SR 167 Master Plan A planning and environmental linkage study

Equity Advisory Committee Meeting #5 November 18, 2022

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SR 167 MASTER PLAN TRAFFIC LEAD
SR 167 MASTER PLAN PARTNER & COMMUNITY ENGAGEMENT
SR 167 MASTER PLAN EQUITY ADVISORY COMMITTEE FACILITATOR



Today's Agenda

Objectives:

- Provide an overview of baseline (funded projects) and the three refined scenarios
- Present and discuss the baseline (funded projects) and the three refined scenario outcomes (benefits and impacts)
- Review next steps

Agenda

- Welcome and introductions
- Review baseline (funded projects) and three refined scenarios
- Review baseline (funded projects) and three refined scenario outcomes (benefits and impacts)
- Discussion clarifying questions and initial reactions
- Next steps
- Adjourn



SR 167 Master Plan Schedule

Phase 1:
Study
planning
Oct – Nov 2021

Phase 2:
Existing and
future
conditions

Dec 2021 –
Feb 2022

Phase 3: Develop and screen strategies Jan – April 2022 Phase 4:
Develop and
evaluate
multimodal
scenarios

Apr – Jan 2023

Phase 5: Final report Nov 2022 – Jun 2023

Implementation Plan

Community and partner engagement

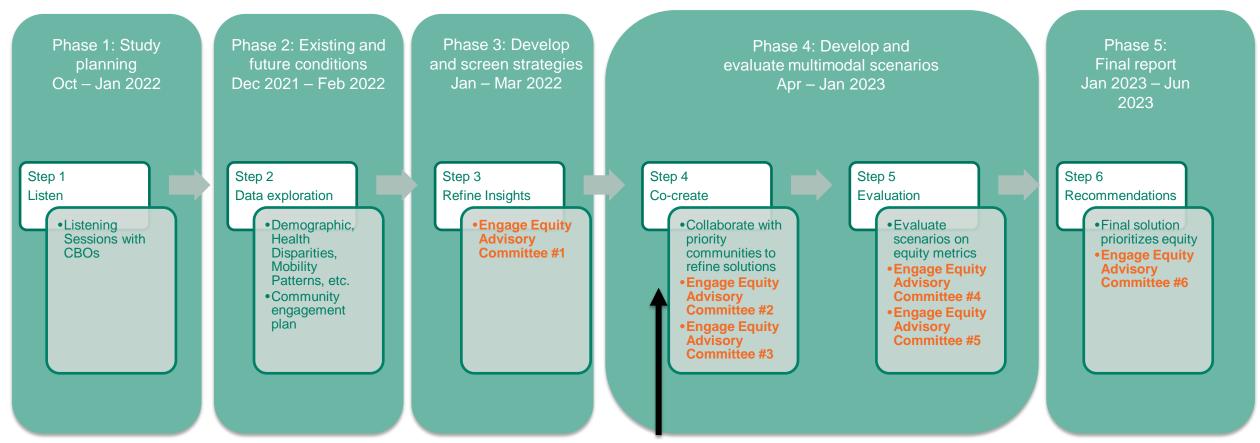
Listening Sessions: Study Area, Vision & Goals

Equity Advisory Committee Meetings

Open House

Co-Creation Community Workshops Open House

Elevating equity - our approach



Equity-focused community
Co-creation Workshops
June-August

Baseline (funded projects) and three refined scenarios for the future of SR 167



Our Process

VISION TO SCENARIOS



Master Plan Purpose: Vision

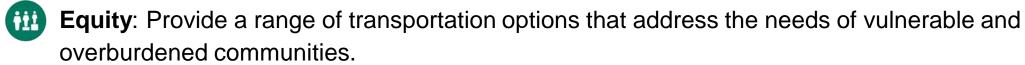
What is the 167 Master Plan vision:

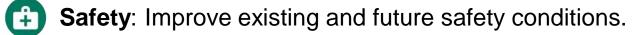
The SR 167 Master Plan will identify near-, medium-, and long-term solutions intended to facilitate the movement of both people that travel on and across SR 167 for work, school, other essential and non-essential trips, and goods that support economic vitality. Travel along and across the SR 167 corridor will be safe, connected, resilient, and reliable. The SR 167 Master Plan will strive for practical solutions to

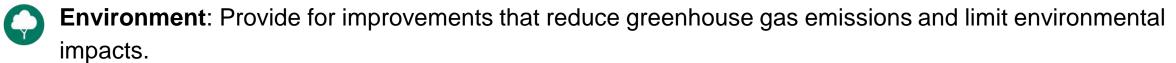
- (a) prioritize the needs of vulnerable and overburdened communities,
- (b) reduce physical barriers of the current system,
- (c) support the Puget Sound Regional Council (PSRC) Regional Growth Strategy,
- (d) facilitate transit and active transportation,
- (e) support projected growth and land-use changes,
- (f) accommodate freight movement, and
- (g) reduce greenhouse gas emissions.

