

TRAFFIC CALMING POLICY

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CITY OF BOCA RATON
201 WEST PALMETTO PARK ROAD
BOCA RATON, FLORIDA 33432

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EXECUTIVE SUMMARY

At the City Council Workshop on November 13, 2000, the City Council directed staff to pursue a revised traffic calming program that included the new “enhanced speed hump” feature as the only feature funded in neighborhoods requesting traffic calming.

The new “Enhanced Speed Hump” traffic calming feature provides an effective opportunity to address traffic calming in the City of Boca Raton in an efficient, timely, affordable, and aesthetically pleasing manner. The enhanced speed hump is a combination traffic calming feature that includes vertical deflection (a speed table), horizontal deflection (road narrowing), a change in pavement color and texture (paver bricks), and landscaping. Vertical deflection is a rise in pavement, or pavement undulation, such as a speed hump or speed table. Horizontal deflection is a change in roadway alignment and can be subtle, such as a roadway narrowing, or more severe, such as a chicane. A variation of the new feature using the same enhanced design, including the paver bricks, road narrowing and landscaping but without the vertical deflection, can be used on those roads designated as eligible for traffic calming but are primary access routes for emergency services and ineligible for features that have vertical deflections. The horizontal deflection will be maintained.

Other traffic calming features may still be available if the neighborhood association or property owners wish to pay for them, as long as plans for and installation of additional features are coordinated with City staff using the same voting procedures and policy guidelines. In addition, City staff may determine other traffic calming features are warranted outside this Traffic Calming Program for technical reasons. Otherwise, the enhanced speed hump feature will be the only features funded at this time by the City. Other traffic calming features may be considered in the future, after completion of the city-wide enhanced speed hump program.

Property owners adjacent to the proposed enhanced speed hump features will be responsible for irrigating and maintaining the landscaping on the sides of the feature in the swale areas. The City will pay for the installation of the feature and the adjustment of any irrigation systems during construction. Routine maintenance costs that arise, such as maintaining paver bricks, pavement markings or curbing, will be absorbed into the City’s existing annual operating budgets for ongoing roadway maintenance.

This revised Traffic Calming Policy will require the redesign of the current 10 neighborhoods on the waiting list who have voted on consensus plans under the previous Policy to include only the cost effective enhanced speed hump traffic calming feature. The revised Policy also includes new petition requirements and a detailed description of the implementation process for the streamlined traffic calming program.

INTRODUCTION

This Traffic Calming Policy reflects the continued commitment of the City of Boca Raton to address a wide range of community goals and objectives, which include transportation mobility, efficiency and safety. While our community strives to be more sustainable and livable, a comprehensive traffic calming program will help harmonize transportation mobility with other community values. This Traffic Calming Policy also helps further the goals of the City's Comprehensive Plan, create a safer community, promote alternate modes of transportation, enhance the street environment and improve the overall quality of life.

BACKGROUND AND HISTORY

The Neighborhood Improvement Study Commission developed the City's original Residential Traffic Calming Plan. This Commission was created by City Council Resolution No. 79-96, in April 1996, with the specific duty to make recommendations to the City Council regarding neighborhood improvement and revitalization. The Commission worked closely with City staff and traffic calming experts during the development of the Plan, which was reviewed and approved by City Council on March 18, 1997, by Resolution No. 37-97.

A revised plan was approved by City Council in March of 1999 by Resolution No. 47-99. The Traffic Calming Program was subsequently put on hold due to a long waiting list of neighborhoods who had petitioned for traffic calming and a high estimated cost of proposed traffic calming consensus plans. A "Traffic Calming Program Comprehensive Report and Recommendations" was distributed to City Council in June 2000 and discussed at the City Council Workshop on August 21, 2000. At the City Council Workshop on November 13, 2000, the City Manager and staff received direction from City Council to streamline the traffic calming process and reduce costs through a revised traffic calming program that included a new "enhanced speed hump" traffic calming feature as the only feature available for funding in neighborhoods requesting traffic calming. This Traffic Calming Policy is therefore the third version of the City's Traffic Calming Program. As City Codes, policies, strategies and goals change, further revisions to this Traffic Calming Policy may be necessary in the future.

