Kasson, Minnesota
Safe Routes to School Demonstration Project

Project Summary and Evaluation

MINNESOTA SAFE ROUTES TO SCHOOL

DEPARTMENT OF TRANSPORTATION

JANUARY 2020

ACKNOWLEDGMENTS

Thanks to the City of Kasson and Kasson-Mantorville Schools staff, students, and families for contributing your time, creativity, and expertise to this project. In particular, we are grateful for the participation of the following people:

- Theresa Coleman, City Administrator, City of Kasson
- Charlie Bradford, Public Works, City of Kasson
- Jenny Carrier, Director, Kasson-Mantorville Community Education
- Mark Matuska, Superintendent, Kasson-Mantorville Schools
- Brandon Theobald, City Engineer, WHKS
- Kent Berghuis, Chief of Police, Kasson Police Department

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Introduction

Demonstration projects are short-term, low-cost, temporary roadway projects used to pilot potential long-term design solutions to improve walking, bicycling, and public spaces. Projects may include, but are not limited to, bicycle lanes, crosswalk markings, curb extensions, and median safety islands.

Demonstration projects allow public agencies, community partners, and people walking, bicycling, taking transit, and driving to evaluate potential infrastructure improvements before potentially investing in permanent changes.

The demonstration project installed in Kasson, Minnesota originated from a Safe Routes to School (SRTS) plan completed in 2017. Working with the City of Kasson and Kasson-Mantorville Public Schools to create the SRTS Plan, the Minnesota Department of Transportation (MnDOT) identified locations near the school that were barriers for students and families walking and biking to school. The plan also provided potential solutions to improve these locations, along with relative priorities.

In an effort to build momentum toward permanent implementation, MnDOT worked with local stakeholders in Kasson to pilot recommendations at one high-priority location using a demonstration project.

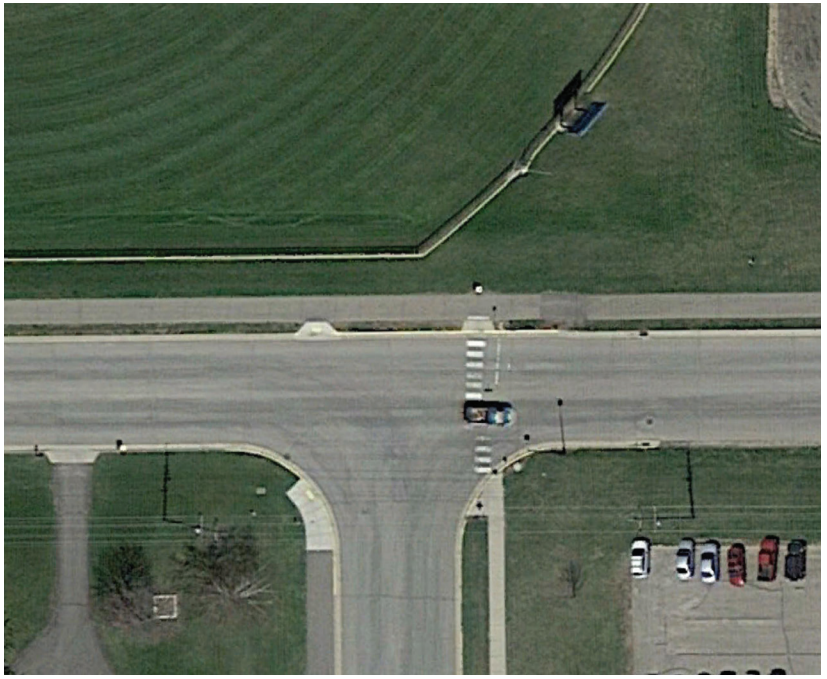
This summary describes the planning, design, and implementation of the Kasson demonstration project, and includes findings from the project evaluation.

Project Overview

The 2017 Kasson-Mantorville SRTS Plan identified locations on campus and on surrounding streets where students were facing challenges when walking and biking to school. Often, these challenges were due to wide streets and lack of separated space, resulting in high vehicle speeds, reduced visibility, and poor driver yielding behavior.

