5 Years into Vision Zero
Lowering Speed Limits
Presentation overview

• Background
• Before/after data
• Where we are at
• Next steps
Vision Zero

Goal
• End traffic deaths by 2030

Trends
• Fatal collisions increased sharply in 2019
• Fatal pedestrian collisions have tripled to-date
• Swift action warranted to deter collision trends

Traffic Fatalities on Seattle Streets

- Total
- Motorcycle
- Cyclist
- Pedestrian
- Linear (Total)
Background

• Pedestrians top mode for fatalities last 8 years
• Median age of pedestrians killed in 2019 collisions is 63 years old
Background

• Speed is *the* critical factor in the frequency and severity of crashes
• Key part of Seattle’s Vision Zero efforts
Center City

Focused on where pedestrian crashes are happening

2015 pedestrian crash locations

2016 speed limit changes

Traffic signals were re-timed for 25 MPH
Center City - crashes

-17% arterials
-22% non-arterials
Urban Villages

• “Neighborhood business districts”
• Land use supports more people walking/rolling, biking, and taking transit
• 80% of pedestrian crashes happen within or near urban villages

Urban village areas

- Frequent Transit
- Local businesses
- Leading Pedestrian Interval
- Curb extensions (bulbs)
- Pedestrian Lighting
Why 25 MPH?

Land use within urban villages support more people walking/rolling, biking, and taking transit

Operating speeds within Urban Villages

~3 MPH

10-15 MPH

10-25 MPH

50th percentile speed (USLimits2) may be used based on:

- Traffic signal density
- Ped and bike activity
- Parking activity
- Driveway activity

FHWA-SA-12-004 (2012)
# Urban Villages - speeds

<table>
<thead>
<tr>
<th>Segment</th>
<th>85th Percentile Speed</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenwood/Phinney urban village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NW 85th St w/o Fremont Ave N</td>
<td>Before: 32.6 MPH</td>
<td>-1.2%</td>
</tr>
<tr>
<td></td>
<td>After: 32.2 MPH</td>
<td></td>
</tr>
<tr>
<td>Greenwood Ave N s/o N 80th St</td>
<td>Before: 25.7 MPH</td>
<td>+1.6%</td>
</tr>
<tr>
<td></td>
<td>After: 26.1 MPH</td>
<td></td>
</tr>
<tr>
<td>Greenwood Ave N n/o N 87th St</td>
<td>Before: 33.5 MPH</td>
<td>-6.9%</td>
</tr>
<tr>
<td></td>
<td>After: 31.2 MPH</td>
<td></td>
</tr>
<tr>
<td>Green Lake/Roosevelt urban village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th Ave NE n/o NE 71st St</td>
<td>Before: 25.9 MPH</td>
<td>-12.0%</td>
</tr>
<tr>
<td></td>
<td>After: 22.8 MPH</td>
<td></td>
</tr>
<tr>
<td>Woodland Ave NE e/o 2nd Ave NE</td>
<td>Before: 27.3 MPH</td>
<td>-6.1%</td>
</tr>
<tr>
<td></td>
<td>After: 25.6 MPH</td>
<td></td>
</tr>
<tr>
<td>NE Ravenna Blvd e/o 12th Ave NE</td>
<td>Before: 26.1 MPH</td>
<td>+3.1%</td>
</tr>
<tr>
<td></td>
<td>After: 26.9 MPH</td>
<td></td>
</tr>
<tr>
<td>University Way NE n/o NE 52nd St</td>
<td>Before: 28.1 MPH</td>
<td>-6.0%</td>
</tr>
<tr>
<td></td>
<td>After: 26.4 MPH</td>
<td></td>
</tr>
<tr>
<td>North Beacon Hill urban village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beacon Ave S n/o S McClellan St</td>
<td>Before: 26.2 MPH</td>
<td>-0.4%</td>
</tr>
<tr>
<td></td>
<td>After: 26.1 MPH</td>
<td></td>
</tr>
<tr>
<td>17th Ave S n/o S College St</td>
<td>Before: 30.0 MPH</td>
<td>-5.7%</td>
</tr>
<tr>
<td></td>
<td>After: 28.3 MPH</td>
<td></td>
</tr>
<tr>
<td>S McClellan St e/o 15th Ave S</td>
<td>Before: 22.1 MPH</td>
<td>+2.9%</td>
</tr>
<tr>
<td></td>
<td>After: 22.7 MPH</td>
<td></td>
</tr>
</tbody>
</table>
Urban Villages - crashes

