ALHC 2023 Conversation #1

Complete Streets and safer systems:
Supporting healthy communities with streets for everyone

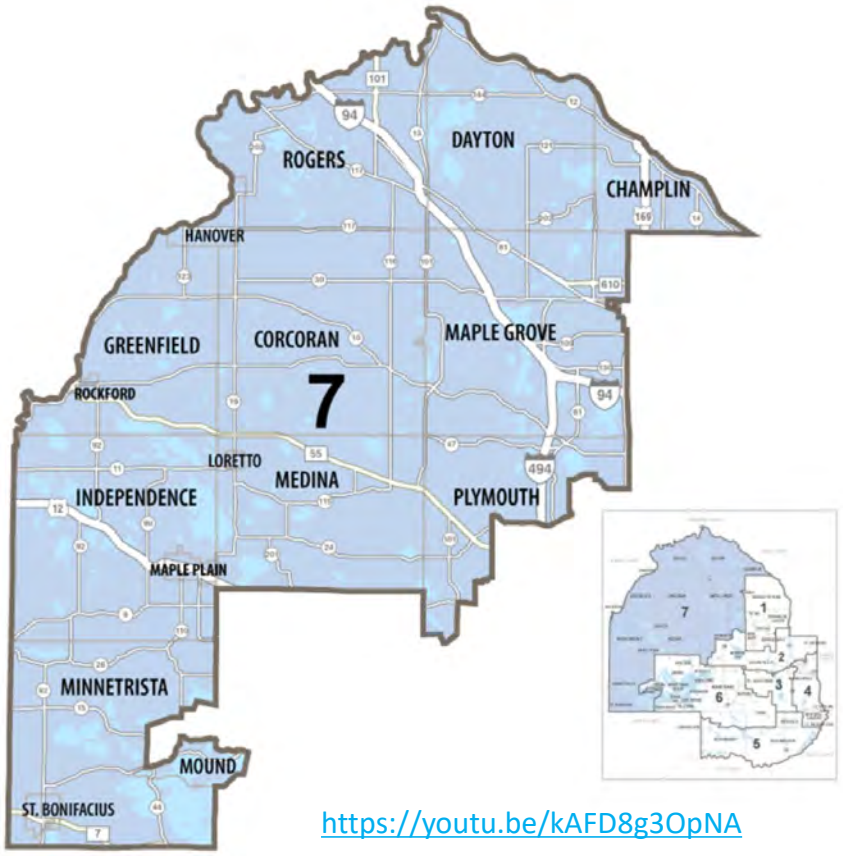
Active Living Hennepin County Partnership meeting, February 3, 2023

Welcome:

Thanks for joining us today!

- As the meeting begins, please introduce yourself by entering your **name and organization** in the **chat**.
- Does your organization have a complete streets or green streets policy? Are you actively implementing? Go to www.menti.com and use the **code 51 48 61** (or click the link in the chat) to let us know.

Kevin Anderson,
Commissioner, District 7



https://youtu.be/kAFD8g3OpNA

Active Living Hennepin County Partnership meeting, February 3, 2023

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Complete Streets and safer systems:
Supporting healthy communities with streets for everyone

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Agenda

10:00 a.m. Welcome & Introductory Remarks:

- **Denise Engen**, Active Living Hennepin County
- **Kevin Anderson**, Commissioner, District 7, Hennepin County

10:05 a.m. Presentations

- **Complete and Green Streets: What has changed since 2009?**
  KC Atkins, Senior Professional Engineer, Hennepin County Public Works (HCPW)
- **The Champlin experience: A suburban city adopts its first complete streets policy in 2022**
  Scott Schulte, Community Development Director, City of Champlin
- **How Complete Streets create a safe system**
  Sonja Piper, P.E. Active Transportation Safety Engineer, MnDOT
- **Preventing deaths and serious injuries on Hennepin County roads**
  Tom Musick, Transportation Safety Program Coordinator, HCPW
- Q & A

11:00 a.m. Sharing local experiences, successes and challenges

11:15 a.m. Adjourn

Complete and Green Streets

What has changed since 2009?

What is a Complete Street?

- Complete Streets is a policy and design that balances the needs of all roadway users, including people walking, rolling, biking, riding transit, driving and freight users.
- A Complete Streets design often enhances safety and accessibility to better serve all people. This approach often helps reduce transportation disparities and vehicle miles traveled, while also improving health and livability.

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What is a Green Street?

- Green Streets is a stormwater management approach that incorporates elements such as vegetation (perennials, shrubs, trees), soil and engineered systems to slow, capture and filter stormwater along a roadway.
- A Green Streets design captures rainwater and pollutants at its source, where the rain falls, cleaning the water prior to discharge into lakes, rivers, and streams. Incorporating Green Streets strategies into roadway design helps protect the environment, improve water quality and mitigate impacts from a changing climate.

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Why Complete and Green Streets?

Why?

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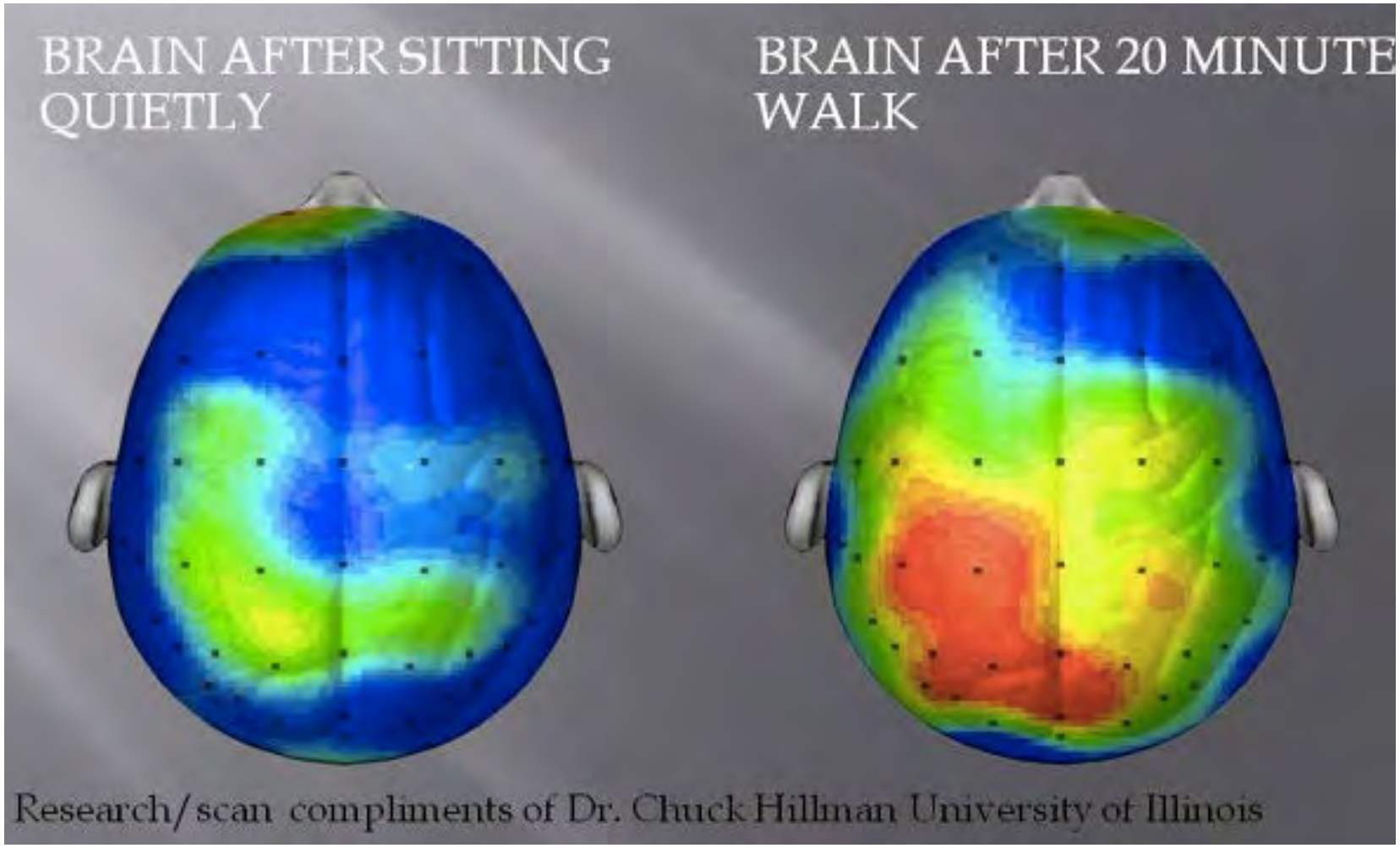
Image: The Great Muppet Caper


BRAIN AFTER SITTING QUIETLY
BRAIN AFTER 20 MINUTE WALK
Research/scan compliments of Dr. Chuck Hillman University of Illinois

Why?

Why?

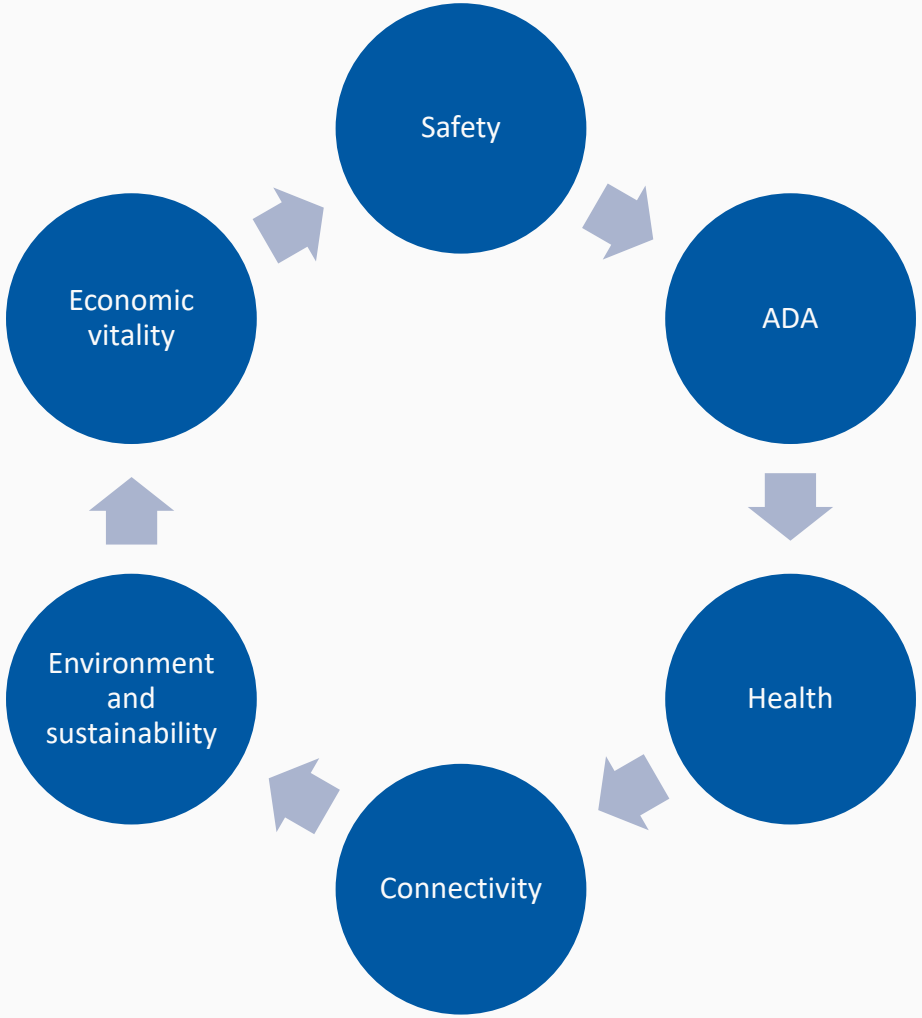
16% of people 16+ do not drive and 20% of population is under 16. That means more than 1/3 of the population does not drive.

"For the invisible riders, two wheeled transit has nothing to do with style or making a political statement"
– Dan Koeppel

Transportation choices…but also, some can't choose

Why?

- Perceived and real
- More people walking, rolling, biking and riding transit



- More mobility for people with disabilities
- Easier use for those with strollers, carts, etc.

