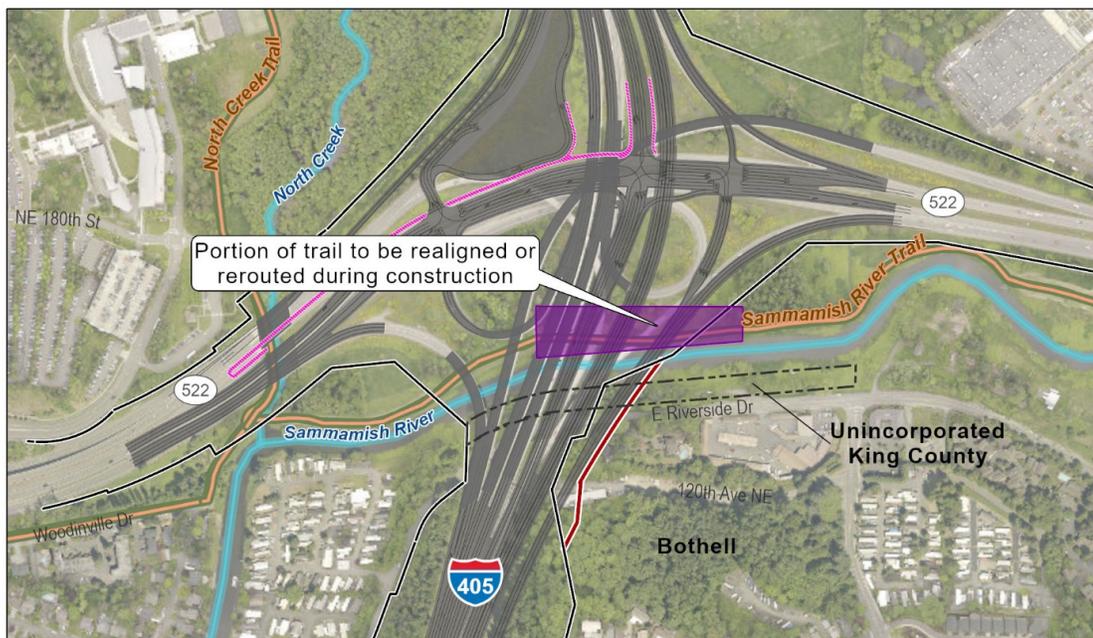
Exhibit 2 – View from Sammamish River Trail



2. Describe the impacts to the Section 4(f) property, and any avoidance, minimization and mitigation or enhancement measures, and why they are considered *de minimis* as defined in 23 CFR 771.17.

To allow for construction of the new I-405 ramps and demolition of existing ramps, the Sammamish River Trail will need to be temporarily relocated. The area affected by the Project is generally under the I-405 roadway and ramps as shown in Exhibit 3.

Exhibit 3 – Area of Construction



Legend

- | | | | | |
|-----------------------------|-----------------------|----------------------------------|---|-------------------|
| Trail | Proposed Right of Way | Proposed Nonmotorized Connection | N | 0 300 600
Feet |
| Existing WSDOT Right of Way | Proposed Improvements | City Boundary | | |

Attachment 1

Section 4(f) Concurrence Letter to King County

This temporary relocation will allow roadway construction to proceed while maintaining trail access. Because the Project is a design-build project, these possible trail alignments are subject to change. It is anticipated that two temporary realignments of the trail would be required, and the duration of the temporary realignments may be a majority of the construction period (3 to 4 years) depending on the construction phasing. Nighttime closures of the trail will be required to allow for the setting of girders on one of the bridges. The nighttime closures will be limited, and advance notice will be provided. Short-term closures, typically less than 15 minutes, may also be required during daytime hours to allow for vehicle and/or equipment access over the trail.

The majority of the work during construction is anticipated to occur within existing WSDOT right of way, but to minimize schedule risks, the contractor could choose to use areas outside of WSDOT right of way to construct the temporary trail alignment and to allow for minor changes to the permanent trail alignment. Both the temporary trail and the reconstructed permanent trail alignment will be consistent with King County Parks specifications for trail width, soft shoulder width, and clear zone distance to structures.

During operation, noise levels on portions of the trail would increase above the Federal Highway Administration Noise Abatement Criteria for parks (66 decibels). However, per 23 CFR 774.15(f)(3), there would be no noise-related constructive use. The increases in noise levels would be the same as or less than the No Build Alternative, or the increase would be no more than 1 decibel and not perceptible. The addition of overhead structures would not degrade the visual setting in this area as there are currently existing overhead structures in the area; therefore, no constructive use would occur. Exhibit 4 provides a visualization of the proposed interchange improvements as viewed from the Sammamish River Trail.

Exhibit 4 – Sammamish River Trail Visualization



Avoidance, Minimization, and Mitigation or Enhancement Measures

Measures to avoid, minimize, and mitigate impacts to the Sammamish River Trail during operation and construction include:

- Coordinate with King County Parks on the permanent realignment of the trail under I-405 to ensure it meets King County trail specifications.
- Design temporary trail realignments to maintain access during construction and ensure the trail is consistent with King County Parks specifications for temporary trails, including needed signage.
- Schedule trail closures to build new structures and demolish existing structures at night to avoid peak-use hours. Coordinate the nighttime construction period with King County Parks.
- Use flaggers for short-term trail closures to facilitate construction vehicle access across the trail.
- Restore the property after construction and coordinate with King County Parks on the restoration of the disturbed areas.

Summary

Construction and operation would result in a *de minimis* impact to the Sammamish River Trail for the following reasons:

- There are no physical changes with regard to trail size and general location. Both the temporary trail and permanent alignment will be constructed to be consistent with King County Parks standards.
- Access to the trail does not change during construction and operation.
- Changes in noise and the visual setting do not alter the experience of trail users during operation.
- Temporary closures would be limited and the longer duration closures would occur at night.

3. For parks, recreational facilities, and wildlife and waterfowl sanctuaries:

a. Describe the public outreach that has been or is being conducted (leave blank for historic sites).

The Project team met with King County Parks on February 26, 2019, and July 12, 2019, to discuss the Project and the effects on the Sammamish River Trail. Information was provided on the preliminary project design concepts and the proposed temporary trail realignment.

The public review and comment period for the Project National Environmental Policy Act Environmental Assessment (EA), held from July 2 to August 6, 2020, included the opportunity for public comment on effects to the Sammamish River Trail and the *de minimis* determination. WSDOT described the *de minimis* determination in Section 4.6.2 of the EA; EA Appendix H, *Recreational, Section 4(f)*, and *Section 6(f) Resources Technical Memorandum*, and on the Recreational Resources page of the online public meeting for the Project EA. WSDOT received no comments on the Sammamish River Trail or the *de minimis* determination during the comment period.

- b. Attach written concurrence of the official with jurisdiction over the 4(f) resource with the *de minimis* determination.**

The Project team has coordinated with King County Parks (official with jurisdiction) to address the impacts to the Sammamish River Trail and the *de minimis* determination. Written concurrence from King County Parks was received on April 6, 2021 (attached).

- 4. For historic resource, attach Section 106 documentation (include SHPO concurrence in project-level findings (DOEs and or FOEs) and Programmatic Agreement Memos for archaeological resources).**

Not applicable.

Request for Approval

Based upon this analysis we request FHWA approval that the use of the Section 4(f) resource described above is *de minimis* as defined in 23 CFR 774.17.

Robert Woeck, I-405/SR 167 Megaprogram Deputy Program Administrator



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Date: 2021.05.19 10:18:07 -07'00'

WSDOT Megaprograms

Date

FHWA Approval

Lindsey Handel, P.E., Urban Transportation Engineer

LINDSEY L HANDEL Digitally signed by LINDSEY L HANDEL
Date: 2021.06.17 12:21:36 -07'00'

FHWA Washington Division

Date

Section 4(f) Temporary Occupancy Approval (per 23 CFR 774.13(d))

Summary Table

Date:	March 4, 2021
WSDOT Region:	Megaprograms
Project:	I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
Project Description:	<p>The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes (ETL) Improvement Project (Project) would provide additional capacity and improve ETL performance along I-405 between SR 522 and I-5. The Project is located mostly in Bothell on I-405 between just south of the I-405/SR 522 interchange at milepost (MP) 21.79 to north of the I-405/SR 527 interchange at MP 27.06.</p> <p>The proposed Project includes:</p> <ul style="list-style-type: none"> • Adding one new ETL in each direction of I-405 between south of SR 522 and SR 527 to create a dual ETL. • Building new direct access ramps and inline transit stations in the I-405 median at SR 522 and at 17th Avenue SE just south of SR 527. • Constructing other associated Project elements, including transit and nonmotorized facilities, local roadway improvements, fish barrier corrections, noise walls, retaining walls, and new stormwater facilities. <p>In addition, the Project includes the demolition of two bridges and construction of three new bridges over the Sammamish River.</p>
Section 4(f) Resource:	West Sammamish River Trail (Planned). The West Sammamish River Trail is a planned facility identified as a regional trail in the <i>King County Open Space Plan: Parks, Trails, and Natural Areas 2016 Update</i> .
Type of 4(f) Resource:	Public Park or Recreation Area
Impact on 4(f) Resource:	Temporary occupancy to remove existing vegetation, including cottonwood trees and noxious weeds, to allow for the construction of a new bridge over the Sammamish River. In addition, the property would be used during construction to provide a staging area for equipment and materials and construction activities.
Official with Jurisdiction:	King County Parks

Describe how the conditions for Temporary Occupancy are met

- 1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land.**

The overall construction duration for the entire project is approximately 4 years. The duration for construction at the King County Parks property would be less than 3 years. The temporary occupancy is required to allow construction of the new bridges over the Sammamish River and the demolition of existing bridges. Prior to construction activities, removal of existing vegetation, including cottonwood trees and noxious weeds, will be required. After construction is complete, the property would be restored. There would be no change in ownership of the land that would be temporarily occupied.

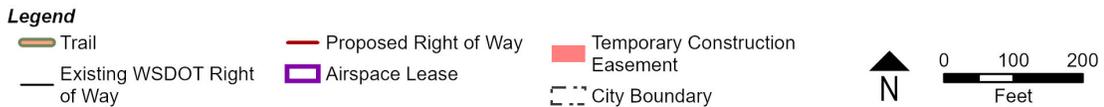
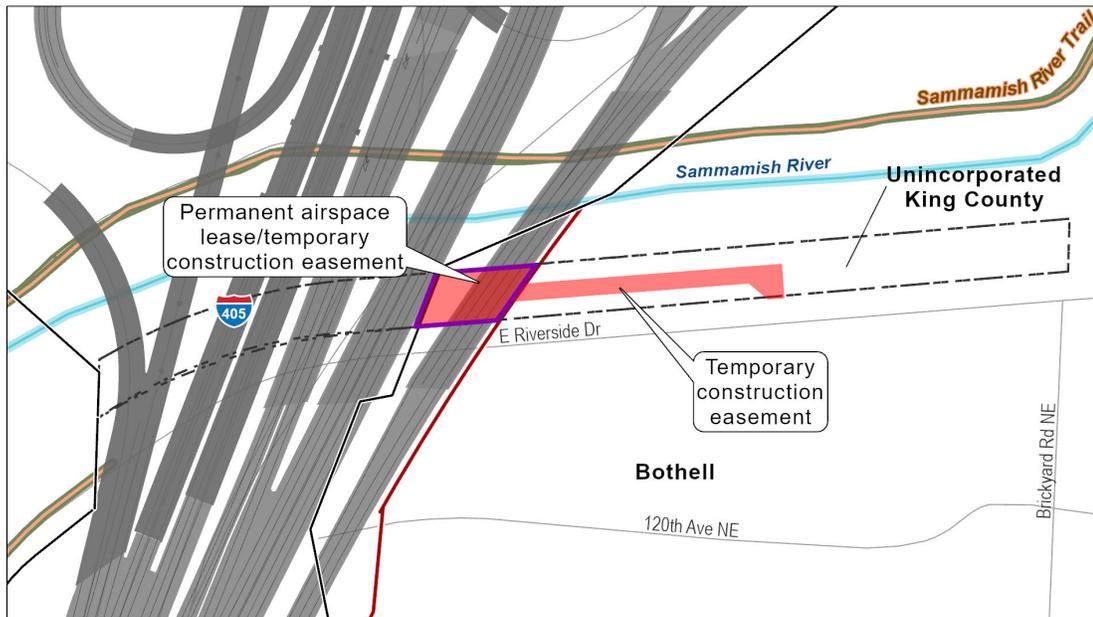
- 2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes of the Section 4 (f) property are minimal.**

The area to be temporarily occupied is property owned by King County Parks and planned for the West Sammamish River Trail. There are no improvements on the property beyond the existing railbed. Construction for the Project will require the removal of existing vegetation, which includes noxious weeds and cottonwood trees on the planned West Sammamish River Trail site. In addition, the property would be used during construction to provide a staging area for equipment and materials and construction activities. There will be no permanent changes to the property beyond the removal of vegetation. The temporary occupancy would not impact the future trail alignment.

- 3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.**

There are no permanent adverse physical impacts or interference with the proposed activities for the property on either a temporary or permanent basis. The Project would require a temporary construction easement to provide access for construction equipment for the construction of the new bridges and demolition of existing bridges. WSDOT would require a permanent airspace lease from King County Parks for the structure over the future trail. The lease would not impair the future trail because minimum structure heights per King County trail specifications would be maintained. Exhibit 1 illustrates the location of the property to be temporarily occupied for the temporary construction easement and the area associated with the airspace lease.

Exhibit 1 – West Sammamish River Trail – Permanent Airspace Lease and Temporary Occupancy Location



4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.

The property is currently not maintained. Portions of the property that would be temporarily occupied during construction will be restored.

5. There must be documented agreement of the official(s) with jurisdiction over the section 4(f) resource regarding the above conditions.

The Project team met with King County Parks (official with jurisdiction) to address the impacts to the West Sammamish River Trail and the temporary occupancy on February 26, 2019 and July 12, 2019. Written concurrence from King County Parks was received on April 6, 2021 (attached).

Request for Approval

Based upon this analysis we request FHWA concurrence that this project's temporary occupancy of the section 4(f) resource described above satisfies the conditions set forth in 23 CFR 771.13(d) and is so minimal as to not constitute a use within the meaning of Section 4(f).

Robert Woeck, I-405/SR 167 Megaprogram Deputy Program Administrator



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Date: 2021.05.19 10:19:04 -07'00'

WSDOT Megaprograms

Date

FHWA Approval

Lindsey Handel, P.E., Urban Transportation Engineer

LINDSEY L HANDEL



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HANDEL
Date: 2021.06.17 12:20:51 -07'00'

FHWA Washington Division

Date

APPENDIX 6 – HAZARDOUS MATERIALS UPDATES



Northwest Region
15700 Dayton Avenue North
P.O. Box 330310
Seattle, WA 98133-9710
206-440-4000
TTY: 1-800-833-6388
www.wsdot.wa.gov

April 14, 2021

To: Robert Woeck, WSDOT I-405/SR 167 Megaprogram Deputy Program Administrator

From: Anne Conrad, WSDOT Northwest Region Hazardous Materials & Solid Waste Management Lead, and WSDOT I-405/SR 167 Megaprogram environmental team

Subject: Update to I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) Environmental Assessment, Appendix G, *Hazardous Materials Analysis Technical Memorandum* and Appendix G1, *Hazardous Materials Analysis Addendum*

INTRODUCTION

The Washington State Department of Transportation (WSDOT) has prepared this update to the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06) Environmental Assessment Appendix G, *Hazardous Materials Analysis Technical Memorandum* dated October 2019 (Appendix G) and Appendix G1, *Hazardous Materials Analysis Addendum* dated February 2020 (Appendix G1). This update provides new and/or clarifying information on the site risk analyses and status of implementing recommendations for several sites of concern since Appendices G and G1 were prepared. This update also summarizes WSDOT's next steps for implementing the remaining recommendations.

This document should be used with Appendices G and G1 as follows:

- The text in Sections 2.0 and 3.0 of this addendum supplements the text in Section 3.7 of Appendices G and G1 for sites 4, 6, 7, 8, 9 and 13.
- Replace Table 7 of Appendices G and G1 with Table 7 in this update. Changes to the previous version of Table 7 are indicated with underlining and strikethrough formatting.

