



MINNESOTA TOWARD **ZERO** DEATHS

TZD Update

Minnesota City Engineers Association

January 20, 2022

Mike Hanson

Director, MN DPS Office of Traffic Safety



Today's Objectives

1. Fatality Update
2. TZD 2.0 Update
3. HSIP/County Road Safety Plan Update

Fatality Update

Minnesota Fatalities in 2021: **500** (preliminary)

- Highest number of fatalities since 2007 (510)
- 26% increase largest single year percentage increase since 1944 (274 to 336)
- Serious Injury crashes have been consistent 2019-2021

What The Heck Happened?

Pandemic set off deadly rise in speeding that hasn't stopped

The number of highway deaths in 2020 was the greatest in more than a decade

CAR DRIVER

U.S. Roads in 2021 Are Most Dangerous in a Decade, Says NHTSA

The COVID-19 pandemic has seemed to change many people's driving habits for the worse, with fatalities up 10 percent in a year.

USNEWS

NEWS

Sign in

Traffic Deaths Increased in 2020 Despite Fewer People on Roads During Pandemic

ScienceDaily

Your source for the latest research news

All Things Considered

'We've had enough': Law enforcement frustrated by continued speeding

MPRnews

The Washington Post

Deadly auto crashes more likely during pandemic lockdown
Study finds less traffic, more speeding and reckless driving

Surging crash-death rates that took hold with pandemic continued this year, according to new estimate

The National Highway Traffic Safety Administration says risky behaviors such as speeding, drunk driving and not wearing a seat belt are largely to blame

npr

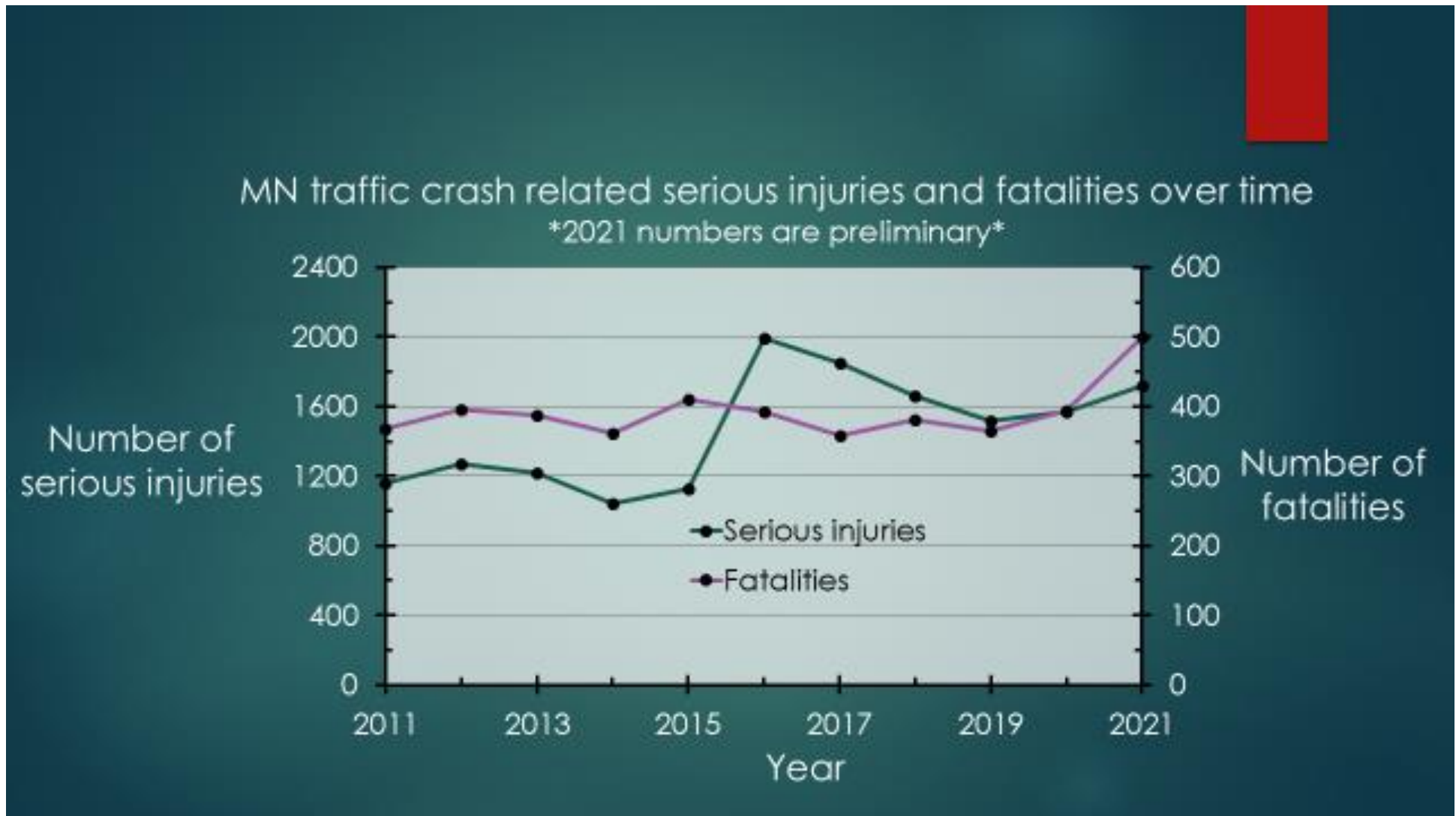
DONATE

The Coronavirus Crisis

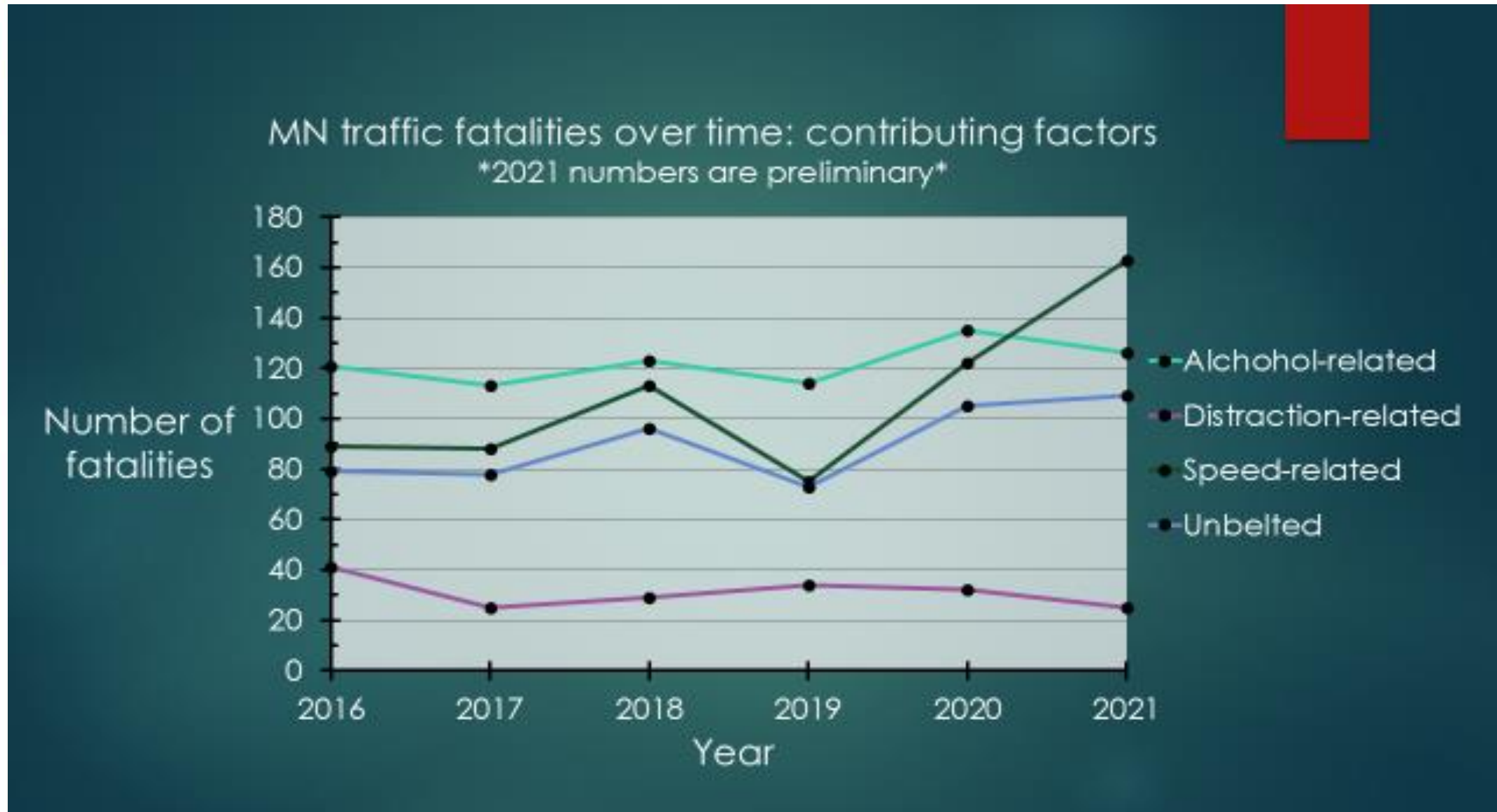
During The Pandemic Lockdown, Traffic Deaths Soared To The Highest Level In 13 Years

**TOWARD
ZERO
DEATHS**

Statewide Fatalities 2011-2021



MN Fatalities Contributing Factor



Pandemic Selfishness

Selfish Choice = Tragic Consequence

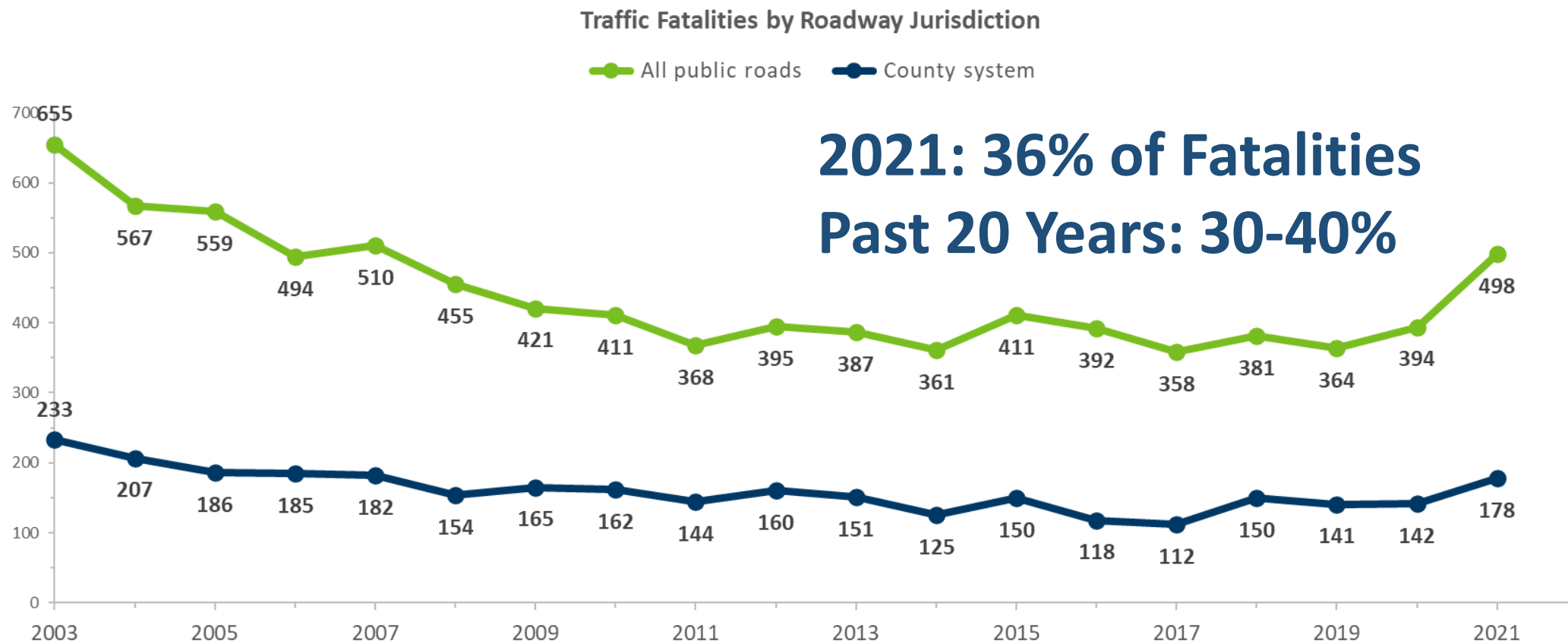


Fatality Update

Not just a Minnesota issue, but...

