

25's the Limit: Setting Safe Speed Limits in Your City

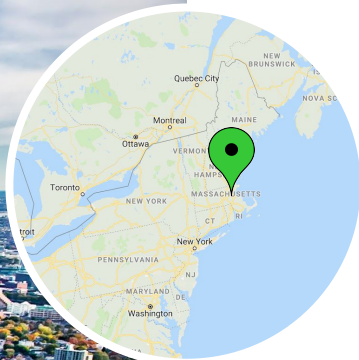
NACTO Designing Cities Conference 2019

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Cambridge, MA

Population

110,893 people

Area

6.39 square miles

16.54 square kilometers

Population density

17,354 people / sq. mi.

6,741 people / sq. km.

Authority to set speed limits in Cambridge

Prior to 2016

- ❑ State law mandated a 30 mph default speed limit in thickly settled areas (all of Cambridge)
- ❑ Posted speed limits had to be approved by State, required speed study and setting speed limit based on 85th percentile
- ❑ 20 mph school zones could be installed in front of schools without State approval

Authority to set speed limits in Cambridge

In 2016

- Municipal Modernization Bill passes
- State law allows 25 mph default speed limit in thickly settled areas (all of Cambridge)
- School zone process stays the same
- State enacts new law relative to safety zones

Section 18B. (a) ***Notwithstanding section 18 or any other general or special law to the contrary***, the city council, the transportation commissioner of the city of Boston, the board of selectmen, park commissioners, a traffic commission or **traffic director of a city or town that accepts this section** in the manner provided in section 4 of chapter 4 may, **in the interests of public safety and without further authority, establish designated safety zones on, at or near any way in the city or town which is not a state highway**, and with the approval of the department if the same is a state highway. Such safety zones shall be posted as having a speed limit of 20 miles per hour.

Range of speed limits in Cambridge



State Roads



Default / Major City-owned streets



School Zones



Safety Zones
Squares and Local-Access

State roads

Varies

Citywide Default / Major City-Owned Sts.

25 mph / 40 kph

School Zones

20 mph / 32 kph

Safety Zones

Squares and Primarily Local-Access Sts.

