



Memorandum

SRF No. 17843

To: Jack Griffin, PE – City Engineer
City of Lake Elmo

From: Christopher Brown, ACIP, PTP – Project Manager

Date: November 27, 2024

Subject: **Proposed Crosswalk Projects**

This memorandum documents the recommendations for the intersections at 39th Avenue and Laverne Ave N and 39th Avenue and Wildflower Drive in the City of Lake Elmo.

1. Policy criteria met to establish marked crosswalk.

The intersections were evaluated with the draft City of Lake Elmo Pedestrian Crosswalk Policy and met the criteria needed to mark a crosswalk. This determination was made using the flowchart and criteria definitions found in the policy document.

To meet the requirements to mark a crosswalk, the location first has to meet the existing traffic volume threshold which both do:

- Laverne Avenue N: 1,800 AADT
- Wildflower Drive: 1,600 AADT

Second, the crosswalk location must meet one of the following criteria: minimum pedestrian/bicycle volume threshold; have a documented pedestrian or bicycle crash in the last ten years; or directly serve a key destination.

- Laverne Avenue N: meets the pedestrian/bicycle volume threshold with greater than 10 crossings per hour for a total of three hours (13, 13, 11).
- Wildflower Drive: It is expected that this intersection will be along the key destination route for walking/bicycles in the Old Village Area. Formal designation of this route is anticipated prior to the Crosswalk installation in 2025.

Third, the location must meet sight distance requirements which both locations do.

2. Intersection scope of improvements.

Both crosswalks along 39th Street N have the same recommended improvements with added signage and crosswalk markings following MUTCD guidance and best practices.

For signage, both crosswalks will have advanced pedestrian crossing warning signage before the crosswalk and at the crossing location with a downward arrow. In all, 4 30" x 30" W11-2 signs, 2 24"x 12" W16-7PL signs, and 2 24" x 12" W16-9P signs will be used. A W11-2 and W16-9P will be placed 100 feet ahead of the crosswalk in each direction while a W11-2 and W16-7PL will be place at the crosswalk.

For the crosswalk markings, preformed thermoplastic pavement markings will be applied into grooves that have been cut into the roadway surface at the crosswalk with ADA accessible ramps. The markings will be 6' x 3' with 3' spacing between each marking.

3. Estimation of cost

The estimated cost for these improvements is \$4,000 per intersection or a total of \$8,000 based on the breakdown below.

- Crosswalk = \$15/SF
 - $3' \times 6' \times 5 = 90 \text{ SF}$
 - $90 \text{ SF} \times \$15/\text{SF} = \$1,350$
- Sign = \$80/SF
 - $(30'' \times 30'' + 24'' \times 12'') \times 4 = 33 \text{ SF}$
 - $33 \text{ SF} \times \$80/\text{SF} = \$2,640$
- Total = Approximately \$4,000 per intersection