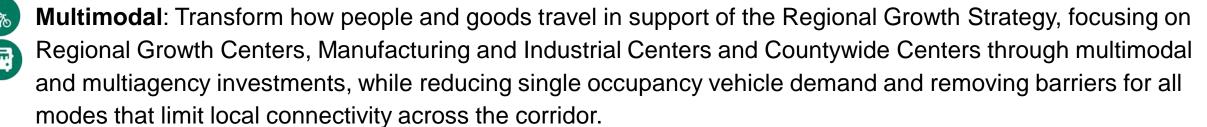
Master Plan Purpose: Goals

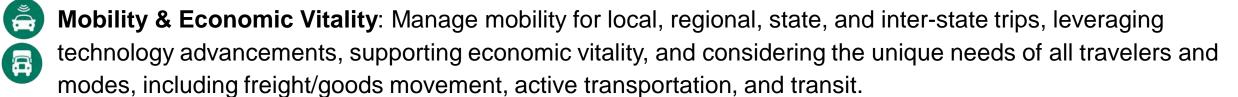
What are the 167 Master Plan goals:











Practical Solutions & State of Good Repair: Identify strategies that are practical, implementable, and fundable in a realistic timeline considering the importance of maintaining a State of Good Repair throughout facility lifecycle.





Funded Projects and Strategies*

Express toll lanes on I-405 from Renton to Bellevue

Completion of SR 509 near SeaTac

Southbound auxiliary lane on I-5 from SR 516 to S 272nd Street

Southbound auxiliary lane on SR 167 from SR 516 to S 277th Street

HOT lane extension from Ellingson Road to SR 410 on SR 167

Completion of SR 167 from the Port of Tacoma to SR 161

Widening of the Stewart Road bridge over the White River

Canyon Road Regional Connection project

Stride BRT service on I-405

RapidRide | Line

Link light rail extensions to Federal Way and Tacoma

Sounder station access and parking improvements in Kent, Auburn, Sumner, and Puyallup

Tacoma to Puyallup Trail

Upgrade toll equipment to enable distance-based tolling on SR 167 (to be consistent with I-405)

Numerous local projects to address local traffic and freight access issues at intersections and roadways

Numerous local projects to improve sidewalks, ADA facilities, crossings, and reduce the level of bicycle stress

TAKEAWAYS

- Current Study Area Investments
 - » SR 167 managed capacity and toll equipment upgrades: \$200 million
 - » SR 167/509 Gateway program: \$2.3 billion
 - » RapidRide I Line: \$100 million
 - » Other local projects: \$100 million
- · Connections to Study Area
 - » I-405 Renton to Bellevue Express
 - Toll Lanes: \$900 million
 - » Link light rail: \$4.9 billion
 - » I-405 BRT: \$400 million

- · Aligned with regional growth strategy
- Multimodal
- Multi-agency
- System-wide investments
- Foundation for SR 167 Master Plan



^{*} Includes fully funded projects, projects that are likely to achieve full funding, and reasonably forseeable policies





| Projects and Strategies Common to All Scenarios | Master Plan Goals Advanced |
|--|---|
| Additional express toll lane on SR 167 from I-405 to SR 18 | #0886 |
| Complete missing ramps at SR 18/SR 167 interchange | 00000 |
| Complete Valley Ave interchange with SR 167 extension | 0000000 |
| Auxiliary lanes on SR 167 and SR 18 | ·· • • • • • • • • • • • • • • • • • • |
| Direct access ramps from express toll lanes to Kent and Auburn | # 6 8 8 8 6 |
| Grady Way/Rainier Avenue grade separation | 8000000000000000000000000000000000000 |
| 60 miles of new or enhanced transit service | # 6 6 6 6 6 |
| 5 miles of new sidewalks on arterials within one-mile of SR 167 | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |
| Low stress bicycle improvements between key community destinations | # ⊕ ⊕ ₺ ⊜ ⊕ ♀ |
| Implement on-demand transit service to connect Equity Priority Areas and Manufacturing Industrial Centers to transit hubs | ********** |
| Active mode improvements to all interchanges impacted by express toll/truck lane widening | # 0 0 & 0 0 |
| Complete gaps, improve lighting, and access on Interurban Trail | (1) (1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4 |
| Recommendation for statewide low-income toll program | 8000000 |
| Recommendation to allow medium duty-trucks in express toll lanes | 0000000 |
| Implement ramp meters for all lanes and at all interchanges | @ G G G G G |
| Coordination with bottleneck removal projects included in the I-405 Master Plan and SR 512 Corridor Study | 00 00 00 0 |

TAKEAWAYS

- · Core projects and strategies to achieve Master Plan Vision
- · Address major gaps in system identified by agencies and community members
- · Core multimodal access improvements to equity priority areas
- · Managed capacity on facility to meet growing travel demands
- · Coordinated with other WSDOT projects and agency plans
- · Not a complete system; requires projects and strategies in the Scenario maps

