

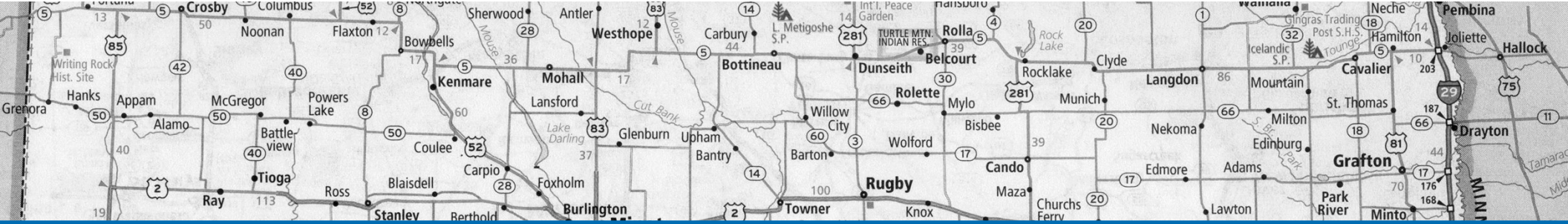
**VISION
ZERO** 

LEAH KELM

REGIONAL OUTREACH COORDINATOR

Southeast Region | Cass County Highway Department





CASS COUNTY GOVERNMENT



SMARTSIGN

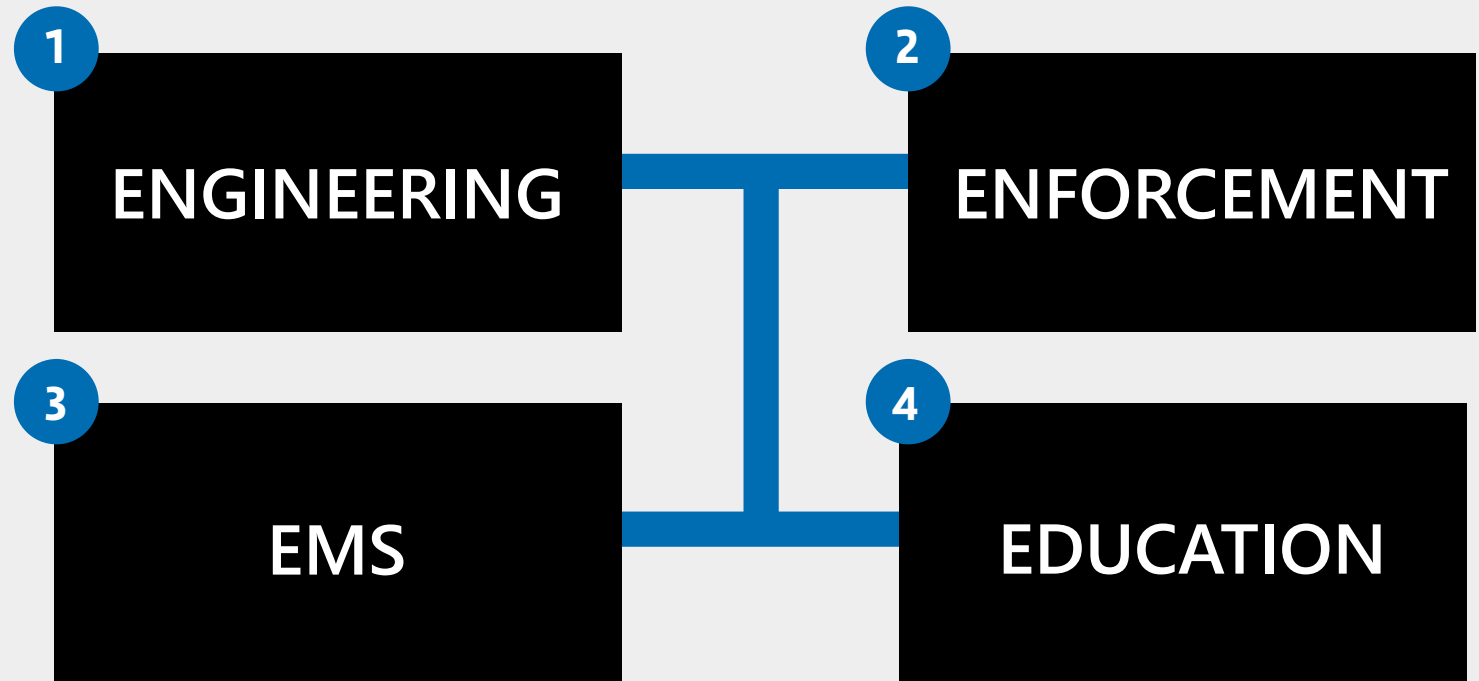
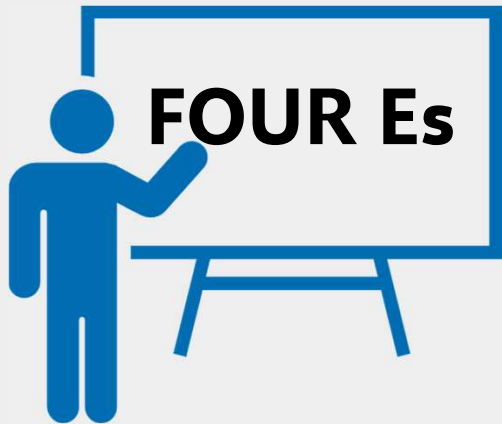
DRIVER BEHAVIOR PILOT PROGRAM