State	2019-2021 PRELIMINARY 2-Year % Increase
Vermont	55%
South Dakota	43%
Louisiana	37%
Minnesota	37%
Utah	33%
Illinois	31%
Connecticut	30%
Montana	30%

County System Fatalities



Fatal crash trends by system

Roadway system	2017-2019 average	2020	2020 % change	2021 (preliminary)	2021 % change
State	157.0	163	+4%	206	+31%
County	124.0	135	+9%	158	+27%
City	43.0	51	+19%	58	+35%
Township	14.0	16	+14%	15	+7%
Other*	3.0	4	+33%	27	+800%
Total	341.0	369	+8%	464	+36%

* Preliminary “other” includes ramps and connectors which will be adjusted to corresponding networks

Fatality Update

Why have fatalities jumped?

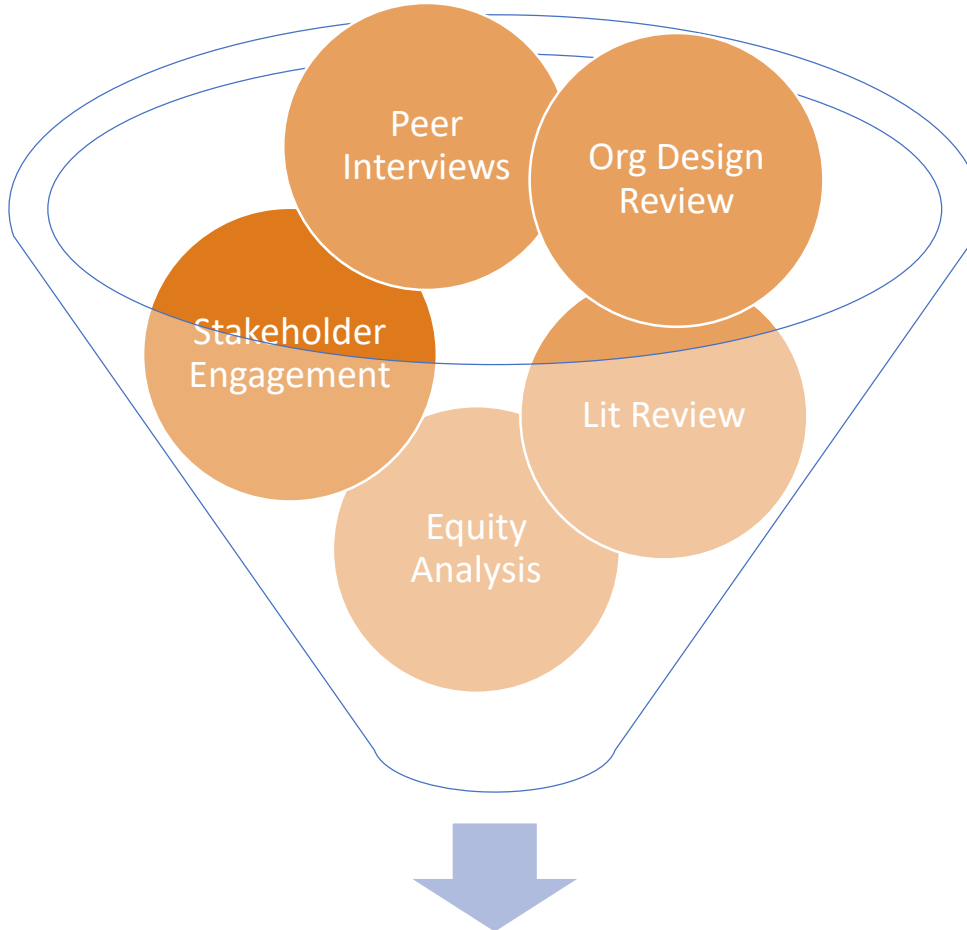
- Changes in enforcement have resulted in significant increases in speed and unbelted as factors in fatal crashes
 - 116% increase in speed-related fatalities from 2019-2021
 - 49% increase in unbelted fatalities from 2019-2021
- Overall, more people are more willing to engage in risky driving behaviors

What can we do about it?

- Short Term
- Long Term

TZD 2.0

Identifying opportunities areas for TZD



TZD 2.0 - What We Heard

Aspects of TZD to keep and enhance

What's Working

- Cross-agency collaborations
- Multi-disciplinary approach (5Es working together)



Innovative strategies



Opportunities to share ideas and learn from others



Local empowerment, leadership and ownership



Funding opportunities



Effective education and communication materials for current focus



Good tools and resources for partners

TZD 2.0 - Moving to a New State

Structure and operations help TZD focus on what matters



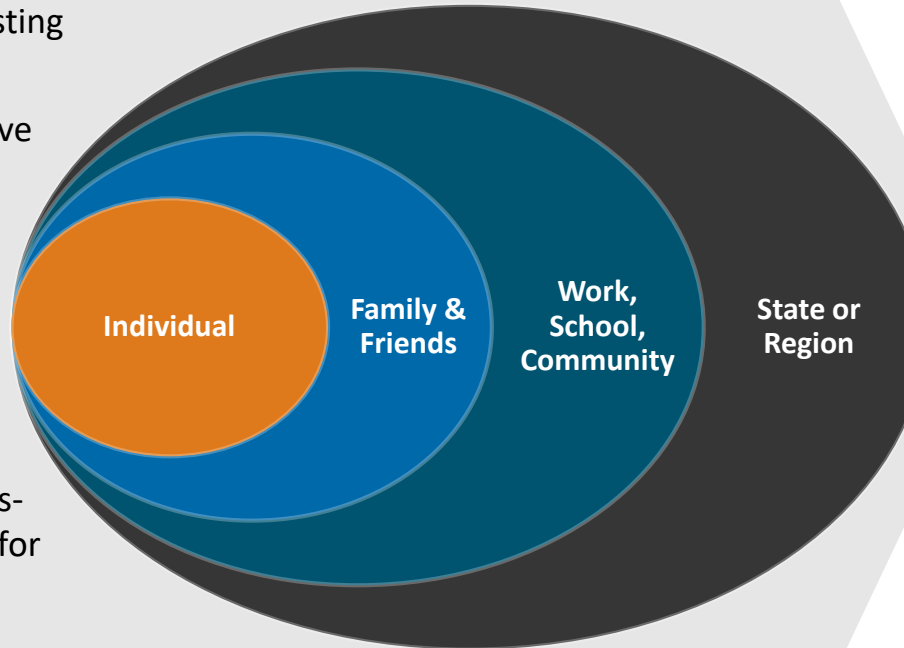
Building a Culture of Traffic Safety

A traffic safety culture is created through Positive Community Norming

A Social Ecological Approach

Using the environment to create lasting changes to beliefs and behavior

- Uses proven principles of Positive Community Norming
- Founded on the principle that the solutions exist
- Engages community and organizations to help drive individual behavior and beliefs
- Driven by hope from a strengths-based orientation and concern for critical issue
- Part of MN Strategic Highway Safety Plan



True, Lasting
Transformation to
Traffic Safety Culture



Designing and Operating a Safe System

Safe System provides a safety net when things go wrong

Safe System Approach

Designs and operates traffic systems and structures to protect against human mistakes and injury tolerances and avoid death and serious injuries

Focus of Federal Highway Administration Approach



“Safety net” to protect people when mistakes happen/they make poor choices

Consultant Implementation Recommendations— Summary

1. Secure partnership commitments with new agencies
2. Hire an Executive Director
3. Hire statewide staff
4. Secure additional State funding for TZD
 - Ongoing flexible State funding for TZD
 - One-time, near-term infusion of State funding to speed up culture building focus

Highway Safety Improvement Program (HSIP)--FHWA State Highway Safety Plan (HSP)--NHTSA

Bipartisan Infrastructure Law (IIJA) Adds \$9M - \$13M/Yr to HSIP through FY2026

- OTE/State Aid working on how best to make funding available to the counties
- DPS-OTS also receiving additional behavior related funding

Local share has been adjusted to 65% for future solicitations (historically 60%)

Thank You!

Thank You!

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- ▶ 651-201-7061

Minneapolis Vision Zero and pedestrian safety work

CEAM Conference
January 28, 2022



Minneapolis Vision Zero

Goal: zero deaths and severe injuries on City streets by 2027

Between 2016 and 2019, an average of

- 13 people died
 - 128 people were severely injured
- in crashes on streets in Minneapolis.

