US 2 Trestle Capacity Improvements and Westbound Trestle Replacement PEL Study

Technical Working Group, Meeting #2 Summary
Friday, September 13, 9:00 a.m. to 1:00 p.m.
Everrett Station, Mount Baker Room

Meeting Purpose
The Washington State Department of Transportation (WSDOT) hosted the second meeting of the Technical Working Group (TWG) for the US 2 Trestle Capacity Improvements and Westbound Trestle Replacement Planning and Environmental Linkages (PEL) Study. The objectives of the meeting were to review and workshop the draft evaluation framework for concepts and alternatives, the draft Level 1 screening criteria, and the draft concepts that address the Purpose and Need to carry into the screening process.

TWG attendees:

- Ben Romanaggi, Lake Stevens
- Chris Simmons, Community Transit
- Corey Hert, City of Everett
- Kathryn Boris, Community Transit
- Max Phan, City of Marysville
- Mohammad Uddin, Snohomish County
- Paul Haggland, Port of Everett
- Sharon Love, FHWA
- Tom Hood, City of Everett

WSDOT participants

- April Delchamps, WSDOT
- Cecile Malik, WSDOT
- Jennifer Charlebois, WSDOT
- Josh Shippy, WSDOT
- Lisa Sakata, WSDOT
- Lucy Temple, WSDOT
- Oteberry Kedelty, WSDOT

Consultant team attendees:

- Anne Broache, WSP
- Ben Rodenbough, WSP
- Chris Wellander, WSP
- Jared Nakamoto, WSP
- Jennifer Rash, PRR
- Kate Bradbury, Parametrix
- Larissa King Rawlins, WSP
- Laurence Idos, PRR

Welcome and introductions

WSDOT and the consultant study team welcomed attendees to the second TWG meeting with a safety moment, introductions, and agenda. The study team recapped the first TWG meeting and provided an update on the study progress.

Engagement and study updates

Jen Rash gave an update on community engagement and some results from the online open house and survey on the draft National Environmental Policy Act (NEPA) Purpose and Need statements. The online open house received over 10,000 visitors and nearly 4,000 survey responses. The full online open house and survey summary is available on the study web page. She also reviewed a milestone calendar of upcoming meetings and engagement.

Lisa Sakata then reviewed the changes to the draft NEPA Purpose and Need statement since the first TWG meeting, noting where public input factored into the changes in the Multimodal Mobility Need and the Resiliency Need. There were no changes to the Safety Need. The final NEPA Purpose and Need statement was provided to FHWA in the Concurrence Point #2 memo, which also included the Existing and Future No Build Transportation Conditions Memo, Transportation Methods and Assumptions, Preliminary Study Area Limits, and Transportation System Resiliency Need Supporting Data. FHWA approved the Concurrence Point #2 memo on August 29. Both the draft and final Purpose and Need statements are available on the study web library.

Evaluation framework

Chris Wellander reviewed the study concept evaluation process and provided a few examples of how this could look for example concepts. The process is summarized here:

- The study team has developed a broad range of potential multimodal improvement concepts categorized by location and mode, and drafted criteria based on the Purpose and Need by which to evaluate the concepts during the pre-screening and Level 1 evaluations.
- During the pre-screening, concepts will be assigned a pass, fail, or neutral rating. Concepts that fail at least one criterion will be screened out. However, some concepts may be refined to address the criteria that led to failure, allowing them to receive a pass or neutral rating and advance to Level 1 screening.
- The study team will document which concepts failed and the reasoning before moving forward with the Level 1 evaluation concepts. FHWA will have the opportunity to review the pre-screening results before the Level 1 evaluation occurs.
- During Level 1, the study team will qualitatively rank the remaining concepts as high, medium, or low against the evaluation criteria. Thresholds for advancing to Level 2 screening will be determined based on these initial results. FHWA will once again have the opportunity to review the Level 1 evaluation results.
- The most promising concepts will be packaged into system-wide alternatives, including corridor-wide improvements across all modes.
- The remaining system alternatives will undergo a Level 2 evaluation which will include quantitative analyses wherever possible, such as travel demand modeling, traffic simulation, level of service (LOS), and travel time comparisons.
- As part of this Planning and Environmental Linkages (PEL) study, the team will also screen Level 2 alternatives to identify potential environmental impacts.