LEGEND - ADVANCES MASTER PLAN GOALS

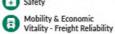


Mobility & Economic

















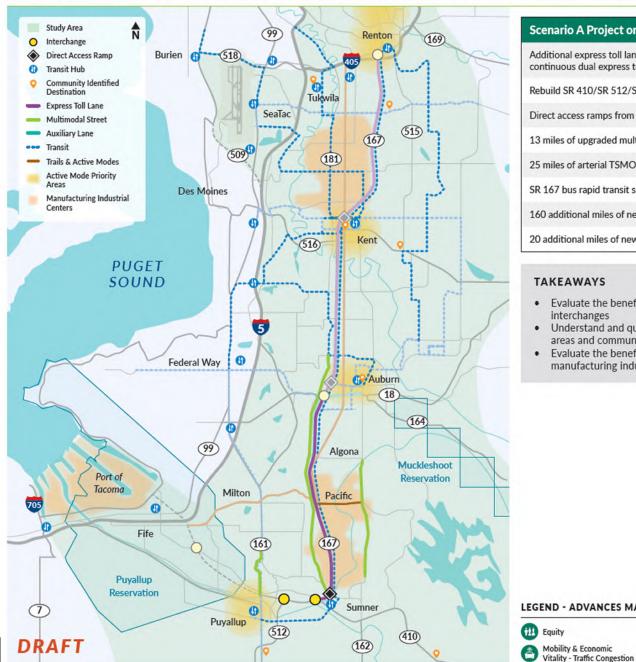
Incorporating Feedback into Scenarios

| Feedback | Projects in the Scenarios |
|--|---|
| Transit is not reliable or accessible | New east-west transit routes New on-demand transit areas/services (e.g., Via, Pingo) More night/weekend service Connections to regional destinations |
| Sidewalk and trail gaps are barriers to access | New connections to regional trails Add/improve sidewalks and bike lanes through interchanges and across SR 167 Fill sidewalk gaps |
| Lighting, visibility, and design can improve sense of security | New lighting, access, and placemaking investments on regional trails |
| Traffic congestion is a barrier to travel | New managed (toll/truck) lanes on SR 167 Multimodal improvements on arterials Improve freight access at interchanges |
| Tolling may be a barrier to low-income travelers on SR 167 | Recommend a statewide low-income tolling program |

SR 167 Master Plan | Scenario A + Projects and Strategies Common to All Scenarios | \$5.0-5.5 Billion







| Scenario A Project or Strategy | Master Plan Goals Advanced |
|--|----------------------------|
| Additional express toll lane on SR 167 from SR 18 to SR 410 (to make a continuous dual express toll lane corridor between I-405 to SR 410) | ## 4 8 6 6 6 |
| Rebuild SR 410/SR 512/SR 167 interchange to reduce weaving | 000000 |
| Direct access ramps from express toll lanes to Sumner (in addition to Kent and Auburn) | |
| 13 miles of upgraded multimodal arterial capacity | 00066 |
| 25 miles of arterial TSMO | |
| SR 167 bus rapid transit service between Puyallup and Renton | |
| 160 additional miles of new or enhanced transit service | |
| 20 additional miles of new sidewalks on arterials within one-mile of SR 167 | # O O & O O |

TAKEAWAYS

- Evaluate the benefits and tradeoffs of greater investments in transit and local streets compared to SR 167
- · Understand and quantify the benefits of expanded transit access throughout study area connecting equity priority areas and community identified destinations
- · Evaluate the benefits of a greater investment in multimodal connectivity particularly in regional growth centers, manufacturing industrial centers, and equity priority areas

LEGEND - ADVANCES MASTER PLAN GOALS

















Multimodal - Active Modes

SR 167 Master Plan | Scenario B + Projects and Strategies Common to All Scenarios | \$5.5-6.0 Billion







| Scenario B Project or Strategy | Master Plan Goals Advanced |
|--|---|
| Additional express toll lane on SR 167 from SR 18 to SR 512 (to make a continuous dual express toll lane corridor between I-405 to SR 512) | ## 4 @ 6 @ 6 |
| Improve ramps to reduce weaving at SR 18/SR 167 interchange (in addition to adding missing ramps at this interchange) | 000000 |
| New flyover ramps from SR 167 express toll lanes to SR 512 | |
| Direct access ramps from express toll lanes to Sumner (in addition to Kent and Auburn) | ## 4 @ 6 6 6 |
| Rebuild or improve five arterial interchanges with SR 167 to address bottlenecks, mprove freight access, and improve active mode connections | □ ○ ○ ○ ○ ○ ○ ○ |
| Multiple frequent bus routes on SR 167 connecting the transit hubs on the corridor with regional destinations | ## 4 10 10 10 10 10 10 10 10 10 10 10 10 10 |

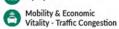
TAKEAWAYS

- . Evaluate benefits and tradeoffs of greater investments on SR 167 interchanges to regional growth centers and manufacturing industrial centers
- . Measure how SR 167 congestion patterns change with improvements at traffic and freight bottlenecks identified by the community and agencies
- Compare results of more direct transit connections via SR 167 to major regional destinations against BRT on SR 167
- . Determine benefits and limitations of a practical solutions approach to SR 410/SR 512 interchange congestion

LEGEND - ADVANCES MASTER PLAN GOALS



















SR 167 Master Plan | Scenario C + Projects and Strategies Common to All Scenarios | \$4.5-5.0 Billion



| Scenario C Project or Strategy | Master Plan Goals Advanced |
|--|---|
| New truck-only lane on SR 167 from SR 18 to SR 167 extension | |
| Rebuild westbound to southbound ramp from SR 18 to SR 167 (in addition to adding missing ramps at this interchange) | |
| Rebuild SR 410/SR512/SR 167 interchange to reduce weaving | |
| Rebuild or improve three arterial interchanges with SR 167 to address bottlenecks, improve freight access, and improve active mode connections | ⊕ ⊙ ⊕ & ⊖ ⊕ ○ |
| SR 167 bus rapid transit service between Puyallup and Renton | |
| Improvements to ramp terminal intersections to improve multimodal safety and freight access (safety, active mode, freight) | (I) |

TAKEAWAYS

- . Evaluate the benefits and tradeoffs of a dedicated freight corridor from the Port of Tacoma to SR 18 and Sumner-Auburn Manufacturing Industrial Center
- . Compare differences between a new truck-only lane compared to a new express toll lane on SR 167
- · Identify benefits and potential impacts freight access and multimodal safety at key interchanges and major intersections

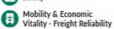
LEGEND - ADVANCES MASTER PLAN GOALS

















Multimodal - Active Modes



How did we use the feedback?



