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INTRODUCTION

The proposed Residential Traffic Management Program (*RTMP*) represents the continual effort and commitment of the City of Corpus Christi's Engineering Services Department (Traffic Engineering Division) to the safety and quality of life of Corpus Christi's residential neighborhoods. It is a collaborative effort of the Traffic Engineering Division and the Police Department to reduce the impact of traffic on neighborhoods. The *RTMP* provides a process for identifying and addressing problems related to speeding and cut-through traffic on residential streets.

The mission of this program is to enhance neighborhood safety and quality of life by working closely with neighborhoods to develop and implement innovative and effective traffic control solutions in the city's residential neighborhoods.

The City receives frequent complaints regarding speeding vehicles and reckless driving on residential streets, including residential areas abutting public parks. Residents in these areas are concerned about the potential for personal injury and property damage as a result of the speeding and sometime reckless traffic. Neighborhood residents and groups often times perceive All-Way STOP control and speed bumps as the best solutions to reducing speeding and cut-through traffic problems. Although the STOP control solution is periodically implemented in Corpus Christi, unwarranted STOP sign installations must be approached cautiously, as driver-disrespect of STOP signs may result. Speed bumps, which must be distinguished from speed humps, are not installed on city streets.

On-the-spot enforcement of the speed limit by Police Departments is the most effective means of causing driver conformance to speed limit regulations; however, limited resources do not allow such enforcement on a regular and permanent basis. To overcome these problems many cities are choosing alternative neighborhood traffic control measures. Some such traffic calming devices include the traffic circle, speed humps, diverters, and cul-de-sacs. These alternative traffic management measures have been effectively used to address residential area traffic problems in many cities in Texas and across the nation.

The *RTMP* recognizes the usefulness of alternative traffic control measures in solving neighborhood traffic problems. Working toward program objectives, this report focuses primarily on the speed hump on neighborhood streets experiencing frequent speeding and/or excessive thru traffic problems. Information from cities that have installed speed humps in residential areas show that their implementation to be successful in reducing speeds on local streets without affecting the safe operation of motor vehicles traversing the device. Test installations in Corpus Christi (over a 10-year period) concur with this finding.

Therefore, despite their novelty, the bottom line is that the devices have performed a very useful function and effective solution at a nominal cost and with a lessening impact on demands for police enforcement and all-way STOP sign installations.

The guidelines that are outlined in this report provide a basis for establishing the installation criteria for speed humps, including traffic diverters and mini traffic circles. Through the *RTMP*, residents can become actively involved in the decision-making process on projects involving their neighborhoods. The possibility of sharing the cost of identified traffic controls is an ingredient of the *RTMP*. Actual measured traffic data on each potential project street -- including remedial traffic accidents, daily traffic volume, peak hour traffic volume, travel speeds and development on or near the street that would encourage an above average amount of pedestrian traffic -- will be the established criteria for prioritizing streets and determining the level of financial participation, if any, required of the street residents. In addition, the *RTMP* aims at continued research into other techniques to address neighborhood transportation problems.

It is important to note that the implementation of traffic calming devices through the *RTMP* can also impact emergency response vehicles by increasing their response times. The implementation of this plan might also cut off apparatus water supply in some neighborhoods, and could injure patients and paramedics not secured while working in rear modules of ambulances. Therefore, it is essential that the overall process of determining the placement of any traffic calming device include the Police and Fire Departments in the planning and evaluation process. Eligibility requirements proposed for the *RTMP* requires that each of the Police and Fire Departments approve locations being considered for traffic calming devices.

Liability Issues

The issue of government liability is a primary concern in decision-making on traffic calming devices on city streets. Commons questions are:

- What if we block access to a street block and a fire rages on?
- What if we install speed humps and a motorcyclist or other vehicle travels out of control?

The answers reached in most communities is that there is little or no exposure, provided the selected traffic calming measures are well-designed, well-signed, well-marked and illuminated, and well-documented. Traffic calming programs following a rational planning process are important in minimizing legal challenges.

How Have Neighborhood Residents Reacted?

Research has shown that most places surveyed on the results of traffic calming program report that traffic calming is a big winner politically. Most results have shown that traffic calming programs are very effective and permanent; therefore, lessening demands for temporary, short term police enforcement. Public support for traffic calming is also evidenced by the relatively few cases in which traffic calming measures have been removed. One reason for this is the show of neighborhood support usually required to install measures in the first place.