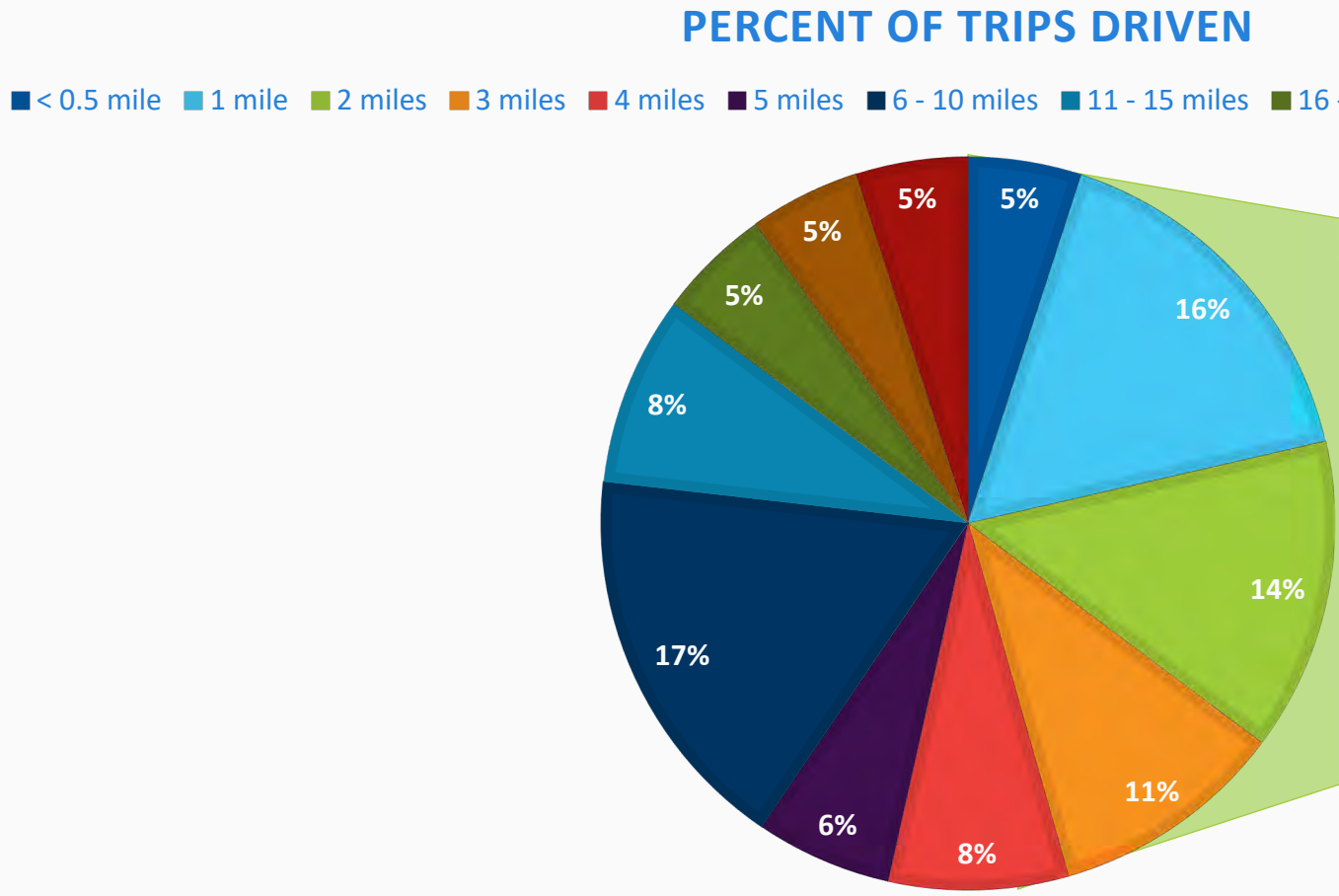
- More physical activity for people of all ages and abilities

- Mobility
- Mode choice

- Reduced emissions
- Reduced VMT
- Carbon reduction

- Equitable access to jobs
- Increased housing value
- Complementary goals with land use

Why?



45.4% are 3 miles or less

National Household Travel Survey (2017)

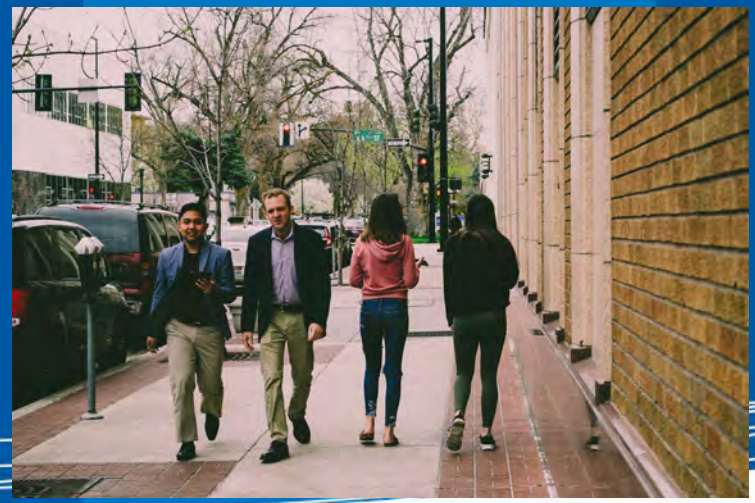
Who are we planning and designing for?

Transportation is social

Driving

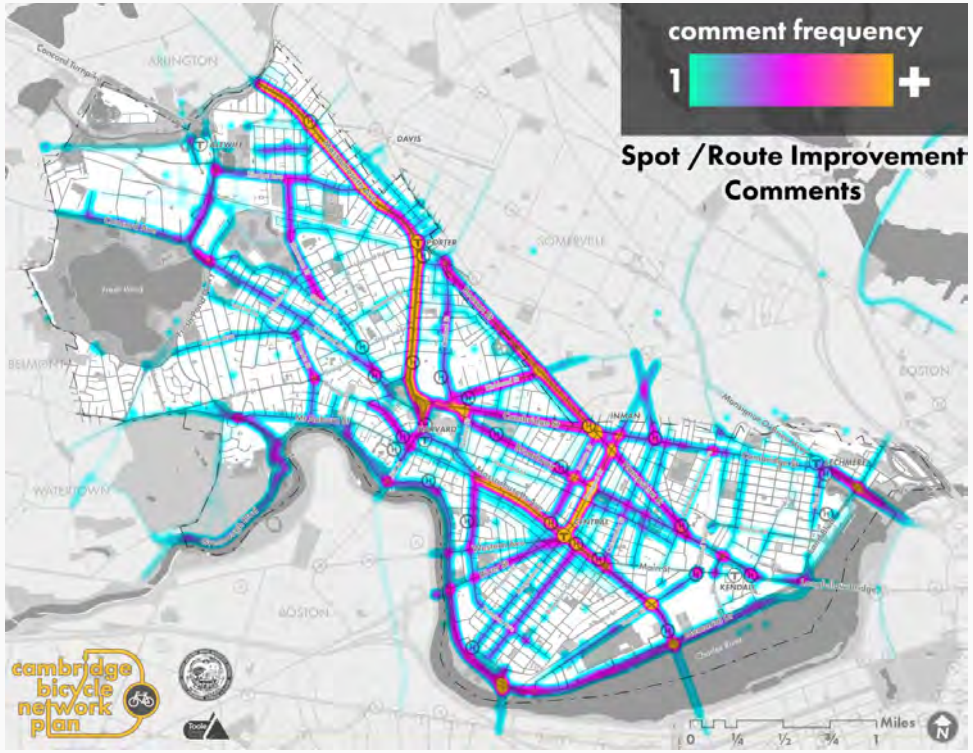
Bicycling

Walking

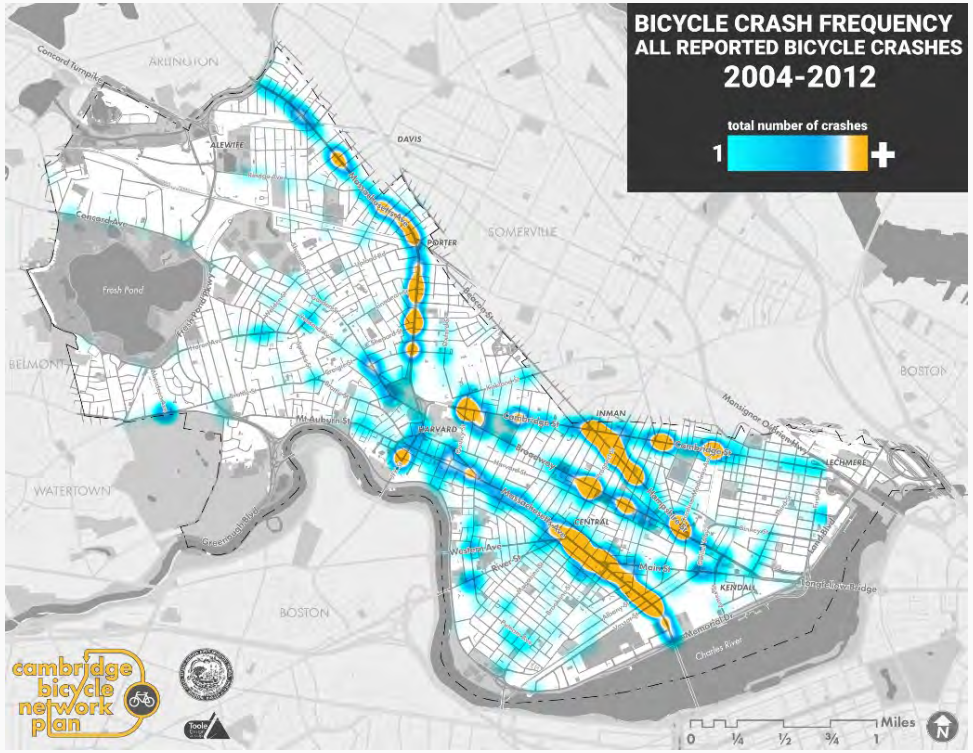


Comfort

Perception



Crash Data



Performance Standards

Driver mobility

Safety

= Then

Multimodal access

Multimodal mobility

Public health

Equity

Economy

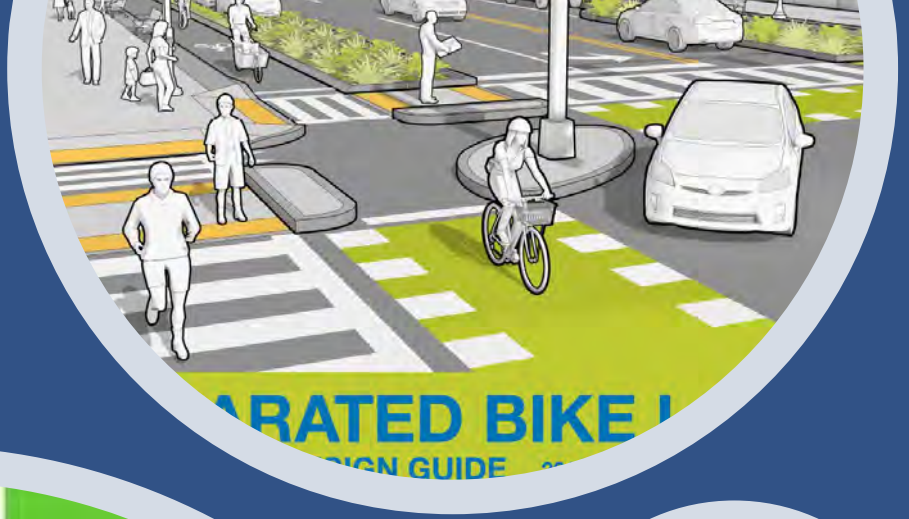
Environment/Resiliency

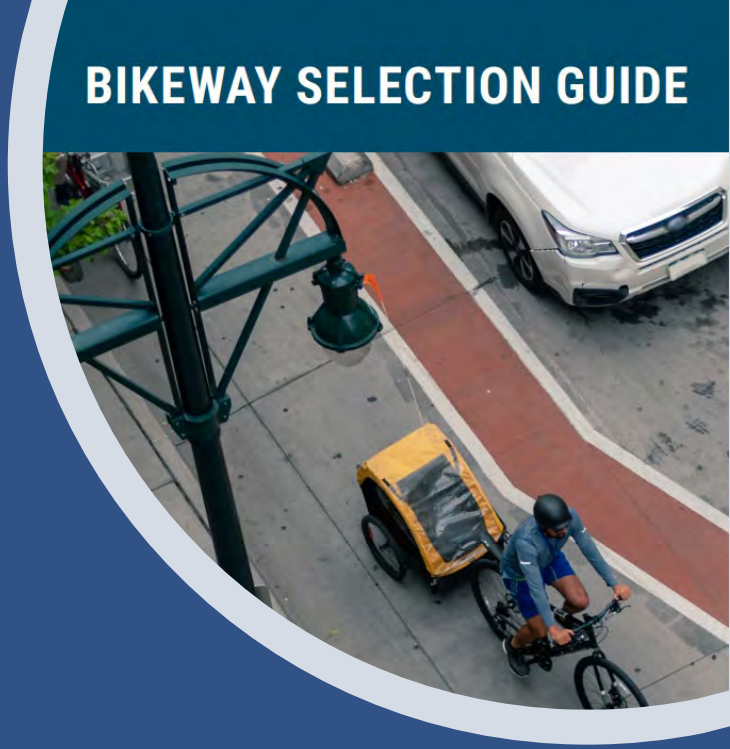
Livability/Quality of life

Safety

= Now

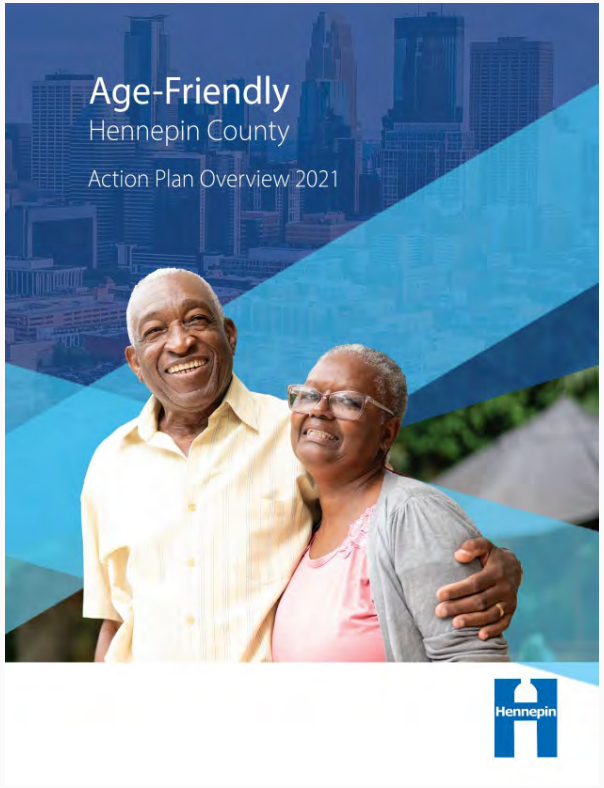
What's new since 2009?

