Improving the Pedestrian Realm in Station Areas
Celeste Gillman, Washington State Department of Transportation
WSDOT’s Vision
• The Washington State Department of Transportation’s vision is to be the best in providing a sustainable and integrated multimodal transportation system.

WSDOT’s Mission
• The Washington State Department of Transportation provides and supports safe, reliable and cost effective transportation options to improve livable communities and economic vitality for people and businesses.
SPATIAL EFFICIENCY
TRAFFIC WORLD AND SOCIAL WORLD

TRAFFIC WORLD

SOCIAL WORLD
Figure 4.1: Risk of pedestrian fatality calculated using logistic regression from the Ashton and Mackay, OTS and police fatal file, and Rosen and Sander datasets.

Pedestrian impacts with front of cars

- Ashton and Mackay data (all ages, n = 358)
- OTS and fatal file data (all ages, n = 197)
- Rosen and Sander data (ages 15–96, n = 490)
DESIGN WITH HUMAN NATURE, NOT AGAINST IT
Hayley Bonsteel, City of Kent
Lynnwood Transit Center Multimodal Accessibility Plan
Interagency Advisory Group

CONSULTANT TEAM

Fehr & Peers

ICF

TSI Transportation Solutions, Inc.

MAKERS

architecture, planning, urban design
Priorities

- Improve auto, bus, pedestrian and bicycle access by identifying multimodal improvement connections to the Lynnwood City Center, Transit Center and the Interurban Regional Trail;
- Reduce growing travel demand on I-5;
- Reduce transportation-related greenhouse gas emissions;
- Support the City Center Plan to facilitate a dense and walkable urban center;
- Leverage WSDOT assets to further transit-oriented development;
- Identify barriers to safe efficient multimodal travel, with consideration for people with special needs and economically disadvantaged populations; and,
- Enhance the community and environment while improving the resiliency of critical transportation facilities.
Lynnwood Transit Center

- Served by Community Transit and Sound Transit
- 4,800 daily boardings in 2014
- 17,900 daily boardings projected by 2035 with Link light rail
- 1,370 surface parking stalls
- 52% of users arrive from < 2.5 miles
- 500 busses per day with 40+% of all CT routes entering the LTC
Figure 7. Mode of Access to the Lynnwood Transit Center

Survey also found Drop off by DART (Dial-A-Ride-Transit) or TAP (Transportation Assistance Program) = (<1%); Carpool = (0%).

Figure 6. Existing Transit Service, 2016

Source: Community Transit.
Public Input

• Improved pedestrian environment at 44th Ave W and I-5 underpass
• Upgrades to the Scriber Creek and Interurban Trails
• More direct walkways, mid-block crossings
• Wider sidewalks along key roadways
• Improved bicycle facilities
• Better connections to the Transit Center
# Access Objectives

This section outlines the Lynnwood Transit Center access objectives by mode. These objectives were developed through coordination with the IAG and community stakeholders, and they assisted in defining the performance metrics to analyze proposed access improvement projects.

## Transit

The over-arching transit access objective is to increase ridership at the Lynnwood Transit Center. Supporting objectives related to feeder transit services to the Lynnwood Transit Center include:

1. Maintain or improve travel times, route directness, and increase transit (bus/shuttle) service frequency.
2. Minimize impacts of traffic congestion and drop-offs/pick-ups on transit.
3. Provide convenient and safe connections between local and regional transit.

## Pedestrian

In anticipation of the increased pedestrian demands at the Lynnwood Transit Center, the pedestrian objectives include:

1. Provide safe, efficient connections within a 15-minute walk shed of the Lynnwood Transit Center.
2. Provide safe crossing opportunities, particularly of arterials surrounding the site (200th St, 48th Ave W, 46th Ave W, and 44th Ave W).
3. Enhance safety and comfort for pedestrians to encourage non-auto access.

## Bicycle

Based on the anticipated increase of bicycle access associated with a shift to non-motorized access modes, the bicycle access objectives include:

1. Provide safe and efficient connections between the Lynnwood Transit Center and adjacent streets within a 3-mile catchment area.
2. Provide safe and well-lit bicycle crossings of arterial streets.
3. Connect local bicycle facilities to the regional bicycle system.