PURPOSE AND GOALS

The City of Boca Raton's Traffic Calming Policy is designed to address traffic concerns in residential areas of the City, such as speeding or cut-through traffic. The City's traffic calming program, working in cooperation with neighborhoods, promotes the preservation of the residential character of the City's neighborhoods and helps to improve the overall quality of life.

The Traffic Calming Program incorporates the following goals:

- Create safe and attractive streets;
- Enhance accessibility for all roadway users including pedestrians and bicyclists;
- Reduce the negative effects of motor vehicles on the environment; and
- Increase the quality of life in the City.

Traffic calming goals should be developed with specific objectives planned on an area-wide basis. These traffic calming goals are achieved by including the following objectives:

- Achieve safe, slow speeds for motor vehicles;
- Reduce transient traffic;
- Improve the safety and the perception of safety on the street;
- Reduce and redirect the need for traffic police enforcement; and
- Reduce crash frequency and severity.

The City's traffic calming goals and objectives are achieved by meeting minimum criteria in established principles and planning concepts to ensure proper implementation. The traffic calming principles are therefore achieved by adopting the following:

- Traffic calming planning and development process must be community-based and supported;
- Traffic calmed streets must incorporate a degree of self-enforcement of motor vehicle speeds through the design of physical features;
- Traffic calming must directly affect driver behavior; and
- Traffic calming must improve the safety of the street for all roadway users, including pedestrians and bicyclists.

DEFINITIONS

“85th Percentile Speed” shall mean that speed at which 85 % of the free flowing vehicles are traveling, or below.

“Arterial Road” shall mean a roadway of considerable continuity used primarily as a main traffic artery and having the capability of carrying high volumes of traffic. An arterial roadway may have restricted access and provide a high degree of mobility. Arterial roadways within the City of Boca Raton are not eligible for traffic calming features through the Traffic Calming Policy described herein.

“City Thoroughfare Plan” shall mean a plan or map maintained by the City, which indicates those roadways, designated as major arterial and collector roads, minor arterial and collector roads that serve as primary access routes for emergency services and private roads. Those roadways not designated shall be considered minor collectors and local roads. The Thoroughfare Plan may be revised as needed by the City.

“Collector Road” shall mean a road that carries traffic from minor roads to arterial roads and may include the principal entrance roads of a residential development and roads for circulation within such development.

“Consensus Plan” shall mean a proposed traffic calming plan detailing the locations of specific traffic calming features, developed by the Traffic Engineering Division in cooperation with a committee of property owners representing the neighborhood area. The consensus plan will become the traffic calming plan proposed for the neighborhood during a final vote.

“Enhanced Speed Hump” shall mean a roadway design feature that provides vertical and horizontal deflection in the roadway, textured pavement, and landscaping. It consists of a flat-topped speed hump with colored bricks on the top, a roadway narrowing, and additional landscaping with curbing on each side of the feature.

“Generally Affected” shall mean all properties within a neighborhood area, the boundaries of which are determined by City staff, petitioning for traffic calming including those adjacent to roads on which traffic calming features may not be located.

“Local Road” shall mean a roadway with relatively low traffic volumes that serves short trips at low speeds. For purposes of this program, local roads are typically residential roadways with a posted speed limit of 25 mph.

“Neighborhood Improvement Study Commission (NISC)” shall mean a group of neighborhood representatives, created by City Council in 1996 through Resolution No. 79-96, with the specific duty to make recommendations to the City Council regarding neighborhood improvement and revitalization. The NISC has since been disbanded.

“Primary Access Route for Emergency Services” shall mean those roadways, determined by Fire-Rescue Services that serve as primary access into neighborhood areas requiring their services. For purposes of the Traffic Calming Program, “Primary Access Routes for Emergency Services” shall not be eligible for traffic calming features that include vertical deflections such as speed humps and speed tables. These routes shall be shown on the City Thoroughfare Plan.

