



State
Smart Transportation
Initiative

Urban Boulevards

February 28, 2017

Chris McCahill with Mary Ebeling

What is an urban boulevard?

1. The road

- Divided arterial that is walkable and low-speed
- Through traffic, local traffic, cyclists, and pedestrians
- Main route for goods and emergency vehicles
- At-grade crossings

2. The land

- Buildings facing the road
- Parking on-street and behind buildings

Source: NACTO Urban Street Design Guide



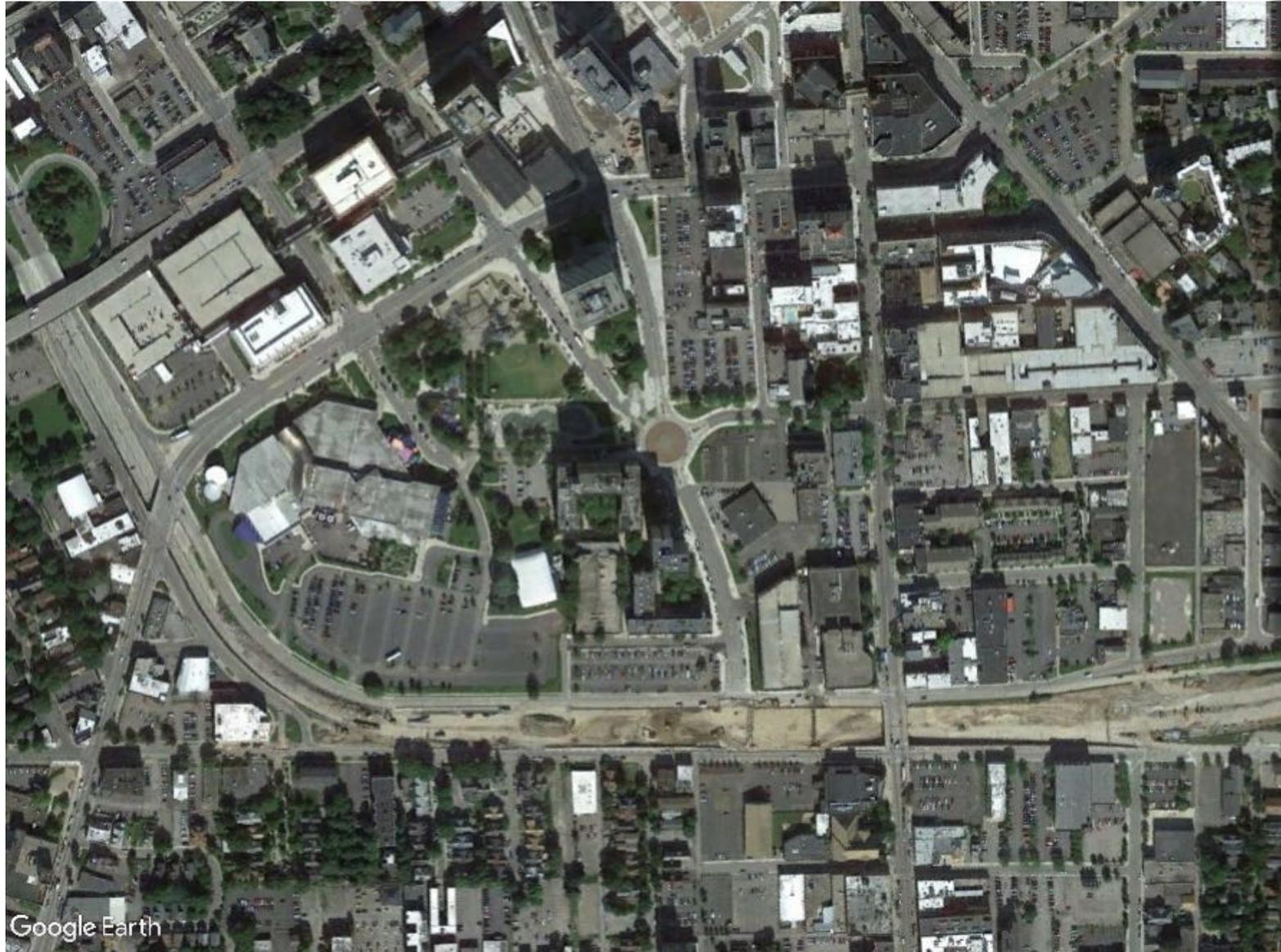
Inner Loop (Rochester, 2014)