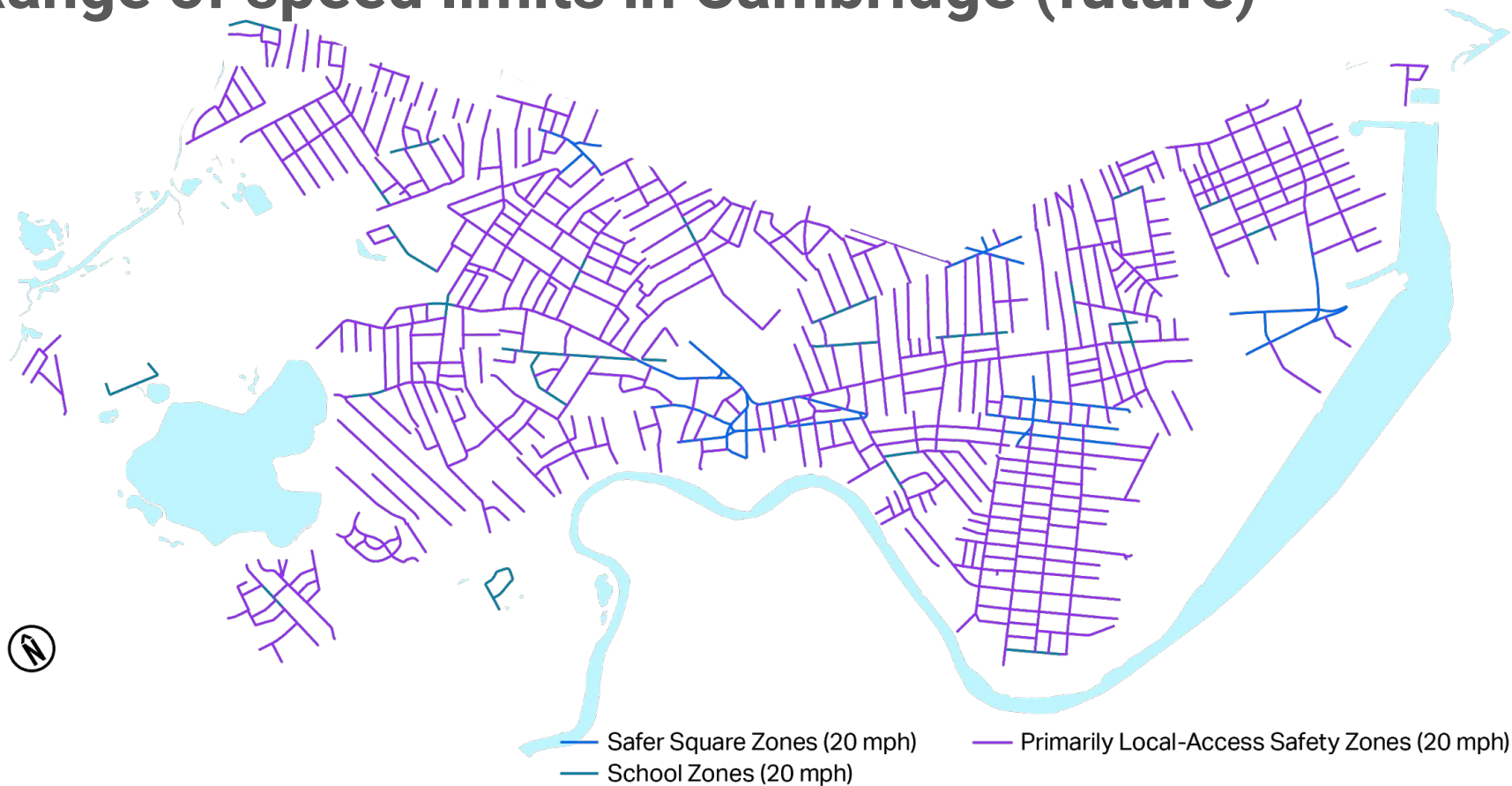
20 mph / 32 kph

Range of speed limits in Cambridge (future)