“Property Owner” shall mean the person(s) or agency that possesses title to a parcel of land, as determined by the Palm Beach County Property Appraiser. Renters or residents other than the property owner are not included.

“Specifically Affected” shall mean properties adjacent to roadways within a neighborhood area, as determined by City staff, petitioning for traffic calming that are directly affected by traffic problems and the installation of traffic calming features. A specifically affected property must have at least one side or portion of the parcel abutting the roadway on which traffic calming features are being considered.

“*Speed Hump*” shall mean a geometric roadway design feature that provides a vertical deflection in the roadway. A *speed hump* is not a traffic control device, but rather a traffic calming feature that is a physical part of a roadway’s design characteristics.

“*Traffic Calming*” shall mean the combination of mainly physical features that reduce the negative effects of motor vehicle traffic use, alter driver behavior and improve conditions for non-motorized street users.

“*Transient Traffic*” shall mean non-local vehicular traffic using neighborhood streets as a short-cut to other areas or to by-pass an alternate route on a main collector and/or arterial; also referred to as “cut-through” traffic.

“*Xeriscape*” shall mean landscaping planted in accordance with the City’s Landscape Design Standards Manual. Xeriscaping incorporates limited use of turf, efficient irrigation design, soil improvements, effective use of mulches, and drought tolerant plantings.

APPLICABILITY

City residents are often very concerned about traffic problems, real or perceived, in their neighborhood. Reports from citizens are sometimes the only way the City becomes aware of specific traffic concerns in residential areas. These concerns may involve speeding, transient traffic, real or potential risk from vehicle crashes, safety, or other issues. Because the character of residential neighborhoods is a city-wide concern, and because traffic calming programs affect daily living patterns of area residents and may involve public safety issues, the generally affected area (the whole neighborhood) should be informed and involved in the development of any plan which involves major change or expenditure of public funds. All residents in a neighborhood area are provided opportunities to offer their opinions on proposed traffic calming plans. A minimum number of specifically affected properties must then formally agree by voting on the proposed traffic calming plan in order for it to be implemented. Specifically affected residents are eligible for the formal vote because they live directly along the roads most affected by traffic problems and traffic calming.

In many cases, collector roads serve as primary access to residential areas for emergency vehicles. Arterial and collector roads within the City of Boca Raton and streets which function as local arterial or collector roads for the purpose of providing emergency services are detailed on the City of Boca Raton Thoroughfare Plan. Streets which are classified as or function as major collector or arterial roads shall not be considered under these traffic calming guidelines.

TRAFFIC CALMING FEATURES

ENHANCED SPEED HUMP FEATURE

The “enhanced speed hump feature” provides an opportunity to address traffic calming in an efficient, timely, affordable and aesthetically pleasing manner. The design of an enhanced speed hump feature is detailed in the Engineering Design Standards Manual, therefore eliminating the need for an engineering consultant to perform the design of each neighborhood traffic calming project. The enhanced speed hump traffic calming feature described through this program is specifically designed only for neighborhood, residential streets. This new feature consists of four key traffic calming elements:

- *Vertical deflection.* The type of speed hump used is a speed table, or a speed hump with a flat top and sloped tapers on each side. The rise in pavement is approximately 3 to 4 inches in height and encourages the reduction of vehicular speeds.
- *Horizontal deflection.* The width of the travel lanes will be reduced in each direction. The overall reduction in pavement width is reinforced with curbing on the sides of the road along the length of the feature.
- *Landscaping.* Trees, bushes, shrubbery and/or other will be installed on each side of the feature using Xeriscaping techniques. The City’s Landscape Architect will maintain a list of acceptable plantings to be used and determine which types of plantings would be best suited harmonizing the feature with the adjacent neighborhood area. The installation of landscaping on the sides, in conjunction with the raised curbing, will prevent drivers from driving around the feature in the swale areas and help reinforce the narrowed pavement width, also narrowing the drivers’ field of vision and encouraging them to reduce travel speeds. The curbing also helps protect the landscaping.
- *Change in texture and color.* Paver bricks used on the flat-topped portion of the speed hump feature aid in notifying the driver of a change in pavement design and provides an aesthetic value.

