



Neighborhood Speed Management Manual
July 18, 2023

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SECTION I – INTRODUCTION

As San Elizario continues to grow, effectively managing speed is a critical component to creating streets that support safe, convenient travel by all road users. The City’s Neighborhood Speed Management Manual purpose is to reduce egregious speeding in residential districts to improve safety and enhance the livability of San Elizario’s streets. The Neighborhood Speed Management Manual utilizes a comprehensive, data-driven approach to speed management and traffic calming that applies a combination of engineering and other countermeasures.

What is traffic calming?

The Institute of Transportation Engineers (ITE) defines traffic calming as “the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for nonmotorized street users.” In response to the public’s concern for the safety and livability of their neighborhoods, the City has developed this policy manual as a guide for implementing neighborhood traffic calming projects. This Neighborhood Speed Management Manual is divided into the following parts:

- The Traffic Calming Program – which is designed to be a joint effort between the residents and the City to: identify traffic issues, create, and implement strategies to address those issues, and evaluate the effectiveness of the various solutions;
- The Traffic Calming Toolbox – which provides a toolbox of typical traffic calming measures and their applicability in San Elizario. Extensive literature research was conducted by City staff into the best practices for traffic calming programs and measures utilized by various municipalities and state transportation agencies;
- Traffic Calming Program Application Request Form;
- Traffic Calming Facts Sheets – provides information obtained from the research and experience of transportation engineering and planning professionals.

In order to be considered for a traffic calming project, the following qualifiers shall be met.

1. Paved street within the city limits.
2. Traffic calming is limited to Local Residential Streets or Collector roads with predominately residential streets. (Arterials are not eligible to apply)
3. Speed limits of 35 mph or less.
4. One travel lane of traffic in each direction. Turning lanes, bike lanes, and parking lanes are not counted as travel lanes.
5. Street must be composed of primarily of residential housing.

For information, please contact the City Clerk at 915-974-7037. Completed applications shall be submitted electronically to the City Clerk via info@cityofsanelizario.com.

SECTION II – TRAFFIC CALMING PROGRAM

Introduction

The City of San Elizario is committed to the safety and livability of its neighborhoods. This Traffic Calming Program (TCP) is designed to be a joint effort between the residents and the City to identify traffic issues, create and implement strategies to address those issues, and evaluate the effectiveness of the various solutions.

Traffic Calming Program Process

The intent is to establish a consistent process to address traffic impact concerns within the city. Prudent implementation of traffic calming measures can promote a higher quality of life and active character within the City's neighborhoods. Only City-maintained streets are eligible for traffic calming strategies under this program. Applicable measures may vary based on the classification and particulars of a street.

Step 1: Application

All City residents are eligible to apply for participation in the TCP. Applications for participation are available via email, website, and at city hall. Completed applications shall be submitted to the City Clerk. Upon receipt of a completed application, the Planning and Zoning Department (Department) will perform a search for applicable data. Data are considered applicable if it has been collected by Department or a City approved contractor no more than 3 years prior to the application. If no data are available, Department will plan for field observations or data collection as necessary and will inform the applicant of any extra time and/or funds this may require.

Step 2: Petition

After receipt of an application, Department will determine whether there is applicable data or whether funding is available to collect new data, and the applicant will be provided with a petition form. This petition form will be accompanied by a map of the area as determined by the Department based on TCP guidelines.

A petition will be considered complete if two-thirds of the affected property owners have signed the petition. The petition process is used by the Department only to determine if there is enough neighborhood support to expend City staff resources on data collection. The Department may modify or expand the petition area to address unique circumstances. The Department will identify these circumstances and provide written explanation to the applicant for any changes to the petition area.

Upon completion of a successful petition, the Department will add the area and traffic concern, as described on the initial application, to a list of data collection and analysis needs.

Step 3: Scoping Meeting

City staff, if needed, may conduct an initial scoping meeting with the petitioning resident or neighborhood group. This meeting will be a collaborative working meeting to discuss the study area, understand the neighborhood traffic issues, define the data collection effort, and provide specifics on

the analysis that will be conducted. The petitioner and city staff may visit the neighborhood to observe firsthand the traffic issues and concerns.