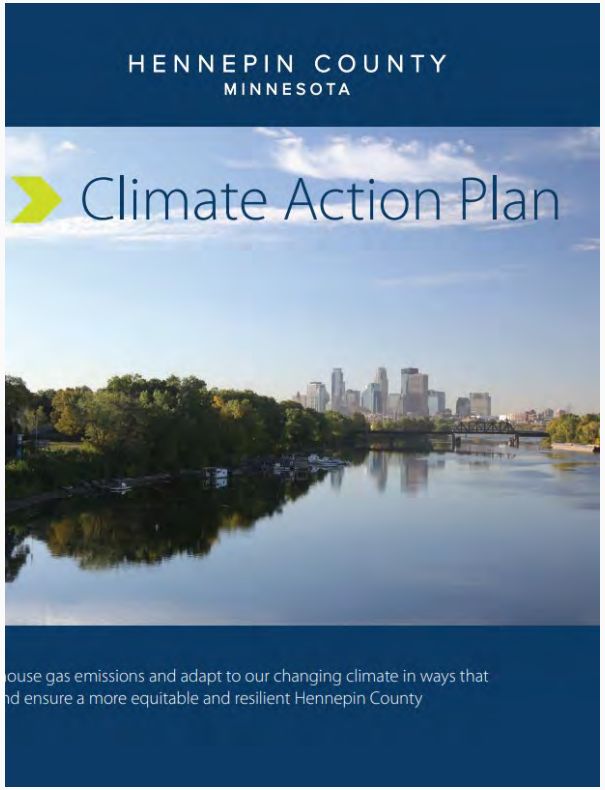


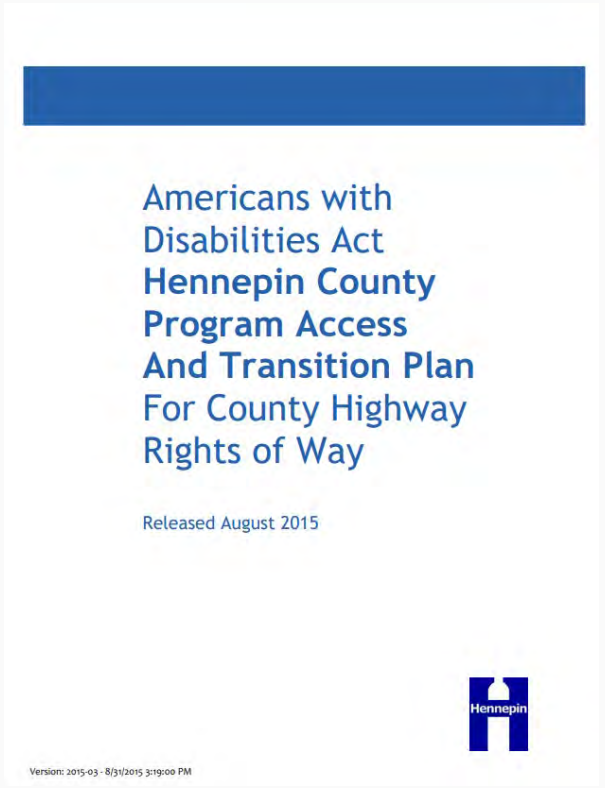


National and state design guidance

Hennepin County







Local plans and policies

TOWARD ZERO DEATHS

Policy momentum is now

Updates with new policy

- Refined county transportation mission and vision
- Modal hierarchy
- Green streets strategies
- Alignment with Climate Action Plan

Stakeholder Focus

- Met with diverse stakeholders representing primary users

Stakeholders engaged	
Age-friendly and disability perspectives	Environmental justice
City staff	Public health
Climate-friendly transportation	Watershed districts and Green Streets staff
Businesses	Written survey for those invited

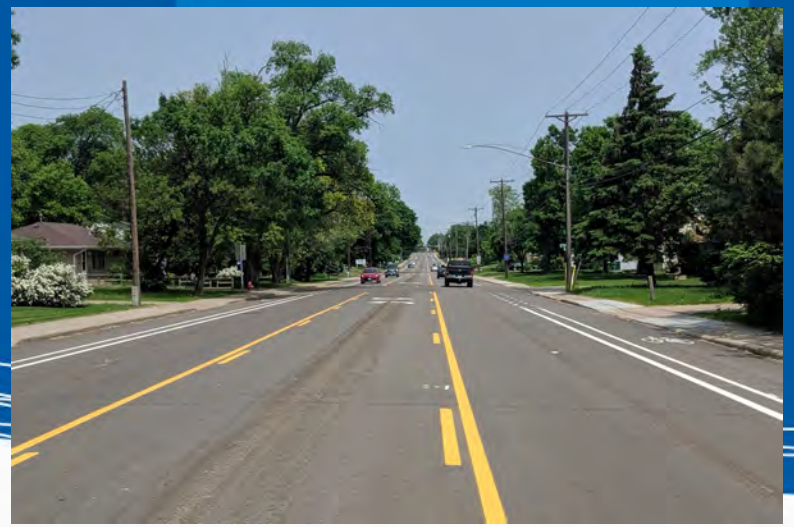
Big picture input

- Most resist the idea of modal hierarchy
- Walking, rolling and strolling top the list
- Stakeholders prefer different context considerations

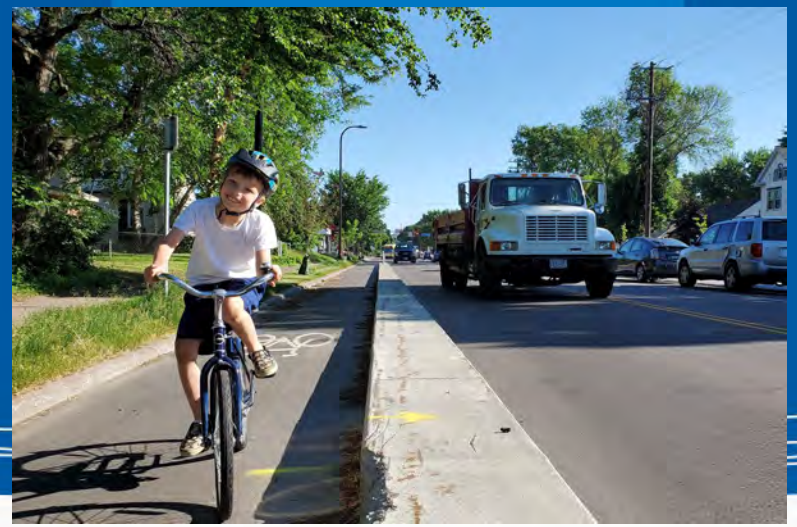
How may you see our Policy implemented?

How?

Maintenance



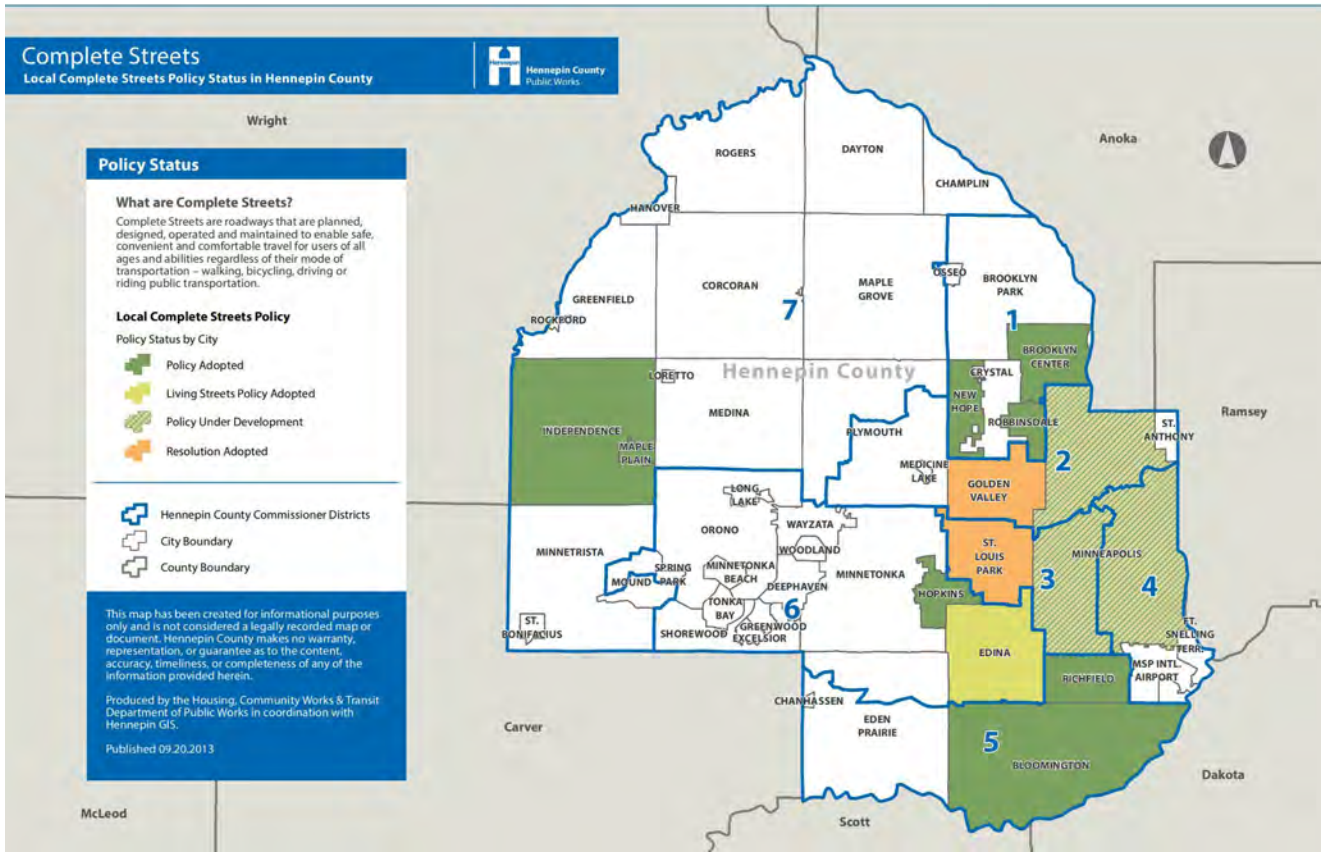
Rehabilitation



Reconstruct

County-wide leader

- Dashboard
  - Metrics
- Sample policy
- Resources
  - Benefits
  - Engagement
  - Design best practices



How you can help

- Land use
- Development
- Access management
- Network connectivity
- Maintenance

Hennepin County

Thank you!

KC.Atkins@hennepin.us

The Champlin Experience: A Suburban City Adopts a Complete Streets Policy in 2022

City of Champlin

Why Complete Streets in Champlin?

