



Association of Minnesota Counties | March 03, 2022

Joe Gustafson  
Washington County Traffic Engineer

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State Aid Operations Engineer





STATEWIDE  
Speed Limit Vision  
PROJECT

## VISION STATEMENT

Speeds limits are set with an emphasis on all users with key influences of **safety**, **engineering**, and **surrounding land use**.

### Core Values

**Speed limits are:**

- 1 Affected by community context, land use, and road design.
- 2 Governed by voluntary compliance through education and accepted social norms.
- 3 Established through consistent technical evaluation and applied equitably across all communities.

In Minnesota, we believe that:

safety culture

non-motorized users

crash severity reduction

surrounding land use

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•A vision for speed limits should recognize the different functions roadways provide.

# Toward Zero Deaths

Speed is one element of our traffic safety culture. To be effective we need to consider all elements.

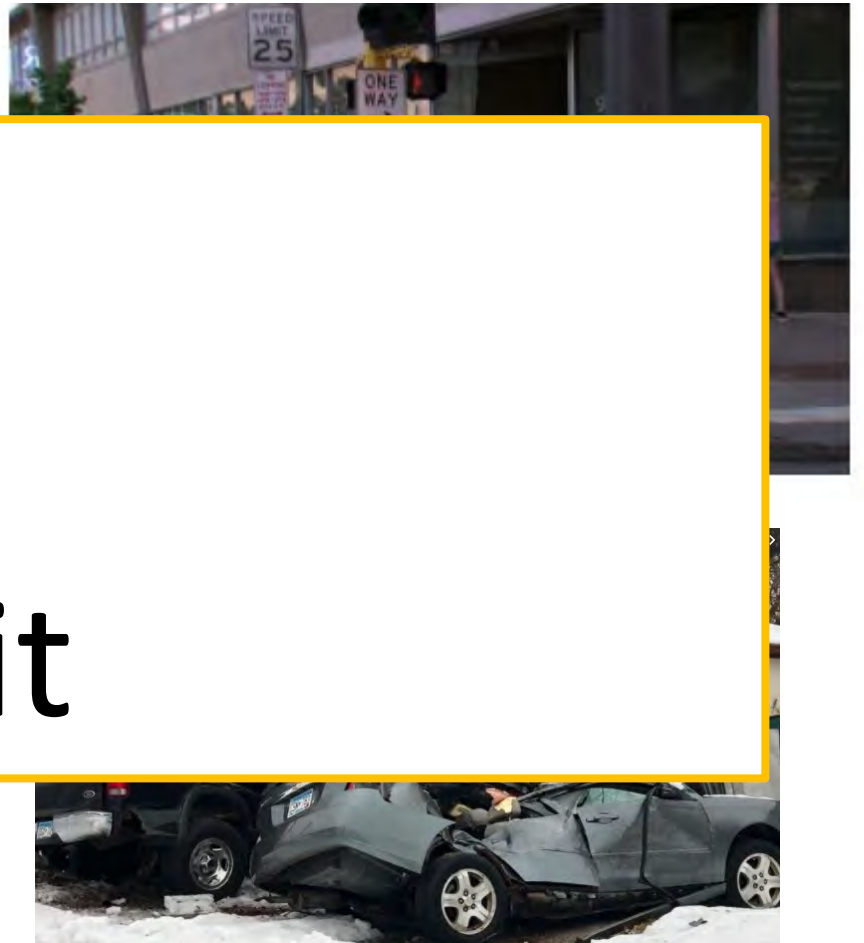







Police: Woman Leads Officers On 100MPH Chase In Eagan

SpeedING  
is NOT  
Speed Limit

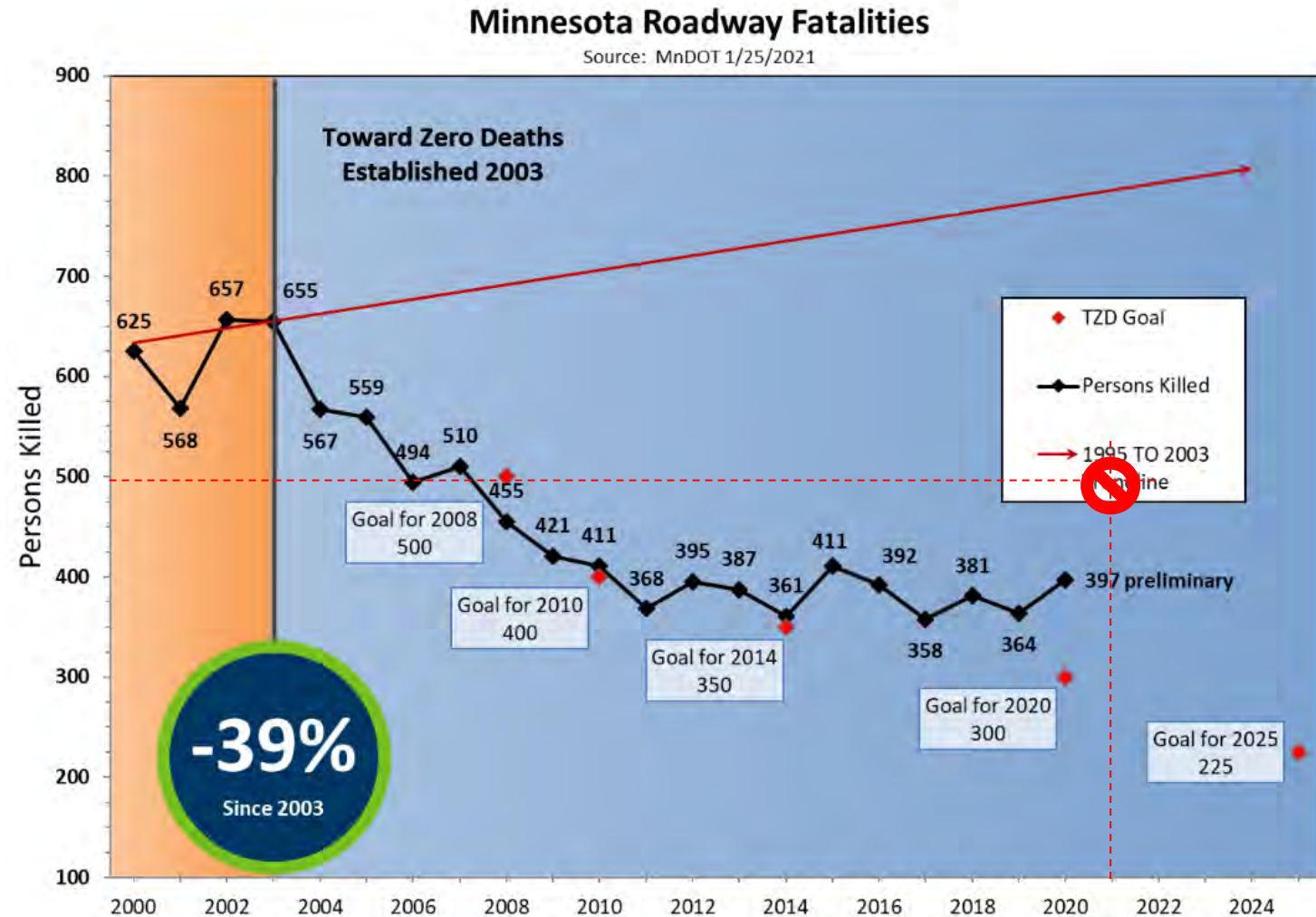


# Long History

Minnesota has a long history in addressing safety on their roads

TZD established in 2003

2014 saw lowest number of fatalities since 1944





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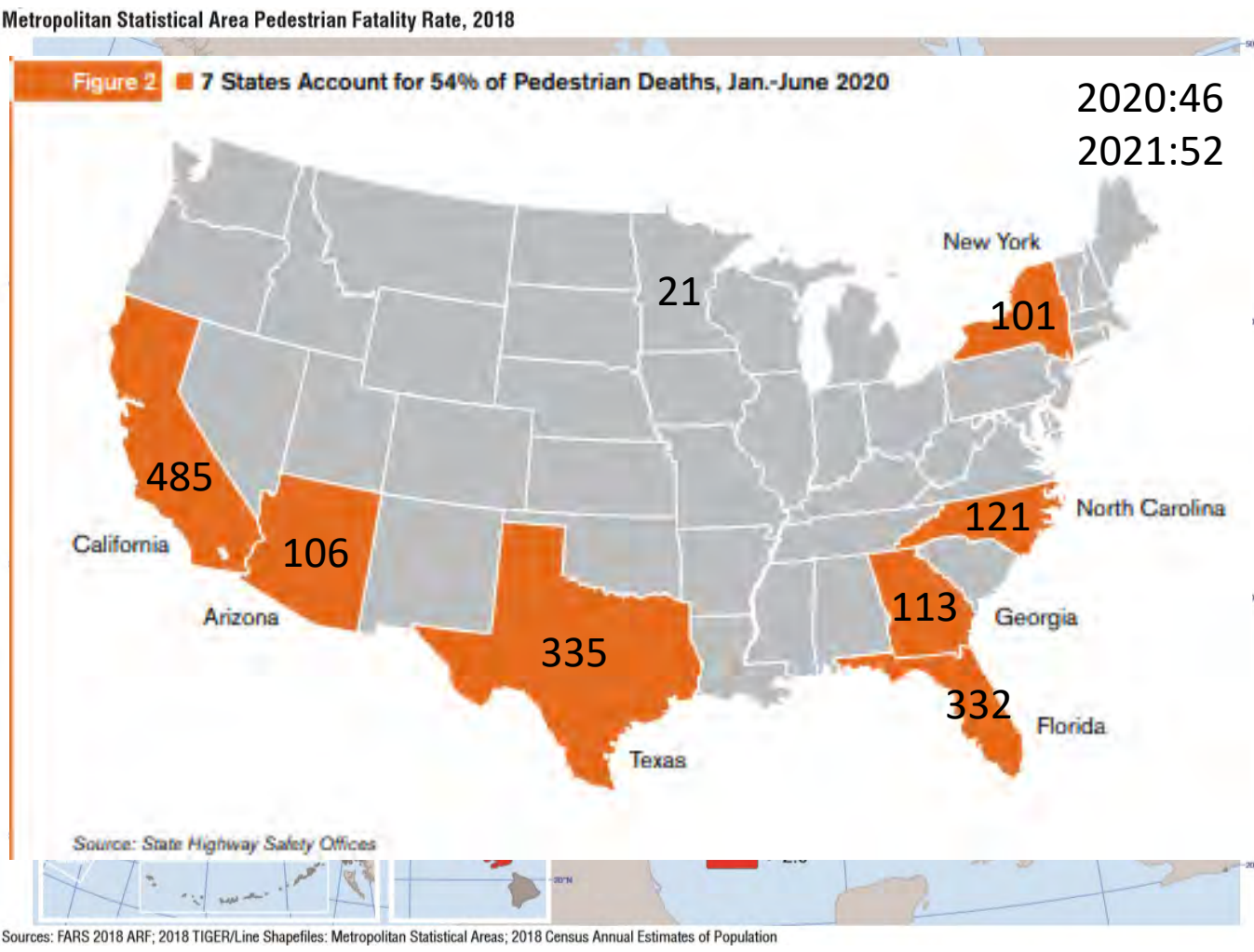
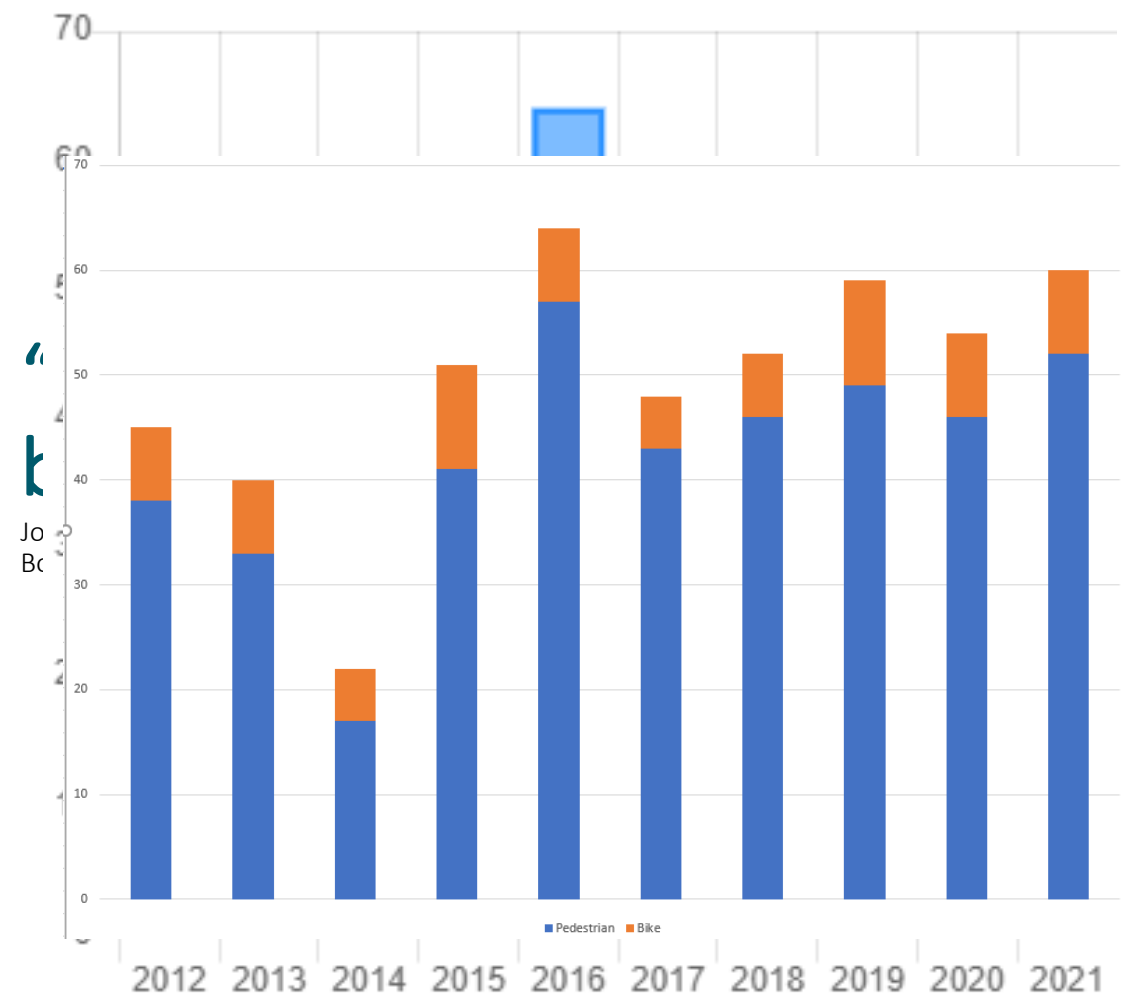
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# MN Fatal Bike and Ped Crashes





# Speed Limit History

The More Things  
Change, The More They  
Remain The Same.

