

Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)  
&  
Highway 99 Interim Pedestrian Path (NE 99<sup>th</sup> Street to NE Parkview)

Clark County Board of Commissioners  
Work Session

August 21, 2013

9:00 a.m. – 10:00 a.m.



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# Project Team



## Clark County Public Works

- Pete Capell, PE – Public Works Director
- Heath Henderson, PE – Engineering & Construction Division Manager
- Matt Hall – Project Management Supervisor
- Scot Brantley – Project Manager
- Steve Schulte, PE – Transportation Manager
- Bill Wright, PE – Transportation Programming Manager



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- Rich Darland, PE – Senior Project Manager
- David Haynes, RLA – Landscape Architect

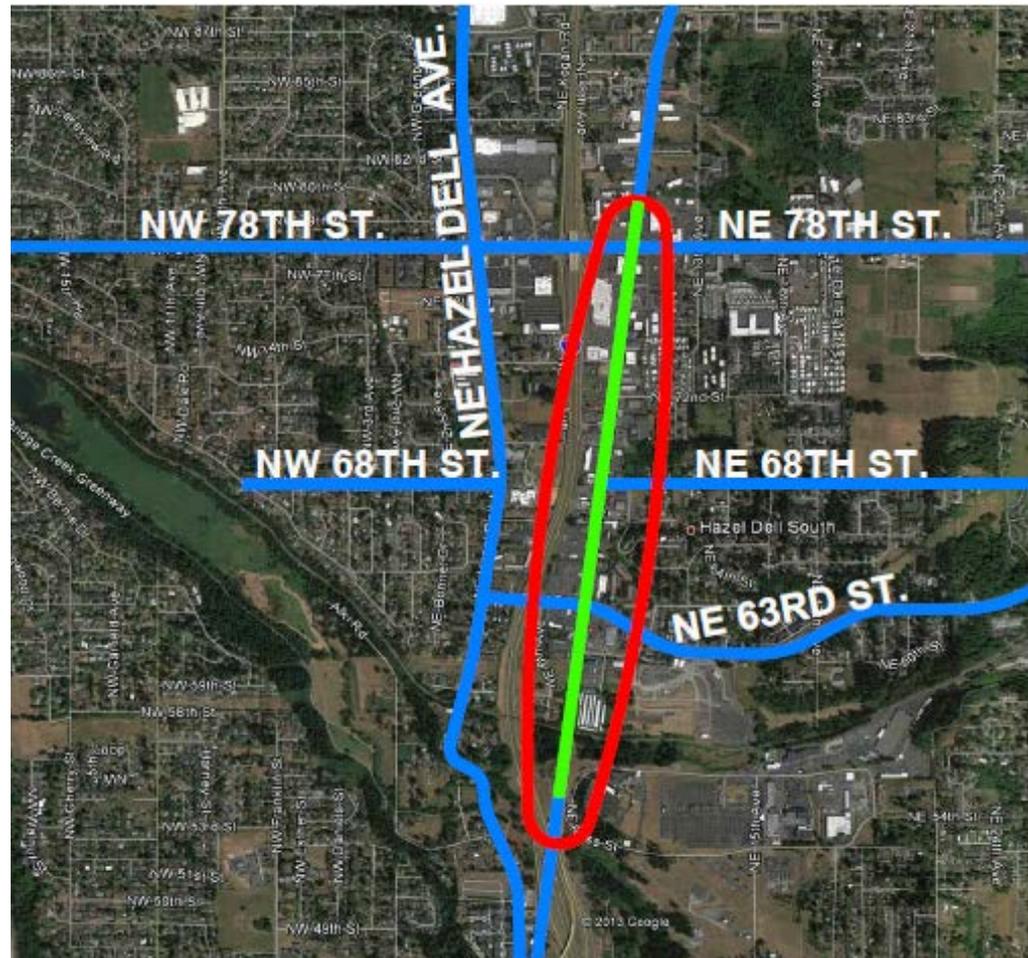


# Highway 99 (Railroad Crossing thru NE 78<sup>th</sup> Street)

Total Length of  
Improvements: 1.2 Miles

Area bounded by:

- Interstate 5
- NE 78<sup>th</sup> Street
- NE 63<sup>rd</sup> Street
- NE Ross Street
- Railroad Bridge



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# Project History



## Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

- Previous Board of County Commissioners directed staff to review alternatives to improve pedestrian safety, vehicular access and beautification along the commercial corridor to encourage new business & growth to Hazel Dell
- Not a programmed TIP (6-Year Road Program), thus the project is not funded
- Improvements south of and including the railroad bridge are within the City of Vancouver. Clark County cannot spend road funds in the City of Vancouver, so a interlocal partnership would be required for any improvements within this area.
- Depending on level of improvements, partial and total property acquisitions and relocation may be necessary
- Stormwater challenges may be significant, depending on improvement level
- Project team looking for innovative solutions that reduce costs and optimize performance

# Existing Deficiencies



## Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

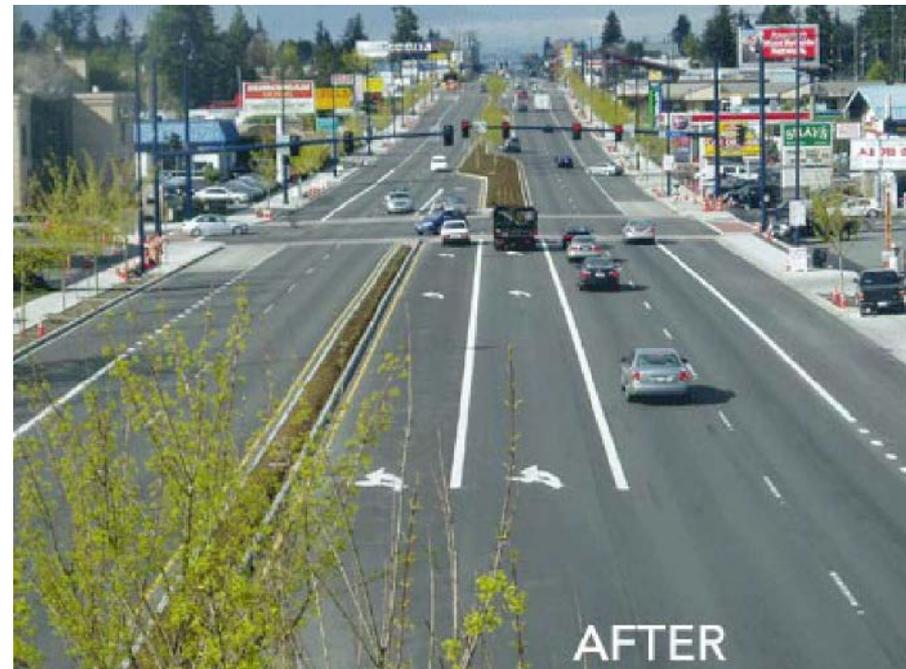
- Railroad bridge is a barrier to pedestrians, bicycles & larger freight trucks
- Lacks 4 travel lanes along entire route
- Lacks safe bus transit stops which do not impede traffic
- Lacks bicycle lanes
- Lacks pedestrian facilities
- Multiple access points to some properties affects safety & mobility
- Power poles & overhead utility lines within sidewalk, do not meet ADA standards
- Signs & banners compete for your attention along the roadway.
- Aesthetics discourage quality redevelopment

# Case Study



## City of Shoreline, Washington – Aurora Corridor Project

First mile of improvements completed in 2008. Second mile will go out to bid 2014.