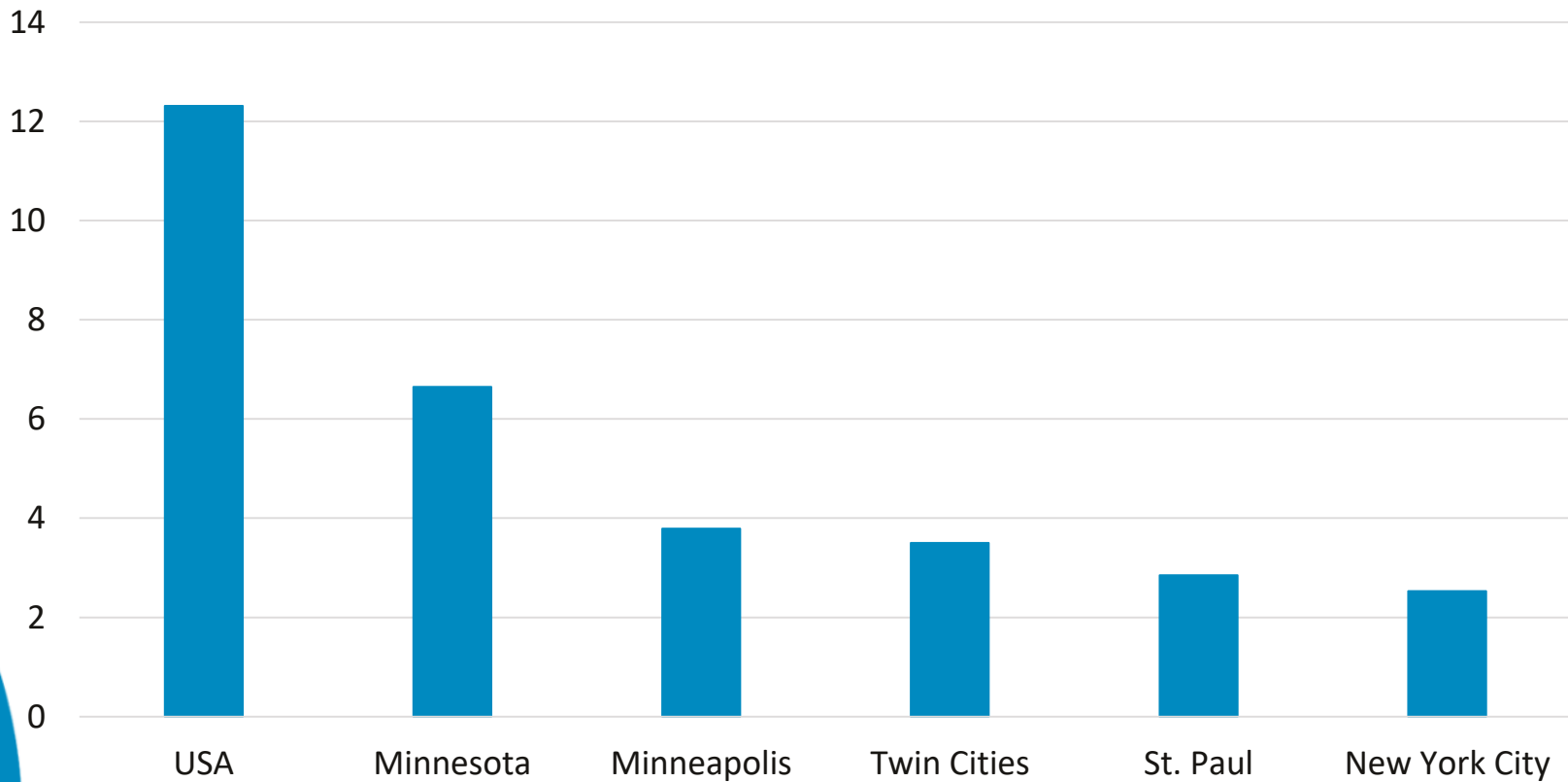
“A commitment to Vision Zero is a commitment to life and equitable opportunity for people in the City of Minneapolis.”

Vision Zero Resolution (2017)

Source: Vision Zero Crash Study
Excludes freeway & intentional crashes

Minneapolis safer than many cities, but work to do

Traffic fatalities per year per 100k population



Includes all traffic deaths, including on interstates
Minnesota locations for 2008-2017
USA & NYC for 2017

Minneapolis Vision Zero timeline

- September 2017: City Council adopted Vision Zero Commitment
- 2017-2018: Crash studies
- 2018: Hired staff/consultants & started internal and external engagement
- 2019: Final Action Plan adopted by Council
- 2020 on: accelerate implementation



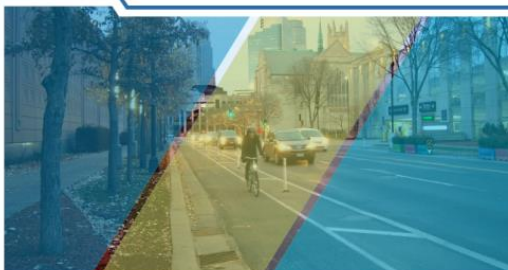


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City of Lakes

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Kimley»Horn

Crash studies

- Document trends, contributing factors, and characteristics of crashes in Minneapolis over a ten year period.
- Inform City's Vision Zero and other safety planning efforts.
- Help City better understand where, how, and why pedestrian, bicycle, and vehicle crashes are occurring

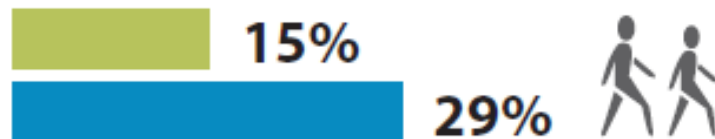
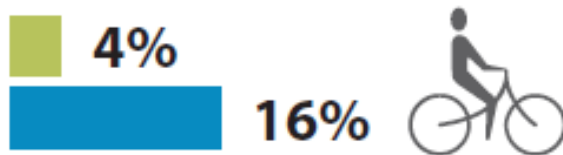


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Minneapolis
City of Lakes

PREPARED BY:
Kimley»Horn

**VISION
ZERO**
MINNEAPOLIS

Bicyclists and pedestrians are overrepresented in severe/fatal crashes



■ Percent of Trips

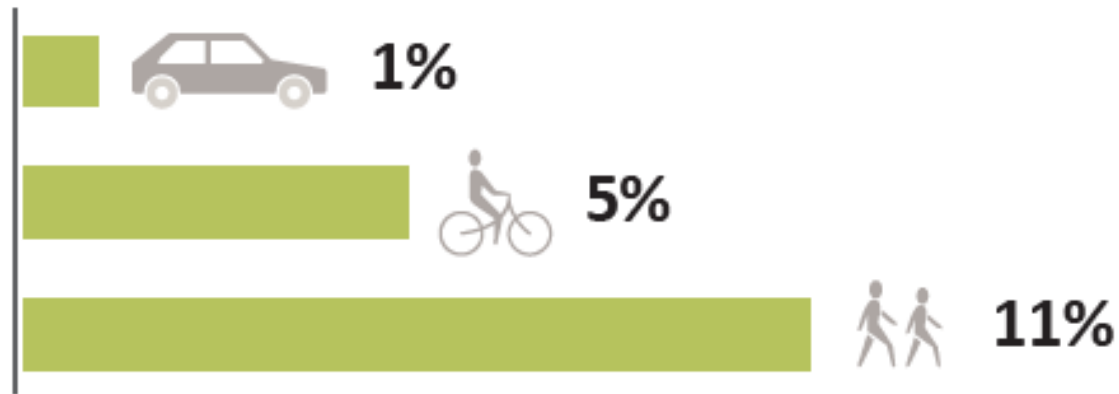
■ Percent of Severe Injuries/Death

Injuries/deaths from Vision Zero Crash Study

% of trips from 2010 Met Council Travel Behavior Inventory

Automobile category includes cars, trucks, & motorcycles, but not transit

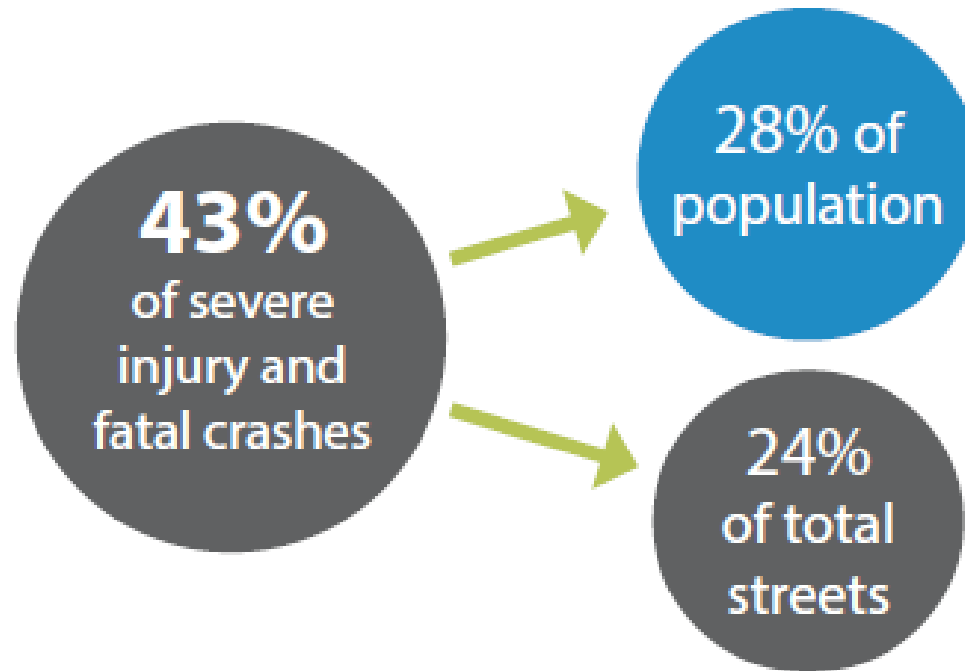
Pedestrians are most vulnerable



% of reported crashes that resulted in severe injury or death

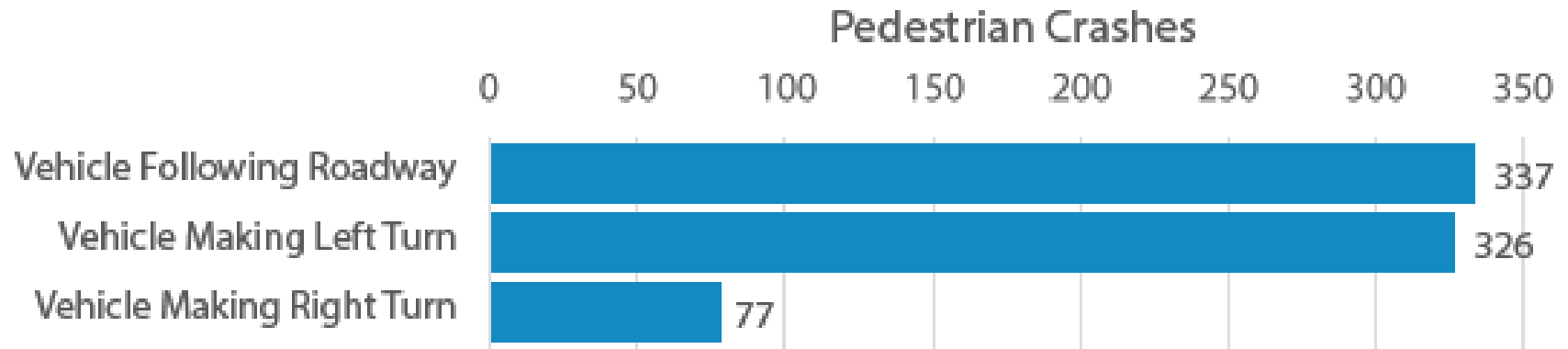
Source: Vision Zero Crash Study

Disparities in crashes for neighborhoods with lower-incomes



*Source: Crashes from 2010-2019 in MnDOT MnCMAT 2020.
Population based on 2013-2017 American Community Survey.*