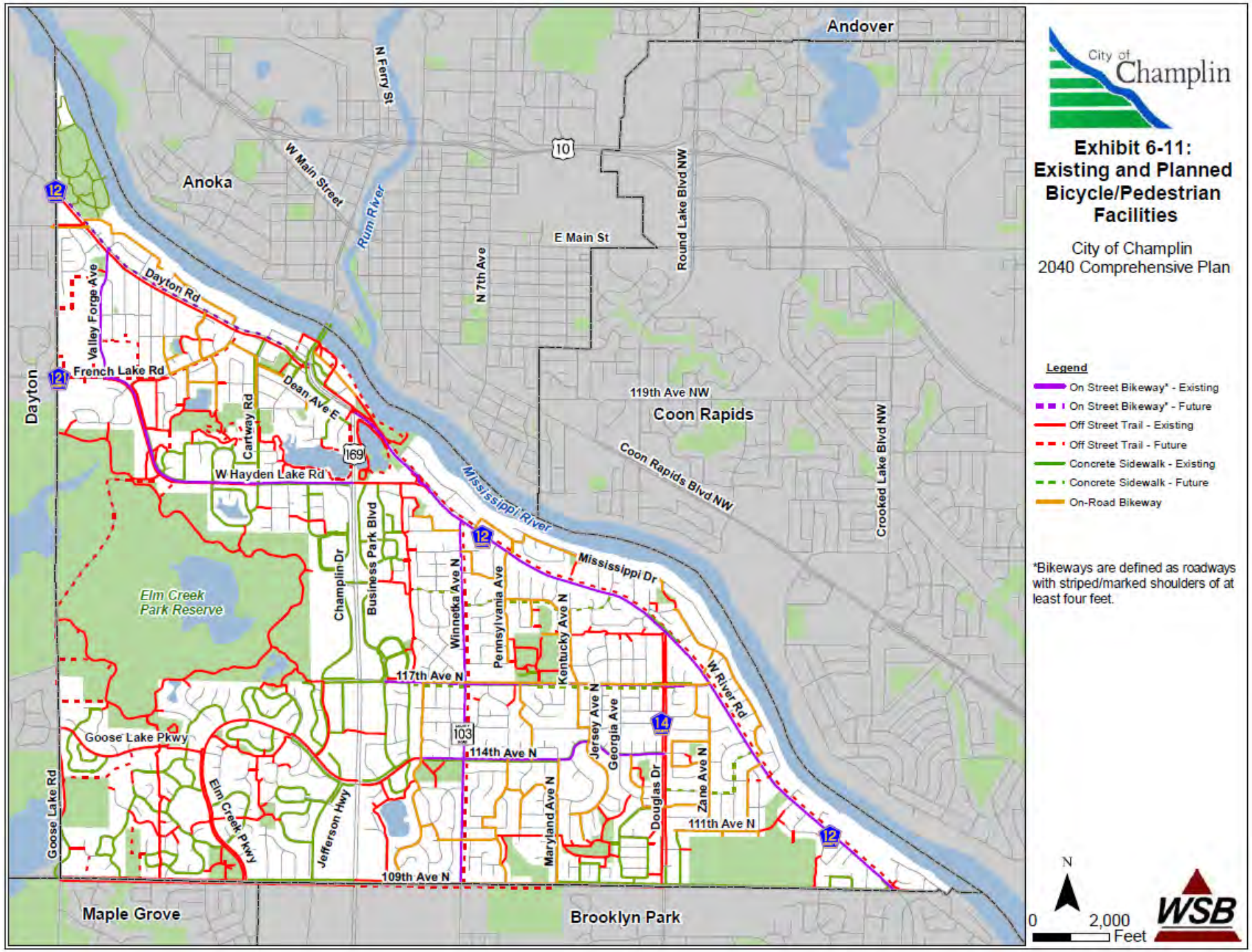
1. Identified in the City's 2040 Comprehensive Plan - Plan recommended adoption of "Complete Streets" design guidelines.

2. City's 2021-2024 Strategic Plan – "Strategic Initiative" to adopt a Complete Streets Policy with a desired outcome to have a connected multi-modal community.

3. Current Lack of Commitment

Adopting a city-wide Complete Streets policy will ensure that all street construction, reconstruction, and improvement projects in Champlin anticipate and consider the needs of people walking, biking, and using other modes. Streets that are designed with a Complete Streets design philosophy are often safer for all users—whether they are driving, walking, biking, or taking the bus. They also consider the needs of a range of vehicle types, including emergency vehicles, maintenance equipment, and freight.

City of Champlin



City of Champlin

Exhibit 6-11: Existing and Planned Bicycle/Pedestrian Facilities

City of Champlin
2040 Comprehensive Plan

Legend

- On Street Bikeway* - Existing
- On Street Bikeway* - Future
- Off Street Trail - Existing
- Off Street Trail - Future
- Concrete Sidewalk - Existing
- Concrete Sidewalk - Future
- On-Road Bikeway

*Bikeways are defined as roadways with striped/marked shoulders of at least four feet.

N

0 2,000 Feet

WSB

Goals

- Improve safety for all roadway users, including the most vulnerable users, to promote equity
- Improve pedestrian and bicycle connections between neighborhoods and community destinations such as parks, the Mississippi Riverfront and tributary waterways, Elm Creek Park Reserve, schools, and businesses
- Improve the health of community members by encouraging active transportation

City of Champlin

Timeline

- May 2022: City applies for and receives an Active Living Technical Assistance Grant via Hennepin County
- June 2022: Project kick-off meeting with City and County staff
- June 2022: Review of existing plans and conditions
- June 2022: Stakeholder meeting with City Council
- July/August 2022: Complete Streets policy drafting
- September 2022: Complete Streets policy discussion with Planning Commission and Parks and Recreation Commission
- September 2022: Draft policy discussion with City Council
- October 2022: Key informant interviews - Planning Commission, Parks Commission, Hennepin County Public Works, School District, Three Rivers Parks District, AARP, and the Champlin Senior Triad group.
- November 2022: Revisions to draft Complete Streets policy
- December 2022: City Council approval of Complete Streets policy

City of Champlin

Biggest Issues

- Snow removal - First year we've had more snow removal complaints pertaining to public trails versus streets.
- Bare asphalt snow clearing policy - "to the best extent possible, given existing conditions".
- Commitment - Provide flexibility with street design of roadways. The policy does not prescribe any specific design treatments and mentions several different design resources for consideration. "Complete Streets are not a prescriptive roadway design formula, and each project may look quite different based on the needs identified in a given area."
- Who pays?

City of Champlin

Outcomes

1. The policy provides the framework for the City to evaluate and implement complete streets projects.

2. The policy identifies general policy statements and not specific projects or improvements.

3. The policy also includes incorporating complete streets practices with the review of private development projects.

4. The policy includes a section related to exceptions to the policy.

5. The development of a complete streets design checklist is an important implementation step for making decisions on considering and implementing complete streets projects with the City's CIP projects and development reviews.

City of Champlin

CS Poll Results

- Does your organization have a complete streets or green streets policy?
- Are you actively implementing complete streets?


Does your organization have a complete streets or green streets policy?
Mentimeter
3
2
2
1
Complete Streets
Complete / Green Streets
Working on it
No
8


Are you actively implementing complete streets?
Mentimeter
3
0
1
1
Yes, have made good progress
Yes, minor successes
Not yet, but working on it
No,not a priority
5

How Complete Streets Create a Safe System

Sonja Piper, MnDOT Active Transportation Safety Engineer

February 3, 2023

DEPARTMENT OF TRANSPORTATION

Presentation Topics

- Complete Streets and Safe System Approach
- Project Example

Complete Streets and Safe System Approach

DEPARTMENT OF TRANSPORTATION

A New Direction

The Safe System Approach aims to eliminate fatal and serious injuries for all road users by:

Accommodating human mistakes

Keeping impacts on the human body at tolerable levels

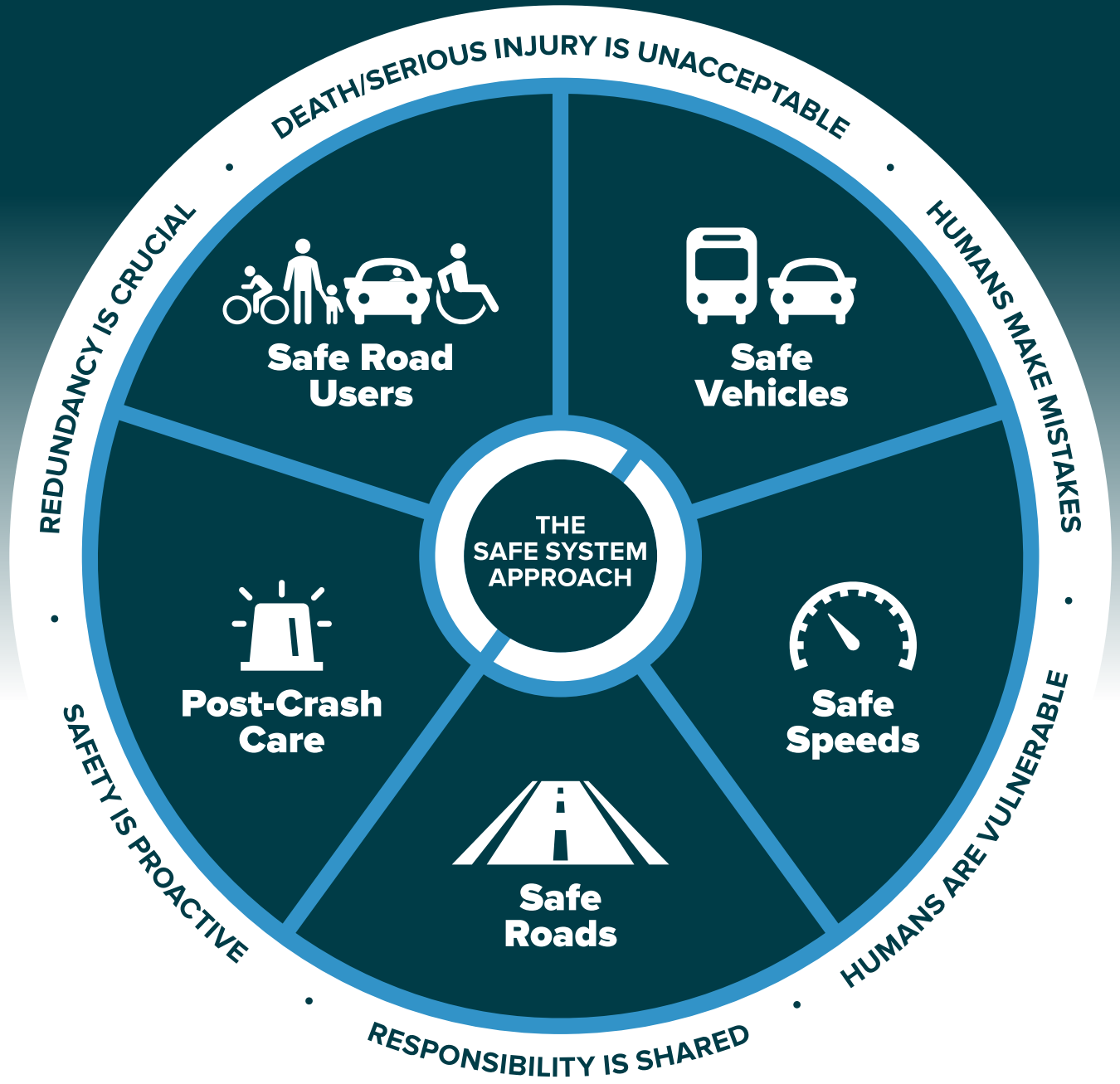
A New Direction

The Safe System Approach aims to eliminate fatal and serious injuries for all road users by:

Accommodating human mistakes

Keeping impacts on the human body at tolerable levels

THE SAFE SYSTEM APPROACH



THE 6 SAFE SYSTEM PRINCIPLES

THE 5 SAFE SYSTEM ELEMENTS

Where are You on the Safe System Journey?