- Upon completing the Level 2 evaluation and environmental screenings, the study team, in coordination with FHWA, will identify the alternatives to move forward into the future NEPA environmental review.

Chris then reviewed draft pre-screening and Level 1 evaluation criteria with the TWG and asked for comments. Chris wrapped up by inviting the TWG members to provide any feedback to the study team by September 27, 2024.

Comments/questions:

- Mohammad Uddin, Snohomish County, asked where sustainability fits in the criteria.
    - The study team responded that Resiliency Need includes sustainability.
- Chris Simmons, Community Transit, raised concern about the impact on local roadways if the trestle were affected by seismic or other issues.
    - April Delchamps shared that the study includes future designs for the trestle to be seismic resilient. Lisa Sakata added that while the study may not directly address local roadways, it highlights the need to further explore the issue.

Concept review: as a group

Josh Shippy reviewed the expanded study area, 2050 system assumptions, origin and destination data, No Build traffic forecasts for the AM and PM peak periods, and other key considerations.

He also recapped the results of the previous transit and active transportation workshops. The transit workshop identified priorities for first/last miles, headways, interchange priority, school collaboration, park and ride lots, vanpools, hub service, microtransit, and employee shuttles. The active transportation workshop focused on opportunities for connectivity between new trestle and key destinations, including priorities for connections to existing trails and roads.

Finally, Josh walked through the roadway concepts for the westbound and eastbound trestles. There are currently eight westbound concepts and eight eastbound concepts, including a No Build concept in each direction. Concepts include a mix of general purpose (GP) lanes, HOV/transit lanes, transit shoulders/peak use shoulders, and high-capacity transit lanes.

Comments/questions:

- Tom Hood, City of Everett, suggested including three general-purpose (GP) lanes and a high-occupancy vehicle (HOV) lane. Josh noted those options were included.
- Tom Hood, City of Everett, asked if the study considered the City of Everett's widening project. Kate Bradbury confirmed that it was included in the study.
- Cecile Malik, WSDOT, asked if any traffic analysis has been conducted. The study team shared that the next steps involve conducting traffic models to analyze the situation further.
- Mohammad Uddin, Snohomish County, asked if the concepts could include a reversible lane. The study team noted the reversible lane concept is still being considered and is included in the TW6 concept.
- Cecile Malik, WSDOT, asked why EB lanes look different from WB lanes in the concepts. The study team noted that EB lanes are newer, but both EB and WB lanes do not meet current seismic criteria.

Breakout Groups: Study area east/west concepts
The group broke into two small groups to discuss the initial east end and west end connection concepts and brainstorm additional concepts. The concepts were provided in a separate package and are referenced in this summary with a reference to the end, direction and concept number, e.g., east end, westbound concepts are EW 1-9.

The study team divided the TWG members into two groups.

Breakout Group #1

- Tom Hood, City of Everett
- Chris Simmons, Community Transit
- Mohammad Uddin, Snohomish County
- Aaron Halverson, City of Lake Stevens
- Cecile Malik, WSDOT
- Project team: Ben Rodenbough, Larissa King Rawlins

Breakout Group #2

- Corey Hert, P.E., City of Everett
- Kathryn Boris, Community Transit
- Sharon Love, FHWA
- Paul Haglund, Port of Everett
- Lucy Temple, WSDOT
- Project team: Anne Broache, Kate Bradbury

East end leads: Josh Shippy, Jared Nakamoto, and Lisa Sakata
West end leads: Oteberry Kedelty, April Delchamps, and Chris Wellander