Step 4: Analysis

Once a clear understanding of the neighborhood traffic issues is reached and the extent of the study area has been defined, City staff will collect the necessary data to perform the needed engineering traffic analysis. This analysis will demonstrate whether a traffic issue meets three or more of the following threshold criteria for traffic calming measures:

- Reported crashes in the past 3 years that could be corrected with traffic calming,
- Traffic volume greater than 500 vehicles per day,
- 25 percent of peak-hour traffic is non-local cut-through traffic, or
- 85th percentile speed exceeds the posted speed limit by 5 mph or more.

The Department will respond in writing to the applicant. The response will indicate if the minimum criteria, as described in this manual, have been met. If the minimum criteria outlined in Step 4 are not met, the application shall be denied, and a date will be provided for the current data expiration. Applicants must re-apply for participation if they would like a neighborhood to be considered after the data has expired.

The data used in the analysis will be readily available to the applicant. If the analysis shows that the issue meets three or more of the minimum thresholds shown above, city staff will use physical and nonphysical traffic management strategies to assess the extent of the neighborhood's traffic problems.

The results of the analysis and the toolbox of traffic calming measures described in Section III of this manual will be used to develop neighborhood traffic calming plans and identify specific traffic calming measures that are recommended for implementation.

Step 5: Report

The Department will summarize the results of the analysis and prepare a recommendation report. The recommendation report will consist of a summary of the scoping meeting, data collected, analysis conducted, preliminary findings, and recommended traffic calming measures. Department shall provide the report via e-mail to the applicant. The applicant may pick-up the report from the City Clerk.

Step 6: Recommendations

The Department will update the traffic engineering report based on the feedback from the public and make final recommendations. Specific devices and locations for traffic calming measures will be identified and recommended for implementation. As projects near the top of the priority list, the Department will refine the cost estimate.

Step 7: Identify Funding

Requests for TCP funding for projects must compete with other requests for traffic calming funding and will be ranked City-wide based on their evaluation. The highest-ranking projects will be implemented first, and the number of projects executed will depend on the City's resources. Projects will continue to be ranked for up to 5 years, at which point they are no longer considered. This time condition has been

set to ensure that projects do not become outdated due to resident and traffic condition changes. Nothing in this section shall prevent earlier implementation if funding is identified for a given project by city council.

Step 8: Implementation

Projects may be implemented on a temporary or permanent basis. Non-physical measures shall be implemented first because they are easiest to install and are the least expensive. If the effects of a traffic calming measure are uncertain, it may be implemented initially on a temporary basis. Once a device or series of devices has proven effective, permanent traffic calming measures may be constructed.

Once projects have been constructed and operational for at least 6 months, a post- implementation evaluation process may be conducted.

9: Performance Evaluation

The Department may revisit and reevaluate the traffic calming measures that have been implemented by conducting a post-implementation study. This study shall determine if the traffic calming measures have been effective and if they accomplished their desired goal by using the same criteria identified in Step 4. Any unanticipated or undesirable effects will be noted, and ineffective devices will be removed. If a device was implemented on a temporary or trial basis, the Department will determine if a more permanent traffic calming measure should be constructed. Finally, any additional measures that could enhance the effectiveness or improve overall neighborhood traffic calming will be identified.

Step 10: Summary and Conclusion

The Department may document the results of the post-implementation study and make recommendations on whether to maintain, improve, and/or remove traffic calming measures. Based on the initial operational period, the Department may assess the extent and cost of maintenance for future planning.

SECTION III –TRAFFIC CALMING TOOLBOX

Introduction

This section of the manual provides a detailed toolbox of traffic calming measures for use in developing neighborhood traffic calming projects. In selecting the correct set of tools to address an identified and documented problem, it is important to understand these considerations, as well as the initial and long-term costs associated with each tool. There are two primary types of traffic management strategies: non-physical and physical measures.

