

# **Municipality of Mt. Lebanon Crosswalk Policy**

## **1. INTRODUCTION**

### **1.1 Policy Statement**

It shall be the policy of the Municipality of Mt. Lebanon, Department of Public Works, to provide pedestrian crossings of public streets through the installation and maintenance of marked crosswalks at locations in which there are significant conflicts between pedestrian and vehicular movements, where pedestrian volumes are elevated, where the ideal pedestrian crossing location is not easily identifiable, and / or where vehicular traffic movements are controlled.

A "marked crosswalk" is any crosswalk that is delineated by pavement markings placed on the road surface to direct pedestrians as to the proper location to cross the street. Crosswalks may be marked at intersections controlled by traffic signals or stop / yield signs or at uncontrolled intersections.

### **1.2 Purpose of Guideline**

The purpose of this guideline is to identify the warrants and criteria for the installation of marked crosswalks as well as the design specifications for crosswalk markings and signage. Adherence to these guidelines will help to ensure that the pavement markings and signs associated with the pedestrian crossings are treated consistently throughout the Municipality with regards to their placement, design, installation and maintenance.

This guideline is meant to provide guidance for marked crossings of municipal owned roadways. For marked crossings of State owned roadways, crosswalk design decisions will be deferred to the Pennsylvania Department of Transportation (PennDOT).

### **1.3 General**

The Federal Highway Administration (FHWA) has conducted many studies over the years on safety effects of marked versus unmarked crosswalks at intersections. In its most recent study, FHWA found that under no condition was the presence of a marked crosswalk alone at an uncontrolled intersection associated with a significantly lower pedestrian crash rate compared to an unmarked crosswalk. Further, the study found that in certain locations, having a marked crosswalk was associated with a higher pedestrian crash rate compared to an unmarked crosswalk. It was determined that there was evidence that the presence of a marked crosswalk prompted many pedestrians to feel overly secure when using the marked crosswalk. As a result, pedestrians often place themselves in a hazardous position by believing motorists can and will stop in all cases because they are in a marked crosswalk. Nonetheless, a marked crosswalk remains a useful traffic engineering device provided sound engineering judgement is utilized for their location and design.

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## **2.2 Crosswalk Design**

The “Piano Key” crosswalk markings are the preferred crosswalk design at signalized intersection. The markings shall be solid white in color and should be 24 -inch “keys” installed parallel to the direction of travel. Markings should be spaced to be centered in the lane and on the lane lines as much as possible. The “keys” should be a minimum of 8-feet in length and extend across the full width of the pavement.

## **2.3 Stop Bar Installation**

When a marked crosswalk is installed on an approach to a signalized intersection, the stop bar should be installed a minimum of 4-feet in advance of the nearest crosswalk marking. The stop bar shall be white in color and have a width of 24-inches.

## **3. MARKED CROSSWALK AT UNSIGNALIZED INTERSECTIONS – STOP OR YIELD CONTROLLED**

### **3.1 Installation Criteria**

Marked crosswalks can be installed on approaches controlled by stop or yield signs where sidewalks and curb ramps are present on both sides of the roadway. Crosswalks should not be installed where no sidewalks are present unless shoulders are available and are adequate for pedestrian use. The determination of adequate shoulder should be based on an engineering assessment of the roadway volumes and surrounding land uses among other site-specific considerations.

### **3.2 Crosswalk Design**

Standard crosswalk markings are the preferred crosswalk design at municipal-owned intersection approaches controlled by a stop or yield sign. The markings shall be solid white in color and should be 12 -inch parallel lines installed a minimum of 8-feet apart and should extend across the full width of the pavement.

The preferred crosswalk design for State owned intersection approaches controlled by a stop or yield sign is the “Piano Key” crosswalk. The markings shall be solid white in color and should be 24 -inch “keys” installed parallel to the direction of travel. Markings should be spaced to be centered in the lane and on the lane lines as much as possible. The “keys” should be a minimum of 8-feet in length and extend across the full width of the pavement.

### **3.3 Stop Bar Installation**

When a marked crosswalk is installed on a stop or yield-controlled approach, the stop bar should be installed a minimum of 4-feet in advance of the nearest crosswalk marking. The stop bar shall be white in color and have a width of 24-inches.

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### **4.3 Pedestrian Warning Signage**

Pedestrian crossing signs and advanced pedestrian warning signs shall be installed for marked crosswalks on an uncontrolled approach to an unsignalized intersection.

## **5. MARKED CROSSWALK AT MID-BLOCK LOCATIONS**

### **5.1 Installation Criteria**

When considering the installation of a marked crosswalk at a mid-block location, the criteria identified by the Pennsylvania Department of Transportation (PennDOT) in Publication 46, Section 11.9 should be evaluated. The referenced criteria include an assessment of the travel speeds, the pedestrian volumes, and the vehicular volumes among other considerations.

### **5.2 Crosswalk Design**

Either the standard crosswalk markings or the "Piano Key" crosswalk markings should be installed at mid-block locations. In addition, curb ramps will be required for any midblock crosswalk.

Standard crosswalk shall be solid white in color and should be 12 -inch parallel lines installed a minimum of 8-feet apart and should extend across the full width of the pavement.

The "Piano Key" markings shall be solid white in color and should be 24 -inch "keys" installed parallel to the direction of travel. Markings should be spaced to be centered in the lane and on the lane lines as much as possible. The "keys" should be a minimum of 8-feet in length and extend across the full width of the pavement.

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Pedestrian crossing signs and advanced pedestrian warning signs shall be installed for marked crosswalks at mid-block locations.