Traditional approach		Safe System approach
Prevent crashes	→	Prevent death and serious injuries
Improve human behavior	→	Design for human mistakes/limitations
Control speeding	→	Reduce system kinetic energy
Individuals are responsible	→	Share responsibility
React based on crash history	→	Proactively identify and address risks

Complete Streets to Create a Safe System

- Complete Streets is an implementation strategy of the Safe System Approach
- Complete Streets addresses 2 of the 5 elements of a Safe System
  - Safe Speeds
  - Safe Roads

Image credit: https://visionzeronetwork.org/resources/demystifying-the-safe-system-approach/

Safe Roads

- Separate people in space and time
- If not possible to separate, then try to manage kinetic energy
- Increase visibility and awareness
- Creating predictable behaviors

Safe Speeds

- Keep impacts on the human body at tolerable levels
- Design streets for desired speed
- Prioritize lower speeds when people walking/biking are mixing with drivers

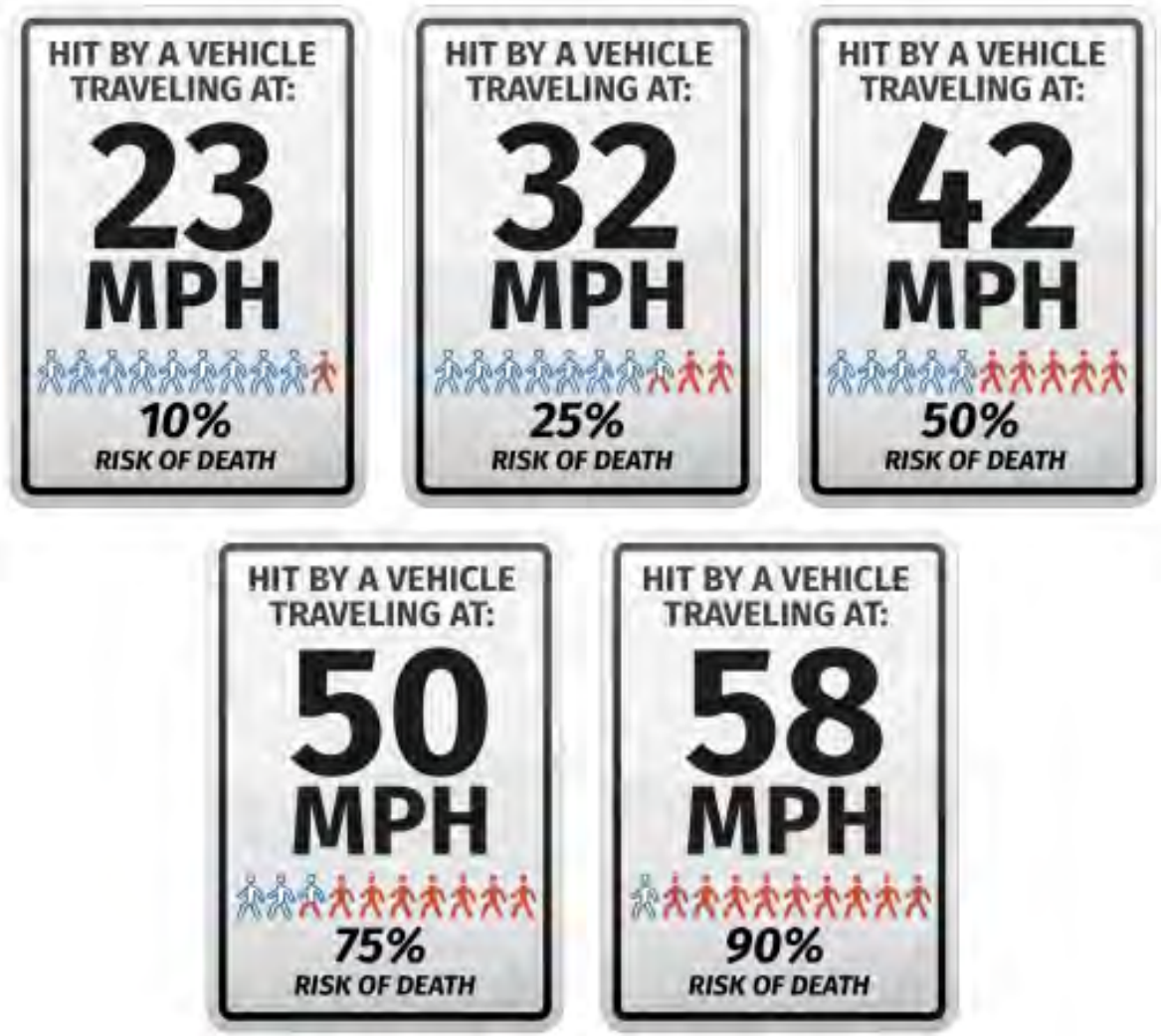
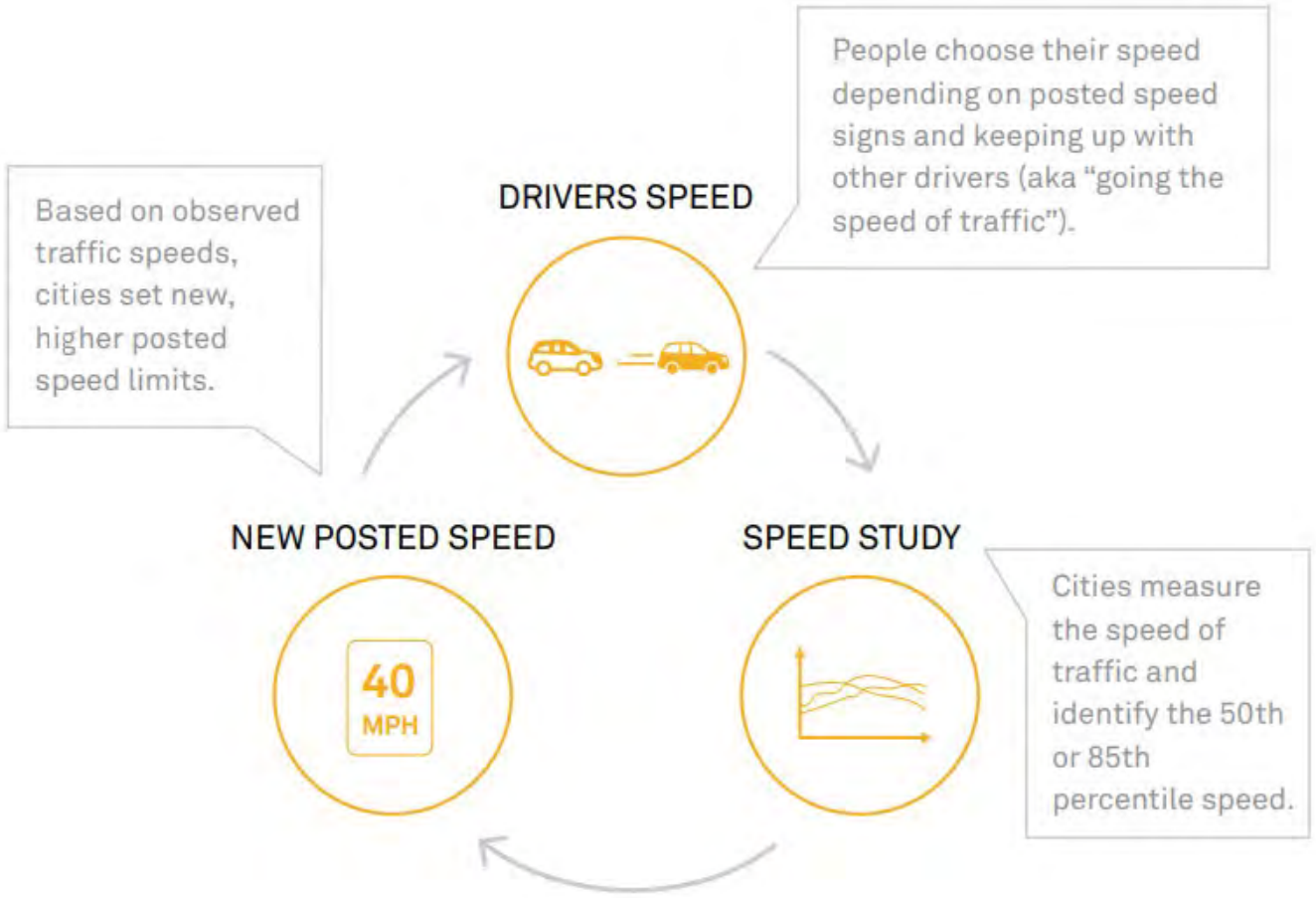


Image credit: https://highways.dot.gov/sites/fhwa.dot.gov/files/2020-11/FHWA_PedSafety_ActionPlan_Nov2020.pdf

Speeds: Current Practice



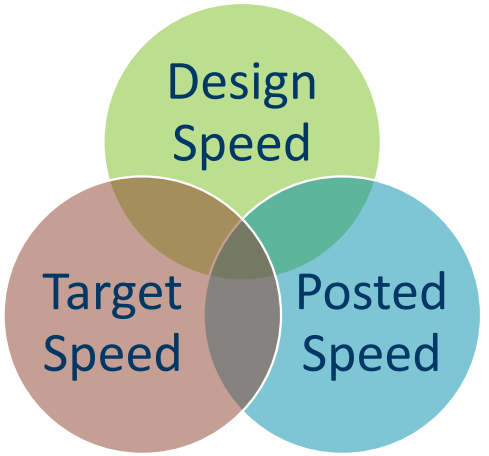
- Design speed is higher than posted speed,
- Drivers drive faster, and
- Speed limit increases

Image credit: NACTO City Limits: Setting Safe Speed Limits on Urban Streets

Target Speed vs. Design Speed

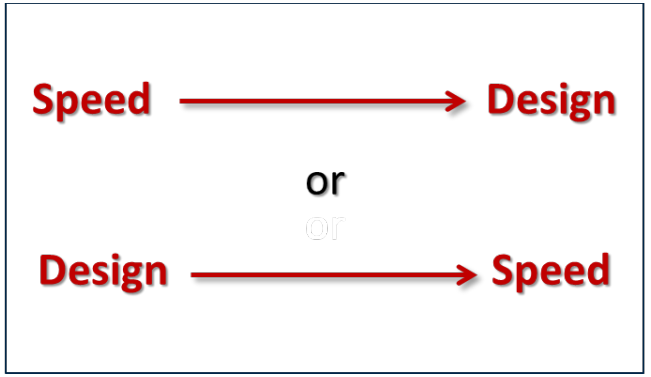
Speed is a choice:

- Design speed: The selected speed used to determine the various geometric design features of the roadway.
- Operating speed: Speed at which vehicles are operating during free flow conditions
- Target speed: The desired operating speed



PBPD guidance document

- Treat speed as a design outcome rather than input
- Forthcoming direction in the new Facilities Design Guide



Applying a Safe System

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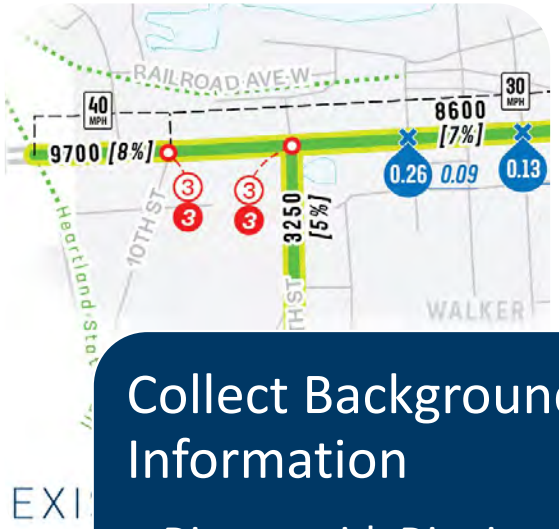
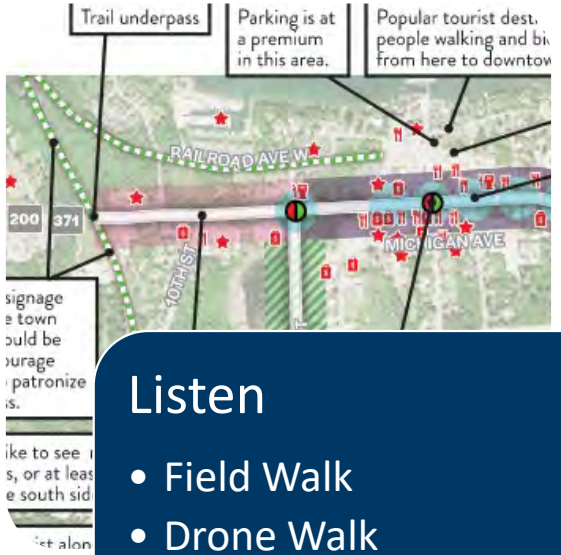
Active Transportation Project Scoping



Collect Background Information

- Discuss with District Staff
- Traffic and Safety Data
- Past Plans and Studies
- Equity Data



Listen

- Field Walk
- Drone Walk
- Other Stakeholders

Develop Recommendations

- Comprehensive View
- Mode of Travel Similar to Vehicles
- Provide Report to Project Manager