Using Technology to Enhance Road Safety



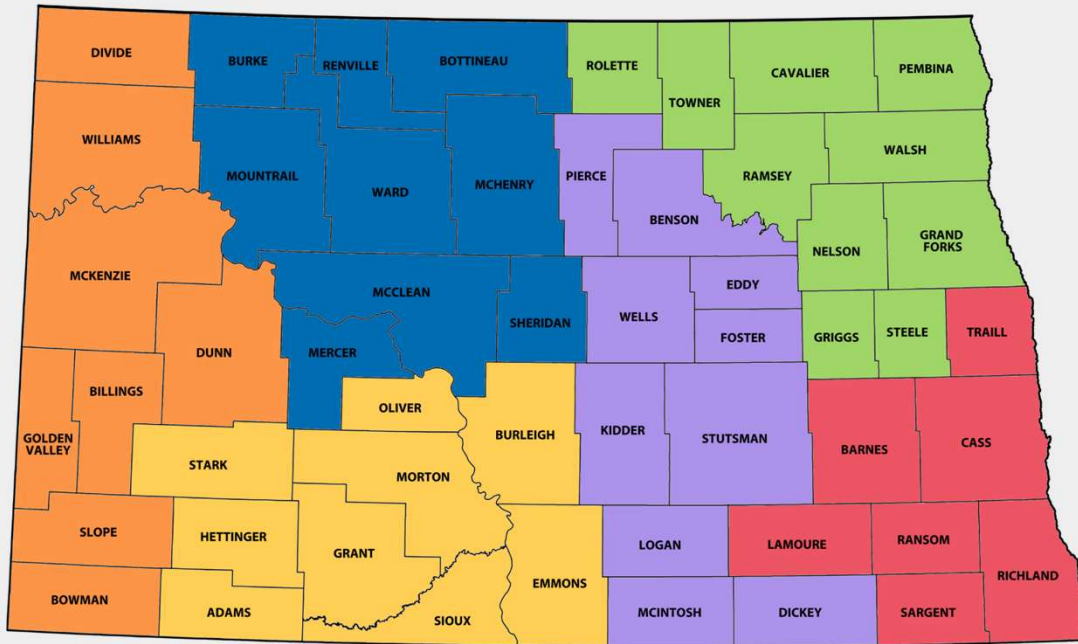


This is a Group Effort

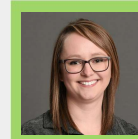




Vision Zero Outreach Coordinators



The Vision Zero Outreach Program was created by the NDDOT Highway Safety Division to advance the mission of Vision Zero.