*Jean-Baptiste Alphonse Karr  
French critic, journalist, and novelist (1808-1890)*

## MINNESOTA SPEED LIMIT HISTORY

For an understanding of where the State of Minnesota has been regarding speed limits, a history of Minnesota speed laws from 1881 to the present is provided in the following list. This list is updated from information provided in the 2008 MnDOT Study and Report on Speed Limits research.

See the table below or download a copy of [Minnesota Speed Limit History](#) (PDF).

Show  entries

Search:

Year	Description
1881	Streetcars in the City of Duluth restricted to 6 mph.
1885	Incorporated villages or boroughs are authorized to regulate the rate of speed of engine-powered vehicles.
1911	<p>Rate of speed —Sec. 16.</p> <p>No person shall drive a motor vehicle upon any public highway "of this state at a speed greater than is reasonable and proper, having regard to the traffic and use of the highway, or so as to endanger the life or limb or injure the property of any person. If the rate of speed of any motor vehicle, operated on any public highway in this state, where the same passes through the closely built up portions of any incorporated city, town or village, or where the traffic is more or less congested, exceeds ten (10) miles an hour for a distance of one eighth of a mile, or if the rate of speed of any motor-vehicle, operated on any public highway of this state, where the same passes through the residence portions of any city, town or village, exceeds fifteen (15) miles an hour for a distance of one-eighth of a mile, or of the rate of speed of any motor-vehicle operated on any public highway in this state, outside the closely built up business portions, and the residence portions of any incorporated city, town or village, exceeds twenty-five (25) miles an hour for a distance of one-quarter of a mile, such rates of speed shall be prima facie evidence that the person operating such motor-vehicle is running at a rate of speed greater than is reasonable and proper, having regard to the traffic and use of the way, or so as to endanger the life or limb or injure the</p>



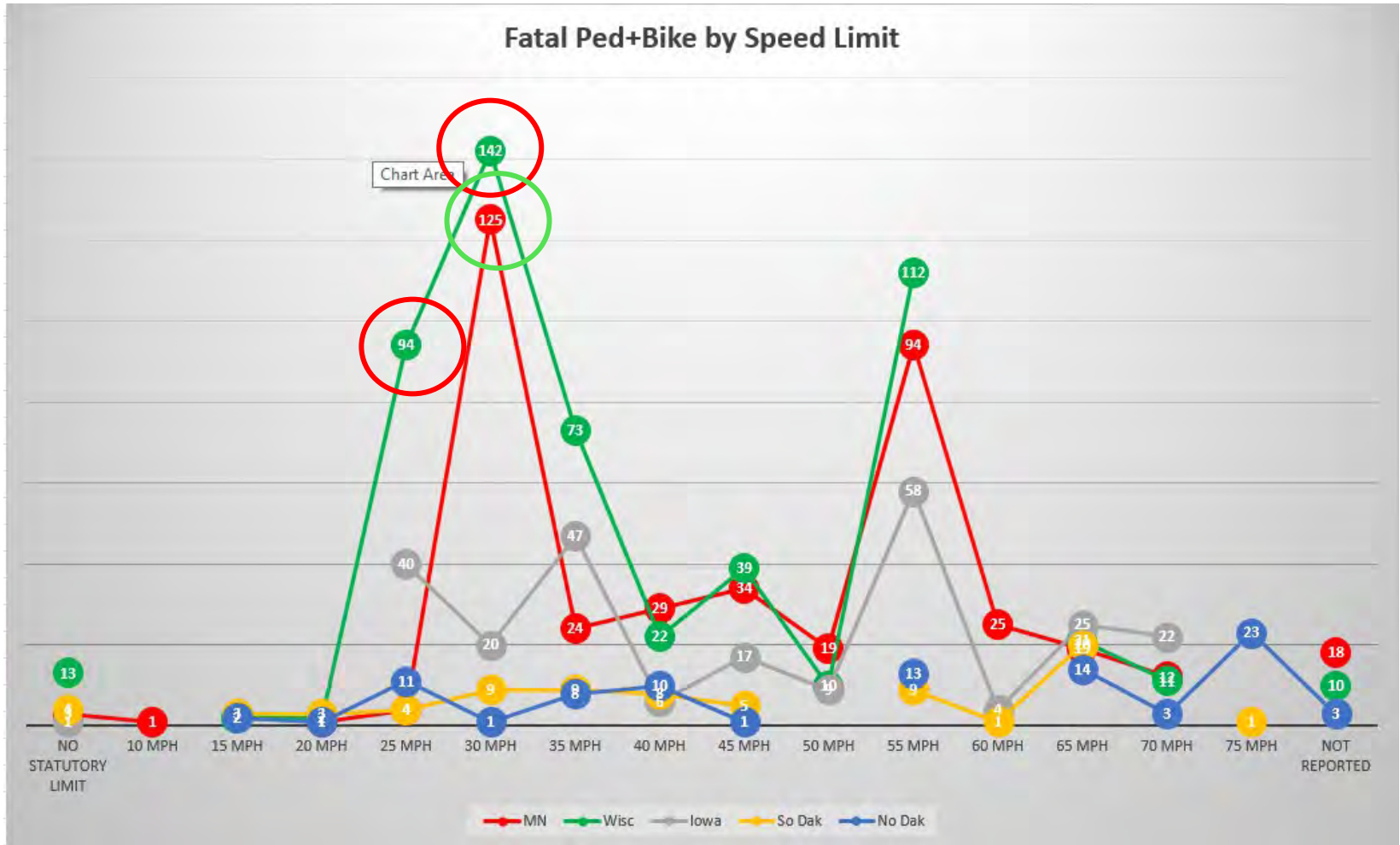
# Current Practice in Minnesota

## In Minnesota

- Statutory Urban Speeds
  - Minnesota – 30 mph
  - All neighboring states – 25 mph
- MnMUTCD (2019)
  - Engineering Approach
  - Should be within 5 mph of the 85<sup>th</sup> percentile speed of free-flowing traffic
  - May consider other factors