Key Feedback from Equity Advisory Committee

| Transit | |
|----------------------------------|--|
| Nighttime Transit service | Buses not present in Industrial areas during night times |
| Information and language needs | Language barriers for people new to the area/country. Examples - may not know what HOV means. Also, could have difficulty navigating 167 with tolls. |
| Location for Transit | Bad congestion in Auburn and need for transit, senior communities here. |
| Transit service / coverage needs | Need for transit service in Renton to Highlands and other residential areas |
| Additional Transit Service | Area around SW 43rd has industrial uses and workers could benefit from additional transit service, particularly at night times. |

Key Feedback from Equity Advisory Committee

| Bicycle and Pedestrian | | | |
|---|--|--|--|
| Walking/Safety | Separation between cars and people due to fast vehicles; people trying to walk on primary route to Muckleshoot Casino - need for sidewalks | | |
| Sidewalks | Rainier Ave - tree roots have broken up sidewalks, especially near Renton Airport | | |
| Trails connection to transit | Bad congestion in Auburn and need for transit, senior communities here. | | |
| Pedestrian connection to light rail | Need for transit service in Renton to Highlands and other residential areas | | |
| Lights for trails/ped | Need to add lighting with pedestrian/trail projects | | |
| Training (not location specific) | Training for people to learn how to ride bikes (not location specific) | | |
| Trails to schools (not location specific) | Need for trails that can get people to schools | | |

Key Feedback from Equity Advisory Committee

| Cars and Trucks | |
|---------------------------------|--|
| Congestion/truck traffic | High traffic / truck traffic - bad congestion at multiple interchanges |
| SR 167 safety | SR 167 north to Kent does not have pull out areas for emergencies |
| Lower income area - Tolling | Tolling should not be as expensive as in Bellevue - lower income area |
| | Auburn/Kent area |
| I-405/167 interchange | Bad congestion, people using carpool lane trying to avoid ramp area / |
| | interchange |
| 212th access to SR 167 | Road repairs needed - getting on and off 167 interchange is difficult |
| Parking (not location specific) | Need to have safe parking for people using public transit |

Scenario benefits and potential impacts



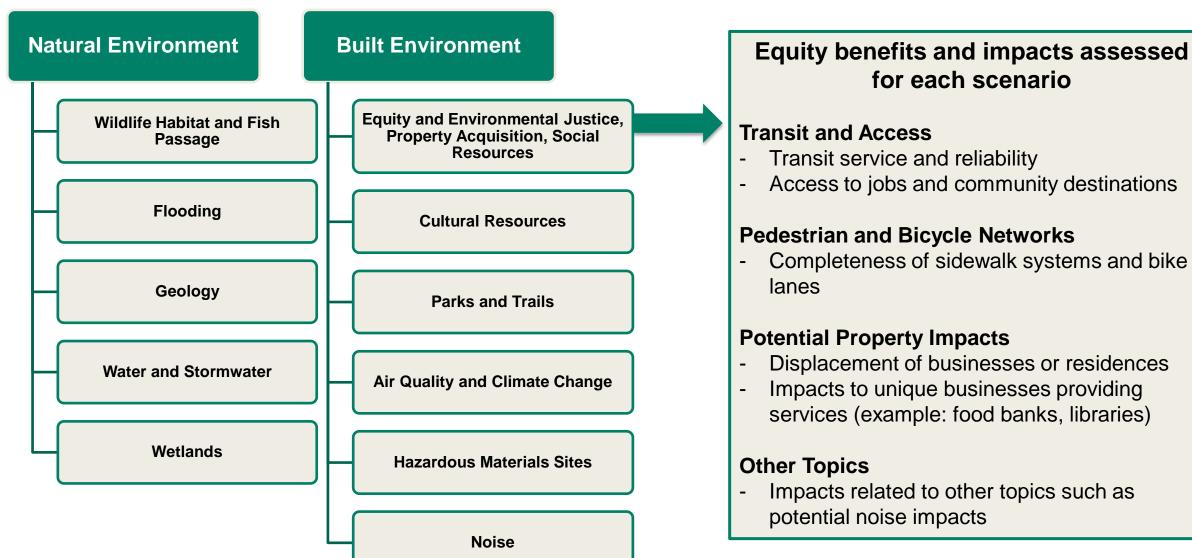
Summarize Results Across Goals and Scenarios

- Identify what is common across all scenarios
- Distill the major differences between the scenarios

- Equity
- Environment
- Safety
- Multimodal Active Modes
- Multimodal Transit
- Mobility and Economic Vitality Traffic Congestion
- Mobility and Economic Vitality Freight Reliability
- Practical Solutions and State of Good Repair



Equity and Environmental Summary





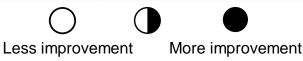
Similarities between Scenarios

- Bicycle system completeness between community identified destinations
- Growth in access to jobs via transit from equity priority areas is greater compared to the study area as a whole
- Low-income toll program recommendation

