



How to Optimize Projects for Road Safety Funding

2024 IACC – Wenatchee, WA

Resin Bonded Stone Surfacing



Resin Bonded Stone Surfacing

After



Before



Separated and Buffered Bike Lanes



Compact Roundabouts



Compact Roundabouts






2024 IACC Safety Road Trip

Retrofits with Resin Bonded Stone Surfacing






 50 min

 26 min
 22 min
 12 min




Separated and Buffered Bike Lanes



 3 min
 2 min
 2 min

Compact Roundabouts



 15 min
 15 min
 7 min

 20 min

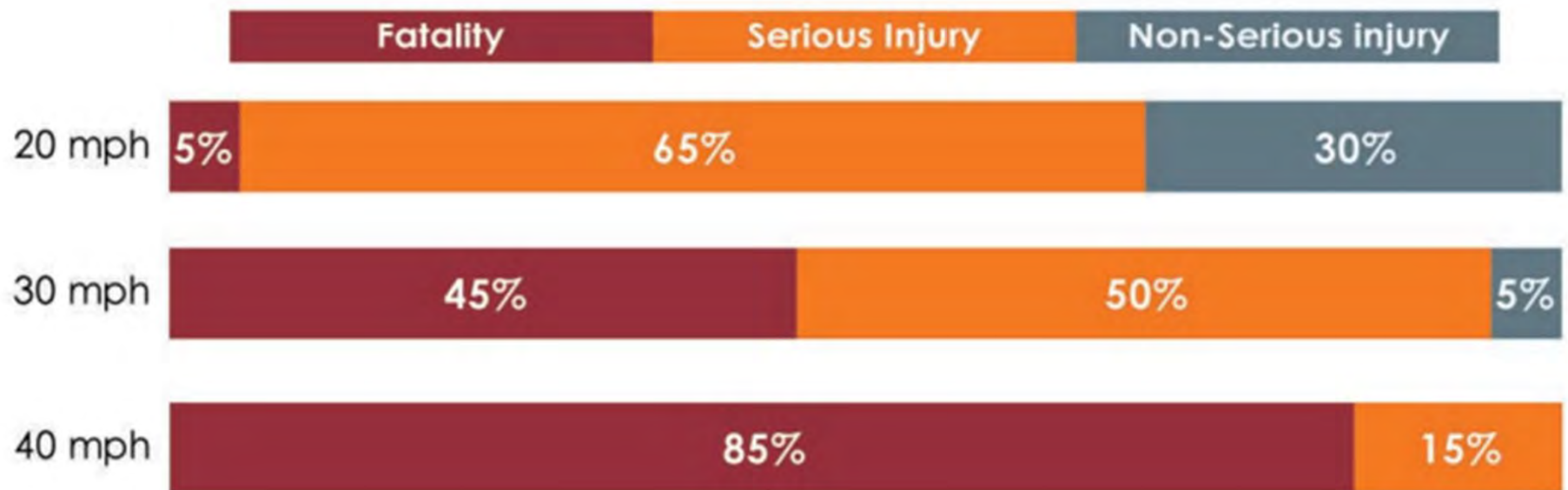
**QR codes link to location in Google Maps

***Travel times are approximate times from Wenatchee Convention Center



Why Speed?

Vehicle Impact Speed and Pedestrian Injury Severity



Source: [Washington State Strategic Highway Safety Plan 2016: Target Zero](#)



Why Speed?

Vehicle Speed (mph)	Probability of Pedestrian Fatality (age ≤ 14)	Probability of Pedestrian Fatality (age 15 to 59)	Probability of Pedestrian Fatality (age ≥ 60)
20	1%	1%	3%
30	5%	7%	62%
40	16%	22%	92%

Image adapted from: [Speed Concepts: Informational Guide, FHWA, 2009](#)

Why Speed?

“Drivers are generally bad at accounting for the externalities of their driving.”

- [Methods and Practices for Setting Speed Limits: An Informational Report, FHWA 2012](#)

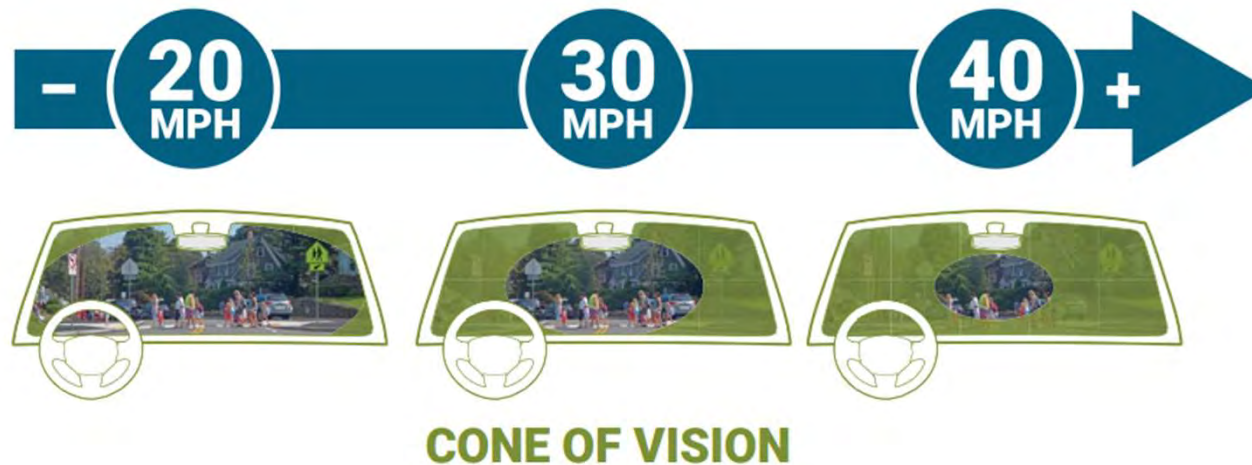


Image: [Achieving Multimodal Networks, FHWA 2016](#)

“Drivers report understanding that speeding is a threat to safety but acknowledge it is a common driving behavior in the United States.”

