



# **4-to-3 Lane Conversions (Road Diets)**

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# What is a Road Diet?



San Antonio, TX

# Why Diet?

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# Crash Reduction



# Traffic Calming





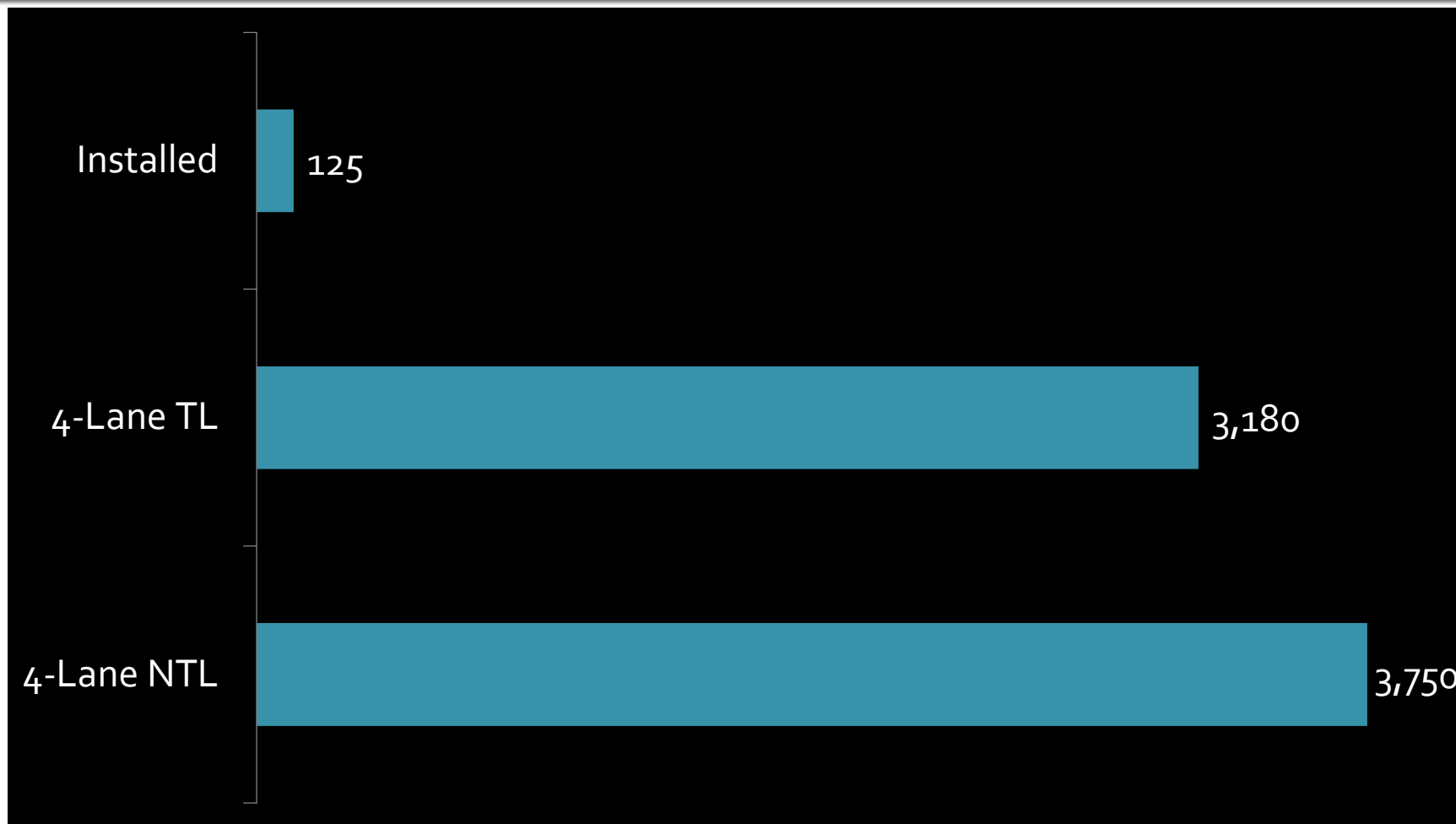
# Livable Communities



# Accommodate Bicycles



# Road Diet Potential (miles)



\*\*Includes some 4-lane divided highways.  
Source: 2011-2012 TAMC Paser Collection