# Case Study



## Evaluation Matrix for Alternatives

	Alternatives				
	No Action	A	B	C	Draft
Address roadway capacity needs	○	●	●	●	●
Improve transit mobility	○	●	●	●	●
Improve pedestrian & bicycle mobility	○	◐	●	●	●
Improve vehicle safety	○	●	●	●	●
Improve pedestrian & bicycle safety	○	◐	●	●	●
Implement natural stormwater system	○	◐	●	●	●
Improve aesthetics	○	◐	●	●	●
Minimize property take	●	◐	◐	◐	◐
Enhance economic potential	○	●	●	●	●

**Extent to which goal is satisfied:**

- High
- ◐ Medium High
- ◑ Medium
- ◒ Medium Low
- Low

# Case Study



## Shoreline's Aurora Corridor



- **Safer travel on Aurora** – raised medians and left-turn pockets, new sidewalks, pedestrian lighting, accessible design
- **Improved traffic flow and transit services** – improved signal detection, bus lanes, and bus shelters
- **Enhanced corridor aesthetics** – undergrounded utilities, new plantings, patterned and colored paving, street furnishings, stylish retaining walls, public art, gateways
- **Reinvestment to promote economic development**
- **Environmental improvements** – new street trees and shrubs, added green space (planted medians and planting strips), stormwater quality and management



▲ Street trees in the planting strip provide shading and natural beauty along the sidewalk. Tree grates can extend the walkable area of sidewalks. Grates have ring sections that can be knocked out to allow for additional tree trunk growth.

### STREET TREES

- **Large canopy tree planting**
- **Replenish oxygen and filter pollutants**
- **Shading to reduce heat island effect**

### WALK, RIDE, BIKE

- Safety improvements - **crossings, pedestrian light heads**
- **Continuous sidewalks**
- **Planting strips** buffering pedestrians from the roadway
- Linkages to the **Interurban Trail**

### WATER CONSERVATION

The Aurora Corridor project practices the following water conservation measures:

- **Hardy, drought tolerant plants**
- **Drip irrigation**
- **Supplemental irrigation through rain gardens**
- **Water-wise demonstration gardens**



▲ Cobble medians planted with Elijah blue fescue. More examples of drought-tolerant plants are below.



Sedum spectabile 'Purpleum' and Cape Blanco Stonecrop



Halogeton ssp. purpureus BLUE OAT GRASS Lavender spp. LAVENDER variouse



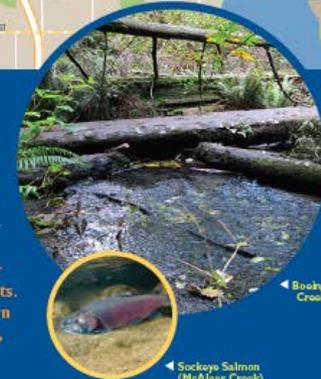
Achillea filifolia 'Moonshine' YARROW Artemisia schmidtiana SILVER MOUND WORMWOOD



▲ Map of creek basins

### BASIN-WIDE WATER QUALITY IMPROVEMENT

An important Aurora Corridor improvement is the capturing, storing, and treatment of stormwater runoff. This is particularly important because the **roadway stormwater contains sediment and pollutants**. Stormwater is not only **slowed down to prevent flooding and erosion**, but also **filtered** before reaching salmon-bearing streams.



▲ Soaking Creek

▲ Sockeye Salmon (McAleer Creek)

Generally, the runoff **north of 185th** flows to **Echo Lake, Lake Ballinger, McAleer Creek, Lake Washington** and eventually **Puget Sound**. The runoff **south of 185th** travels a much shorter distance from **Boeing Creek to Puget Sound**.

### NON-NATIVE SPECIES?

Most native species are **best adapted to cool, forested conditions**, rather than developed urban environments. The drought tolerant plants featured along Aurora Ave are **not necessarily** all Pacific Northwest native species.