Enhanced speed hump traffic calming features are most effective if applied in a series. The final locations of traffic calming features shall be determined by City staff. Locations will depend on adequate spacing between features (approximately 400 to 500 feet apart), driveway connections to the road right-of-ways, side streets, and drainage. Selection of locations must also take into consideration existing infrastructure such as fire hydrants, drainage inlets, utility boxes, manholes, poles, etc.

An alternative to the enhanced speed hump feature that may be used on roadways designated as primary access routes for emergency services is the same feature as designed except without the raised hump. Because primary access routes for emergency services are eligible for traffic calming but not features that include vertical deflections, this feature without the raised hump provides a feasible alternative.

In addition, there may be occasions where the physical characteristics of the existing roadway limits the use of the enhanced speed hump feature. The design of the enhanced speed hump feature is flexible to accommodate special circumstances. These situations will be reviewed on a case by case basis. For example, the roadway narrowing aspect of the enhanced speed hump feature may be wider or narrower depending on existing roadway widths or other conditions. The length of the feature without the speed hump may be modified, such as for an entrance feature. Each special circumstance or unique situation shall be identified and reviewed individually by Traffic Engineering as appropriate. On rare occasions, an enhanced speed hump feature may require minor design modifications if it is to be located on a roadway with unique characteristics, such as an unusually wide residential roadway or a street with curbing. In no case shall the design of the enhanced speed hump feature be altered significantly enough to require a consultant to be hired to perform design work.

OTHER TRAFFIC CALMING FEATURES

The enhanced speed hump feature shall be the only feature funded at this time by the City. Other traffic calming features will not be funded through the Traffic Calming Program under this policy. Other traffic calming features may be considered in the future, after completion of the city-wide enhanced speed hump program. Approximately two (2) years after the first phase of the enhanced speed hump installations is complete, City staff will again readdress the overall Traffic Calming Policy and program to see if any traffic calming problems in the neighborhoods still exist that may be better resolved by other solutions or traffic calming features. City staff may also determine other traffic calming features are warranted outside this Traffic Calming Program for technical reasons. To address serious traffic safety problems, the City Manager may direct the installation of traffic calming features without requiring a vote.

Other traffic calming features may still be available if the neighborhood association or property owners wish to pay for them. The design and locations of any additional or alternative traffic calming features shall be coordinated with and approved by City staff. Property owners or Neighborhood Associations desiring traffic calming features other than the enhanced speed hump feature shall be subject to the process described in this Traffic Calming Policy, using the same voting procedures and policy guidelines. A written agreement with the City providing for the design costs, construction costs, and maintenance will be required. All additional costs associated with special designs or a neighborhood traffic calming plan that incorporates features other than the enhanced speed hump feature shall be the responsibility of the petitioner(s).

Developers may also contribute traffic calming features or funds to the traffic calming program. For a development or redevelopment project that impacts an adjacent residential roadway in a neighborhood that has petitioned for traffic calming, the developer may install one or more traffic calming features, such as an enhanced speed hump feature, mini-traffic circle or other during the construction of the project. If it is not feasible for a developer to install traffic calming as part of their project, the developer may donate funds

to the City to be used for traffic calming in the adjacent affected neighborhood area through the Traffic Calming Program. Any contributions to the traffic calming program by developers will be on a voluntary basis. Any traffic calming features proposed to be installed by a developer shall be coordinated with and approved by City staff and may be subject to the same voting procedures and policy guidelines described under this Traffic Calming Policy.

Traffic calming features other than the enhanced speed hump feature that may be considered by the City at a future time or that may be additional features funded by a group of property owners or Homeowners Association, or a developer, are described briefly below. All designs are subject to the approval of the City Traffic Engineer.