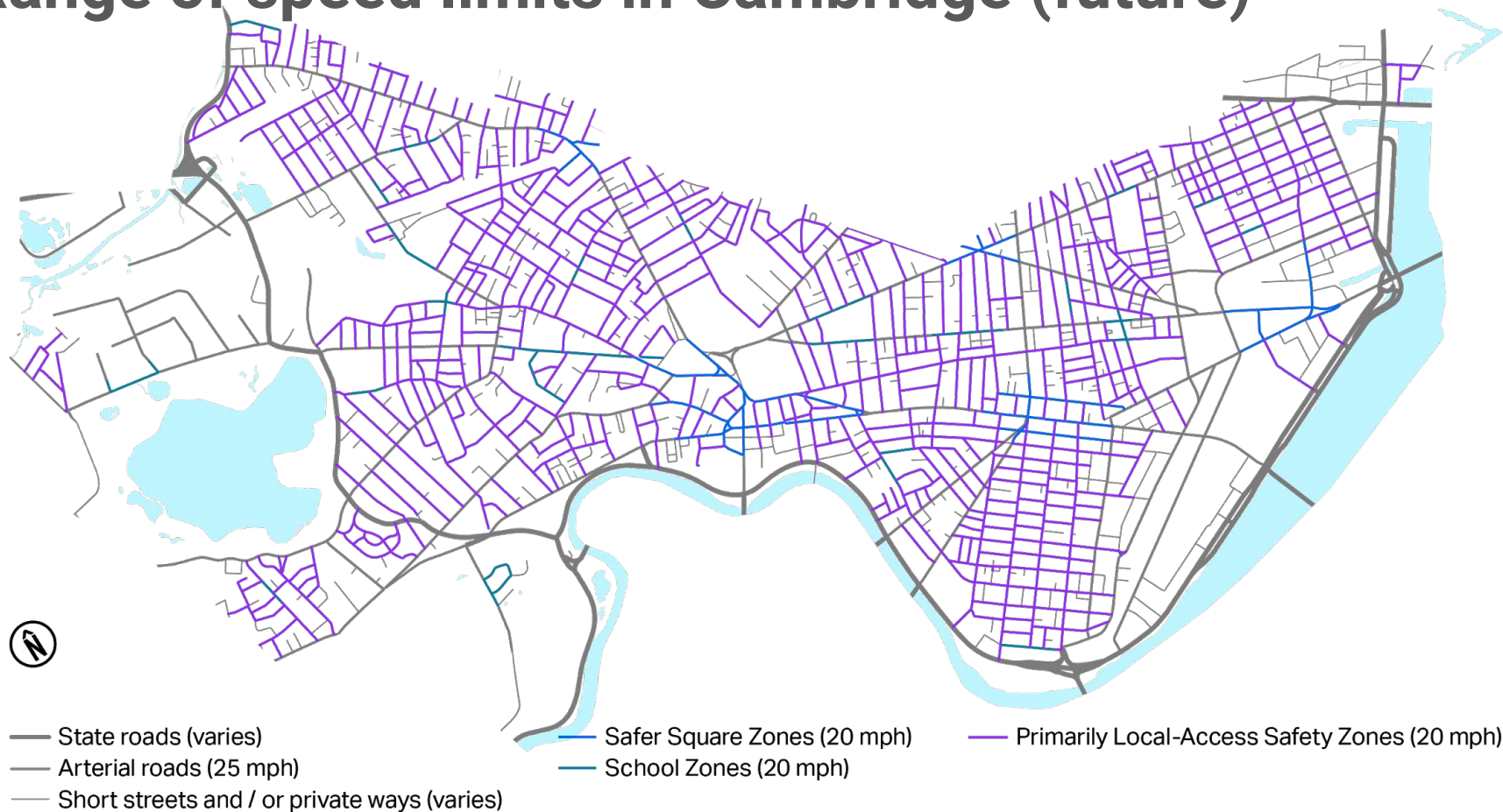


- State roads (varies)
- Arterial roads (25 mph)
- Short streets and / or private ways (varies)

Range of speed limits in Cambridge (future)



Range of speed limits in Cambridge (future)





Seattle, WA

Population

750,000 people

Area

85 square miles

220 square kilometers

Population density

8,800 people / sq. mi.

3,400 people / sq. km.

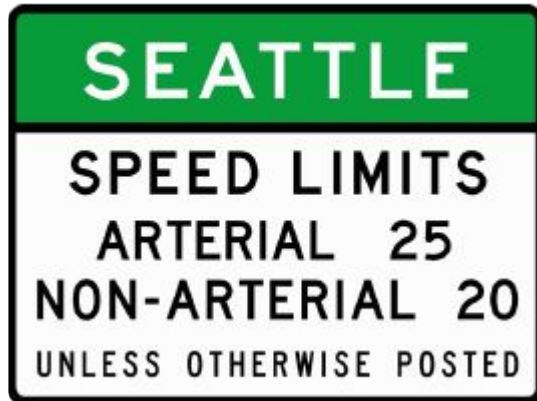
Authority to set speed limits in Seattle

Code of Washington (46.61.415)

- Allows local agencies to set speed limits based on an engineering study and MUTCD

Washington Neighborhood Safe Streets Bill (2013)

- Speed limits on non-arterials can be set to 20 mph without a speed study



Range of speed limits in Seattle



State Routes (40mph+)



Downtown Core (25mph)



Urban Villages (30-25mph)



Residential Streets (20mph)