East end of US 2, westbound concepts

Concept name	Group 1 notes	Group 2 notes
EW 1	• Shows the need for 3 GP lanes on the WB trestle as each connection needs a dedicated lane. • Noted that traffic from growth in Monroe uses the I-405 corridor, not US 2 and I-5. • Lots of growth is occurring along the 20th Street corridor.	• Port said this concept is good for freight because it broadens the curve on the merge to US 2 from SR 204. However, the concept does not provide a lot of excess capacity for 20th Street traffic growth over the years. • City of Everett said the single-lane on-ramp from 20th Street is less desirable because the HOV lane ends, but it is a viable alternative. This concept is weaker for most of the traffic because of where volumes originate. The trestle probably only needs to accommodate 2 to 3 lanes of traffic, so the question is what is the best lane configuration?
EW 2	• Would this keep and/or extend the BAT lane along 20th Street? • Noted that it is not good to make buses weave through traffic to get from the existing BAT lane on 20th to an HOV/transit lane across the trestle. • Westbound it is a small movement to go under the trestle to access Ebey Island. • The roundabout could help traffic flow. Would need to make sure you can run a 60-foot bus through it.	• Port noted HOV/buses would have to change sides of the roadway (from outside to inside) to continue on US 2 from 20th Street. • Community Transit said a queue jump for buses/HOV could help this issue; however, currently only SWIFT buses have the technology needed to activate a queue jump.

Concept name	Group 1 notes	Group 2 notes
EW 3-5 (similar except for merge locations)	• Less of an improvement for the SR 204 ramp. • Where is the HOV access?	• Port and City of Everett agreed that two lanes on the US 2 ramp from the south may not be consistent with 2050 data on origins, which indicate most traffic is coming from the east (20th). • Port noted that some northbound freight uses SR 204 today to avoid height-restricted bridge on I-5 to sewage treatment plant. • No substantial comments from group on EW 4 or EW 5.
EW 6	• Noted this concept includes 4 lanes on the WB trestle.	• City of Everett noted that cost is an issue for a structure that carries 4 lanes across the trestle. • Sharon and Lisa noted that larger environmental footprint may also be an issue for foundations and shading.

Concept name	Group 1 notes	Group 2 notes
EW 7, 8 (similar except for merge locations)	• Keep in mind the sides for HOV connections and limit lane changes for buses. • Transit Signal Priority (TSP) systems are currently not consistent in different jurisdictions. Community Transit is not able to have multiple systems on their buses. • Consider adding the roundabout to this concept to maintain the flow. • Would the HOV lane be on the inside/south side? Would access still be provided to the Pacific Loop ramp on the west side? • Noted that it was not a preference to get from the trestle to I-5 NB for transit. However, there could be an HOV demand.	• HOV lane on inside of US 2 could be a challenge for traffic coming from 20th, where HOV lane is on the outside. • Community Transit noted that similar to EW 2, a queue jump on 20th could help with this issue. • Would need to determine the best place for the HOV transition. Could keep the HOV lane on the outside of US 2. • Most transit is coming from the north and east and destined for Everett and points south. Community Transit plans to increase the frequency of bus service to Everett in the future, and 3 SWIFT lines will converge on Everett Station. Community Transit also has park and ride ideas for SR 9. • No substantial comments from group on EW 8.
EW 9	• 2-way 20th Street Bridge. All options provide only one lane onto trestle. • Longer structure to reduce the merge point. • What are the peak movement volumes on to and off of 20th Street?	• No substantial comments from group
Other	N/A	