- *Mini-Traffic Circles*: Raised circular structure constructed in an intersection that horizontally deflects the flow of traffic entering the intersection to slow traffic and help reduce the number and severity of crashes. All approaches become a “Yield” condition.
- *Mid-Block Islands*: Elongated, curbed median islands constructed approximately midway in a roadway segment to separate driving lanes and reduce lane widths.
- *Entrance Way Features*: Treatments that provide landscaping at the entrances to the neighborhood to help give identity and remind drivers to maintain slow speeds throughout the residential area. Also referred to as “gateway features”.
- *Roadway Narrowings*: Reduction in pavement width of a roadway section while maintaining two-way traffic. Landscaping planted in conjunction with the narrowing reinforces the impression of limited pavement area and narrows field of vision.
- *Intersection Redesign*: Consists of several different possible designs based on the specific needs and unique characteristics of the location. May involve eliminating excess pavement areas, creating horizontal deflections on approaches or realigning intersection to 90-degrees.
- *Speed Humps*: Besides the enhanced speed hump feature, there are other types of speed humps. A standard speed hump is a parabolic, curved hump 12 to 14 feet long (not to be misunderstood as a “speed bump”). Another type of speed hump with a flat top, or speed table, used as a raised pedestrian crosswalk must be reserved for areas near playgrounds or schools.

LANDSCAPING

Landscaping shall incorporate native species wherever possible and the need for irrigation will be minimized through the use of “xeriscape” landscaping techniques. The landscaping installed on each side of the enhanced speed hump features shall be determined by the City’s Landscape Architect and be compatible with the adjacent area. To reduce time and resources expended on individual landscaping designs for each enhanced speed hump feature, the Landscape Architect shall maintain a list of trees, shrubs and other vegetation alternatives that may be used during the installation of each

feature. Existing adjacent irrigation systems shall be adjusted as needed as part of the construction of the enhanced speed hump features.

MAINTENANCE

The property owner adjacent to the enhanced speed hump traffic calming features shall be responsible for the maintenance and irrigation of the landscaping. The City will contact the adjacent property owner in an attempt to obtain agreement for the installation of the enhanced speed hump features. The City of Boca Raton shall maintain the roadway, signs, curbs, pavement, decorative paver bricks, and pavement markings within the public right-of-way in accordance with existing standard maintenance operations.

If a property owner does not agree to have an enhanced speed hump feature installed adjacent to their property, the City shall attempt to find an alternative location or modify the traffic calming plan. If all reasonable attempts have been made to find an alternative location or traffic calming solution with no success and the enhanced speed hump feature must be installed at a location where the adjacent property owner does not agree, that adjacent property owner shall still be responsible for the maintenance and irrigation of the landscaping pursuant to City Code Section 25-251 that states “the owner and/or occupant of the [adjacent] private property shall maintain the abutting swale areas”, as would be the case if the City altered the swale for other reasons.

A neighborhood, property owner(s), or developer who funds the installation of traffic calming features other than the enhanced speed hump features, shall be responsible for any maintenance, irrigation and watering required for landscaping associated with those features. A maintenance agreement may be required to be executed in writing by the City. Should the association or property owner fail to maintain the landscaping or irrigation or pay any required charges, the City may remove the landscaping or other features.

A neighborhood or property owner that opts to plant landscaping in the roadway right-of-way other than the xeriscape landscaping installed with each traffic calming feature shall do so subject to City approval through the existing permitting process.

SIGNAGE

Standard signing and pavement markings for enhance speed hump features shall be used as detailed in the Engineering Design Standards Manual and in accordance with the Federally adopted *Manual of Uniform Traffic Control Devices* (MUTCD). Signage shall include a yellow warning sign at each feature. In the event a series of enhanced speed hump features are installed without intersecting side street conflicts, one advance warning sign may be used to warn motorists of the speed hump series. Minimal additional signage and/or pavement markings, such as white edgeline striping and raised pavement markers (small reflector buttons) may also be necessary.