The Objective . . .

is to develop a Residential Traffic Management Program which will:

-
- improve neighborhood livability by meaningful mitigation of the problems caused by excessive non-resident traffic and excessive speeding
 - include community input and a process for cost participation to facilitate neighborhood traffic safety improvements
 - allow for proven traffic calming techniques
 - identify reasonable funding mechanisms, including resident participation in costs
 - establish a clear framework for qualifying candidate locations
 - promote safe and pleasant conditions for residents, bicyclists, pedestrians, and transit riders on residential streets
 - make efficient use of City resources by prioritizing traffic calming projects
 - reduce the burden on Police traffic enforcement within residential neighborhoods so that its resources can more effectively be utilized at high traffic volume and high traffic accident locations

Today's Residential Traffic Situation

-
- Speeding beyond the 30 mph limit
 - Externally generated cut-through traffic due to prevalence of grid neighborhood street networks and limited number of effective collector streets in certain areas of the city
 - Difficulty in backing out of driveways
 - Hit-and-run accidents with on-street parked cars
 - Concern with safety of children playing in front yards, sidewalks and in playgrounds abutting neighborhood collector streets
 - Noise

Typical Requests

- **Slow - Children At Play** signs
- **No Thru Traffic** signs
- **Speed Limit** signs
- All-Way **Stop** signs
- Speed Bumps/Speed Humps
- Police enforcement of speed limit
- Street Barricades
- One-Way Streets

Slow - Children at Play Signs

- Ineffective in reducing accidents
- Ineffective in reducing speeds
- Motorists familiar with the street seldom see children in the street and thus routinely ignore the warning.

No Thru Traffic Signs

- Unenforceable
- Ineffective in reducing cut-through traffic
- May *invite* cut-through traffic

Speed Limit Signs

- Ineffective in reducing *operating* speeds
- Motorists drive at the speed they feel comfortable driving
- Violators using exceptionally excessive speeds ignore speed limit signs

Unwarranted All-Way STOP Signs

- Poor compliance by familiar motorists
- Create disrespect for *red octagon* sign
- Speeds between signs can actually increase
- *Texas Manual on Uniform Traffic Control Devices*: “Stop signs should not be used for speed control.”

Police Enforcement

- Occasional enforcement provides temporary relief
- Regular enforcement is more effective, but unrealistic
- Requires police resources more pressed to enforce traffic regulations at higher-volume, high accident locations and school zones

Traffic Calming Devices

- Speed Humps (not Bumps)
- Diverters and Semi-Diverters
- Traffic Circle
- Raised Intersections
- Chicanes (Alignment Shifts)
- Chokers (Midblock Constrictions)
- Center Island Narrowing
- Raised Crosswalks
- Passive (Signed) Access Regulations

Speed Humps: Used to slow vehicle speeds. Speed humps are used in a series or at spot locations to reduce speeds along a length of street.

- \$1,500 - \$2,000 each
- 12 feet long (cross-section width)
- Variable height and (normally 3 inches high) cross-section (parabolic, flat top) for various speed tolerances
- More effective than speed bumps and “rumble strips”

U.S. Cities with Speed Humps

- | | |
|---------------------|-------------------------|
| • Boston, MA | • Seattle, WA |
| • Columbus, OH | • Toledo, OH |
| • Oklahoma City, OK | • Washington, DC |
| • Omaha, NE | • Wichita, KS |
| • Orlando, FL | • Dallas, TX |
| • Palo Alto, CA | • Austin, TX |
| • Phoenix, AZ | • Houston, TX |
| • Sacramento, CA | • San Antonio, TX |
| • St. Louis, MO | • Numerous other cities |

Diverters

- Intended for addressing ***non-resident, cut-through*** traffic problems
- Designed to make cut-through route either impossible or unattractive and arduous compared to alternative use of through streets
- Requires care so as to not simply relocate problem onto other residential streets, ***requiring examination of entire neighborhood street system***, and possibly two or more diverters in subdivision
- More effective on gride street networks

Mini Traffic Circles: Raised islands placed in an intersection with the primary purpose to slow high-speed traffic and to reduce reported accidents. Most effective when constructed in a series.

