

Neighborhood Traffic Calming

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Agenda

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2. Why is Traffic Calming Important; Safety Benefits of Traffic Calming
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4. Proposed Traffic Calming Approach and Tools
5. Background on Speed Humps in Fort Worth
6. Texas Peer City Review and Lessons Learned
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What is Traffic Calming?

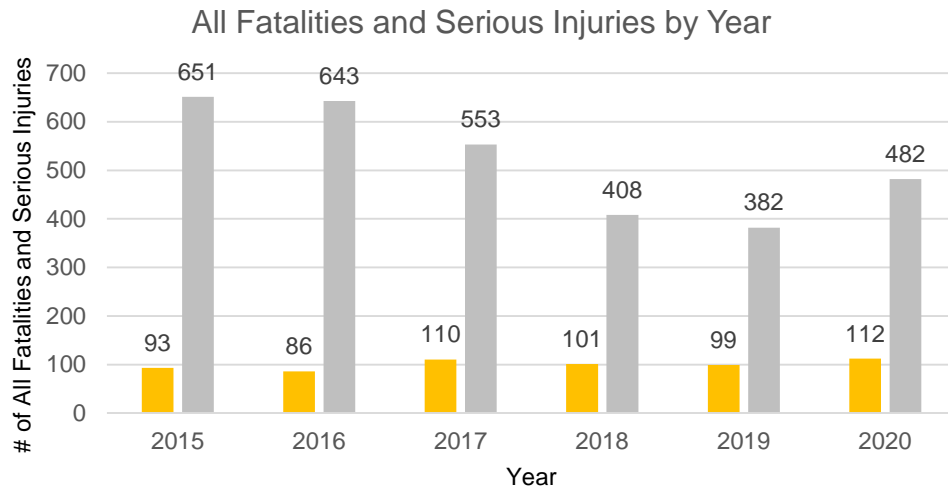
According to the Federal Highway Administration (FHWA), traffic calming reduces automobile speeds or volumes, mainly through the use of physical measures, to improve the quality of life in both residential and commercial areas and increase the safety and comfort of walking and bicycling.

Traffic Calming programs involve:

- Applying road design and engineering measures to obtain appropriate speeds;
- Setting speed limits that are safe and reasonable;
- Applying enforcement efforts and appropriate technology that effectively address speeders and deter speeding.

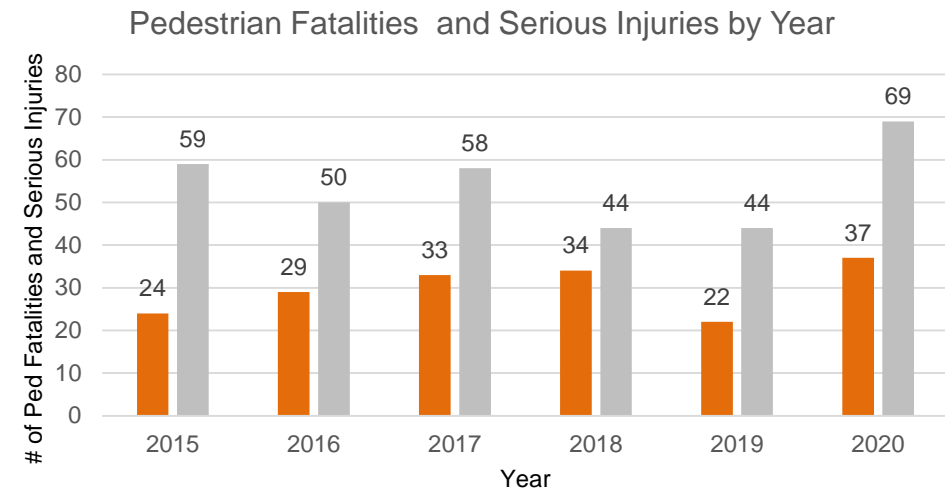
Why is Traffic Calming Important?

- In 2016, the Federal Highway Administration (FHWA) designated Fort Worth as a Focus City due to a high rate of pedestrian fatalities.*
- Significant reductions in all fatalities (veh, bike, ped) have not been achieved since 2016 and pedestrian fatalities continue to trend upward.



Source: CRIS

■ Fatalities ■ Serious Injuries



■ Fatalities ■ Serious Injuries

*Effective 2021, Fort Worth is no longer a Focus City.

