

# CURB EXTENSIONS/ BULB OUTS

## Purpose

Shorten crossing distances and increase pedestrian comfort and visibility.

## Description

Also called bulb outs or neck downs, curb extensions extend a section of sidewalk into the roadway at intersections and other crossing locations.

## Estimated Cost



## Applicable Locations

- Curb extensions can make crossings safer and more comfortable everywhere from a mid-block crosswalk to a large signalized intersection.
- Curb extensions can be built in all-day parking lanes or wide shoulders.
- Transitions to lower-speed areas.

## Applicable Street Types

- Downtown Boulevard
- Downtown Street
- Boulevard
- Town Center Boulevard
- Town Center Street
- Neighborhood Connector
- Neighborhood Street
- Neighborhood Yield Street
- Industrial Street
- Country Connectors
- Country Roads

## Safety Benefits (see graphic on next page)

1. Shorten crossing distance.
2. Increase visibility between drivers and pedestrians.
3. Crosswalk is more noticeable to drivers.
4. Narrow the roadway to slow through speeds.
5. Reduce vehicular turning speed.
6. Add space for ADA curb ramps aligned with crosswalk.
7. Create physical barrier from parking encroachment on crosswalk.

## Expected Crash Reduction

Initial research indicates this treatment may be effective at increasing driver yielding and improving pedestrian safety.<sup>21</sup>

## Design Guidance

- Limit planting and street furniture height within curb extensions to preserve sight lines.
- Consider expanding curb extensions at bus stops to produce bus bulbs.
- Where curb extension installation on one side is infeasible or inappropriate (i.e., no parking lane), this should not preclude installation on the opposite side.
- Maximum length can vary to accommodate sight lines, manage stormwater, facilitate transit loading, or restrict parking. Minimum length is the width of the crosswalk.
- Designers should refer to the Montgomery County Bicycle Master Plan to ensure that curb extensions do not preclude the implementation of the designated low stress network of bikeways.

## Considerations

- If funding for permanent curb extension construction is unavailable, use lower cost alternatives, such as bollards, temporary curbs, planters, or paint and striping.
- Curb extensions should not extend into travel lanes or bicycle lanes. Generally designed with one foot of shy distance between the face of curb and the edge of travel lane.
- When designing the corner radius on a curb extension, consider the appropriate large vehicle turning path to prevent encroachment into the pedestrian space.
- Curb extensions can require modifications to or relocation of drainage structures. Consider drainage slots with solid surface plating at pedestrian crossings as an alternative.

## Systemic Safety Potential

Spot treatment or systemic safety improvement. Consider at all locations with on-street parking.

## Additional Information

- Montgomery County Complete Streets Design Guide
- NACTO Urban Street Design Guide
- FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