Non-Physical Traffic Management Strategies

Non-physical strategies provide a non-invasive form of calming traffic that is inexpensive and easy to implement, and that can also be removed easily if the measure is unsuccessful. For these reasons, non-physical measures will be applied prior to implementing any physical traffic calming measures. Non-physical traffic calming strategies can take multiple forms. A discussion of some of the most common non-physical strategies is provided below.

- **Safety Education** - involves efforts to make the public mindful of their own driving behavior and the impact it has on others. Programs are often centered on promoting safe and lawful driving habits and may include programs geared toward drivers, bicyclists, pedestrians, or safe interaction amongst all users.
- **Police Enforcement** - involves the presence of police officers to monitor speeds and issue citations for law violations such as stop sign, speed limit, turn restriction, and other traffic law violations. Visible presence is highly effective while an officer is present.
- **Pavement Markings** - include a variety of painted roadway guidance such as various forms of striping and painted markings and raised pavement markers. Pavement markings are relatively easy and low-cost to install, maintain, and modify. Markings can reduce speeds, prevent unwanted turn movements, and heighten driver awareness.
- **Signage** - may be used for a variety of warnings, regulations, and restrictions. Regulatory signs, such as speed limit signs are a useful way to remind drivers of the regulatory speed limit in their neighborhood.
- **Speed Monitoring Tools** - provide drivers dynamic feedback or provide real-time messages and information via smart devices, and other informational and safety signage. Providing feedback or safety messaging may remind drivers to change their behavior and encourage slower speeds.

Physical Traffic Management Strategies

Physical strategies consist of physical changes in the roadway design for the purpose of reducing the average roadway speed (speed management) or daily traffic volume (volume management), improving the vehicle pedestrian design, or a combination of these elements. Physical strategies are discussed below.

- Removal of an Unwarranted Traffic Control Device is sometimes needed to improve traffic management. The overuse of traffic control devices, particularly stop signs, can desensitize drivers and lead to noncompliance. The Manual on Uniform Traffic Control Devices (MUTCD) explicitly states that stop signs should not be used for speed control.

- Traffic Volume Management strategies include treatments that are intended to reduce and redirect traffic movements but are unlikely to have a significant influence on operating speeds.
- Speed Management can be achieved through either horizontal or vertical deflection measures.
 - Vertical deflection devices encourage driver to slow down by introducing raised sections of pavement which vehicles must drive over.
 - Horizontal deflection devices encourage drivers to slow down by introducing an obstacle which drivers must safely and comfortably navigate around. The horizontal shift in roadway geometry due to physical devices may also introduce an optical narrowing of the road.

Traffic Calming Devices

The City’s Neighborhood Speed Management Manual may utilize various approaches to reduce speeding throughout the city. One approach is to utilize different kinds of traffic calming devices to achieve context appropriate and cost-effective speed reduction strategies. When possible, low-cost, high-impact treatments will be applied first, and gradually escalated over time as needed. The specific devices presented in this toolkit may expand as staff continue to research new ideas from other cities and test new speed management solutions where appropriate. Selected facts sheets, relevant to this manual, summarize information presented in the ITE/FHWA Traffic Calming EPrimer are in Appendix II. The three types of traffic calming devices deployed by the City are: speed monitoring tools, vertical deflection devices, and horizontal deflection devices

SPEED MONITORING TOOLS

Dynamic Speed Display Devices

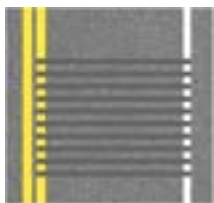
A Dynamic Speed Display Device is typically a portable unit that measures the speed of approaching vehicles and communicates the speed to drivers on a digital display.