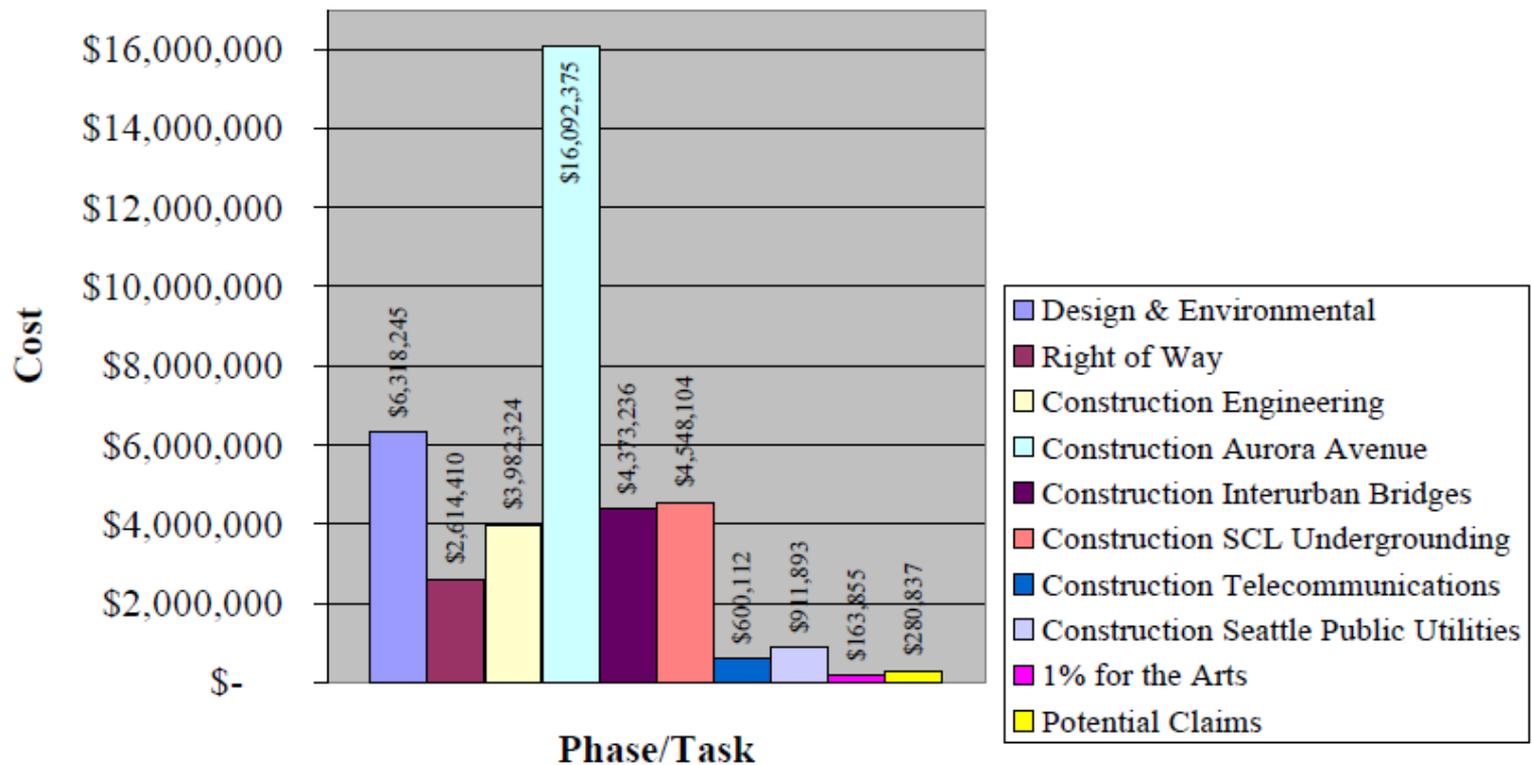


# Case Study



City of Shoreline, Washington – Aurora Corridor Project

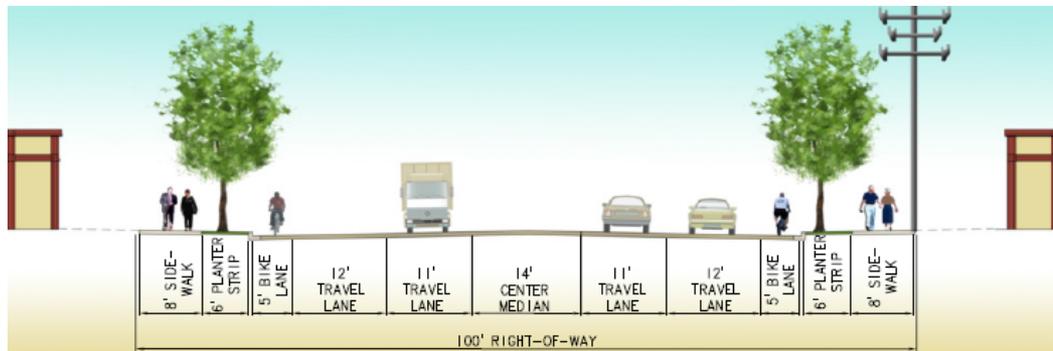
## Total Projected Cost for Aurora Ave N 145th-165th and the Interurban Trail Bridges



# Option 1 – Minor Improvements

## Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

- Cost \$6.8 million dollars (including engineering, design & permitting)
- Sidewalk & pedestrian ramp improvements
- Pavement inlay & restriping
- Stormwater collection
- Transit stop relocation
- Landscaping
- Street amenities (Category I)
- Utilities on the west side placed underground
- Multi-use path improvements
- Retaining walls

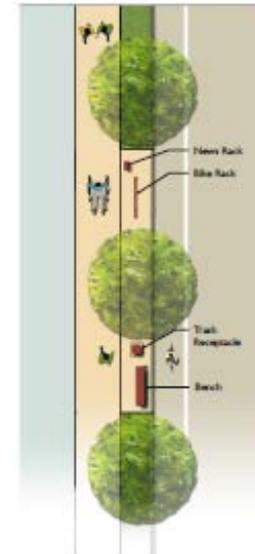


## Option 2 – Medium Improvements

### Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

- Cost \$11.5 million dollars (including engineering, design & permitting)
- Sidewalk & ramp improvements
- Pavement inlay & restriping
- Stormwater collection
- Transit stop relocation
- Landscaping
- Street amenities (Category I)
- Multi-use path improvements
- Retaining walls
- Traffic signal improvements
- Utilities on the both sides placed underground
- Access control measures
- Right-of-way acquisitions