In an effort to reduce the number of overall warning and regulatory signs in neighborhoods, a sign shall be used where a comprehensive traffic calming plan has been constructed on a neighborhood-wide basis. The sign will be a specially designed regulatory sign designating a speed limit of 20 miles per hour in traffic calmed residential areas and installed at every entrance to the traffic calmed neighborhood where in the past a speed limit sign typically existed. This sign will be an effort to combine regulatory speed limit signage with some of the necessary advanced warning signage for traffic calming. Traffic Engineering staff will review each neighborhood traffic calming plan for signage needs and will develop a signage plan accordingly.

IMPLEMENTATION

PROCESS

The following eight steps are followed throughout the Traffic Calming Program:

1. **Inquiry:** Initial contact made by residents inquiring about traffic calming; petitions, forms, and other documents will be available for distribution.
2. **Petition:** After staff reviews minimum petition requirements (*35% of generally affected property owners*) with residents, petition submitted. Mini-committee formed of residents in neighborhood area.
3. **Traffic studies:** Accident history reviewed and speed and volume traffic studies performed.
4. **Develop Plan:** Neighborhood traffic calming plan developed by City staff in coordination with mini-committee.
5. **Adjacent Property Owners Agreement:** Property owners adjacent to each proposed enhanced speed hump feature contacted to obtain agreement.
6. **Public meeting:** One public information meeting held with all generally affected residents to disseminate information on proposed traffic calming plan and receive input, after which the neighborhood traffic calming plan will be finalized.
7. **Vote:** Specifically affected property owners vote. *Minimum return of 50% of ballots required, and of those 60% must vote in favor of project* to proceed with implementation.
8. **Construction:** If result of vote is favorable, neighborhood traffic calming plan is placed on a schedule for the installation of the traffic calming features.

1. Inquiry

Upon initial contact made by a resident or property owner inquiring about traffic calming in their neighborhood, City staff will discuss the program procedures and petition requirements. Staff will then determine the area affected and neighborhood boundary lines. Typically a resident calls concerning traffic problems on one specific roadway section. However, if the implementation of traffic calming on one roadway section may transfer the problems to a parallel local roadway, the affected neighborhood area shall be addressed as a whole. This affected neighborhood area is called the generally affected area and will be determined by Traffic Engineering staff, taking into consideration the natural, constructed, and traffic boundaries of an area. Natural and constructed boundaries include features such as the Intracoastal Waterway, environmental preserves, lakes, canals, railroads, airports, interstate highways, etc. Traffic boundaries include arterial and collector roadways, such as Federal Highway, Glades Road, Palmetto Park Road, Camino Real, Ocean Boulevard, etc.

Minimum petition requirements may be discussed and explained with inquiring parties via the telephone. A preliminary field review by Traffic Engineering staff may be required and a meeting with the inquiring parties may also occur if needed. Petition forms, informational brochures and maps detailing the generally affected area boundaries shall be provided to the inquiring party.

2. Petition

Staff will provide information on the boundaries of the generally affected neighborhood, minimum petition requirements, petition forms, and any informational brochures to residents wishing to pursue traffic calming in their area.

A mini-committee shall be formed for the petitioning neighborhood area made up of two (2) to six (6) property owners who live in the neighborhood. They may be generally or specifically affected property owners. The mini-committee shall have one liaison that serves as the main contact person between the City and the committee. The mini-committee will, among other duties, coordinate with City staff on the development of the traffic calming plan, help contact property owners adjacent to potential enhanced speed hump feature locations, distribute appropriate information to neighbors as needed, be available to answer questions from area residents about traffic calming, help organize the public meeting, and present the proposed traffic calming plan to their neighbors.

