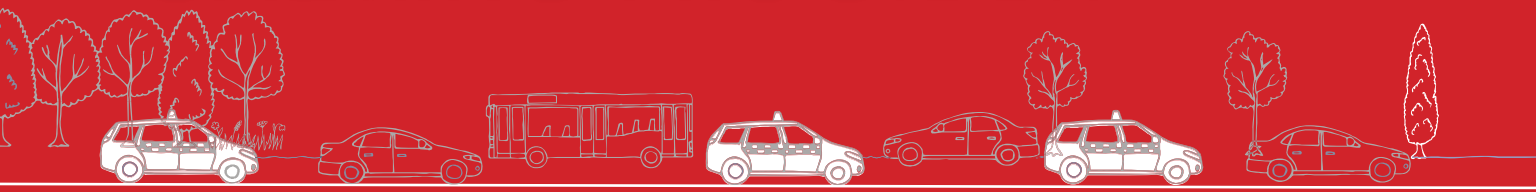
NEIGHBORHOOD TRAFFIC CALMING PROGRAM



College Station, TX

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WHAT IS TRAFFIC CALMING?

Traffic calming is defined by the Institute of Traffic Engineers (ITE) as the combination of mainly physical measures that ***reduce the negative effects*** of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. The objective of traffic calming is to ***reduce the speed and volume of traffic*** to acceptable levels for increasing the safety of the roadway.

- **ADDRESSES** a wide array of neighborhood and liveability concerns and can be implemented with a variety of roadway treatments
- **SUPPORTS** active lifestyle options by enabling pedestrians and bicyclists to travel safely within the neighborhood
- **REDUCES** the potential for serious and fatal pedestrian and bicycle injuries

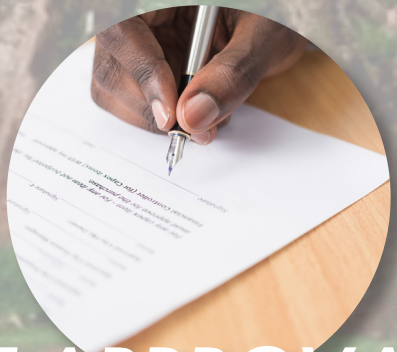
ABOUT THE ORDINANCE

Where a person lives is a very important part of how a person feels about their community. The neighborhoods' vehicular speeds, traffic volumes, and presence of sidewalks all contribute to a neighborhood's integrity. As speeding and vehicular volume increases, walking and biking around the neighborhood can be uncomfortable for residents. The City of College Station recognizes the usefulness of physical measures to effectively manage neighborhood traffic problems.

The traffic calming guidelines in this booklet provide a basis for establishing the selection and installation criteria for areas that would benefit from these tools. A list of the program's objectives and policies can be found on the next page.

The College Station Traffic Calming Ordinance aims to:

1. Promote safe and pleasant conditions for residents, pedestrians, bicyclists, and motorists on local neighborhood and minor collector streets.
2. Reduce impacts of traffic and speed on local neighborhood and residential streets.
3. Preserve and enhance pedestrian and bicycle travel within neighborhoods.
4. Achieve efficient and safe movement of traffic within neighborhoods, including emergency response vehicles.
5. Maintain acceptable levels of service on the City's arterial streets so as to avoid diversion onto local streets.



THE PROJECT APPROVAL PROCESS

1. Project Identification

- A citizen or neighborhood association must call or write to the City to request the problem street(s)
- All requests received by August 1st are considered for the following fiscal year, beginning October 1st
- The traffic calming projects are selected each fiscal year based on project scores and availability of funding

2. Review and Notification

- City Staff sends a letter to each business, property owner, and resident in the study area
- A survey is sent for residents, property owners, and businesses to fill in describing various traffic related problems in the project area
- An evidence of neighborhood support form must be signed by at least 20% of local property representatives that live within the study area

3. Data Evaluation

- Data will be collected in the project area in the spring and fall months on regular school days
- City Staff then will evaluate the traffic data to determine levels of traffic volume, vehicular speed, pedestrian activity, and other observations
- Projects are scored and ranked based on data-related criteria
- Projects are addressed in order of score and budget availability

Project Selection

4. Working Group

- The development of the plan typically requires three meetings: Introduction to Traffic Calming, Development of Alternatives, and Open House
- Working group is established based on who marked themselves as interested on the neighborhood support form
- No more than 15 members should represent the project street as well as other streets in the neighborhood that would be significantly impacted by the project