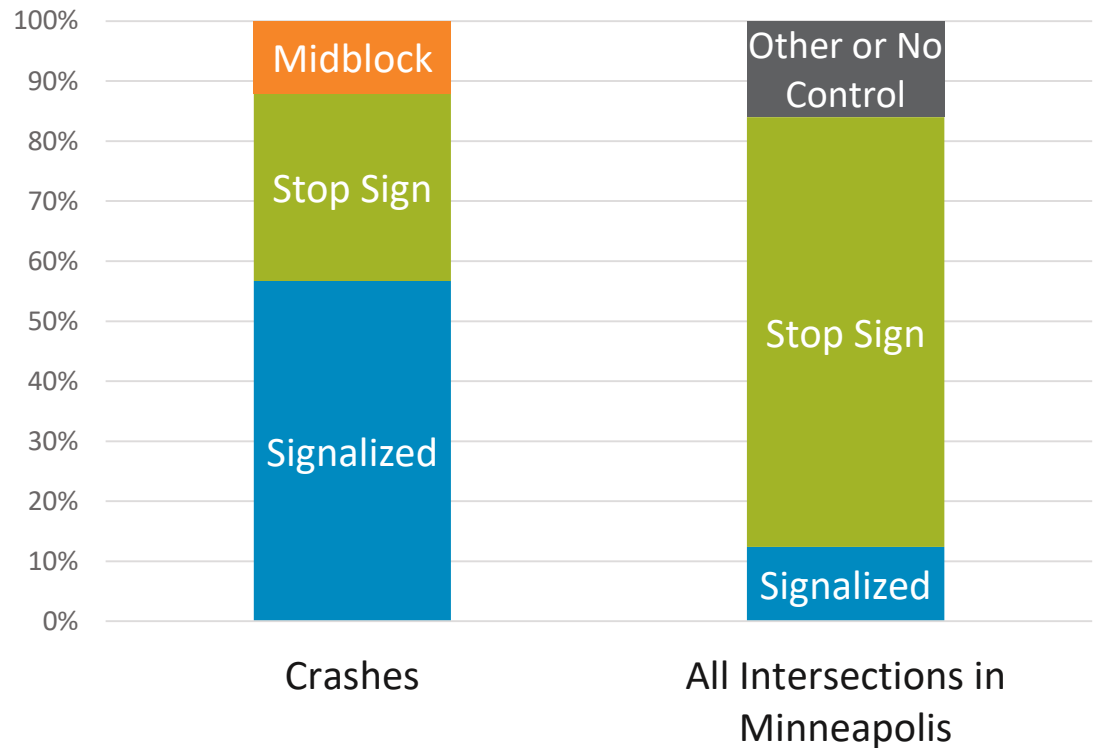
Left-turning vehicles are big factor for pedestrian crashes



Source: 2017 Minneapolis
Pedestrian Crash Study

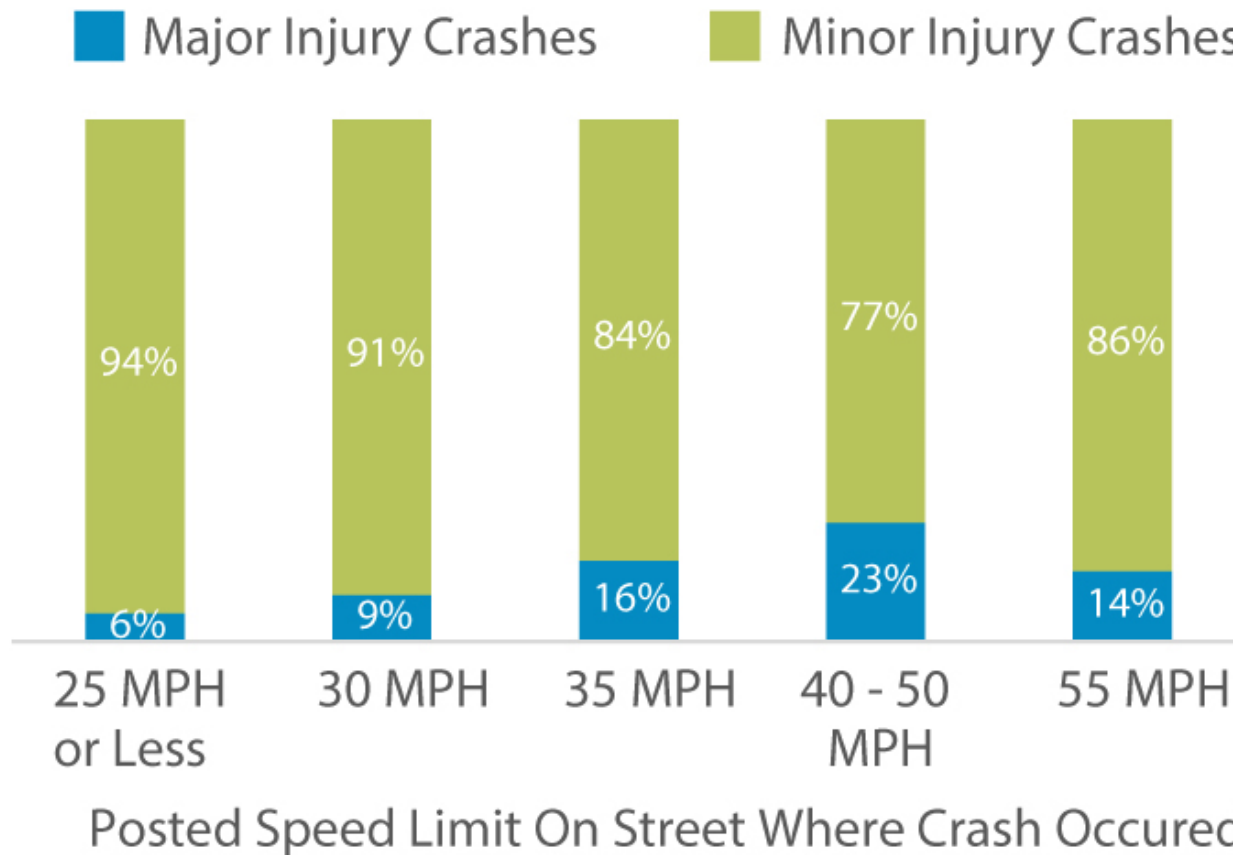
Most crashes happen at intersections

- 80% of bicycle crashes, 78% of pedestrian crashes, and 89% of vehicle crashes happened at intersections
- 12% of intersections citywide have traffic signals, but represent:
 - **48%** of all bicycle crashes
 - **54%** of all pedestrian crashes
 - **57%** of all vehicle crashes



Source: Vision Zero Crash Study data

Streets with lower speed limits have less severe pedestrian crashes



Source: Pedestrian Crash Study

RISK TO PEDESTRIANS INCREASES AS DRIVER SPEED INCREASES

20
mph



13%

OF PEDESTRIANS WILL DIE OR
SUFFER A SEVERE INJURY IF
HIT BY A VEHICLE AT 20 MPH

30
mph



40%

OF PEDESTRIANS WILL DIE OR
SUFFER A SEVERE INJURY IF
HIT BY A VEHICLE AT 30 MPH

40
mph



73%

OF PEDESTRIANS WILL DIE OR
SUFFER A SEVERE INJURY IF
HIT BY A VEHICLE AT 40 MPH

Source: Brian T. Tefft. 2013. *Impact of speed on a pedestrian's risk of severe injury or death.*

Minneapolis **VISION ZERO** ACTION PLAN 2020-2022



Address 4 areas:

Safe streets

Safe people

Safe vehicles

Safety data

December 2019



Supporting safe speeds

- Lower speed limits
- Street design
- Education
- Communications
- Automated enforcement

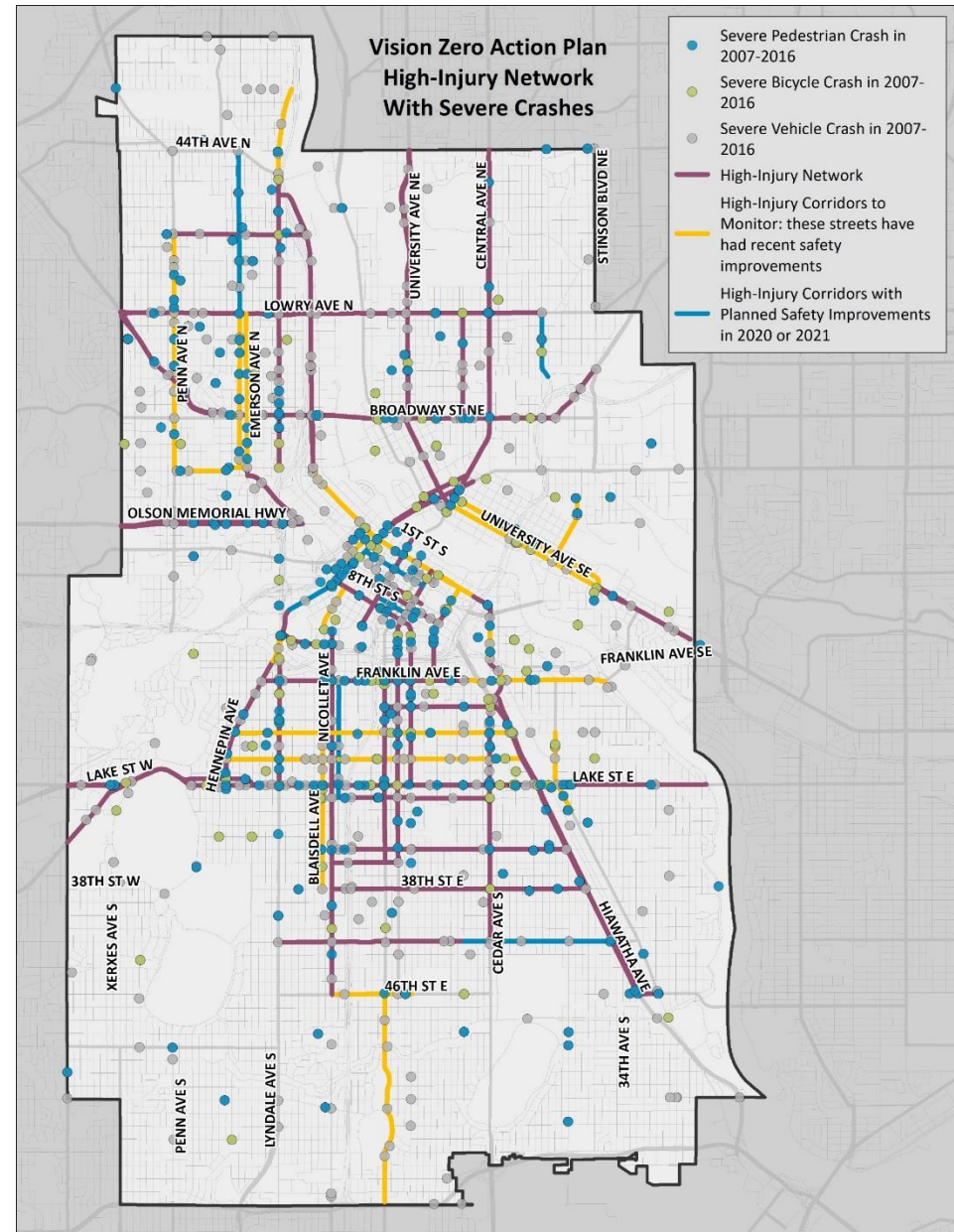


Reducing speed limits



ID High Injury Streets

- 9% of streets with 70% of severe and fatal crashes
- Allows initial focus for action—we hope to proactively address all in 3 years
- Crashes inform capital priorities