State Roads

30-50mph / 48-80kph

Citywide Default

25 mph / 40 kph

Lowered arterial speed limit
from 30 to 25 mph in 2016

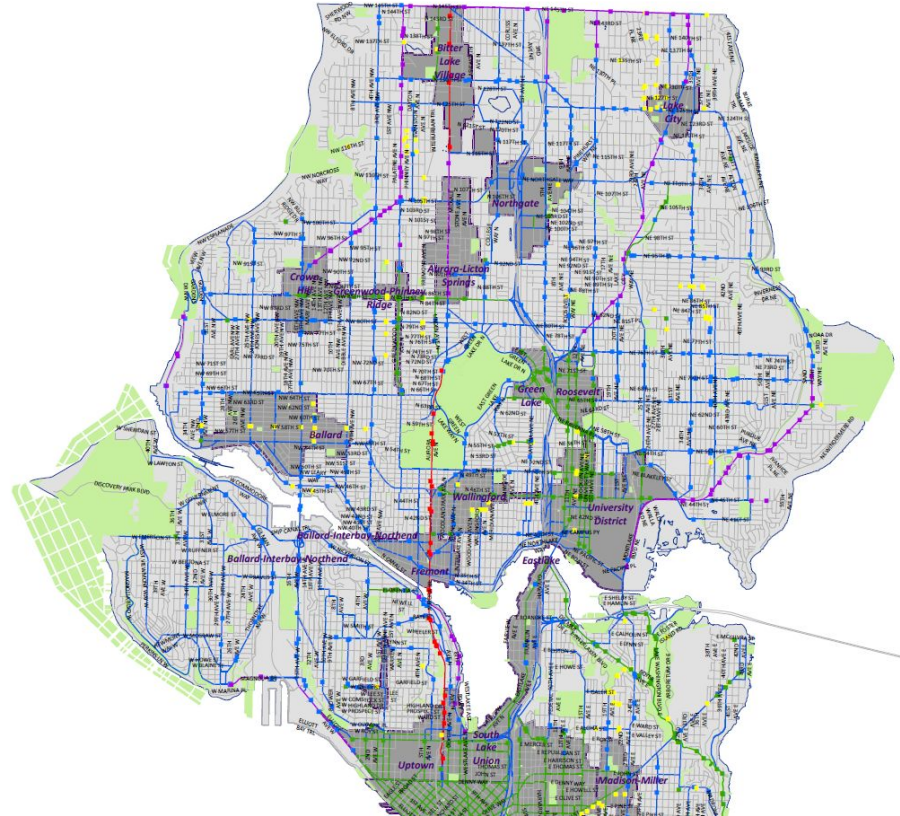
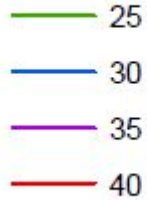
Residential Streets

20 mph / 32 kph

Lowered residential speed limit
from 25 to 20 mph in 2016

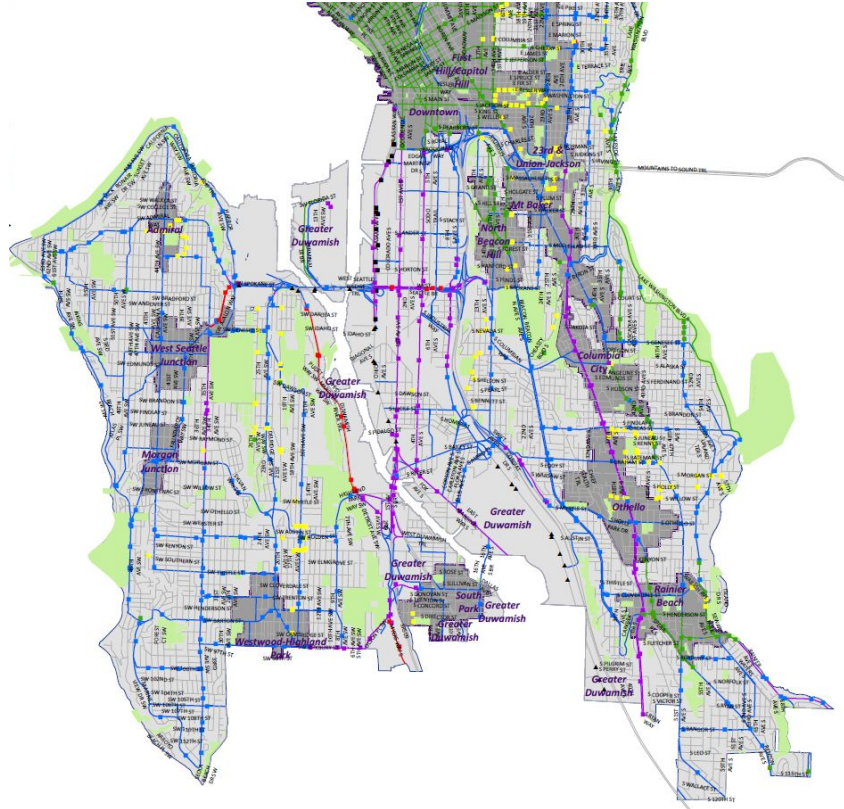
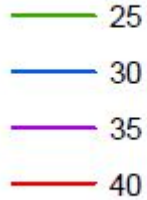
Range of speed limits in Seattle (North)