Google Earth

900 ft

Inner Loop (Rochester, 2016)



COMMERCIAL REAL ESTATE

Taking Out a Highway That Hemmed Rochester In

Square Feet
By KEITH SCHNEIDER NOV. 1, 2016



Recently filled in, the eastern segment of the Inner Loop in Rochester was a sunken expressway that separated downtown from the city's east end. Mike Bradley for The New York Times



Stoughton Road Revitalization Project Plan (2008)



Phase 2



Phase 3



Phase 4

Building Types



Highway to boulevard

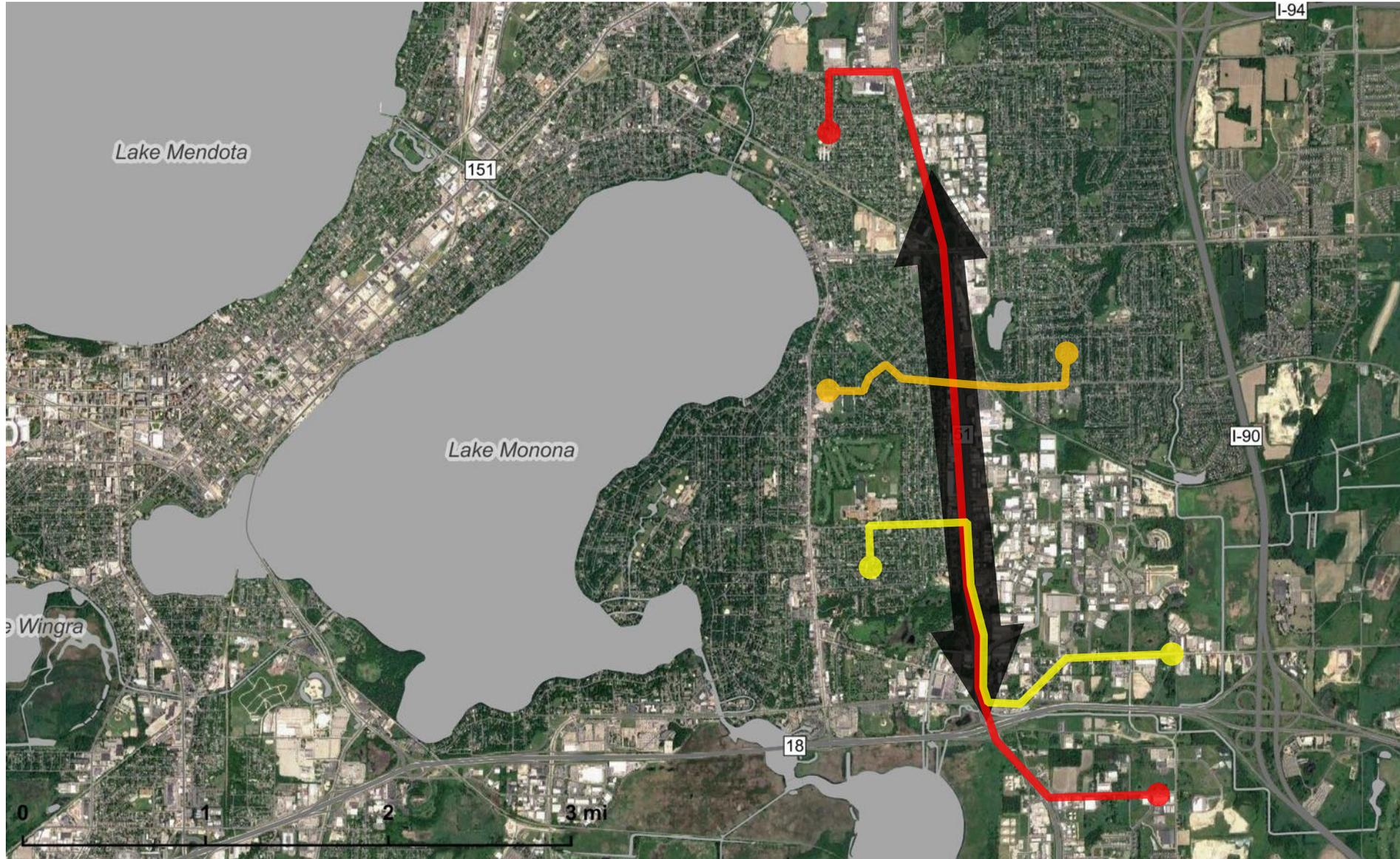


Source: Florida Department of Transportation; SSTI Community of Practice, Nov. 2015