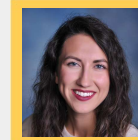
KAITLIN ATKINSON

Northeast Region
Grand Forks County Sheriff's Office



MOLLY SCHOEN

Northwest Region
Ward County Highway Department



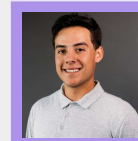
THERESA LIEBSCH

Southwest Region
Burleigh County Sheriff's Department



LEAH KELM

Southeast Region
Cass County Highway Department



JOSEPH CARLBLOM

East Central Region
Stutsman County Sheriff's Office





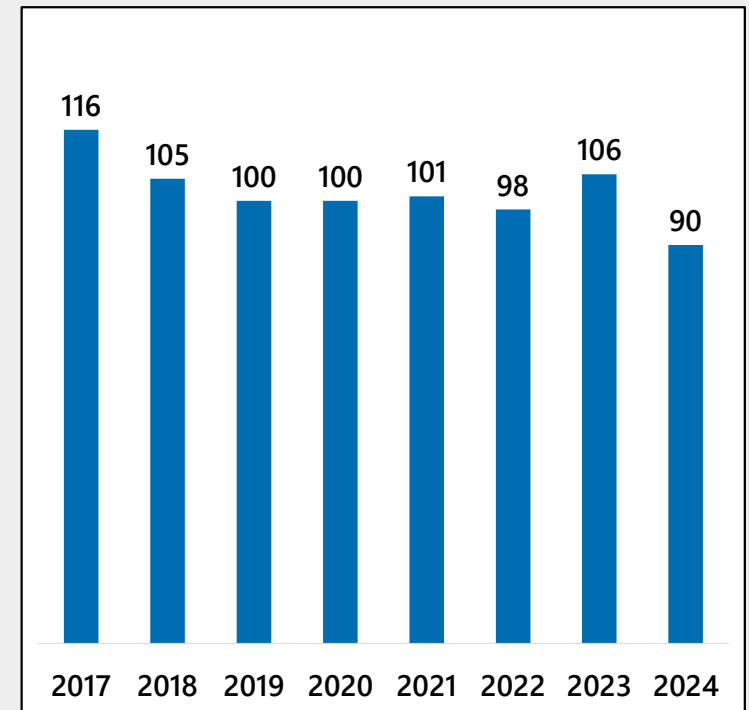
The Numbers in North Dakota

ND Motor Vehicle Crashes, Fatalities, and Injuries (2017-2024)

YEAR	CRASHES	FATALITIES	INJURIES
2017	15,280	116	5,311
2018	15,242	105	5,365
2019	14,221	100	5,278
2020	8,820	100	4,917
2021	9,585	101	4,614
2022	10,734	98	3,763
2023	10,475	106	2,828
2024	-	90	-

All data in this presentation is provided by the North Dakota Department of Transportation's Highway Safety Division. The data for 2024 is preliminary and has not yet been finalized.

ND Motor Vehicle Fatalities (2017-2024)





HSP Grant Opportunity

Official website of the state of North Dakota <https://www.nd.gov>

Dakota | Transportation

Home | Driver | Motor Vehicle | Construction & Planning | Travel & Safety | News & Events | About

Highway Safety

VISION ZERO
Zero fatalities. Zero excuses. [Visit Vision Zero](#)

Vision Zero is North Dakota's traffic safety initiative to eliminate fatalities and serious injuries on North Dakota roadways. This is accomplished by applying strategies in the 4E areas of education, enforcement, engineering and emergency medical services. One of these strategies includes programs aimed to change behavior to advance the safety of the traveling public.

Be part of the solution by buckling up, transporting children in child passenger safety seats appropriate for the child's age, height and weight, driving distraction-free, driving sober (not under the influence of alcohol and/or drugs) and obeying all posted speed limits.