# Road Diets Support SHSP

⚠ Senior Mobility Action Team

⚠ Ped/Bike Action Team

⚠ Engineering Action Team

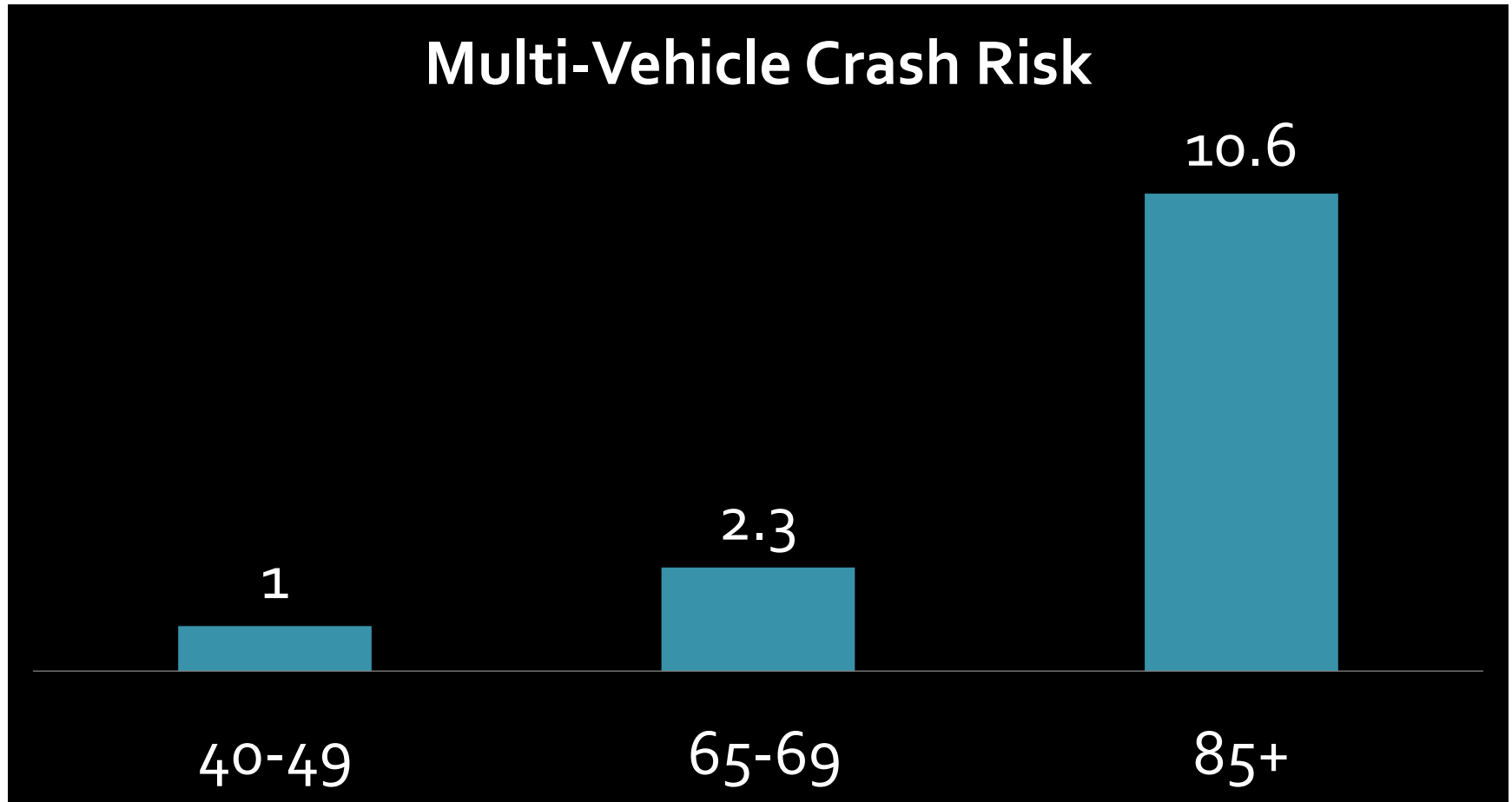
# Senior Mobility

North American Conference on  
Elderly Mobility:  
A Decade of Progress

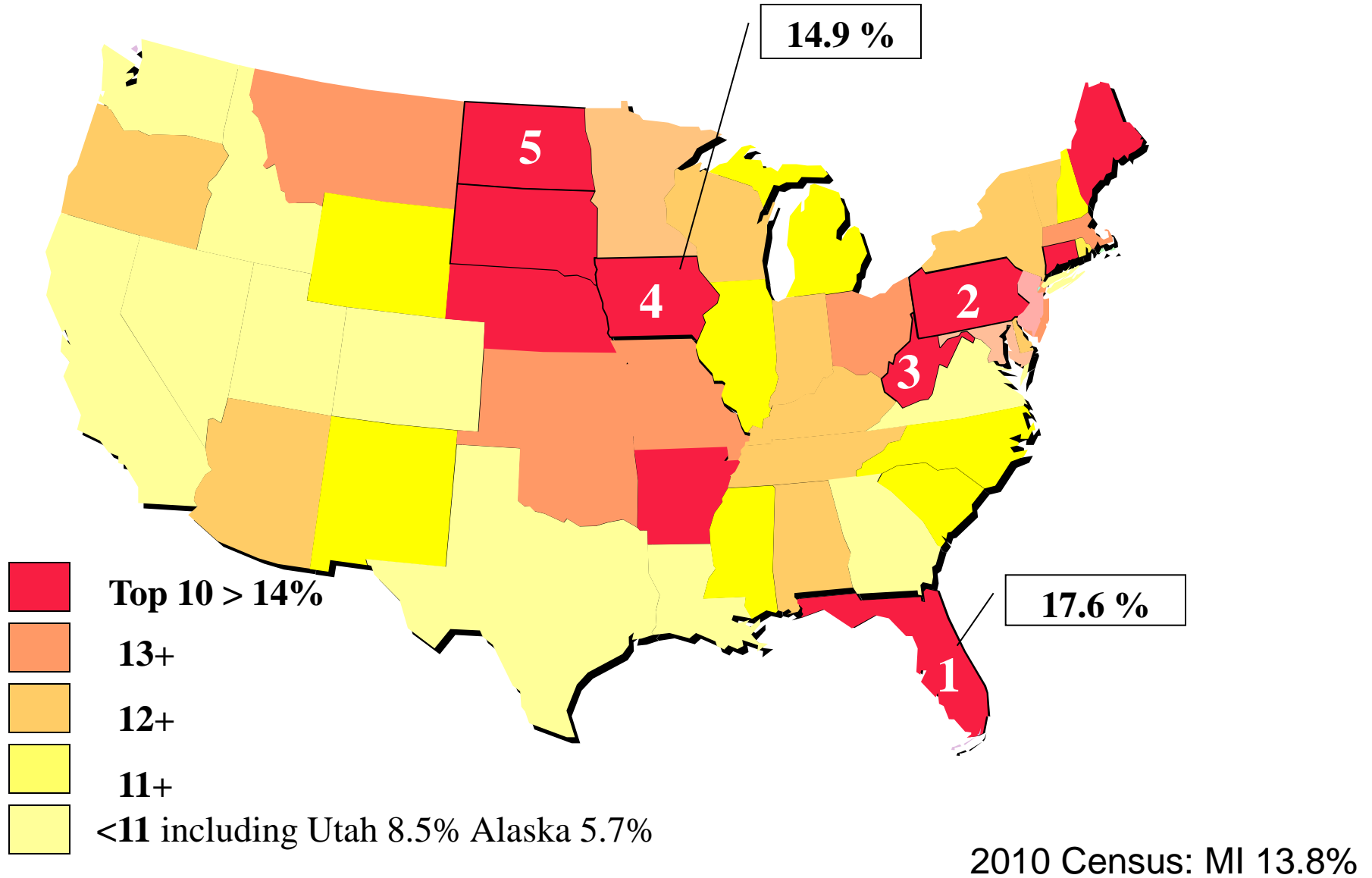
Detroit, Michigan

May 11-15, 2014

# Senior Mobility



# Percentage of Population Age 65 and Older 2000 Census, by State



## ⚠ Navigation of intersections

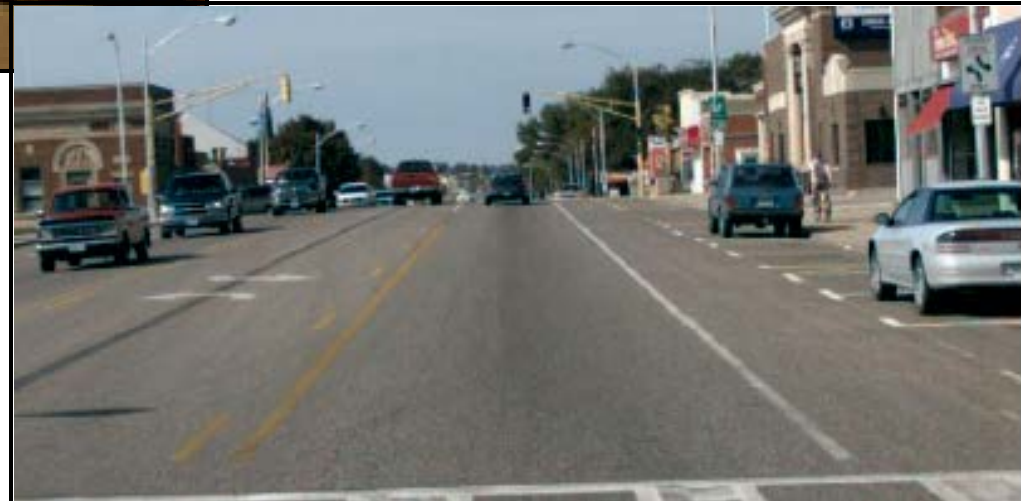


Sioux City, IA

Iowa – 14 corridors

Crashes ↓ 24 %

