I-405/NE 85th Street Interchange and Inline BRT Station Project

Kirkland Transportation Commission

May 22, 2019
Agenda

• Welcome and introductions
• Objectives
• Project overview
• Design development
• Design, access, and mobility
  • Funded elements
  • Unfunded elements
• Next steps
• Questions
Objectives for tonight’s meeting

• Provide recap of NE 85th Street interchange project progress to date
• Review previous outreach efforts and how WSDOT has responded to feedback
• Present design concepts incorporating previous outreach comments
• Collect additional feedback from commissioners
Cynthia Padilla, AIA, LEED AP BD+C
I-405 BRT Project Manager
Sound Transit
I-405 transit planning

I-405 Bus Rapid Transit builds upon the:

- I-405 Master Plan (2002)
- Sound Transit Long-Range Plan (2014)
- Sound Transit 3 Plan (2016)
In-405 Bus Rapid Transit

I-405/NE 85th Street Interchange and Inline Station Project

- Stride BRT Station location adjacent to downtown Kirkland to the west and access to Redmond to the east
- WSDOT and Sound Transit began conceptual development in early 2018
- Sound Transit Board approved continued design development in December 2018
- Preliminary engineering in 2019
Project coordination

I-405/NE 85th Street Interchange and Inline Station Project

Cross Kirkland Corridor

85th Connection Project

Kirkland Urban

Moss Bay

I-405/BRT

120th AVE NE

114th AVE NE

LEE JOHNSON

Madison Rose Hill

COSTCO

 Everest

North Rose Hill

NE 85th Street

South Rose Hill

NE 80th Street

Sound Transit

WSDOT
Barrett Hanson, PE
Engineering Manager
WSDOT I-405/SR 167 Program
I-405 Master Plan

Regional Consensus
• EIS Record of Decision, 2002
• Multimodal, multiagency plan

Roadways
• Two new lanes in each direction
• Local arterial improvements

Transit and Transportation Choices
• Bus rapid transit system
• New transit centers
• 50 percent transit service increase
• HOV direct access ramps and flyer stops
• Managed lanes system
• 5,000 new park and ride spaces
• 1,700 new vanpools

Environmental Enhancements
Concept development process

**Statement of Need:** Multimodal connectivity between I-405 Bus Rapid Transit and the NE 85th Street corridor to fulfill the City of Kirkland’s vision and the I-405 Master Plan, including express toll lanes.

Stakeholders involved:
- City of Kirkland
- Federal Highway Administration
- Federal Transit Administration
- King County Metro
- Sound Transit
- WSDOT

Items of importance:
- Transit connectivity
- Nonmotorized mobility/connectivity
- Kirkland Vision
- Compatibility with master plans
- Vehicular traffic operations
- Cost
I-405/NE 85th Street Interchange

Project Description:
- Construct a three-level interchange with inline BRT station, direct access ramps to ETLs, and local roadway improvements
- Fully funded by Sound Transit

Level 3 (Top)
I-405 mainline

Level 2 (Middle)
Transit station and access to ETLs

Level 1 (Bottom)
Through traffic on NE 85th Street and access to/from I-405 general purpose lanes

Local bus stops
Same level as BRT stops

BRT stations
Below I-405 level, no vertical transfer required to 85th

Pedestrian walkways
Maximum 5% grade, no switchbacks
Existing nonmotorized facilities
Nonmotorized improvements

Funded nonmotorized elements
Proposed unfunded nonmotorized elements and drop-off/pickup area
Existing connection
I-405/NE 85th Street Interchange

Video
Considerations identified by stakeholders

Motorized access and mobility issues
- **Kiss and ride/drop-off facilities**
- Compatibility for automated/connected vehicles
- Existing local street traffic issues
- **Existing intersections at 114th and 120th Ave NE**
- Coordination with 85th bus only lanes

Nonmotorized access and mobility issues
- BRT and local stop locations and design
- Bike parking facilities
- **Connections between inline station and Cross Kirkland Corridor, local streets, greenways**
- Urban design
Karl Westby, PhD
Traffic Engineering Manager
WSDOT I-405/SR 167 Program
Preliminary traffic study area

- Evaluated area-wide traffic impacts
- Changes were localized
Design concepts: NE 85th Street (level 1)
Signalized design – motorized operations

2045 peak period level of service, AM/PM

Legend:
- LOS X/X
- Roadway
- Proposed sidewalk
- Existing sidewalk
Non-signalized design – motorized operations

- Allows for continual traffic flow
- Eliminates need for left turn lanes; footprint reduction from 7 lanes to 4 lanes