Engineering to Keep You Safe

<p>Reduced Conflict Intersections Alters how left turn movements occur.</p>	<p>Cable Median Barriers Reduces cross-median crashes.</p>	<p>Roundabouts Slows traffic and reduces serious collisions.</p>	<p>Rumble Stripes Enhanced edge lines and centerlines for improved safety.</p>
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Take Personal Responsibility

<p>Seat Belts Single most effective safety device.</p>	<p>Impaired Driving Drive sober or designate a driver.</p>	<p>Distracted Driving A common factor in most vehicle crashes.</p>	<p>Lane Departure Most common in rural areas.</p>
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[APPLY FOR SAFETY GRANTS](#) | [ND CRASH MEMORIAL WALL](#) | [HIGHWAY SAFETY PROGRAMS](#)





Priority Emphasis Areas

Priority Emphasis Areas represent the key crash contributing factors with the greatest potential to reduce fatalities and serious injuries. Traffic data from 2017-2021 was reviewed to determine these 11 areas.



SAFE ROAD USERS

- Impaired Driving
- Occupant Protection
- Young Drivers
- Older Drivers
- Distracted Driving



SAFE SPEEDS SAFE VEHICLES

- Speed Management
- Commercial and Heavy Vehicles



SAFE ROADS

- Intersections
- Lane Departure
- Local Roadway Systems



POST-CRASH CARE

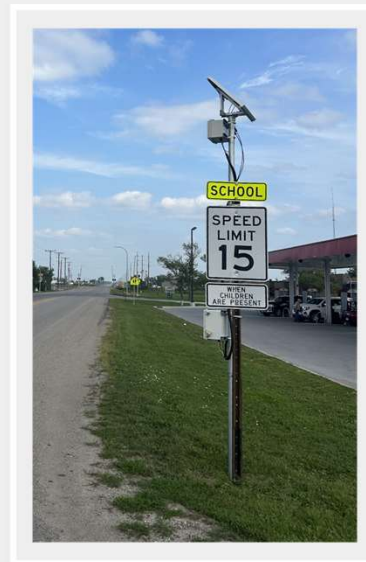
- Emergency Response and Medical Services

SMARTSIGN SYSTEM

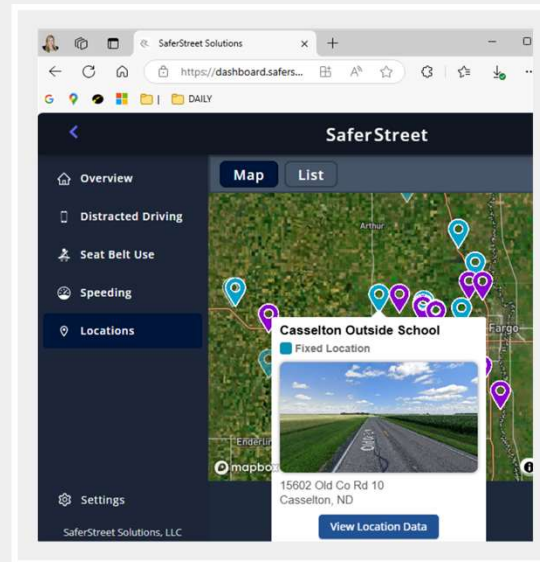
SmartSign Driver Behavior Pilot Program



The comprehensive safe driving system from SaferStreet Solutions utilizes a SmartSign, driver behavior detectors, and the IntelliRoad cloud dashboard.