Crashes age 65+ ↓ 28 %





M-43, East Lansing, MI

## Michigan – 8 corridors

Injury Crashes	↓ 26 %
Age 65+	↓ 37 %



# Road Diets Support SHSP

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# Ped/Bike

## ⚠ Accommodations for pedestrians & bicyclists

- Mobility
- Safety



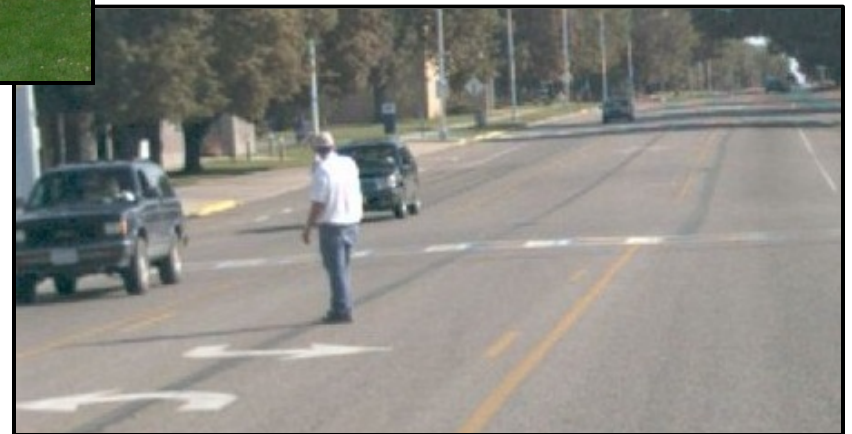
# Pedestrians

⚠ Safer crossing



← 4-lane

3-lane →



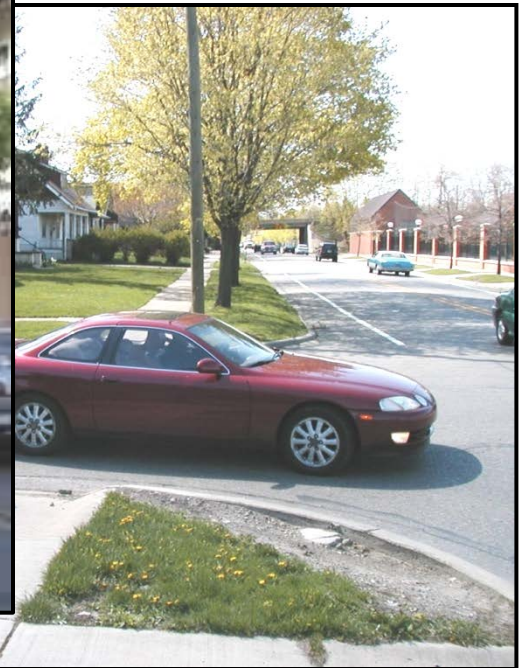
⚠ Provides space for pedestrian refuge





# Bicycles

- ⚠ Bike Lanes are more convenient and safer than sidewalk