SPEEDLIMIT

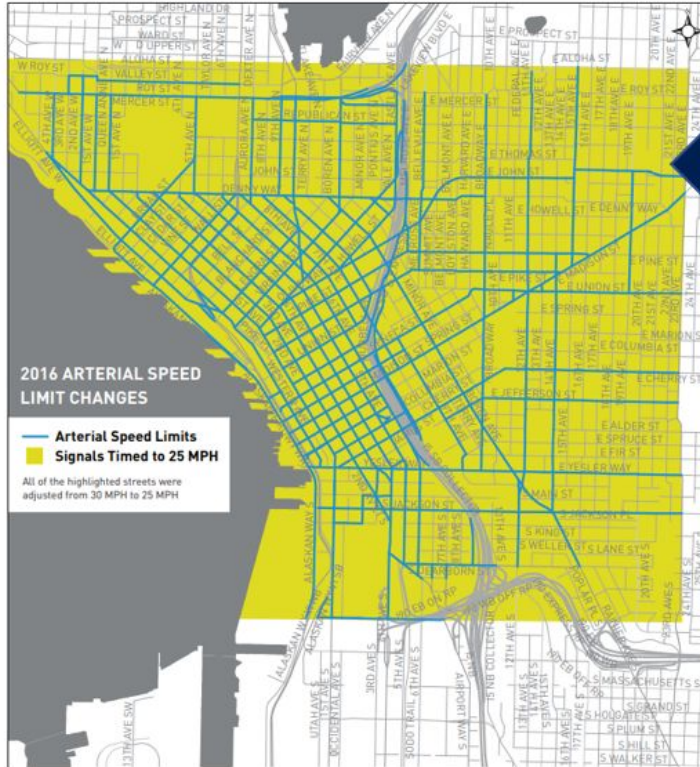


Range of speed limits in Seattle (South)