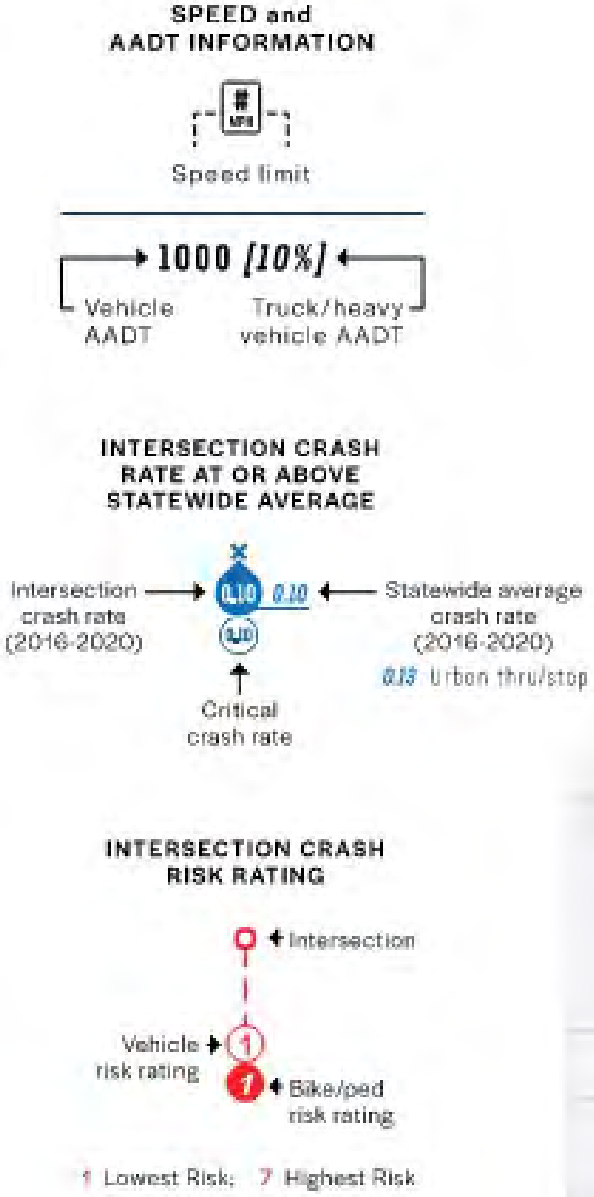
Example Project

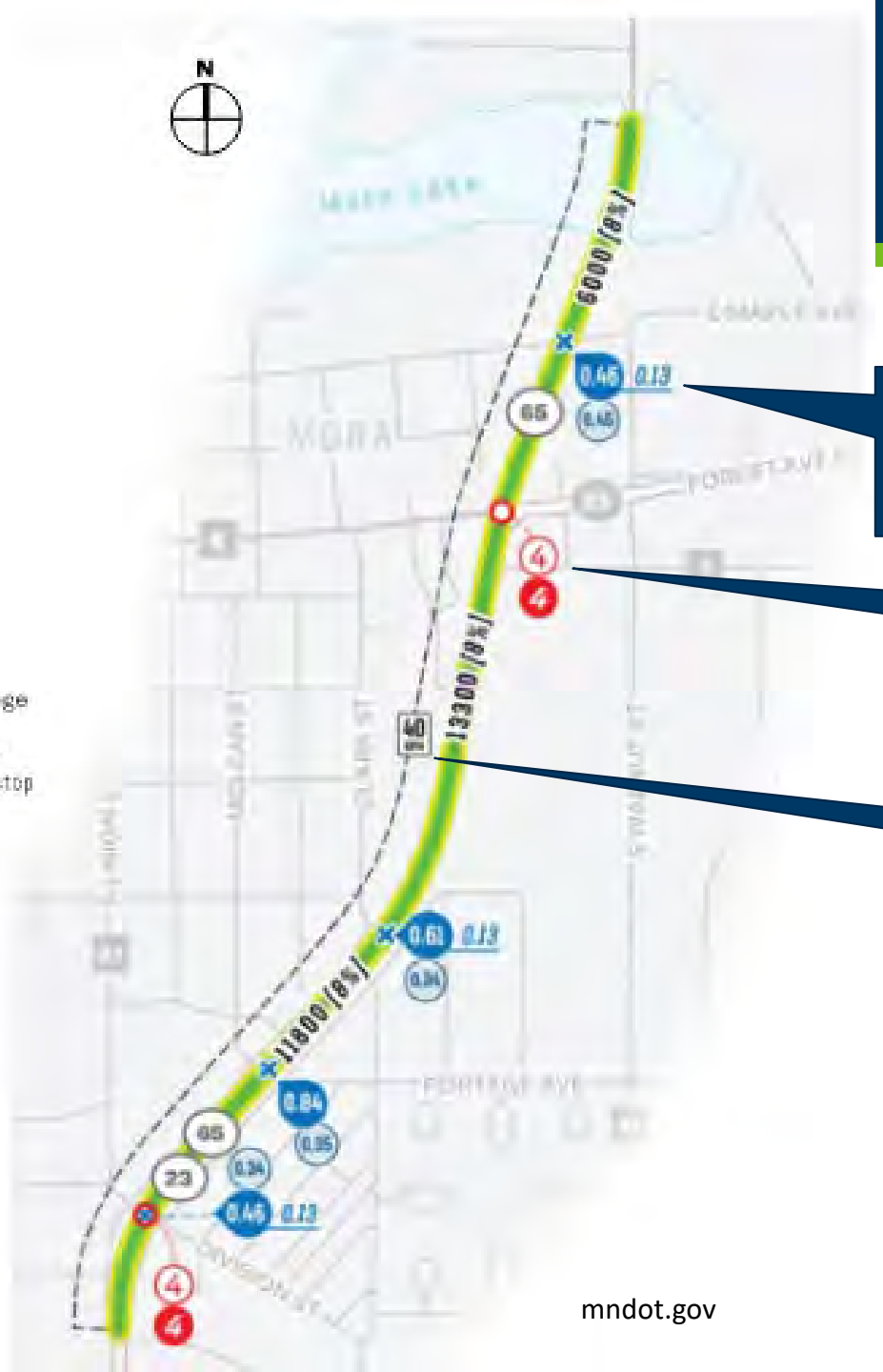
- TH 65 through Mora
- Planned as FY 2030 Urban Reconstruction

*** Disclaimer: The project and recommendations we discuss may not be part of the final project and is for discussion purposes only ***

Background Information in SSA Concepts

EXISTING DATA





- Prevent death and serious injury
- Design for human mistakes/ limitations

- Proactively identify and address risks

- Traffic volumes

- Reduce system kinetic energy

- Speed limits

Modal Hierarchy: Grounding in relative vulnerability

User	Relative Vulnerability
	High. Due to the speed and mass of vehicles, people walking are the most vulnerable. Safety of the most vulnerable users must be priority, as they are most at risk.
	Medium-high. Less vulnerable than people walking, but more vulnerable than people driving due to their speed and mass. The range of age and experience for bicyclists varies broadly, which affects the needs and designs for projects.
	High. People taking transit have a similar level of vulnerability as people walking or biking.
	Low. Because of the relative safety provided by a vehicle (e.g., seatbelts, airbags), people driving are less vulnerable than people walking and biking.
	Low. Because of the relative safety provided by a vehicle, people driving freight vehicles are less vulnerable than people walking and biking.

Image Credit: Tom Flood, creativebyrovelo.com

Roadway Context & Hierarchy

- Identify land-use characteristic
  - 9 context categories
- Pair with Modal Hierarchy Tool
  - Assigns high, medium, low scale for all transportation user group per context

Roadway Contexts with Baseline Modal Hierarchy

1

High	High	High	Low	Medium

Urban Core

2

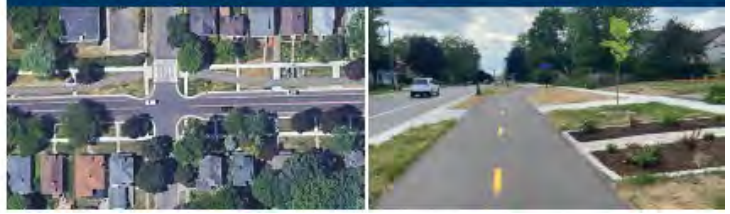
High	Medium	High	Low	Medium

Urban Commercial

3

High	High	Medium	Low	Low

Urban Residential



4

High	High	Medium	Low	Low

Suburban Commercial

5

High	High	Medium	Medium	Low

Suburban Residential

6

Medium	Low	Low	High	High

Industrial

7

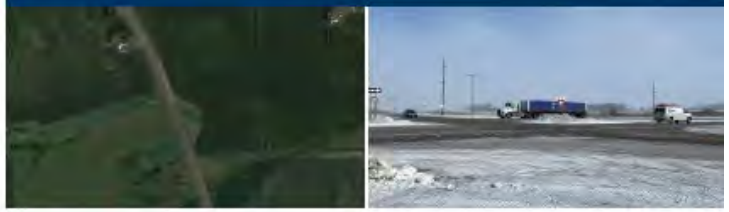
High	Medium	Low	High	Low

Rural Crossroad

8

Medium	Low	Low	High	High

Rural



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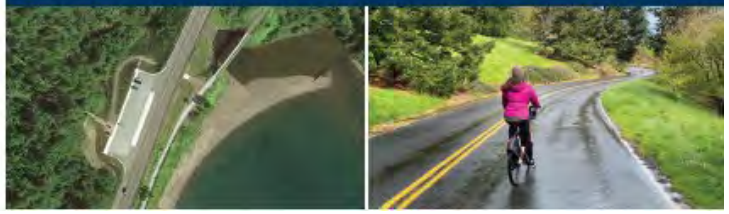
High	High	Low	Medium	High

Natural



Project Specific Modal Hierarchy

- Complete Streets Process establishes a hierarchy of users:

mndot.gov

Mora: Site Observation and Virtual Discussion

- The highway is a barrier
- Speeding is a concern
- Difficulty crossing the highway
- There are people walking and biking in shoulder
  - Footprints observed in gravel shoulder
- Marked crossing is not very visible and does not feel safe

Design for the Results We Want

** Disclaimer: The project and recommendations we discuss may not be part of the final project and are for discussion purposes only **

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User Priorities

- Based on the hierarchy, apply SSA concepts
- What can we do to…

Prevent death and serious injuries?

Design for human mistakes/limitations?

Reduce system kinetic energy?

Share responsibility?

Proactively identify and address risks?

Self-Enforcing Roadway

- Self-enforcing roadways focus on managing driving speeds through design.
- Drivers use clues from roadway design and environment to choose their driving speed.
  - “Friction” from narrow lanes or curb extensions
  - Horizontal deflection
  - Vertical deflection
  - Reduced turning radii
- Use the design to achieve “Safe Speeds”

Mora Recommendations

LEGEND – Segments

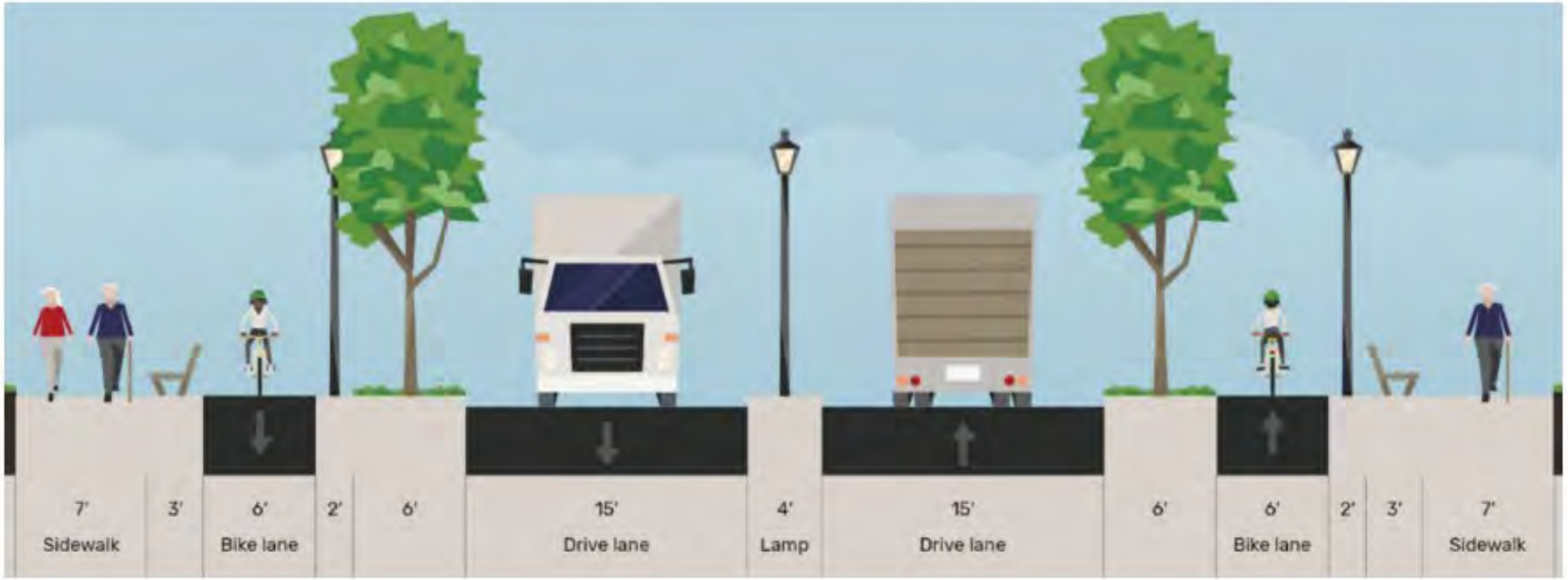
- A — Roadway reconfiguration along a segement
- A — Separated active transportation facilities
- Existing shared-use path