DETECTOR



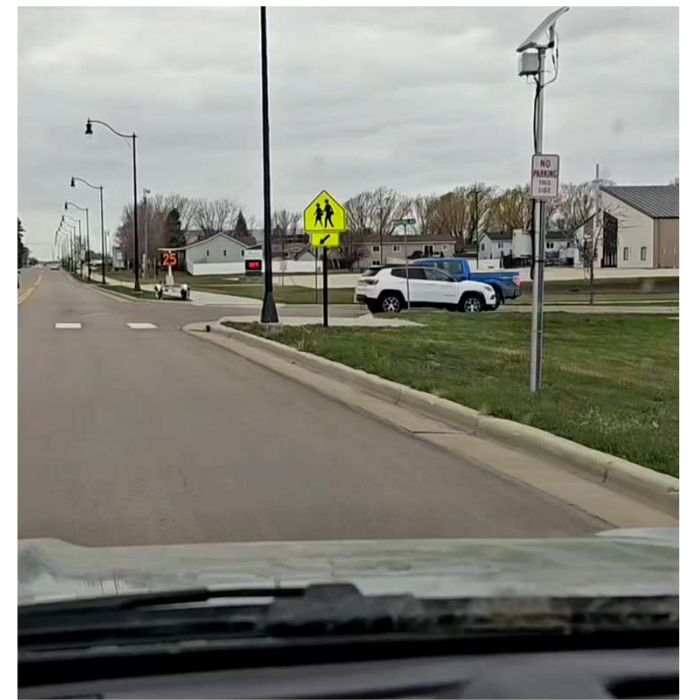
DASHBOARD



SMARTSIGN

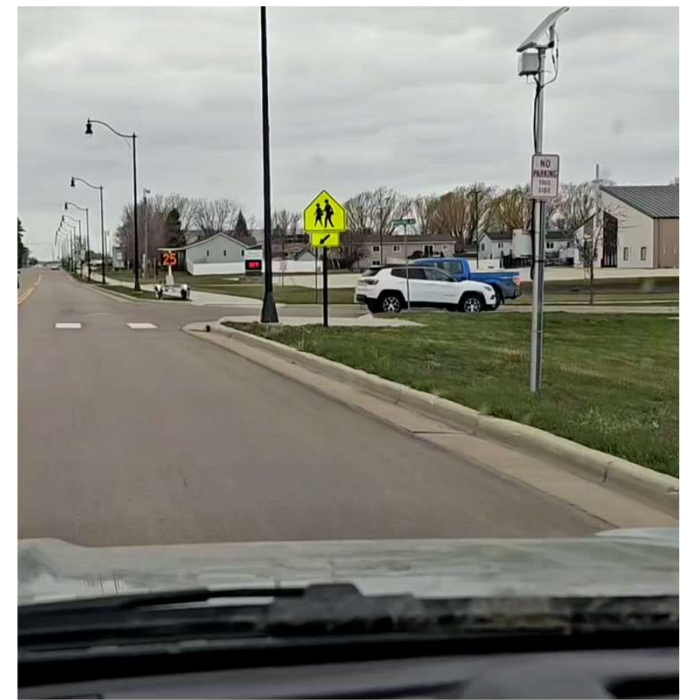
SMARTSIGN SYSTEM

SmartSign Driver Behavior Pilot Program



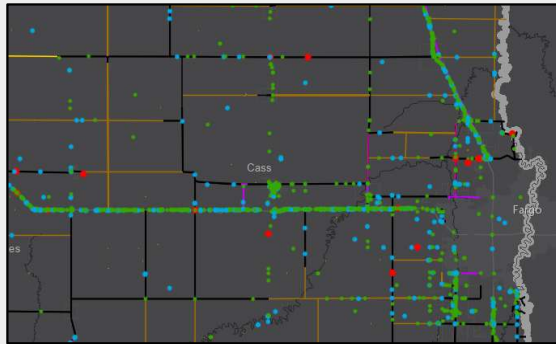
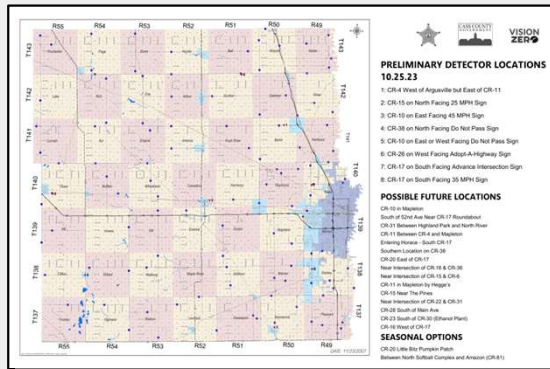
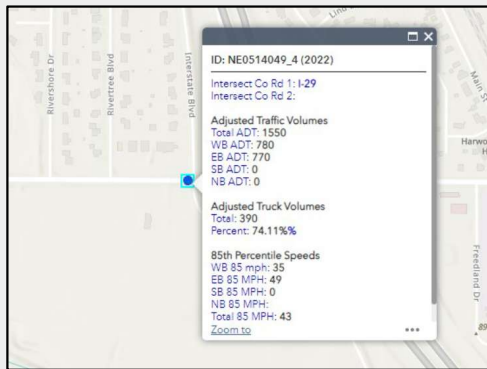
SMARTSIGN SYSTEM