## Auto

Based on existing conditions and anticipated automobile access needs to the at the Lynnwood Transit Center, the objectives for auto access include:

1. Provide convenient access to the parking facility.
2. Provide safe separation from non-motorized users.
3. Manage parking to reduce peak vehicular demands.
Baseline Performance Measures

Station-Area Measures:
Capture factors that determine ridership and will help stakeholders understand how different alternatives support the goal of increasing ridership.

Regional Measures:
Assess how ridership changes affect travel along I-5 connecting Lynnwood to Seattle.

Table 4. Baseline Performance Measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Measure Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Area Measures</td>
<td></td>
</tr>
<tr>
<td>Ridership</td>
<td>Average weekday Link boardings at Lynnwood Transit Center</td>
</tr>
<tr>
<td>Land use</td>
<td>Number of jobs and housing units located within a half-mile (network distance) of the station</td>
</tr>
<tr>
<td>Bicycle access</td>
<td>Average level of traffic stress on key bicycle routes within 3 miles (a 15-minute ride) of the station</td>
</tr>
<tr>
<td>Pedestrian access</td>
<td>Average intersection density within a 15-minute walk of the station</td>
</tr>
<tr>
<td>Pedestrian access</td>
<td>Percent of blocks within a 15-minute walk of the station that have adequate pedestrian facilities</td>
</tr>
<tr>
<td>Transit access</td>
<td>Number of people, jobs, and college students located within a 15-minute bus ride from the station</td>
</tr>
<tr>
<td>Auto access</td>
<td>Number of intersections within a mile of the station exceeding city LOS standard during PM peak period</td>
</tr>
<tr>
<td>Auto access</td>
<td>Number of transit riders arriving by vehicle per station area parking stall</td>
</tr>
</tbody>
</table>

Regional Measures

| Mode Split | Vehicle trips and miles reduced due to transit                                      |
| GHG and pollution | Greenhouse gas and pollutant emissions reduced due to strategies                     |

2 "Adequate" refers to streets with 12" sidewalks on both sides of streets that match Streetscape Design Standards (where applicable).
Contextual Measures

Address community needs but are either not quantifiable or are not directly related to ridership.

Were qualitatively evaluated to help understand tradeoffs that may exist between future scenarios.

Table 5. Contextual Measures

<table>
<thead>
<tr>
<th>Performance Measure Category</th>
<th>Contextual Need or Issue</th>
</tr>
</thead>
</table>
| Safety                       | • High-conflict locations for bikes/pedestrians/transit near station  
                              | • Safety along Scriber Creek and Interurban trails |
| Environmental Justice        | • Existing affordable housing development near station  
                              | • Viability of existing businesses serving local population |
| Social / Community           | • Downtown encourages urban living (mix of uses, compact development) |
| Urban Design                 | • Surrounding streets are uncomfortable and uninteresting for walking |
| Economic development         | • Support for market-rate development |
| Environmental                | • Impacts to wetlands  
                              | • Flood risk due to limited stormwater manag (Scriber Creek focus)5 |
| Implementation               | • Ability to leverage WSDOT and other resources |
| Public Health                | • Opportunities for active transportation to encourage personal fitness |
Ridership
Existing: 4,800
2035 Baseline: 17,900
2035 LMAP: 22,600 - 23,700

Land Use
Existing: 4,500 & 3,700
2035 Baseline: 7,100 & 6,100
2035 LMAP: 12,500 & 11,500
Walkshed

Existing: 90 & 107
2035 Baseline: 96 & 121
2035 LMAP: 100 & 132

Evaluation Results

Existing: 0% and 15%
2035 Baseline: 40% & 17%
2035 LMAP: 100% & 40%

15-minute walk shed and City Center intersection density, respectively.

15-minute walk shed with adequate pedestrian facilities per Streetscape Type 2 and Prominent Intersections, City Center and non-City Center arterials, respectively.
Bikeshed

Existing: 1.9 & 2.6*
2035 Baseline: 1.8 & 2.2*
2035 LMAP: 1.6 & 1.9*

On scale of 1 (low) to 4 (high) stress ride.
*does not include fully separated Interurban Trail.
Evaluation Results

Mode split measures resulting in weekday vehicle trips reduced and weekday VMT reduce, respectively.