UPDATES TO RISK ANALYSES

Based on the updated risk analyses for the 18 potential sites of concern, 11 sites now have a low anticipated level of impact to the Project, as described below. Of these 11 low impact sites, two have the potential to become a moderate impact risk. The remaining 7 sites have a moderate anticipated level of impact to the Project, and two have the potential to become a high impact risk.

Site ID 6 King County Parks/Former BNSF Rail Line, King County Parcel Number 0926059170

This site is located within the Project limits, at the southeast corner of the I-405/SR 522 interchange. This parcel is the former BNSF railroad right of way, at the location of a proposed new bridge for the northbound off-ramp. The Project proposes to obtain an airspace easement for the new bridges and off-ramp, which is considered a partial property acquisition. The Project also proposes a temporary construction easement (TCE) for the site. Rail lines have historically been known to have petroleum, creosote, and heavy metals contamination. Although the rail tracks have been removed, there may still be residual contamination present. This site was previously considered a **Moderate** impact risk to the Project based on the description of potential construction activities at the site. The site is now considered a **Low** impact risk to the Project because construction activities are limited to potentially using the area for staging.

Site ID 7 WSDOT NE Woodinville Drive UST, NE Woodinville Drive and NB I-405, SE Corner, Bothell, FSID# 23108

This site is located within the Project limits at the southeast corner of the I-405/SR 522 interchange. A heating oil underground storage tank (UST) was discovered during the I-405, Bellevue to Lynnwood Improvement Project, when a drainage system was installed in 2015. The UST had leaked into the soil, and the TPH-D-contaminated soil was excavated and removed off-site. Groundwater was apparently not impacted. Following cleanup activities, the site received an NFA determination from Ecology in 2017.

The presence of a historical LUST that has been addressed to Ecology's satisfaction is a Historical Recognized Environmental Condition (HREC). The site was previously considered to be a **Moderate** impact risk to the Project because of its location, and residual TPH-D-impacted soil might be present and potentially impact the Project; if encountered, remediation would be straightforward. The site is now considered a **Low** impact risk to the Project because additional review of available documents indicated residual TPH-D-impacted soil had been over-excavated and removed.

FOLLOW-UP ON IMPLEMENTATION OF RECOMMENDATIONS

Site ID 4 Former Excell Cleaners/Shurgard/Canyon Park, Self-Storage Limited Partnership, 1715 228th Street SE, Bothell (Inactive drycleaner list)

This site is located adjacent to the Project limits, on the south side of the Project limits, and hydrologically cross-gradient. A dry cleaner operated on the site from 1994 to 1996. It is currently used as a storage facility. There is no evidence of releases to soil or groundwater, but no site investigations have been conducted. The history and file review of this site is described in more detail in Appendices G and G1.

Proposed Project activities include use of the site as a TCE. The following activities would occur in the WSDOT right of way adjacent to the site: excavation for a detention pond and stormwater treatment, construction of a stormwater outfall, a stream realignment, pavement resurfacing, addition of new pavement, construction of a retaining wall, and correcting a fish barrier.

A limited Phase II Environmental Site Assessment (ESA) was conducted in March 2021. Based on the findings of the investigation, there was no indication of a widespread release of volatile organic compounds (VOCs) to soil or groundwater. However, the groundwater results indicate impacts associated with total and dissolved arsenic, total lead, total chromium, total petroleum hydrocarbons as diesel (TPH-D), and total petroleum hydrocarbons as heavy oil (TPH-O).

The limited Phase II ESA did not alter the conclusion that the site is considered to be a **Moderate** impact risk to the Project. WSDOT will include a copy of the Phase II study with the design-build RFP and will develop General Special Provisions (GSPs) and Special Provisions (SPs) to limit dewatering and require assessment of any generated fluids prior to disposal.

Site ID 8 Chevron 93299, 15900 116th Ave NE, Bothell, FSID# 94213842

This site is located adjacent to the Project right of way, and east of the Project limits, within 500 feet of the I-405 pavement, and hydrologically upgradient. The history and file review of this site is described in more detail in Appendices G and G1.

Proposed Project activities closest to the site are excavations for a noise wall. The presence of shallow impacted groundwater that could potentially migrate off site and impact the Project is a REC. A limited Phase II Environmental Site Assessment (ESA) was conducted in November 2020. No evidence of contamination from the service station was discovered in a groundwater sample collected from a monitoring well located approximately 300 feet hydrologically down-gradient to cross-gradient from the site. However, the Project's proposed noise wall at this location extends approximately 300 feet closer to the Chevron site than the monitoring well that was sampled. It is unknown if impacts to groundwater from the Chevron site might reach to the northern end of the proposed noise wall.

The limited Phase II ESA did not alter the conclusion that the site is considered to be a **Moderate** impact risk to the Project. WSDOT will include a copy of the Phase II study with the design-build RFP and will develop General Special Provisions (GSPs) and Special Provisions (SPs) to limit dewatering and require assessment of any generated fluids prior to disposal.

Site ID 9 Juno Therapeutics (former Sonus Pharmaceuticals), 1522 217th Place SE, Bothell, FSID# 28356548

This site is located within the Project limits on the northwest side of SR 527. WSDOT proposes a partial acquisition of the tax parcel the Ecology site is located on along SR 527, where proposed improvements include additional pavement, pavement resurfacing, and a retaining wall. The history and file review of this site is described in more detail in Appendices G and G1. Based on the results of a hydrogeologic investigation, Ecology provided a No Further Action determination for this site in 2006.

As described in Appendices G and G1, the presence of historical impacted groundwater that has been addressed to Ecology's satisfaction is a historical REC (HREC). There is no change to the conclusion that the site is considered to be a **Low** impact risk to the Project, with the possibility of becoming a **Moderate** impact risk if Project activities on the site require dewatering.

A follow-up conversation with Ecology in July 2020 clarified that because WSDOT's proposed acquisition area is outside Ecology's site boundary on the tax parcel, and the site received a No

Further Action determination by Ecology, no further site investigation is recommended at this time. WSDOT has updated the recommendations in Table 7 to reflect the completion of this coordination with Ecology.

Site ID 13 Bothell City Shop/Public Works UST 2391 and City of Bothell King County parcel 0926059013, 17555 120th Avenue NE/17555 Brickyard Road NE, Bothell, FSID# 21681545

WSDOT proposes a partial acquisition and a temporary construction easement at the Bothell City Shop parcel (King County parcel 0926059001) and a full acquisition of the City of Bothell parcel (King County Parcel 0926059013).

In May 2020, WSDOT completed a limited Phase II ESA for Site ID 13. The investigation found oil-range total petroleum hydrocarbons (TPH-O) is present in soil above the MTCA Method A Cleanup Levels on the City of Bothell parcel 0926059013. The testing location is within the proposed acquisition footprint and is where street sweepings were historically dumped. Low concentrations of TPH-O are present in soil north and east of the building on the Bothell City Shop parcel, outside the current proposed partial acquisition footprint. These detections are likely the result of releases from historic operations at the site. Low concentrations of total petroleum hydrocarbons as diesel (TPH-D) are present in soil to the northeast of the building on the site, outside the current proposed partial acquisition footprint. These detections are likely the result of releases from the former underground storage tanks at the site that were not fully removed during the cleanup action in 1993. There were no detections for chemicals of concern in the groundwater samples.

The Phase II investigation did not alter the conclusion that the site is considered to be a **Moderate** impact risk to the Project because of the property acquisition and historical activities leading to possible releases of petroleum products, metals, and solvents. WSDOT will include a copy of the Phase II study with the design-build RFP and will develop General Special Provisions (GSPs) and Special Provisions (SPs) to require development of a Hazardous Materials Management Plan to address known and unknown contamination in the work area.

NEXT STEPS AND CONCLUSION

This update is intended to provide supplemental information to Appendices G and G1 for hazardous materials sites of concern. For the remaining sites of concern, WSDOT plans to implement the recommendations detailed in Table 7 of this update. Note that this update also includes minor changes to the wording of the recommendations for Site IDs 1, 4, 5, 6, 7, 8, 9, 10, 13, and 16 to clarify details, such as who is performing the recommendation and timing for completion.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
1	AT&T Wireless NR5 Bothell 920307 (aka Cingular Wireless) (3706871)/AT&T Mobility Phase I Main Building (98437662)	TCE	20307 North Creek Parkway Bothell Adjoining to east	Southeast and southwest	Excavation adjacent to the site for retaining wall along NB I-405 and a fish barrier correction/ stream channel creation at Stream 25.0L. A TCE will be needed for clearing existing vegetation on the north bank of the wetland and replanting with native vegetation	ALLSITES, CSCSL, UST, VCP	TPH-D, TPH-O	Soil Groundwater	In 2008, ~10,000 gallons of diesel fuel were released from an AST into a storm drain and soil. Emergency response actions contained the spill within the property boundaries. In 2013 a remediation system to recover oil from groundwater was installed. Groundwater monitoring in 2017 indicated impacted groundwater is not leaving site. Status is cleanup started.	Moderate. High impact risk if contaminated groundwater plume migrates off-site to Project limits.	<u>WSDOT will include RFP language stating that if</u> excavation for the retaining wall extends into the shallow groundwater, <u>the contractor shall conduct sampling and pre-characterizing the groundwater for disposal purposes-is recommended.</u>
2	Dry Clean US (5125580)	No	22833 Bothell Everett Highway Bothell 900 feet to south	North-northeast	Stream alignment, stormwater treatment	ALLSITES, CSCSL, ECHO, FINDS, HSL, VCP	PCE, HVOCs	Soil Groundwater Air	A dry cleaner operated on site beginning in 1992. Environmental assessments were conducted beginning in 2005. PCE present in soil and groundwater. Impacted soil removed in 2007 and 2009. Subsequent sampling of groundwater, soil gas, and indoor air found PCE and HVOCs above CULs. Soil vapor extraction system (SVE) pilot studies and air sparge study conducted in 2016. No additional work was completed, and current status is cleanup started. Groundwater was found between 3 to 8 feet bgs, but down-gradient monitoring well did not contain PCE above CULs in 2017. Status is cleanup started.	Moderate. High impact risk if contaminated groundwater plume migrates off-site to Project limits.	No action. The site is 900 feet away from planned construction activities.
3	Canyon Park Cleaners (77714595)	No	22615 Bothell Everett Highway Bothell Adjoining to south	Estimated to south	Excavation for detention pond, pavement resurfacing, additional pavement, retaining wall, fish barrier correction	ALLSITES, ECHO, FINDS, Historic cleaner, Inactive drycleaner, RCRA NonGen	Potential HVOCs	Unknown	Dry cleaners from 1987 to 2001. No known environmental releases; no investigations conducted.	Moderate	No action. The site is more than 500 feet away from planned intrusive work. Large scale dewatering not expected.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
4	Former Excell Cleaners/Shurgard / Canyon Park, Self-Storage Limited Partnership	TCE	1715 228th Street SE Bothell Adjoining to west	Estimated to north toward North Fork Perry Creek	TCE, Excavation for detention pond, stormwater treatment, stormwater outfall, stream alignment, pavement resurfacing, additional pavement, retaining wall, fish barrier correction	Historic cleaner	Potential HVOCs	Unknown	Dry cleaners from 1994 to 1996. No known environmental releases; no investigations conducted. (Snohomish County parcel 270530000401600)	Moderate	WSDOT would will develop language as part of TCE acquisition to limit liability. Conduct WSDOT conducted a Limited Phase II ESA in March 2021. WSDOT will develop GSPs and SPs to limit dewatering and require assessment of any generated fluids prior to disposal.
5	Jacksons 615/Shell 120935 (53947398)	No	22802 Bothell Everett Highway Bothell 650 feet to southwest	Northeast	Stormwater treatment	ALLSITES, CSCSL, ECHO, FINDS, ICR, LUST, Manifest, RCRA-NonGen, UST, VCP	TPH-G, Benzene	Soil Groundwater	A LUST with releases to soil and groundwater was reported to Ecology in 1990. Petroleum-impacted soil was excavated and disposed of off-site in 1991. Approximately 15,000 gallons of groundwater was removed, treated, and disposed of. A soil vapor extraction (SVE) and groundwater treatment system was installed and operated from 1993 through 2001. The site entered the VCP in 2009. Status is cleanup started.	Moderate	No action. The site is 650 feet away from planned construction activities.
6	King County Parks/Former BNSF Rail Line	Air Space TCE	King County Parcel # 0926059170 Project	Estimated north to Sammamish River	Permanent easement (Air Space only), TCE, construct new bridge for NB off-ramp		TPH, Creosote, Metals	Suspected in soil	Based on history of rail lines, any work in and around rail lines can encounter contamination.	Moderate Low	As part of obtaining the air space lease and TCE, WSDOT would will develop language to limit liability. WSDOT will d Develop GSPs and SPs to address the risk of encountering contamination in the work area. As part of developing the RFP, WSDOT will specify in the contract that the contractor must sample and pre-characterize soil to determine baseline conditions if the contractor proposes construction activities that would require any excavation on the site.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
7	WSDOT NE Woodinville Dr UST (23108)	Existing WSDOT ROW	NE Woodinville Drive and NB I-405, SE Corner Bothell Project	Estimated north to Sammamish River	Retaining wall, additional pavement, construct new bridge for NB off ramps	ALLSITES, CSCSL NFA	TPH-D	Soil	A heating oil UST was discovered during the I-405 Express Lanes Project when a drainage system was installed in 2015. The UST had leaked into the soil, and the petroleum contaminated soil was excavated and removed off-site. The site received an NFA in 2017.	Moderate Low	WSDOT will d Develop GSPs and SPs to address risk of encountering contamination in work area during construction.
8	Chevron 93299 (94213842)	No	15900 116th Ave NE Bothell Adjoining to east of ROW and a proposed noise wall	West	Pavement resurfacing, noise wall, retaining wall	ALLSITES, CSCSL, ECHO, Financial Assurance, FINDS, HSL, ICR, LUST, Manifest, RCRA-LQG, UST	TPH-G, Benzene	Soil Groundwater	Gasoline service station in operation since 1987. In 1993, an LUST was reported. TPH-G and benzene found in soil and groundwater above CULs in 1995. Depth to groundwater is approximately 12 feet bgs. Status is awaiting cleanup.	Moderate	WSDOT Conducted conducted a limited Phase II ESA to determine soil and groundwater quality at the location of the proposed noise wall adjoining the site in <u>November 2020</u> . WSDOT will d Develop GSPs and SPs to limit dewatering and require assessment of any generated fluids prior to disposal.
9	Juno Therapeutics (former Sonus Pharmaceuticals Bothell) (28356548)	A	1522 217th Place SE Bothell Project	East	Partial acquisition, pavement resurfacing, signage	ALLSITES, CSCSL NFA, Manifest, RCRA NonGen, VCP	Metals (arsenic and manganese)	Groundwater	Metals (arsenic and manganese) in groundwater confirmed above MTCA CULs. Groundwater present between 0.35 and 4.18 feet bgs. The site received an NFA from Ecology in 2006, as the metals exceedances appeared to be naturally occurring. (Snohomish County parcel 27053000104100)	Low. Moderate impact risk if Project activities on the site require dewatering.	WSDOT contacted Ecology and confirmed that the proposed acquisition is outside the Site boundary. No additional investigation is required. Contact Ecology for a written opinion on the NFA and associated conclusions related to arsenic as it pertains to the property acquisition and construction activities (dewatering and discharge). WSDOT will develop language as part of the property acquisition to limit liability. WSDOT will d Develop GSPs and SPs to limit intrusive work to limit dewatering and require assessment of any generated fluids prior to disposal.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
10	Texaco Star Mart/Jacksons 616/Texaco #632321469/Shell 120531 (63265631)	No	11700 NE 160th Street Bothell Adjoining to east of ROW, 400 feet from I-405	Variable, but likely to southwest	Pavement resurfacing	ALLSITES, CSCSL, ECHO, FINDS, Historic Auto, ICR, LUST, Manifest, RCRA-NonGen, UST, VCP	TPH-G, TPH-D, BTEXN	Soil Groundwater	Site has been a gas service station since 1972. Leaks and spills from the USTs and pipes were reported to Ecology in 1991. In 1991, 1,740 cy of contaminated soil was excavated and removed. Contaminated soil remained, and groundwater was impacted. Additional investigations were conducted between 1992 and 2019. Groundwater depth varied between 9.95 to 39.8 feet bgs, with variable flow direction. Groundwater may migrate to stormwater drainage swale, which is connected to a culvert which flows to the I-405 ROW to a bioswale. Site status is cleanup started.	Low. Moderate impact risk if Project activities include excavation to groundwater level.	WSDOT will develop GSPs and SPs to limit dewatering and require assessment of any generated fluids prior to disposal.
11	Autosmith/Bothell North/One Hour Electric (91249646)	No	2326 228th Street SE Bothell ~400 feet to northeast	Estimated north to Perry Creek	Pavement resurfacing and additional pavement	ALLSITES, Historic auto, Historic cleaner, UST	Potential HVOCs, TPH-D	Unknown	UST removed in 1978. Transmission repair shop from 2007 to 2009. Drycleaning from 2006 to 2011. No records of releases to soil or groundwater.	Low	No action. The site is 400 feet away from planned construction activities.
12	Bang Property (59898498)	No	12631 & 12633 NE Woodinville Drive, Woodinville 0.31 miles to south	Northeasterly to Sammamish River	None	ALLSITES, CSCSL, FINDS, HSL	TPH-G, TPH-D, BTEXN	Soil Groundwater	In 2001, petroleum contaminated soil was found in the ROW of NE Woodinville Drive. Two LUSTs from a former gasoline service station were removed in 2015 to minimize migration onto the down-gradient Ferndale Grain site. Contaminated soil was excavated and removed and biological treatment slurry was placed in the excavation. Confirmation samples indicated TPH and BTEXN still present in sidewalls. Groundwater was not tested, and is suspected of contamination. Status is cleanup started.	Low	No action. The site is more than 0.25 mile from planned construction activities.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/ Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
13	Bothell City Shop/Public Works UST 2391 (21681545) and City of Bothell King County parcel 0926059013	A	17555 120th Ave NE/17555 Brickyard Road NE, Bothell Project	Estimated north to Sammamish River	Partial acquisition, retaining wall, additional pavement, construct new bridge for NB off ramps, demolish a building Full Acquisition	ALLSITES, CSCSL NFA, ECHO, FINDS, ICR, LUST, RCRA-NonGen, UST	TPH-G, TPH-D, Benzene, Metals, Solvents	Soil	One diesel UST and one gasoline UST, installed in 1977, were removed from the site in July 1993 due to failing a tightness test. Leaking petroleum products contaminated the soil, and Ecology received notification of a LUST in 1993. Approximately 130 cubic yards of petroleum contaminated soil was removed in August 1993. Groundwater was reported as not affected. The site was cleaned up and received an NFA in 2012. If residual contamination is present, cleanup will be straightforward. (King County parcel 0926059001) King County parcel 0926059013: Adjoining parcel to Bothell City Shop parcel. Operational activities from Bothell City Shop may have occurred on this parcel.	Moderate	WSDOT conducted Conduct a Phase II ESA to determine soil and groundwater quality at the site <u>in May 2020</u> . As part of property acquisition, WSDOT will <u>will develop</u> language for acquisition limiting liability. <u>WSDOT will develop</u> GSPs and SPs to address risk of encountering contamination in work area. Building assessments for asbestos and lead based paint is required as part of WSDOT's ROW acquisition process.
14	Ferndale Grain Woodinville (32147851)	No	12800 NE Woodinville Drive Woodinville 0.25 miles to southeast	Northeasterly to Sammamish River	Stormwater treatment	ALLSITES, CSCSL	TPH-O, TPH-G, TPH-D, Benzene, Xylenes	Soil Groundwater	The site was historically operated as a feed mill, until 1997. Subsurface soil and groundwater investigations in 1994 and 1995 were followed by installation of in-situ remediation system in 1996 which has been continuously operating. An upgradient off-site source from LUSTS at a former gasoline station (Bang Property, currently Twisted Cafe) has continued to impact the site. Ferndale removed the LUSTs from the off-site source in 2015 and has conducted quarterly groundwater monitoring. Status is cleanup started.	Low	No action. The site is 0.25 mile from planned construction activities.
15	Securite Gun Club/Dirt Lorde Property (11796)	No	12024 Woodinville Drive Bothell 150 feet to south	North and west to Sammamish River	Stormwater treatment, stream alignment north of Sammamish River	ALLSITES, CSCSL NFA, NPDES	TPH-D, TPH-O	Soil Groundwater	Releases of heating oil to soil and groundwater were found in 2016. Remediation conducted in 2017 removed impacted soil and groundwater. Three monitoring wells were installed in 2017 and groundwater was measured between 9.67 and 18.23 feet bgs in perched groundwater lenses. Following remediation, soil and groundwater concentrations of TPH-D and TPH-O were below applicable MTCA CULs. The site received an NFA in 2017.	Low	No action. The site is 150 feet from planned construction activities.