- Results in a more aesthetically-pleasing (landscaped) appearance
- More costly than speed humps and diverters, \$10,000 per installation
- Requires maintenance for landscaping
- Very effective for line of sight reduction on long, straight streets
- Results in more vehicle delay than speed humps
- Results in speed reduction without access or turning restrictions

INSTALLATION POLICY

General

The purpose of this policy is to provide guidelines for the application of “traffic calming devices” (i.e., speed humps, traffic diverters, and mini-traffic circles), each representing proven approaches to control vehicular traffic speed, and to reduce unnecessary “thru traffic” along a residential roadway. The City of Corpus Christi has tested installations of speed hump devices since the mid-1980's. A passive form of regulation and control, time-restricted access restrictions, is also discussed as a potential application in lieu of physical controls.

PHYSICAL CONTROLS

Speed Hump:

A speed “hump” is a gradual rise and fall of pavement surface across the width of the roadway. It is intended that the speed hump be the primary traffic calming feature implemented under the guidelines of the RTMP. Two common designs of speed humps include (a) parabolic humps - 12 feet long with a maximum height of three to four inches, and (b) flat-top humps - 22 feet long having a 10-foot long and 3 inch high plateau with 6-foot long circular arc approaches. A speed hump differs from a speed bump, the latter of which is more abrupt -- having a height of three to four inches over a length of one to three feet. Due to gentle vehicle rocking, speed humps cause some driver discomfort and result in most vehicles slowing down at humps and between properly spaced successive humps.

Research has shown that speed humps are effective in safely reducing speeding along a roadway. There is, however, a potential for traffic diversion onto neighboring streets as a result of motorists avoiding the speed hump street.

In order for speed hump installation to be effective, their use should be in accordance with carefully established traffic engineering criteria and documented facts for the street(s) under consideration. As is the case with all traffic control devices, proper installation will normally result in compliance and safe driving practices. This policy provides criteria and procedures for installation of safe and effective speed humps. It also allows residents affected by a proposed hump to participate and provide input in the installation process.

Traffic Diverter:

A traffic diverter (or diagonal directional island) is a raised traffic island placed diagonally across an intersection to **prevent “thru” traffic** flow across the intersection. This device would force all traffic entering the intersection to make right or left turns onto the intersecting street, dependent on the orientation of the diverter, although semi (partial) diverters may also be considered to block through traffic but allow more flexible turning movements. Unlike the speed hump, a traffic diverter causes definite and direct traffic diversion from one street onto another street. Therefore, its main purpose would be to discourage and/or eliminate excessive traffic flow on a residential street and will not be installed on a neighborhood

collector street.

The effects of a traffic diverter are more dramatic on the adjacent street network (and possibly nearby subdivisions) than the speed hump. Therefore, its selected application must be more critically analyzed with respect to the entire subdivision street network. Under no circumstances should a diverter be approved for a location if it is anticipated that the through traffic problem would only result in the targeted traffic being diverted only to another residential street or subdivision rather than to a nearby collector street and/or arterial street. ***Therefore, for proper redistribution of traffic to a through street, it may be necessary to provide diverter devices on other abutting streets in consideration of the entire subdivision.*** Further, a diverter or semi-diverter would only be considered by the City in exceptional cases and would only be installed with the agreement of not less than 75% of the affected (petitioned) neighborhood residents.

In order for the traffic diverter to be effective and safe, it must be a highly visible device, including the use of advance warning signs. Upgraded street lighting would also be necessary at the intersection. It is also important that diverters (or semi-diverters) be designed to allow passage of bicyclists. A low maintenance type of landscaping may also be considered for diverters to aide in breaking up the line-of-sight for approaching motorists.

Mini Traffic Circle:

The mini traffic circle is a small version of an intersection “round-about”, typically with a 20- to 25 diameter, of circular or oval shape, including landscaping (a tree and/or shrubbery). The mini traffic circle is very popular in the northwest region of the United States, and is used for speed reduction, volume reduction, and traffic accident reduction purposes. Like the traffic diverter, location of the mini traffic circle is restricted to intersections and generally results in less effect on midblock traffic speeds.

