Sound Transit
Leveraging Highway Infrastructure for Better Bus Service
10/29/2020
Agenda

• Service Overview
• Opportunities and Challenges with Highway Operations
• Transitioning to High-Capacity Transit
• Lessons Learned
Service Overview
System Overview

- **ST Express**
  - FAST, FREQUENT REGIONAL BUS SERVICE

- **Sounder**
  - HIGH CAPACITY COMMUTER RAIL

- **Link**
  - FREQUENT, RELIABLE HIGH-CAPACITY LIGHT RAIL

- **Tacoma Link**
  - LIGHT RAIL WITH MULTI-MODAL CONNECTIONS
ST Express Overview

- 28 routes spanning 3 counties
  - Regional, Overlay, Connecting
- Fleet of 360 buses, including CNG, diesel, and diesel-electric hybrids
- 70k daily platform hours
- 61k daily riders
ST Express Guiding Principles

1. Provide regional express service and work with partners to provide local connections

2. Integrate with high-capacity transit and emulate future service

3. Connect regional populations and employment centers

4. Integrate with other modes to create an all-day, all-week network for customer convenience
Opportunities and Challenges with Highway Operations
Flyer/Off-Ramp Stop
Freeway-Adjacent TC
In-Line Freeway Station

Operating in HOV and Express Lanes

LEGEND
- ST Express regional bus
- Link light rail (Red Line / Blue Line)
- Sounder rail
- Transfer opportunity between modes
- Represents multiple stops, detail not shown
- Stop or station
- Service on select trips only
- Service continues to stated destination

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Sound Transit
## Benefits and Tradeoffs

<table>
<thead>
<tr>
<th>In-Line Freeway Station</th>
<th>Freeway-Adjacent Transit Center</th>
<th>Flyer/Off-Ramp Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits</strong></td>
<td><strong>Benefits</strong></td>
<td><strong>Tradeoffs</strong></td>
</tr>
<tr>
<td>Best use of HOV/express lanes for travel time and reliability</td>
<td>May leverage HOV/express lanes, shortest walk, easier transfers to local service</td>
<td>Most affordable to install, easiest to implement with existing infrastructure</td>
</tr>
<tr>
<td><strong>Tradeoffs</strong></td>
<td>Requires longest deviations</td>
<td>Slower, harder to maintain consistent stop patterns</td>
</tr>
<tr>
<td>Most expensive, difficult transfers to local service</td>
<td></td>
<td></td>
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</tbody>
</table>

*Source: TransitCenter*  
*Source: Seattle Times*  
*Source: UW's The Daily*
In-Line Freeway Station Examples

**Eastgate**

**Mountlake Terrace**

- **Express routes**
- **Connecting Local Service**
- **Bus bay #3**
Leveraging Highway Projects, Transitioning to HCT
WSDOT I-405/SR 167 Project

- 50-mile Express Toll Lane System
- Direct Access and Direct Connectors
- P&R + Transit Center Expansions
- Center-running BRT
S2: BRT on I-405 North

- Flyer/Off-Ramp Stop
- Freeway-Adjacent TC
- In-Line Freeway Station

Legend:
- ST Express regional bus
- Link light rail (Red Line / Blue Line)
- Single bus rapid transit (BRT)
- Transfer opportunity between modes
- Represents multiple stops, detail not shown
- Stop or station
- Service continues to stated destination

*Date pending capital realignment
NE 85th Street (Kirkland)

**Level 1 (bottom)**
NE 85th Street through traffic and access to/from I-405 general purpose lanes

**Level 2 (middle)**
- Nonmotorized users
- Access to/from I-405 ETLs for transit and ETL users

**Level 3 (top)**
I-405 mainline

**KCM local bus stops**
Same level as STRIDE stations

**STRIDE inline stations**
Below I-405 level, no vertical transfer required to NE 85th Street

**Nonmotorized access**
Maximum 5% grade, no switchbacks

**Legend**
- ST: Sound Transit
- ETL: I-405 Express Toll Lanes
- KCM: King County Metro
I-405 BRT travel times

AM peak hour travel times to Bellevue

North Line – Lynnwood to Bellevue

<table>
<thead>
<tr>
<th></th>
<th>Time (min)</th>
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</thead>
<tbody>
<tr>
<td>ST Express (existing)</td>
<td>57</td>
</tr>
<tr>
<td>ST3 representative project*</td>
<td>50-55</td>
</tr>
<tr>
<td>I-405 BRT proposed refined project*</td>
<td>46-51</td>
</tr>
<tr>
<td>I-405 BRT with north express toll lanes</td>
<td>33-38</td>
</tr>
</tbody>
</table>

South Line – Burien to Bellevue

<table>
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<th></th>
<th>Time (min)</th>
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<tr>
<td>ST3 representative project*</td>
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</tr>
<tr>
<td>I-405 BRT proposed refined project*</td>
<td>38-42</td>
</tr>
</tbody>
</table>

*Preliminary travel time estimates for planning purposes, subject to change. Existing travel times are average times. Year 2025 estimates assume new express toll lanes are open between Renton to Bellevue. Updated information will be provided prior to beginning service.
Lessons Learned
Lessons Learned

• Make ongoing improvements with future projects and goals in mind
• Leverage partners, their projects, and political champions
• Don’t make bike/ped and bus connections an afterthought
• Don’t wait till it’s perfect: build markets and support now
Thank you.

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