Table 7. Recognized Environmental Conditions Summary Table

Site ID	Site (Facility Site ID)	Acquisition (A) or TCE	Site Address and Distance from Project	Groundwater Flow Direction	Planned/Proposed Construction Activities	Databases	Contaminants of Concern	Impacted Media	Description	Likely Risk to Construction or WSDOT's Liability	Recommendations
16	Siemens Transmission/Cepheid Bothell (3322)/Terminix Branch 2141 (11122292)	A	22121 17th Ave SE Bothell Project	Estimated south to Queensborough Creek	Partial acquisition, additional pavement	ALLSITES, ASBESTOS, ECHO, FINDS, Historic auto, Manifest, NPDES, RCRA-NonGen	Potential TPH, solvents, pesticides	Unknown	Two buildings were constructed in 1985 with several commercial businesses in operation. Siemens transmission repair shop operated from 2001 to 2004. Terminix, a pest control company, operated from at least 2000 to 2002. Cepheid, a molecular diagnostics company, was located at the same address. There has been no indication of releases of hazardous materials to soil or groundwater. ACM removed during remodeling of one of the buildings in 2017. (Snohomish County parcel 27053000403900)	Low	As part of property acquisition, WSDOT would will develop language for acquisition limiting liability.
17	Snohomish County Fire Station 45 (97654)	No	1608 217th Place SE Bothell Adjacent	Estimated west toward North Creek	Additional pavement/sidewalk	ALLSITES, UST	Potential TPH	Unknown	Two USTs removed in 1996. No releases reported.	Low	No action. The site is 150 feet from planned construction activities.
18	Tan & Yang Property (8389076)	No	727 228th Street SE Bothell 0.28 mile to west	Estimated to east and northeast to Perry Creek	None	ALLSITES, CSCSL	TPH	Soil Groundwater	Private residence. TPH was confirmed in soil and suspected in groundwater in 2006. Status is awaiting cleanup.	Low	No action. The site is located more than 0.25 mile from planned construction activities.

ACM = asbestos-containing material; AST = aboveground storage tank; bgs = below ground surface; BTEXN = benzene, toluene, ethylbenzene, and total xylenes; CUL = cleanup levels; GSP= General Special Provision; HVOCs = halogenated volatile organic compounds; LUST = leaking underground storage tank; MTCA = Model Toxics Control Act; NFA = no further action; PCE = tetrachloroethene; ROW = right of way; SP=Special Provision; SVE = soil vapor extraction; TPH-D = total petroleum hydrocarbons as diesel; TPH-G = total petroleum hydrocarbons as gasoline; TPH-O = total petroleum hydrocarbons as heavy oil; UST = underground storage tank; VCP = voluntary cleanup program

APPENDIX 7 – AGENCY CONCURRENCE DOCUMENTATION

September 17, 2020



City of Bothell™

Ms. Lisa Hodgson
WSDOT I-405/SR 167 Program Administrator
600 108th Avenue NE, Suite 405
Bellevue, WA 98004

RE: WSDOT ETL Direct Access Ramp Project Transportation Analyses

Dear Ms. Hodgson:

This letter summarizes the City of Bothell's findings and concurrence with the transportation analyses performed for the Washington State Department of Transportation (WSDOT) I-405, SR 522 Vicinity to SR 527 Express Toll Lane (ETL) Direct Access Ramp Project, and the Environmental Assessment transportation assumptions documented in your April 9, 2020 letter. The primary assumptions relate to the development of the background growth, infrastructure system improvements planned and funded by the City, and future planned improvements and timing associated with the WSDOT ETL Project.

The City of Bothell has been working very closely with WSDOT throughout the analysis and development of the ETL Project elements and associated improvements needed to mitigate impacts related to the additional traffic generated by the new Direct Access Ramp. The methodology used by WSDOT in their efforts has also been coordinated with the City's current effort on the Canyon Park Subarea Plan transportation analyses efforts to ensure that assumptions are reasonable and accurate to develop future traffic conditions. WSDOT's analysis is based on adopted Comp Plan built scenario and City's subarea plan update is based on analysis for several alternatives of proposed land use scenarios.

The City of Bothell appreciates the opportunity to continue participating and coordinating with WSDOT in this process to ensure a successful project that will benefit both the City and the State.

Sincerely,

A handwritten signature in cursive script that reads "Erin Leonhart".

Erin Leonhart
Public Works Director

cc: Eddie Low, Deputy Public Works Director
Michael Kattermann, Community Development Director
Steven Morikawa, Capital Projects Manager
Barrett Hanson, WSDOT Consultant Team

City of Bothell
Public Works Department
18415 101st Ave NE
Bothell, WA 98011

MEMORANDUM

Date: May 26, 2021

To: Lindsey Handel, Federal Highway Administration

From: Craig Helmann, Puget Sound Regional Council
I-405/SR 167 Megaprogram transportation analysis team, Washington State
Department of Transportation

Subject: **Regional Travel Demand Forecast Model Overview for WSDOT's I-405 North-end
Projects**

The regional travel demand forecasting model used to evaluate projects at the northern portion of I-405 near Bothell, Washington was initially developed in 2014 and has been used on a variety of Washington State Department of Transportation (WSDOT) project transportation analyses since then. This memo briefly describes how the model was originally developed from the Puget Sound Regional Council's (PSRC) regional 4-step travel demand model and the enhancements that were incorporated to improve the model's ability to forecast demand on regional facilities. The memo also discusses consistency with the current version of PSRC's regional model, as well as the collaboration and coordination between PSRC and the WSDOT I-405/SR 167 Megaprogram team.

Original Model Development

The I-405 Travel Model (I-405 Model) was initially developed in 2014 to support analysis for various WSDOT Mega Programs, including the I-405/ SR 167 Corridor Megaprogram and the Puget Sound Gateway Program. The I-405 Model was based on PSRC's regional travel demand model (v1.0b). Since its inception, the I-405 Model has been refined to support individual projects associated with each program, including the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.

The following list briefly describes the cumulative refinements that were made to the regional model. These updates (including land use, transportation network, modeling framework, and assignment assumptions) were made by the WSDOT I-405/SR 167 Megaprogram team in coordination with PSRC throughout the model development process.

- Incorporated a 2015 base year land use forecast and 2025 and 2045 future year forecasts for the *I-405 Express Toll Lane Phase II Traffic and Revenue Study*.
 - Updated sociodemographic characteristics using data from the 2010 U.S. Census (PSRC Model v1.0b was based on 2000 Census data).

- Future year forecasts based on PSRC's Land Use *VISION 2040* (version 1.0).
- Added detail and refined the transportation network in all four counties.
 - Expanded the number of Traffic Analysis Zones (TAZs) from 938 to 981.
 - Updated the number of lanes, free-flow speeds, roadway capacities, interchange geometries, turn prohibitions, and toll rates to be consistent with 2015 conditions.
 - Updated the transit network to include 2015 transit itineraries for King County Metro, Community Transit, and Everett Transit.
- Revised trip generation rates based on the PSRC 2006 Household survey (PSRC Model v1.0b was based on 1999 household survey).
- Updated assignment methods for traffic, transit, and park-and-ride lots.
 - Custom traffic assignment volume delay functions were developed in coordination with WSDOT to reduce the tendency of the PSRC Model to overestimate the demand on freeway corridors compared with adjacent arterial corridors.
 - The transit assignment was updated to include boarding penalties and wait time factors to be consistent with the methodology in Sound Transit's *Incremental Ridership Model* and to better account for passenger bias in selecting mode and station locations for boarding/alighting.
 - Demand at park and rides was partially determined based on an attractiveness factor that incorporates transit connectivity and overall lot capacity (factors not included in the PSRC Model v1.0b).

The WSDOT I-405/SR 167 Megaprogram team coordinated with PSRC staff to review the approach that was used to update land use inputs for the I-405 Model as required for the environmental analysis. It was necessary to adjust the Land Use Vision (LUV) forecast product to enable an extension from a 2040 horizon year out to a 2045 horizon year. The five-year extrapolation was performed by averaging annual growth rates from 2035 to 2040 and applying those rates from 2040 to 2045. This methodology was developed in coordination with PSRC staff and was confirmed to be a technically sound approach to extend the LUV forecast. PSRC acknowledges that similar approaches have been used on a variety of other projects in the region.

The model was calibrated and validated to 2015 conditions within the respective study areas. Specific updates to the I-405 Model associated with the I-405, SR 522 Vicinity to SR 527 Express Lanes Improvement Project are described in the following sections.

I-405 Travel Model Development

In 2016, the I-405 Model was calibrated and validated along the entire I-405 corridor for use on north-end planning projects as part of the I-405/SR 167 Corridor Megaprogram, including the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project; I-405, Northeast 132nd Street

Interchange Project, and the I-405, NE 85th Street Interchange and Inline Station Project. As part of this effort, the model was ported over to the recently updated 4k trip-based model framework (v4.0.5) developed by PSRC. This 4k update increased the number of TAZs in the regional model from 983 to 3,700 and introduced important updates to many components of the model to incorporate more recently available travel behavior data.

The I-405 Model was merged with PSRC’s 4k model framework to take advantage of the refinements within each model. The trip generation improvements to the I-405 Model described previously were based on the anticipated updates within the 4k framework and no further updates were necessary for this step. PSRC’s 4k model changes to the trip distribution, mode choice, and time of day models were incorporated into the I-405 Model while maintaining the refined networks and assignment methodologies. PSRC was not able to release detailed land use estimates due to privacy employment data restrictions imposed by the State of Washington; therefore, the I-405 Model land use data and TAZ system were retained.

The WSDOT I-405/SR 167 Megaprogram team also coordinated with PSRC staff to ensure that the network assumptions used in the environmental analysis were consistent with regional projects in the latest Regional Transportation Plan. This coordination included review of the Regional Capacity Project list provided by PSRC staff to the project team. Although the project model contains a more detailed transportation network than the regional network from PSRC, the Regional Capacity Projects from PSRC were consistent between the project and regional models.

Table 1 summarizes the inputs and sub-models within the I-405 Travel Model and their primary sources. The I-405 Model is a combination of refinements to an earlier version of PSRC’s regional model (v1.0b) and components taken directly from the updated regional model (v4.0.5).

Table 1: I-405 Travel Model Components and Sources

Model Component	Source
<i>Land Use Inputs</i>	<i>Based on PSRC’s Land Use Vision 2040 v1.0</i>
<i>TAZ System</i>	<i>Refined based on PSRC Model v1.0b</i>
<i>Transportation Networks</i>	<i>Refined based on PSRC Model v1.0b</i>
Trip Generation Model	PSRC 4k Model v4.0.5
Trip Distribution Model	PSRC 4k Model v4.0.5
Mode Choice Model	PSRC 4k Model v4.0.5
Time of Day Model	PSRC 4k Model v4.0.5
Assignment Model	Refined based on PSRC Model v1.0b

Source: Fehr & Peers.

Attachment 1 to this memo describes in more detail the development, calibration, and validation of the subarea model. The I-405 Model was primarily validated to AM and PM peak hour demand volumes by direction on I-405 between I-5 and SR 520. The validation included 15 locations on I-405 and 5 locations on nearby freeways (I-5, SR 525, and SR 520). Across both time periods and directions, almost 85 percent of the validation locations have model volume estimates with +/- 20 percent of the observed demand volumes.