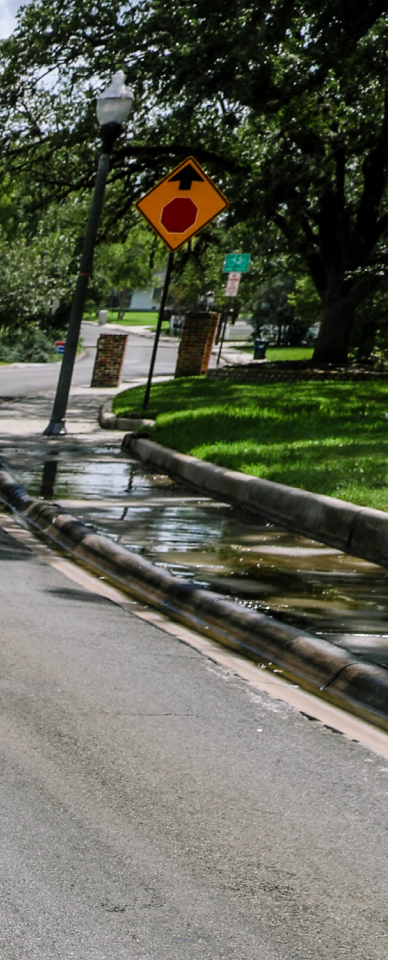
5. Plan Development

- After reviewing the traffic data and a menu of measures available, the working group is responsible for brainstorming possible solutions to address the given traffic problems at the second meeting
- After a consensus is achieved on which measures the working group desires and the specific locations of the measures, City Staff then analyzes the proposal for impacts on emergency response and drainage in the area

6. Plan Approval

- An open house meeting is held to present the plan to all interested persons. Each property representative is allowed one vote
- At least 60% of the ballots received have to be in favor of implementing the plan for it to pass
- If the vote passes, City Staff completes the design for construction
- Funding is requested for the project at the following budget cycle

Project Implementation



TRAFFIC CALMING TOOLBOX

1. *Traffic Circle*
2. *Raised Center Median*
3. *Chokers, Curb-Extensions, or Bulb-outs*
4. *Chicane*
5. *Speed Feedback Signs*
6. *Striping*
7. *Shift*
8. *Closures*
9. *Speed Humps*

TOOL 1: TRAFFIC CIRCLE

Traffic circles are raised islands constructed at intersections. They are typically landscaped with ground cover, bushes, and trees. Traffic circles require drivers to slow to a speed that allows them to comfortably maneuver around them.

PROS:

1. Reduces speed at intersection approach
2. Reduces vehicle conflicts at intersection
3. Provides equal access to intersection for all drivers
4. Does not restrict access to residents
5. When landscaped, traffic circles improve the appearance of a street

CONS:

1. On-street parking is prohibited within 30 ft (minimum) of the intersection
2. May not reduce cut-through traffic
3. Will increase emergency response time
4. Can restrict access for trucks and longer school buses
5. Maintenance responsibility, if landscaped

TOOL 2: RAISED CENTER MEDIAN

Raised center medians are raised islands constructed in a street. They are typically landscaped with ground cover, bushes, and trees or paved with decorative pavers. They create narrowed lanes and encourage motorists to slow through the narrow section.

PROS:

1. Reduces lane width and vehicular speed
2. Provides aesthetic visual break up on long straight streets
3. Provides a visual cue to motorists that they are entering a neighborhood

CONS:

1. Curbside parking must be prohibited
2. Maintenance responsibility if landscaped
3. May have little or no impact on cut-through traffic

TOOL 3: CHOKERS, CURB EXTENSIONS, OR BULB-OUTS

Street physically narrowed to expand sidewalks and landscaped areas; possibly adding medians, on-street parking, etc. These measures narrow the pavement by widening the sidewalk area at strategic locations. They provide shorter pedestrian crossing distances and provide protection at the beginning of a parking lane.

PROS:

1. Minor inconvenience to drivers, with minimal inconvenience to traffic
2. Good for pedestrians due to shorter crossing distance
3. Provides space for landscaping
4. Slows traffic without affecting emergency response time
5. Effective when used in a series

CONS:

1. Double lane narrowing not very effective at reduced speeds or diverting through-traffic
2. Only partially effective as a visual obstruction
3. Unfriendly to cyclists unless designed to accommodate them
4. Conflict between passing opposing drivers could create problems

TOOL 4: CHICANE

A chicane is a series of two or more staggered curb extensions on alternating sides of the roadway. They are usually landscaped with ground cover, bushes, and trees. Horizontal deflection encourages motorists to slow down through the chicane. Small raised island may be added.