SmartSign Driver Behavior Pilot Program





Initial Behavior Detector Locations



Crash Locations

Severity | Surface Conditions | Lane Departure

Current Road Signs

Sign Type | Location

Proximity to Destinations

Schools | Parks | Businesses | Events

Law Enforcement Input

Observed Behaviors | Citations | Public Concerns

County Coverage

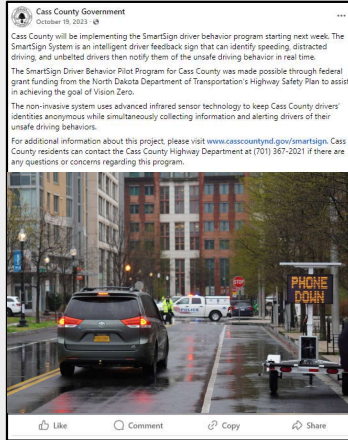
Varied Areas | Gather Diversified Data



Inform the Public

METHODS

- Press Release
- TV and Radio
- County Website
- Social Media



HIGHWAY DEPARTMENT	MISSION	VISION
<p>The County Highway, Planning, and Vector Control offices are all located at the Cass County Highway Department Complex in West Fargo. The County Engineer is appointed by the County Board of Commissioners to serve as the department head for all of these operations.</p>		
 COUNTY ENGINEER	 CURRENT PROJECTS	 PROJECT BIDDING
ROAD & BRIDGE MAINTENANCE + COUNTY 31 BRIDGE REPLACEMENT -		
SMARTSIGN DRIVER BEHAVIOR PROGRAM		
<p>VISION ZERO Zero fatalities. Zero excuses.</p> <p>SmartSign Driver Behavior Program The SmartSign Driver Behavior Pilot Program for Cass County was made possible through federal grant funding from the North Dakota Department of Transportation's Highway Safety Plan to assist in achieving the goal of Vision Zero.</p> <p>Driver behaviors including not wearing a seat belt, speeding, and/or driving unreasonably and distracted.</p>		
EVENTS <ul style="list-style-type: none"> Road Advisory Committee Meeting: 09/17/2023 2:00 pm - 3:00 pm Road Advisory Committee Meeting: 07/21/2023 2:00 pm - 3:00 pm Road Advisory Committee Meeting: 11/17/2023 2:00 pm - 3:00 pm 		
<ul style="list-style-type: none"> Access Permit Cass County Utility Permit 2023 2025-2022 Comprehensive Highway & Bridge Plan 30 Day Over Dimensional Permit 10 Percent Winter Exception 		
NEWS		



Valley News Now

News Watch Live Weather 24/7 Weather Video Weather Kit Valley Ag Sports ND Today Valley News Now

Cass County installing SmartSign to identify unsafe driving behaviors

SmartSign Cass County, ND (10/19/23)
By Gretchen Hjortsholm
Published Oct 19, 2023 at 4:49 PM CDT

OXO

CASS COUNTY, N.D. (Valley News Live) - Cass County will be implementing the SmartSign driver behavior program starting next week. The SmartSign System is an intelligent driver feedback sign that can identify speeding, distracted driving, and unbelted drivers.





Baseline Study

For the baseline study, data was collected at 28 locations over a period of 8 days, with the fixed locations collecting data over 21 days.