### Category I Amenities



BIKE RACK



TRASH RECEPTACLE

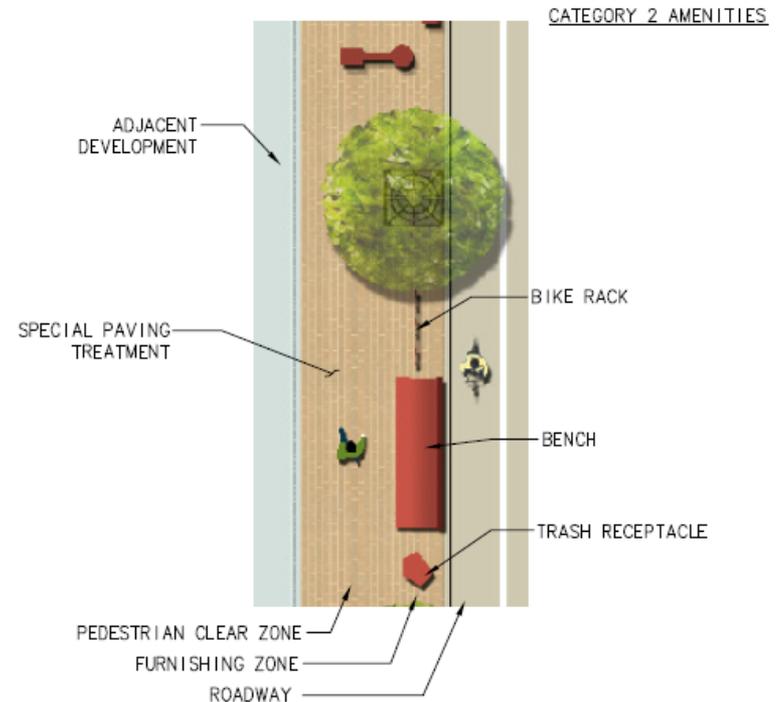


BENCH

# Option 3 – Major Improvements

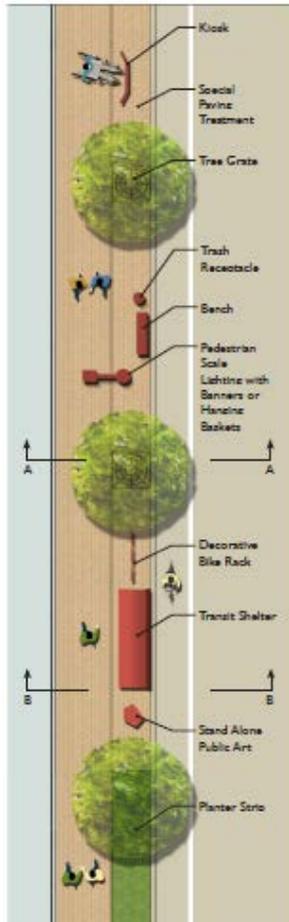
## Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

- Cost \$14.6 to 30.9 million dollars (including engineering, design & permitting)
- Sidewalk & pedestrian ramp improvements
- Pavement inlay & restriping
- Stormwater collection
- Transit stop relocation & enhancements
- Landscaping
- **Street amenities (category I & II)**
- Traffic signal improvements
- Utilities on the both sides placed underground
- High visibility corners
- Retaining walls
- Access control measures
- Right-of-way acquisitions
- **Pedestrian tunnel at railroad**
- **Railroad crossing improvements**
- **Regrade HWY 99 to address substandard clearance**