LEGEND – Intersections and Crossings

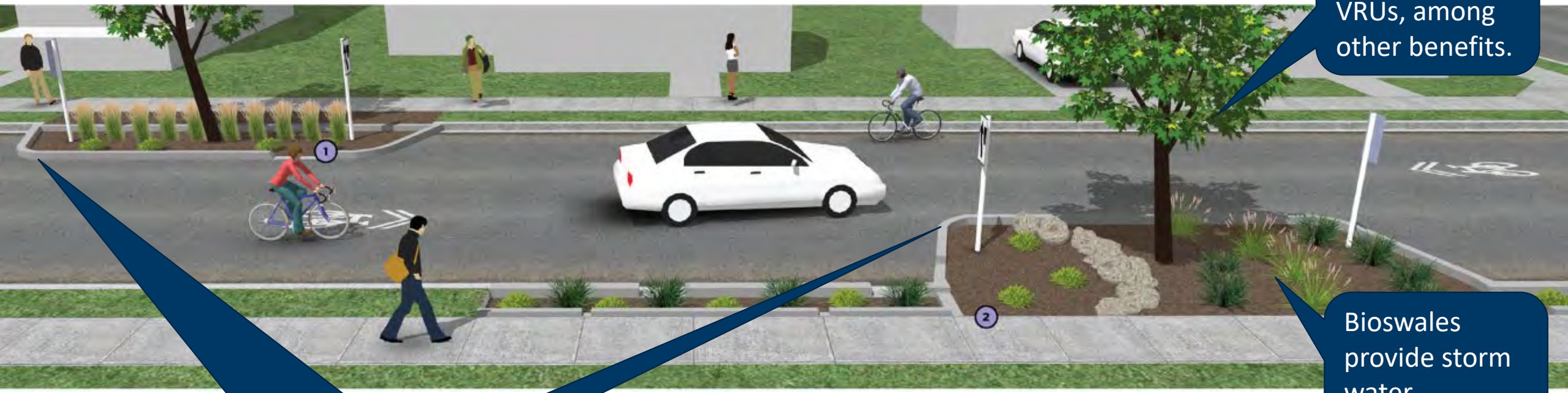
- B — Mini or urban compact roundabout
- C — Enhanced crossing

Mora Recommendations

Concept A-1: S Union Street/Divions Street to E Maple Avenue



Going beyond the roadway



Trees provide shade for VRUs, among other benefits.

A chicane provides traffic calming on this bicycle boulevard in addition to the traffic calming affects of the landscaping.

Bioswales provide storm water management.

Summary

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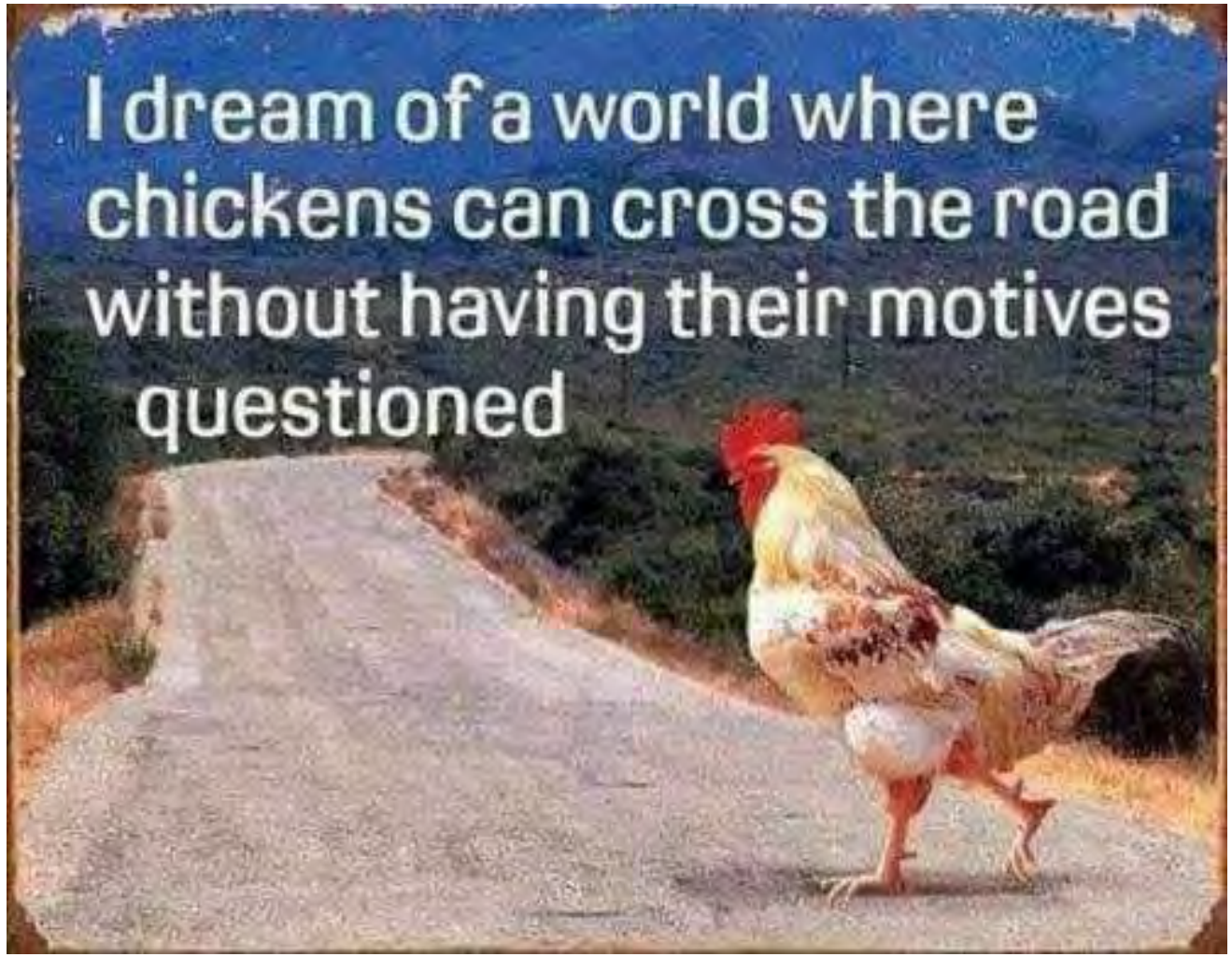
“You cannot have a safe system if you do not provide safe mobility for pedestrians, bicyclists, and motorcyclists.”

Wes Kumfer, Collaborative Sciences Center for Road Safety, Nov 4, 2020

Thank you!



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Preventing deaths and serious injuries on Hennepin County roads

February 2023

Discussion items

- Safe System approach
- What does the crash data show?
- Going beyond engineering (the other Es of transportation safety)
- Looking forward: TZD Action Plan

Safe System approach

- Point of emphasis in all national efforts to get toward zero deaths (TZD, Vision Zero, etc.)
- The goal of zero is to eliminate deaths and serious injuries on the roads, not to eliminate crashes

Safe System “wheel”

- Five elements of a safe transportation system
- Six foundational principles for understanding and applying Safe System approach

Source: FHWA.

Ahead of the curve

- In Hennepin County, we're following a Safe System approach
- Let me know ways in which I can contribute to and or shine a positive light on the work you are doing from a safety perspective