The validation effort within the study area (focusing on individual freeway and arterial segments) is substantially more detailed than what is typically performed for the PSRC regional model where a limited number of screenlines are compared across the entire four-county region. **Attachment 2** to this memo compares volume estimates on the arterial streets within the study area using the traffic counts, the I-405 Travel Model, and the current release of the PSRC regional model (see below). In general, the I-405 Model is more accurate than the regional model at these locations.

PSRC acknowledges that it is both necessary and appropriate for subarea models, like the I-405 Travel Model, to update the assignment methods (including volume-delay functions) to improve the accuracy and ability of a model to forecast growth within a specific study area. Given that these changes are only relevant to a small geographic area these are not typically incorporated back into the regional model.

Current PSRC Trip-Based Model Release

After the development of the I-405 Travel Model was completed, PSRC officially released the current version (v4.1.0) of the trip based regional travel model in summer 2018. This version of the model continues to have a 2014 base year and 2040 horizon year and is the most current version available as of May 2021. The next release of the regional model is anticipated to occur when the *2022 Regional Transportation Plan* is adopted and will have a 2018 base year and 2050 horizon year.

As discussed in the previous sections and summarized in **Table 1**, PSRC provided the WSDOT I-405/SR 167 Megaprogram team with a pre-release version of the regional model (v4.0.5) to incorporate the planned improvements into the I-405 Model. As such, PSRC considers the I-405 Travel Model to be consistent with the currently released version of the regional travel model (v4.1.0).

Attachments

- Attachment 1: I-405 Travel Model Memorandum
- Attachment 2: Comparison of Model Volumes

Lisa Hodgson

Lisa Hodgson, PE
WSDOT I-405/SR 167 Megaprogram Program
Administrator

Craig Helmann

Craig Helmann
Puget Sound Regional Council Director of Data



TECHNICAL MEMORANDUM

Date:

To:

From: Jeff Pierson, Fehr & Peers

Subject: I-405 Model Update

SE16-0478

INTRODUCTION

Fehr & Peers was selected by the Washington State Department of Transportation (WSDOT) to provide support for traffic modeling and analysis for projects along I-405. The key components of travel demand modeling support are as follows:

- Prepare 2015, 2025 and 2045 demand models to allow various options to be analyzed
- Perform with and without tolling scenarios for the design option identified by WSDOT
- Work closely with WSDOT staff to reach agreement on assumptions prior to model runs

Fehr & Peers recently worked with WSDOT to prepare travel modeling analyses for the SR 167 Completion and SR 509 Corridor projects. The project team agreed to build on the models previously used for these WSDOT projects, supplemented by additional detail in the transportation network and transportation analysis zone (TAZ) system in the I-405 study area.

This report begins by describing key components of the development of the SR 167 and SR 509 Travel Models which form the foundation of the I-405 Travel Model. Subsequently, the modifications made to the I-405 study area and validation results are summarized. The I-405 Travel Model was calibrated and validated along the entire I-405 corridor and was previously used to support the I-405 Renton to Bellevue (RTB) project.



This model documentation was prepared in support of the following projects along the corridor's northern portion:

- I-405 – SR 522 to SR 527 Capacity Improvement Project
- I-405 - NE 132nd St Interchange Improvements
- I-405 - NE 85th St Interchange and Inline Station Project

Validation statistics in this memo are limited to locations between SR 520 and I-5 in Lynnwood.

I-405 TRAVEL MODEL DEVELOPMENT

The I-405 Travel Model is based on the Puget Sound Regional Council (PSRC) 4K v4.05 travel model framework. This section summarizes the background and updates made to that model, based on consultation with PSRC and WSDOT staff.

Land Use

An important input variable for the travel demand model is an accurate estimate of current land use data (2015) and future year forecasts. Future year land use estimates used the PSRC's Land Use Vision (LUV, January 2016) forecasts to develop total households and total employment allocations that are consistent with County and local jurisdiction land use allocations. The base and future land use estimates were developed by Stantec.

Generally, the 2015 base year land use estimates were developed using a variety of data sources. The 2015 total household and total employment data was created at the census tract geography. The following sources were used to develop household and employment estimates:

- 2010 U.S. Census
- Year 2000 thru 2014 building permit data at census tract geography (PSRC)
- 2015 census tract housing data (Office of Financial Management)
- 2015 census tract household size data (PSRC)
- 2014 PSRC employment summaries derived from the Quarterly Census of Employment and Wages (QCEW), administrative records employers report, by law, to the Washington State Employment Security Department (ESD)



- PSRC's supplemental data from the Boeing Company, the Office of Washington Superintendent of Public Instruction (OSPI), and governmental units throughout the central Puget Sound region

The 2025 land use estimates are based on the PSRC's January 2016 Land Use Vision forecasts. Efforts were made to ensure that the growth between the base year (2015) and the 2025 PSRC estimates were logical. Minor adjustments were made to 2015 total household and total employment estimates to minimize illogical growth. The 2015 adjustments were made to Forecast Analysis Zones (FAZs) that did not have an exact equivalency between census tract geographies and FAZ geography.

The PSRC LUV future forecasts extend to year 2040. For this study, a year 2045 land use estimate was required. Working closely with PSRC, the project team developed an estimated land use forecast for 2045. The 2045 forecasts were developed by determining the average annual growth between 2025 and 2040 as well as determining the average annual growth rate between 2035 and 2040. The two growth rates were then averaged and applied to the PSRC 2040 forecasts to extend out an additional five years.

Model Framework

The I-405 Travel Model was initially developed based on the PSRC's older Regional Travel Demand 1K Model v1.00b. The PSRC has extensive model documentation and a User's Guide. Rather than re-write the PSRC documentation, this memorandum summarizes the changes Fehr & Peers made to update the I-405 Travel Model. These changes include major updates to the following:

- Expansion of TAZ detail from 938 TAZs to 973 TAZs
- Added detail and refined the roadway network in all four counties
- Updated transit network to include current 2015 transit itineraries for King County Metro, Community Transit, and Everett Transit
- Updated park-and-ride component of the model
- Includes Tideflats truck trip generation component (special generators)
- Updated demographic inputs from the 2010 Census and employment data from the ESD
- Revised trip generation rates based on the PSRC 2006 Household survey
- Updated assignment methods for traffic, transit, and park-and-ride lots



The following sections describe these items in more detail, including the specific changes that were made to develop the I-405 travel model, why they are relevant for the model, and provide some details about key input and output files.

TAZ Updates

TAZs organize land use development data into specific geographic areas. 12 zones from PSRC's 1K TAZ system were disaggregated into 47 zones for the I-405 Travel Model. The zones were split near SR 509, Renton, and Bellevue. The updated TAZ equivalencies between the PSRC model and I-405 Travel Model are shown in **Table 1**.

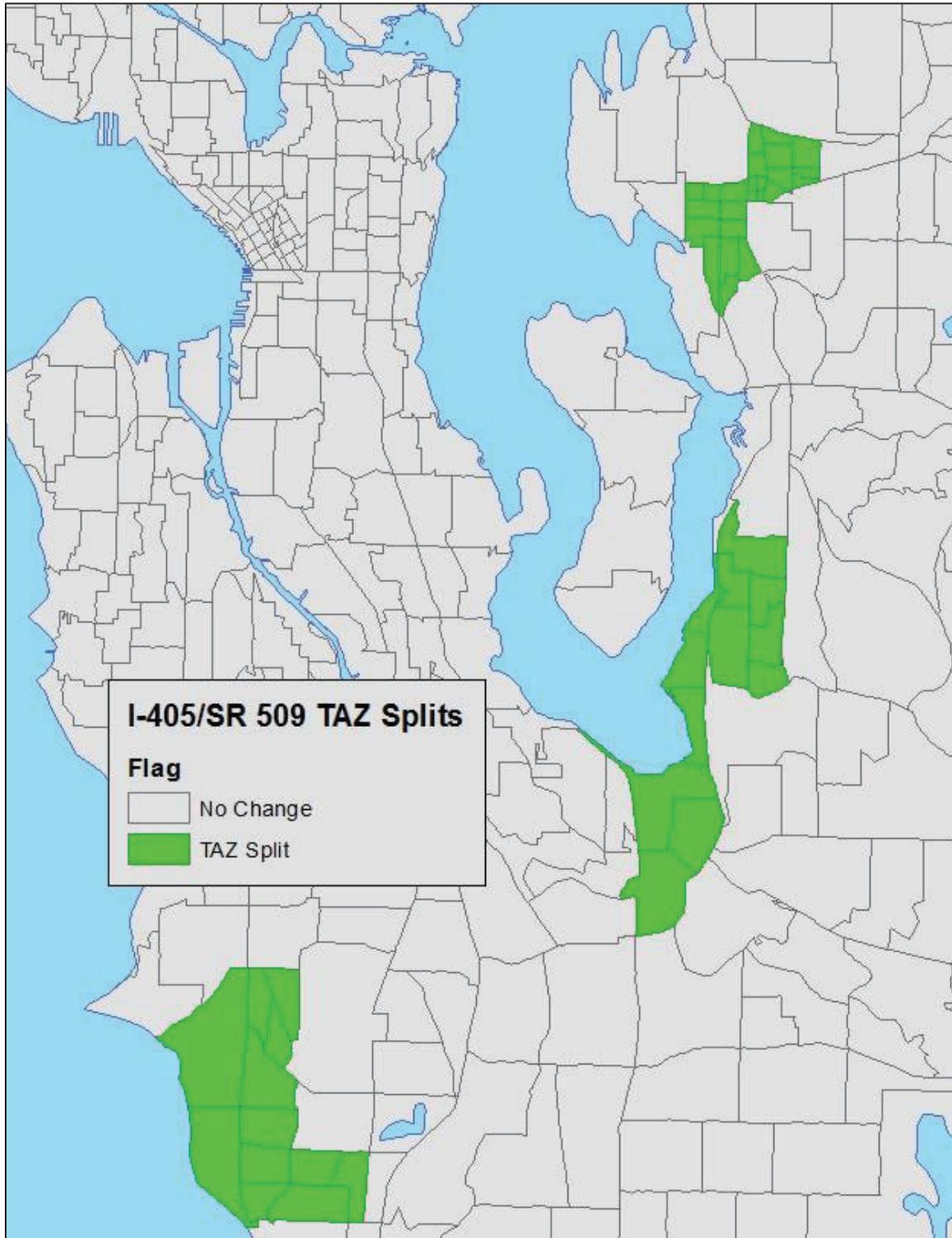
TABLE 1. TAZ EQUIVALENCIES

PSRC TAZ	I-405 TAZs
289	289, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 953
291	291, 954, 955, 956
293	293, 952
294	294, 951
295	295, 950
310	310, 957, 958, 959, 960, 961, 962
323	323, 963, 965
324	324, 964
372	372, 970, 971, 972
373	373, 969
374	374, 966, 973
375	375, 967, 969

The TAZs that were split are highlighted in **Figure 1**.



FIGURE 1. TAZ SPLITS





Transportation Networks

The highway network developed for the base year model was created by updating the highway network with additional detail in Pierce, King, and Snohomish Counties. Much of the highway network modification was done to accommodate the additional TAZs created in the study area. A generalized summary of the modifications made to the highway network is shown in **Table 2**.

TABLE 2. NETWORK MODIFICATIONS

Network Attributes	Modifications
Zone Connectors	The regional TAZs that were split required coding new TAZ connectors to the arterial network. Any TAZ connectors that were connected to intersections were moved to mid-block. Driveway locations were identified with aerial photos and centroid connectors were located appropriately for the small mixed-use center TAZs. Walk access links were added to all regional centers and to park-and-ride lots.
Additional Arterials	Additional base year network detail was added to support the screenline validation effort and future year network assumptions.
Lanes	Modified lanes based on review of aerial photos and field visits. Major changes included coding of center turn lanes (adding 0.2 lanes per the common convention in the area-e.g., a three-lane road is coded as having 1.2 lanes in each direction).
Speed	Speed limits for arterials and collectors in SR 509 and I-405 study area were set to match field conditions.
Capacity	Roadway capacities were modified where appropriate throughout the region (e.g., correcting inconsistent coding from previous modeling efforts.)
Freeway Interchanges	Modified intersection geometries at SR 518, SR 509 and I-5 interchanges to match actual ramp configurations.
Turn Prohibitions	Added turning restrictions at various locations based on network modifications.
Tolls	Updated SR 16 and SR 520 toll to match current rates. Toll rates are in year 2010 dollars and are a blended rate based on a mix of cash and Good To Go pass usage.

The transit network and operations inputs for the model were updated to reflect 2015 service characteristics (routes and headways) for all transit agencies in the region, including Sound Transit, Pierce Transit, King County Metro, Community Transit, Kitsap Transit, and Everett Transit. The modifications were made for peak period and off-peak service.



The process to determine demand at park and ride lots was also modified. The model incorporates a utility factor to differentiate the attractiveness of a park and ride lot based on transit connectivity and capacity of the lot. The PSRC model framework does not assume such a factor.

Sociodemographic Data

As described in Chapter 5 of the PSRC model documentation, a key element of the overall model structure is the sociodemographic characteristics of households. This data influences model components such as vehicle availability, mode choice, and trip generation. Version 1.00b of the PSRC model was based on sociodemographic data from the 2000 US Decennial Census. As part of the I-405 Travel Model development, the sociodemographic data were updated using the most recent 2010 Decennial Census data from the US Census Bureau. This data updates the proportions of the households in each of the 256-household cross-classification categories.

Trip Generation Rates

In conjunction with the updated sociodemographic information, PSRC updated the trip generation rates for their trip base models. The primary source of changes in trip rates for households were derived from the 2006 household travel survey. Trip rates for employment were also modified. Summaries of all the trip rate changes can be found in the PSRC publication, *Puget Sound 4K Model Version 4.03, Draft Model Documentation, June 2015*. The new rates have been incorporated into the I-405 Travel Model.

External Trips

The external trips for the travel models were updated to be reflective of the year 2015 traffic counts. The future year external trips are assumed to grow at approximately two percent a year, to be consistent with PSRC's latest regional model.

Special Generators

The travel models for the two projects used similar special generators as the PSRC trip model. The only differences compared to the PSRC's approach to model special generators are as follows:

- The modeling of Sea-Tac International Airport trips was modified to better reflect origins and destinations of trips to and from the airport. PSRC has recently incorporated the modifications in their 4K framework.



- The travel models also include Bremerton Navy base and the Snohomish County Boeing facility as special generators.

Transit Assignment

The transit assignment process has been modified from the approach used by PSRC in the regional travel model. The transit assignment methodology used in the SR 509 travel models mirrors the methodology used in the Sound Transit Incremental Transit Ridership Model. Specifically, the models incorporate Sound Transit's Boarding Penalty and Wait Time Factors used in the regional transit assignment. The Sound Transit methodology better accounts for passenger bias in selecting both mode and station locations for boarding/alighting based on factors other than transit headways/speeds that are considered in the PSRC 4K model framework. To work with the updates in the transit assignment macro, the transit nodes in the network file have been flagged to identify the following, consistent with the Sound Transit methodology:

- Regular bus stops
- Transit centers
- Rail stations (e.g., Sounder, Central and Tacoma Link)

The approach in the Sound Transit model has been approved by the Federal Transit Administration (FTA) and provides greater flexibility in how different stations are represented in the model and more accurately reflects observed boarding and transfer patterns.

Traffic Assignment

Fehr & Peers updated the volume delay functions (VDFs) to improve the performance of the traffic assignment portion of the I-405 Travel Model. The VDFs were developed based on the Highway Capacity Manual's (2010) recommendations for VDFs for large regional travel demand models (Chapter 30 – Area wide Analysis Appendix C). The VDF changes were initially made in conjunction with WSDOT for Fehr & Peers' earlier work on the I-405 Eastside Tolling Corridors project. The VDFs were specifically developed to reduce the PSRC model's tendency to "over-assign" traffic to the freeway corridors compared to adjacent arterial corridors with less congestion. In other words, the standard PSRC VDFs tend to make major regional roadways more "attractive" compared to typical city arterials and collectors. The new VDFs are based on functional class and speed. The VDFs used in the PSRC 4K Version 4.05 and the I-405 Travel Model are shown in **Table 3**.



