

## DETAILED ALTERNATIVES

### Spot Improvement Concepts: Bicycle and Pedestrian Improvements

#### Bicycle and Pedestrian Safety

Bicycle and pedestrian safety is a concern throughout the US 53 and US 14/61 corridor. Several bicycle and pedestrian safety treatments are included in one or both of the improvement alternatives. A summary of these treatments is below.



#### Leading Pedestrian Interval (LPI)

A leading pedestrian interval is a traffic signal phase that allows a pedestrian to enter the crosswalk before vehicular traffic receives a green indication. This improves pedestrian visibility and motorist yielding behavior.



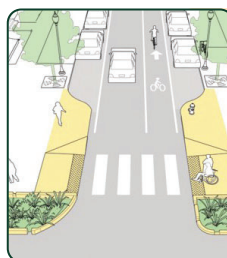
#### Prohibit Right Turn on Red

Prohibiting right turn on red improves pedestrian safety at signalized intersections by reducing the frequency of vehicle-pedestrian conflicts. These prohibitions can be implemented at all times, during certain times of day, or only when a pedestrian is present.



#### Green Crosswalks

Green crosswalks define locations where bicycle facilities cross a street. The crosswalks raise awareness of bicyclists and improve motorist yielding behavior.



#### Curb Bump Out

Curb bump-outs (or extensions) physically and visually narrow the road, calming traffic and shortening pedestrian crossings. This improves crosswalk safety and operations by reducing the time a pedestrian is in the crosswalk and improving sightlines for vehicular traffic.



#### Pedestrian Refuge Island

Raised Islands that provide a location for pedestrians to dwell in the median while waiting for traffic to clear. These islands allow pedestrians to cross busy roads one direction at a time.



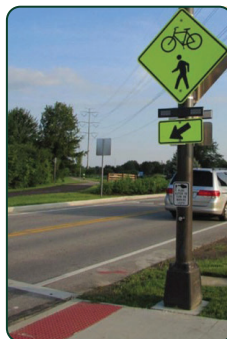
#### Bicycle Signals

Bicycle Signals are signal indications that apply specifically to bicyclists. These signals indicate to bicyclists when it is safe to cross at busy intersections.



#### Speed Feedback Signs

Speed feedback signs provide motorists real-time feedback on the speeds they are traveling. These signs are effective at reducing speeds at spot locations, such as high-use pedestrian crosswalks.



#### Rectangular Rapid Flashing Beacon (RRFB)

A RRFB includes bright flashing lights placed at crosswalks that are activated when a pedestrian pushes a button to cross the street. These devices draw attention to pedestrians and improve vehicle yielding behavior. RRFBs are currently present at several locations along the corridor.