

Pedestrian Crossing Improvements

Project Management Services Unit

City Council Work Session

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Crosswalk Defined

“Cross-walk” means:

- (a) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs, or in the absence of curbs from the edges of the traversable highway.



Crosswalk Defn. –cont.

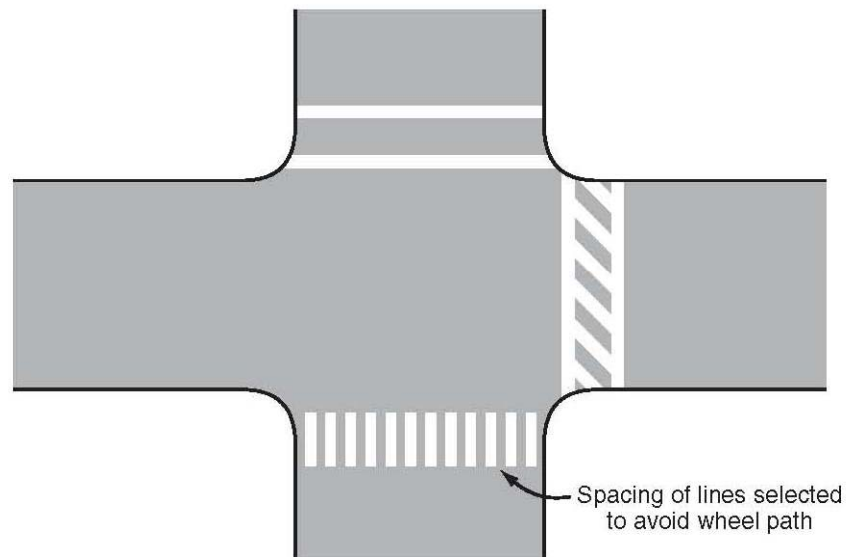
“Cross-walk” means:

(b) Any portion of a highway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.

Crosswalk Styles

- Unmarked
- Traditional
- Special Emphasis

Figure 3B-16. Examples of Crosswalk Markings



In Road signs



No state law for uncontrolled crosswalks

Stop for peds primary message

Sign is MMUTCD sign

- Size for in road only
- Uniform look for all
- Within Crosswalk standard language



Rear End Crashes

- Citywide 2006-2010 rear end crashes = 5534 (avg. 1100 per yr.)
- Rear end crashes largely property damage only (78%)
- Newly installed traffic signals increase number of traffic crashes
 - Avg. freq. Signalized intersection 14 per yr.
 - Avg. Freq. Unsignalized 4 per year
 - Predominantly rear end crashes
 - Drivers make a decision each cycle change
- 88% fail to stop in assured clear distance



Pedestrian Crashes

- Citywide 2006-2010 Pedestrian crashes = 225
- Pedestrian crashes predominantly injury crashes (95%)



Crosswalk Improvements

- Markings and signage
- Enhanced markings and signage
- Overhead signage
- Street lighting
- Textured pavement
- Raised crosswalk (minor streets only)
- In pavement lights
- Rectangular Rapid Flashing Beacons (RRFB)
- HAWK or Pedestrian Hybrid signal
- Conventional signal

Plymouth near Beal

- 22,000 vpd
- Speed Limit 35
- 5 lane cross section with ped crossing island
- No recent crash history
- Site of 2 Ped fatalities in 2003



Washtenaw near Tappan M.S.

- State trunkline hwy (BL-94)
- ADT of 19,500
- Speed Limit 45 mph / school zone 30 mph
- 4 lane cross section
- No crash history



Selected Pedestrian Improvements

- In pavement lights
- LED airport strobes
- Reported **% yielding
- MUTCD complaint
- Costly to install
(requires trenching)
- Possible maintenance
issues



Selected Pedestrian Improvements

- Blinker Sign
- LEDs in border
- Claimed 80% yielding
- Not MUTCD complaint ?
- Low cost and solar power



Selected Pedestrian Improvements

- Rectangular Rapid Flashing Beacon (RRFB)
- LEDs strobe in stutter flash
- Pedestrian actuated
- High 80% yielding rate
- MUTCD compliant
- No warranting volumes set
- Low cost and solar power



Maryland Ave near UNLV



Selected Pedestrian Improvements

- Pedestrian Hybrid Beacon or HAWK
- Red / Yellow signal
- Ped actuated
- 90% yielding rate
- MUTCD complaint – warrant required
- High cost and requires power





Recommended Improvements

- Installation of RRFBs at all four (4) Plymouth island locations
 - Lower cost and complements existing infrastructure
 - High yielding rates
 - Consistent treatment along the corridor
- Washtenaw Ave near Tappan under study by MDOT
 - Pedestrian volumes likely not warranting HAWK



Budget and Schedule

- Estimated \$65,000 cost for all four RRFBs
- No dedicated funding
- Use fund balance from major streets
- Projected start early February and complete by March

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