Cost of the mini traffic circle is significantly greater than for a speed hump or diverter, primarily related to the usual cost for modifying intersection corner radii and landscaping. Therefore, its application is much more restrictive to the desire to incorporate aesthetical treatment and line-of-sight reduction (on long, straight street sections). Use of this device generally requires the ability of the neighborhood group to commit to continued maintenance of the landscaping. Like the traffic diverter, in order for the mini traffic circle to be effective and safe, it must be highly visible, including use of advance warning signs. Existing intersection lighting may need to be upgraded at the intersection.

PASSIVE CONTROL

In some cases, physical traffic calming (speed humps, diverters, or mini traffic circles) may not be practical for any number of reasons. An optional passive control may be considered in the form of time-regulated access restrictions. This control is more appropriate for cases where through traffic patterns have established along a residential street for which viable, alternative routes exist on other nearby streets more suited for collection and distribution of neighborhood traffic. Although the residents on the street being controlled would have their access to the street equally affected, normal two-way traffic would continue to occur on the street for

residents leaving their homes.

Mechanics of Access Restrictions. Very simply, street access restrictions would be implemented through installation of “DO NOT ENTER” signs with designated hours of application. Enforcement by the Police Department would be necessary, initiated by the observations of residents on the street.

Eligibility Requirements

All of the following criteria should be satisfied for a street to be considered eligible for speed hump, traffic diverter, or mini traffic circle installation once the City has received a citizen request for residential traffic calming. Specified criteria is listed separately for time-regulated access restrictions.

Operational and Geometric Requirements of the Street -- Consideration of Physical Devices

- Only functionally-classified “residential” and “neighborhood collector” streets having not more than one travel lane in each direction and not more than 40-foot in width (measured from back-of-curb to back-of-curb) shall be considered for installation of traffic calming devices. Any functionally-classified “through street” identified in the City’s Code of Ordinances Section 53-251 or other street which has function to substantially serve through traffic immediately abutting residential subdivisions shall not qualify.
- A diverter traffic calming devices shall not be installed on a functional neighborhood collector street.
- The street shall have a posted or prima facie speed limit of 30 mph or less determined in accordance with the City’s method of establishing speed zones.
- A street must be shown to have an average (85th percentile [%]) travel speed above the legal speed limit to be eligible for a speed hump or mini traffic circle.
- Speed humps and traffic diverters shall not be located in a horizontal curve or on a vertical curve where visibility is restricted.
- The street should have curb and gutter. Consideration may be given to streets without curb and gutter if it determined that street drainage can be accommodated and that it will be possible to prevent vehicle run-arounds.
- The street must be approved by each of the Fire Department and Police Department for installation of the traffic calming device. After a petition or request is received, and upon determination by the Traffic Engineering Division that a street or streets have the necessary physical and geometric characteristics to qualify for a traffic calming device, a layout of the subdivision will be forwarded to the Fire and Police Departments for their

identification of streets which must be kept free of any traffic calming devices. Unless each of the Fire and Police Department approve a traffic calming on the project street, no physical traffic calming devices will be allowed on the project street.

- If the street is a transit route, it should be reviewed and approved by the Corpus Christi Regional Transportation Authority (RTA).
- The average daily two-way traffic demand on the street shall be not less than 400 vehicles per day (averaged over not less than a three weekday time period).
- Traffic calming device will not be installed in front of an opponent's property.
- Mini traffic circles necessitating additional right-of-way will be considered only at locations where the property owners agree to dedicated easements for the widened corners.

Operational and Geometric Characteristics of the Street -- Consideration of Passive (Time Regulated Access Restriction) Devices.

The following basic criteria would be used to determine justification for an access restriction:

- a time regulated access restriction will be limited to not more than six hours during any one day.
- petition initiated by and signed by 90% of property owners abutting the street block under consideration,
- street must be functionally-classified residential street (excluding neighborhood collector streets),
- traffic demand on the street exceeds 750 vehicles per day (average weekday),
- peak hour through traffic on street exceeds 50% of the total peak hour traffic,
- The 85th-percentile [%] traffic speed on the street exceeds the legal speed limit,
- City Traffic Engineer determines that an equally acceptable and reasonable alternative traffic route of higher functional classification is available to accommodate traffic denied access at the restricted street and would not negatively impact any other residential street.

Speed Hump, Diverter and Traffic Circle Location

A speed hump, traffic diverter or traffic circle shall not be located in front of or immediately to the side of a property if the occupant objects to its placement, or, in the case of multiple dwellings, if majority of the households on the property object to its placement.