Prioritizing safety in street work

- Safety and equity are part of how capital street projects are selected
- Messaging Vision Zero in engagement & prioritizing in decision making



Updated Street Design Guide

- Sdg.minneapolismn.gov
- Vision Zero is a key goal
 - Narrowed lanes; tightened/clarified curb radii
- Protected bikeways only in street reconstructions
- Added guidance on:
 - Raised crossings
 - Traffic circles
 - Protected intersections
 - Pedestrian safety islands



Quick-build safety improvements

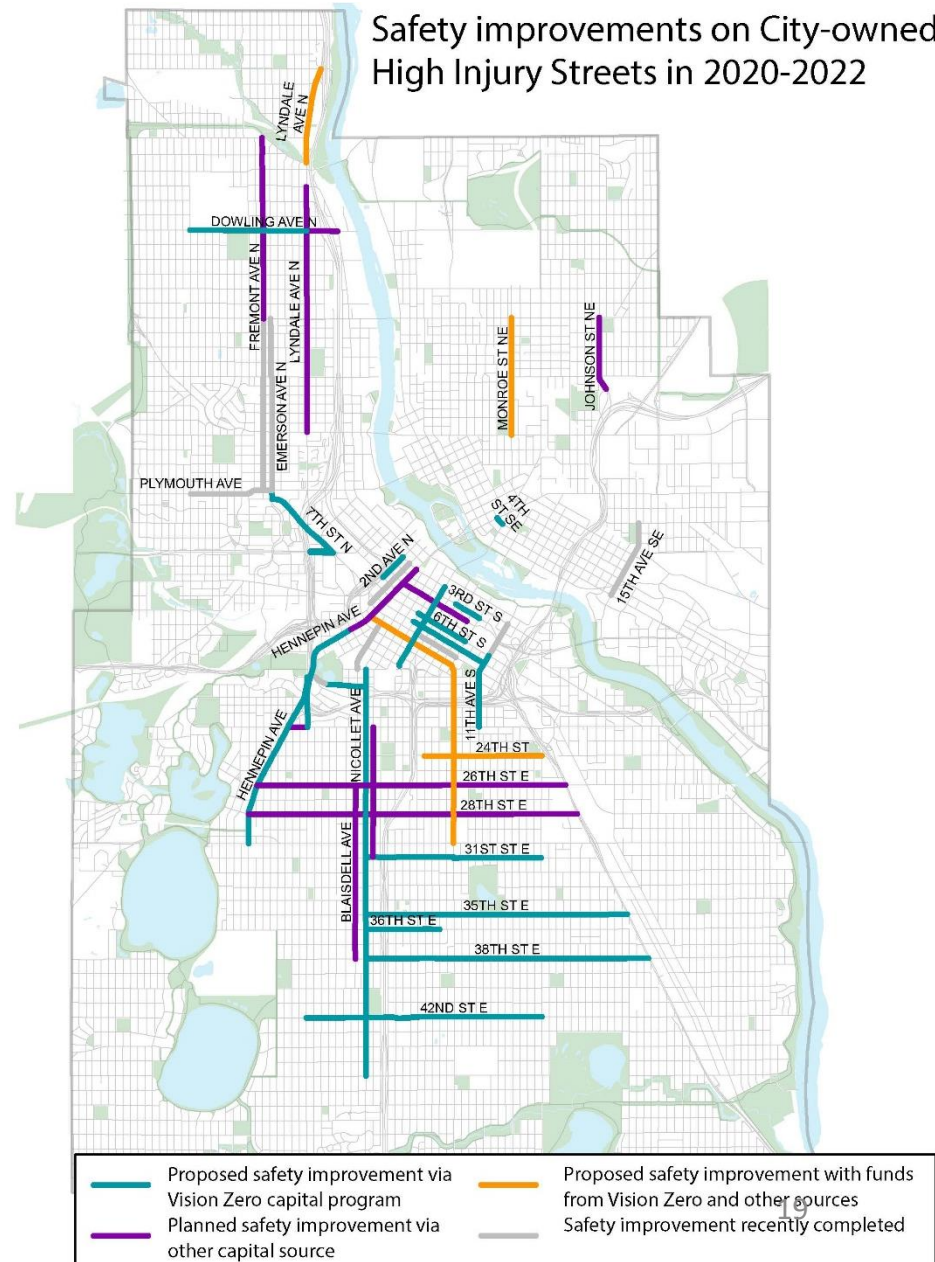
4-to-3 lane conversions



Bollard safety islands



Safety improvements on City-owned High Injury Streets in 2020-2022



Quick-build safety improvements

RRFBs and Zebra crosswalks



Bollard curb extensions



Bollard hardened centerlines



Bollard slow turn wedges



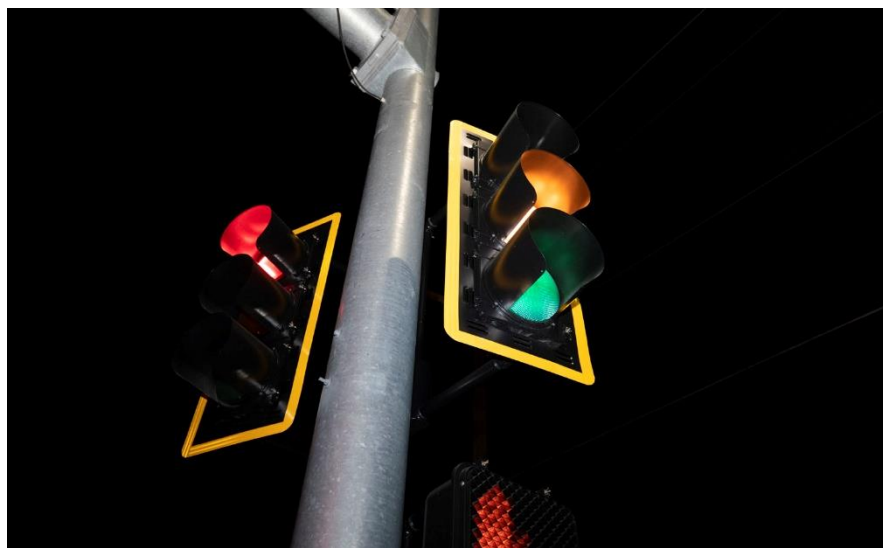
Leading pedestrian intervals



Dedicated left-turn phasing



Retroreflective back plates



Improving process for managing traffic calming requests

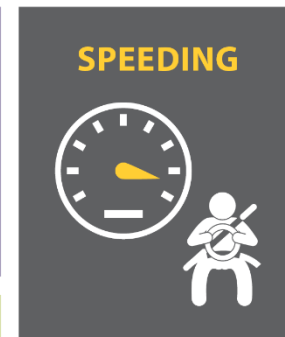
- Fair, equitable, transparent, and prioritizes safety
- Stay focused on High Injury Streets



Determine leading crash causes

- Actions can address
- Can be focus of communications, education, and/or enforcement efforts

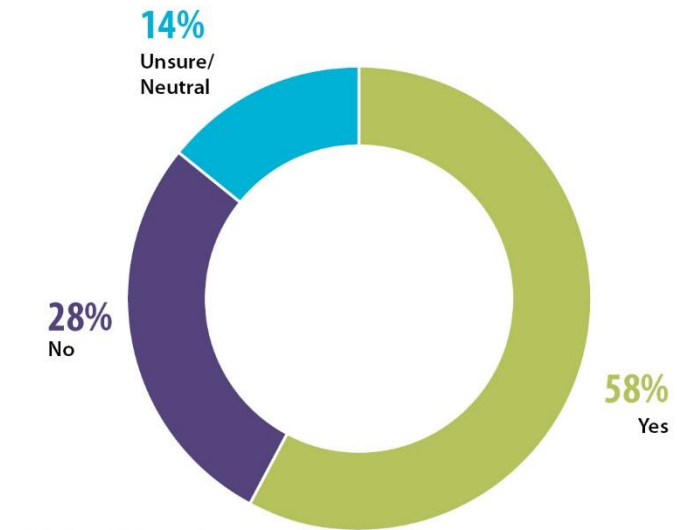
Top 5 unsafe behaviors on Minneapolis streets



Automated traffic enforcement

- Speeding and red light running are most common focuses
- Speed cameras:
 - Typically ~20-25% injury reduction*
- Red light cameras:
 - 14% fewer fatal crashes at all signalized intersections**
- Seeking Legislative authority
- Working on how to implement most effectively and equitably

Question 3: Would you be in favor of Minneapolis using automated traffic enforcement?



Based on 1,598 responses.

*Source for speed cameras: National Highway Traffic Safety Administration 2007 study

**Source for red light cameras: Insurance Institute for Highway Safety 2017 study



Thank you

VISION ZERO

SAFE STREETS FOR MINNEAPOLIS



minneapolismn.gov/visionzero
sdg.minneapolismn.gov
ethan.fawley@minneapolismn.gov

Pedestrian Safety on City Streets

John Gorder, P.E.
Eagan City Engineer

January 28, 2022



Eagan

History/ Current

Challenges

Efforts for Pedestrian/Bike Safety



Eagan

- Auto-centric suburban development - single-family south 2/3, C/I north 1/3
- Development 1950'-1980's
- Existing trails sidewalks
transportation/parks: 160+ miles
88 miles plowed (68% of transportation trails)

Consistent high resident rankings -
walkability and facilities



Eagan



- Transition to ped-bike development/ planning
- Apartments, grocery stores
- Cultural turnaround/ mindset