Historical perspective

Franklin Avenue Bridge, 1923

1946

1947

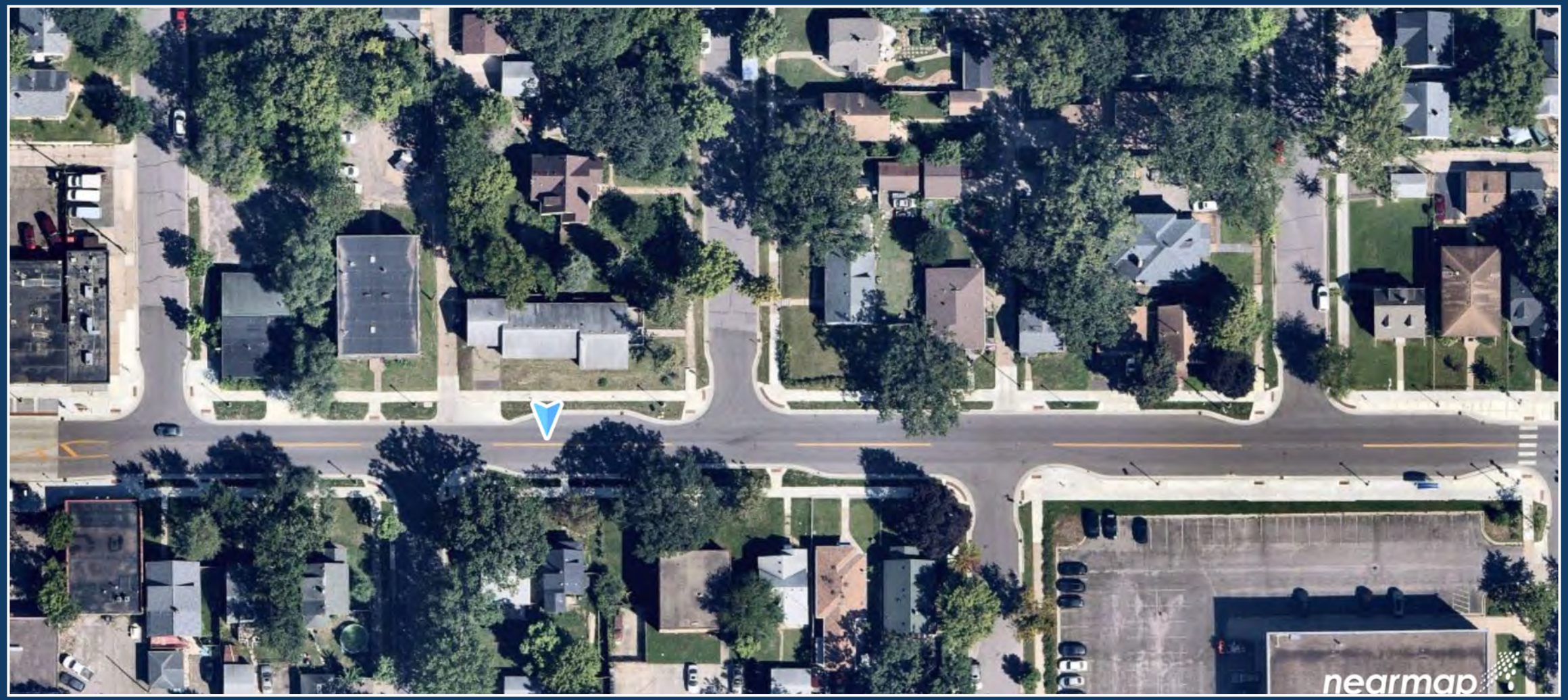
Bringing safety into 21st century

Franklin Avenue Bridge, 2021


Hennepin County

North 44th Avenue in Minneapolis, 2018

Hennepin County



North 44th Avenue in Minneapolis, 2022

Hennepin County

Protecting vulnerable road users

Before: 2014

After:
2022

Reduced number of lanes; added a cycle track

Hennepin County

Lyndale Ave S and 27th Street W, Minneapolis, 2016

Hennepin County

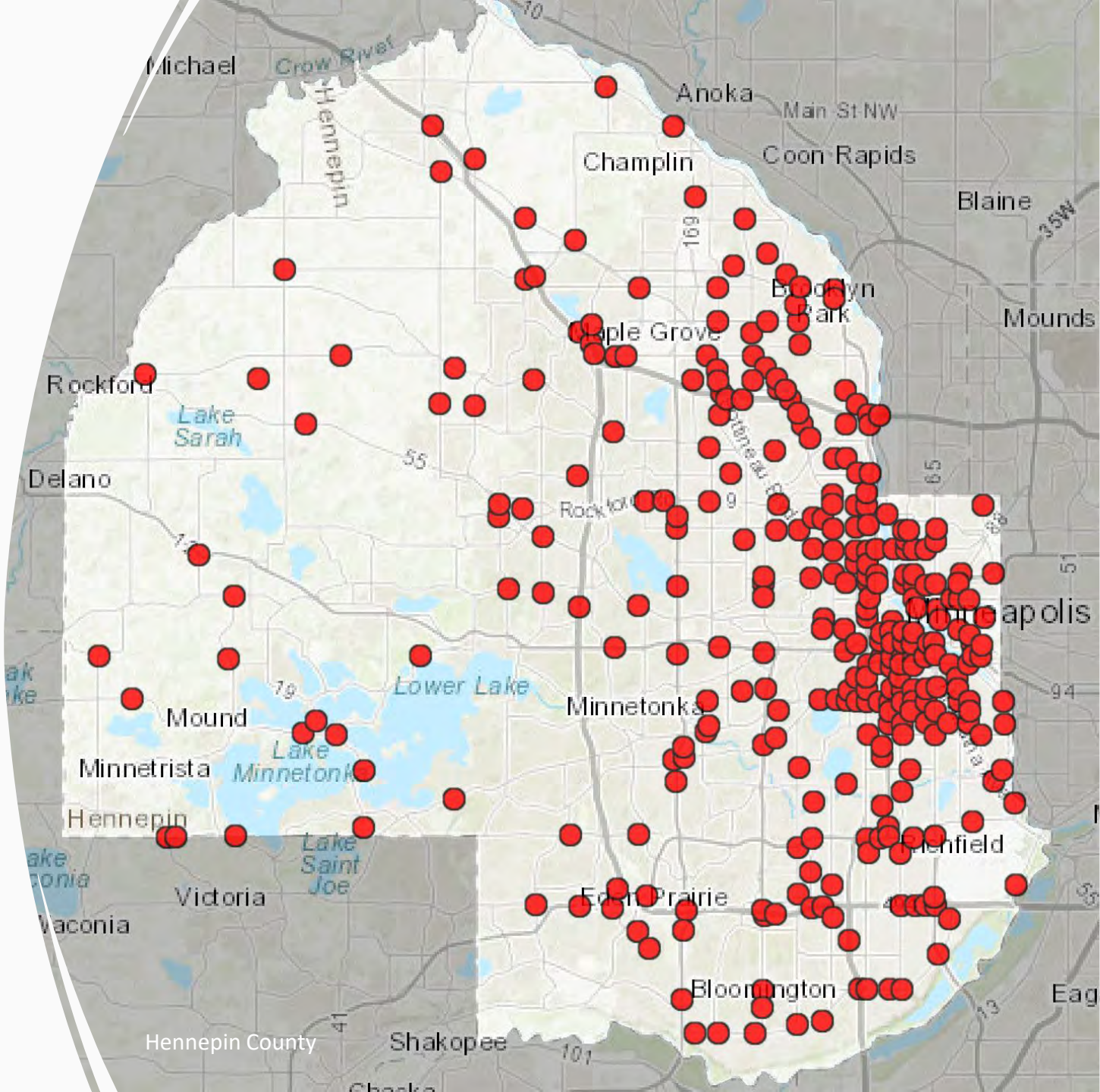
Lyndale Ave S and 27th Street W, Minneapolis, 2022

66th Street and Portland Avenue, Richfield, 2022

Crash data: How are we doing?

Jan. 1 to Dec. 31, 2022*

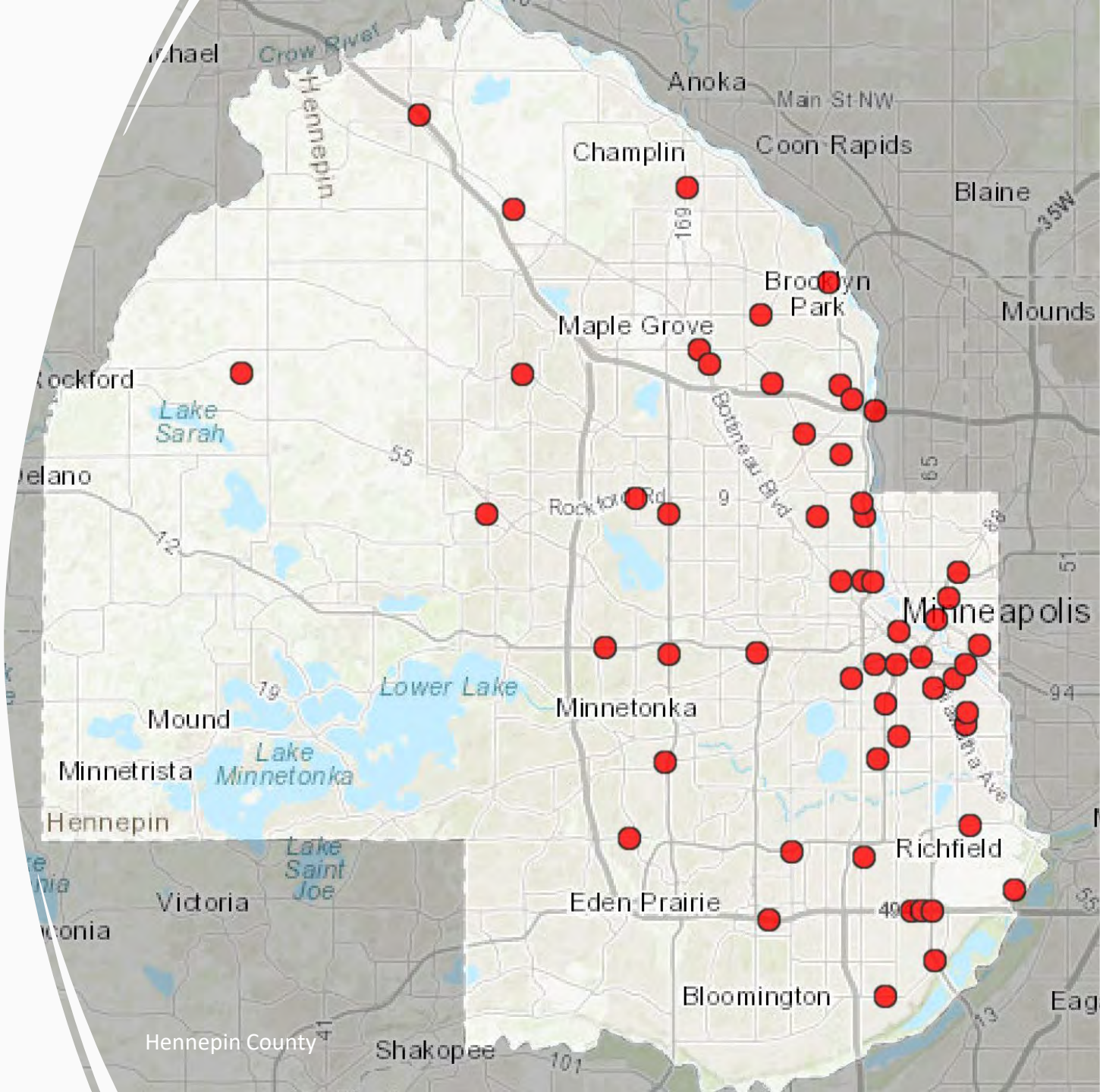
435 K and A crashes in Hennepin County



Crash data: How are we doing?

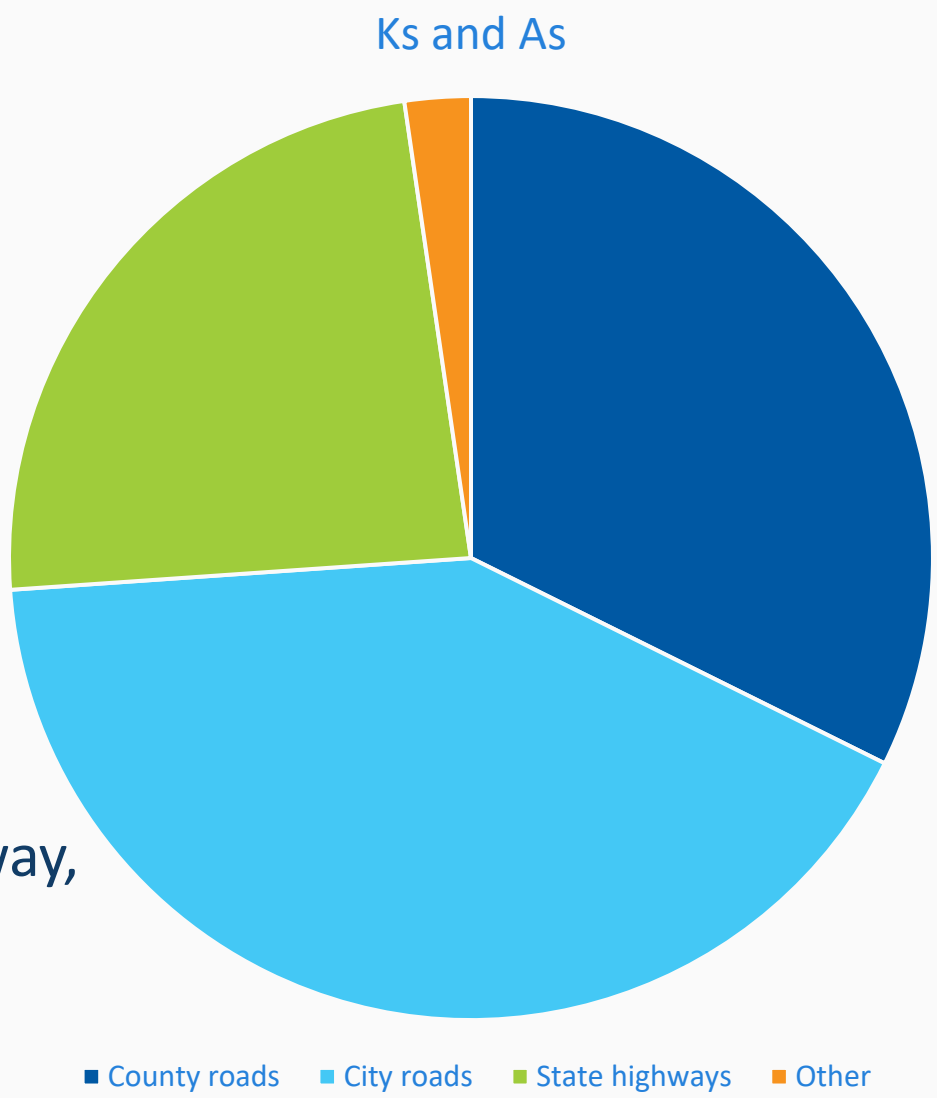
Jan. 1 to Dec. 31, 2022*

56 fatal crashes in Hennepin County



Crash data, continued

- 435 serious and fatal crashes overall in Hennepin County
  - 140 on county road network (32.2 percent)
  - 180 on city streets and municipal state aid streets (41.4 percent)
  - 103 on interstate trunk highway, US trunk highway, state trunk highway, ramp/connectors (23.7 percent)



Region and state comparison

- Hennepin: 3.63 fatalities per 100,000 population

- Washington: 2.64
- Ramsey: 3.47
- Dakota: 3.94
- Scott: 4.65
- Carver: 4.69
- Anoka: 4.72
- Chisago: 10.56

Important to note: The national rate was 11.78 and Minnesota's statewide rate was 6.96. We're doing really well in Hennepin County, and we can continue to be a leader in striving toward zero.

(FARS data from 2016-20)

Contributing factors

- Speed is one of the top factors in fatal and serious injury crashes in Hennepin County and across the country
- Other top contributing factors:
  - Impairment
  - Distraction
  - Failure to yield (red light running)
  - Unbelted

Beyond Engineering

- Through TZD, we are bringing together the other “Es” of traffic safety
  - **Education**: Giving drivers the knowledge they need to avoid hazardous driving practices and choose responsible behavior.
  - **Emergency Medical & Trauma Services**: Providing fast, efficient emergency medical and trauma services to reduce fatalities and serious injuries whenever a crash does occur.
  - **Enforcement**: Ensuring compliance with traffic laws to change driver behavior and reduce unsafe driving practices.
  - **Engineering**: Changing the roadway to make travel safer.

Activities and outreach

- Little Earth
- Auto Show
- State Fair
- Brooklyn Center safety camps
- Meetings with community members
- Able to contribute to other public engagement efforts

Little Earth in Minneapolis

Safe Streets and Roads for All

- Hennepin County received a grant from US DOT to create a TZD Action Plan
- SS4A could shape federal funding opportunities in the next few years

Q&A

What are your questions for the presenters?

Sharing local experiences

- Does your organization have a complete streets, green streets or other similar policy?
- What are your success stories, challenges, concerns, or questions – for each other or the panelists?
- How are you integrating complete streets with goals for sustainability, equity, access to destinations, physical activity or other efforts?

Resources shared

- HC Active Living webpage: Active Living (hennepin.us)
- Commissioner Scott Anderson's greeting: https://youtu.be/kAFD8g3OpNA
- KC Atkins (Hennepin Co.):
  - Multimodal Networks - Publications - Bicycle and Pedestrian Program - Environment - FHWA (dot.gov)
  - Bikeway Selection Guide | FHWA (dot.gov)
- Sonja Piper (MnDOT)
  - MnDOT Complete Streets: https://www.dot.state.mn.us/complete-streets/
  - USDOT: As Part of Major Push to Bring Down Traffic Deaths, USDOT Launches Roadway Safety Call to Action | US Department of Transportation

Panelists

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Thank you!

Hennepin County Active Living

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Funding for this project was provided from the Minnesota Department of Health through the Statewide Health Improvement Partnership (SHIP). SHIP supports community-driven solutions to expand opportunities for active living, healthy eating and commercial tobacco-free living.