Design, Construction, and Maintenance

Design standards and installation procedures for speed humps, traffic diverters, mini traffic circles and related features, such as signs and pavement markings shall be prepared by the Traffic Engineering Office (Refer to [Appendix C](#)). Construction of speed humps, traffic diverters and mini traffic circles will be administered by the Traffic Engineering Office in conjunction with the City's Street Service Department or by contract installation, at the discretion of the City. The City of Corpus Christi will maintain the speed humps and traffic diverters and all related features. Landscaping within mini traffic circles shall be approved by the City's Department of Park & Recreation and maintained, through mutual letter of understanding with the organized neighborhood association, by the project applicants.

Speed Hump Removal and Alteration

The process for speed hump or traffic diverter alteration or removal requested by the residents is the same as the process for installation, except that there will be no City participation in the cost incurred. A petition approved by the neighborhood association, documenting that at least two-thirds (2/3) of all the households and businesses adjacent to the speed hump or traffic diverter street are in favor of the devices' removal, will be required.

In case the Traffic Engineering Office determines that an unforeseen problem has resulted due to the hump, diverter or mini traffic circle, it may be redesigned or removed by the City. In such case, the City will bear the full cost of removal and restoration of the street to original condition.

CALMING DEVICE STUDY PROCESS

The following items describe the procedure to be followed for speed hump or traffic diverter installation.

Project Request

Request for speed hump or traffic diverter installation can be initiated by any one individual, group of residents, or neighborhood association. A request may be sent in writing to:

Residential Traffic Management Program
[Department of Engineering Services](#)
Traffic Engineering Division
P. O. Box 9277
Corpus Christi, Texas 78469-9277

Preliminary Review of Citizen / Neighborhood Request

- After a request for a traffic calming device has been received, City staff will conduct an initial investigation of the street's eligibility in regards to the operational and geometric characteristics ([Eligibility Req.](#)). The Fire and Police Department will be forwarded a copy of the petition and subdivision layout, following determination of the initial investigation that the basic criteria is satisfied, for these department's review and specification of any streets which should not have calming devices.
- If the operational and geometric requirements for eligibility are not met, or if the Fire and Police Departments do not approve the request, the street will not be considered for the traffic calming device and the requester(s) will be notified.
- If after initial investigation it is determined that the street qualified for the traffic calming device, the petition and an endorsement statement for the neighborhood association (if applicable) will be mailed to the requester(s). The project requester(s) will be responsible for circulating the petition in the petition area.
- If the approved petition and endorsement statement for the neighborhood association (if applicable) is received by the specified date, City staff will conduct a field investigation and collect preliminary data, including traffic volumes and speeds.
- The street will be placed on the list of streets eligible for the traffic calming device installation. A priority ranking will be assigned to the street according to Project Prioritization Criteria ([Appendix A](#)).

Petition Requirement / Process

The petition area may be extended to include nearby streets which may see an increase in traffic as a result of this project. This “petition area” will be defined by the City’s Traffic Engineering Office. It is intended that the petition is to be presented by residents on a project block section or block sections, dependent on the perceived impact the traffic calming device(s) would have on upstream and downstream block sections.

- A petition from the residents and business owners within the defined petition area documenting that at least two-thirds of all households adjacent to the project street support the installation of a traffic calming device for the study to proceed further. Multi-family dwellings with more than four units will be counted as one household, with the property owner or manager representing the household. If a household is occupied by a renter, the property owner of that household is responsible for signing the petition. Consideration of mini traffic circles will only be considered for petitions from organized neighborhood (property owner) associations including a letter stating the long term commitment of the association for continual maintenance of any approved landscaping within the traffic circle.
- A statement from the neighborhood association endorsing a mini traffic circle and its commitment to continually maintain any landscaping on the mini traffic circle, if the mini-circle is the targeted calming device.

Citizen Cost Responsibility

The cost for speed hump installation (including signs, pavement markings, and if necessary, special features) may be shared between the City and the residents according to the cost share criteria (Refer to [Appendix B](#)).

