



City of Warren

MN Highway 1 (Bridge Ave)

Safe Routes to School Demonstration Project: Summary and Evaluation



DECEMBER 2021



OVERVIEW

Demonstration projects are temporary, low-cost roadway projects used to test potential long-term solutions to improve walking, bicycling, and public spaces. Projects can include bike lanes, crosswalk markings, curb extensions, and median safety islands.

The demonstration project at the Warren-Alvarado-Oslo school campus originated from a Safe Routes to School (SRTS) plan completed in 2020. In collaboration with school staff, MnDOT, and project consultants, the City of Warren installed the demonstration project in the spring of 2021.

The goal of the project was to make it easier for students to cross MN Hwy 1 (Bridge Ave), which has high traffic volumes and speeds and did not have a marked crosswalk for elementary students to cross northward.

After multiple draft designs, the SRTS team decided on curb extensions across Hwy 1 leading to a pedestrian lane on N 4th St, and curb extensions in front of the high school on Hwy 1 at S 2nd St. By narrowing lane widths and the distance to cross at intersections, the design aims to slow drivers and allow pedestrians to cross more efficiently and safely.



PROJECT SUMMARY

INSTALLATION DATE: April 2021

DAYS TO INSTALL: 1

MATERIAL COST: ~\$10,000 (including signs, posts and bases that can be reused on future projects)

FEATURED ELEMENTS INSTALLED:

- Curb extensions (4)
- High-visibility crosswalks (2)
- Pedestrian lane (1)
- Pedestrian signs (2)

LESSONS LEARNED AND NEXT STEPS

The SRTS team fielded a survey to capture feedback from the community about the project sites. A large majority of survey respondents reported that the demonstration projects made people more aware of the school zone, encouraged drivers to go more slowly, made it easier for pedestrians to cross the street, and made drivers more likely to see and yield to pedestrians.

DRIVER AWARENESS:

Most survey respondents reported that the project increased visibility and awareness of pedestrians, citing both painted curb extensions and the vertical white flex posts used to buffer painted areas.

DRIVER SPEEDS:

Many survey respondents, including those who felt negatively about the project, reported having to slow down to navigate and turn through the project sites, improving pedestrian safety.

LARGE VEHICLES:

Some respondents reported concerns about large vehicles passing and turning through the project sites given reduced lane widths.

PEDESTRIAN COMFORT AND SAFETY:

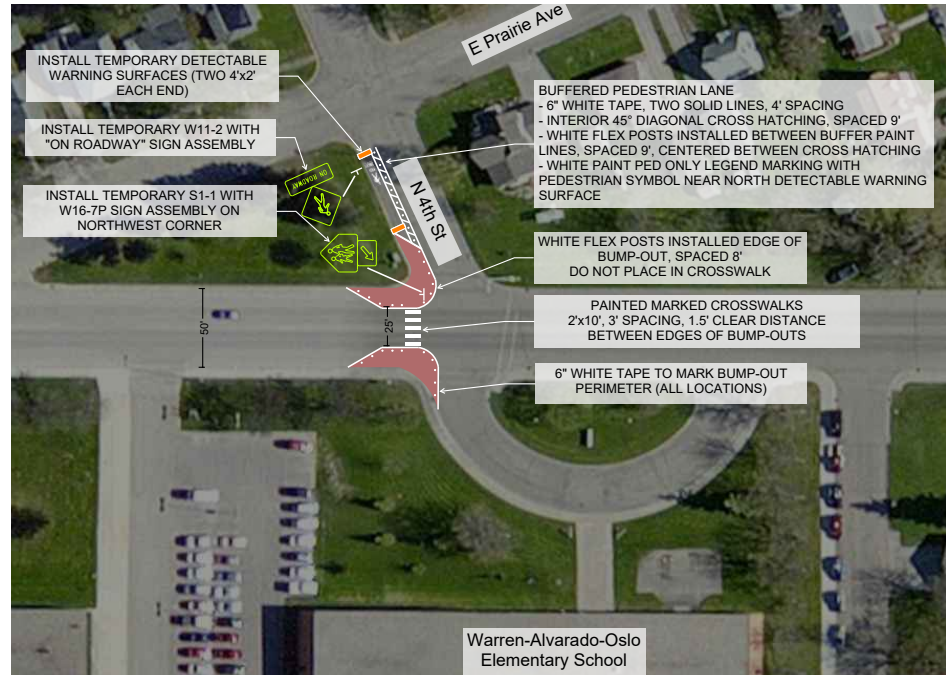
Most survey respondents drove through the project sites. Respondents who walked were positive about the experience and reported that they and their children felt safe.