Safety Benefits of Traffic Calming

Speed impacts crash severity

- Lower speeds result in greater survivability when crashes occur.

Slower speeds save lives

- Average risk of death for a pedestrian at impact rises as speed increases.
- A person walking struck by a person driving 40 mph is 8x's more likely to die than one struck by person driving 20 mph.

Slower speeds

- Promote safety in residential neighborhoods
- Prevent crashes
- Safer for pedestrians and cyclists, specifically where infrastructure does not exist.



DEATH DUE TO SPEED

U.S. DEPARTMENT OF TRANSPORTATION. LITERATURE REVIEWED ON VEHICLE TRAVEL SPEEDS AND PEDESTRIAN INJURIES. MARCH 2000.
[HTTP://WWW.NHTSA.GOV/ABOUT-NHTSA/TRAFFIC+TECHS/CURRENT/LITERATURE+REVIEWED+ON+VEHICLE+TRAVEL+SPEEDS+AND+PEDESTRIAN+INJURIES](http://www.nhtsa.gov/about/nhtsa/traffic+techs/current/literature+reviewed+on+vehicle+travel+speeds+and+pedestrian+injuries)

Existing Traffic Calming Approach

- Transportation and Public Works (TPW) relies on citizen service requests to identify and address speeding in neighborhoods.
- In FY 20, Transportation Management received over 28,000 service requests. Approximately 1,220 requests were related to neighborhood traffic safety and speeding.
- TPW has used limited tools to address traffic calming requests.
 - Signage - Speed limit signs, driver feedback signs
 - Police Enforcement

3 Ways to Submit Service Requests

1) Call Center
817-392-1234

2) MyFW App



3) City Webpage

<https://fortworth-csrprod.cwi.motorolasolutions.com/ServiceRequest.mvc/SRIntake>

Outcomes of Existing Traffic Calming Approach

- Individuals rather than neighborhoods are engaged
- Staff time is used to investigate speeding concerns
 - Data collection (9 hours)
 - Field visit photos, measurements, communicate with requestor - 2 hrs, includes travel
 - Research previous VueWorks requests - 1 hr
 - Request and review crash data from Police Department - 4 hrs
 - Equipment setup and take down for speed studies (to confirm whether 85% of vehicles are traveling 5 miles per hour/more over posted speed limit) - 2 hrs
- TPW receives multiple requests for the same location, mainly because signage and enforcement alone are not effective measures for long-term speed reduction.

Proposed Traffic Calming Approach

- Proactively identify and prioritize project areas using a data driven approach focused on the Vision Zero High-Injury Network
- Engage neighborhoods in a comprehensive manner to eliminate one-off requests
- Gain consensus on potential projects that may benefit the neighborhood as a whole but possibly impact individual properties
- Work with the Police Department on targeted enforcement

Traffic Calming Tools

- Vertical Deflection countermeasures create a change in roadway height that forces a vehicle to reduce speed. Examples include:
 - Speed Humps
 - Speed Bumps
 - Speed Tables
 - Speed Cushions
- Horizontal Deflection countermeasures create a horizontal shift in the roadway so that a vehicle cannot travel in a straight line and must reduce speed. Examples include:
 - Curb Extensions
 - Chicanes
 - Mini Roundabouts/Traffic Circles

Vertical Deflection

Speed Bumps

- Raised areas of pavement primarily used in parking lots
- They pose a safety hazard for vehicles traveling too fast and can be more damaging to vehicles.
- Emergency Response Impact - unknown as bumps are used primarily in parking lots



Background on Speed Humps in Fort Worth

- In 2014, TPW issued a Departmental Policy Memo 31.28 stating that the city avoids installing speed humps, speed tables, chokers, diverters or other traffic calming modifications unless in urban village efforts and instead use driver feedback devices to educate and impact neighborhood speeds.
- Speed humps were prohibited due to emergency response time and equipment impacts, maintenance costs, and stakeholder concerns about damage to personal vehicles.
- Transportation and Public Works' current practice is to remove speed humps as roadways are scheduled for maintenance or reconstruction.
- In the interim, until funding is available for removal, signage is installed for speed hump visibility rather than refreshed pavement markings.