Understanding urban boulevards

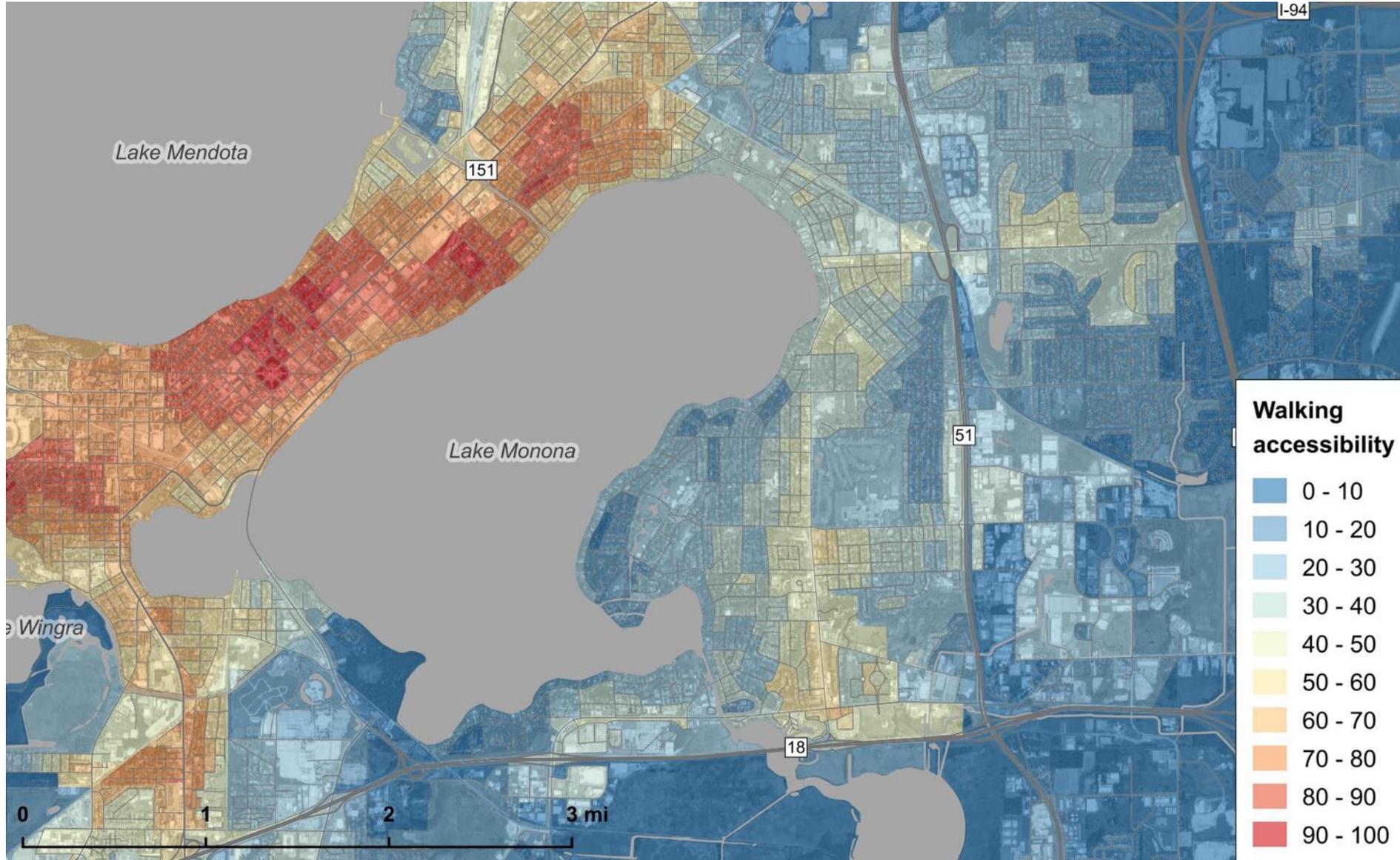
1. Accessibility
2. Safety
3. Traffic

1. Accessibility



- **Mobility:** volume and speed of traffic
- **Accessibility:** ease of reaching destinations

1. Accessibility



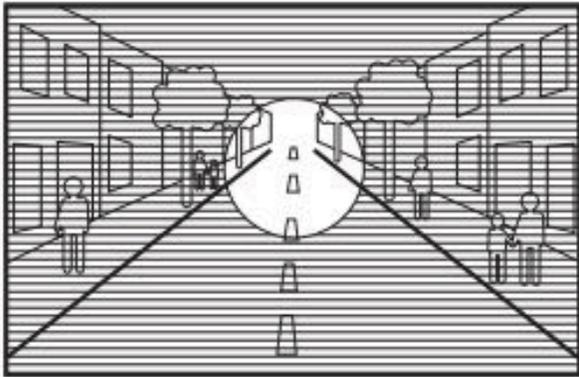
- **Mobility:** volume and speed of traffic
- **Accessibility:** ease of reaching destinations
- Boulevards improve local accessibility
- Accessibility linked to outcomes like land value and transportation spending
- Virginia DOT uses accessibility to prioritize projects

2. Safety

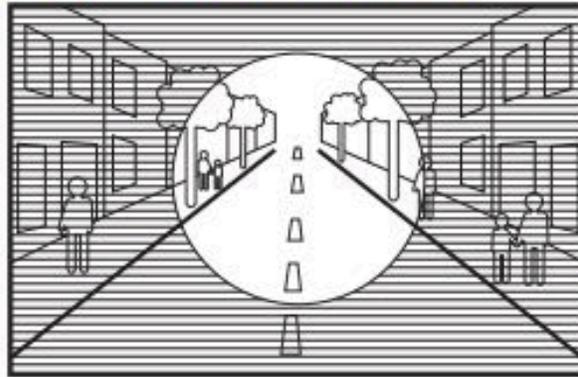
Freeway

- Uniform speeds
- Limited access
- “Forgiving design”