Summary Table of Scenario Ratings with Respect to Equity Performance Metrics

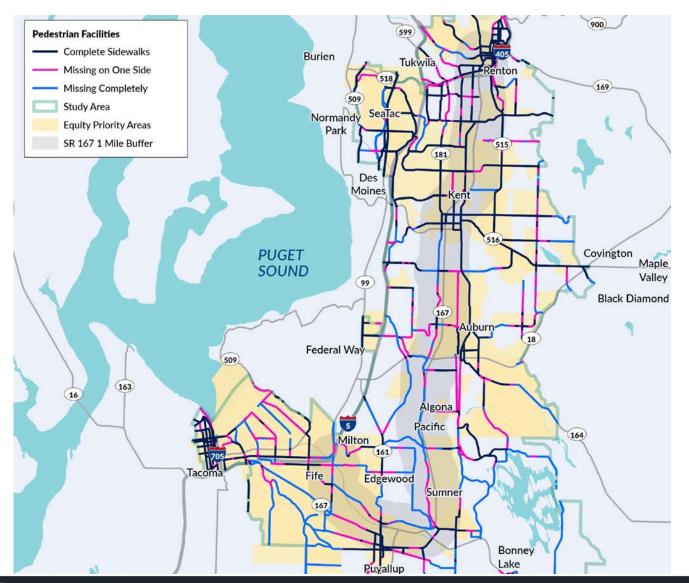
| Metric | Scenario A | Scenario B | Scenario C |
|---|------------|------------|------------|
| Jobs within a 45-minute bus or train ride (midday and evenings) | | | |
| Sidewalk system completeness within equity priority areas | | | |

Legend - Performance relative to baseline:

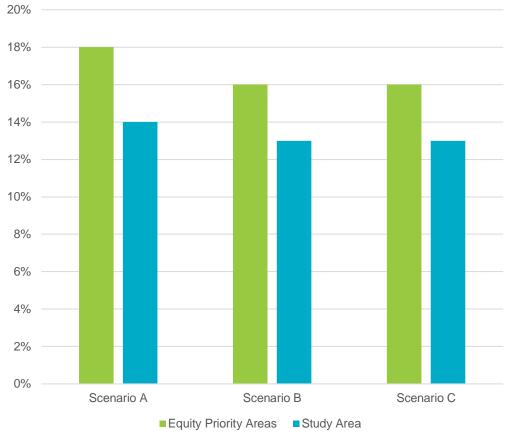




Selected Equity Results



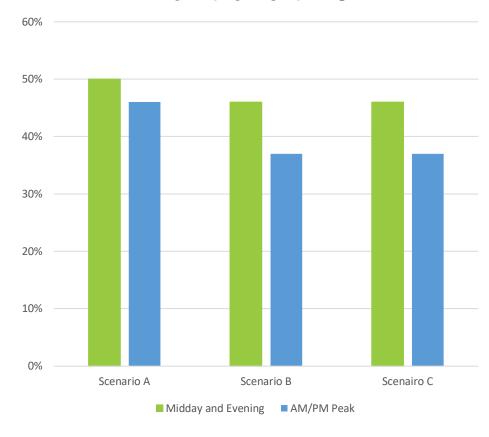
Increase in Jobs Accessible within a 45-minute bus or train ride (includes transfer and wait time)





Selected Equity Results

Increase in Households Accessible within 45- minute bus or train ride from the Kent MIC



| Origin/ Destination Pair | Baseline | Scenario A/B/C |
|---|------------|----------------------|
| SeaTac Link Station - Valley Medical Center | 45-50 mins | 35-45 mins (-18%) |
| Southcenter Transit Center - Kent East Hill | 50-55 mins | 40-45 mins (-17%) |
| Kent East Hill - Auburn Sounder Station | 40-45 mins | 35-40 mins (-8%) |
| 132nd/240th Kent - Kent MIC (Amazon) | 50-55 mins | 30-35 mins (-38%) |
| Kent Sounder Station - Fairwood | 35-40 mins | 30-35 mins (-8%) |
| Green River Com. College - Kent MIC (Amazon) | 65-70 mins | 45-50 mins (-26%) |
| Federal Way Transit Center - Auburn Way/M St | 2 hrs | 55-60 mins (-52%) |



Similarities between Scenarios

- Overall environmental impacts are similar throughout the corridor
- Lower VMT per capita than existing conditions (25% lower in 2050)
- Potential to address existing environmental issues on SR 167

Summary Table of Scenarios Ratings – Potential for Environmental Impacts Requiring Mitigation

| Metric | Scenario A | Scenario B | Scenario C |
|------------------------|------------|------------|------------|
| Projects on SR 167 | | | |
| Projects not on SR 167 | | | |

Legend - Performance relative to other scenarios:









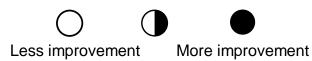
Similarities between Scenarios

Substantial investments in areas with high crash history

Summary Table of Scenario Ratings with Respect to Safety Performance Metrics

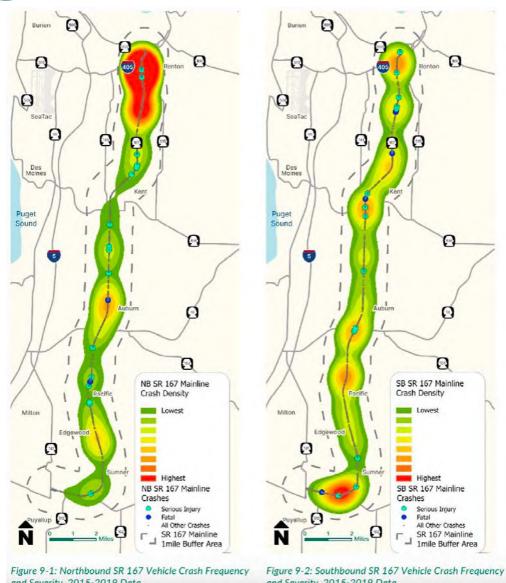
| Metric | Scenario A | Scenario B | Scenario C |
|--|------------|------------|------------|
| Investments in areas large differences in speed | | | |
| Investments in areas with history of active mode crashes | | | |