VERTICAL DEFLECTION DEVICES

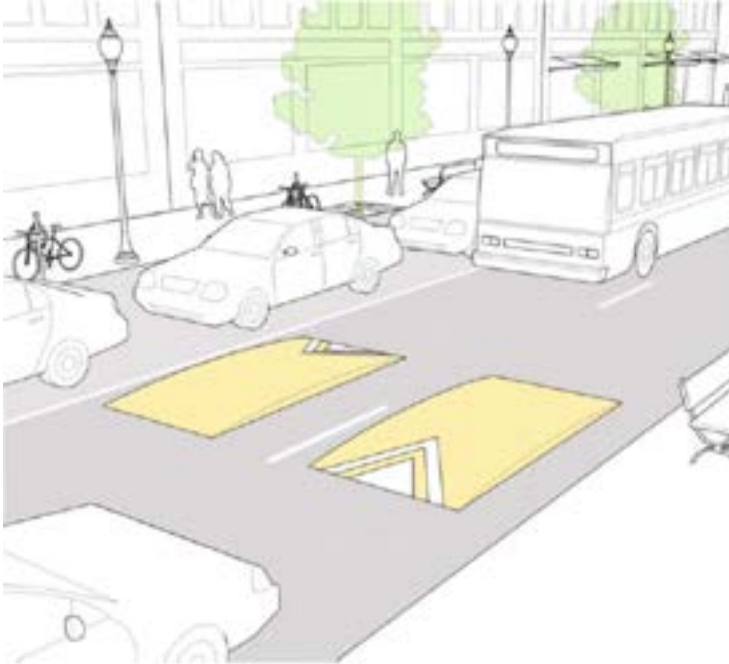
Rumble Strips

Rumble strips are formed into the pavement surface of a roadway by placing grooves or materials into the pavement. Two commonly used devices are milled and raised rumble strips.



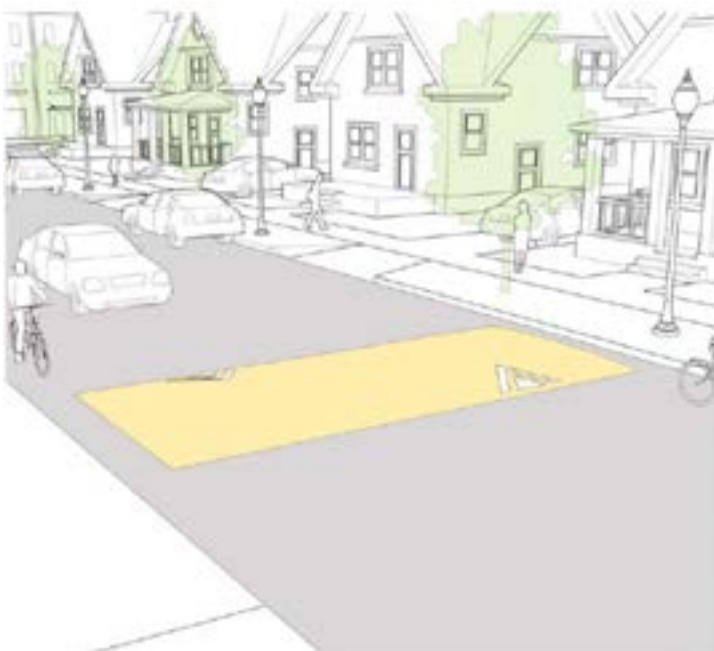
Speed Cushions

Speed cushions are placed in groups of 2 or more cushions. The spacing can be offset to allow emergency vehicles to pass through with ease and are typically used on key emergency response routes. To comfortably navigate over speed cushions, a driver must reduce their speed. Rubber speed cushions can be more abrupt than asphalt speed cushions and are sometimes used when more speed control is desired.



Speed Humps

Speed humps are raised sections of rubber or asphalt approximately 10 to 14 feet long and 3 to 4 inches high. The spacing and profile of speed humps helps to prevent hard braking and accelerating patterns. Speed humps are not suitable for sharp curves or steep grades.



Speed Tables

Speed tables extend fully across the street and signed for pedestrian use. Like speed humps, raised crosswalks are typically 3 to 6 inches high and have a flat top to allow pedestrian use. Raised crosswalks can enhance safety for people crossing the street by encouraging drivers to slow down as they approach the cross walk.



HORIZONTAL DEFLECTON DEVICES

Chicanes

A chicane is a series of alternating curves with or without medians located in a position that forces drivers to diverge from a straight travel path. To navigate the alternating curves, drivers must reduce speed as they travel through the feature.