TABLE 3. VOLUME DELAY FUNCTIONS

Speed (MPH)	PSRC Version 4K	I-405 Travel Model
< 30	$fd5 = (\text{length} * 60 / \text{ul2}) * (1 + 0.60 * (\text{HRFAC} * \text{volau} / (\text{ul1} * \text{lanes}))^{5.8}) + e11 / ((1 - \text{get}(1)).\text{max}(0.01))$	$fd1 = (\text{length} * 60 / \text{ul2}) * (1 + 1.5 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^4)$
30		$fd2 = (\text{length} * 60 / \text{ul2}) * (1 + 1.2 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^5)$
35		$fd3 = (\text{length} * 60 / \text{ul2}) * (1 + 1 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^5)$
40		$fd4 = (\text{length} * 60 / \text{ul2}) * (1 + 0.7 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^5)$
45		$fd5 = (\text{length} * 60 / \text{ul2}) * (1 + 0.72 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^5)$
50	$fd3 = \text{put}((\text{length} * 60 / \text{ul2}) * (1 + 0.56 * (\text{HRFAC} * \text{volau} / (\text{ul1} * \text{lanes}))^{6.0})) + \text{length} * ((0.5639 + \text{put}(\text{get}(1) / \text{length}) * (0.6398 + \text{get}(2) * (-0.0712 + \text{get}(2) * (0.0004 + 0.00009 * \text{get}(2))))))$	$fd6 = (\text{length} * 60 / \text{ul2}) * (1 + 0.74 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^5)$
55		$fd7 = (\text{length} * 60 / \text{ul2}) * (1 + 0.1 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^{10})$
60	$fd1 = \text{put}((\text{length} * 60 / \text{ul2}) * (1 + 0.72 * (\text{HRFAC} * \text{volau} / (\text{ul1} * \text{lanes}))^{7.2})) + \text{length} * (0.\text{max}(-.5639 + \text{put}(\text{get}(1) / \text{length}) * (0.6398 + \text{get}(2) * (-0.0712 + \text{get}(2) * (0.0004 + 0.00009 * \text{get}(2))))))$	$fd8 = \text{put}((\text{length} * 60 / \text{ul2}) * (1 + 0.72 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^{7.2})) + \text{length} * (0.\text{max}(-0.5639 + \text{put}(\text{get}(1) / \text{length}) * (0.6398 + \text{get}(2) * (-0.0712 + \text{get}(2) * (0.0004 + 0.00009 * \text{get}(2))))))$
70		$fd10 = (\text{length} * 60 / \text{ul2}) * (1 + .32 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^7)$
Centroid	$fd9 = (\text{length} * 60 / \text{ul2})$	$fd9 = (\text{length} * 60 / \text{ul2}) * (1 + 1.5 * (\text{HRFAC} * (\text{volau} / (\text{lanes} * \text{ul1}))^4)\text{or}(\text{length} * 60 / \text{ul2})$
<p><i>Notes:</i> <i>fd: Function Definition (part of EMME macro language)</i> <i>length: Link distance</i> <i>ul2: Speed in EMME model</i> <i>HRFAC: EMME Time Period Peak Hour Factor (AM=.375, PM=.350, MD=.184, EV=.354, and NI=.255)</i> <i>volau: EMME Total Vehicle Demand for Time Period</i> <i>lanes: Number of Lanes</i> <i>ul1: EMME Capacity (vphpl)</i></p>		

Base Year Model Validation

The I-405 model validation was done for the AM and PM peak hours. **Figure 2** shows the locations chosen for the validation effort for this portion of the model. The observed data was generally obtained from the WSDOT’s 2015 Compact Data Retrieval (CDR) database. **Tables 4-7** show the results of the validation for the AM and PM peak hours by direction.



TABLE 4. AM PEAK HOUR NORTHBOUND/EASTBOUND VALIDATION

Location	GP Lanes			HOV Lanes			Total		
	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>
SR 525									
1. 164 th St SW	2,093	2,271	1.08	-	-	-	2,093	2,271	1.08
I-405									
2. Damson Rd	3,290	2,811	0.85	139	1,015	7.33	3,428	3,826	1.12
3. SR 527	2,514	2,092	0.83	143	977	6.83	2,657	3,069	1.15
4 236 th St SE	3,571	3,268	0.92	142	993	6.99	3,713	4,261	1.15
5. 195 th	2,637	2,327	0.88	155	1,171	7.57	2,791	3,498	1.25
6. SR 522	3,234	2,582	0.80	127	1,267	10.00	3,361	3,849	1.15
7. 170 th St	4,098	2,532	0.62	172	1,195	6.95	4,270	3,727	0.87
8. NE 132 nd St	3,761	3,273	0.87	272	1,410	5.18	4,033	4,682	1.16
9. NE 124 th St	2,826	2,431	0.86	201	1,601	7.96	3,028	4,032	1.33
10. NE 116 th St	3,671	3,133	0.85	225	1,557	6.92	3,896	4,689	1.20
11. NE 97 th St	4,477	4,418	0.99	268	663	2.47	4,745	5,082	1.07
12. NE 85 th St	3,695	3,519	0.95	269	669	2.49	3,964	4,189	1.06
13. NE 70 th St	3,932	3,533	0.90	277	653	2.35	4,209	4,186	0.99
14. NE 37 th St	4,284	3,386	0.79	274	1,536	5.60	4,558	4,922	1.08
15. SR 520	3,261	2,477	0.76	347	1,596	4.60	3,607	4,073	1.13
16. NE 8 th St	5,610	3,865	0.69	417	1,575	3.77	6,027	5,440	0.90
SR 520									
17.108 th Ave NE	2,963	2,611	0.88	135	230	1.70	3,099	2,841	0.92
18. 140 th Ave NE	3,778	3,667	0.97	1,345	614	0.46	5,123	4,281	0.84
I-5									
19. 196 th St SW	5,450	5,269	0.97	217	230	1.06	5,668	5,499	0.97
20. 164 th St SW	4,394	4,637	1.06	280	351	1.25	4,674	4,988	1.07



TABLE 5. AM PEAK HOUR SOUTHBOUND/WESTBOUND VALIDATION

Location	GP Lanes			HOV Lanes			Total		
	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>
SR 525									
1. 164 th St SW	2,245	2,432	1.08	-	-	-	2,245	2,432	1.08
I-405									
2. Damson Rd	3,141	3,130	1.00	1,060	960	0.91	4,201	4,089	0.97
3. SR 527	2,097	2,190	1.04	1,060	1,403	1.32	3,157	3,593	1.14
4 236 th St SE	2,731	3,772	1.38	1,370	1,350	0.99	4,101	5,122	1.25
5. 195 th	2,439	3,209	1.32	1,352	1,558	1.15	3,791	4,768	1.26
6. SR 522	2,466	3,080	1.25	1,357	1,529	1.13	3,823	4,608	1.21
7. 170 th St	4,098	2,532	0.62	172	1,195	6.95	4,270	3,727	0.87
8. NE 132 nd St	4,983	5,130	1.03	2,538	2,033	0.80	7,522	7,163	0.95
9. NE 124 th St	4,073	4,419	1.09	2,219	2,214	1.00	6,291	6,633	1.05
10. NE 116 th St	5,110	4,655	0.91	2,733	2,291	0.84	7,843	6,946	0.89
11. NE 97 th St	5,683	5,164	0.91	2,775	2,484	0.90	8,458	7,648	0.90
12. NE 85 th St	4,599	4,496	0.98	2,744	2,493	0.91	7,343	6,989	0.95
13. NE 70 th St	5,102	4,576	0.90	2,761	2,502	0.91	7,863	7,078	0.90
14. NE 37 th St	6,051	4,925	0.81	1,822	2,064	1.13	7,873	6,989	0.89
15. SR 520	5,819	4,758	0.82	1,876	2,071	1.10	7,695	6,829	0.89
16. NE 8 th St	5,217	3,815	0.73	1,067	2,082	1.95	6,284	5,897	0.94
SR 520									
17.108 th Ave NE	2,719	2,631	0.97	220	249	1.13	2,939	2,879	0.98
18. 140 th Ave NE	3,579	2,947	0.82	853	477	0.56	4,432	3,424	0.77
I-5									
19. 196 th St SW	3,745	6,450	1.72	1,294	1,132	0.88	5,039	7,582	1.50
20. 164 th St SW	4,571	3,476	0.76	1,107	1,100	0.99	5,677	4,577	0.81



TABLE 6. PM PEAK HOUR NORTHBOUND/EASTBOUND VALIDATION

Location	GP Lanes			HOV Lanes			Total		
	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>
SR 525									
1. 164 th St SW	2,402	2,719	1.13	-	-	-	2,402	2,719	1.13
I-405									
2. Damson Rd	3,774	3,528	0.93	1,018	1,137	1.12	4,792	4,665	0.97
3. SR 527	2,550	2,752	1.08	1,240	1,220	0.98	3,791	3,972	1.05
4 236 th St SE	4,106	4,495	1.09	1,253	1,233	0.98	5,360	5,728	1.07
5. 195 th	2,871	3,286	1.14	1,260	1,472	1.17	4,131	4,758	1.15
6. SR 522	3,298	4,035	1.22	1,391	1,481	1.06	4,689	5,516	1.18
7. 170 th St	5,337	3,795	0.71	1,066	1,380	1.30	6,402	5,175	0.81
8. NE 132 nd St	4,624	5,182	1.12	2,029	2,709	1.34	6,653	7,892	1.19
9. NE 124 th St	3,556	4,064	1.14	2,085	2,820	1.35	5,640	6,884	1.22
10. NE 116 th St	4,578	4,898	1.07	2,439	2,863	1.17	7,018	7,762	1.11
11. NE 97 th St	5,472	5,776	1.06	2,515	2,589	1.03	7,987	8,366	1.05
12. NE 85 th St	4,163	4,751	1.14	2,476	2,582	1.04	6,640	7,334	1.10
13. NE 70 th St	4,350	4,705	1.08	2,515	2,635	1.05	6,865	7,340	1.07
14. NE 37 th St	5,374	5,700	1.06	1,808	1,870	1.03	7,182	7,570	1.05
15. SR 520	3,237	3,677	1.14	1,364	2,119	1.55	4,601	5,796	1.26
16. NE 8 th St	5,302	4,812	0.91	1,386	1,931	1.39	6,688	6,742	1.01
SR 520									
17.108 th Ave NE	1,952	2,364	1.21	134	314	2.34	2,087	2,679	1.28
18. 140 th Ave NE	3,592	3,395	0.95	1,146	806	0.70	4,738	4,201	0.89
I-5									
19. 196 th St SW	6,133	6,520	1.06	1,182	1,113	0.94	7,315	7,633	1.04
20. 164 th St SW	4,674	3,695	0.79	1,399	1,087	0.78	6,073	4,782	0.79



TABLE 7. PM PEAK HOUR SOUTHBOUND/WESTBOUND VALIDATION

Location	GP Lanes			HOV Lanes			Total		
	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>	<i>Count</i>	<i>Model</i>	<i>Ratio</i>
SR 525									
1. 164 th St SW	2,714	2,650	0.98	-	-	-	2,714	2,650	0.98
I-405									
2. Damson Rd	3,580	3,262	0.91	780	1,188	1.52	4,360	4,450	1.02
3. SR 527	2,470	2,119	0.86	758	1,378	1.82	3,228	3,497	1.08
4 236 th St SE	3,427	3,192	0.93	884	1,347	1.52	4,311	4,539	1.05
5. 195 th	3,098	2,807	0.91	857	1,328	1.55	3,954	4,135	1.05
6. SR 522	3,013	2,541	0.84	808	1,337	1.65	3,821	3,877	1.01
7. 170 th St	4,884	4,332	0.89	814	1,340	1.65	5,698	5,672	1.00
8. NE 132 nd St	4,289	3,744	0.87	869	1,769	2.04	5,158	5,513	1.07
9. NE 124 th St	3,284	3,061	0.93	761	1,967	2.59	4,045	5,029	1.24
10. NE 116 th St	4,352	3,505	0.81	850	1,937	2.28	5,202	5,441	1.05
11. NE 97 th St	5,128	4,522	0.88	852	1,527	1.79	5,980	6,049	1.01
12. NE 85 th St	3,915	3,816	0.97	860	1,537	1.79	4,775	5,352	1.12
13. NE 70 th St	4,536	4,258	0.94	866	1,524	1.76	5,402	5,783	1.07
14. NE 37 th St	5,121	4,557	0.89	766	1,746	2.28	5,887	6,303	1.07
15. SR 520	4,424	4,876	1.10	1,321	1,786	1.35	5,744	6,661	1.16
16. NE 8 th St	3,873	4,995	1.29	873	1,765	2.02	4,745	6,761	1.42
SR 520									
17.108 th Ave NE	2,445	2,866	1.17	278	560	2.01	2,724	3,426	1.26
18. 140 th Ave NE	2,806	2,899	1.03	624	744	1.19	3,431	3,643	1.06
I-5									
19. 196 th St SW	4,949	5,607	1.13	771	977	1.27	5,720	6,584	1.15
20. 164 th St SW	4,836	4,443	0.92	653	697	1.07	5,489	5,140	0.94



PROJECT LIST

The following projects were assumed for the 2025 and 2045 No Build scenarios.

City	Project Name	Description	Source	Planned Completion Year
Bellevue	110th Avenue NE/NE 6th Street to NE 8th Street	Five-lane roadway section.	Bellevue 2017-2022 TIP	
Bellevue	120th Ave NE (Stage 3) NE 12th St to NE 16th St	Extend the 120th Avenue NE widening from NE 12th Street to NE 16th Street to consist of five lanes, including two travel lanes in each direction with turn pockets or a center turn lane.	Bellevue 2015-2021 CIP	2017
Bellevue	120th Ave NE Stage 2 - NE 8th St to NE 12th St	Extend, realign, and widen 120th Ave NE. Build a new signalized intersection at Lake Bellevue Drive/Old Bel-Red Road. The section will consist of five lanes, including two travel lanes in each direction with turn pockets or a center turn lane.	Bellevue 2015-2021 CIP	2017
Bellevue	124th Avenue NE/NE 18th Street to Northup Way	Widen the roadway to five lanes.	Bellevue 2017-2022 TIP	
Bellevue	124th Avenue NE/NE 8th Street to NE Spring Blvd	Widen 124th Avenue NE between Bel- Red Road and Spring Boulevard. The roadway cross-section of this segment will consist of five lanes, including two travel lanes in each direction with turn pockets or a center turn lane.	Bellevue 2017-2022 TIP	
Bellevue	130th Avenue NE/NE 20th to NE Bel-Red Road	From NE 20th Street to NE Spring Blvd will include two travel lanes; NE Spring Blvd to Bel-Red Road will include one through lane in each direction, a center turn lane.	Bellevue 2017-2022 TIP	



City	Project Name	Description	Source	Planned Completion Year
Bellevue	143rd Place NE/NE 20th Street to Bel-Red Road/NE 20th Place signal	New two-lane road starting at the NE 20th Street/143rd Place NE traffic signal and extending to the end of the existing NE 20th Place north of Bel-Red Road. Install signal, eastbound to northbound left turn pocket at the existing Bel-Red Road and NE 20th Place intersection.	Bellevue 2017-2022 TIP	
Bellevue	Bel-Red Rd/NE 20th St to NE 24th St	Widen to five lanes, including two travel lanes in each direction, with center turn lane	Bellevue 2017-2022 TIP	
Bellevue	Eastside Rail Corridor Grade Separated Crossing at NE 4th Street	Construct a grade separated crossing over NE 4th Street along the Eastside Rail Corridor.	Bellevue 2017-2022 TIP	
Bellevue	NE Spring Blvd (Zone 1) - 116th to 120th Avenues NE	Construct a new arterial street between NE 12th Street/116th Avenue NE and 120th Avenue NE. NE 12th Street will be widened between 116th Avenue NE and the new street connection west of the Eastside Rail Corridor. The roadway will have two travel lanes in each direction with turn pockets, along with new traffic signals at the NE 12th Street and at 120th Avenue NE intersections	Bellevue 2015-2021 CIP	2021
Bellevue	NE Spring Boulevard - 130th to 132nd Ave NE	Construct the westbound lane and other improvements on the north half of a new arterial roadway connection between 130th Avenue NE and 132nd Avenue NE. The project includes traffic signals at the 130th Avenue NE and 132nd Avenue NE and a single travel lane outside the LRT alignment.	Bellevue 2015-2021 CIP	2021
Bellevue	NE Spring Boulevard – 130th Avenue NE to 132nd Avenue NE (eastbound)	Construct the eastbound lane and other improvements on the south half of a new arterial roadway connection between 130th Avenue NE and 132nd Avenue NE.	Bellevue 2017-2022 TIP	



