Seattle Industrial Areas
Freight Access Project
Summary of Existing Conditions
Presentation overview

• Project area
• Project objectives
• FAB workshops
• Existing conditions
• Next steps
• Questions
Project area

• MICs
  – Ballard/Interbay
  – Duwamish

• Connecting Corridors between MICs

• Corridors from the MICs to the Regional Highway System
Project objectives

1. Increase safety for all travel modes

2. Maintain and improve truck mobility and access to accommodate expected general traffic, freight, and cargo growth

3. Ensure connectivity for major freight intermodal facilities

4. Reduce environmental impacts, including greenhouse gas emissions

Image Credit: WSDOT
<table>
<thead>
<tr>
<th>FAB workshops</th>
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<tr>
<td><strong>Issues, concerns, solutions</strong></td>
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<td><strong>Performance Measures</strong></td>
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<tr>
<td><strong>Summary of Existing Conditions</strong></td>
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<td><strong>Future Conditions</strong></td>
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<tr>
<td><strong>Draft improvement concepts</strong></td>
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<td><strong>Final Draft improvement projects</strong></td>
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Existing conditions for trucks

- Street network
- Mobility constraints
- Corridor volumes
- Corridor travel speeds
- Collision history
- Pavement and bridge conditions
- Multi-modal demands
Street network

- Arterial Streets – trucks are allowed

- Major Truck Street:
  - principal arterials
  - Complete Streets ordinance states “freight will be the major priority”

- Last mile connections
Mobility constraints

Intersection Operations

Geometric Constraints

Height Restrictions

At-grade RR Crossings
Mobility constraints

Weight & Width Restrictions

Port/Rail Yard Operations

Moveable Bridges
Mobility constraints

- Height Restriction (Less than 14’0”)
- Geometric Constraint
- Weight Restriction
- Intersection Operations
- At-Grade Rail Crossing

- > 9% Slope
- 5-8% Slope

- Moveable Bridge
- Downtown Traffic Control Zone
Average daily truck & auto volumes

Source: 24-hour tube counts from 14 locations in the Duwamish MIC.
Truck volumes – reading the maps

Average Daily Traffic Volume (ADT)

Average Daily Truck Volume

Color represents percent of trucks in the traffic stream

Example Map
Truck volumes

• 15th Avenue NW and Elliott Ave W have the highest daily percentage of trucks

• Limited east-west truck routes

• Data gaps still exist
Truck volumes

- Few surface street connections through Downtown
Truck volumes

- Trucks account for more than 10 percent of traffic on most roadways.
- Port activity contributes to the large number of Duwamish truck movements.
New travel speed methodology

• Congestion measured as percent of posted speed limit
  – i.e. < 60% of speed limit is severely congested flow

• Focus on peak periods
  • 7:00 to 9:00 AM
  • 3:00 to 5:00 PM

Example

Average auto & truck speeds
Congestion levels – north

AM Peak: 7:00 – 9:00 AM

PM Peak: 3:00 – 5:00 PM
Congestion levels – central

AM Peak: 7:00 – 9:00 AM

PM Peak: 3:00 – 5:00 PM
Congestion levels—south

AM Peak: 7:00 – 9:00 AM

PM Peak: 3:00 – 5:00 PM
System reliability

What it Measures

• Variability of travel time or delay

• Concept of buffer index
Buffer index

How traffic conditions have been communicated

Travel Time

Annual average


What travelers experience...

Travel Time

Travel times vary greatly day-to-day


...and what they remember

Example

Plan for 40% more travel time ~ or six additional minutes to arrive on-time

Buffer Index (40%) = 95th-Percentile (21 min) minus Average (15 min)
# Rail operations

- At-grade rail crossings on mainline in MICs

<table>
<thead>
<tr>
<th>Average Daily Totals (2012 weekday)</th>
<th>Duwamish MIC</th>
<th>MIC connection</th>
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<tbody>
<tr>
<td></td>
<td>Holgate Street</td>
<td>Lander Street</td>
</tr>
<tr>
<td>Train Crossings</td>
<td>107</td>
<td>87</td>
</tr>
<tr>
<td>Total Gate Down Time (hours)</td>
<td>3.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Average Gate Down Time (min.)</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Minimum/ Maximum Gate Down Time (min.)</td>
<td>0.3 – 8.2</td>
<td>0.5 – 8.1</td>
</tr>
<tr>
<td>Average Train Speed (mph)</td>
<td>7.4</td>
<td>8.1</td>
</tr>
<tr>
<td>Minimum/Maximum Train Speed (mph)</td>
<td>0.4 – 24.6</td>
<td>0.5 – 22.9</td>
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Source: SDOT Coal Train Traffic Impact Study (2012)
## Next steps

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<th>Task Description</th>
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<td>July</td>
<td>Future Conditions and Needs Identification</td>
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<tr>
<td>September</td>
<td>Improvement Project Identification and Prioritization</td>
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<td>October/November</td>
<td>Preparation of Draft Plan</td>
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Questions?

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www.seattle.gov/transportation/freight_industrialareas.htm

http://www.seattle.gov/transportation