Corner Extensions

Corner extensions or bulb-outs are devices which extend the sidewalk or curb into the roadway. Curb extensions visually narrow the roadway and force drivers to slow down to navigate around the devices and enhance safety for people walking or riding bicycles by decreasing the distance to cross at an intersection.



Delineator Posts

Delineator posts are flexible plastic posts that may be used to visually narrow the roadway or reinforce horizontal deflection on streets without physical devices. Delineator posts are easy to install and usually implemented as a rapid solution to address an immediate safety concern before a more permanent solution can be implemented.



Sources

2009 Manual on Uniform Traffic Control Devices (MUTCD). FHWA. 2012
2011 Texas Manual on Uniform Traffic Control Devices (TMUTCD) - Revision 2. TxDOT. 2014
ITE/FHWA Traffic Calming EPrimer. FHWA. 2017
Neighborhood Traffic Management Program. City of El Paso, Texas. 2018
Neighborhood Traffic Management Program. City of Socorro, Texas. 2022
NACTO Urban Street Design Guide. 2013

**APPENDIX I
FORMS**

TRAFFIC CALMING PROGRAM (TCP) APPLICATION REQUEST FORM

Section A

On this date ____/____/_____, we, the residents of, request that the City of San Elizario's Planning and Zoning Department initiate a TCP Study (Study) in our neighborhood to address the following concern(s):

- Safety
- Speeding
- Excess Traffic
- Cut-Through Traffic
- Commercial Vehicle Restriction
- Other (Please describe:) _____

Description of neighborhood conditions or recent changes in traffic, leading to this application:

Section B

We understand that the TCP process involves active participation of our community and that the decision-making process may require us to set and attend neighborhood meetings, further petition campaigns, and coordinate with the Planning and Zoning Department on components of the Study. We also understand that initiating a Study does not guarantee implementation of traffic calming devices or policies, which are dependent on both the findings of the study and available fiscal resources.

Section C

All persons signing this official request certify that they reside in the neighborhood referenced in Section A above, and agree with the identified concern(s) checked in Section A. All persons signing this official request also agree that the designated contact person(s) below will represent the neighborhood as facilitator(s) between the neighborhood residents and the City of Elizario's Planning and Zoning Department for the purposes of this Study.

Sign and submit to the City of Elizario c/o City Clerk (12710 Church St., P.O. Box 1723, San Elizario, Texas, 79849 or info@cityofsanelizario.com)

Designated Neighborhood Contact(s)

Name: _____ Address: _____
Telephone: _____ Email: _____

Supporting Neighborhood Group/Association

Name: _____ Address: _____
Telephone: _____ Email: _____

TRAFFIC CALMING PROGRAM (TCP) APPLICATION REQUEST FORM

Representatives from the _____ neighborhood, are requesting an initiation of a TCP Study. Based on available data, properties identified in the attached location map, Exhibit 1, are considered to be in the Study area. Two-thirds (2/3) of the owners of said properties on Exhibit 1 must agree with this application request and sign the petition below. Only one owner signature per address is required.

