

# CITY OF PLYMOUTH

## PEDESTRIAN SAFETY PROJECTS

### FREQUENTLY ASKED QUESTIONS

**QUESTION: What are the project and community goals influencing the design of pedestrian crosswalk and signal improvements within the City of Plymouth?**

A: The City of Plymouth's recent Strategic Plans (2017 through 2023) and Plymouth Downtown Development Authority (DDA) Master Plan (completed in 2020) have frequently focused on several Complete Street goals and values, which were used to inform and guide the design of downtown and neighborhood improvement projects. Over the past several years, the following goals and values have been discussed:

- Safe Complete Streets for all users of the roadway
- Access for people of all ages and abilities
- Walkability and safe pedestrian crossings
- Utilizing current technology and industry standards to design infrastructure into city assets, services and policies
- Incorporating eco-friendly and sustainable practices
- Contributing to a vibrant and thriving local economy
- Changing motorist habits and overall safety culture through responsible designs
- Connected community with streets as civic spaces
- A multimodal transportation plan which prioritizes pedestrian and bicycle comfort and safety in addition to motor vehicle safety.

Since 2020, these values and goals were considered during the recent pedestrian crossing improvements at the following locations:

- Main Street/Ann Arbor Trail – increased the Active User Experience by adding push button activation and a Leading Pedestrian Interval (LPI) when activated by a pedestrian prior to crossing the street.
- Harvey Street between Ann Arbor Trail and Penniman – increased the Active User Experience by adding push button activation and a LPI when activated by a pedestrian prior to crossing the street at both the Penniman/Harvey and Ann Arbor Trail/Harvey intersections. A midblock crosswalk was also added with an enhanced safety element called a Rectangular Rapid Flashing Beacon (RRFB).
- RRFBs were also added at several key pedestrian crosswalks throughout the City with the goal of creating more awareness when pedestrians need to cross at unsignalized or uncontrolled intersections:
  1. Main Street @ Hartsough – this midblock crosswalk safety enhancement was added due to the long distance between traffic lights along South Main Street.
  2. Ann Arbor Trail/Evergreen – this is a frequently used crosswalk located in the residential area west of downtown
  3. Penniman/Evergreen – this is a frequently used crosswalk located in the residential area west of downtown
  4. Starkweather/Liberty – this location is in the heart of Old Village at a popular crossing location

5. Mid-block on Main Street between Penniman and Ann Arbor Trail – this “mid-block” crosswalk connects Kellogg Park to the prominent west side restaurant and shopping district along Main Street
6. Ann Arbor Trail/Forest – this location was enhanced to provide more awareness to pedestrians crossing three lanes of traffic in a busy downtown shopping and restaurant area

Each of the above-described locations was identified as a key pedestrian crossing within the City.

**QUESTION: What types of transportation are City rights-of-way designed to serve?**

A: Pedestrian, bicyclist and motor vehicle traffic are each considered to be important modes of transportation in the City of Plymouth. All City rights-of-way are intended to provide access for pedestrian, bicycle, and vehicle modes of transportation. As part of each infrastructure improvement project, the City reviews and evaluates current traffic conditions for all users and user types. The City aims to provide safe and comfortable conditions for all users to move and travel throughout the City.

**QUESTION: What type of traffic control devices are used at intersections?**

A: Intersections are locations within the City’s street network and are defined where two streets cross or come together. Nearly all of the City intersections are three- and four-leg intersections in the street network. Over the years, many of the higher volume intersections have been outfitted with traffic control devices in accordance with the State of Michigan’s Manual on Uniform Traffic Control Devices (MMUTCD). The purpose of traffic control devices and warrants is to help ensure “safety by providing for the orderly and predicable movement of all traffic, motorized and non-motorized...and to provide such guidance and warnings as are needed to insure the safe and informed operation of individual elements of the traffic stream.”

Depending on several factors including traffic volumes, roadway geometry and crash data, warrant criteria must be evaluated in order to determine the appropriate traffic control an intersection through the use of yield signs, stop signs or traffic signals at a City intersection. Without a proper warrant in place, the City police department may have difficulty enforcing a moving violation, such as failing to stop at a stop sign.