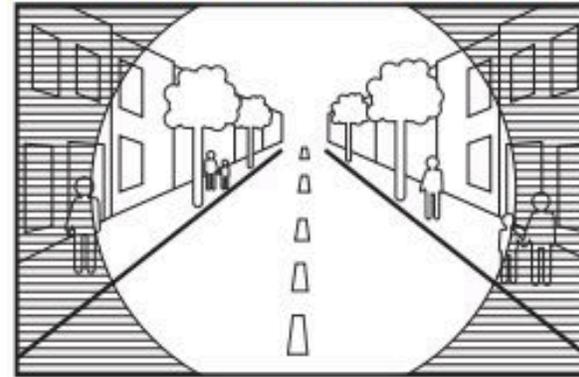
1 out of 10 survive



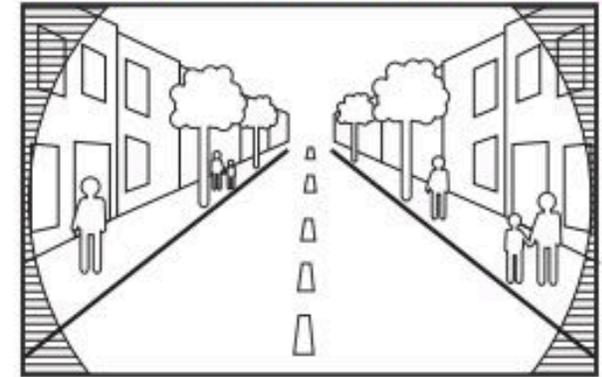
45+ MPH



30-40 MPH



20-30 MPH



10-15 MPH

Urban boulevard

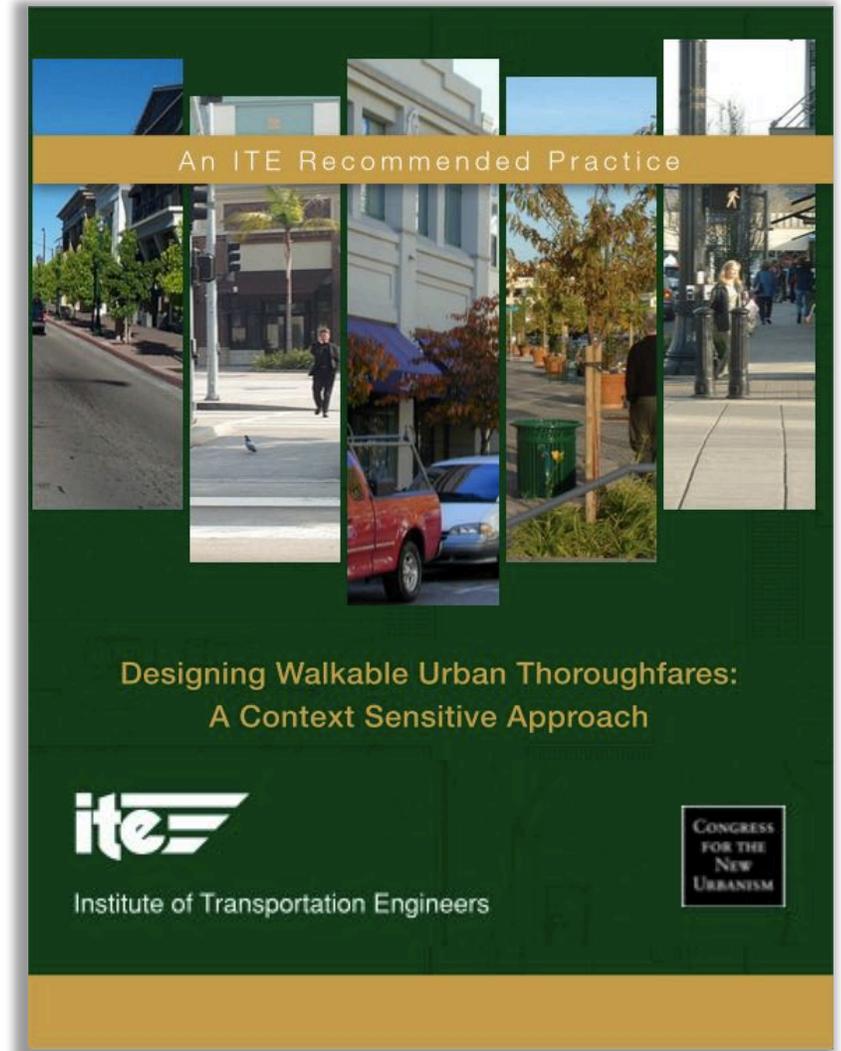
- Lower speeds
- More reaction time
- Less severe crashes