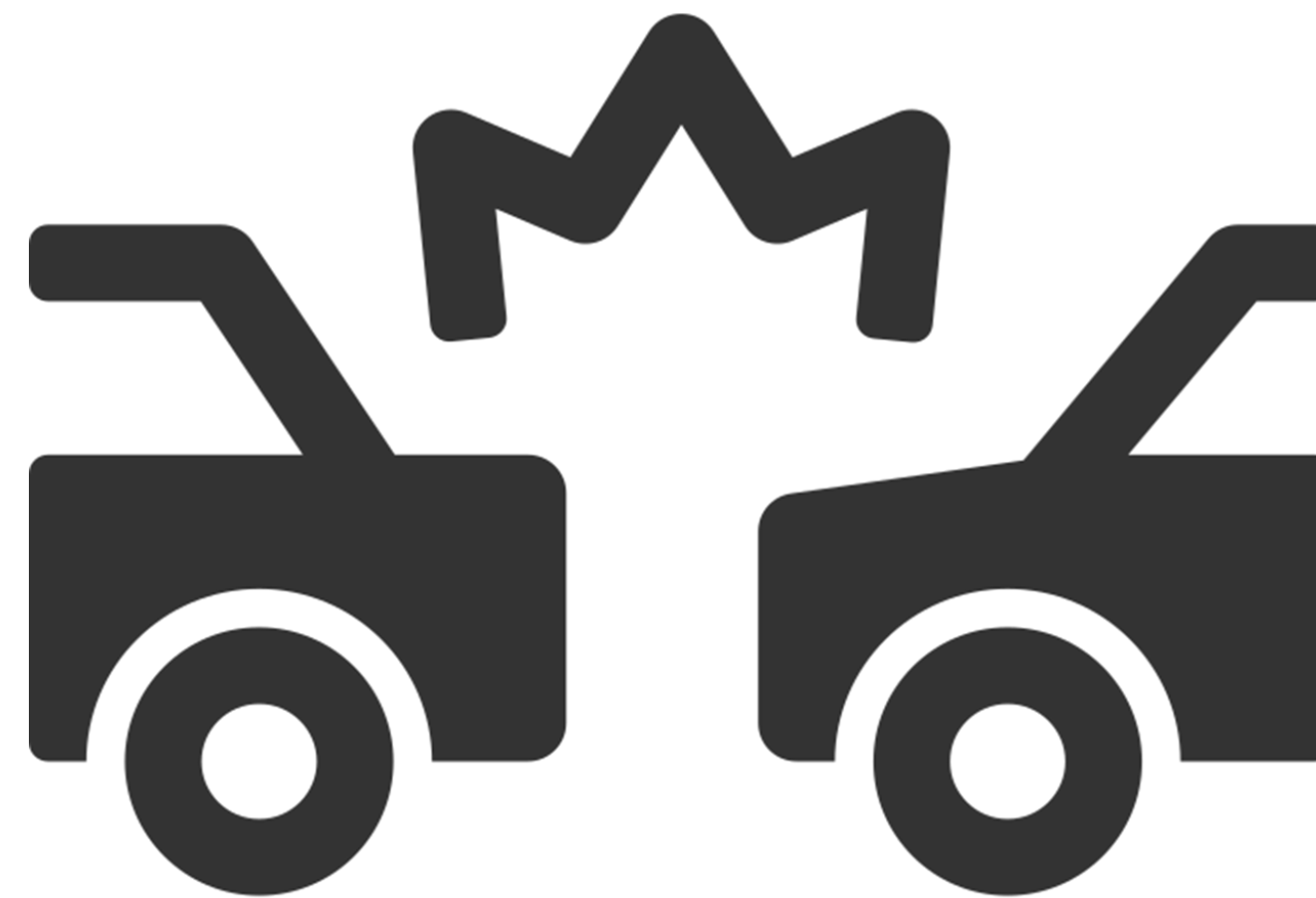
Pedestrian Safety

- “Everything made for comfort of driver inside - less safe for others outside” – Mazcko
- (Everything made to connect peds to online world. Less Safe)
- “Must protect most vulnerable users” - Mazcko
- Active participant in safety - driving, walking, biking



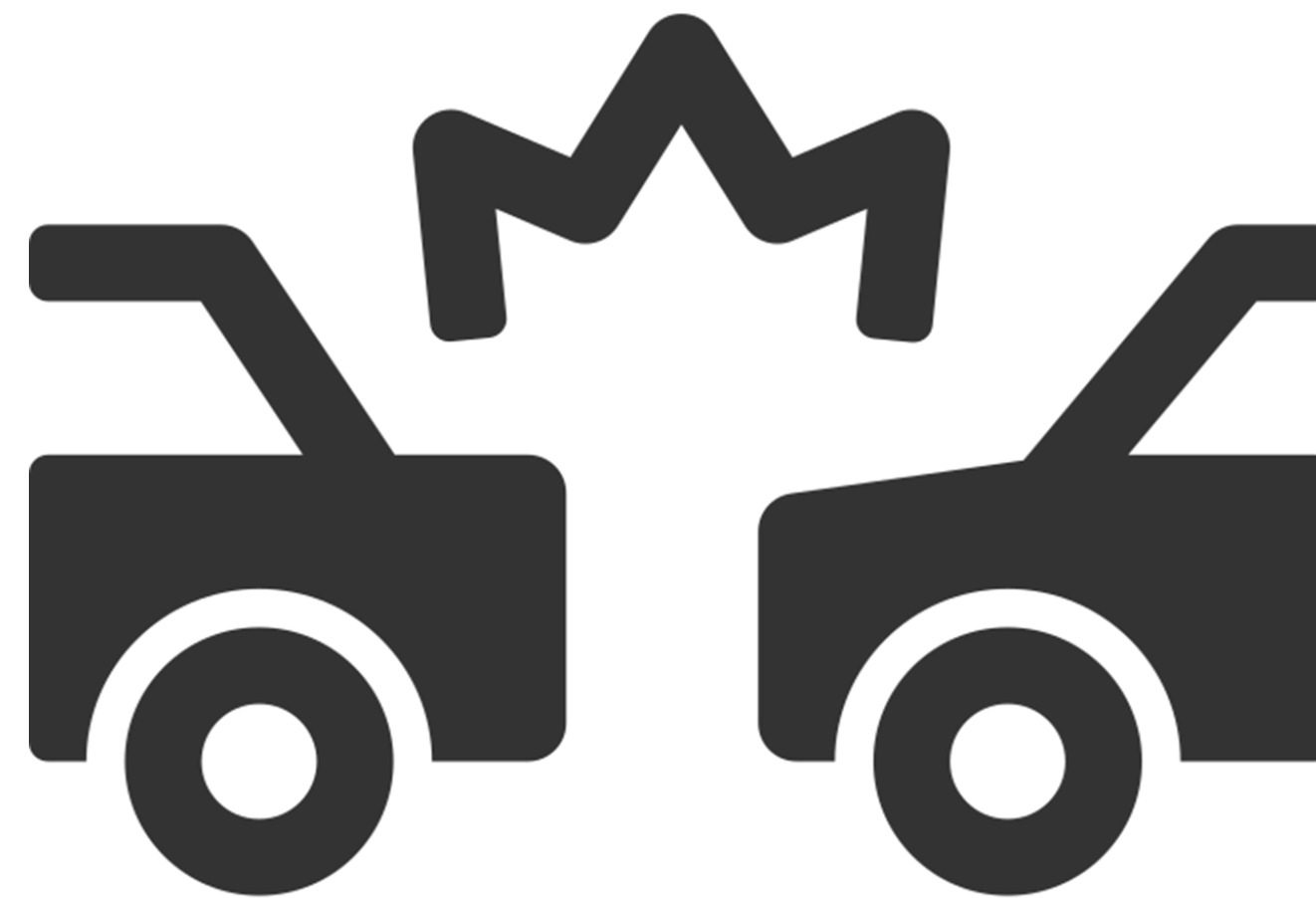
2015 State - Strategic Highway Safety Plan

- Help to local agencies
- CH2M Hill - Eagan, St. Paul participated
- Analyzed Metro crash data – city streets
- Characteristics/risk factor severe crashes



2015 Strategic Highway Safety Plan

- Sidewalks/ trails along collectors/arterials = proven safety
- Road diets, reduced crossing lengths
- Future efforts, projects



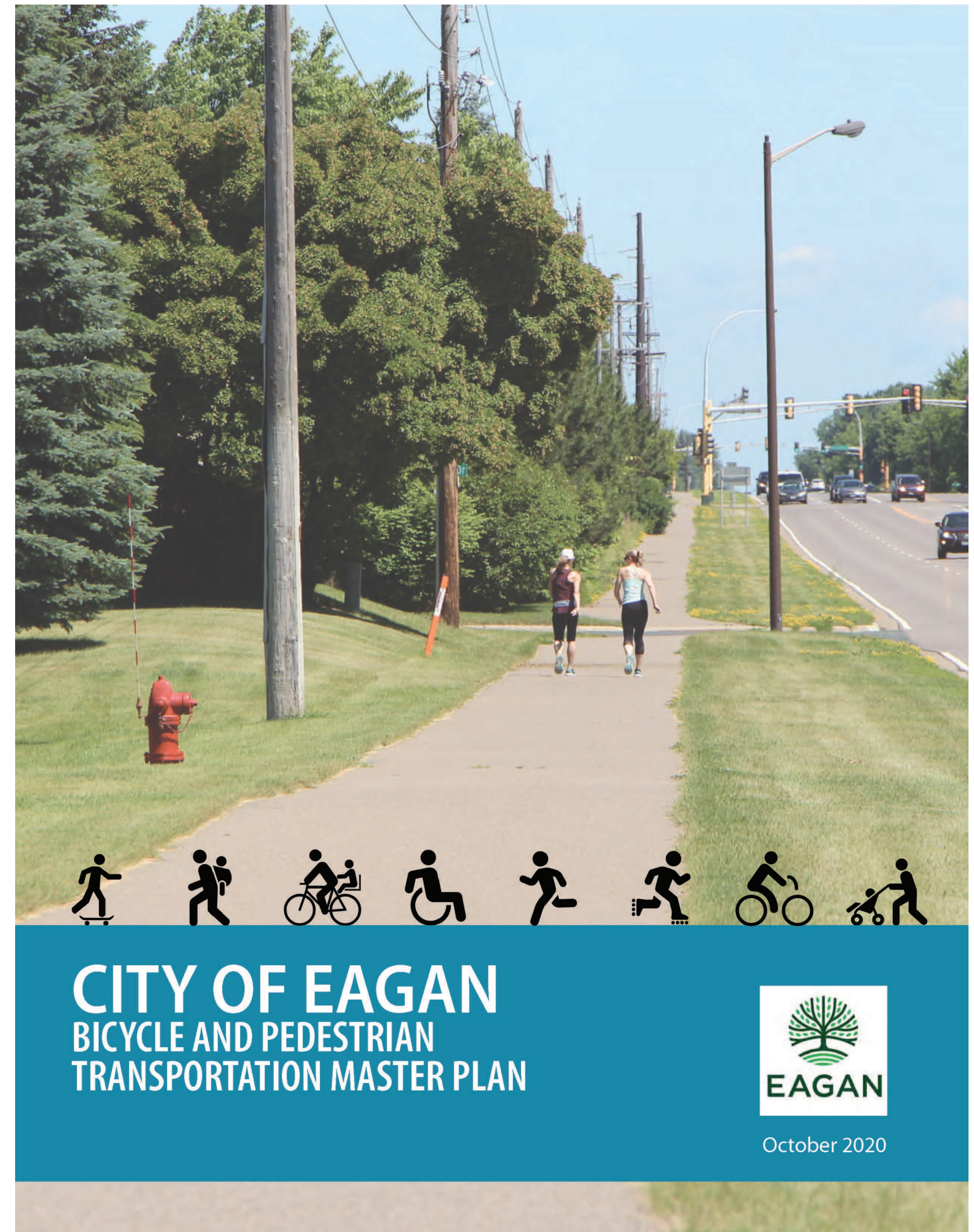
Eagan / Dakota County Efforts

- Eagan Bicycle/ Pedestrian Transportation Master Plan
- Dakota County
 - School Zone Safety Assessment
 - County Road Crossing Assessment
- Eagan Crosswalk Policy Update



Eagan - Bike/Pedestrian Transportation Master Plan (2020)

- Gaps - CIP and adjacent street improvements
- Collector/ arterials - areas of most benefit



Eagan - Bike/Pedestrian Transportation Master Plan (2020)