Legend - Performance relative to baseline:



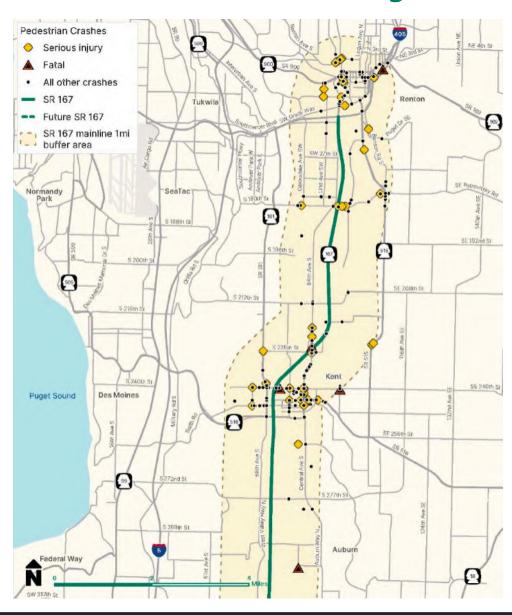


Safety Data - Areas with Crash History



and Severity, 2015-2019 Data

and Severity, 2015-2019 Data





Multimodal - Active Transportation Summary

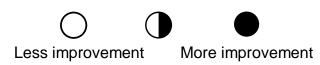
Similarities between Scenarios

- Bicycle network system completeness connecting community identified destinations
- Sidewalk system completeness within RGCs
- Close the remaining gaps, improve access/crossings, lighting, and security on the Interurban Trail
- Improves multimodal access and reduces level of traffic stress at interchanges

Summary Table of Scenario Ratings with Respect to Multimodal – Active Performance Metrics

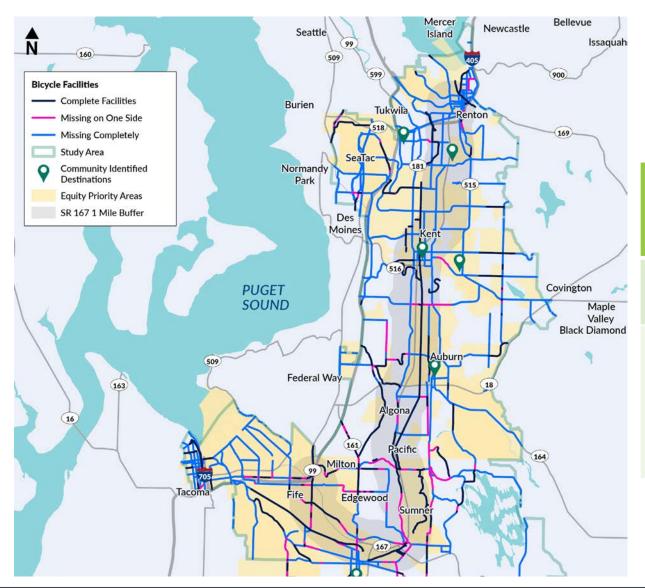
| Metric | Scenario A | Scenario B | Scenario C |
|---|------------|------------|------------|
| System Completeness for pedestrian infrastructure within 1 mile of SR 167 | | | |

Legend - Performance relative to baseline:





Multimodal - Active Transportation Results



| Sidewalk System Completeness | Baseline | Scenario A | Scenarios B and C |
|---|----------|------------|----------------------|
| Within 1-mile of SR 167 | 78% | 100% | 83% |
| Within Regional Growth Centers that are within 1-mile of SR 167 | 95% | 100% | 100% |

Multimodal - Transit Summary

Similarities between Scenarios

- Transit travel times between transit hubs
- Expanded time of day for transit service
- Direct access ramps in Kent and Auburn
- On-demand/local transit services in Equity Priority Areas

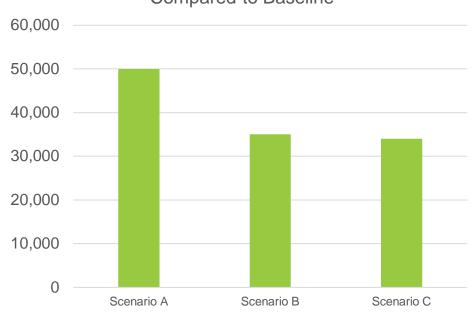
Summary Table of Scenario Ratings with Respect to Multimodal – Active Performance Metrics

| Metric | Scenario A | Scenario B | Scenario C |
|--|------------|------------|------------|
| Daily Transit Boardings | | | |
| Transit Travel Time between Transit Hubs | | | |
| Daily Boardings on SR 167 Bus Service | | | |



Selected Multimodal - Transit Results





| Origin/ Destination Pair | Baseline | Scenario A/B/C |
|--|------------|----------------------|
| Puyallup to S. Renton | 75-85 mins | 55-65 mins (-27%) |
| Green River CC to FWTC | 65-75 mins | 40-50 mins (-35%) |
| Kent East Hill to Kent-Des Moines Link Station | 35-45 mins | 30-40 mins (-24%) |