The intersection of 16th Street NE and 5th Avenue NE was observed to be particularly challenging for students walking to, from, and between the Elementary, Middle, and High School. Because of this, it was identified in the 2017 SRTS Plan as a "high" priority for improvement. The photos and aerial imagery on the right show wide crossings, large curb radii, and the presence of motor vehicle traffic during arrival and dismissal of students. The three schools are located on the north edge of Kasson, and drivers use 16th Street NE to reach State Highway 57 from origins to the east.

Because of its proximity to the three schools and the observed challenges, this intersection was selected by local stakeholders and the City Engineer to pilot high visibility crosswalks, forward stop bars, and curb extensions using traffic paint and flex posts.




STAY
BACK
STOP
FOR

Making it Happen

CHOOSE LOCATION (MARCH 2019): MnDOT and consultant staff met with City of Kasson staff, the City Engineer, and staff from Kasson-Mantorville Public Schools to review recommendations from the 2017 SRTS Plan and determine which infrastructure recommendations, if piloted as a demonstration project, would have the greatest impact on safe and comfortable walking and biking to school. The group observed dismissal of students and confirmed the challenges described in the 2017 SRTS Plan were still applicable. From this meeting and subsequent conversations, the intersection of 16th Street NE and 5th Avenue NE was selected for a demonstration project.

DESIGN (APRIL 2019): MnDOT and consultant staff worked with the Kasson City Engineer to design the intersection to reduce crossing distances, calm traffic, and improve visibility (see concept design to the right). District transportation and local emergency services staff were consulted to ensure school buses and emergency vehicles were able to operate in the intersection safely.

Once the design was finalized and reviewed by the City Engineer, the Kasson Public Works Department ordered the demonstration project materials.

INSTALLATION (MAY 2019): Approximately 10 Kasson and MnDOT staff installed the demonstration on two days during the week leading up to summer break.

First, the intersection pavement was cleaned of debris and allowed to dry. Next, the curb lines were outlined with chalk following the design dimensions. The first day of installation ended after the inside of the curb extensions was painted.

On the second day, the high visibility crosswalks were painted, white edge lines were installed around the curb extensions, and the flex posts were affixed to the pavement using butyl pads.

Photos of the installation are shown on the following page.