- Generator/ Destination data (hot spots)
- Guide CIP & public improvements

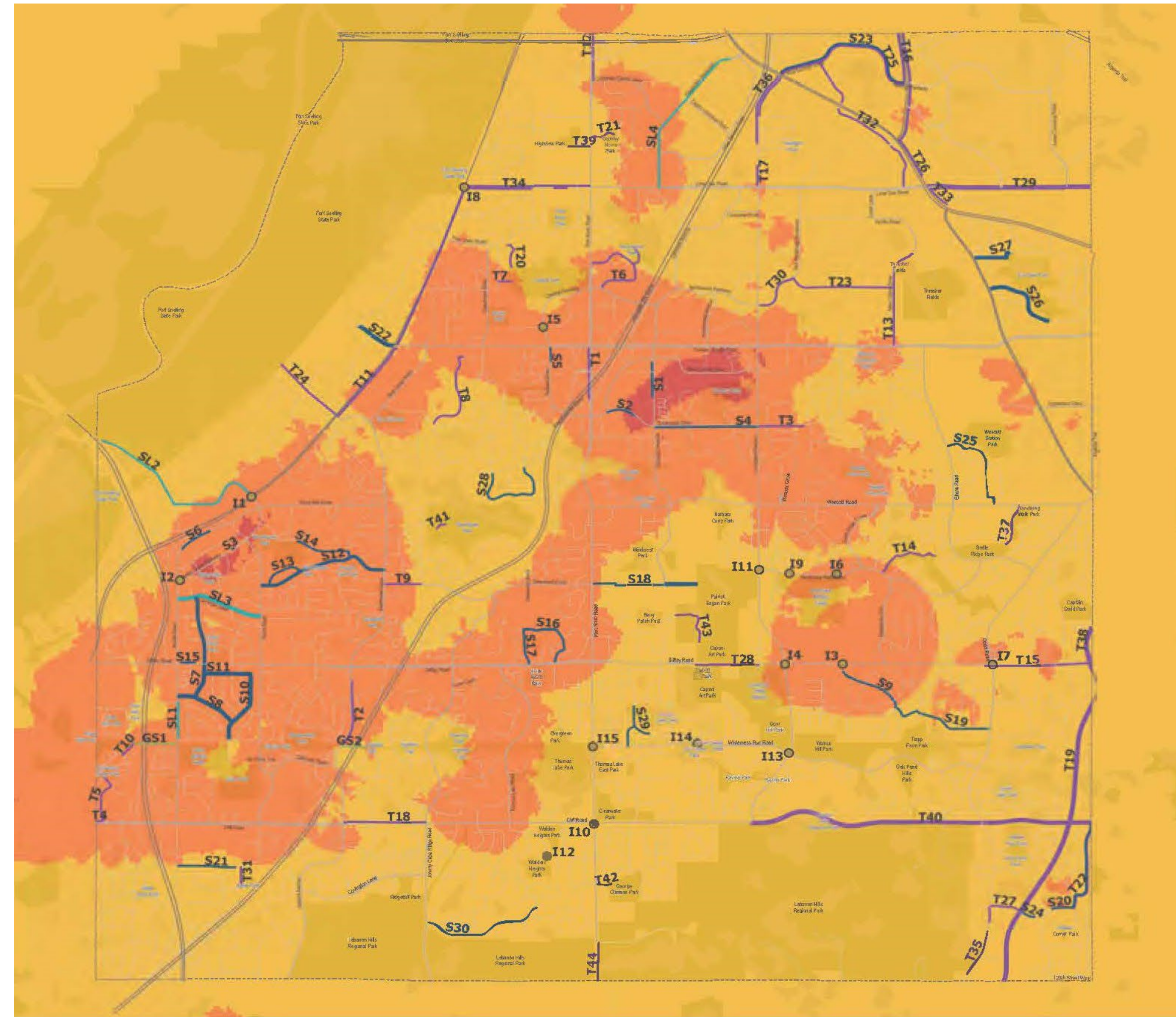


Figure 9 - Demand Analysis Map

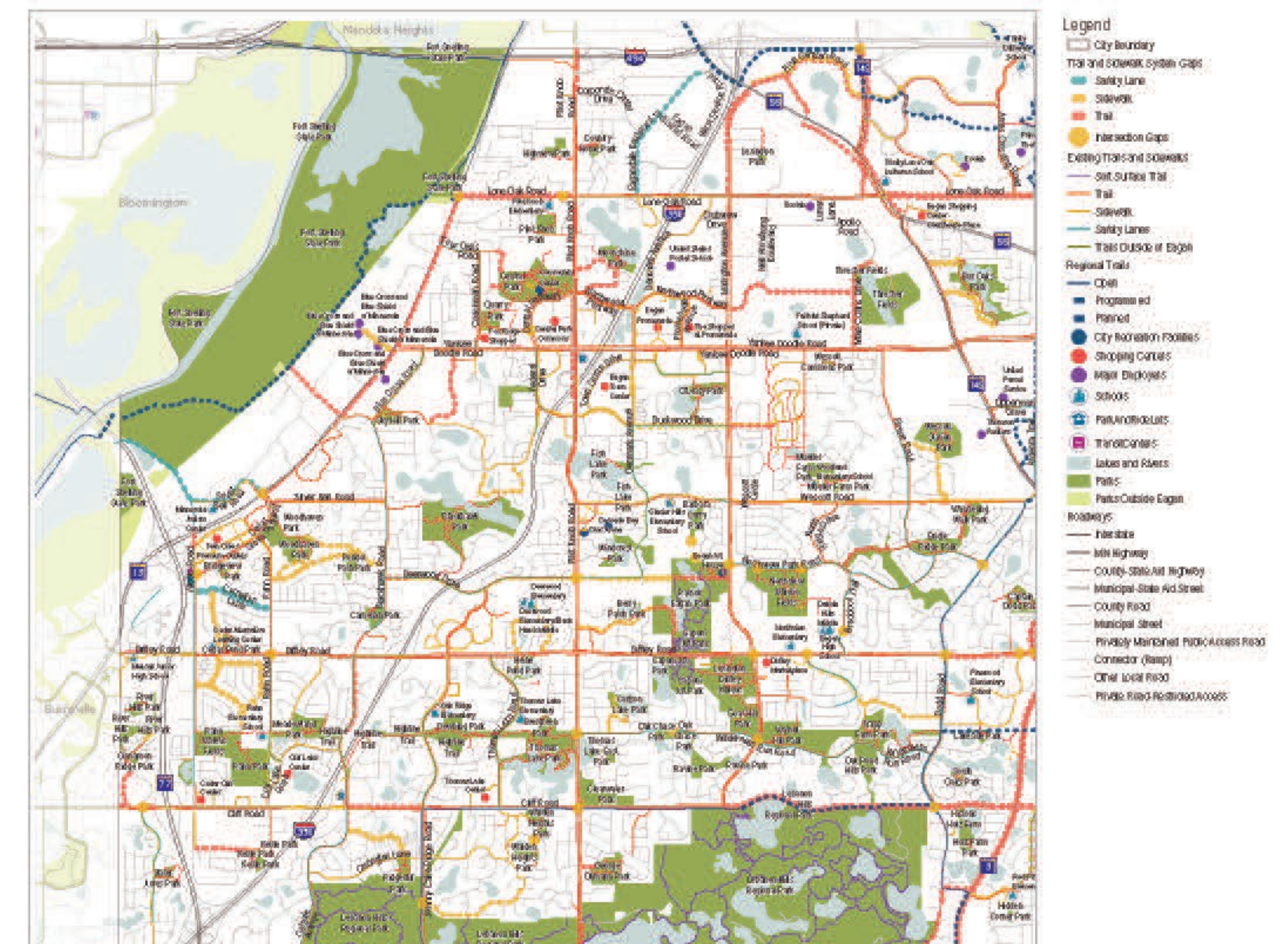


Eagan - Bike/Pedestrian Transportation Master Plan (2020)

- Identify potential “hyper-collectors” for short-segment sidewalk gaps
- Between local & collector

IDENTIFYING GAPS IN THE EXISTING SYSTEM

Eagan's trail and sidewalk system is extensive and continues to expand as development occurs throughout the city and as other agencies improve the regional and state recreation systems. An important part of this study was to ask for input from the public where gaps exist in the existing trail and sidewalk system. Online engagement tools, public input at community events and recommendations from the advisory committee were included in the gap analysis. The public identified specific locations where incomplete or missing segments of trails and sidewalks exist, where there are desirable connections to neighborhoods, parks or retail locations, where improvements to street crossings are needed and where major barriers like highways block pedestrian access. The Trail and Sidewalk Gap Map below shows all gaps identified during the analysis and public comment period.

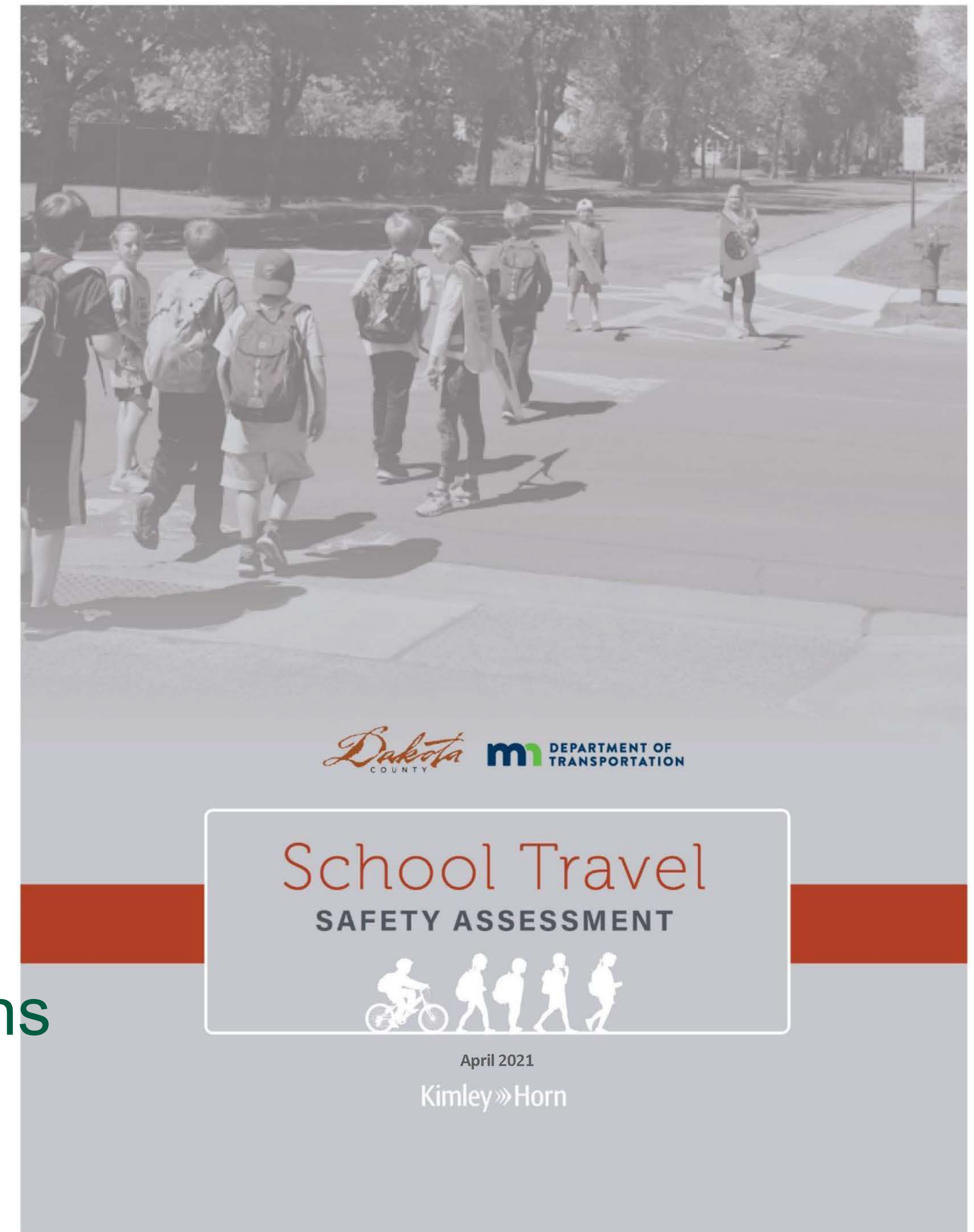


Dakota County School Safety Assessment (2021)