- ⚠ Marked bike lanes is the key
- ⚠ Winter maintenance



# Bicycle Danger Index

➤ Major Streets w/o bike lanes	1.28
➤ Minor Streets w/o bike lanes	1.04 *
➤ Streets with bike lanes	0.5 ←
➤ Mixed-use paths	0.67
➤ Sidewalks	5.32

(\* = shared roadway)

1.00 = median

**Source: William Moritz, U.W. - "Accident Rates for Various Bicycle Facilities" - based on 2374 riders, 4.4 million miles**



# Road Diets Support SHSP

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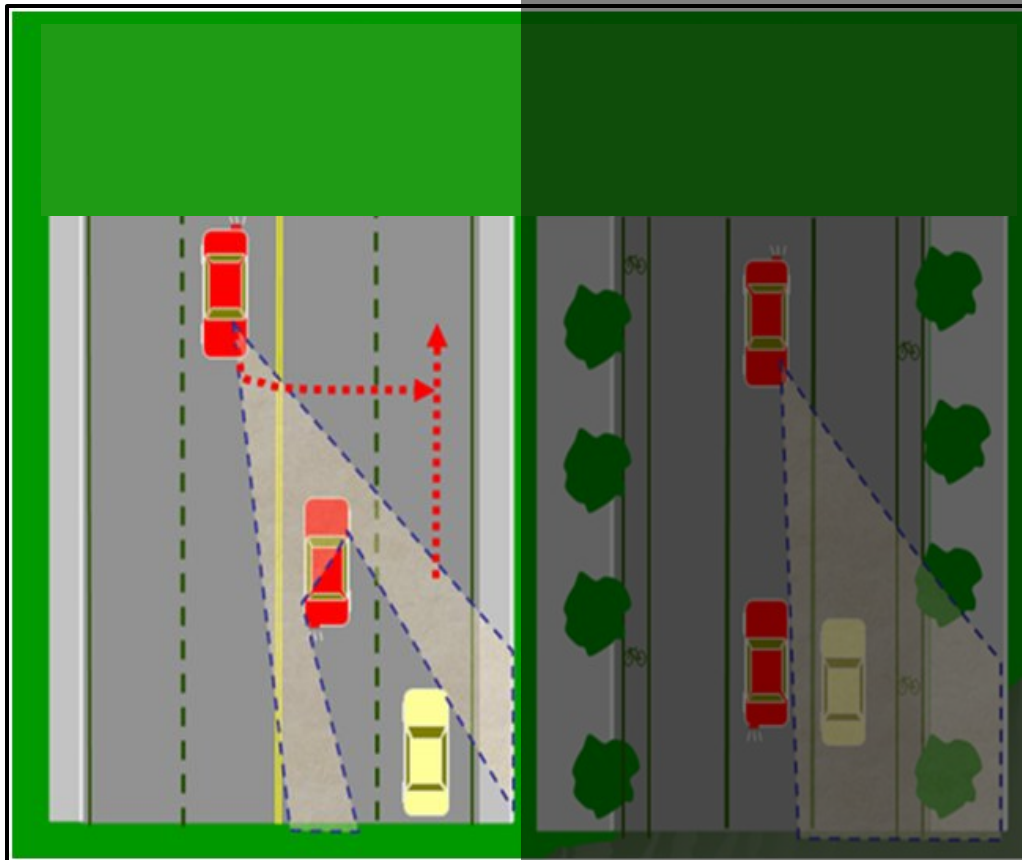
# Engineering - Intersections