PROS:

1. Reduces motorist speed
2. Does not restrict access to residents
3. Minimal impact to emergency vehicles response time
4. Reduces crossing distance for pedestrians
5. Can be aesthetically pleasing, if landscaped

CONS:

1. Curbside parking must be prohibited
2. Maintenance responsibility, if landscaped
3. May have little or no impact on cut-through traffic

TOOL 5: SPEED FEEDBACK SIGNS

Dynamic speed feedback signs alert drivers that they are speeding and create a sense of being monitored to the driver. The feedback may be the driver's actual speed, a message such as "slow down," or activation of some warning device.

PROS:

1. Easy to implement and low cost to construct
2. Can be portable and temporary

CONS:

1. Not a viable long-term solution
2. Some drivers use it to test the limits on their speed, rather than slow down

TOOL 6: STRIPING

Striping as a traffic calming technique can help reduce the driver's perceived width of the roadway. The striping alternatives can consists of adding the following: centerline stripe; edge lines; striped median; striped choker or chicane; and psycho-perceptive striping.

PROS:

1. Does not reduce emergency response time
2. Allow for greater flexibility to meet future changes
3. Can be implemented quickly and are less costly to construct
4. Provides opportunity for multimodal street design (e.g. bike lanes, on-street parking)

CONS:

1. Some limitations in speed reduction
2. Less effective when speeds are already low

TOOL 7: LATERAL SHIFT

A lateral shift a realignment of an otherwise straight street that causes travel lanes to shift in at least one direction. A chicane is a form of a lateral shift.

PROS:

1. Provides opportunities for landscaping
2. Can provide locations for pedestrian crosswalks
3. Appropriate for a multitude of road design conditions including one- and two-way streets, bus transit routes, and roads with bicycle facilities

CONS:

1. May require removal of some on-street parking
2. Applicable only to mid-block locations
3. Limited data available on impacts on speed, volume diversions, and crash risk

TOOL 8: CLOSURES

Half or full road closures as a form of traffic calming are done by installing physical barriers that either cut off one or both directions of traffic. Full-street closures usually leave open space for pedestrians and bicyclists; they are sometimes called cul-de-sacs, dead-ends, or mini-parks.

PROS:

1. Can be used to assist in crime prevention
2. Can be applied with and without bicycle facilities and on roads with on-street parking
3. Can improve pedestrian crossing safety
4. Both closure types can be designed to allow emergency vehicle access with removable barriers

CONS:

1. Potential legal concerns
2. May result in traffic diverting to other local streets
3. No significant impact on vehicle speeds beyond the closed block
4. Concerns regarding street network connectivity and capacity

TOOL 9: SPEED HUMPS

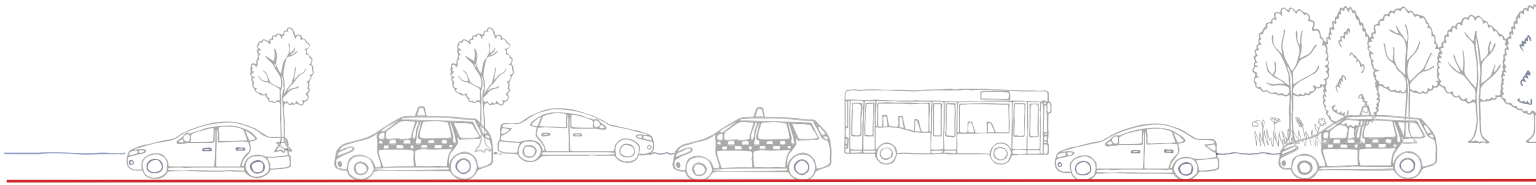
A speed hump or cushion is an elongated mound in the roadway pavement surface extending across the travel way at a right angle to the traffic flow. It encourages the motorist to travel at a slow speed both upstream and downstream of as well as over the hump. Speed humps and cushions are not permitted on specified emergency routes.

PROS:

1. Work well in combination with curb extensions
2. Can be used on a one-lane one-way, or two-lane two-way street
3. Reduces speeds by 20-25%

CONS:

1. Impacts emergency vehicle response times
2. Appropriate only at mid-block sections, and not at intersections
3. Need to design for drainage
4. Generates extra noise
5. Not compatible with autonomous vehicles



MORE RESOURCES

If you would like to know more about this ordinance, please contact…

City of College Station Public Works Department

Ph: (979) 764-3690

Email: Traffic@cstx.gov

310 Krenek Tap Rd

College Station, TX 77840

or visit www.cstx.gov/traffic

For more information regarding traffic calming measures, please visit…

- **American Planning Association (APA):** https://www.planning.org/blog/blogpost/9111385/
- **Institute of Transportation Engineers (ITE):**

  https://www.ite.org/technical-resources/traffic-calming/traffic-calming-measures/
- **Federal Highway Administration (FHWA):**

  https://safety.fhwa.dot.gov/ped_bike/univcourse/pdf/swless11.pdf