# Option 3 – Major Improvements

## Category II Amenities



TREES IN DECORATIVE GRATES



SPECIAL PAVING



DECORATIVE BIKE RACK



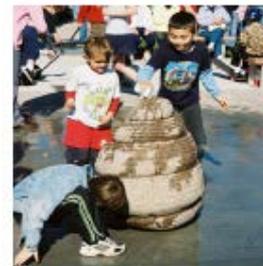
KIOSK



TRANSIT SHELTER



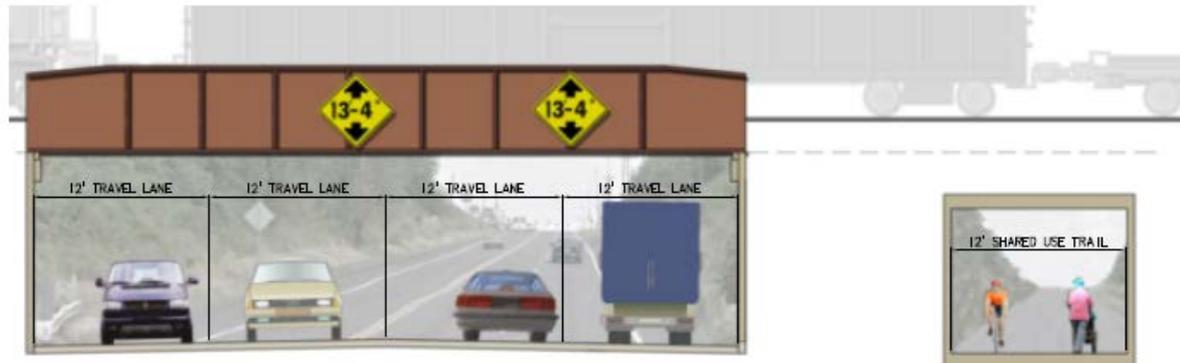
PEDESTRIAN SCALE LIGHT WITH BANNER



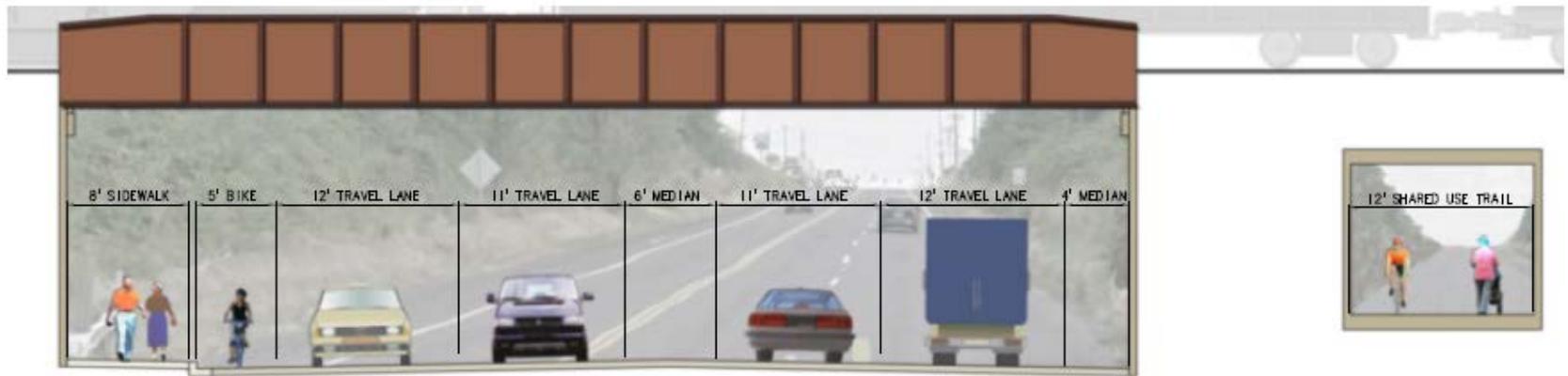
STAND-ALONE PUBLIC ART

# Option 3 – Major Improvements

Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)



Pedestrian Access Tunnel – Section (Option 3A)



Highway 99 Widening/Lowering and New Railroad Bridge – Section (Option 3B)



# Staff Recommendations

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## Highway 99 Concept Plan (Railroad Crossing thru NE 78<sup>th</sup> Street)