Legend:
- LOS X/X: 2045 peak period level of service, AM/PM
- Roadway
- Proposed sidewalk
- Existing sidewalk
Signalized design – nonmotorized

- 7-lane crossing (~100 feet)
- 40-60 second signal delay at each crossing
Non-signalized design – nonmotorized

- Shorter crossings (~48 feet) w/ refuge areas
- Buffer separation for nonmotorized users
- Crossings prior to intersection with flashing beacons

Legend:
- Roadway
- Proposed sidewalk
- Existing sidewalk

[Map showing proposed changes at a roundabout intersection]
Non-signalized design – roundabout safety

**Intersection**

- 32 Vehicle conflicts
- 24 Pedestrian conflicts

**Roundabout**

- 8 Vehicle conflicts
- 8 Pedestrian conflicts

**Reduction in collisions**

- Overall collisions: 37% reduction
- Injury collisions: 75% reduction
- Fatality collisions: 90% reduction
- Pedestrian collisions: 40% reduction

Source: Federal Highway Administration and Insurance Institute for Highway Safety (FHWA and IHS)
Operations: 120th Avenue NE/NE 85th Street

Third eastbound lane, 120th-122nd, assumed in Build alternative, to be constructed by others

* Conditions are independent of NE 85th Street Interchange Project.
Diana Giraldo, PE
Design Project Engineer
WSDOT I-405/SR 167 Program
Neighborhood connections

- SW Connection
- NW Connection
- SE Connection
- NE Connection

- Drop-off/pickup area (kiss and ride)

Legend:
- Funded nonmotorized elements
- Proposed unfunded nonmotorized elements and drop-off/pickup area
- Existing connection
Neighborhood connections: SW

- **Funded nonmotorized elements**
- **Proposed unfunded nonmotorized elements and drop-off/pickup area**
- **Existing connection**

**Highlights**
- Detention Pond
- SW Neighborhood Connection
- SB On-Ramp
- Slater St 4% Grade
- NE 85th St Sidewalk
- SW Connection

**Logos**
- Sound Transit
- WSDOT
Neighborhood connections: SE

- Funded nonmotorized elements
- Proposed unfunded nonmotorized elements and drop-off/pickup area
- Existing connection

116th Ave NE 2% Grade
4% Grade
Max 8% w/ Landings
NE 85th St Sidewalk
Neighborhood connections: NE

1. Funded nonmotorized elements
2. Proposed unfunded nonmotorized elements and drop-off/pickup area
3. Existing connection

- NE 85th St Sidewalk
- 1% Grade
- Costco Parking
- NB I-405 On-Ramp
- NB On-Ramp
- NE Neighborhood Connection

Sound Transit
WSDOT
Neighborhood connections: NW

- **NW Connection**

- **Funded nonmotorized elements**
- **Proposed unfunded nonmotorized elements and drop-off/pickup area**
- **Existing connection**

**Key Points**:
- NE 85TH ST SIDEWALK
- 2% GRADE
- NE 87TH ST
- NW Neighborhood Connection
- SB Off-Ramp
- SB I-405

**Diagram Details**:
- Illustrated connections and pathways within the NW neighborhood
- Visual representation of funded and proposed nonmotorized elements
- Marked sections for existing connections
Drop-off/pickup area

Drop-off/pickup area (kiss and ride)
NEXT STEPS

Cynthia Padilla, AIA, LEED AP BD+C
I-405 BRT Project Manager
Sound Transit
## Project timeline

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
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<tbody>
<tr>
<td><strong>Conceptual Design Development</strong></td>
<td><strong>15% Design Conceptual Plan</strong></td>
<td><strong>Traffic Analysis and IJR</strong></td>
<td><strong>ENV Clearance and Permitting</strong></td>
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<td><strong>Right of Way Acquisition</strong></td>
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**Public and Stakeholder Communications**

- Start BRT operations
Community outreach

2018
• Kirkland Transportation Commission
• Kirkland City Council Ad Hoc Committee
• Kirkland City Council Study Session
• 4 stakeholder workshops
• 1 public open house

2019 (to date)
• 6 Kirkland neighborhood briefings for I-405 BRT

Upcoming outreach
✓ Kirkland Alliance of Neighborhoods (May 8)
✓ Kirkland Transportation Commission (May 22)
☐ Open house (June 10)
☐ Kirkland City Council Ad Hoc Work Group (June 14)
☐ Kirkland Transportation Commission (June 26)
☐ Kirkland City Council (July 2)
Questions?
Contact

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Sound Transit
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