9 out of 10 survive

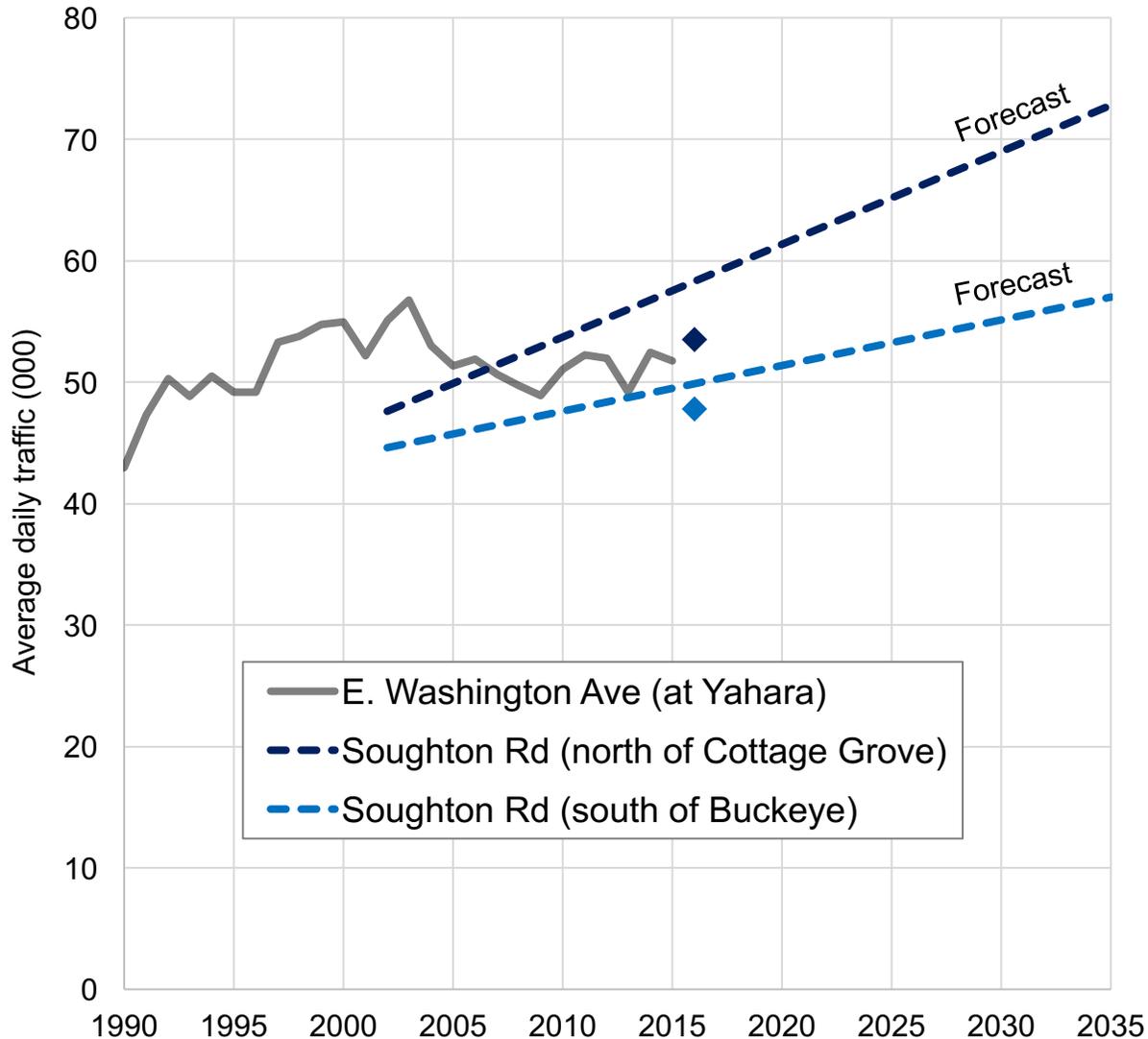
2. Safety

- Target speed (25-35 mph)
- “Selection of design speed is extremely important because [it determines] curvature, sight distance, clear zone, and other geometric and cross-sectional features.” – WisDOT *FDM*
 - WisDOT sets posted speed based on observed traffic
 - WisDOT’s design speed is 5 mph higher

Target = Posted = Design



3. Traffic



- Stoughton Road carries around 50,000 vehicles per day (similar to E. Washington Ave.)
- Current traffic is below forecasted growth
- U.S. DOT to Congress: States tend to overestimate traffic growth

(Information at ssti.us/news)

GPS Data (StreetLight Data)