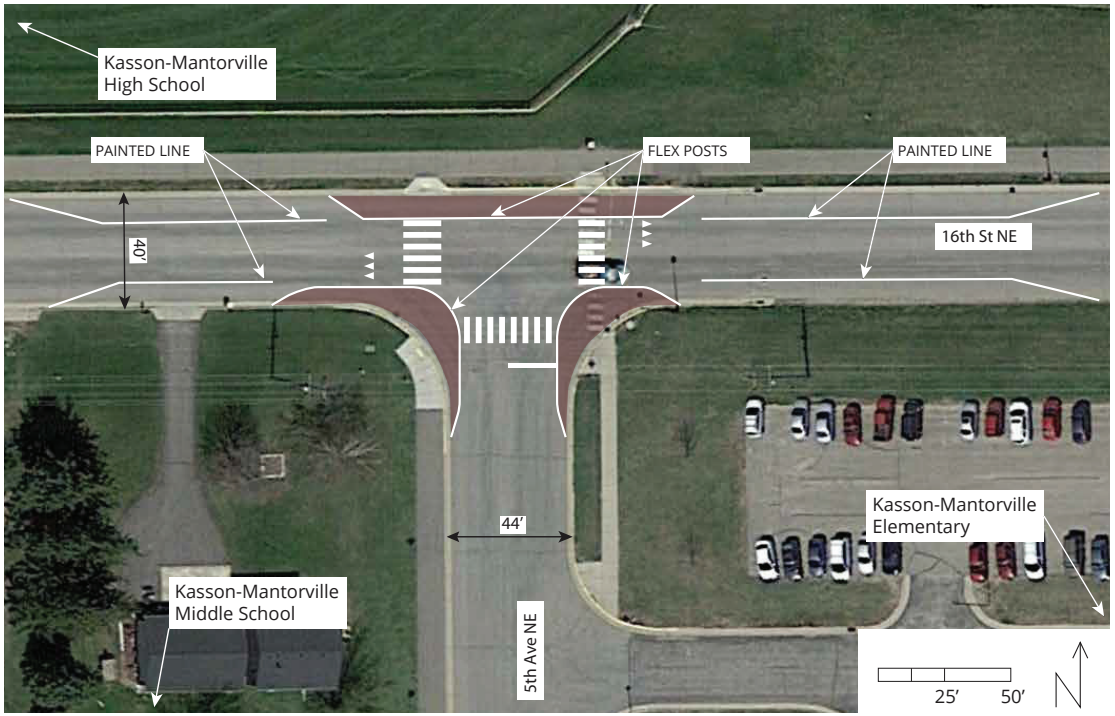
PROJECT SUMMARY

INSTALLATION DATE: May 2019

INSTALLATION DURATION: 5 months

MATERIAL COST: $5,000

STAFF USED TO INSTALL: Approximately 10



5th Ave NE & 16th St NE


16TH ST NE
STOP
BUCKLE UP
WE VALUE YOUR LIFE

"I can tell you from experience that it seemed to have slowed traffic a bit, but more importantly it gave pedestrians a shorter crossing area. People making right and left hand turns are doing it more slowly, too, and I think this is in part due to the constraints put on them by the tighter lanes."

- Kent Berghuis, Kasson Chief of Police

Evaluation and Results

Thoughtful evaluation can help to build support for active transportation and achieve long-term goals around equitable street design. Kasson can use information and data collected before and after the installation to inform changes to the project design. This section discusses evaluation tools used and the results received.

IN-PERSON OBSERVATION AND PHOTOS

During installation, project staff and partners observed the demonstration project area while noting and discussing conflicts, circulation patterns, and the behavior of people sharing the road. Following the installation, the team observed again and concluded the following:

- School bus drivers and private vehicles appeared to approach the intersection and make turning movements at slower speeds
- People waiting to cross 16th Street NE and 5th Avenue NE were able to stand within the temporary curb extension for increased visibility
- During the five months the demonstration project was installed, no flex posts were damaged or knocked over. This indicates buses and other vehicles were able to navigate through the intersection without encroaching into the temporary curb space.

MOTOR VEHICLE SPEEDS AND YIELDING

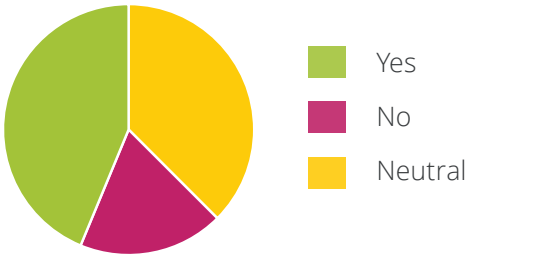
City of Kasson Police collected motor vehicle speeds before the installation over the span of one week. Of the total 605 vehicles that were radared along 16th Street in the vicinity of 5th Avenue, 211 were traveling over the speed limit of 30 miles per hour. City staff from the Police Department and Public Works reported that average speeds along 16th Street were lower during the installation.

Yielding compliance (motor vehicle drivers yielding to people walking and biking in the crosswalks) was observed before and during the installation. Yielding rates generally improved after the demonstration project was installed.

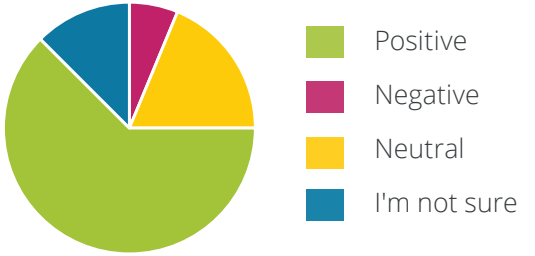
PUBLIC PERCEPTION SURVEY

Kasson-Mantorville Community Education staff collected 16 public perception surveys at a summer community event in Kasson. Results from the surveys are shown on the following page and generally reveal support for the project. Seventy-three percent of respondents felt positively about the changes becoming permanent. Seventy-nine percent of survey takers thought people drive more slowly and cautiously with the changes installed.