East end of US 2, eastbound concepts

Concept name	Group 1 notes	Group 2 notes
EE 1	• Noted there would be no new construction, just restriping.	• No substantial comments from group
EE 2	• No substantial comments from group	• Community Transit (CT) suggested considering a roundabout to join the 20th corridor (included in concept EE3)
EE 3	• Noted steepness of hill, which would make roundabout difficult. • There are enough volumes at that intersection that it needs to stay open with enough storage.	• Roundabout may cause traffic back-ups onto US 2 – could consider adding some sort of bypass lane for through traffic. • Roundabout may require a lot of earth work because of grades.
EE 4	• Same comments as for EE 3.	• Both EE 3 and signalization option in EE 4 have challenges with grades on SR 204, particularly for freight needing to stop on steep grades.
EE 5	• The grades on the ramps from SR 204 may help reduce traffic slowdown from people making the grade climb and merging. • Would traffic on 20th Street divert to SR 204? • Currently, eastbound traffic on SR 204 can back up all the way across the trestle to I-5.	• No substantial comments from group
Other	• Consider freight access to the Cascade Industrial Center. • The US 2 Cascade Master Plan doesn't look at continuing an HOV lane east towards the Cascades. • Could the current park-and-ride lot in Lake Stevens be a transit center in the future? Community Transit looking at Monroe first.	• Consider adding right-in, right-out restriction at Sunnyside Boulevard Southeast to southbound SR 204.

Concept name	Group 1 notes	Group 2 notes
	• Dedicated bus lanes for service with 15-minute headways would be huge operationally but not sure about the cost-benefit analysis. • Community Transit is looking at a route restructure in 2027 with their Gold Line service. They have a micro-transit pilot starting in Q4 2024 in Monroe and Lake Stevens. • Consider cost and feasibility of HOV enforcement • At Sunnyside the roundabout is beginning to work better. Would need to model performance of a roundabout. • Look at reducing speeds on SR 204 from 55 mph to 45 mph and change the geometry of the ramp.	

West end of US 2, westbound concepts

Concept name	Group 1 notes	Group 2 notes
WW 1	• Important connections from US 2 WB to both directions of I-5 and downtown Everett. • How HOV connections from US 2 to I-5 are made is important. Could there be a connection from an HOV lane on the inside lane on US 2 WB to an HOV lane on I-5 north and south. Limit lane changes needed, which are particularly difficult for buses. • How are lanes managed on the WB US 2 trestle? Which one would be HOV	• Westbound US 2 to southbound I-5 is the biggest constraint in the system, so 2 lanes on this ramp appear in most options.
WW 2	• No comments	• Port noted freight needs sufficient clearances under I-5 for oversized/overweight (over dimensional) vehicles. Freight currently has to divert to avoid low clearance bridge on I-5 near Marysville (takes US 2 to SR 9 to 172nd to I-5). • Port will share map of over dimensional routes with WSDOT – this can be a factor for super loads going to Boeing and Cascadia Manufacturing Industrial Center in Marysville.
WW 3	• Does the flyover ramp to I-5 South have a connection to California? • It was noted that some alternatives would result in closing the connection to Walnut. • Suggestion to show connections that are underneath an existing structure as a dashed line.	• Four-lane ramp on California Street may be less desirable with its designation as an active transportation corridor.

Concept name	Group 1 notes	Group 2 notes
WW 4	• Asked how the HOV direct access ramp would connect to Broadway. • How does the HOV/transit lane get Community Transit routes to Everett Station or on I-5 south to the Lynnwood Transit Center? • Chris noted that, looking at these concepts, he's also thinking about Community Transit routes coming down from the north (future Gold Line) and connecting at Everett Station.	• City of Everett noted that HOV on left side of California Street would be a weakness and that it would be better on the right side to access Pacific Avenue. • Kate suggested the HOV lane on California should be in the middle to accommodate these movements.
WW 5	• City of Everett noted there is a big character difference (land use) on either side of I-5. Riverside neighborhood is concerned about connections. • Consider ramp and track interaction during construction, considerations with future Everett Link Extension. • Hewitt corridor is congested in the PM. People use Broadway to bypass traffic on I-5 and then get back on at Hewitt.	• Kate suggested the HOV lane on California should be in the middle to accommodate a left on Maple Street and a right on Pacific Avenue.
WW 6, 7	• The City of Everett noted that their preference was not to have the primary WB US 2 off-ramp tied into Everett Street. This is because Everett Street east of where the ramps would tie in are residential in nature and ramp traffic would affect it. Also, they have concerns about how the existing NB ramp to I-	• Both concepts could have conflicts for traffic traveling to the northbound I-5 ramp. WW 7 could have more conflicts because the off-ramp from US 2 would be one block closer to the on-ramp to I-5.