City	Project Name	Description	Source	Planned Completion Year
Bellevue	NorthupWay/156th Avenue NE to 164th Avenue NE	Add median left-turn lane	Bellevue 2017-2022 TIP	
Bothell	228th St SE from 35th Ave SE to 39th Ave	Widen 228th Ave to a 4-lane roadway; add EB right turn pocket at 228th/35 th .	Bothell 2017-2022 TIP	
Bothell	Beardslee Boulevard Widening (Campus to I- 405)	Add an EB lane along Beardslee Blvd from 110th Ave NE to I-405.	Bothell 2017-2022 TIP	
Bothell	Main Street Extension	Extends the current Main Street from Bothell Way to 98th Avenue NE.	Bothell 2015-2021 CFP	
Bothell	Multiway Blvd: Phase 2 (SR 522 to NE 188th St - Excluding West Side)	Multiway Boulevard consists of four travel lanes, a left turn lane.	Bothell 2015-2021 CFP	
Bothell	Pop Keeney Way (NE 185th St / 98th Ave NE)	Construct a road that connects the new NE 185th Street near the bend at 98th Avenue NE to Pop Keeney Field.	Bothell 2015-2021 CFP	
Bothell	SR 522 Stage 2B Improvements (Wayne Curve to NE 180th St)	Installation of a BAT lane westbound.	Bothell 2015-2021 CFP	
Bothell	SR 522 Stage 3 Improvements	Widen the GP lanes; add BAT lanes in each direction (including the missing Seattle outbound direction of the BAT lane from 91st Avenue NE to approximately 800 feet west of the 96th Avenue NE intersection).	Bothell 2015-2021 CFP	
Kirkland	124th Ave NE Roadway Improvements (North Section) Design	Widen the existing roadway between intersections at NE 116th Street and NE 124th Street from 3 lanes to 5 lanes, to include 2-way center turn lane.	Kirkland CIP 2017-2022	design phase
Lynnwood	194th St SW - 33rd Ave W to 40th Ave W	Construct a new 2 lane road from 40th Ave W to 33rd Ave W.	Lynnwood CFP 2017-2022	
Lynnwood	196th St SW (SR-524) - 37thAve W to 48th Ave W	Widen 196th St SW from five lanes to seven lanes.	Lynnwood CFP 2017-2022	2019



City	Project Name	Description	Source	Planned Completion Year
Lynnwood	200th St SW - 40th Ave W to 48th Ave W	Widen 200th St SW from three lanes to 5/7 lanes; turning lanes at the 44th Ave W/200 th St SW intersection.	Lynnwood CFP 2017-2022	2022
Lynnwood	200th St SW 64th Ave W to Scriber Lk Rd	Widen 200th St SW.	Lynnwood CFP 2017-2022	2022
Lynnwood	36th Ave W Maple Road to 164th St SW	36th Ave W will be widened to a three- lane arterial; roundabout will be installed at 179th St SW; Maple Road and 172nd St SW will be realigned into a single intersection with a traffic signal.	Lynnwood CFP 2017-2022	2020
Lynnwood	42nd Ave W 200th St SW to 194th St SW	Build a new road from Alderwood Mall Blvd. to 194th St SW.	Lynnwood CFP 2017-2022	2020
Lynnwood	44th Ave W I-5 to 194th St SW	Build a new northbound lane from 200th to 194th. Construct a new southbound lane from 194th to 195th.	Lynnwood CFP 2017-2022	2022
Lynnwood	52nd Ave W 168th St SW to 176th St SW	Widen from 2 to 3 lanes	Lynnwood CFP 2017-2022	2022
Lynnwood	Beech Road Extension AMP to Ash Way Underpass	Construct two extensions of Beech Road.	Lynnwood CFP 2017-2022	2022
Lynnwood	Maple Road Extension AMP to 32nd Ave W	Construct a new road.	Lynnwood CFP 2017-2022	2020
Lynnwood	Poplar Extension Bridge Phase I&II	Construct a bridge across I-5 to connect Poplar Way with 33rd Ave W.	Lynnwood CFP 2017-2022	2020
Redmond	Redmond Way and Cleveland St. Couplet Conversion	Convert Redmond Way from 160th Ave NE to Avondale Way to one through lane in each direction and center turn lane. Convert Cleveland Street to one through lane in each direction; A BAT lane will be completed from the Bear Creek Bridge near SR 520 to 168th Ave with a queue jump at Avondale Way.	Redmond TIP 2017-2022	



City	Project Name	Description	Source	Planned Completion Year
Renton	SW 27th St/Strander Blvd Connection	Provides a critical four/five-lane arterial that will serve as a connector to West Valley Highway (SR 181) and East Valley Road.	Renton TIP 2017-2022	
Renton	S 7th St - Rainier Ave S to Talbot Rd S	Widen the existing roadway to 3 lanes (2 lanes EB and 1 lane WB; new eastbound right-turn lane at the intersection of S 7th St and Shattuck Ave S and a traffic signal at this location.	Renton TIP 2017-2022	
Renton	Carr Road Improvements	Widen to 5-lane roadway (2 lanes westbound, 3 lanes eastbound).	Renton TIP 2017-2022	
Renton	Park Ave N Extension	Extend Park Ave N to the north of Logan Ave N.	Renton TIP 2017-2022	
Renton	Houser Way N - N 8th St to Lake Washington Blvd	Widen a one lane roadway to a two-lane roadway.	Renton TIP 2017-2022	
Renton	116th Ave SE Improvements	Widen roadway to provide a 3-lane roadway.	Renton TIP 2017-2022	
Renton	Rainier Ave N Corridor Improvements - Phase 5	Narrow the street from 5 to 3 lanes where feasible.	Renton TIP 2017-2022	
Renton	Lind Ave SW - SW 16th St to SW 43rd St	Widen existing roadway to five lanes where required.	Renton TIP 2017-2022	
Renton	Oakesdale Ave SW/Monster Rd SW/68th Ave S to SR 900	Widen existing roadway to four lanes plus two-way-left-turn-lane where needed.	Renton TIP 2017-2022	
Tukwila	Strander Blvd Extension Phase 3	Build a new roadway extending Strander Blvd/SW 27th St from West Valley Highway to Oakesdale Ave in the City of Renton.	Tukwila CIP 2017-2022	2020
Tukwila	West Valley Hwy (I-405 -Strander Blvd)	Design and construct completion of 7 lane sections of West Valley Hwy.	Tukwila CIP 2017-2022	
Woodinville	171st Urban Parkway	Construct three lane urban parkway 131st to 140th.	Woodinville TIP 2017-2022	2019



City	Project Name	Description	Source	Planned Completion Year
Woodinville	Trestle Replacement - SR202 Corridor	Widen existing roadway.	Woodinville TIP 2017-2022	
Woodinville	Sammamish Bridge Replacement (SBRP)	Widen existing two-lane road and bridge section from 127th to 131st to provide additional lanes.	Woodinville TIP 2017-2022	2019
Woodinville	140th Ave NE	Widen NE 181st St to Woodinville-Snohomish Road to 5 lanes.	Woodinville TIP 2017-2022	
Woodinville	Woodinville-Snohomish Widening	Widen the road to a 5-lane section.	Woodinville TIP 2017-2022	
Woodinville	NE 173rd St	New 2/3 lane grid road; 135th Ave to 138th Ave.	Woodinville TIP 2017-2022	
Woodinville	135th Ave NE	New 2/3 lane grid road; 175th St to Little Bear Creek Parkway.	Woodinville TIP 2017-2022	
Woodinville	Garden Way	New 2/3 lane grid road; NE 171st St to NE 175th St.	Woodinville TIP 2017-2022	
Woodinville	State Route 202 Corridor Improvement	Add additional lanes from 12th Pl NE to NE 148 th .	Woodinville TIP 2017-2022	
Woodinville	Little Bear Creek Parkway	SR 202 to NE 190th -Widen the existing two-lane road sections to provide additional lanes.	Woodinville TIP 2017-2022	
Woodinville	NE 178th St (Mill Place)	140th Ave NE -Wood-Duvall - New three lane grid road.	Woodinville TIP 2017-2022	
Woodinville	1351h Ave NE South	NE 175th lo NE 171st - New 2/3 lane grid road.	Woodinville TIP 2017-2022	

**PSRC Model and I-405 Model 3hr Peak Period
Screenline Volumes**

PSRC Model	AM Peak Period (6-9AM)		PM Peak Period (3-6PM)	
	2014	2040	2014	2040
SR 527 n/o SR 524	9,530	10,610	12,010	13,590
SR 527 n/o 220th	10,100	12,090	13,100	15,520
BEH s/o I-405	8,240	9,150	9,230	10,050
BEH s/o 228th	4,490	5,040	6,430	7,810
228th w/o BEH	4,380	5,290	5,430	6,580
228th w/o 27th	2,390	2,970	2,730	3,340
228th e/o 29th	2,090	2,570	2,240	2,880
Total	41,220	47,720	51,170	59,770

I-405 Model	AM Peak Period (6-9AM)		PM Peak Period (3-6PM)	
	2015	2045	2015	2045
SR 527 n/o SR 524	6,030	7,590	9,180	11,410
SR 527 n/o 220th	6,130	7,310	8,850	11,050
BEH s/o I-405	7,950	10,160	9,820	12,190
BEH s/o 228th	3,700	4,250	4,210	5,110
228th w/o BEH	4,750	6,510	6,940	9,220
228th w/o 27th	1,800	2,980	3,180	5,100
228th e/o 29th	1,860	2,550	2,900	3,800
Total	32,220	41,350	45,080	57,880

Note: A 0.365 conversion factor is used to convert 3 hr peak period volumes to 1 hr peak hour volumes.

**PSRC Model and I-405 Model 1hr Peak Hour
Screenline Volumes**

PSRC Model	AM Peak Period (6-9AM)		PM Peak Period (3-6PM)	
	2014	2040	2014	2040
SR 527 n/o SR 524	3,480	3,870	4,380	4,960
SR 527 n/o 220th	3,690	4,410	4,780	5,660
BEH s/o I-405	3,010	3,340	3,370	3,670
BEH s/o 228th	1,640	1,840	2,350	2,850
228th w/o BEH	1,600	1,930	1,980	2,400
228th w/o 27th	870	1,080	1,000	1,220
228th e/o 29th	760	940	820	1,050
Total	15,050	17,420	18,680	21,820

I-405 Model	AM Peak Period (6-9AM)		PM Peak Period (3-6PM)	
	2015	2045	2015	2045
SR 527 n/o SR 524	2,200	2,770	3,350	4,160
SR 527 n/o 220th	2,240	2,670	3,230	4,030
BEH s/o I-405	2,900	3,710	3,580	4,450
BEH s/o 228th	1,350	1,550	1,540	1,870
228th w/o BEH	1,730	2,380	2,530	3,370
228th w/o 27th	660	1,090	1,160	1,860
228th e/o 29th	680	930	1,060	1,390
Total	11,760	15,090	16,450	21,130

SR 522-527 Final Post-Processed Peak Hour Screenline Volumes

	AM Peak Hour (Int Peak)				
	Existing	2025 No Build	2025 Build	2045 No Build	2045 Build
1) SR 527 n/o SR 524	2500	2870	3025	3125	3300
2) SR 527 n/o 220th	2450	2755	3140	3000	3430
3) BEH s/o I-405	3250	3395	3645	3710	4070
4) BEH s/o 228th	1920	1975	2075	2085	2225
5) 228th w/o BEH	2095	2315	2375	2640	2725
6) 228th w/o 27th	1855	2025	2060	2270	2325
7) 228th e/o 29th	1505	1580	1625	1760	1810
Total	15575	16915	17945	18590	19885

	PM Peak Hour (Int Peak)				
	Existing	2025 No Build	2025 Build	2045 No Build	2045 Build
1) SR 527 n/o SR 524	3455	3965	4035	4255	4445
2) SR 527 n/o 220th	3325	3915	4135	4145	4625
3) BEH s/o I-405	3365	3625	3780	3930	4105
4) BEH s/o 228th	2100	2210	2245	2370	2400
5) 228th w/o BEH	2575	3025	3085	3315	3370
6) 228th w/o 27th	2175	2795	2800	3180	3195
7) 228th e/o 29th	1675	2015	2075	2205	2280
Total	18670	21550	22155	23400	24420

PSRC TDM, I-405 TDM and I-405 Post-Processed Annual Growth Rate (Base Year to Horizon Year)

CAGR Growth Rates (Base Year to Horizon Year)	AM Peak Period (6-9AM)				PM Peak Period (3-6PM)			
	PSRC Model	I-405 Model	<i>I-405 Post Processed Volumes</i>	TDM Difference (405 - PSRC)	PSRC Model	I-405 Model	<i>I-405 Post Processed Volumes</i>	TDM Difference (405 - PSRC)
SR 527 n/o SR 524	0.4%	0.8%	<i>0.8%</i>	0.4%	0.5%	0.7%	<i>0.8%</i>	0.3%
SR 527 n/o 220th	0.7%	0.6%	<i>0.8%</i>	-0.1%	0.7%	0.7%	<i>0.8%</i>	0.1%
BEH s/o I-405	0.4%	0.8%	<i>0.5%</i>	0.4%	0.3%	0.7%	<i>0.6%</i>	0.4%
BEH s/o 228th	0.4%	0.5%	<i>0.3%</i>	0.0%	0.8%	0.6%	<i>0.4%</i>	-0.1%
228th w/o BEH	0.7%	1.1%	<i>0.9%</i>	0.3%	0.7%	1.0%	<i>0.9%</i>	0.2%
228th w/o 27th	0.8%	1.7%	<i>0.8%</i>	0.9%	0.8%	1.6%	<i>1.4%</i>	0.8%
228th e/o 29th	0.8%	1.1%	<i>0.6%</i>	0.3%	1.0%	0.9%	<i>1.0%</i>	-0.1%
Total Screenline CAGR	0.56%	0.84%	<i>0.66%</i>	0.27%	0.60%	0.84%	<i>0.84%</i>	0.24%