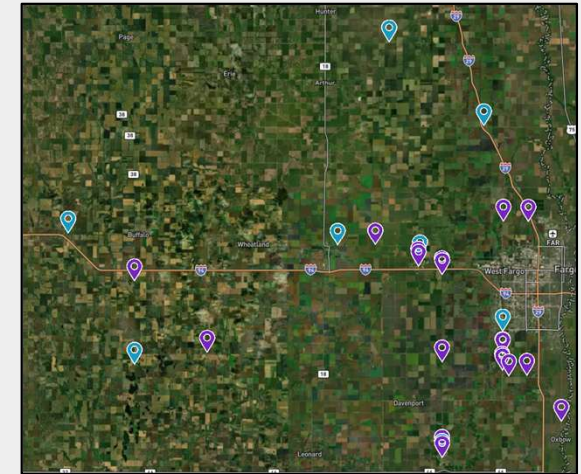
This collection period focused solely on the behavior detectors, as the SmartSign had not yet been deployed.

Baseline Study Results (October-November 2023)

UNBELTED	PHONE USE	SPEEDING
18.2%	12.7%	83.3%

Speed Breakdown

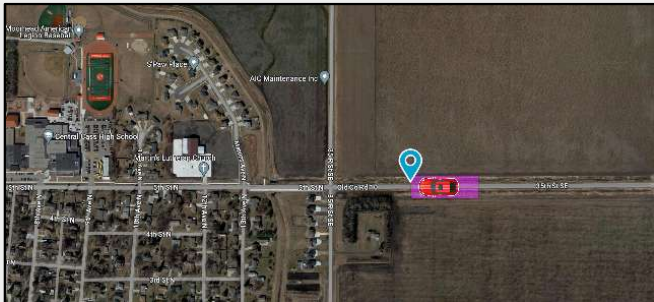
NOT SPEEDING	1-5 MPH OVER	6-10 MPH OVER	11-15 MPH OVER	15+ MPH OVER
20%	32%	27%	14%	7%





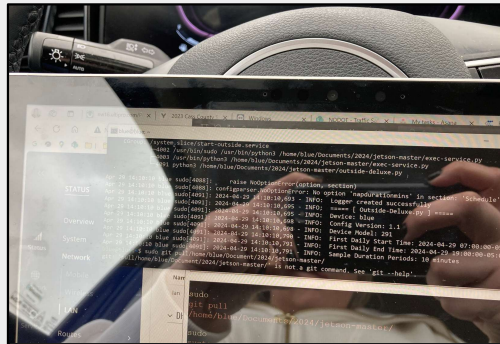
SmartSign Deployment

LOCATION:
Casselton (East of Central Cass)





Project Setbacks



Learning Curve

School Zones | Product Capabilities | Traffic Counts

Equipment Issues

Batteries | AT&T Service | Modem Updates

Weather

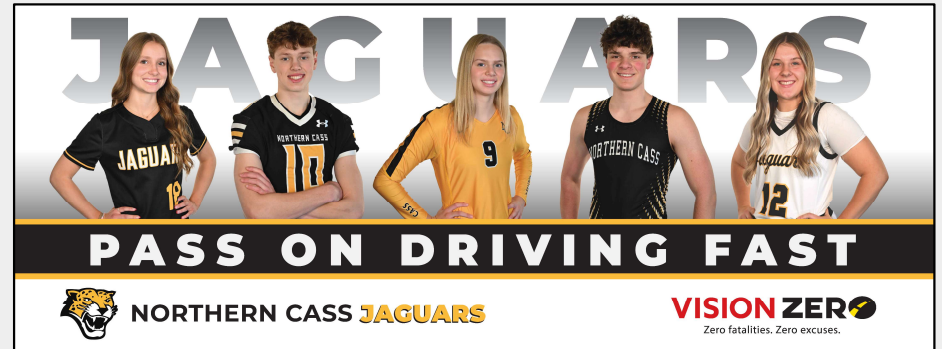
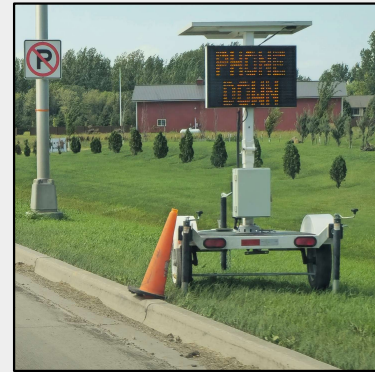
Spring Restart Delayed | Sign Deployment