- The residents’ cost share is that percentage of the total cost that is not the City’s responsibility. One or more residents may pay this share or it may come from other private sources -- the exact manner of which would be left to the residents.
- Residents are given the opportunity to pay for the full cost of approved traffic calming device installation, regardless of a determination of partial City funding, in order to expedite the cost of installation(s).
- City staff will submit a statement to the requestor(s) of each approved project indicating the estimated total installation cost, City’s cost share (if any), residents’ cost share (if any), and the project’s ranking on the priority list. If the project does not receive high enough priority to receive City funding, yet still satisfies the City’s eligibility requirements ([Page 11](#)) and accumulates at least four (4) criteria ranking points, residents will have the option to voluntarily pay for the full installation cost and expedite the traffic calming device installation.

- For projects eligible for partial City funding, it will be the responsibility of the requester(s) to ensure the residents' cost share is deposited with the City not less than ninety (90) days prior to the planned date of installation. If the City does not receive the residents' cost share within this time, the project will be removed from the priority list. In such case, a new petition will have to be submitted if the neighborhood wants to be considered for installation of a traffic-calming device in the next fiscal year. However, other guaranteed payment procedures may be offered to cover the residents' cost share, at the discretion of the City.

Further, residents in approved Community Development Block Grant zones may have their share of the project funded through Community Development Block Grant funds, contingent on Council approving an annual project element for the Residential Traffic Management Program.

Field Study / Project Prioritization

Speed hump, traffic diverter, and mini traffic circle projects satisfying the above criteria will be prioritized on a citywide basis and will be implemented on the basis of available funding. This would ensure the most efficient allocation of the City's resources. The projects will be ranked according to the criteria developed by the Traffic Engineering Office (Refer to [Appendix A](#)). The project prioritization criteria is subject to revision with time.

Funding for Approved Traffic Calming Projects

- It is intended that City funds will be allocated once a year, immediately after the Residential Traffic Management Neighborhood Program budget request is prepared by the Engineering Services Department. Eligible funding sources to cover the City's share of a project may come from any number of sources, including the City's General Fund (Operating Budget), capital improvement funds, Street Trust Fund, Community Development Block Grant Program or an additional / new revenue source. During a fiscal year, City funding will proceed in descending order from the top of priority list. Cost sharing criteria ([Appendix B](#)) will be used to determine the residents' share of the installation cost. Project requests received during a fiscal year (with completed studies) shall be eligible for funding during the same fiscal year.
- During the formulation of each fiscal year budget, the Department of Engineering Services shall recommend an annual operating budget for the Residential Traffic Management Program based on pending eligible projects waiting to be undertaken plus additional projects estimated to be requested for the budget year. The City Council will approve an annual operating budget for each fiscal year.
- Of the City's annual allocated funds, which may vary from year-to-year, **70%** will be reserved for projects requiring one hundred percent (100%) city financing. The remainder of the allocated City funds will be reserved for projects that require cost sharing by the residents. The funding split of **70%** and **30%** is subject to revision based on the need to

undertake highest priority projects. City funding participating will proceed in descending order from the top of the priority list until all annual funds are allocated to projects.

- Once the project is listed on the priority list, it will be considered for funding up to three consecutive years. If after three years a project has not been constructed (whether due to limited funds or a low priority rating), a recertification of support for the traffic calming device will be required. This time limit ensures that the project request has not become obsolete due to changing traffic conditions and/or support of current residents in the area. The project requester(s) and the neighborhood association will be notified when the three year time limit expires. Recertification of the petition may result in the project receiving a different (higher or lower) relative priority with other approved projects. If the recertification process fails to support the project, the project will be removed from the priority list. A new request may be made to re-enter the project after six months of the recertification effort, with the usual procedures being followed.

Calming Device Installation

Upon receipt of residents' share (if any) and allotment of City's share (if any), the selected traffic calming device will be installed as scheduling permits. Once funds have been committed for a particular project, the funding will not be withdrawn unless so requested in writing by the petitioner(s). The construction of the traffic calming device and the associated placement of signs and markings will conform to the current design standards as established by the Traffic Engineering Division.