- [Safety Study: Reducing Speeding-Related Crashes Involving Passenger Vehicles, NTSB 2017](#)

Why Speed?

Design Speed (mph)	Minimum Radius for Normal Crown Section (ft)
15	945
20	1,680
25	2,430
30	3,325
35	4,360
40	5,545
45	6,860
50	8,315
55	9,920
60	11,675
65	13,130
70	14,675
75	16,325
80	18,065

$\Delta \sim 2,000$ ft

Minimum Radius for Normal Crown Section
Exhibit 1250-1

[Design Manual \(M22-01\), WSDOT 2017](#)



Why Speed?



If you need a sign to tell people to slow down,
you designed the street wrong.

#slowthecars

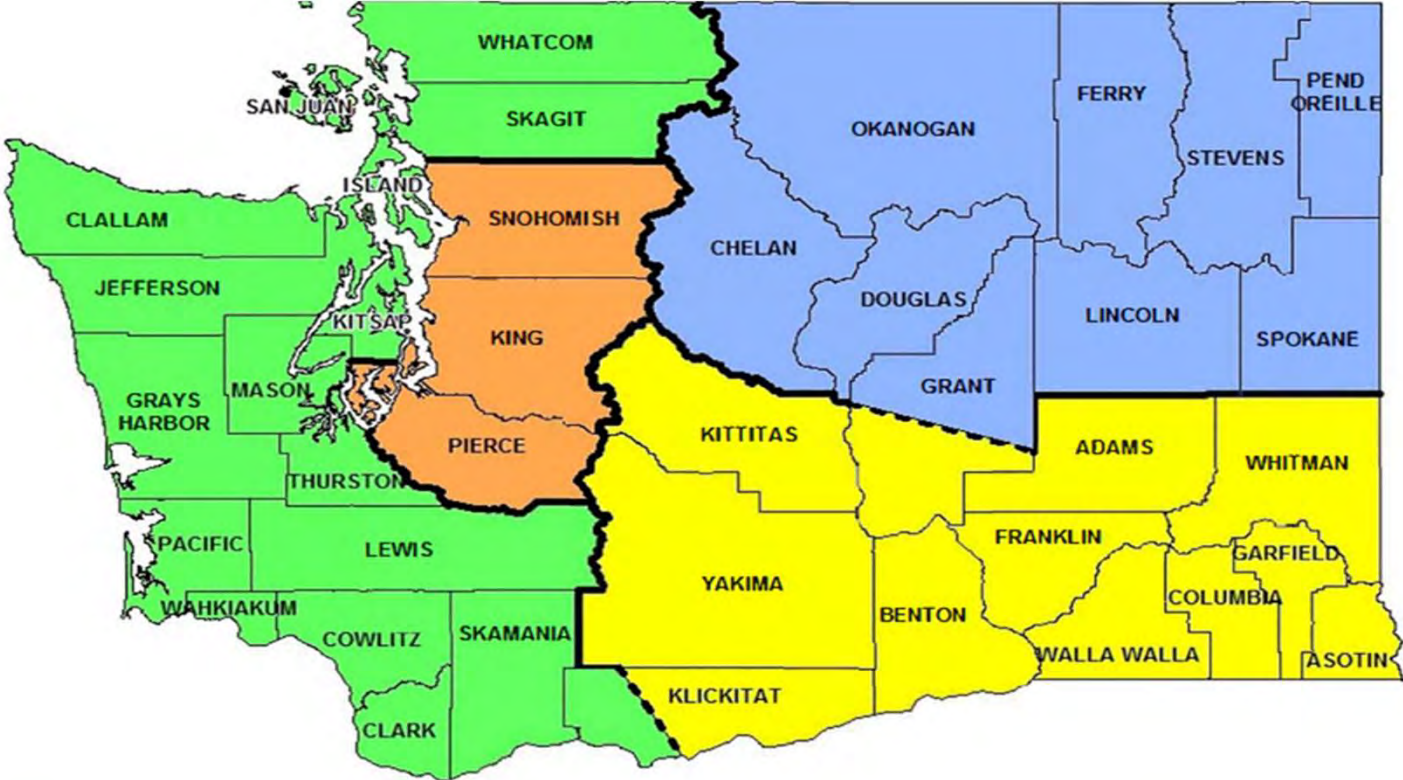
**STRONG
TOWNS**



What is the right speed?



Region Engineer Information



Greg Armstrong
GregA@tib.wa.gov
 360.586.1142



Chris Langhoff
ChrisL@tib.wa.gov
 360.586.1157



Andrew Beagle
AndrewB@tib.wa.gov
 360.586.1151



Jonathan Heusman
JonathanH@tib.wa.gov
 360.586.1143