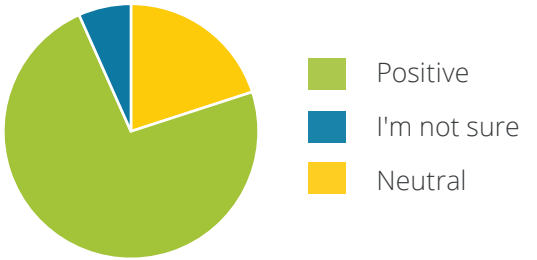
Do these changes make you more likely to take this route?



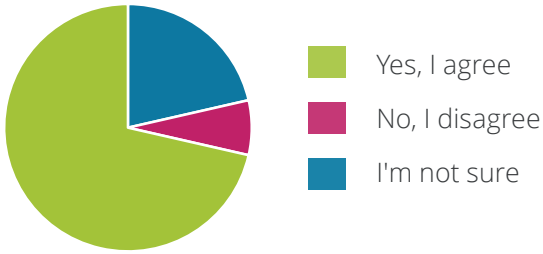
How do you feel about the appearance of these changes?



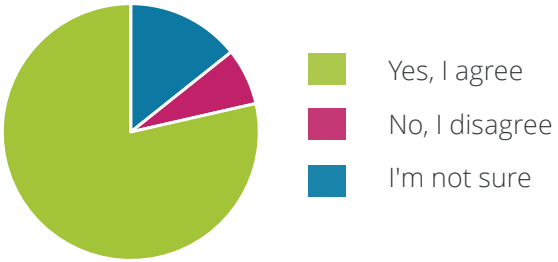
How do you feel about any or all of these changes becoming permanent?



Drivers wait for people to walk through the crosswalk.



People drive more slowly and cautiously than before the changes.



N = 14 to 16, depending on question.

Recommendations for Long-Term Change

The City of Kasson is dedicated to improving active transportation safety and connectivity in the near- and long-term. This demonstration project is a step towards safer and more comfortable walking and biking to, from, and between the three Kasson-Mantorville school campuses. The designs evaluated during the demonstration project can offer several long-term benefits:

- Shorter pedestrian crossing distances
- Better pedestrian visibility at corners
- Slower driver turning movements and approach speeds
- Increased space for landscaping and other furnishings

WHAT ASPECTS OF THE PROJECT WORKED WELL?

- The project was a chance to quickly and efficiently plan, design, install, and evaluate the project.
- The project made it easier and safer to walk and bike in the area through:
  - Shortened pedestrian crossing distances and increased visibility of pedestrians crossing the street.
  - Added queuing space for people walking and biking
  - Engagement around new ideas to promote active transportation

WHAT ASPECTS OF THE PROJECT COULD BE REFINED FOR LONG-TERM CHANGE?

- Share illustrative concepts of more permanent designs with the public. This could help avoid confusion by showing residents what long-term changes to the site could look like and could better communicate the project's intent.
- Educate families that drive to school about the importance of Safe Routes to School and appropriate driving behavior near schools.
- Consider using thermoplastic to create pavement markings. This material lasts longer than traditional traffic paint.

WHAT COULD BE CONSIDERED LONG-TERM?

- **STREET RESURFACING:** The City of Kasson plans to resurface 16th Street NE in the near future. It is recommended that a more permanent installation of the demonstration project is incorporated into the scoping of this project. If that is not feasible, the City should consider using more durable materials to mimic the intent of the demonstration project (e.g., thermoplastic pavement markings, longer-lasting paint and flex post hardware, place-making, etc.)
- **WINTER MAINTENANCE:** Long-term design should consider winter maintenance and allow snow plows to navigate through curb extensions. Curb extensions should be designed approximately one to two feet less than the full width of adjacent on-street parking; snow plows will be able to plow parallel to parked cars without hitting and potentially damaging the curb extensions. Reflective markers on poles and painted curbs can provide additional guidance. Street maintenance leaders should be included in the design of long-term intersection changes.

RECOMMENDED NEXT STEPS

- Coordinate with local leaders to discuss permanent changes
- Use the findings presented here and other data to develop additional design documents for a long-term concept
- Gather public and stakeholder input regarding the proposed long-term project
- Pursue available SRTS infrastructure grant funding through MnDOT