Results are based solely on posting speed limit signs more frequently

<table>
<thead>
<tr>
<th>Urban village</th>
<th>Total # of crashes</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before (5 yr average)</td>
<td>After</td>
</tr>
<tr>
<td>Greenwood/Phinney</td>
<td>64.4</td>
<td>36</td>
</tr>
<tr>
<td>U-District</td>
<td>158</td>
<td>114</td>
</tr>
<tr>
<td>Green Lake/Roosevelt</td>
<td>45.8</td>
<td>37</td>
</tr>
<tr>
<td>North Beacon Hill</td>
<td>28</td>
<td>27</td>
</tr>
</tbody>
</table>

Why speed matters?

Field of vision at 15 MPH

Field of vision at 30-40 MPH
20th Ave NE (corridor)

- Posted speed limit: **30 MPH**
- 3,000 ADT
- 1-mile long corridor
- Typical sign spacing guideline:
  - At arterial crossings
  - Intermediate signs every ¼ mile
### 20th Ave NE (corridor)

#### Speeds

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>30.6 MPH</td>
<td>32.2 MPH</td>
<td>31.5 MPH</td>
<td>31.8 MPH</td>
</tr>
<tr>
<td>Southbound</td>
<td>30.4 MPH</td>
<td>32.1 MPH</td>
<td>31.2 MPH</td>
<td>31.1 MPH</td>
</tr>
</tbody>
</table>

#### Speeders

<table>
<thead>
<tr>
<th></th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>(veh)</td>
</tr>
<tr>
<td>Northbound</td>
<td>19.4%</td>
<td>(1,306 veh)</td>
</tr>
<tr>
<td>Southbound</td>
<td>17.5%</td>
<td>(1,566 veh)</td>
</tr>
</tbody>
</table>

#### Top End Speeders

<table>
<thead>
<tr>
<th></th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>(veh)</td>
</tr>
<tr>
<td>Northbound</td>
<td>0.3%</td>
<td>(22 veh)</td>
</tr>
<tr>
<td>Southbound</td>
<td>0.4%</td>
<td>(33 veh)</td>
</tr>
</tbody>
</table>

# of veh for "Speeders" and "Top End Speeders" are based on a 7-day study period.
Process

- Collected speed studies citywide
- 25 mph based on 50th percentile speeds (USLimits2) and operating speeds

Policy for setting arterial speed limits

- Seattle 2035 Comprehensive Plan
- Right of Way Improvement Manual (Streets Illustrated, Street type standards)

Factors
- Land use
- Street type, function
- Crash history
- Modal activity
- Etc.

Existing speed limits
- 30 mph
- 40 mph
- 35 mph

Traffic volumes

Proximity with other urban villages expanded scope of speed limit evaluation work

80% of pedestrian collisions occur within or near our city’s urban villages
Target speeds

Principal Arterials
25-40 mph*

Minor/Collector Arterials
25-30 mph

Non-arterials
20 mph
(15 mph for alleys)

* Except limited access/controlled driveway access streets

Street Type Standards (source: “Streets Illustrated”)
Citywide speed limits - Phase 1

- Approx. 2,700 new speed limit signs
- Full implementation by Q2 2021
Next steps

• Work with the state to lower the speed limits on state arterials within the city
• Evaluate before/after speeds and strategize (Phase 2)
Questions?

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www.seattle.gov/VisionZero