- **Operational Speed**
- **The Pace Speed**
- **Crash History**
- **Roadside Environment**
- **Road Characteristics**
  - Shoulder - Alignment
  - Grade - Sight Dist.
- **Parking Practices**
- **Non-Motorized Activity**

# Data, Data Everywhere



Insurance Institute for Highway Safety Speed Study - Boston Ma

Speed	Before 30 MPH Limit	After 25 MPH Limit	Change
50th percentile	24.8	24.8	0
85th percentile	31.0	31.0	0
+25 MPH	47.9%	46.9%	-2%
+30 MPH	18.2%	18.1%	-0.5%

Speed Profile on Local Streets Wisconsin Vs. Minnesota

Roadway Width	Average 85% percentile Speed (MPH)	
Feet	River Falls, WI	Woodbury, MN
30	32	32
32	33	32
36	31	34
40	34	34
42	34	36

# Injury minimization/Safe system philosophy

Figure 4.5: Difference in deformation striking a solid object at 60 km/h and 100 km/h



h configurations

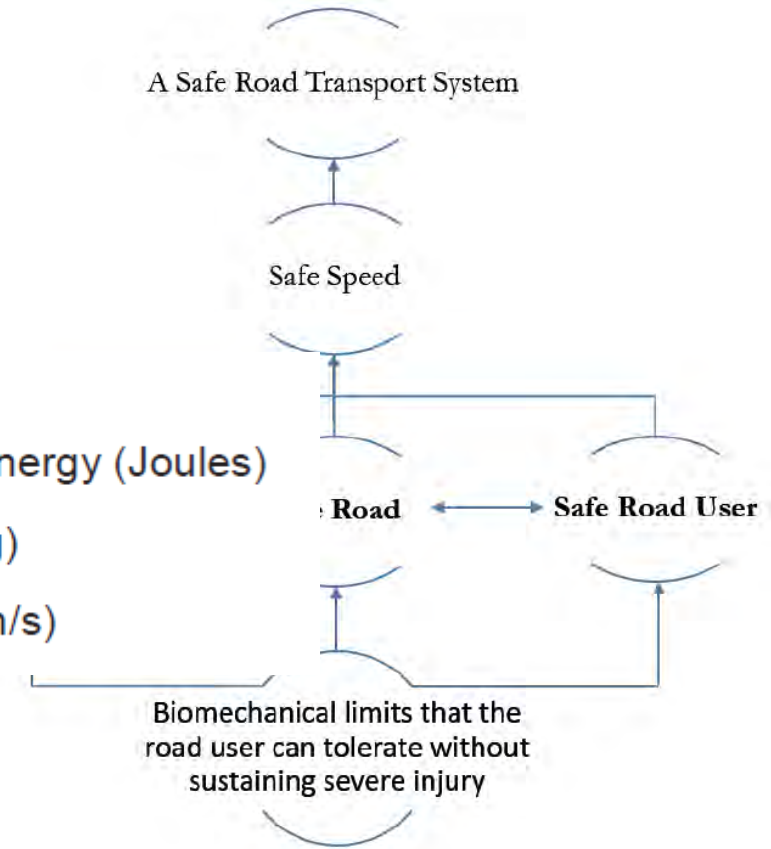
$$E_k = \frac{1}{2} m v^2$$

where

$E_k$  = kinetic energy (Joules)

$m$  = mass (kg)

$v$  = velocity (m/s)



*"In road injury epidemiology, kinetic energy is the pathogen", LS Robertson – Epidemiologist.*

Source: ANCAP

Source: Jurewicz, Sobhani et al. (2015) and based on Wramborg (2003)



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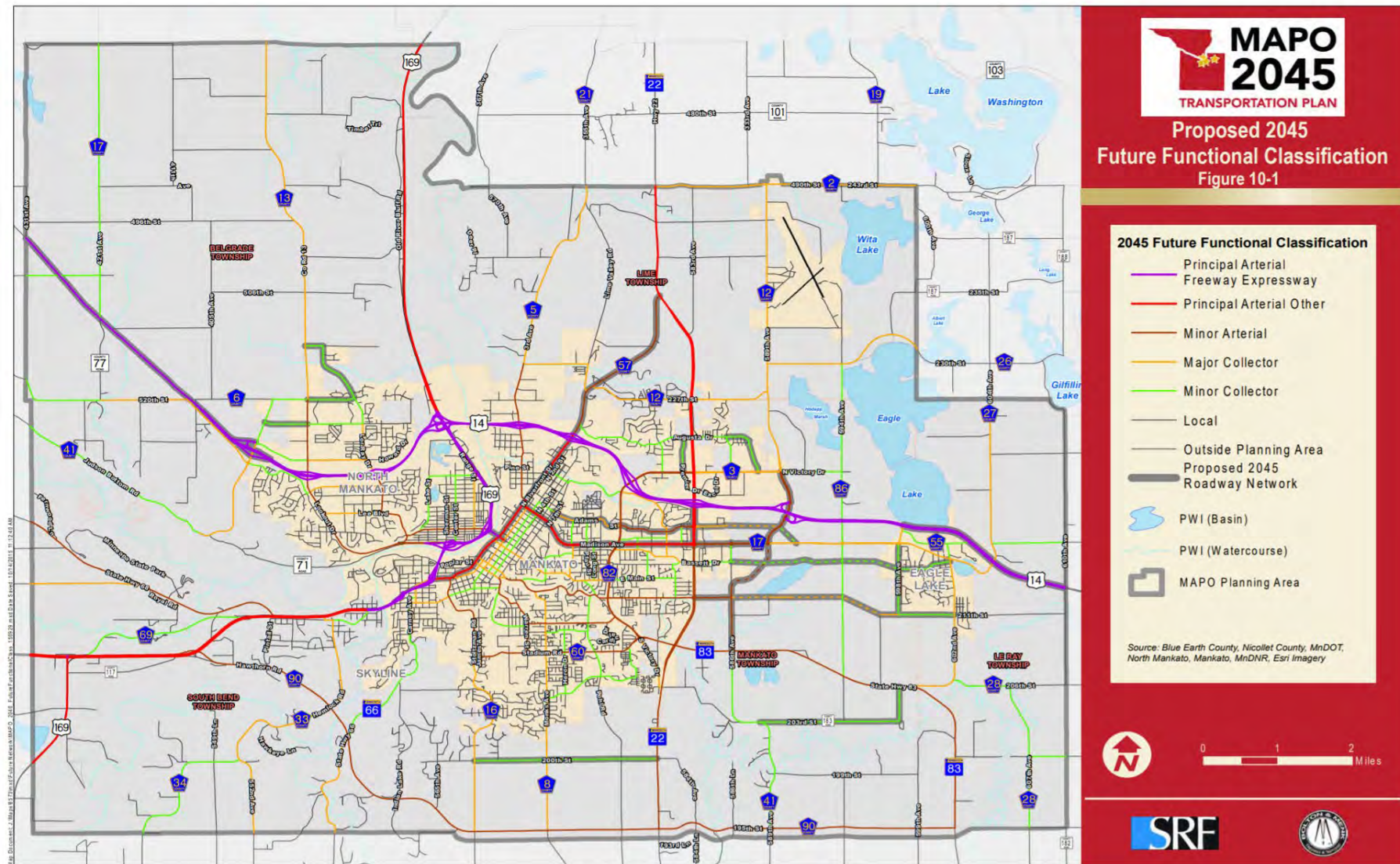
•A vision for speed limits should recognize the different functions roadways provide.