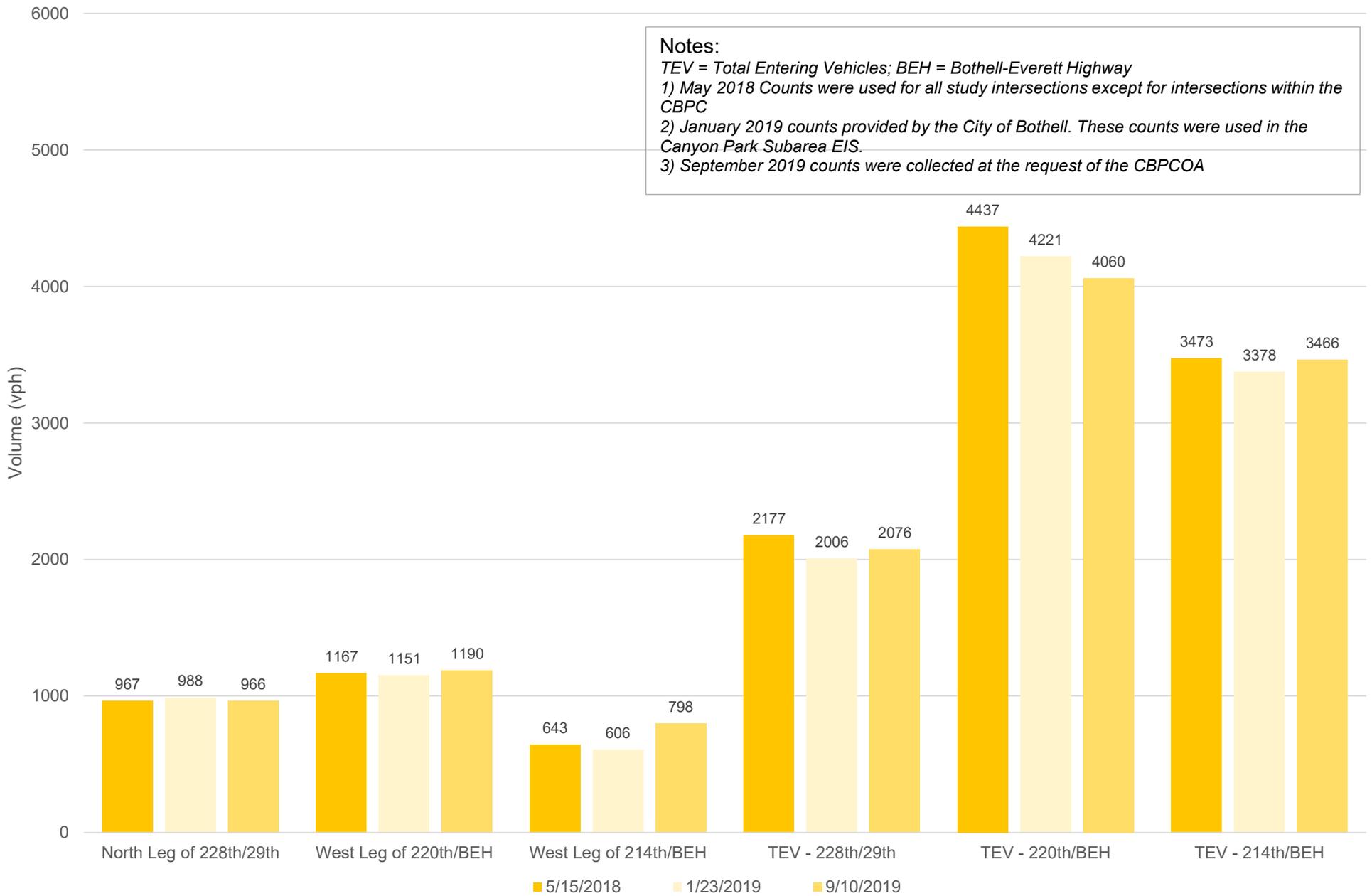
CAGR = Compound Annual Growth Rate; TDM = Travel Demand Model

Base year is 2014 for the PSRC TDM model, 2015 for the I-405 Modified PSRC Model, and 2018 for the I-405 Post-Processed Volumes

Horizon year is 2040 for the PSRC TDM model and 2045 for the I-405 Modified PSRC Model and the I-405 Post-Processed Volumes

Canyon Park Business Center Intersection Counts 2018-2019 PM Peak Hour Raw Volumes

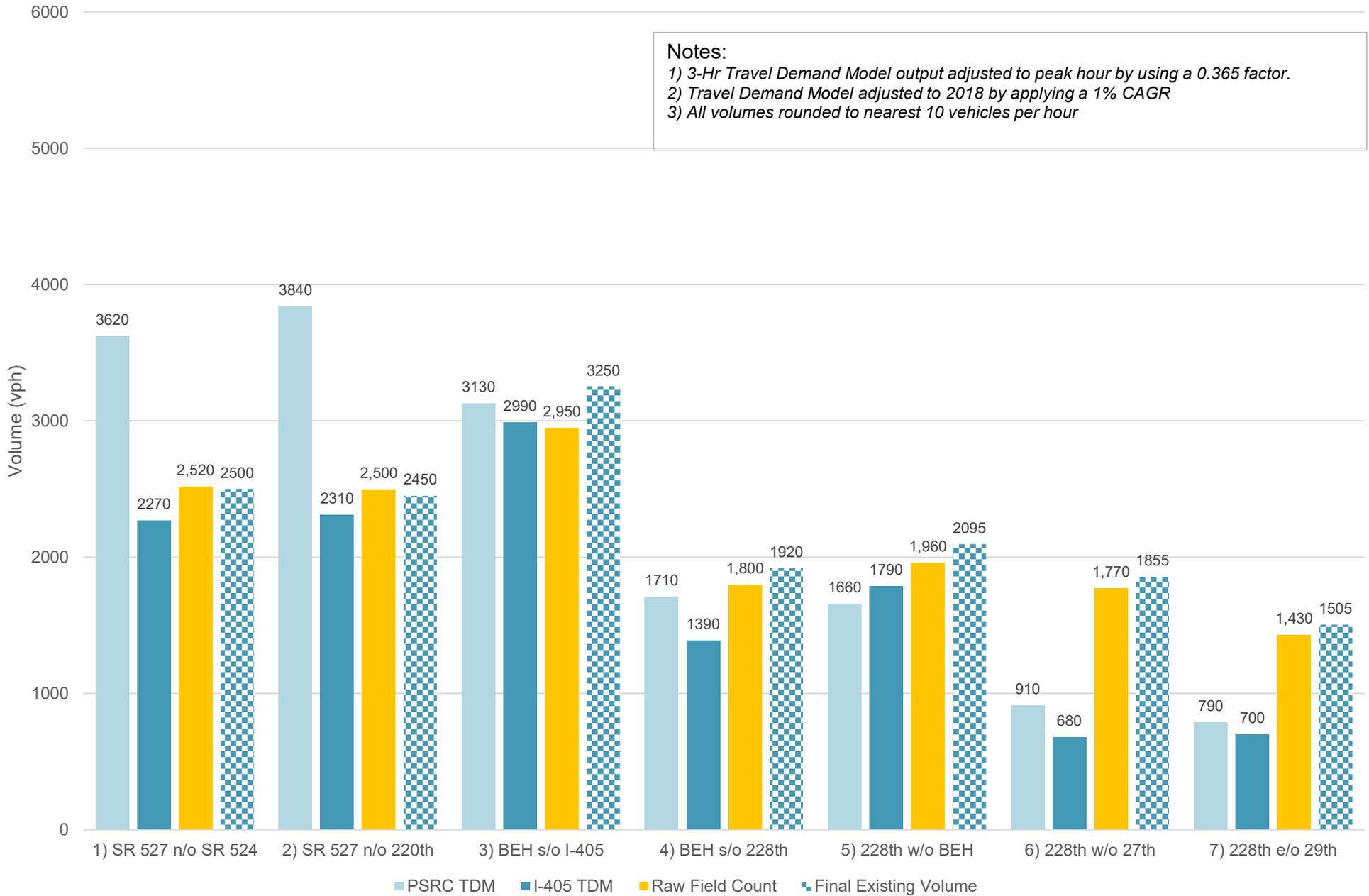
Notes:
 TEV = Total Entering Vehicles; BEH = Bothell-Everett Highway
 1) May 2018 Counts were used for all study intersections except for intersections within the CBPC
 2) January 2019 counts provided by the City of Bothell. These counts were used in the Canyon Park Subarea EIS.
 3) September 2019 counts were collected at the request of the CBPCOA



2018 AM Peak Hour Two-Way Link Volumes

Notes:

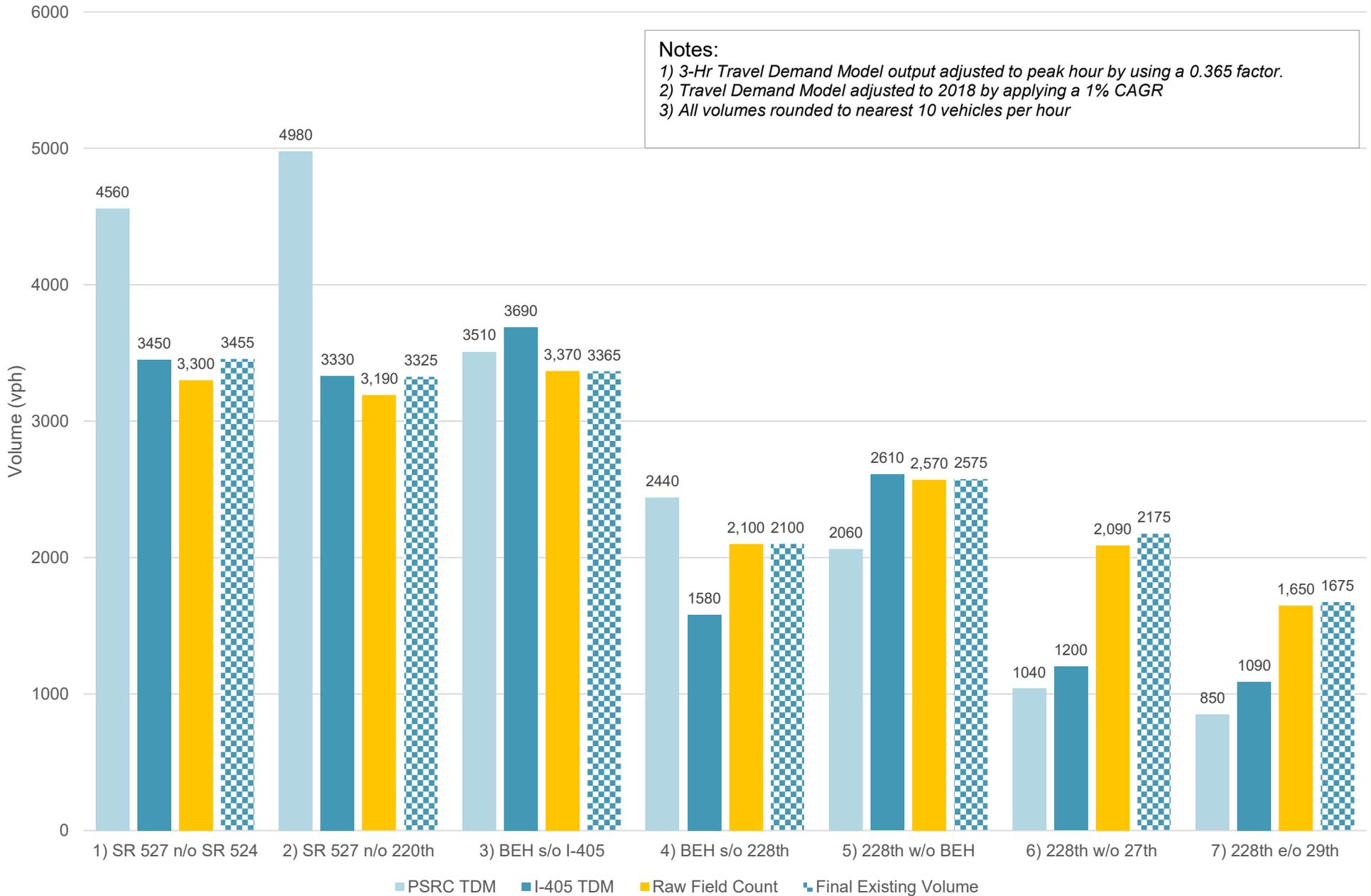
- 1) 3-Hr Travel Demand Model output adjusted to peak hour by using a 0.365 factor.
- 2) Travel Demand Model adjusted to 2018 by applying a 1% CAGR
- 3) All volumes rounded to nearest 10 vehicles per hour



2018 PM Peak Hour Two-Way Link Volumes

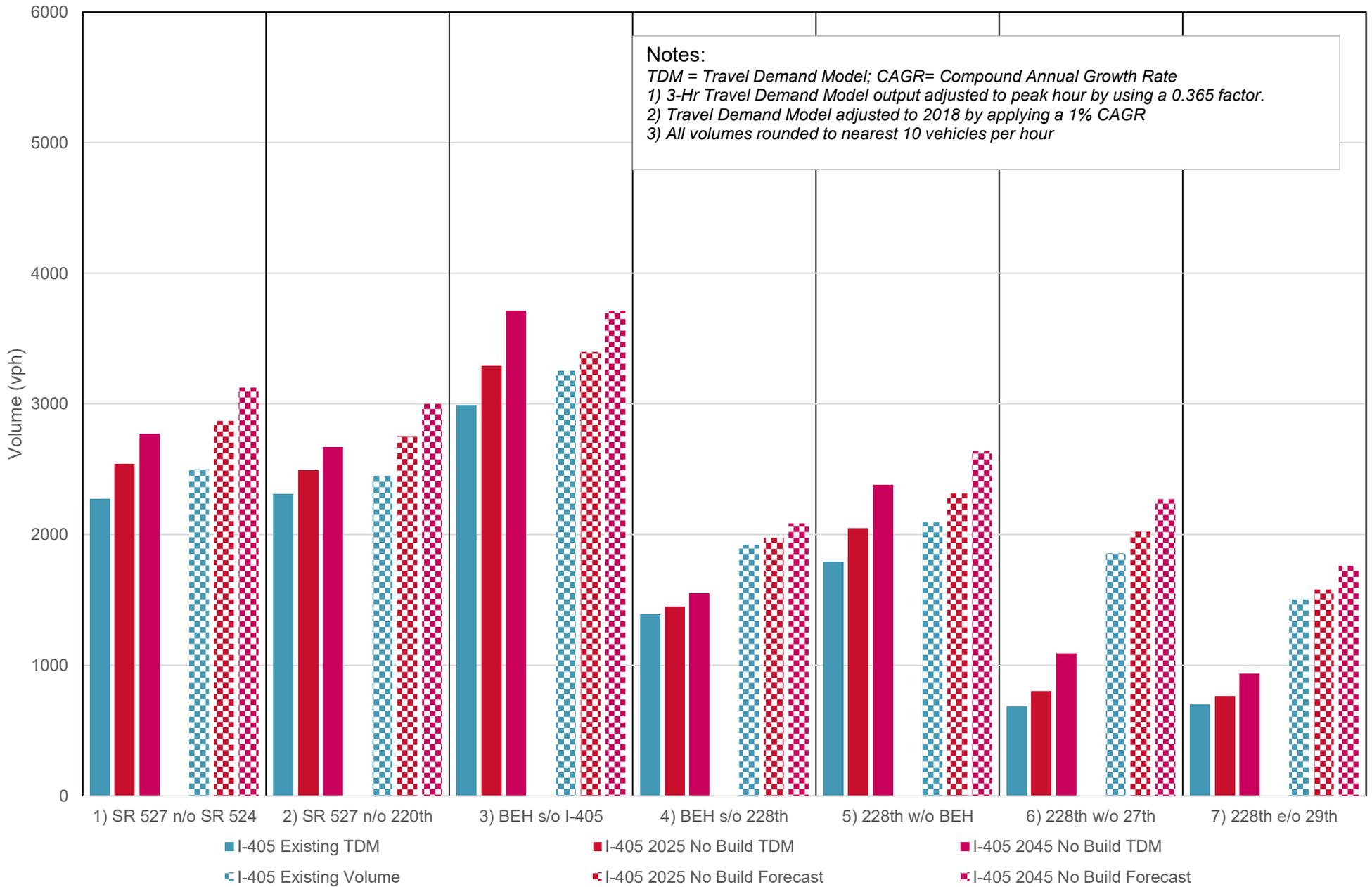
Notes:

- 1) 3-Hr Travel Demand Model output adjusted to peak hour by using a 0.365 factor.
- 2) Travel Demand Model adjusted to 2018 by applying a 1% CAGR
- 3) All volumes rounded to nearest 10 vehicles per hour



I-405 Travel Demand Model and Post-Processed Volume Relationship AM Peak Hour: Existing, 2025 No Build, and 2045 No Build

Notes:
 TDM = Travel Demand Model; CAGR= Compound Annual Growth Rate
 1) 3-Hr Travel Demand Model output adjusted to peak hour by using a 0.365 factor.
 2) Travel Demand Model adjusted to 2018 by applying a 1% CAGR
 3) All volumes rounded to nearest 10 vehicles per hour



I-405 Travel Demand Model and Post-Processed Volume Relationship PM Peak Hour: Existing, 2025 No Build, and 2025 No Build