Property Owner Signature

Name(print): _____ Address: _____

Telephone: _____ Signature: _____

Name(print): _____ Address: _____

Telephone: _____ Signature: _____

Name(print): _____ Address: _____

Telephone: _____ Signature: _____

Name(print): _____ Address: _____

Telephone: _____ Signature: _____

Name(print): _____ Address: _____

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APPENDIX II
ITE TRAFFIC CALMING FACTS SHEETS

Traffic Calming Fact Sheets

May 2018 Update



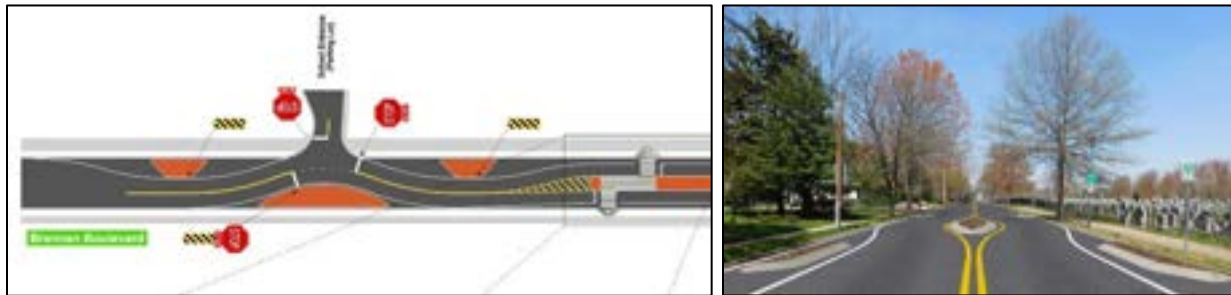
Chicane

Description:

- A series of alternating curves or lane shifts that force a motorist to steer back and forth instead of traveling a straight path
- Also called deviations, serpentines, reversing curves, or twists

Applications:

- Appropriate for mid-block locations but can be an entire block if it is relatively short
- Most effective with equivalent low volumes on both approaches
- Appropriate speed limit is typically 35 mph or less
- Typically, a series of at least three landscaped curb extensions
- Can use alternating on-street parking from one side of a street to the other
- Applicable on one-lane one-way and two-lane two-way roadways
- Can be used with either open or closed (i.e. curb and gutter) cross-section
- Can be used with or without a bicycle facility



(Source: Delaware Department of Transportation)

ITE/FHWA Traffic Calming EPrimer: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Design/Installation Issues:

- Chicanes may still permit speeding by drivers cutting straight paths across the center line
- Minimize relocation of drainage features
- May force bicyclists to share travel lanes with motor vehicles
- Maintain sufficient width for ease of emergency vehicles and truck throughput

Potential Impacts:

- No effect on access, although heavy trucks may experience challenges when negotiating
- Limited data available on impacts to speed and crash risk
- Street sweeping may need to be done manually
- Minimal anticipated volume diversion from street
- May require removal of some on-street parking
- Provides opportunity for landscaping
- Unlikely to require utility relocation
- Not a preferred crosswalk location
- Bus passengers may experience discomfort due to quick successive lateral movements

Emergency Response Issues:

- Appropriate along primary emergency vehicle routes

Typical Cost (2017 dollars):

- Reported costs range between \$8,000 and \$25,000

Corner Extension/Bulb-Out

Description:

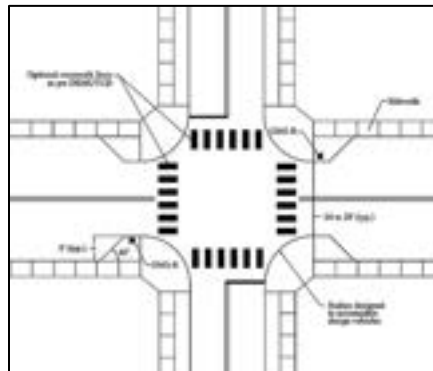
- Horizontal extension of the sidewalk into the street, resulting in a narrower roadway section
- If located at a mid-block location, it is typically called a choker

Applications:

- When combined with on-street parking, a corner extension can create protected parking bays
- Effective method for narrowing pedestrian crossing distances and increase pedestrian visibility
- Appropriate for arterials, collectors, or local streets
- Can be used on one-way and two-way streets
- Installed only on closed-section roads (i.e. curb and gutter)
- Appropriate for any speed, provided an adequate shy distance is provided between the extension and the travel lane
- Adequate turning radii must be provided to use on bus routes



(Source: James Barrera, Horrocks, New Mexico)



(Source: Delaware DOT)

ITE/FHWA Traffic Calming EPrimer: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Design/Installation Issues:

- Effects on vehicle speeds are limited due to lack of deflection
- Must check drainage due to possible gutter realignment
- Major utility relocation may be required, especially drainage inlets
- Typical width between 6 and 8 feet
- Typical offset from travel lane at least 1.5 feet
- Should not extend into bicycle lanes

Potential Impacts:

- Effects on vehicle speeds are limited due to lack of deflection
- Can achieve greater speed reduction if combined with vertical deflection
- Smaller curb radii can slow turning vehicles
- Shorter pedestrian crossing distances can improve pedestrian safety
- More pedestrian waiting areas may become available
- May require some parking removal adjacent to intersections