Project Successes Thus Far

HIGHLIGHTS

- Dashboard and Update Feedback
- NHTSA and MNDOT Visit
- Vision Zero School
- Self-Heating Batteries
- Enforcement Heat Map
- Replacement of All Detectors
- Data for Highway Department
- Behavior Change



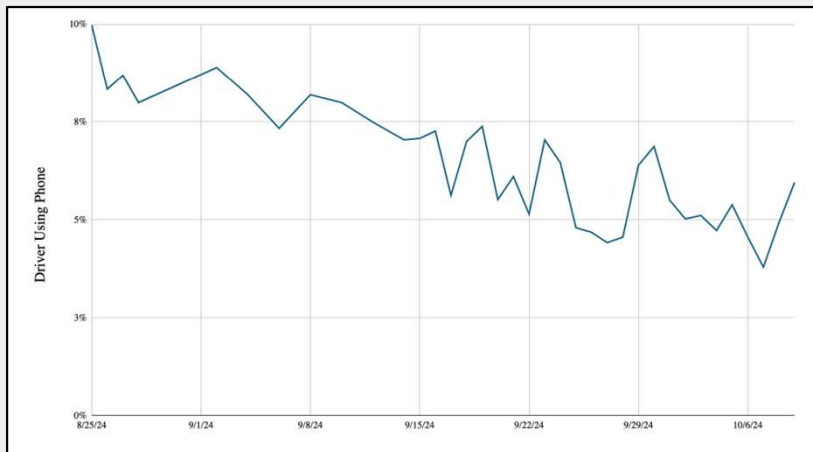


Heritage Driving Behaviors

LOCATION: Heritage Middle School (Horace)

Phone Use During Fall SmartSign Placement

AUGUST 25, 2024	OCTOBER 10, 2024	REDUCTION
8.9%	5.4%	39%





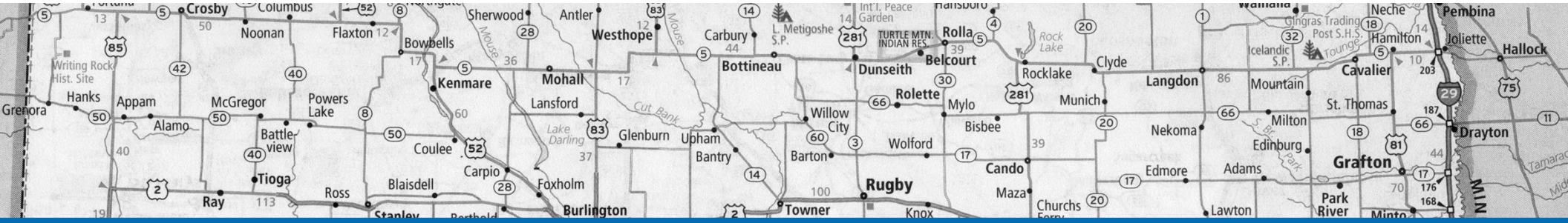
Winter Driver Behavior Data

WINTER DRIVING COMPARISON

The "Before Winter" data includes all collected behaviors before November 2024.

The "During Winter" data includes all collected behaviors from December 2024 to yesterday (1/29/25).

Location	Unbelted			Phone Use		
	Before Winter	During Winter	Change	Before Winter	During Winter	Change
Heritage Middle School	15.6%	10.6%	-5.0%	6.8%	7.8%	1.0%
Horace	22.8%	13.7%	-9.1%	12.7%	7.6%	-5.1%
Tower City	20.1%	17.2%	-2.9%	7.2%	6.4%	-0.8%
Casselton	21.4%	19.5%	-2.0%	9.3%	9.0%	-0.3%
Mapleton	18.0%	11.1%	-6.9%	9.2%	11.6%	2.4%
Horance rt 17	12.4%	5.7%	-6.7%	9.1%	4.2%	-4.9%
Fairground	15.7%	14.0%	-1.7%	6.5%	5.1%	-1.4%



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Southeast Region | Cass County Highway Department



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visionzero.nd.gov