Appeal Process

- Any citizen, group of citizens, or neighborhood association contesting the point ranking, relative priority to other approved traffic calming projects, or disapproval rendered by the City Traffic Engineer, and/or the interpretation or application of any criteria, described herein, by the City Traffic Engineer for a requested or petitioned traffic calming project may file an appeal with the City Traffic Engineer on the prescribed appeal form, within ten (10) days after a notice of project rating and related decision regarding the requested or petitioned project has been provided to the requesting citizen, group of citizens or neighborhood association.
- In such case of an appeal, a hearing shall be scheduled before the City's Transportation Advisory Committee in its first available monthly meeting following receipt of the appeal, or contingent on satisfying proper legal notice requirements for posting of the Committee's meeting agenda. Upon conducting the hearing, including any supplemental information the appellant may wish to present, the Transportation Advisory Committee shall make a recommendation to the City Council on the appeal.
- The City Manager shall set the date of such hearing before the City Council, and the City Council will have final authority on the appealed project rating and decision for what traffic calming devices, if any, will be authorized.

APPENDIX A

FIELD STUDIES / PROJECT PRIORITIZATION CRITERIA

Traffic calming device projects will be ranked according to the criteria established in this section. Projects will be assigned points on the basis of existing speeds and volumes, average number of speed related accidents documented by the Corpus Christi Police Department (CCPD), proximity of abutting public park area, and presence of school and/or other special pedestrian generators in the area. The project accumulating the greatest number of points will be considered to have the highest priority. Among projects with the same rank, higher priority will be given to the one with the earliest application date. However, the City may revise priorities on the basis of continuing traffic accident experience which has occurred beyond the time the initial evaluation and priority ranking had been completed.

1. Accident Criteria

All accidents considered for point assignment must have causative factors (including, but not limited to excessive travel speed) which have a strong likelihood for mitigation by one or more traffic calming devices.

Total Number of Reported Accidents Over a Period Of 3 Consecutive Years	Points Assigned
Less than 2	0
2	1
3 - 4	2
4 - 5	3
6 - 7	4
8 or more	5

2. Speed Criteria

The speed criteria considers the percentage of vehicles traveling greater than 7 MPH over the posted speed limit. This information will be obtained from a series of radar speed studies on the project street on normal weekday periods during peak hour traffic periods (7:00am - 9:00 am, 11:00 am - 1:00 pm, and 4:00 pm - 6:00 pm).

Percentage of Vehicles Traveling Greater than 7 MPH Over Posted Speed Limit	Points Assigned
0	0
1 - 2	1
3 - 4	2
5 - 6	3
7 - 8	4
9 - 10	5
11 - 12	6
13 - 14	7
15 - 16	8
17 - 18	9
19 - 20	10
Greater Than 20 %	11

3. Traffic Volume Criteria

Traffic volumes (two-way) during any one of the normal peak hours and during the minimum three weekday study period are considered.

a. Speed Humps

Hourly Volume (vehicles/hour)	Points Assigned
Less than 50	0
51 to 100	1
101 - 200	3
201 - 300	5
301 - 400	7
greater than 400	9

b. Traffic Diverters and Mini Traffic Circles

Daily Volume Vehicles/Day	Points Assigned
less than 500	0
501 - 700	1
701 - 900	3
901 - 1,100	5
1,101 - 1,300	7
1,301 - 1,500	9
1,501 - 1,700	11
1,701 - 1,900	13
Greater than 1,900	15

4. Type of Neighborhood Criteria

Points will be assigned to the project if there are schools and/or special pedestrian generators (such as parks, elderly housing, community center, shopping areas).

Elementary school on project street.....3 points

Middle school on project street2 points

School within a 1000 ft. radius of the project street. 1 point

Special pedestrian generators within a 1000 ft.
radius of the project street (libraries, neighborhood
recreation centers, community center ballpark
complex, shopping mall or strip shopping center 1 point
for each facility

Absence of sidewalks on the project street. 1 point

No available functional paralleling arterial and collector
“thru” street within 1/4-mile 1 point

Public park within a 1,000-ft radius of the project street 1 point

APPENDIX B

COST SHARING CRITERIA

The cost for a traffic-calming device shall be shared between the City and the residents according to the following criteria. Points considered for cost share are based on points assigned for priority ranking.

