

Traffic Calming Devices

Speed Hump / Speed Cushion



Speed Hump



Speed Cushion

What it is: Speed humps are asphalt mounds constructed on residential streets. One can be placed by itself or in a series depending on the length of the street. Speed humps are usually spaced at least 150 feet from an intersection and apart from each other. Speed humps are typically 12 feet long and 3.5 inches high. Their vertical deflection encourages motorists to reduce speed. A speed cushion is a variation of a speed hump, with channels to accommodate wide wheelbase vehicles like buses so bus passengers are affected less.

When they are used: The primary benefit of speed humps is speed control.

Advantages:

- Effectively reduces vehicle speeds
- Does not require parking removal
- Can reduce vehicular volumes
- Easily tested on temporary basis

Disadvantages:

- Slows emergency vehicles
- May increase noise near speed humps
- May divert traffic to parallel streets
- May not be aesthetically pleasing

Special Considerations:

- Vehicle speeds between humps have been shown to decrease by up to 25%
- Volumes may decrease if parallel route, without measures, is available
- Possible increase in traffic noise from braking and accelerating
- Highest noise may increase from buses and trucks
- Speed humps may reduce emergency vehicle response times
- Speed humps require advance warning signs and object marker at hump
- Difficult to construct precisely, unless prefabricated

Cost: \$6000-\$8000 each

Sidewalk Bulb-out



What it is: Sidewalk bulb-outs narrow the street by extending the curbs toward the center of the roadway or by building detached raised islands to allow for drainage.

When they are used: Sidewalk bulb-outs are used to narrow the roadway and to create shorter pedestrian crossings. They also improve sight distance and influence driver behavior by changing the appearance of the street.

Advantages:

- Better pedestrian visibility
- Shorter pedestrian crossing
- Can decrease vehicle speeds
- Opportunity for landscaping

Disadvantages:

- Can require removal of parking
- Can create drainage issues
- Difficult for trucks to turn right

Special Considerations:

- Curb extensions can be installed at intersections
- Curb extensions should not extend into bicycle lanes, where present
- Curb extensions at transit stops enhance service
- No noise or emergency service impacts
- May require landscape maintenance to preserve sight distances

Cost: \$50,000-\$100,000 each

Median Islands



Traffic Circle



Medians



Chicane



Choker

What it is: Median islands are raised islands in the center of street that can be used to narrow lanes for speed control and/or be used for pedestrian refuges in the middle of the crosswalk. As a last resort, they can create a barrier to prohibit left-turns into or from a side street. Median islands come in different shapes and forms, each of which has its own name. They include medians, chokers, chicanes, circles and diverters.

When they are used: Median islands are used on wide streets to lower travel speeds and/or used to provide a mid-point refuge area for crossing pedestrians. As a last resort, they can be used to prohibit certain turning movements.

Advantages:

- Effectively reduces vehicle speeds
- Can reduce pedestrian crossing
- Opportunity for landscaping
- Can be low impact on emergency vehicles
- Can reduce collision potential
- Can increase sight distance

Disadvantages:

- May require parking removal
- May impede certain movements such as driveway access, trucks & emergency vehicles
- May require additional right-of-way
- Increased maintenance
- May create drainage issues
- May be a hazard for bicyclists
- May divert traffic volumes

Special Considerations:

- Median islands, when used to block side street access, may divert traffic
- In this condition, they may impact emergency response times
- All forms of median islands may visually enhance the street through landscaping
- Any lane width reduction should result in at least 10 foot lanes
- Bicyclists would rather avoid lane narrowing
- Driveway access needs to be considered
- Speeds generally reduced when street cross-section reduce significantly
- Emergency response agencies prefer medians and chokers over other median types
- Where right-of-way is limited, chicanes are not recommended
- When both approach volumes moderate, chicanes better than chokers
- Parking may be significantly reduced with chokers and chicanes
- Chicanes and chokers may increase conflicts with bicycles
- Chicanes and circles have the least noise impact
- Chicanes & circles can be installed in a series, alone or in combination with each other
- Buses can maneuver around traffic circles at slow speeds
- All medians require more signs and pavement markings
- Traffic circles are less effective at T-intersections and offset intersections

Costs:

- Chicane: \$20,000-\$40,000 each
- Choker: \$10,000 each
- Median/diverter: \$10,000-\$75,000 each
- Traffic circle: \$25,000-\$35,000 each