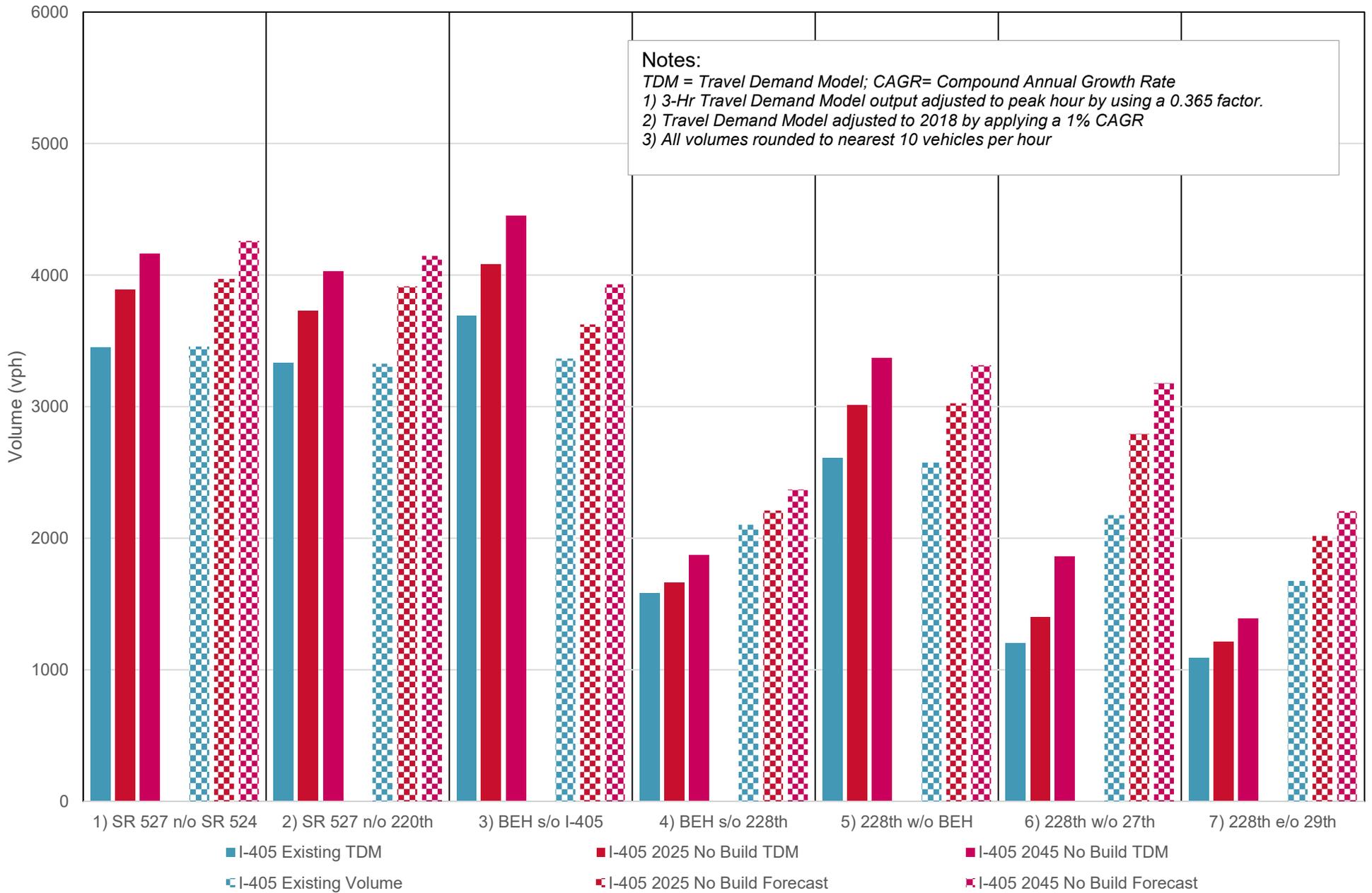
Notes:

TDM = Travel Demand Model; CAGR= Compound Annual Growth Rate

1) 3-Hr Travel Demand Model output adjusted to peak hour by using a 0.365 factor.

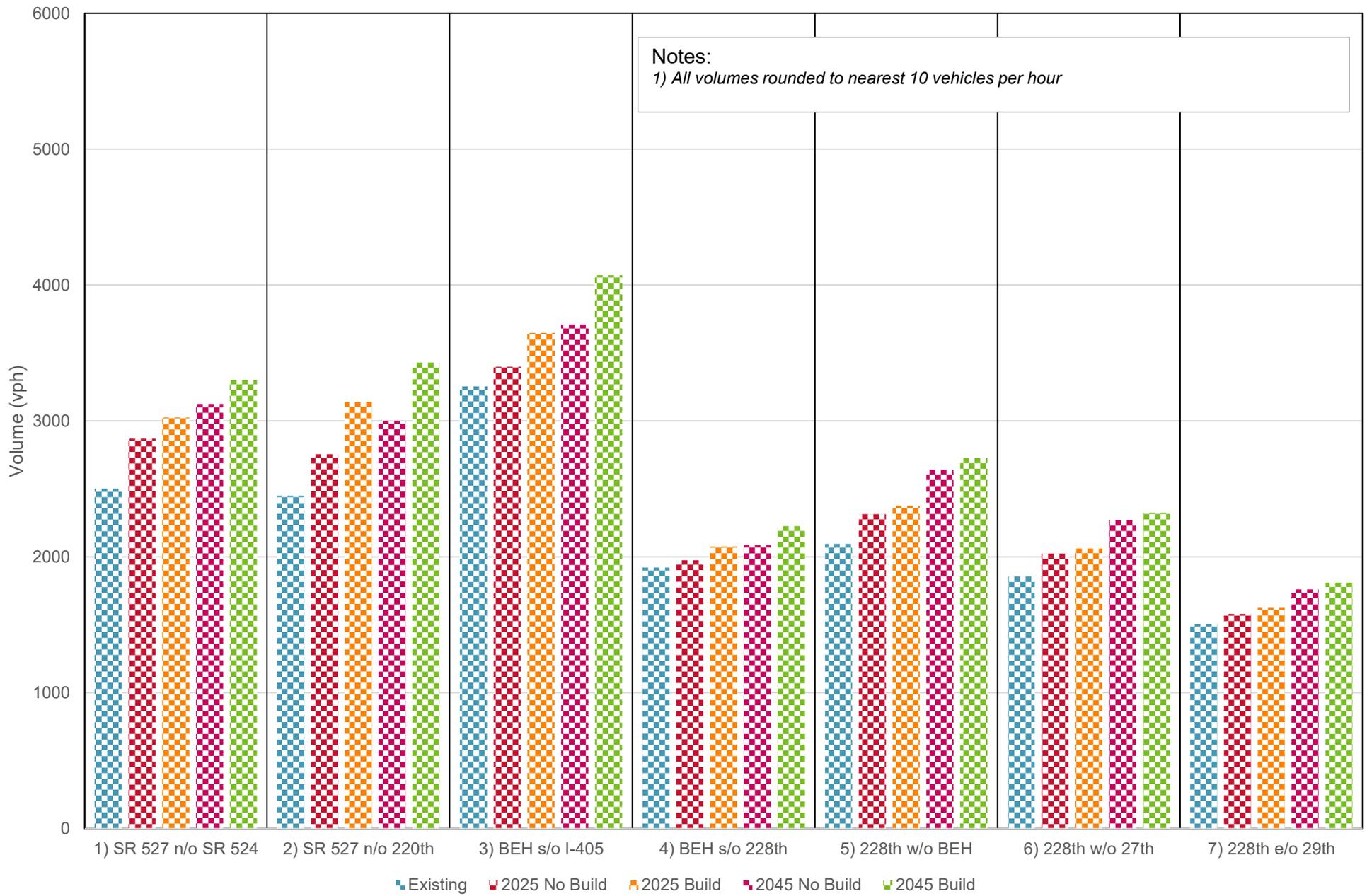
2) Travel Demand Model adjusted to 2018 by applying a 1% CAGR

3) All volumes rounded to nearest 10 vehicles per hour



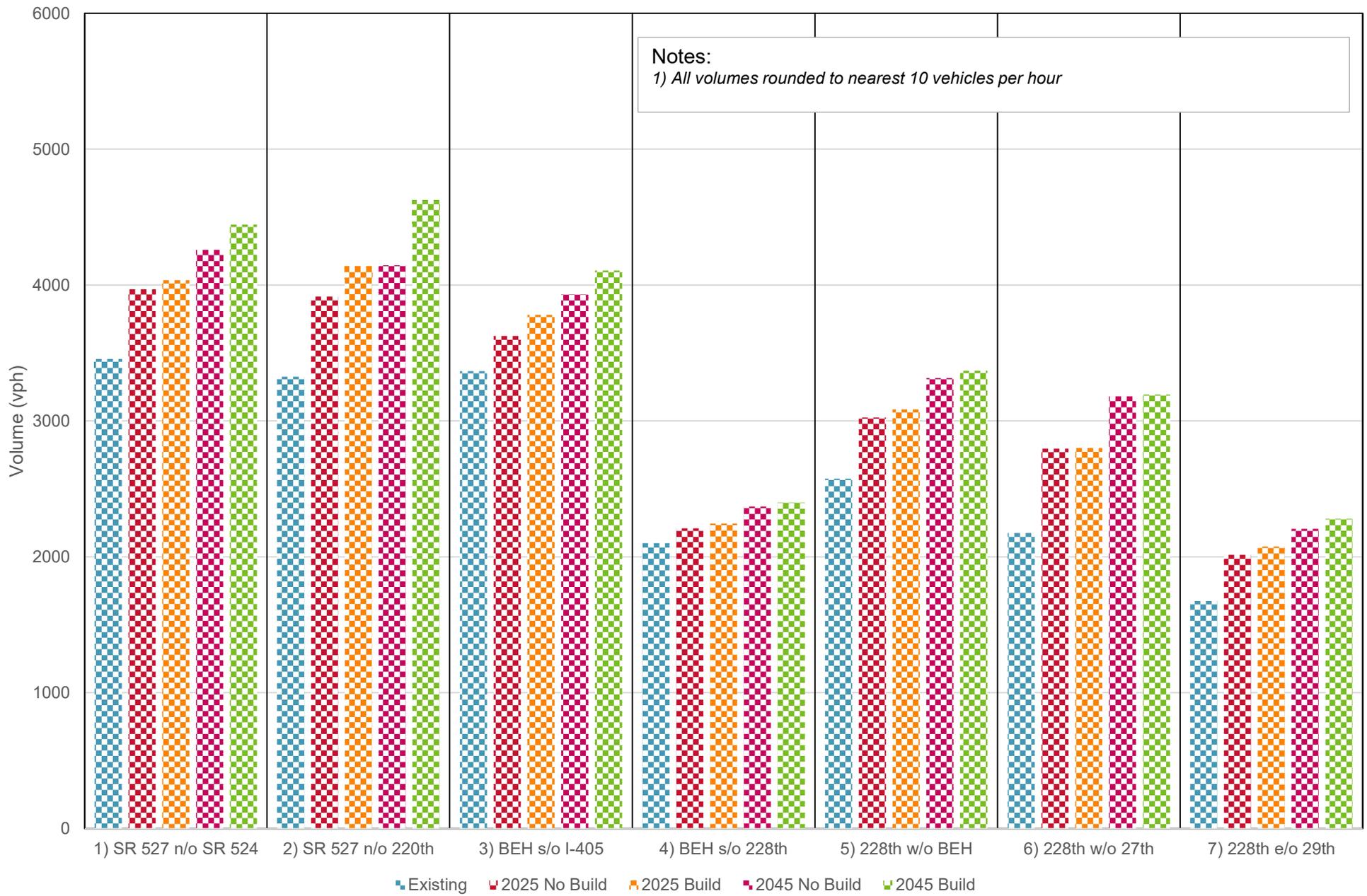
I-405 Final Post Processed Volumes - Two Way Link Volumes AM Peak Hour

Notes:
1) All volumes rounded to nearest 10 vehicles per hour



I-405 Final Post Processed Volumes - Two Way Link Volumes PM Peak Hour

Notes:
1) All volumes rounded to nearest 10 vehicles per hour



APPENDIX 8 – CUMULATIVE EFFECTS UPDATES



January 5, 2021

TO: Robert Woeck, WSDOT I-405/SR 167 Megaprogram Deputy Program Administrator

FROM: I-405/SR 167 Megaprogram Environmental Team

SUBJECT: Update to Appendix O, *Cumulative Effects*, for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Environmental Assessment

This memorandum provides an update to Appendix O, *Cumulative Effects*, of the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) Environmental Assessment (EA). Please see Appendix 2, *Errata to the Environmental Assessment*, of the Project Finding of No Significant for a description of these updates as they apply to Chapter 5 of the Project EA and Appendix A, *Transportation Discipline Report*.

As discussed in the Historical and Present Context and Reasonably Foreseeable Future Projects section of EA Appendix O, the City of Bothell proposed to update its subarea plan for the Canyon Park neighborhood located in the Project study area near SR 527 at the time the Project EA was developed. In December 2019, Bothell published the *Canyon Park Subarea Planned Action Draft EIS* (Bothell 2019). The *Draft EIS* evaluated a no action alternative that would maintain growth established in the City's currently adopted comprehensive plan, *Imagine Bothell* (Bothell 2015) and three build alternatives that would increase development densities over currently planned growth but did not identify a preferred alternative.

Since the publication of the Project EA in July 2020, the City has continued its public process and released an Addendum to the *Draft EIS*, a draft *Canyon Park Subarea Plan*, draft zoning and development regulations, and a draft planned action ordinance. On December 7, 2020, the City published the *Canyon Park Subarea Planned Action Final EIS*. The *Final EIS* identifies and evaluates a Preferred Alternative that combines elements of alternatives studied in the *Draft EIS* (Bothell 2020).

On December 15, 2020, the Bothell City Council voted to adopt the updated *Canyon Park Subarea Plan*, zoning and development regulation amendments within the Bothell Municipal Code, and a planned action ordinance. The development regulations and planned action ordinance took effect on January 1, 2021, and implementation will be ongoing for the life of the plan. The City plans to pursue certification of the subarea plan from the Puget Sound Regional Council in 2021 in order to retain the Regional Growth Center designation for Canyon Park.

Because the outcome of the City's planning process for the Canyon Park Subarea was unknown when the analysis for WSDOT's EA was prepared, WSDOT coordinated closely with the City to reach agreement on assumptions to be used in each agency's respective environmental analyses. Bothell provided written concurrence with WSDOT's EA analysis approach and assumptions,

including use of the growth projections in the adopted comprehensive plan, as documented in FONSI Appendix 7, *City of Bothell Concurrence Letter*.

The Project EA evaluates land use densities in Bothell's currently approved and adopted comprehensive plan, *Imagine Bothell* (Bothell 2015). The City's *Canyon Park Subarea Planned Action Final EIS* evaluates the cumulative impacts of the City's proposed changes in density and development in that area by including the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project as part of the baseline conditions in both the No Action and Action Alternatives. The I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project would not preclude the City's proposal to increase land use densities in the Canyon Park Subarea.

References

Bothell, City of. 2015. *Imagine Bothell Comprehensive Plan*. July.

Bothell, City of. 2019. *Canyon Park Subarea Planned Action Draft Environmental Impact Statement*. December.

Bothell, City of. 2020. *Canyon Park Subarea Planned Action Final Environmental Impact Statement*. December.

Memorandum

To: WA3419E10731 (I-405 SR 522 Vicinity to SR 527 Express Toll Lanes Project File)
From: Lindsey Handel
Date: June 15, 2021
Re: WSDOT's January 5, 2021 Memo from Rob Woeck to the I-405 Environmental Team on the Subject : Update to Appendix O, *Cumulative Effects*, for the I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Environmental Assessment

This memo is to clarify the referenced WSDOT January 5 memo's use of the term "FONSI" to describe the decision document for the above referenced Project. FHWA and WSDOT had not made a Finding of No Significant Impact at the time the January 5, 2021 Memorandum was written. An administrative draft decision document had been submitted to FHWA on November 30, 2020. While FHWA had provided comments on the administrative draft, no decision had been made at the time of the January 5, 2021 Memo.

The references in the January 5, 2021 Memorandum should have been to the Administrative Draft Finding of No Significant Impact, as the actual Finding has not been made. FHWA is noting this error to ensure it is clear that FHWA and the project team had not made a decision at that time, and that the decision will be made only after FHWA has ensured that all of our comments on the Draft decision document and EA errata have been addressed. FHWA will make the final NEPA decision after consideration of all of the supporting analysis and information obtained throughout the NEPA process.

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