Buffered Bike Lanes

Separates bike lanes from the motor vehicle traffic on roadway using buffers such as pavement markings or a physical buffer (curb, planters or parked vehicles). These bike lanes can be one-directional on each side of the road or bi-directional on one side.

PROS:
- Increase the perceived areas of safety from cars makes bicycles routes seem less stressful

CONS:
- Needs additional right of way
- Requires a minimum width of 8-12' for a two-way configuration and 5-7' for a one-way configuration

Bike Boxes

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.

PROS:
- Increases visibility of bicyclists
- Groups bicyclists together to clear an intersection quickly, minimizing impediment to transit or other traffic
- Aids bicyclists in making left turns on streets with more than one lane

CONS:
- Requires a minimum additional setback or 10-16' from crosswalk
- Requires driver compliance

Crosswalks

Indicates (with pavement markings) preferred locations where pedestrians can cross the road. Can be located at intersections or mid-block.
The introduction of a crosswalk on an arterial such as Emmet will necessitate an additional pedestrian enhancement for safety purposes such as a Rapid Flashing Beacon or HAWK signalization.

PROS:
- Alerts drivers to pedestrians crossing the roadway
- Designates right-of-way for motorists to yield to pedestrians

CONS:
- Interrupts traffic flow
- Requires driver compliance
- The incorporation of a mid-block crossing requires an analysis and justification for review and approval

Shared Use Paths

Allows for multi-modal travel along roadways.
Wide enough to accommodate bicycles and pedestrians.

PROS:
- Separates non-auto traffic from the roadway entirely
- Allows multi-modal access

CONS:
- Needs sufficient right of way for a 10' trail plus buffer distance from road

Wide Sidewalks

Expands the width of the sidewalk beyond the minimum.

PROS:
- Provides more pedestrian accessibility and provides comfort

CONS:
- Needs additional right-of-way

Rapid Flashing Beacon

Warns drivers that a pedestrian is crossing at an unsignalized location when flashing signal is activated by the pedestrian.

PROS:
- Adds visual cue alerting drivers to pedestrians crossing

CONS:
- Increases cost compared to a crosswalk

Pedestrian Refuge

Separates pedestrians and vehicles using a curbed area in the crosswalk in the middle of the crossing creating a two-stage crossing.

PROS:
- Reduces pedestrian crossing distances

CONS:
- Minimum width is 6'
- Increases costs compared to a crosswalk

Hawk Beacons

Pedestrian-controlled crossing signals that stop vehicular traffic when pedestrians are present.

PROS:
- Provides a protected crossing for pedestrians

CONS:
- Disrupts vehicular traffic flow
- Significantly increases cost compared to a crosswalk

Coordinated Signal Timing

Syncronizes traffic flow and reduces delays.

PROS:
- Reduces congestion

CONS:
- Minimal improvement to traffic conditions where intersection is at full capacity

Leading Pedestrian Interval

A Leading Pedestrian Interval (LPI) typically gives pedestrians a 3–7 second head start when entering an intersection with a corresponding green signal in the same direction of travel.

PROS:
- Have been shown to reduce pedestrian-vehicle collisions as much as 60% at treated intersections
- Enhance visibility of pedestrians in the intersection and reinforce their right-of-way

CONS:
- Require adjustments to signal timing
- May require curb extensions or other extra costs

Innovative Intersection Design

A variety of innovative intersection designs are available that can improve safety, move traffic more smoothly and better accommodate additional traffic without adding lanes to a roadway. i.e. Roundabouts