Mobility & Economic Vitality - Traffic Congestion

Similarities between Scenarios

- Substantially improves the number of people moved on SR 167 compared to baseline
- Reduced congestion and reliable trip times in express toll lanes where dual lanes are provided
- Identifies complementary projects to additional traffic reaching I-405 and SR 512
- Analysis assumed HOV 3+ vehicles are free and congestion in toll lanes is managed with variable toll rates

Summary Table of Scenario Ratings with Respect to Multimodal – Active Performance Metrics

| Metric | Scenario A | Scenario B | Scenario C |
|---|------------|------------|------------|
| Number of people moved on SR 167 | | | |
| Reliable travel times on express toll lanes even with growth in traffic over time | | | |
| Total hours of congestion on arterials | | | |

Northbound Travel SR 167 General Purpose

2030 AM Peak Period











Northbound Travel

Northbound Travel SR 167 Express Toll Lanes

2030 AM Peak Period









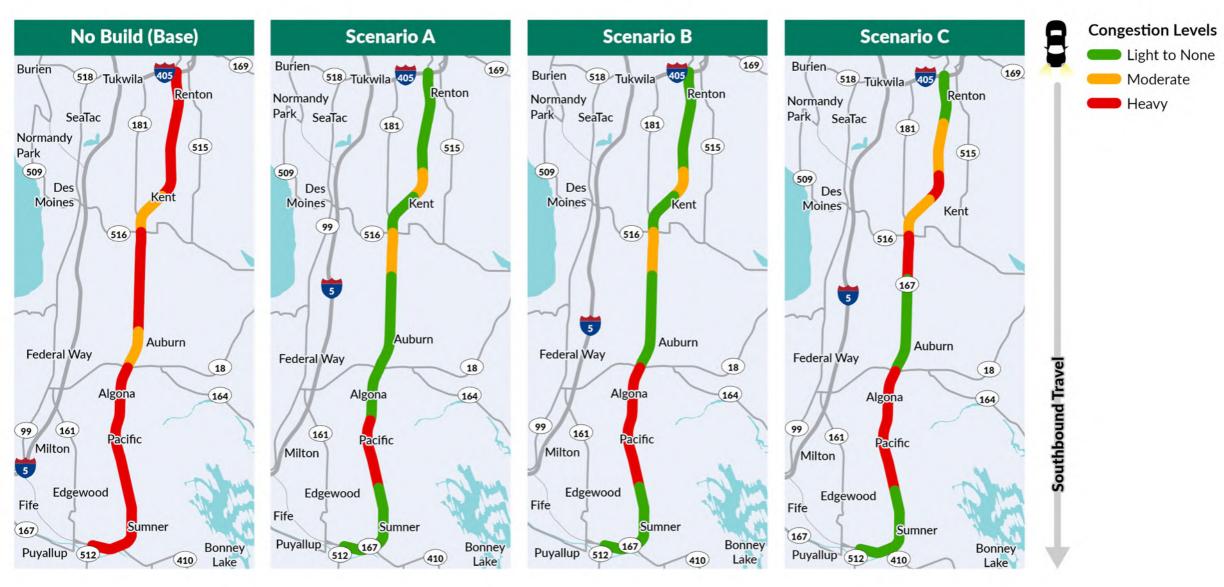




Northbound Travel

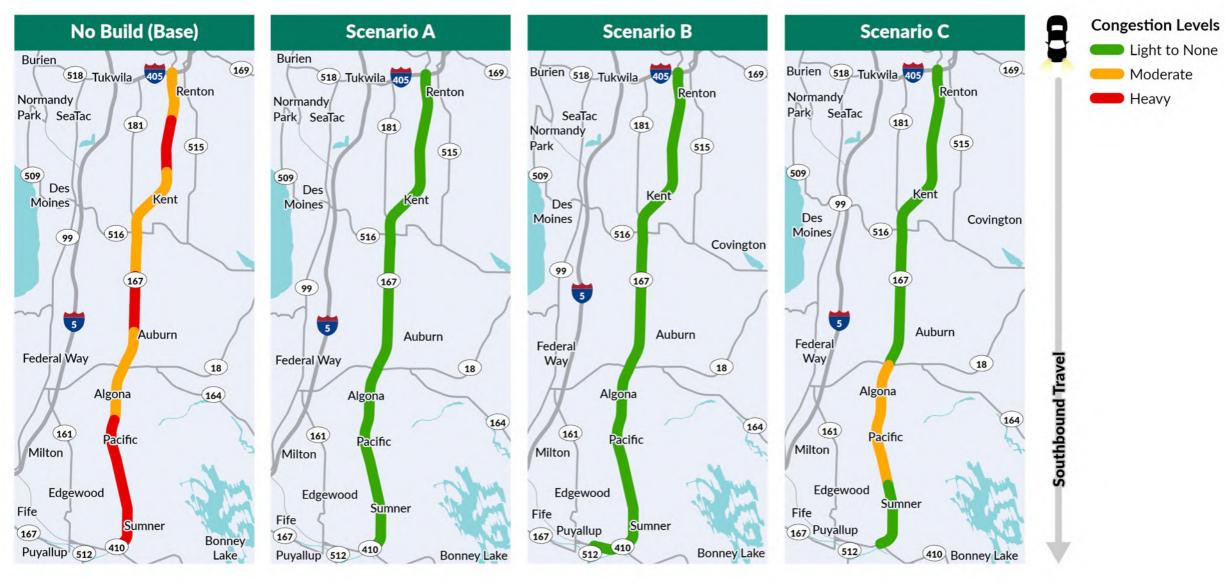
Southbound Travel SR 167 General Purpose

