## Accessible Pedestrian Signals:

Accessible Pedestrian Signals (APSs) include pedestrian signal features, including push buttons that are designed to accommodate persons with disabilities, particularly visually impaired. Accessible Pedestrian Signals can be appropriate where specifically requested to assist disabled citizens, or where conditions warrant (i.e. areas where it is difficult to cross using non-visual cues, complex signal phasing, complex intersection geometry, etc.). The 2009 MUTCD includes the following guidance: "if a leading pedestrian interval is used, the use of accessible pedestrian signals should be considered" (2009 MUTCD Section 4E.06).

## Leading Pedestrian Intervals:

At signalized intersections, Leading Pedestrian Intervals (LPIs) allow the crosswalk/pedestrian movement to begin crossing between three and six seconds before the green light is given to motor vehicle traffic in the same direction. LPIs are appropriate at signalized intersections where there is relatively heavy pedestrian volume or significant conflicts with turning vehicles.

## Pedestrian Countdown signals:

Countdown signals provide a numerical display of time remaining once the "red hand" or "Don't Walk" symbol appears, allowing pedestrians to see how much time they have left to complete crossing the street.

## Traffic Controls at Intersections:

Traffic signals regulate the flow of all travelers across intersections, regardless of mode. Signals for both motorists and pedestrians are particularly important at high-use, mid-block crossings on higher speed roads, multi-lane roads, or at highly congested intersections (2009 MUTCD).

## Rapid Flashing Beacons:

Rapid flashing beacons will increase the visibility of students and all pedestrians as they cross the roadway. This type of signal is pedestrian-activated, i.e., the signal will only flash if a pedestrian has pushed a button, indicating that they need to cross the street.

## Curb Extensions:

Curb extensions are recommended to reduce pedestrian crossing distances (and thus exposure to traffic) and to slow motor vehicle turning speeds. Curb extensions located along school bus routes should effectively calm traffic, but not impede buses from making the turn.

## Curb Radius Reductions:

Curb radius reductions are recommended to slow motor vehicle turning speeds and to reduce pedestrian crossing distances (and thus exposure to traffic). Curb radius reductions involve tightening the motor vehicle turning radius at an intersection without extending the curb line
into a parking lane. Curb radius reductions located along school bus routes should effectively calm traffic but not impede buses from making the turn.

## High Visibility Crosswalks:

High visibility crosswalk striping improves the visibility of pedestrians to motorists. Different striping patterns can be used and the most common patterns are variations of the ladder style. Thermal plastic materials should be used to resist decay.

## Speed Tables/Raised crosswalks:

Raised crosswalks are flat-topped speed humps with crosswalk markings painted on the top. Raised crosswalks serve two purposes: they make pedestrians more visible to motorists; and they cause motorists to slow at the most critical location, where pedestrians cross (The Effects of Traffic Calming Measure on Pedestrian and Motorists Behavior, FHWA 2001). The state does not allow speed humps or tables on the state roadway system.

## Stand-back Lines:

Stand-back lines are pavement markings placed on sidewalks a few feet from the edge of the curb. This crossing treatment is used to help students know where on the corner it is safe to wait.

## Sidewalks and buffers:

One of our long-term goals is to establish a well-connected sidewalk network throughout the neighborhoods so that families can walk for more of their daily trips, rather than drive. Sidewalks are most effective when they include a buffer. This buffer increases pedestrian comfort and safety and can also serve as a place for pedestrian "overflow", especially closer to the school where groups of walkers are largest. The preferred design for sidewalks in this plan is a minimum six foot wide sidewalk with a minimum two foot wide buffer. Available right of way will impact the ultimate design. The DOT standard minimum sidewalk width is five feet from back of curb. Recommended dimensions for sidewalks with buffers are a five foot sidewalk with a two foot buffer. For uncurbed sidewalk, the minimum width is three feet with a green strip separating the sidewalk from the road.[NAME OF LOCAL JURISDICTION] standards are for a six foot sidewalk and a two foot wide buffer.

## Lighting:

Pedestrian-level lighting will improve safety and comfort throughout the neighborhoods. We recommend that lighting be installed at the same time as sidewalks. The highest priority for lighting should be given to those intersections identified where students cross.

## School Zone Identification:

School pavement markings are recommended to alert motorists that they are entering a school zone where pedestrians may be present both along and crossing the roadway. New pavement
markings can work with existing school zone signs to reinforce the message to motorists about the school zone.

Speed Feedback Signs:
Communities may use a mobile "speed trailer" that can be placed in locations where motorists exceed the speed limit often enough that passive enforcement is appropriate. Permanently installed feedback signs provide ongoing information to motorists about the speed at which they are traveling.