PERMANENT IMPROVEMENTS:

As one respondent wrote when asked about what should be made permanent: "Both cross walk protection points. Even if it stays as is, that would be ok too." Another wrote: "All of it! It's fantastic! It makes me feel safer walking with my stroller and being able to cross there!"

As the City considers installing permanent improvements, it should assess whether any modifications to curb extension dimensions should be made to accommodate larger vehicles and prevent drivers from crossing over the centerline.





DESIGN

The demonstration project at the Warren-Alvarado-Oslo school campus consisted of two pairs of curb extensions and high-visibility crosswalks on Hwy 1 (Bridge Avenue), as well as a separated pedestrian lane along a segment of N 4th St.

The curb extensions are intended to alert drivers to the presence of crossing pedestrians, reduce lane widths and thereby encourage drivers to slow down, and to shorten pedestrian crossing distances so that people walking and rolling have to spend less time in unprotected portions of the road. When successful, these temporary curb

extensions can be made permanent with simple concrete curbs that connect with existing pedestrian facilities.

The temporary pedestrian lane, which is the demonstration project equivalent of a sidewalk, helps to separate pedestrians from vehicular traffic while making them more visible to drivers, increasing both pedestrian safety and comfort along a key connection leading to the school campus.

EVALUATION

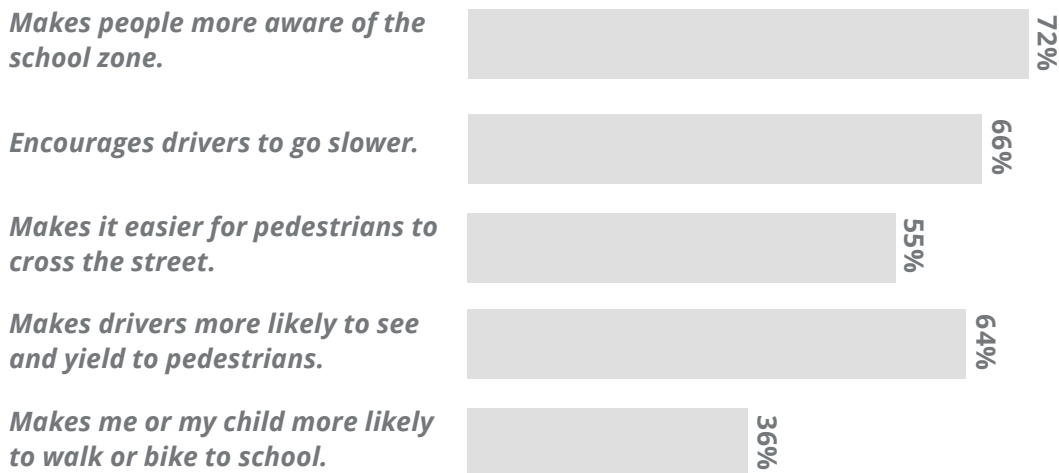
Safe Routes to School staff worked with the community to collect feedback about the demonstration project. This feedback helps describe the effects of the project and to identify opportunities to modify and improve the design if and when the project is constructed with permanent materials.

Speed data were collected before the project was installed and while it was in place in order to measure whether the project helped to reduce dangerous vehicle speeds. The project staff and community also fielded an online survey to collect input about how pedestrians, bicyclists, and drivers felt about the project and to solicit ideas for improving the project in the future.



RESULTS

SURVEY RESPONDENTS AGREE THAT THE PROJECT...



AVERAGE SPEEDS DECREASED