**QUESTION: Who has priority at a street intersection?**

At stop controlled intersections, vehicles must come to a complete stop at any approach of an intersection where stop signs are in place, and must stop for any pedestrian that is within a crosswalk or crossing the street . Pedestrians can cross the street at an intersection if there isn’t a vehicle already within the intersection.

For intersections that warrant traffic signals, vehicles must follow the traditional “green = go, yellow = caution/prepare to stop, and red = stop” convention. Vehicle traffic movements typically alternate from one direction to the other in a uniformly timed sequence. For intersections with pedestrian crossing devices, pedestrian traffic can be presented with an opportunity to cross the street, either through a programmed timing sequence or a push button activated sequence. Vehicles are required to yield to pedestrians in a crosswalk.

**What is a Leading Pedestrian Interval (LPI)? How long is the typical LPI in the City of Plymouth?**

A: A Leading Pedestrian Interval (LPI) is a term used to describe a signal/crosswalk timing sequence where the pedestrians are given the opportunity to enter the crosswalk at an intersection (typically 3 to 7 seconds) before vehicles are given the green light indication to enter the intersection. In the City of Plymouth, a 4 second LPI has been incorporated into the signal timing at Main/Ann Arbor Trail, Harvey/Penniman and Harvey/Ann Arbor Trail. The LPI is only activated when a pedestrian activates the crosswalk signal using a push button prior to crossing the street.

**QUESTION: Do all intersections require a Leading Pedestrian Interval (LPI)?**

A: Not all intersections require a leading pedestrian interval. They are most commonly used to give priority to pedestrians in higher-than-normal pedestrian crossing areas or where vehicles routinely are observed to turn quickly before allowing pedestrians to enter the crosswalk. LPI's have been deliberately incorporated into the pedestrian activated signal timing at Main/ Ann Arbor Trail, Harvey/Penniman and Harvey/Ann Arbor Trail. This has been done to maintain consistency throughout downtown Plymouth. The LPI is not activated during phases where only motor vehicles or bicycles are traveling through the intersection.

**QUESTION: What is an Exclusive Pedestrian Phase and has the City ever considered implementing one?**

An Exclusive **Pedestrian Phase (EPP)** gives pedestrians flexibility to cross any leg of the intersection, reducing the time they need to wait to get to their final destination. During an EPP, all motor vehicles are stopped in all directions during this time to reduce conflicts with pedestrians. EPPs are often implemented when the number of pedestrians outnumbers the number of vehicles. The City of Plymouth has not implemented any EPPs because the number of vehicles crossing through the intersections is higher than the number of pedestrians during typical non-event conditions.

**QUESTION: Is the City monitoring and evaluating vehicular and nonmotorized traffic operations?**

A: The safety and operations at the project intersections where crosswalk changes were implemented are being monitored by the City. Based on field conditions, considering pedestrian feedback, and through continued monitoring, signal timing can be adjusted as necessary.

**Community Concerns**

**CONCERN: The push button seems to create additional delays for pedestrians.**

A: The City has is working towards creating an Active User Experience for Pedestrians throughout the City. To give the pedestrians the safest opportunity to cross the street, push button-activated pedestrian signals have been incorporated into recent infrastructure projects at several locations in the downtown area. By necessitating the action of pushing the button to

start the crossing sequence, pedestrians become more aware of their surroundings and more aware of when they are supposed to enter the crosswalk.

**CONCERN: Some pedestrians are choosing to walk during the Do Not Walk indication. Should there be a sign prohibiting this?**

A: In general, additional signing has been found to not change this type of behavior and leads to an overabundance of visual information / sign clutter at intersections. These types of signs may violate user expectations, confuse users and possibly decrease safety / comfort. Adhering to the Walk rule is something that should already be known by every pedestrian. As stated in the Michigan Vehicle Code Section 257.613, a person who violates the Don't Walk is responsible for a civil infraction.