SPEEDLIMIT



Seattle Downtown Core & Center City



Traffic signals were re-timed to reduce posted speed limit to **25 MPH**

Crashes on arterials

12% ↓

Injury and serious injury

6% ↓

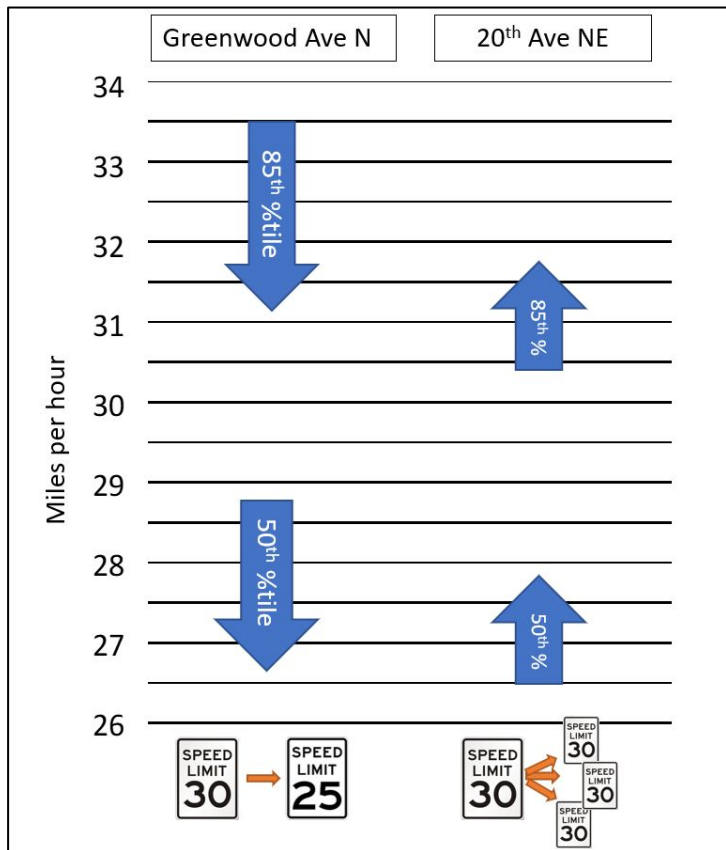
2016 CBD speed limit changes

Speed Limit Results - Seattle

Street		Greenwood Ave N	20th Ave NE
Width		52'	36'
ADT		11,000	3,000
Before	# of 30mph Signs	2	2
	50th %tile Speed	→ 28.7 mph	26.5 mph
	85th %tile Speed	33.5 mph	→ 30.4 mph
Action		Change speed limits signs from 30mph to 25mph	Install additional signs to reinforce 30mph speed limit



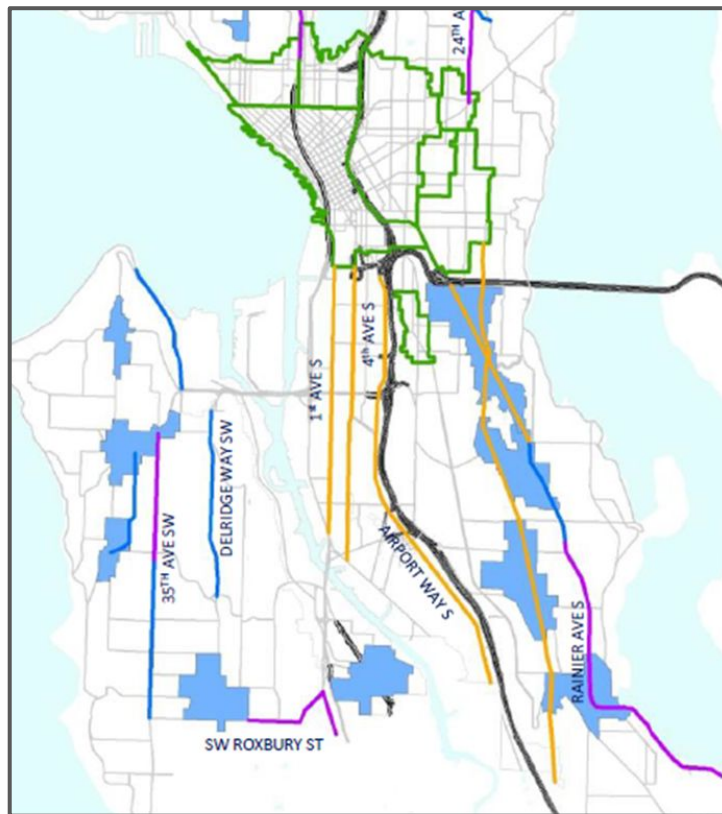
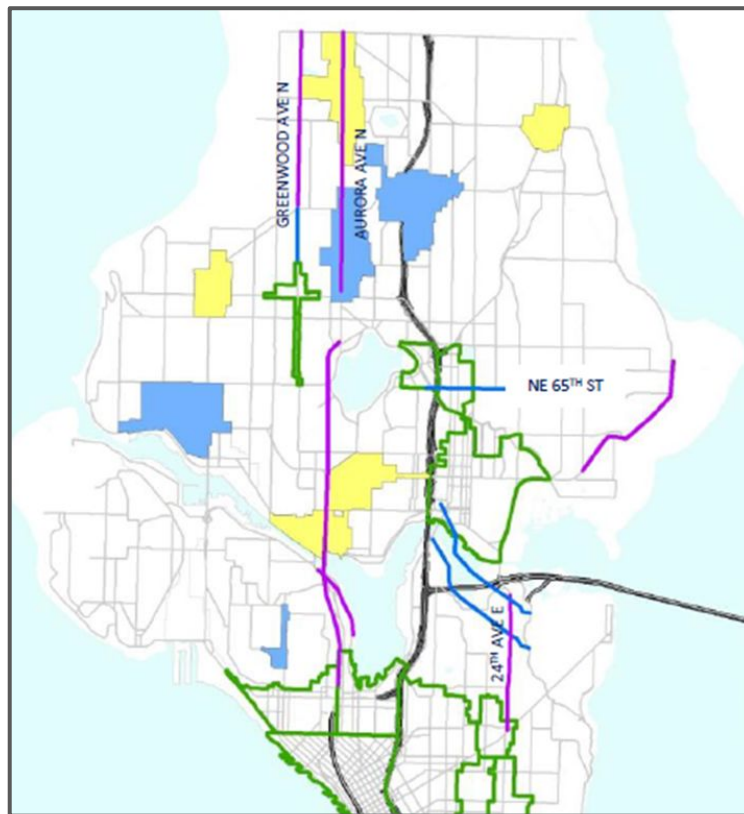
Speed Limit Results - Seattle