Existing: 2,110 & 18,290
2035 Baseline: 7,875 & 68,205
2035 LMAP: 9.9k-10.4k & 86.1k-90.4k

Auto
2035 LMAP transit shed overlaid with heat equity maps indicating low, medium or high:

- Below poverty
- Non-English speaking
- Communities of color
- Below median income
- Gini index
Contextual Measures

Graphs represent specific measures from each category.

Safety

Environmental Justice

Social/Community

Urban Design

Economic Development

Environmental

Implementation

Public Health
# Implementation Packaging

<table>
<thead>
<tr>
<th>Package</th>
<th>Rationale</th>
<th>Project #</th>
<th>Project Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Non-motorized Access Improvements</td>
<td>Close proximity to station area; early win opportunity</td>
<td>P1</td>
<td>Interurban Trail Improvements near Station</td>
<td>⭕️⭕️⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B1</td>
<td>Scriber Creek Trail Improvement (Transit Center to Wilcox Park)</td>
<td>⭕️⭕️●</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P8</td>
<td>44th Ave/I-5 Underpass</td>
<td>⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P10</td>
<td>200th St Widen Sidewalks (50th Ave W - 44th Ave W)</td>
<td>⭕️⭕️</td>
</tr>
<tr>
<td>Southeast Bicycle and Auto Access Improvements</td>
<td>Provides bike network and new connections</td>
<td>A1</td>
<td>Poplar Way Extension Bridge (Poplar Way – 33rd Ave W)</td>
<td>⭕️⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A4</td>
<td>40th Ave W Crossing of I-5</td>
<td>⭕️</td>
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<td></td>
<td></td>
<td>B19</td>
<td>204th St Facility (44th Ave - Poplar Way)</td>
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<tr>
<td></td>
<td></td>
<td>B18</td>
<td>Larch Way / 204th St SW</td>
<td></td>
</tr>
<tr>
<td>Northwest Bike Access Package</td>
<td>Completes key bike network connections</td>
<td>B6</td>
<td>Bike lockers at SWIFT stops</td>
<td>⭕️⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B16</td>
<td>Center to Sound Trail (Wilcox Park to SR 99)</td>
<td>⭕️⭕️</td>
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<tr>
<td></td>
<td></td>
<td>B20</td>
<td>At-grade crossing on Cedar Valley Rd/201st Pl &amp; 201st Pl Greenway</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B17</td>
<td>36th Ave W (196th St SW – 184th Pl SW)</td>
<td></td>
</tr>
<tr>
<td>Transit Package</td>
<td>Completes transit connections to station area with good traveler information</td>
<td>T1</td>
<td>196th St Widening (I-5 – 48th Ave)</td>
<td>⭕️⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T2</td>
<td>SWIFT on 196th St</td>
<td>⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4</td>
<td>196th St SWIFT reroute to LTC</td>
<td>⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T5</td>
<td>Transit Signal Priority Routes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6</td>
<td>Expand Customer Service at LTC</td>
<td></td>
</tr>
<tr>
<td>Land Use/Policy Package</td>
<td>Logical grouping of land use policies supporting City Center</td>
<td>LU3</td>
<td>Encourage new development in the City Center to include pedestrian pathways</td>
<td>⭕️⭕️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LU1</td>
<td>Right of Way Preservation Ordinance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LU2</td>
<td>Encourage increased density of residential growth farther west of 44th Ave</td>
<td>⭕️</td>
</tr>
</tbody>
</table>
## Implementation Rating