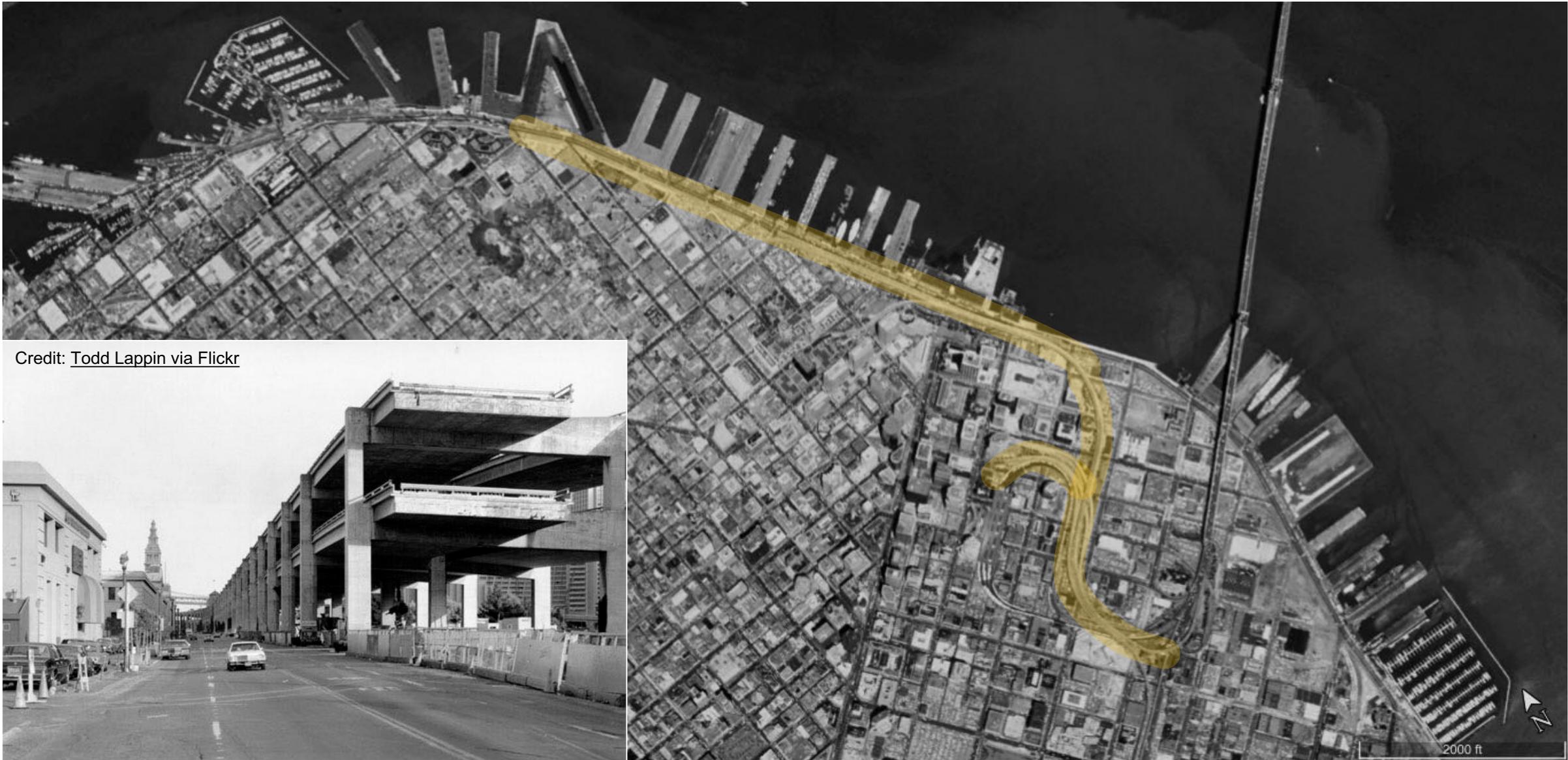
Local trips

	A	B
Within red area	8%	5%

Trip lengths

Length	A	B
0-5 mi	12%	15%
5-10 mi	29%	31%
10-20 mi	43%	38%
20+ mi	16%	16%

Embarcadero (San Francisco, 1987)



Credit: [Todd Lappin via Flickr](#)

Embarcadero (San Francisco, 2016)



Central Freeway (San Francisco, 1987)