Vertical Deflection

Speed Humps

- Rounded raised areas of pavement typically 12 to 14 feet long, often placed in a series (spaced 260 to 500 feet apart) at mid-block locations
- Appropriate for residential streets and residential collectors that are on-lane/two-lane and have posted speed of 35 mph or less
- Not typically used on major roads, bus routes, or primary emergency response routes.
- Series of speed humps may result in traffic diversion
 - Comprehensive traffic calming approach needed to ensure problem isn't moved to another roadway.
- Emergency Response Impact - Approximately 3 and 5 seconds delay per hump for fire trucks and up to 10 seconds for ambulances with patients



Vertical Deflection

Speed Tables

- Raised speed humps with flat section on top and ramps on the ends
- Serve as raised crosswalks when placed at pedestrian crossings
- Appropriate for residential streets and residential collectors that are on-lane/two-lane and have posted speed of 35 mph or less
- Can be implemented at mid-block or intersection locations
- Series of speed tables may result in traffic diversion
 - Comprehensive traffic calming approach needed to ensure problem isn't moved to another roadway.
- Emergency Response Impact - less than 3 seconds of delay per speed table



Vertical Deflection

Speed Cushions

- Two or more raised areas placed laterally across a roadway with gaps between raised areas, often placed in a series at mid-block locations
- Appropriate for residential streets and residential collectors that are on-lane/two-lane and have posted speed of 35 mph or less
- Gaps allow emergency vehicles to pass at higher speeds
- Series of speed cushions may result in traffic diversion
 - Comprehensive traffic calming approach needed to ensure problem isn't moved to another roadway.
- Emergency Response Impact - less than a one-second delay experienced by most emergency vehicles



Horizontal Deflection

Curb Extensions

- Horizontal extension of the sidewalk into the street, which visually and physically narrows the roadway and creates shorter crossings for pedestrians
- Can create protected on-street parking
- Emergency Response Impact – limited

Chicanes

- Alternating curbs or lane shifts that force a vehicle to reduce speed and veer back and forth out of a straight travel path.
- Appropriate for residential streets and residential collectors that are on-lane/two-lane and have posted speed of 35 mph or less.
- Alternating on-street parking can serve as a chicane.
- Emergency Response Impact - limited



Curb Extension



Chicane

Horizontal Deflection

Mini Roundabout or Traffic Circle

- A raised island that forces vehicles to reduce speed when traveling through an intersection
- Fits within an existing intersection and can be landscaped.
- Emergency Response Impact - limited



Texas Peer City Review

	Dallas	Houston	Austin	San Antonio
Formal Traffic Calming Program/Application Process	X		X	X
Dedicated Funding	X		X	X
Implementation based on Citizen Requests	X	X		X
Proactive Identification of Locations			X	
Petition Requirement (petition required before staff initiates evaluation)	2/3 Property Owner/Resident Support	N/A	N/A	2/3 Property Owner/Resident Support
Established Safety (i.e. crashes) and Equity Criteria	X		X	X

Texas Peer City Review - Lessons Learned

- Traffic calming tools should be implemented as part of a formal traffic calming program, inclusive of an application process and neighborhood consensus.
- Support from 2/3 property owners/residents establishes neighborhood consensus around an issue and acceptance of potential impacts (i.e. parking restrictions, placement in front of property, etc) before city resources are committed for evaluation.
- Emergency response impacts are an important consideration and should be coordinated with the Fire Department.

Texas Peer City Review - Lessons Learned (cont.)

- Speed and crash data, existing transportation infrastructure, and neighborhood context are important considerations to determine eligibility.
- Establishing an equitable process is critical
- Dedicated funding for implementation directly influences the scale of traffic calming efforts.
- Pop-up projects provide important data to determine efficacy of a countermeasure before a permanent (i.e. concrete) solution is constructed.

Proposed Traffic Calming Framework

- Formal Traffic Calming Program/Application Process with support from impacted neighborhood residents
- Implementation based on proactive identification of locations and neighborhood requests
- Petition requirement (petition required before staff initiates evaluation) to confirm neighborhood consensus
- Establish safety (i.e. crashes) and equity criteria to document safety need and enhance engineering review
- Engage neighborhoods in walk audits and design charrettes
- Implement pop-up projects with neighborhood buy-in and monitor and evaluate projects for effectiveness

Next Steps

- Partner with Blue Zones to complete Neighborhood Traffic Calming Toolkit by February 2022
- Work with Blue Zones and engage the Diamond-Hill Jarvis neighborhood to conduct walk audit and develop neighborhood traffic calming pilot project
- Brief Mobility Infrastructure Committee on Vision Zero High-Injury Network Roadway Assessments in March 2022

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Thank you