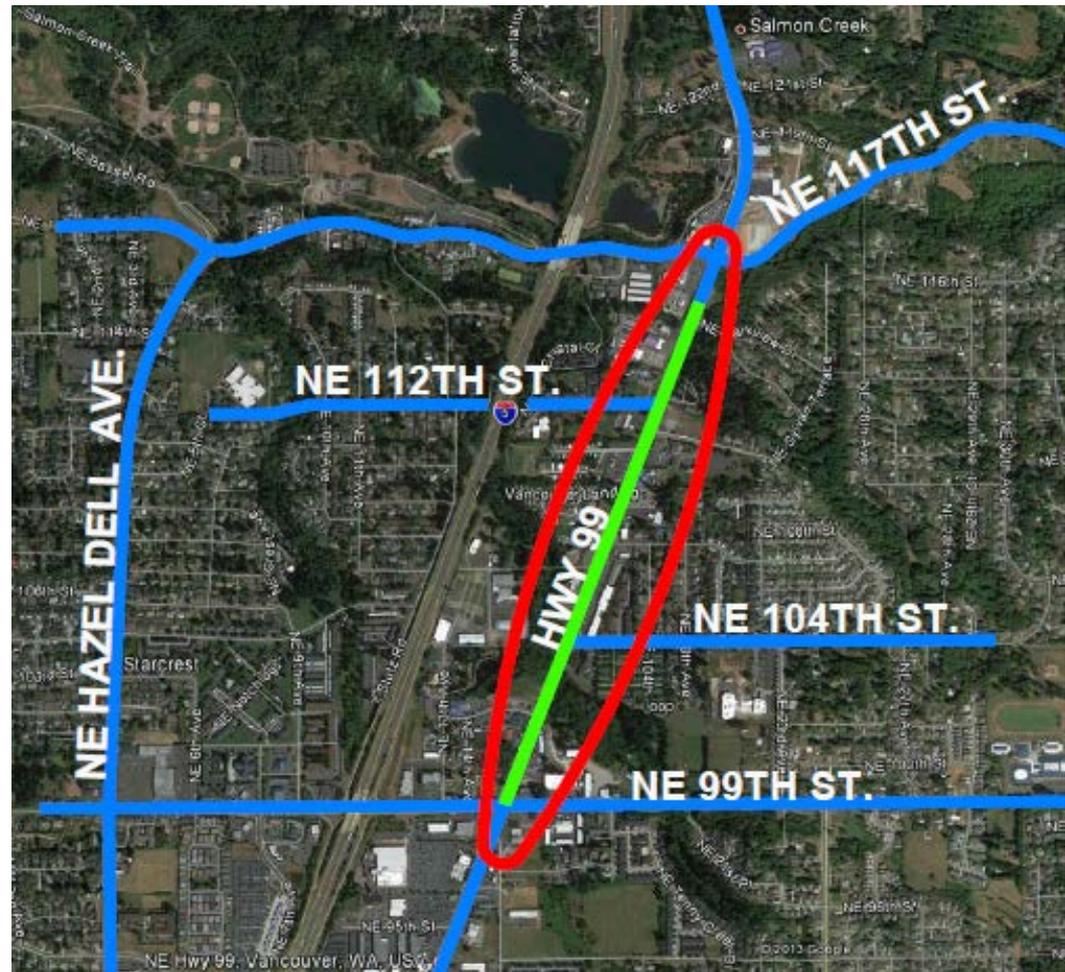
- Hold any major work until planning for northern section of Highway 99 (NE 99<sup>th</sup> Street to NE 129<sup>th</sup> Street) is completed. This will determine the 'standard' for future Highway 99 improvements
- Look for grant opportunities with the City of Vancouver to improve the railroad bridge bottleneck in the NE Ross Street to NE 63<sup>rd</sup> Street section.
- Look for grant opportunities with Highway and Local Programs to improve 'spot' pedestrian deficiencies between NE 63<sup>rd</sup> and NE 78<sup>th</sup> streets
  