# Use and Function of Roadway Classification

 <b>Mobility</b>	<b>Arterials</b> <i>Higher mobility, low degree of access</i>
	<b>Collectors</b> <i>Balance between mobility and access</i>
	<b>Locals</b> <i>Lower mobility, high degree of access</i>

Establishes level of  
roadway based on  
**fit and function**





Sample Functional Classification Map

# So, What Are We Doing About It?

## **MnDOT**

- Work Zone Speed Management Study
- Implementing Process Improvements

## **TZD Action Teams**

- Speed Action Team
- Automated Speed Enforcement
- Urban and Rural Roadway Design
- The Choice of Speeding: Consumer Research

## **Local Road Research Board**

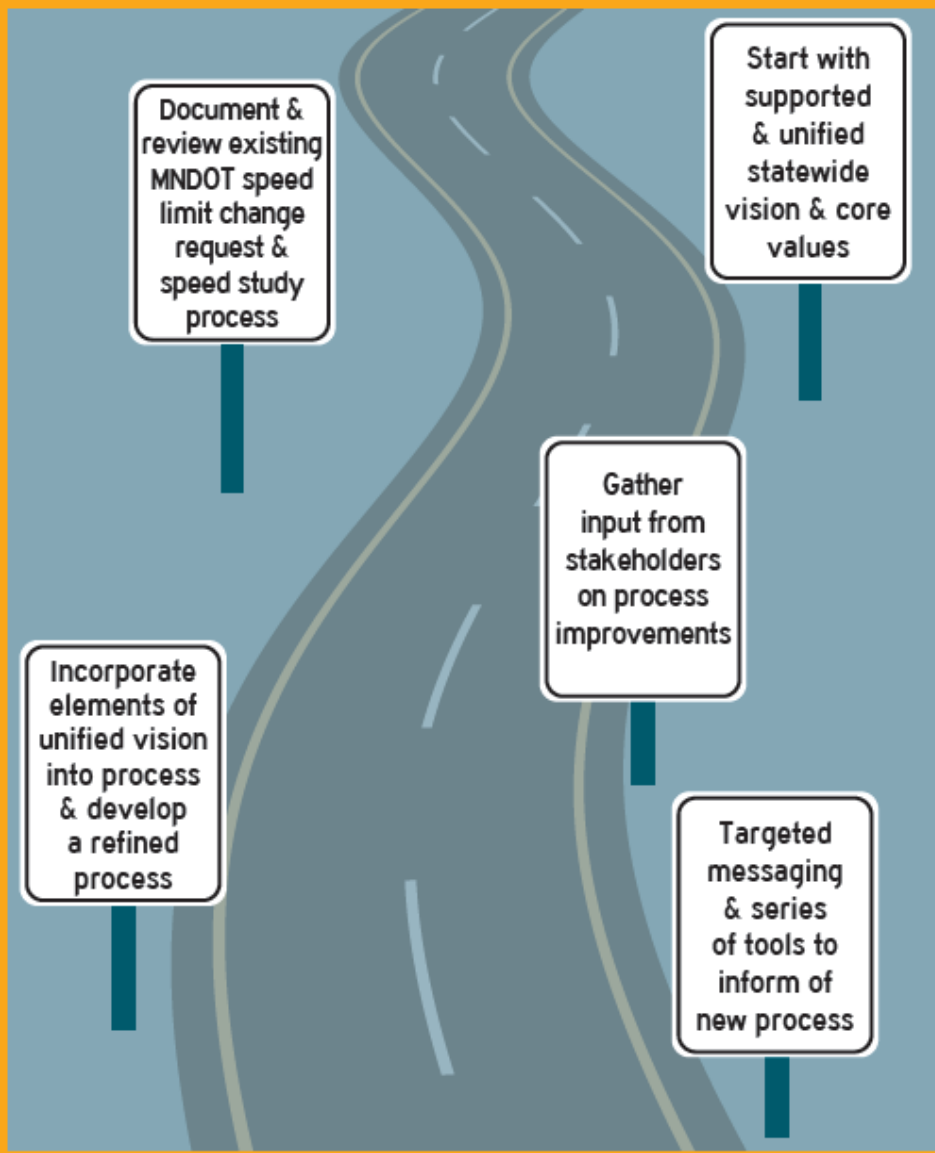
- Impact of Speed Limit Changes on Urban Streets
- Guidelines for Determining Speed Limits on Municipal Roadways