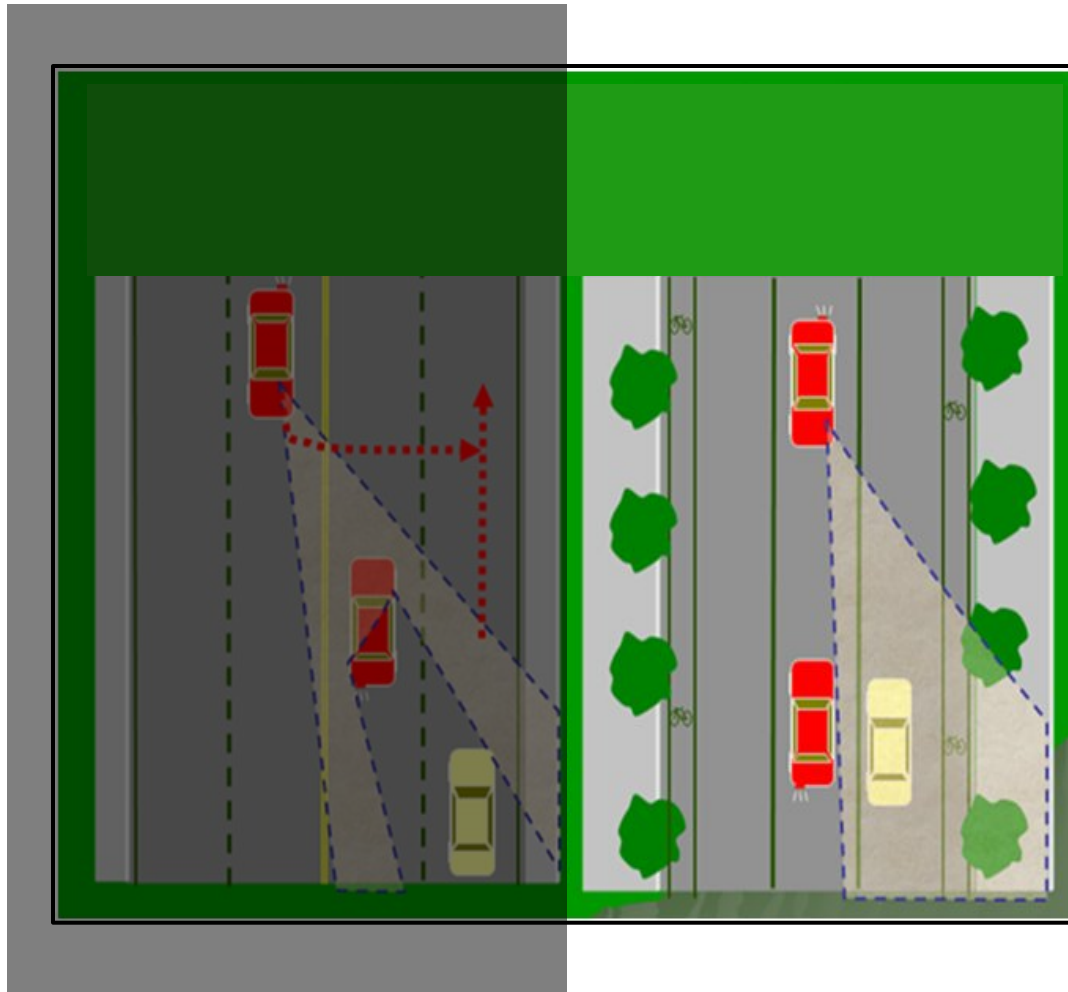
# Right Turn Radius



# Sight Distance

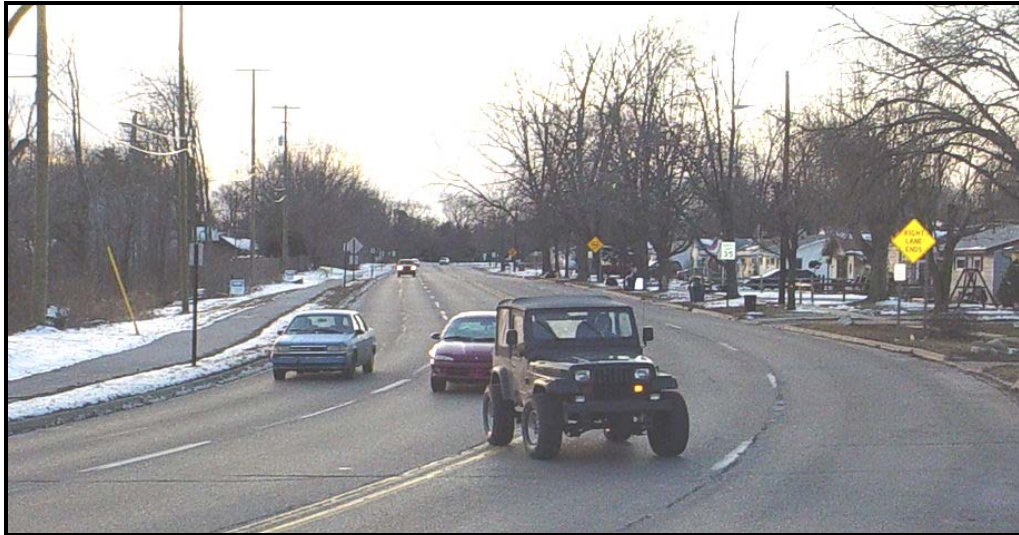


# Sight Distance





# Left Turn Crash Potential



⚠ Weaving



# Who is doing this?

- ⚠ MDOT
  - 53 corridors (49 miles)
- ⚠ Genesee MPO
  - 24 corridors (Flint-14)
- ⚠ Tri-County MPO
  - 21 corridors (Lansing-12)
- ⚠ Grand Rapids MPO
  - 17 corridors (GR-11)
- ⚠ Ann Arbor
  - 10 corridors

Local agencies 80 sites, 77 miles

# Design Considerations

- ⚠ MDOT Checklist – Form 1629 (MDOT Only)
- ⚠ Driveway density – Depends on Impetus



# Crash Reductions

## ⚠ Time of Return Form

- Suburban – 50% Reduction for all crashes (IA)
- Urban – 30% Reduction for all crashes (WA)



# Traffic Volume

- ⚠ 10,000 – Consider modeling intersections and major driveways
- ⚠ 15,000 – Modeling required per FHWA
- ⚠ 20,000 and above – Caution
  - Have been successful