Street		Greenwood Ave	20th Ave
After	50th %tile Speed	26.7	27.7
	85th %tile Speed	31.2	31.7
Results	Change in 50th %tile	- 7.0%	+ 4.7%
	Change in 85th %tile	- 6.9%	+ 4.4%



Where Are We Going - Seattle




Urban Villages

 Speed limit adjustment complete

 2019-2020

 2020-2021

Arterials

 Speed limit adjustment complete

 2019-2020

 2020-2021

 Future corridors



BOGOTA IN NUMBERS:

8 million people
380 km² of urban área
21 thousand inhab/km²
6.3 deaths/100.000 inhab.

+ 13M daily trips
+ 2M registered veh.
146 veh/1000 inhab.



LEGAL FRAMEWORK:

NATIONAL LAW

Allows 60km/h as the maximum speed limit for urban áreas (37 mi/h)

School Zones, residential áreas and hospital áreas max. 30km/h (18 mi/h)

CITY SPEED LIMITS

Maximum: 60km/h (37 mi/h)

8 main roads went down to 50km/h (31mi/h) in the past year (oct 2018)

School, residential and hospital zones: 30-10 km/h (18 – 6 mi/h)

Comercial zones = 40-20km/h (25 – 12 mi/h)



GOING FROM 60 TO

- 204 deaths in 2017
- **4 out of 10** deaths
- **85%** of deaths were vulnerable road users
- **156 Km** intervened (28% of the arterial roads)