## **Minnesota Safety Council**

- Dynamic Speed Feedback Sign: Grant projects
- Speed Counts: Employer Campaign

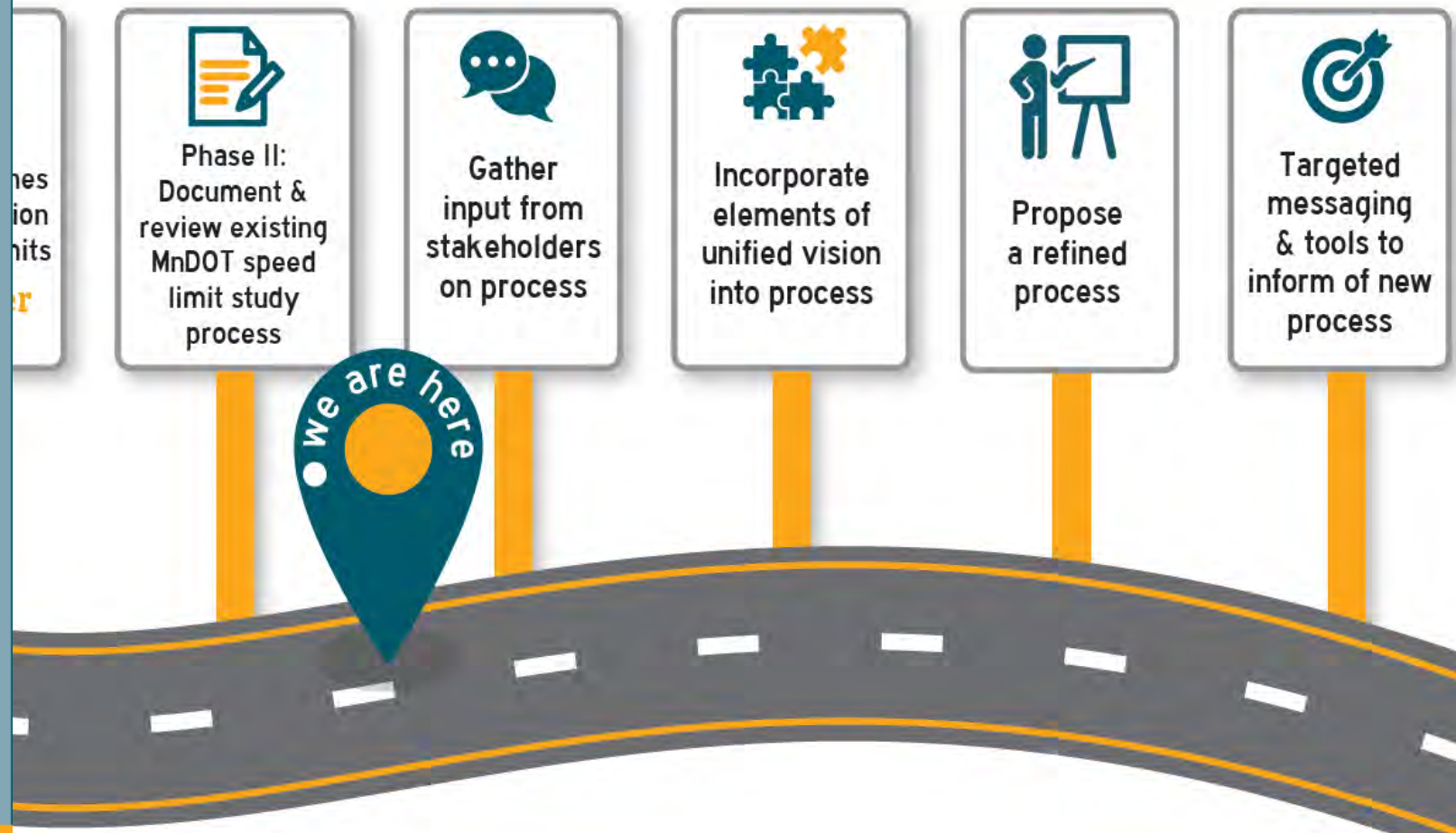


# Project Scope



## STATEWIDE Speed Limit Vision PROJECT - Phase II

# DRAFT Timeline



## **Task 2: Process Review and Refinement**

The outcome of this task will be documentation of the existing State engineering and traffic investigation process, and suggested refinements to improve the process and create greater transparency. Under this task, Contractor will:

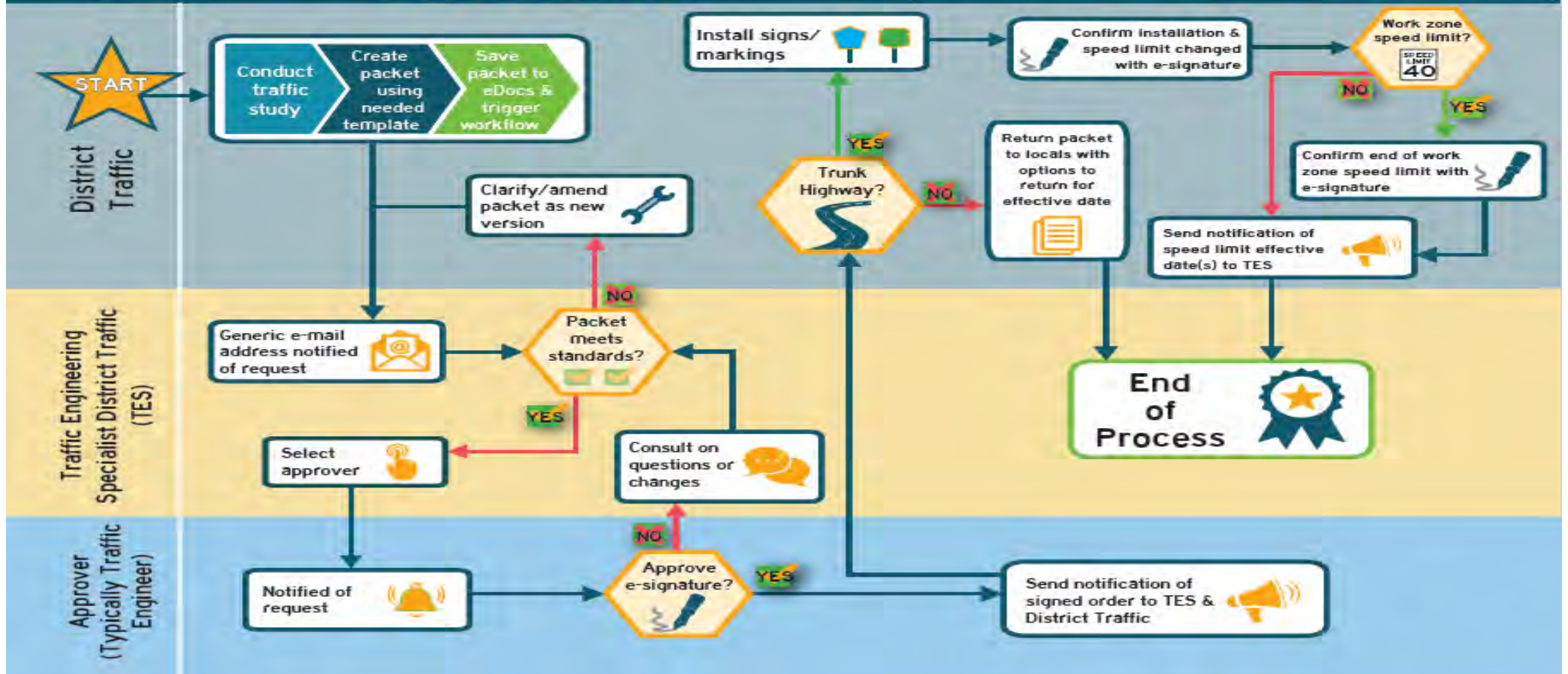
1. Review the existing State speed limit request and speed study process with State staff. Examine the steps and timeline involved.
2. Review the existing process for areas of potential refinement to include:
  - a. Review process for completion of a speed study on newly reconstructed roadways
  - b. Discuss the process for re-establishing statutory speed limits
  - c. Develop a uniform submission package and process for requesting a speed study
  - d. Review data collection and data needs
  - e. Sample resolutions
  - f. Review and recommend way to decrease lag times, increase the number of speed studies that can be completed, provide a fixed time to completed deadline.
  - g. Consider adding a step: Provide a preliminary review of analysis and recommendations prior to speed limit authorization. (From requestor to District and District to Central Office)
  - h. Adding input from stakeholders (Cities and Townships) within and along the roadway corridor so that they feel they have been heard.
  - i. How to handle other factors, in addition to the 85th-percentile speed, that have a role in setting speed limits. Look at developing specific parameters.
  - j. Define how the elements and core values of the Minnesota Speed Limit Vision are incorporated into the final posted speed limit recommendation.
  - k. Discuss changes to the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD) and National Cooperative Highway Research Program (NCHRP) 966 research, report, and tools and how they could be used in the State process.
  - l. Lead discussion with State staff. Can State set speed limits outside the current boundaries? Will State set limits outside of the current boundaries? For example, speeds from 55 to 60 MPH.
  - m. Discuss process for revocation of an existing speed study to statute-based limits
  - n. How to handle special cases and places such as near schools, parks, downtowns.
  - o. How to address emotionally charged requests
  - p. Discuss the situations (provide examples) where a speed limit review is typically needed