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Higher ✓✓✓</th>
<th>Medium ✓✓</th>
<th>Lower ✓</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic Development</strong> (Weight=1)</td>
<td>Supports City Center Land Use Vision</td>
<td>Within City Center or transit station</td>
<td>Adjacent to City Center or transit station</td>
<td>Outside</td>
</tr>
<tr>
<td><strong>Accessibility (Weight=3)</strong></td>
<td>Improves access to LTC and improves ridership</td>
<td>Measurable change</td>
<td>Some change</td>
<td>Minimal change</td>
</tr>
<tr>
<td></td>
<td>Serves multiple modes</td>
<td>3+ modes</td>
<td>2 modes</td>
<td>1 mode</td>
</tr>
<tr>
<td></td>
<td>Connectedness</td>
<td>Completes missing links</td>
<td>Improves an existing facility</td>
<td>No change</td>
</tr>
<tr>
<td><strong>Ease of Implementation</strong> (Weight=2)</td>
<td>Cost</td>
<td>Lower Cost (&lt;$5 million)</td>
<td>Low – High Cost ($5-10 million)</td>
<td>Higher Cost (&gt; $10 million)</td>
</tr>
<tr>
<td></td>
<td>Project Readiness</td>
<td>Ready to go. Identified time line and/or has funding committed</td>
<td>Some or all design complete</td>
<td>Minimal or some initial planning completed</td>
</tr>
<tr>
<td></td>
<td>Level of Complexity</td>
<td>Simple design</td>
<td>Design needed but straightforward project</td>
<td>Complex design, may need multiple entities involved</td>
</tr>
</tbody>
</table>
Visualizing Strategies on 44th Avenue West

- Gateway opportunity
- Proposed street with placemaking opportunities
- Linear park along 44th Ave (in addition to streetscape improvements)
- Gateway/place making opportunities
- Connection to Interurban Trail with gateway opportunity
- Connection to Interurban Trail
- Multi-purpose trail
- Crossing improvements
- Proposed street
- Lynnwood Transit Center
- Snohomish Creek Trail
- Interurban Trail
Visualizing Strategies at the 44th Avenue West and I-5 Underpass
Visualizing Strategies on 48th Avenue West
Dustin Akers, AICP, CNU-A
City Center Program Manager
425.670.5045
dakers@lynnwoodwa.gov
Connections in Place:
Mobility Hubs in Seattle

Improving the Pedestrian Realm in Station Areas
Kyle Rowe
October 11, 2017
Today’s agenda

• New Mobility Playbook

• Mobility Hub Program

• Case study: Westlake Mobility Hub
What is new mobility?

- Emerging technologies
- Smartphone- or app-enabled
- Shared mobility services
- On-demand and door-to-door service
- Need-based/pay-as-you-go
- Access to information
- Built on data infrastructure
- Electric vehicles
SDOT’s role within new mobility

As industry and consumer preferences shift...

• Industry growth and disruptions
• More sharing and choice
• Rapid socialization
• Low barrier to entry

SDOT responds and anticipates...

• Anticipatory governance
• Nimble and effective regulations
• Innovation-friendly environment
• Risk management
NEW MOBILITY PLAYBOOK

Version 1.0
June 2017

IF WE LEAVE IT TO CHANCE...

IF WE SHAPE IT...
Respond and anticipate to new mobility

Our five plays are to:

PLAY 1:
Ensure new mobility delivers a fair and just transportation system for all

PLAY 2:
Enable safer, more active, and people-first uses of the public right of way

PLAY 3:
Reorganize and retool SDOT to manage innovation and data

PLAY 4:
Build new information and data infrastructure so new services can “plug-and-play”

PLAY 5:
Anticipate, adapt to, and leverage innovative and disruptive transportation technologies
Mobility Hubs

A. Direct connections between services
B. Bike share stations
C. Wayfinding and trip planning
D. Safe/accessible walk and bike routes
E. Full feature bike stations with parking
F. Dedicated car share parking
G. Shuttle/microtransit loading zones
H. For-hire curbside loading zones
I. Dedicated EV charging stations
J. Short-term bike parking

Hamburg Hochbahn
Mobility Hubs

1. Access to...
2. Connections between...
3. Better information about...
4. Creating great places amongst...
Westlake Shared Mobility Hub Demonstration

Westlake Hub today
Westlake Shared Mobility Hub Demonstration

Westlake Hub today
Westlake Shared Mobility Hub Demonstration

Accommodate new demands
Westlake Shared Mobility Hub Demonstration

Adjust bad behavior
Provide better information
Westlake Shared Mobility Hub Demonstration

Harvest a great place
Thank you

Kyle Rowe
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Questions?