# Design Year



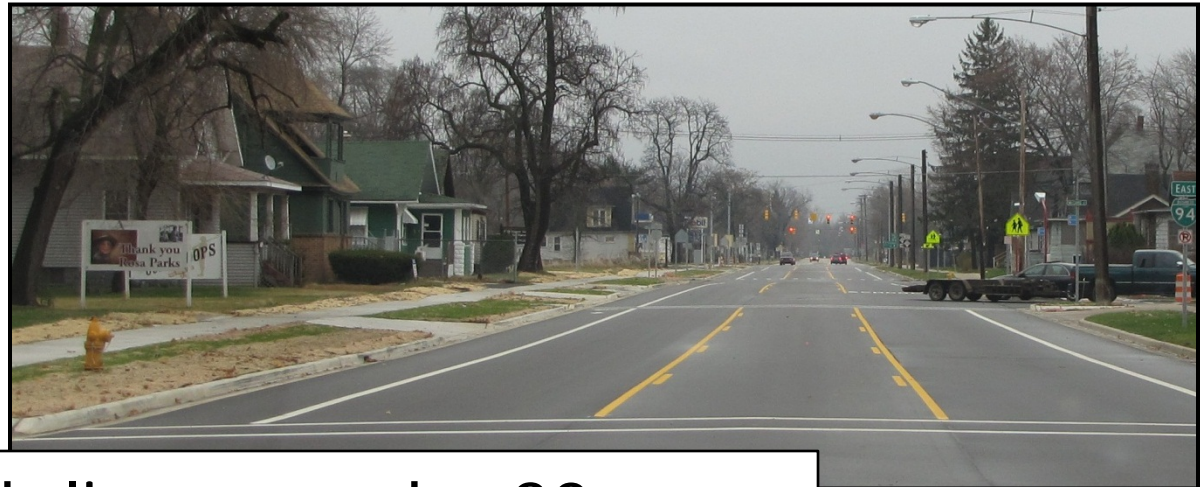
Restriping - 3 years



# Design Year



Resurfacing/same curb line – 3 years



Reconstruction/curb line moved – 20 years

# Lane Width



12' – Truck Traffic

11' – Traffic Calming

< 11' – Has been used in cities, neighborhoods

# Road Diet Controversy

- ⚠ Frankenmuth
- ⚠ Bessemer
- ⚠ Owosso



Serving The Frankenmuth Area Since 1906 **50¢**

# Frankenmuth

VOL. 95  
NO. 20  
WEDNESDAY, NOVEMBER 15, 2000  
Frankenmuth, MI 48734

NEWSPAPER - DO NOT DELAY  