Points from Priority Ranking	City's Cost Share
20 and above	100%
16 - 19	75 %
12 - 15	50 %
8 - 11	25 %
4 - 7	0 %

APPENDIX C

DESIGN STANDARDS

Speed Humps -- Dimension and Cross-Section

- Two types of speed hump designs, circular or flat-topped, may be considered. The circular speed hump will generally be approximately 12 feet long and have the cross-section of a segment of a circle with a maximum height of 3.5 inches at the center. The flat-topped speed hump will generally be approximately 22 feet long consisting of a 10-foot long plateau with 6-foot long circular arc approaches on either side. This flat-topped speed hump will be 3 inches in height.
- The cross-section design of a speed hump will depend on the traffic calming design speed objective for a particular project street. The following design speed objectives will normally apply:
 - 30 MPH Design -- for typical residential streets without any unique development or geometric features ***
 - 25 MPH Design -- for streets abutting public parks/playgrounds, on streets which have horizontal curvature designed for this speed, or other type development which in the opinion of the City Traffic Engineer may generate an above average level of child pedestrian activity
 - 20 MPH Design -- for street sections immediately abutting elementary schools or streets which have horizontal curvature designed for this speed
 - 15 MPH Design -- used only on approaches to street sections having horizontal curvature designed for this speed

***Note: The City Traffic Engineer may consider unusual levels of traffic accident experience to apply a design speed objective lower than 30 MPH on any typical residential street.

- On streets with curbs, humps should extend fully across the road from curb joint to curb joint. A 12-inch minimum taper may be considered for drainage. For humps installed on non-curbed roadways special treatment such as delineator posts or other approved traffic control device should be considered to prevent vehicle run-arounds.

Speed Humps -- Spacing and Location

Speed humps will usually be placed between 200 feet to 600 feet apart at the discretion of the City Traffic Engineer. Other spacing may be used based upon engineering judgement. The following guidelines will be considered when determining speed hump spacing, but may be adjusted at the discretion of the City Traffic Engineer due to local circumstances in each case.

- On single short blocks (less than 600-feet) a single hump positioned near mid-point will be considered.
- On single blocks of moderate length (601 - 1,200 feet), a two hump configuration will be considered.
- On very long single blocks (exceeding 1,200 feet), no more than four (4) humps may be considered.
- On lengthy continuous street segments or for humps provided over a series of blocks, interior humps may be placed 400 ft. to 600 ft. apart.

The following points should be considered when locating speed humps (or other traffic calming device):

- A speed hump will not be located in front of a driveway or within an intersection. Speed humps will not be located within 100 feet of an intersection.
- The first hump in a series should be installed within approximately 200 feet downstream of a stop sign.
- Speed humps will not be located over, or contain, manholes, or be located adjacent to fire hydrants or driveways.
- For humps located near drainage inlets the hump will be placed just downstream of the inlet. If this is not feasible, special treatment must be considered for drainage.
- If possible, humps will be located on property lines rather than directly in front of a residence.
- The advantage of existing or potential street lighting should be taken into account when determining hump locations.

Diverter and Traffic Circle Design Standards

A description of a typical mini-traffic circle design is given on [page 10](#). Variations may be made by the City Traffic Engineering Office dependent on specific roadway geometry and right-of-way limitations.

Traffic Control for Traffic Calming Devices

Traffic control consisting of signs, pavement markings and enhanced street lighting should be provided to advise roadway users of a speed hump's presence and to guide their subsequent action. Traffic signs and pavement markings should conform to the Texas Manual of Uniform Traffic Control and Devices (MUTCD) standards.

Removal Process for Speed Humps and Diverters

- Not until after a review of traffic characteristics, three (3) months after installation.
- Cost of removal to be 100% applicant's responsibility.
- Neighborhood meetings process again required.

TRAFFIC CALMING DEVICE PETITION

Location:			
<u>Contact Persons:</u>			
Primary -- _____			
Address: _____	Phone No: _____	Residence: _____	Work: _____
Secondary -- _____			
Address: _____	Phone No: _____	Residence: _____	Work: _____
Third -- _____			
Address: _____	Phone No: _____	Residence: _____	Work: _____

We, the undersigned hereby petition for the installation of speed humps or a traffic diverter on between _____ and _____ according to policies and procedures established by the Traffic Engineering Office.

Note: The street mentioned above will be considered for speed hump installation only if the signatures below represent **two-thirds or more** of all the households/businesses adjacent to the street. Only **one** signature from each household/business (apartment complex) will be considered.

Abbreviated Sample of Petition Sign-Off Form:

ADDRESS	NAME (PLEASE PRINT)	SIGNATURE	PHONE NUMBER		WHETHER OWNER or RENTER	OK IF INSTALLED IN FRONT OF MY RESIDENCE (Please Initial)
			HOME	WORK		