- Next Steps
  
- Questions

# Highway 99 Interim Pedestrian Path

Total Length of Improvements: 0.9 Miles

Area bounded by:

- NE 117<sup>th</sup> Street (Parkview)
- NE 99<sup>th</sup> Street



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# Project History



## Highway 99 Interim Pedestrian Path (NE 99<sup>th</sup> Street to NE Parkview)

- Neighborhood and Business Associations have supported providing a safe pedestrian walkway through this segment.
- Parkview to NE 117<sup>th</sup> sidewalk just completed with TIB grant
- Provide a intermediate walking path in the short term
- Construction of NE 99<sup>th</sup> – 107<sup>th</sup> Street scheduled TIP (Traffic Improvement Program) in 2019
- Several existing businesses are encroaching into the public right of way
- Project team looking for innovative solutions that reduce costs and optimize performance

# Existing Deficiencies



## Highway 99 Interim Pedestrian Path (NE 99<sup>th</sup> Street to NE Parkview)

- Lacks safe pedestrian facilities
- Lack of pedestrian connections throughout the entire length of suggested improvements, thus pedestrians are sharing the road with vehicles.
- Narrow pavement sections where Highway 99 crosses water
- Existing power poles, signal poles & overhead utility lines within sidewalk do not meet ADA standards
- Lacks safe bus transit stops which do not impede traffic
- Lacks bicycle lanes
- Lacks center turn lanes
- Low spots within the walking areas fill with runoff



## Minor Improvements (West Side Only)

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### Highway 99 Interim Pedestrian Path (NE 99<sup>th</sup> Street to NE Parkview)

- Cost \$350,000 (including engineering, design & permitting)
- Asphalt pavement
- Curb, with drainage gaps
- Retaining wall
- Landscaping
- Pedestrian crossing signal
- Guardrail
- Bus stop modifications
- Striping

# Staff Recommendations

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## Highway 99 Interim Pedestrian Path (NE 99<sup>th</sup> Street to NE Parkview)

- Construct the interim walkway on the west side of Highway 99 as discussed
  - Possible construction 2014
  - Funded by sidewalk/ADA ongoing program
  - Replaced by full sidewalk installations with Highway 99 roadway improvements after 2019.
- 
- Next Steps
  - Questions