USPS 207-960

## Council stands by decision; Main Street back to 4 lanes

### Overflow audience attends final meeting

**THREE LANE TO BE REMOVED  
BY NOV. 30**

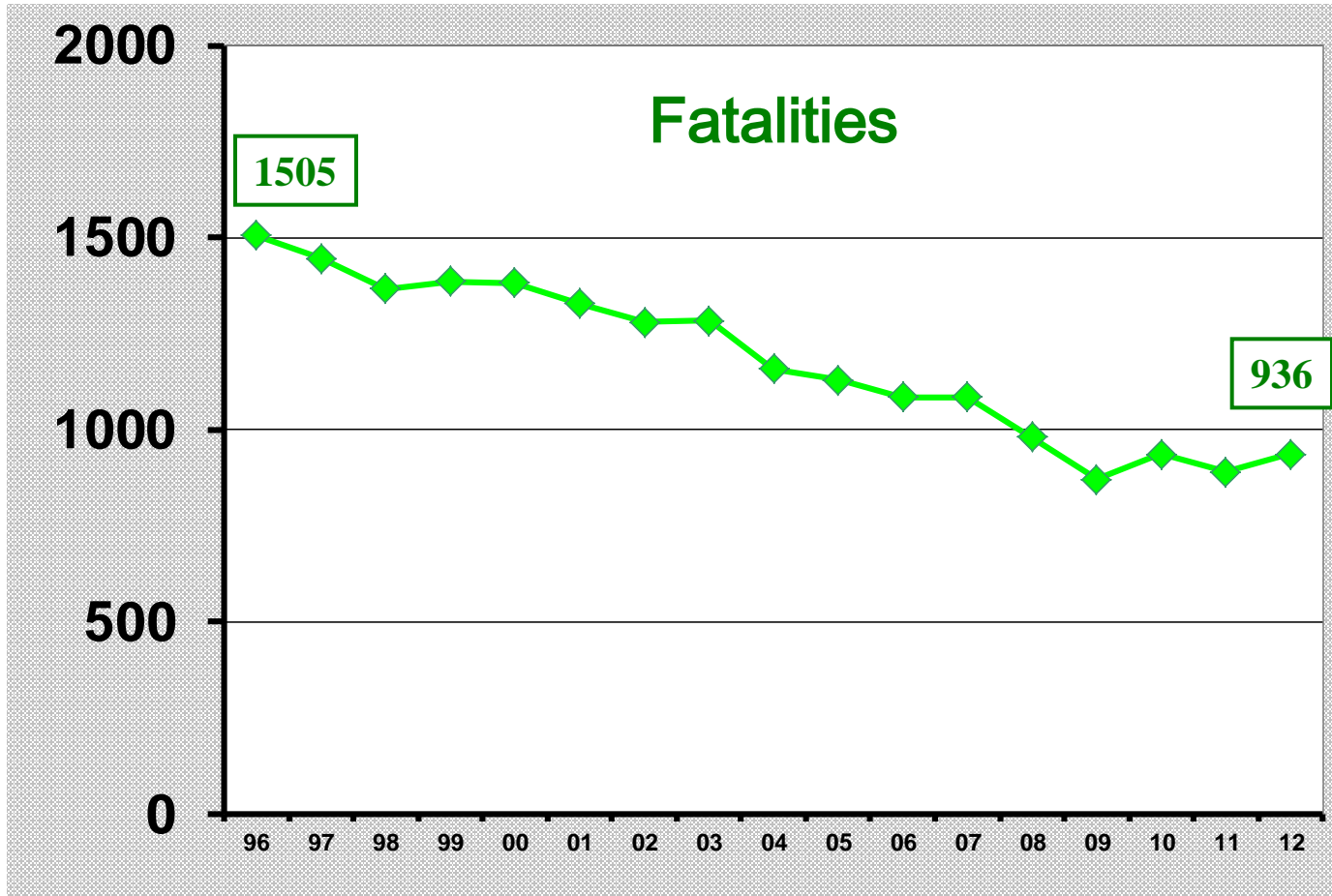
The City Council Chambers were full on Wednesday evening with an overflow crowd sitting on chairs and standing in the hallway outside the chamber doors. The subject of intensive local interest was the old three lane versus four lane configuration for the downtown area of Main Street. The question was placed in the council