Emergency Response Issues:

- Retains sufficient width for ease of emergency-vehicle access
- Shortened curb radii may require large turning vehicles to cross centerlines

Typical Cost (2017 dollars):

- Cost between \$1,500 and \$20,000, depending on length and width of barriers

Traffic Calming Fact Sheets

May 2018 Update



Speed Cushion

Description:

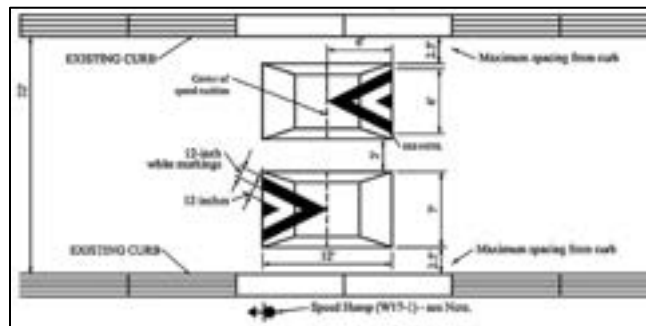
- Two or more raised areas placed laterally across a roadway with gaps between raised areas
- Height and length similar to a speed hump; spacing of gaps allow emergency vehicles to pass through at higher speeds
- Often placed in a series (typically spaced 260 to 500 feet apart)
- Sometimes called speed lump, speed slot, and speed pillow

Applications:

- Appropriate on local and collector streets
- Appropriate at mid-block locations only
- Not appropriate on grades greater than 8 percent



(Source: James Barrera, Horrocks, New Mexico)



(Source: Delaware Department of Transportation)

ITE/FHWA Traffic Calming EPrimer: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Design/Installation Issues:

- Two or more cushions at each location
- Typically 12 to 14 feet in length and 7 feet in width
- Cushion heights range between 3 and 4 inches, with trend toward 3 - 3 ½ inches maximum
- Speed cushion shapes include parabolic, circular, and sinusoidal
- Material can be asphalt or rubber
- Often have associated signing (advance-warning sign before first cushion at each cushion)
- Typically have pavement markings (zigzag, shark's tooth, chevron, zebra)
- Some have speed advisories

Potential Impacts:

- Limited-to-no impact on non-emergency access
- Speeds determined by height and spacing; speed reductions between cushions have been observed averaging 20 and 25 percent
- Speeds typically increase by 0.5 mph midway between cushions for each 100 feet of separation
- Studies indicate that average traffic volumes have reduced by 20 percent depending on alternative routes available
- Average collision rates have been reduced by 13 percent on treated streets

Emergency Response Issues:

- Speed cushions have minimal impact on emergency response times, with less than a 1 second delay experienced by most emergency vehicles

Typical Cost (2017 dollars):

- Cost ranges between \$3,000 and \$4,000 for a set of rubber cushions

Traffic Calming Fact Sheets

May 2018 Update



Speed Hump

Description:

- Rounded (vertically along travel path) raised areas of pavement typically 12 to 14 feet in length
- Often placed in a series (typically spaced 260 to 500 feet apart)
- Sometimes called road humps or undulations

Applications:

- Appropriate for residential local streets and residential/neighborhood collectors
- Not typically used on major roads, bus routes, or primary emergency response routes
- Not appropriate for roads with 85th-percentile speeds of 45 mph or more
- Appropriate for mid-block placement, not at intersections
- Not recommended on grades greater than 8 percent
- Work well in combination with curb extensions
- Can be used on a one-lane one-way or two-lane two-way street



(Source: City of Boulder, Colorado)



(Source: PennDOT Local Technical Assistance Program)

ITE/FHWA Traffic Calming EPrimer: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Design/Installation Issues:

- ITE recommended practice - "Guidelines for the Design and Application of Speed Humps"
- Typically 12 to 14 feet in length; other lengths (10, 22, and 30 feet) reported in practice in U.S.
- Speed hump shapes include parabolic, circular, and sinusoidal
- Typically spaced no more than 500 feet apart to achieve an 85th percentile speed between 25 and 35 mph
- Hump heights range between 3 and 4 inches, with trend toward 3 - 3 ½ inches maximum
- Often have associated signing (advance warning sign before first hump in series at each hump)
- Typically have pavement markings (zigzag, shark's tooth, chevron, zebra)
- Taper edge near curb to allow gap for drainage
- Some have speed advisories
- Need to design for drainage, without encouraging means for motorists to go around a hump

Potential Impacts:

- No impact on non-emergency access
- Average speeds between humps reduced between 20 and 25 percent
- Speeds typically increase approximately 0.5 to 1 mph midway between humps for each 100 feet Beyond the 200-foot approach and exit of consecutive humps
- Traffic volumes diversion estimated around 20 percent; average crash rates reduced by 13 percent

Emergency Response Issues:

- Impacts to ease of emergency-vehicle throughput
- Approximate delay between 3 and 5 seconds per hump for fire trucks and up to 10 seconds for ambulances with patients

Typical Cost (2017 dollars):

- Cost ranges between \$2,000 and \$4,000

Speed Table/Raised Crosswalks

Description:

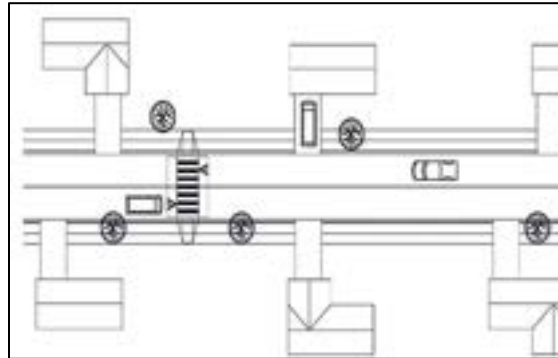
- Long, raised speed humps with a flat section in the middle and ramps on the ends; sometimes constructed with brick or other textured materials on the flat section
- If placed at a pedestrian crossing, it is referred to as a raised crosswalk
- If placed only in one direction on a road, it is called an offset speed table

Applications:

- Appropriate for local and collector streets; mid-block or at intersections, with/without crosswalks
- Can be used on a one-lane one-way or two-lane two-way street
- Not appropriate for roads with 85th percentile speeds of 45 mph or more
- Typically long enough for the entire wheelbase of a passenger car to rest on top or within limits of ramps
- Work well in combination with textured crosswalks, curb extensions, and curb radius reductions
- Can be applied both with and without sidewalks or dedicated bicycle facilities
- Typically installed along closed-section roads (i.e. curb and gutter) but feasible on open section



(Source: Google Maps, Boulder, Colorado)



(Source: Delaware Department of Transportation)

ITE/FHWA Traffic Calming EPrimer: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Design/Installation Issues:

- ITE recommended practice – “Guidelines for the Design and Application of Speed Humps”
- Most common height is between 3 and 4 inches (reported as high as 6 inches)
- Ramps are typically 6 feet long (reported up to 10 feet long) and are either parabolic or linear
- Careful design is needed for drainage
- Posted speed typically 30 mph or less

Potential Impacts:

- No impact on non-emergency access
- Speeds reductions typically less than for speed humps (typical traversing speeds between 25 and 27 miles per hour)
- Speeds typically decline approximately 0.5 to 1 mph midway between tables for each 100 feet beyond the 200-foot approach and exit points of consecutive speed tables
- Average traffic volumes diversions of 20 percent when a series of speed tables are implemented
- Average crash rate reduction of 45 percent on treated streets
- Increase pedestrian visibility and likelihood of driver yield compliance
- Generally not appropriate for BRT bus routes

Emergency Response Issues:

- Typically preferred by fire departments over speed humps, but not appropriate for primary emergency vehicle routes; typically less than 3 seconds of delay per table for fire trucks

Typical Cost (2017 dollars):

- Cost ranges between \$2,500 and \$8,000 for asphalt tables; higher for brickwork, stamped asphalt, concrete ramps, and other enhancements sometimes used at pedestrian crossings