Concept name	Group 1 notes	Group 2 notes
	5 from Everett Ave would function with heavy traffic entering Everett from the US 2 ramp.	• Port noted that freight can't use Everett Avenue because the grade changes are too steep. Instead, they usually take I-5 to 41st to Rucker to Pacific to West Marine View Drive. • The City of Everett confirmed that this is their preferred freight route, and that Pacific is not a preferred route for trucks, it is more seen as a gateway for transit and future light rail. California is an active transportation corridor, and Hewitt is a gateway to downtown for vehicles and pedestrians. • April requested maps showing modal priorities in the city. • The Port noted that they are looking at future planned growth but do not yet have concrete projections for growth in freight trucks.
WW 8	• No substantial comments from group	• This concept would have potential conflicts with traffic to eastbound US 2 and got screened out in the recent Everett study. • One access point to downtown Everett will not be sufficient to accommodate all modes, including transit. • There are also some vertical issues with the ramp under the eastbound bridge.
WW 9	• Not a lot of access into downtown Everett. Particularly not general-purpose traffic, just a transit only lane. • Chris noted that east-west Community Transit routes will terminate at Everett Station. • Questioned need for HOV access to I-5 south, noted it isn't needed for Community Transit routes but	• A single lane to Everett Avenue would not work in combination with a transit-only ramp to California; therefore, this concept would likely be screened out.

Concept name	Group 1 notes	Group 2 notes
	could be used by carpool or vanpool services to employers to the south.	
WW 10	• Connects down to Pacific Avenue. • Direct connection to Everett Station would really improve transit reliability and could provide a 2-minute travel time savings. • River Road provides access and opportunity for redevelopment.	• City of Everett had geometric concerns about loop ramp in this concept, but initial study team investigation indicates it would work. • This concept would have challenges with a high number of right-of-way acquisitions needed.
WW 11	• Noted that the aux lane would help get people up the hill, where they are working on accelerating and getting up to speed, before starting the merge once it starts to flatten out.	• No substantial comments from group. Acknowledged that the aux lane would greatly enhance any 2-lane ramp option from WB US 2 to SB I-5.
WW 12	• Would need to evaluate signage and connections with a two-way bridge. No connection to Hewitt?	• New concept for a two-way signature bridge came out of conversations with WSDOT Maintenance, which determined that retrofits for the eastbound US 2 trestle could be as costly as replacing the bridge. • Port noted this concept is currently missing a connection to downtown Everett. • City of Everett noted this concept could allow a larger radius for the ramp to a potential future frontage road. • Port noted this concept could have efficiencies for construction, as it could be constructed offline while the existing bridges remain open to traffic.

Concept name	Group 1 notes	Group 2 notes
WW 13	• Will this additional aux lane all the way to SR 526 be modeled for traffic? • Biggest challenge is the connections of I-5/SR 526/SR 99. • Model the Origin-Destination and traffic flow from EB SR 526 to NB I-5 and EB US 2. • In the AM more traffic is coming from US 2 and NB I-5 to SR 526. • 2050 there will be more growth in the north portion of Snohomish County.	• Group had minimal comments but noted this would likely qualify as an entirely separate project.

West end of US 2, eastbound concepts

Note: Group 1 did not have time to discuss these concepts. The notes below reflect Group 2's discussion.