# STATEWIDE Speed Limit Vision PROJECT

## PROCESS: Future State PHASE II DRAFT







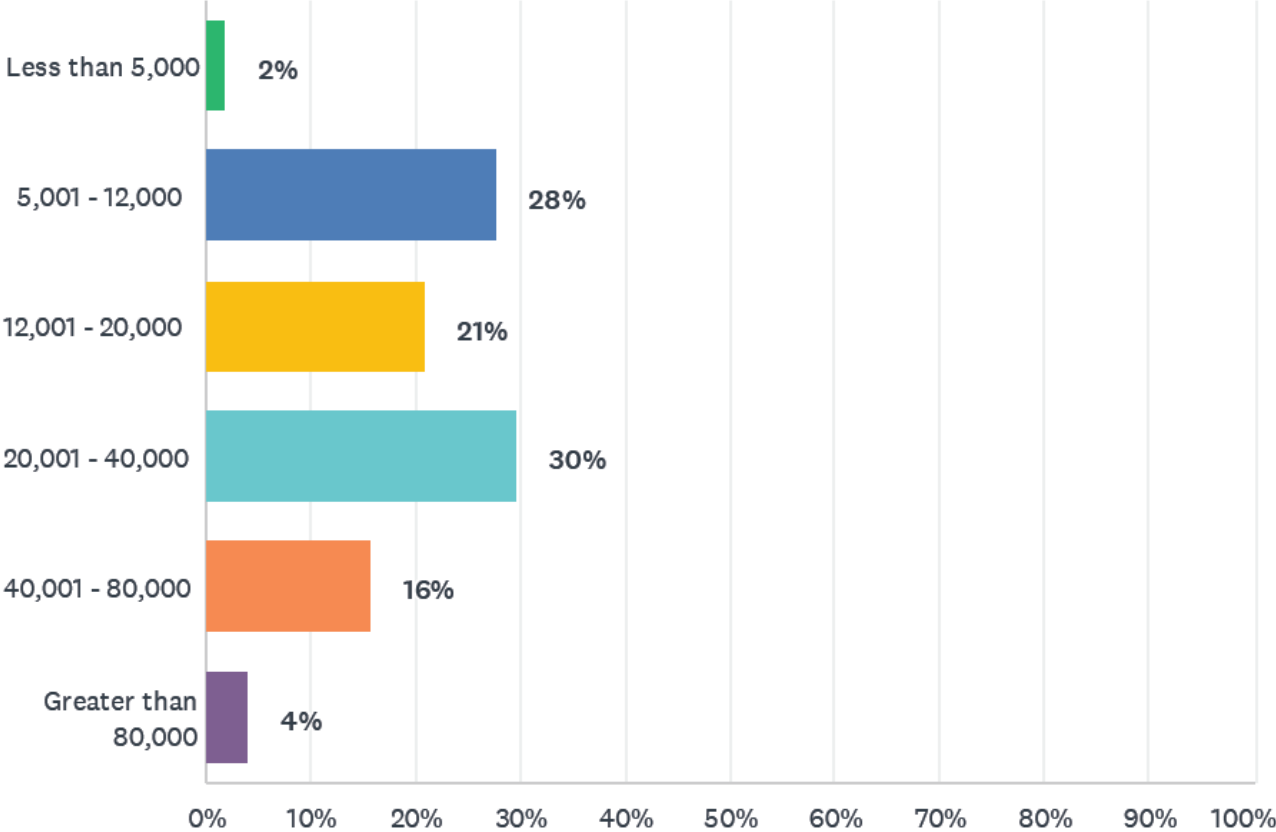
Some County Perspectives

Joe Gustafson  
Washington County Traffic Engineer

# Speed Limit: City Questionnaire

Q6 What is the population of your city?

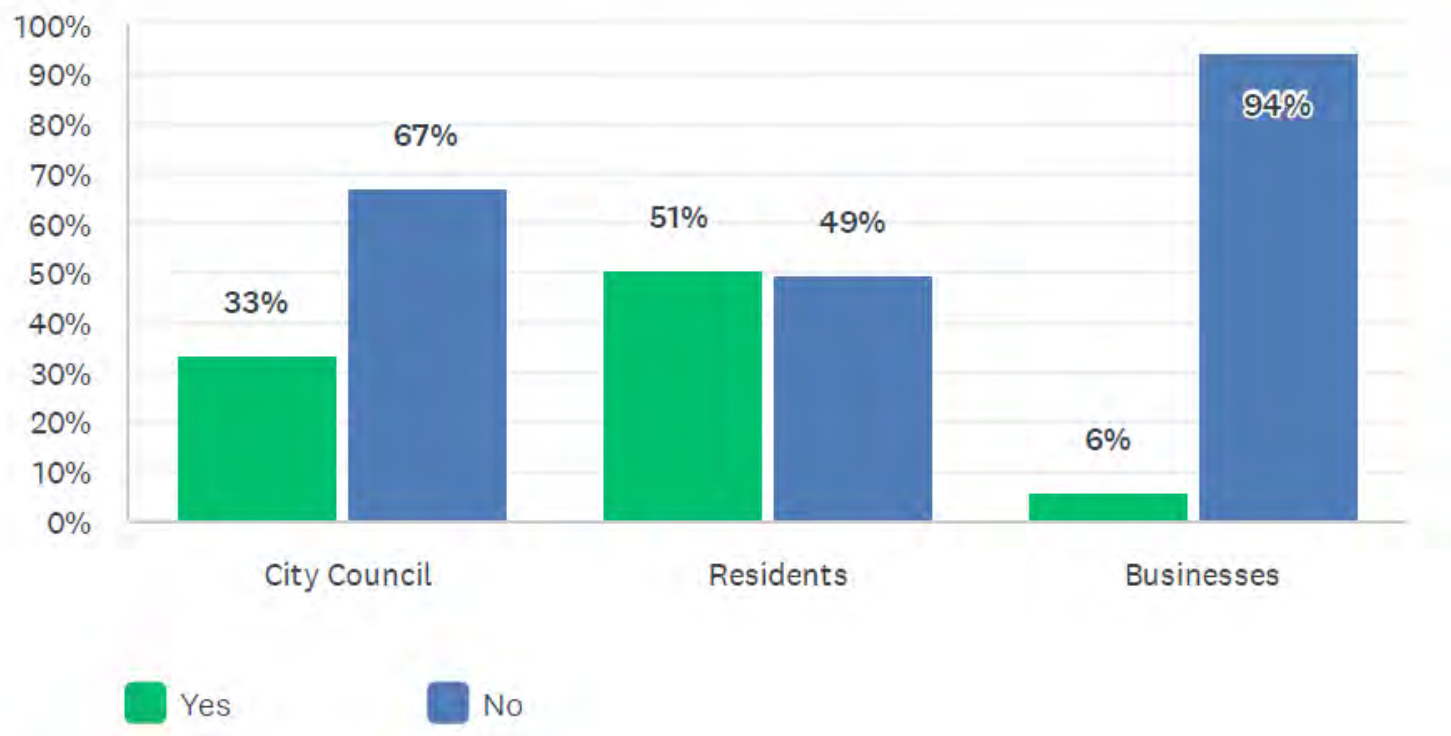
Answered: 101    Skipped: 5



# Speed Limit: City Questionnaire

Q7 Has anyone shown interest in changing speed limits because of the law?