In his Oct. 24 letter to Mayor Rupperecht which was reprinted in its entirety in last week's issue of the NEWS, Mr. DeSana listed his reasons why he thought the three lane layout was the best design for our downtown area. However, in his next to last sentence in the three page letter, DeSana said "Please work with the Bay Region Office to coordinate the conversion back to the four lane cross section." In effect, he was again letting the City Council make the final decision and he was approving a

- ⚠ Checklist
- ⚠ Don't oversell

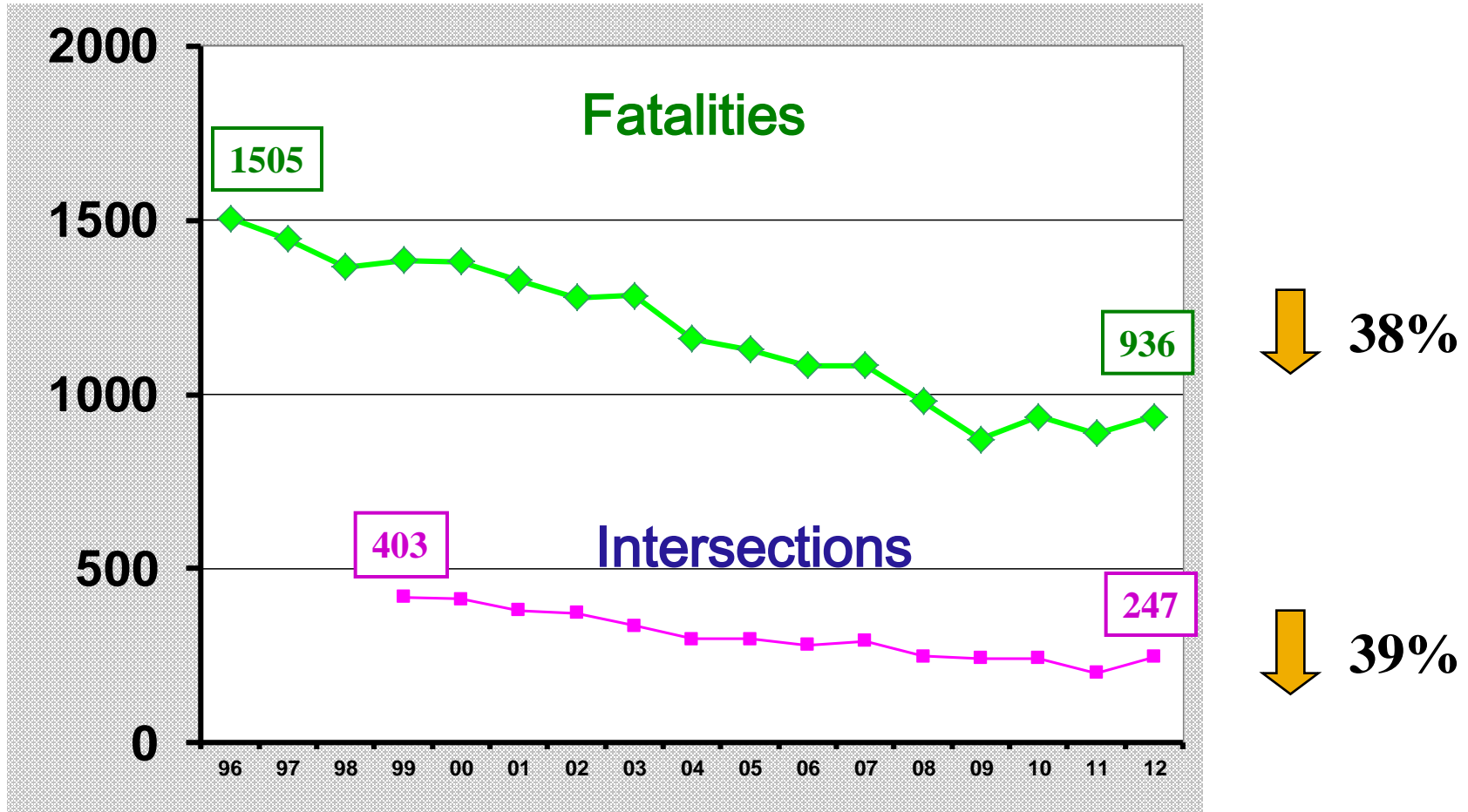


# Michigan Fatalities: 1996-2012



↓ 38%

# Michigan Fatalities: 1996-2012



# Toward Zero Deaths

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TZD  
[Video](#)

# Questions?

## Road Diets for Dummies

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