Concept name	Group 2 notes
WE 1, 2	• No substantial comments from group
WE 3	• Port expressed concerns about concept because there is already a short lead-in and challenging weave at 41st
WE 4	• City of Everett and Community Transit liked the idea of a direct connection to Everett Station and future light rail.

Group 1 general discussion:

Trestle configuration

- Reversible lane concepts on the US 2 trestle may not work if, based on US 2 trip types, use of the trestle is more consistent throughout the day and not a strong PM/AM peak. Currently there is a directional peak period but that may shift and even out over time.
- On the west side of the US 2 trestle the ramp, spacing and vertical/horizontal geometrics is a constraint. East of I-5 the trestle and connections can be a barrier to going north/south.
- With replacing the trestle, going south of the existing EB trestle is a challenge due to the water and gas transmission pipelines.

Transit

- Community Transit is not looking at a Swift line across US 2 due to ridership forecasts. They would look at 15 minute all day service.
- Chris Simmons noted they are looking at transit priority at signals along Pacific.
- It was asked if it would make sense to have a dedicated lane on the trestle for light rail or BRT. Chris Simmons noted that Swift BRT doesn't make sense across US 2 in their future network plans; if ever, there would not be a BRT station on US 2. It was noted that the US 2 area is currently outside of Sound Transit's service benefit area.

Development/land use

- Tom (City of Everett) noted that the industrial areas will stay industrial. The Riverfront residential development may expand. Development in the downtown core is creeping east.
- High density residential and TOD development expected near I-5 and along Community Transit's Gold Line.
- Broadway corridor is being looked at with Everett's Comprehensive Plan revisions, going to 5 to 7 story for redevelopment. Tom noted the capacity along Broadway needs to be maintained (can't reduce lanes) as it gets very high traffic volumes from spillover from I-5.
- Everett has redevelopment and economic development plans for the Everett Point Industrial Center (EPIC) site. This will include light industrial uses and a river front trail. Planning a new bridge over Everett Avenue connecting to the site (EPIC Bridge | Everett, WA - Official Website (everettwa.gov))

Active transportation

- Snohomish County parks is working on trail improvements, on both the east and west sides of US 2. Planned improvements to the Lowell River front trail as well. Need to get an understanding of existing and planned trails.
- City of Everett discourages vehicles from using California, trying to make it more an active transportation route. Everett Avenue has capacity.
- It was asked if the old US 2 WB structure could be kept for active transportation use. It was noted that the existing structure has seismic (liquefaction) issues that would affect the safety of active transportation uses.
- It was mentioned that during the active transportation workshop the lane widths and speed differences between e-bikes, bicycles, and pedestrians was discussed in terms of how much width might be needed.

Group 2 general discussion on EW concepts

- Community Transit said EW 2 would provide the most operational flexibility for transit, but there are some concerns about having enough space for a roundabout that could accommodate articulated buses, as this is a potential SWIFT route in the long term.
    - City of Everett suggested right-side HOV/transit lanes could be considered for the ramp to Everett.
    - Port/FHWA noted that a holistic view of all connections to US 2 (east and west) is needed to determine the best location for the HOV lane.
- Community Transit asked which option would connect to the trestle concept with the HCT/light rail corridor (TW7).
    - Josh and Jared said any of the westbound concepts with a right-side HOV lane could accommodate this concept.
    - Sharon (FHWA) cautioned that there should be a station on the east side of US 2 in the plan if the HCT/light rail concept is going to be considered; otherwise, there may be issues with lack of logical termini for NEPA. She suggested renaming the corridor in TW7 to "potential" light rail/HCT corridor.
    - Community Transit said EW 2 might fit best with TW 7 because of the roundabout.
- The group briefly discussed active transportation connections and acknowledged challenges with steep grades on the east side of US 2.

Next steps

The study provided reference and resource materials for TWG review through an FTP site, with comments on criteria and concepts due by the close of business on September 27. The next TWG meeting will be held first quarter of 2025.