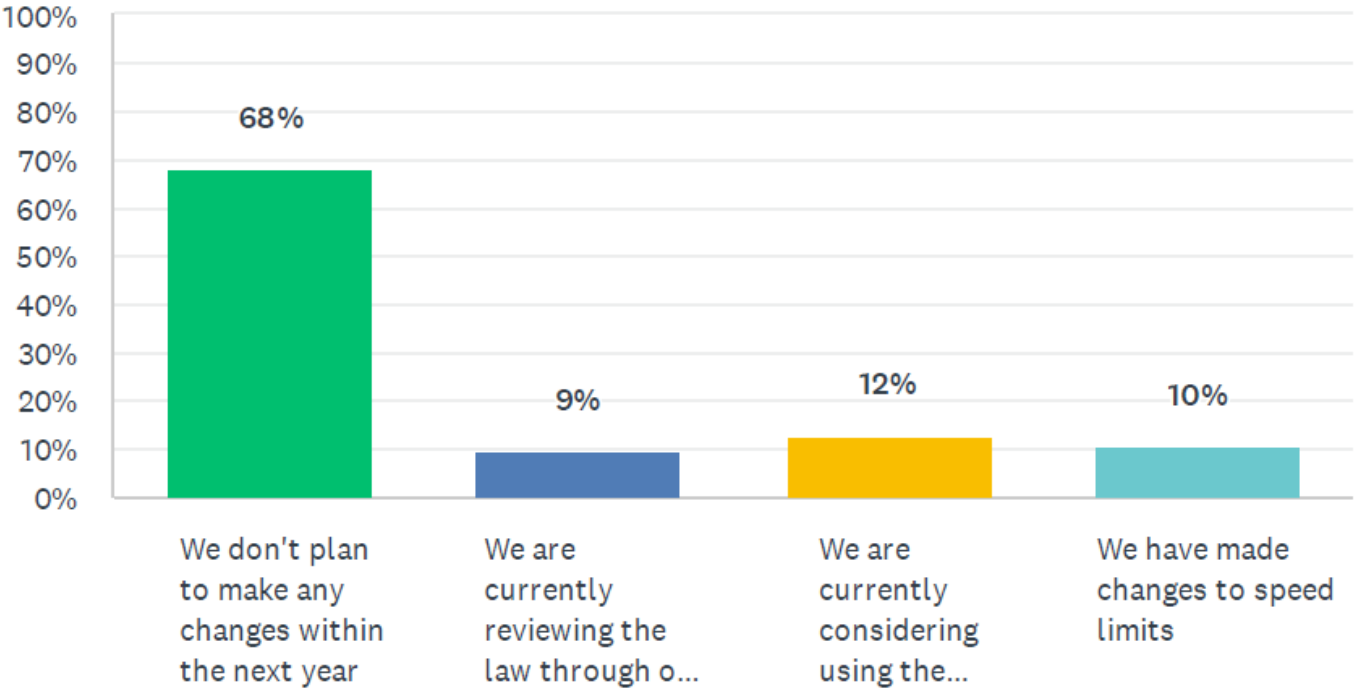
Answered: 97    Skipped: 9



# Speed Limit: City Questionnaire

Q8 Regarding the authority to set speed limits on city streets, please choose the answer that best describes your city's status:

Answered: 97   Skipped: 9



# County Road Speed Limits

- Statutory Limits when applicable (55 rural, 30 urban)
- Or set by MN Commissioner of Transportation, at county request
- Some limited exceptions (school zones, active work zones, etc)
- Consistent statewide process, considers site conditions
- Cities allowed to set their own limits for city roads (2019 statute)





# Speed Study Criteria

- Follow Manual of Uniform Traffic Control Devices (MUTCD)
  - Federal regulation, though some states adopt their own (including MN)
  - Applies to all roadways (even private roadways open to public travel)
  - Requirements:
    - Increments of 5 mph
    - Speed limit sign appearance
    - Unless “statutory”, must conduct “engineering and traffic investigation”
    - Provides list of factors to consider for that investigation
  - Says limits “should” be within 5 mph of 85<sup>th</sup> percentile – NOT required
- There are no “MUTCD Police”, but possible civil liability

# Some Recent Pressure Points

- Study process can take a while (weather, staffing, etc)
- Impossible to satisfy all stakeholders
- Some trunk highway limits going above 55, city streets going below 30
- Increasing pedestrian safety concerns
  - Cities cannot lower speed limits on county roads
- Increasing speeding
- Decrease in traffic enforcement
- Still no evidence that changing the speed limit changes the actual speeds

# MCEA Platform Position

- *MCEA believes the purpose of speed limits is to promote a safer environment for all roadway users by minimizing conflicts between vehicles and supporting uniform traffic speeds that are reflective of the roadway design, context and operating speeds. Speed limits are most effective when they are reasonable, predictable, and respected by drivers.*
- *MCEA supports the process established by Minnesota Statutes 169.14, Subd. 5 which ensures objective, uniform determination of speed limits by centralizing such authority with the Minnesota Commissioner of Transportation and opposes any statutory changes that result in a lack of consistency in how speed limits are determined across the State of Minnesota.*

# Benefits of Current Statute

- Better uniformity of speed = fewer conflicts
- Predictable limits = better compliance and driver respect
- Solid basis for law enforcement officers and courts
- MnDOT has the expertise, welcomes feedback, and is transparent
- MnDOT process protects counties from liability, lawsuits



# More Benefits of Current Statute

- Speed limit discussions can be highly charged, emotional
- Current statute promotes positive relations
  - County Boards
  - County staff
  - Law Enforcement & Courts
  - Constituents (residents, drivers)
  - Adjacent counties (border roads)
- MnDOT serves as neutral arbitrator, makes data-driven decision
- County officials have agency in requesting study, advocating

# Coming Attractions

- New Federal MUTCD coming (2022?)
  - Draft released for comment in 2020
  - Comment period closed in Spring 2021
  - Changes to guidelines for setting speed limits – Will affect MnDOT process
- IIJA – Requires more frequent updates of the MUTCD
- “USLIMITS3” – Updates to optional but rigorous national process
- Implementation phase of Minnesota Speed Limit Visioning:  
[mnspeedlimitvision.org](https://mnspeedlimitvision.org)

# Some Final Thoughts

- Continued pressure to break apart the system
- Even an opt-out statute would put pressure on county boards and staff
- Speeding and pedestrian safety are big issues
  - Speeds, and speeding, are both increasing
  - Cars are quieter, fast doesn't feel as fast as it once did (if you are in the car)
  - Enforcement of traffic laws remains low, focus is on outliers
  - Speed limit is an outcome of road design, not an input.
- MUTCD changes and Speed Limit Vision will improve the process

# Speed Limit Vision: Next Steps

Education, Education, Education!

Sharing the Vision

Process improvement related to speed study materials, documents.

Develop additional tools and resources.



# Questions?

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