48 Schools Countywide

Grouped school zones
various lanes, school types

Evaluated safety improvements & options



Dakota County School Safety Assessment

Consistency in application – BMP's

Details, examples, suggestions

High speed, 4+ lanes

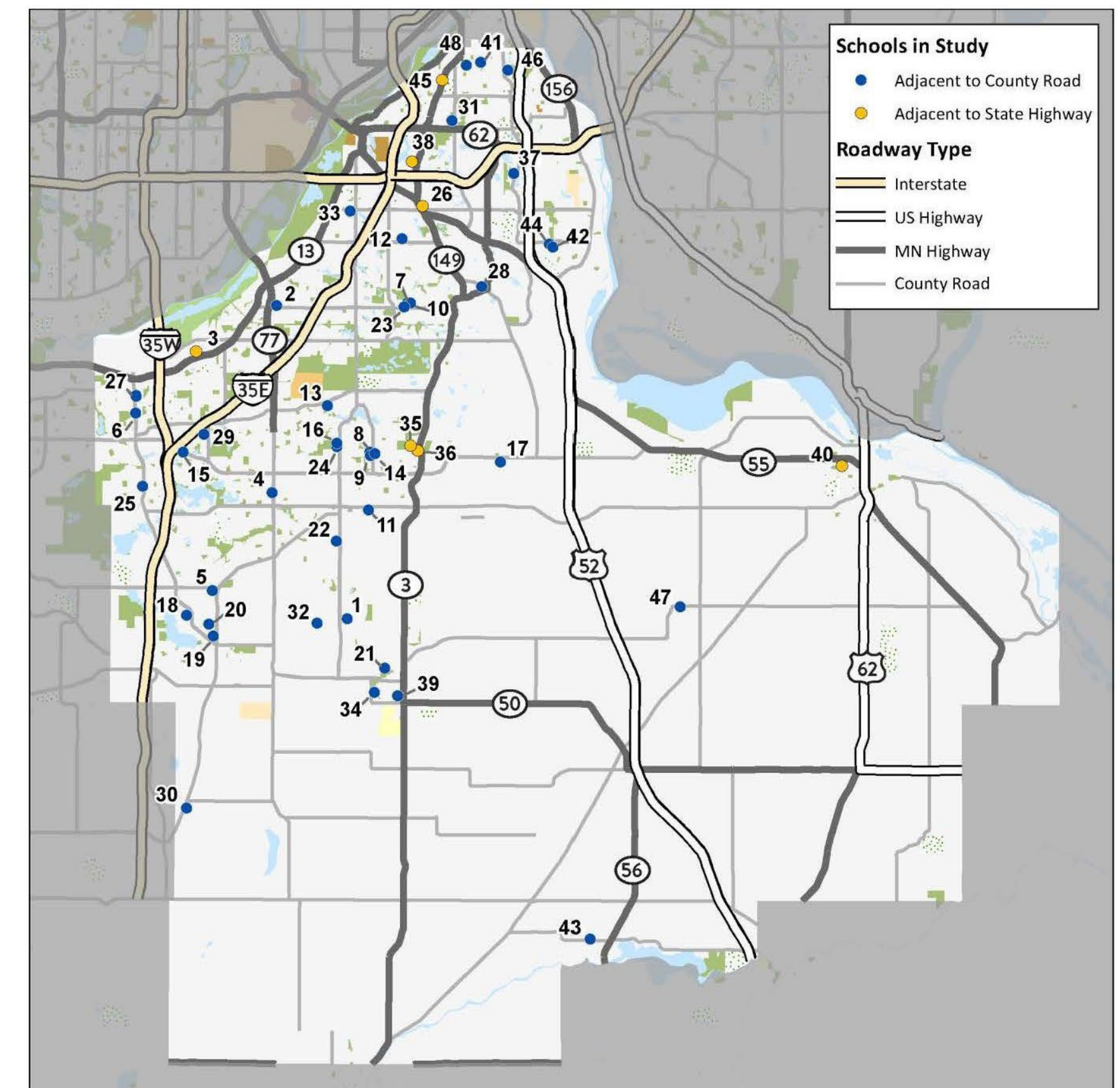
High speed, 2-3 lanes

Low speed, < 35 mph

Results shared with each city, school district

- **Low Speed Road:** Schools next to county or state roads with speed limit of 35 mph or less. All schools on roads with lower speed limits were grouped together because there were only two schools on roads with three or four lanes.

Figure 1-1: Map of Schools Included in Assessment



Dakota County County Road Crossing Assessments (pending)

- Various County roads – speeds, lanes
- Generators/ destinations
- User survey – Online/ QR code
- Temporary measures implemented



Dakota County
Crossing Study

Project Management Team Meeting
September 1, 2021



Dakota County County Road Crossing Assessments (pending)

- Evaluation
- BMP Recommendations pending
- > 45 mph recommendations



Dakota County Crossing Study

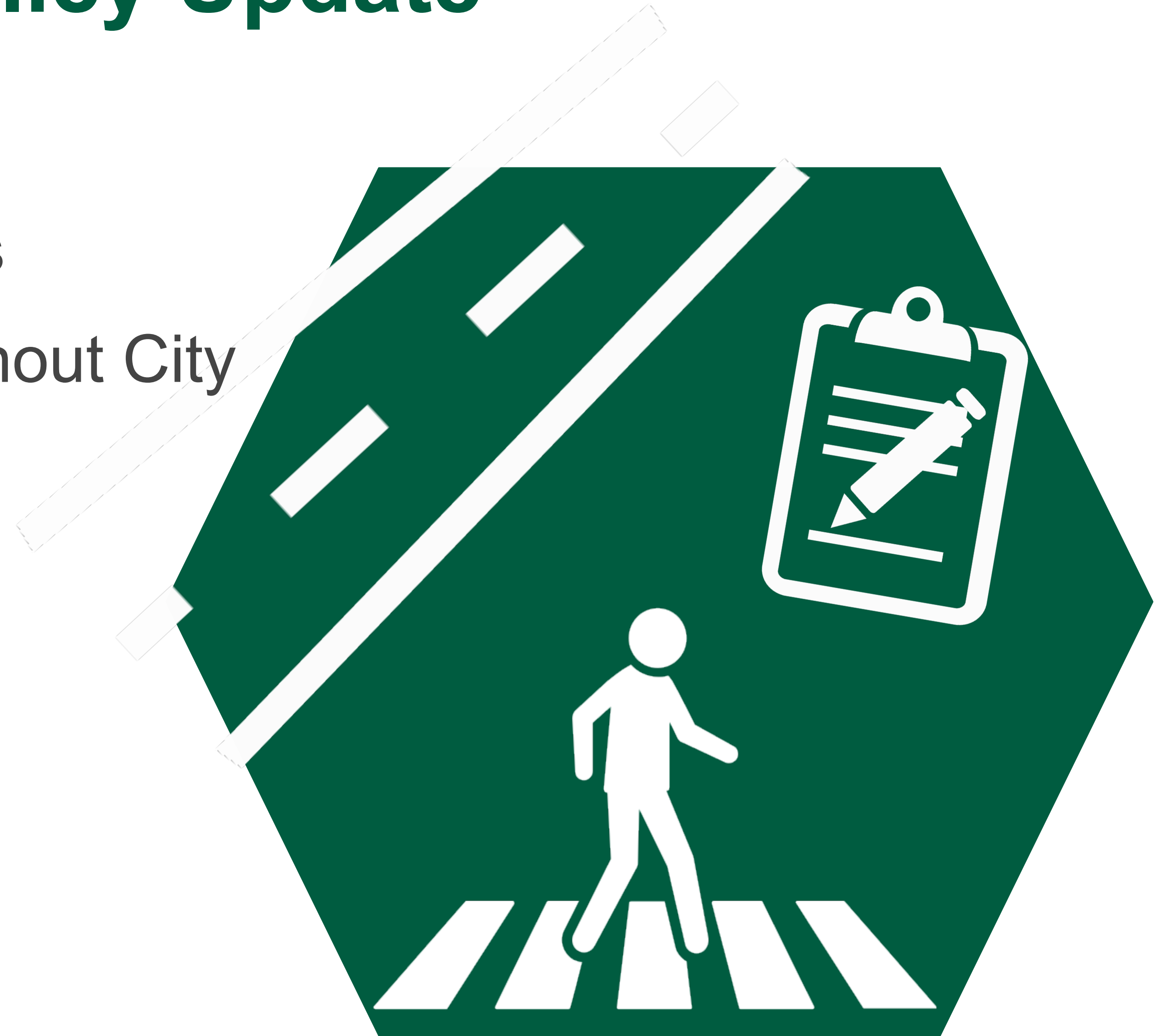
Project Management Team Meeting

September 1, 2021



Eagan Crosswalk Policy Update

- Build on County Work
- FHWA guidelines/ other Cities
- Consistent application throughout City
 - Where, how
 - Street improvement projects
 - Citizen requests



Other Efforts

- CAV – speed limits/ effectiveness
- <https://www.cityofeagan.com/busted-by-the-bus-is-back>
- Speed/ safety enforcement on collectors/ arterials
- 4-lane to 3-lane conversions – City & County
- Safe Routes to School
- Dakota County Greenways
 - Accelerate 77 miles trails – 5 years



Plans/ Studies:

Eagan Bicycle And Pedestrian Transportation Master Plan

https://cityofeagan.com/images/PublicWorks/Eng/12601_BikePedTransportationMP_Report_201026_Ir-FINAL.pdf

Dakota County School Safety Assessment

<https://www.co.dakota.mn.us/Transportation/TransportationStudies/Current/Pages/school-safety-assessment.aspx>

Dakota County Ped Crossing Safety Assessment

<https://www.co.dakota.mn.us/Transportation/TransportationStudies/Current/Pages/school-safety-assessment.aspx>



Thank you!

Questions?