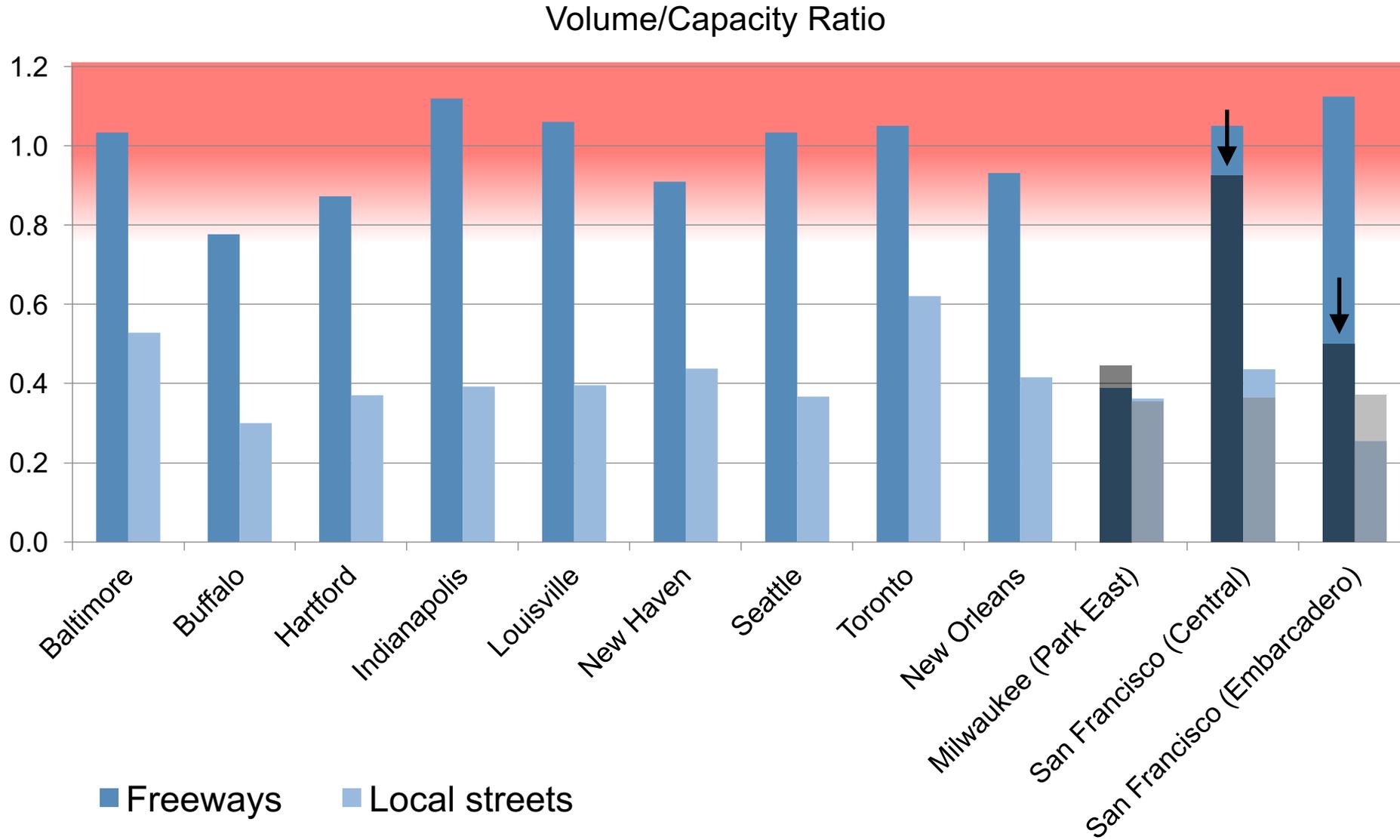


Central Freeway (San Francisco, 2016)



Credit: Steve Boland via Flickr

The takeaway...



- Urban freeways attract and funnel traffic
- Connected street networks distribute traffic more evenly

An evolving community



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ssti.us

Traffic data courtesy of Billings, Garrick, & Lownes (2013). "Changes in travel patterns due to freeway teardown for three North American case studies." *Urban Design International* 18: 165-181.