2030 PM Peak Period



Southbound Travel SR 167 Express Toll Lanes

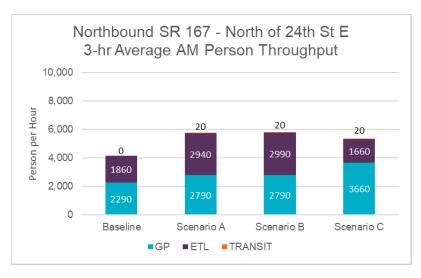
2030 PM Peak Period

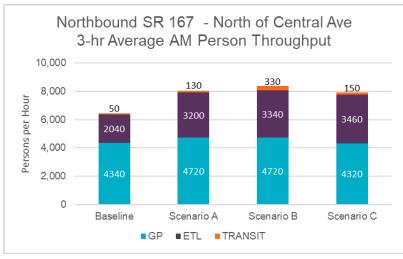




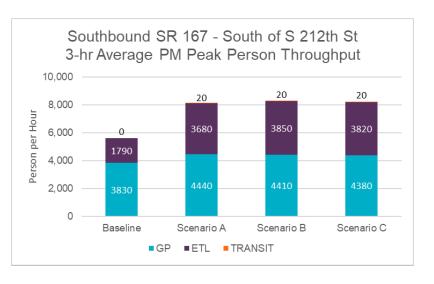
Person Throughput at Key Locations - 2030

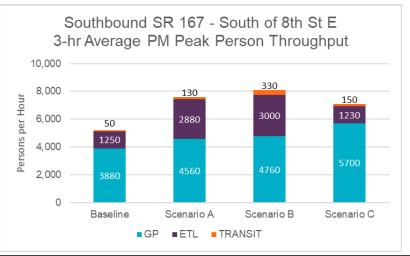
Northbound AM Peak





Southbound PM Peak







Mobility & Economic Vitality - Freight Reliability

Similarities between Scenarios

- Recommendation to allow medium-duty trucks (box truck size) in ETLs
- Improved truck throughput and travel time reliability for all scenarios
- Solutions to reduce major bottlenecks that affect freight access

Summary Table of Scenario Ratings with Respect to Multimodal – Active Performance Metrics

| Metric | Scenario A | Scenario B | Scenario C |
|---|------------|------------|------------|
| Freight throughput on SR 167 | | | |
| Travel time reliability for freight | | | |
| Local freight access improvements at interchanges | | | |



SR 167 Speed Ranges

Summary Table of 3-hr Speed Ranges by Facility and Mode

| | Northbound AM (6 – 9 a.m.) | | | Southbound PM (3 – 6 p.m.) | | |
|------------|----------------------------|-------|----------------|----------------------------|-------|----------------|
| Scenario | ETL | GP | Heavy Truck | ETL | GP | Heavy Truck |
| Baseline | 45-50 | 20-25 | 20-25 | 25-40 | 5-20 | 5-20 |
| Scenario A | >55 | 35-60 | 35-60 | >55 | 30-50 | 30-50 |
| Scenario B | >55 | 35-60 | 35-60 | >55 | 25-35 | 25-35 |
| Scenario C | >55 | 35-60 | 35-60 | 50-55 | 20-35 | 25-40 |

Key Highlights

- All scenarios improve speeds for all modes compared with the Baseline
- ETL speeds are higher than GP speeds
- ETL single lane section in Scenario C remains a constraint
- Truck speeds are 5-10 mph faster than GP speeds in Scenario C south of SR 18





Practical Solutions and State of Good Repair

Similarities between Scenarios

- All scenarios are feasible to implement and maintain
- Increase resiliency of the regional transportation system
- Multimodal
- Multi-agency

Summary Table of Scenario Ratings with Respect to Practical Solutions and State of Good Repair

| Metric | Scenario A | Scenario B | Scenario C |
|--|---------------------|---------------------|---------------------|
| Estimated Planning-level Capital Costs | \$5.0-\$5.5 Billion | \$5.5-\$6.0 Billion | \$4.5-\$5.0 Billion |

Key Findings Summary

- Scenario A rates higher with respect to equity and multimodal (active and transit)
- Scenario B rates higher with respect to mobility and economic vitality
- Scenario C has only marginal freight benefits
- Coordination with the SR 512/I-405/Puget Sound Gateway programs is critical
- Scale and cost of the three scenarios are similar
- Likely will mix and match projects/strategies for the final recommendation

Discussion



Next Steps



Next Steps

- Engagement
 - Planning for online open house this spring
 - Policy Advisory Committee meeting 9:00 10:30 a.m., Wednesday, November 30
- Technical Work
 - Begin refining the recommended scenario based on analysis and partner input
- Request for Partner Feedback
 - Schedule one on one briefings or subcommittee discussions
- EAC Meeting #6: *Friday, February 24, 11 a.m. 1 p.m.*
- TAC Meeting #6: February (tentatively 2/15)
- PAC Meeting #6: March (tentatively 3/8)
- SR 167 Master Plan Next Steps: Implementation Plan

More information:

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