— First stage

Av Boyacá

Av Ciudad de Cali

Av La Américas

Av Calle 80

Av Carrera 68

— Second stage

Av Ciudad de Quito

Av Primero de Mayo

— Third stage

Av Suba



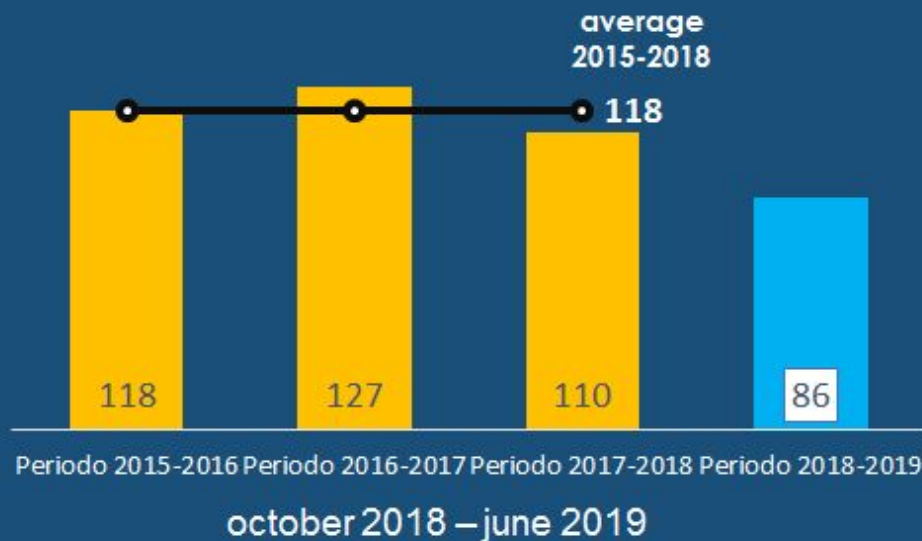
Alcaldía de Bogotá



GOING FROM 60 TO

50

Alcaldía de Bogotá



32 LIVES
SAVED

↓ 27%



MAKING DESIGN CHANGES

Alcaldía de Bogotá

School Zone



Residential/Comercial Zone



2014 -2019 / jan - june

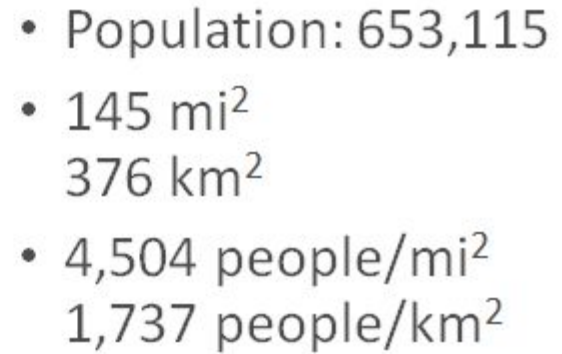


88



46%





Data: 2018 Population Estimates, Portland city, Oregon

Portland's legal framework

Default (“statutory”) speed limits established by state law

- 20 mph (30 kmh) in School Zone or Business District
- 25 mph (40 kmh) in Residence District, except arterials (20 mph now allowed in Portland and around the state)
- 55 mph (90 kmh) in locations “not otherwise described”

Non-default, segment-specific “designated” speed limits are managed by state DOT

Portland has two options to change a speed limit:

1. Request to DOT that a designated speed limit be rescinded to allow for a default speed on an eligible street segment
2. Request to DOT that a designated speed limit be created or revised (triggers study that considers free-flow 85th percentile speeds)

Range of streets in Portland



25 mph default (residential collector)



35 mph designated



35 mph designated



40 mph designated

Even residential streets vary widely



20 mph default (residential)



20 mph default (residential)



20 mph default (business district)

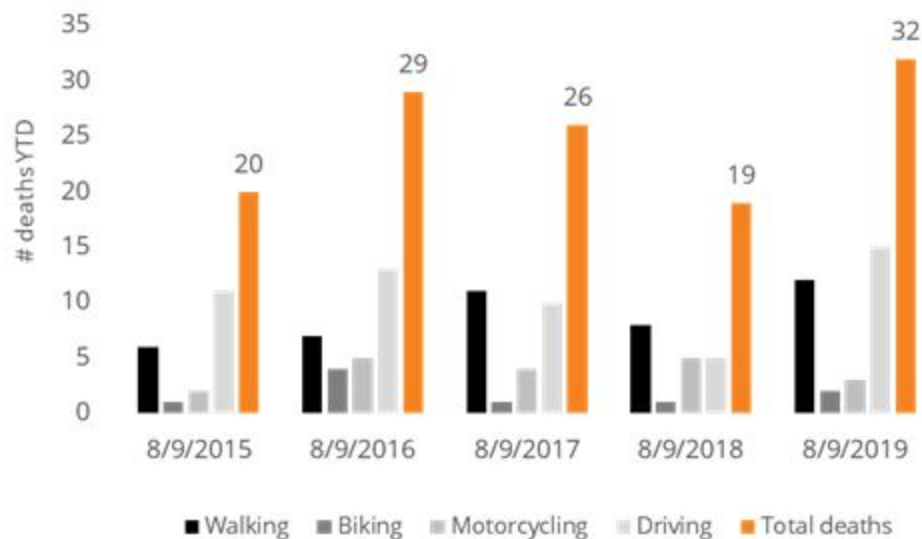


20 mph default (business district)

Portland's High Crash Network



Pedestrians are especially vulnerable



Taking a “safe systems” approach to lowering speeds

Safe system approach: Context sensitive	Standard approach: 85th percentile
<p>Set speed limits based on</p> <ul style="list-style-type: none">• likely crash types• resulting impact force• the human body's ability to withstand these forces <p><i>Ask: What is safe?</i></p>	<p>Set speed limits based on the assumption that most drivers choose reasonable and safe speeds</p> <p><i>Ask: How fast are people going?</i></p>

Lowering speed limits citywide

