From Curb Space to Flex Zone

NACTO 2017: Curb Appeal
Tracy Krawczyk, Policy & Planning Director
October 30, 2017
Our mission, vision, and core values

Mission: deliver a high-quality transportation system for Seattle

Vision: connected people, places, and products

Committed to 5 core values to create a city that is:
- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative

For all
Right-of-way (ROW) allocation

2016 Comprehensive Plan established a new framework for ROW allocation decisions

Defined

– 3 zones
– 6 essential functions
# 6 essential ROW functions

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>DEFINITION</th>
<th>USES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOBILITY</strong></td>
<td>Moves people and goods</td>
<td>• Sidewalks</td>
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<tr>
<td></td>
<td></td>
<td>• Bus or streetcar lanes</td>
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<tr>
<td></td>
<td></td>
<td>• Bike lanes</td>
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<td></td>
<td></td>
<td>• General purpose travel lanes - includes freight</td>
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<td></td>
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<td>• Right- or left-turn only lanes</td>
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<tr>
<td><strong>ACCESS FOR PEOPLE</strong></td>
<td>People arrive at their destination, or transfer between different ways of getting around</td>
<td>• Bus or rail stops</td>
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<td></td>
<td></td>
<td>• Bike parking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Curb bulbs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Passenger load zones</td>
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<tr>
<td></td>
<td></td>
<td>• Short-term parking</td>
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<tr>
<td></td>
<td></td>
<td>• Taxi zones</td>
</tr>
<tr>
<td><strong>ACCESS FOR COMMERCE</strong></td>
<td>Goods and services reach their customers and markets</td>
<td>• Commercial vehicle load zone</td>
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<tr>
<td></td>
<td></td>
<td>• Truck load zone</td>
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<tr>
<td><strong>ACTIVATION</strong></td>
<td>Offers vibrant social spaces</td>
<td>• Food trucks</td>
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<tr>
<td></td>
<td></td>
<td>• Parklets and streateries</td>
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<td></td>
<td>• Public art</td>
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<tr>
<td></td>
<td></td>
<td>• Seating</td>
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<tr>
<td></td>
<td></td>
<td>• Street festivals</td>
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<tr>
<td><strong>GREENING</strong></td>
<td>Enhances aesthetics and environmental health</td>
<td>• Plantings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Boulevards</td>
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<tr>
<td></td>
<td></td>
<td>- Street trees</td>
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<tr>
<td></td>
<td></td>
<td>- Planter boxes</td>
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<td></td>
<td></td>
<td>• Rain gardens and bio-swales</td>
</tr>
<tr>
<td><strong>STORAGE</strong></td>
<td>Provides storage for vehicles or equipment</td>
<td>• Bus layover</td>
</tr>
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<td></td>
<td>• Long-term parking</td>
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<td></td>
<td></td>
<td>• Reserved spaces [e.g. for Police or other government use]</td>
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<tr>
<td></td>
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<td>• Construction</td>
</tr>
</tbody>
</table>
3 ROW zones

**PEDESTRIAN REALM**
Comprised of frontage, pedestrian mobility, and furniture zones between the property line and the flex or travelway zones. This space includes the sidewalk, planting areas, bus shelters, sidewalk cafes, and bike racks.

**TRAVELWAY**
Most often used for mobility purposes. Lanes can serve all modes or be dedicated to serve specific modes, such as a bus or bike lane.

**FLEX ZONE**
An essential zone for people and goods, providing separation between moving vehicles in the travelway and people in the pedestrian realm. This zone can contain multiple uses along a street - including commercial deliveries, parklets, on-street parking, and taxi zones. It can be used for mobility at specific times of the day.
ROW functions by zone

**MOBILITY**

- **ACCESS FOR PEOPLE**
- **ACCESS FOR COMMERCE**
- **ACTIVATION**
- **GREENING**
- **STORAGE**
Outcome: multi-functional streets
Projected CBD flex lane changes

Existing Uses

- Short Term Parking: 27%
- Motor Vehicle Travel: 25%
- No Standing Zones: 24%
- Loading/Unloading: 9%
- Surface Transit: 7%
- Variable Restrictions: 3%
- Bike Travel: 2%
- Reserved Parking: 1%
- Other Uses: 3%

Bar chart showing 2014% and 2020% of curbspace:

- Mobility: 52% to 57%
- Access for People: 39% to 30%
- Storage and Maintenance: 4% to 5%
- Access for Commerce: 4% to 2%
- Activation and Greening: 1% to 6%

Additional information:
- More bicycle and bus lanes
- ~1,300 fewer parking spaces
- ~2 miles of new bus layover
- 235 fewer loading zones
- More green streets
E-commerce is changing access needs

Total U.S. Retail Sales

Source: https://www.census.gov/retail/index.html
Urban Freight Lab

• Unique partnership
  – University of Washington
  – Seattle DOT
  – Costco Wholesale
  – Nordstrom
  – Charlie’s Produce
  – UPS
  – USPS

• Systems engineering approach to solve delivery problems that overlap cities’ and businesses’ spheres of control

• Living laboratory
Final 50 Feet Program

• Analyze both the street network and vertical buildings as one unified urban goods delivery system
  
  – Use of scarce curb, freight bay, loading dock, and alley space
  
  – How delivery people move with handcarts through city streets
  
  – Delivery process within urban towers
Goal 1
Reduce truck dwell time

Benefits:

• Lower delivery firm costs (and for customers)

• Creates loading capacity without building new spaces

• Frees alley space for others
Goal 2
Reduce failed first deliveries

Benefits

• Lower congestion
• Improve shopper experience
• Protect retailers’ brand
• Cut costs
• Reduce crime
• Neighborhood equity

Photo: UW Urban Freight Lab
Analyzing the final 50 feet

Enter

Deliver

Exit

Graphic: UW Urban Freight Lab
Seattle Municipal Tower example

<table>
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<tr>
<th>Percent of Total Time</th>
<th>Enter</th>
<th>Deliver</th>
<th>Exit</th>
</tr>
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<tbody>
<tr>
<td>33%</td>
<td>41%</td>
<td>26%</td>
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</table>

**Enter**
- Mean: 7 min
- sd: 3 min
- Range: 2 - 15 min

1. Park in freight bay
2. Get clearance from security guard
3. Unload goods on to cart
4. Wait for freight elevator

**Deliver**
- Mean: 8 min
- sd: 8 min
- Range: 2 - 34 min

5. Take elevator to receivers’ floor
6. Deliver/pick up goods on receivers’ floor
7. Repeat process steps 5-6 for multiple deliveries
8. Wait for elevator to return to truck
9. Take elevator back to freight bay
10. Return security device to guard
11. Load hand cart onto truck
12. Maneuver truck out of freight bay

Graphic: UW Urban Freight Lab
Initial findings

• 85% of all CBD buildings rely on curb space and/or alleys for deliveries

• More on-street enforcement is not the answer

• Most system capacity gains are within buildings, rather than curb space
Next steps

- Develop potential solutions for all building types

- SMT Pilots
  - Pre-screening of regular delivery companies and new freight elevator security access
  - Install common carrier locker system
Questions?

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Seattle freight access
Seattle other curb uses

TNC geo-fencing pilot
Seattle flex zone priorities

RESIDENTIAL
1. Support for Modal Plan Priorities
2. Access for People
3. Access for Commerce
4. Greening
5. Storage
6. Activation

COMMERCIAL + MIXED USE
1. Support for Modal Plan Priorities
2. Access for Commerce
3. Access for People
4. Activation
5. Greening
6. Storage

INDUSTRIAL
1. Support for Modal Plan Priorities
2. Access for Commerce
3. Access for People
4. Storage
5. Activation
6. Greening
Seattle transit treatments
Performance Paid Parking Program

- 70% and 85% occupancy goal, per Seattle Municipal
- Parking occupancy studies used to set and adjust rates
- 30 paid parking areas with 90 rates varied by time of day

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<th>AREA OF ASSESSMENT FOR OCCUPANCY</th>
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<tr>
<td>BELOW 65% Lower rate, consider splitting into subareas and increasing time limits.</td>
</tr>
<tr>
<td>WITHIN WATCH LIST Wait 1 year</td>
</tr>
<tr>
<td>WITHIN TARGET RANGE No action</td>
</tr>
<tr>
<td>WITHIN WATCH LIST Wait 1 year</td>
</tr>
<tr>
<td>ABOVE 90% Increase rate consider decreasing time limits.</td>
</tr>
</tbody>
</table>

65%  70%  85%  90%