In order for a neighborhood to proceed with the traffic calming program, a petition shall be submitted to the City signed by property owners from a minimum of 35% of the total number of generally affected properties within the neighborhood boundaries determined by City staff. In the event there are multiple owners of a property, only one property owner shall be counted for that parcel. The purpose of obtaining signatures from owners of a minimum of 35% of the generally affected properties is to verify there are a significant number of residents interested in traffic calming before proceeding through the remainder of the traffic calming program. Signatures from generally affected property owners within the neighborhood boundary are required so that representatives from multiple streets within the neighborhood may be included. Although only specifically affected property owners may vote on the final traffic calming plan, all generally affected property owners should remain informed during the development process and be provided opportunities for input.

3. Traffic studies

After the petition has been received, City staff will schedule traffic studies on the critical roadways to determine average 85th percentile speeds and average daily traffic volumes. A review of the crash history will also be performed for a period of three years. Traffic Engineering staff will analyze the traffic data and evaluate it based upon the criteria and point system detailed in Appendix A. Points will be totaled per street. In areas involving multiple roadways, the neighborhood will be prioritized based on the street with the

highest single point value. After this analysis, petitioning neighborhood areas which score less than 2.5 points minimum from the combined ranking scale for crash history, traffic volumes, and vehicle speeds will be not eligible for the construction of traffic calming features through this program. Petitioning neighborhood areas which score a minimum of 2.5 points or more will be eligible for the construction of the enhanced traffic calming speed hump features through this program and may proceed with the remaining steps described herein. If initial traffic studies show that there are other potentially impacted roads in the area, additional traffic studies on those roads may need to be conducted.

In order to provide comparable results for developing the priority of neighborhood traffic calming plans, all traffic studies should be performed during the peak season. The peak season shall include the months of November to April and when school is in session. This requires petitions to be received in groups by year. Petitions may be received at any time during the year. However, a petition received after March or April, may have to wait until the next peak season to be studied and ranked, unless otherwise agreed to proceed in a different month by the neighborhood mini-committee. In some cases, the neighborhood mini-committee, if in agreement with City staff, may determine the neighborhood does not experience a significant increase in seasonal traffic and performing studies outside the peak season would result in similar conclusions without waiting for the next peak season.

Petitioning neighborhood areas which score less than the minimum 2.5 points who wish to repetition at a later time shall wait a minimum of **one (1)** year from the date the previous petition was received by City staff before submitting a new petition for the same area, unless City staff determines a change in traffic conditions has significantly impacted the neighborhood area since the previous petition was reviewed. Such significant changes may include new construction, roadway improvements, changes in land use, or similar changes creating regional impacts. Petitioning neighborhood areas which score less than the minimum 2.5 points may pursue alternative education methods to increase awareness of traffic concerns within the neighborhood as described in the “Alternative Education and Enforcement Tools” Section toward the end of this Policy.

4. Develop Plan

City staff will develop a proposed traffic calming plan. The traffic calming feature available for use in the plan is the enhanced speed hump traffic calming feature (described in further detail in the “Enhanced Speed Hump Feature” Section above). For a particular roadway section, the enhanced speed hump feature may be most effective if applied in a series. The locations will be determined by City staff and will depend on several factors, including but not limited to adequate spacing between features (approximately 400 to 500 feet apart), driveways connections to road right-of-ways, intersecting side streets, horizontal or vertical curvature of the roadway, and drainage. Selection of locations must also take into consideration existing infrastructure such as fire hydrants, drainage inlets, utility boxes, manholes, poles, etc.

The plan will be developed in coordination with the mini-committee. This will enable the committee to remain informed of where enhanced speed hump features are proposed to be located and how the locations were determined. Input from the mini-committee will also be sought during the decision-making process, and the committee will help contact area residents during the review of alternative enhanced speed hump locations. They will also help field questions from residents. Field reviews or committee meetings may occur as needed.

5. Adjacent Property Owners Agreement

The property owners will be responsible for the landscaping maintenance and irrigation associated with the enhanced speed humps as per the Engineering Design Standards Manual and City Code Section 25-251 (see also the above Maintenance Section in this Policy). The City will adjust any adjacent sprinkler systems for the property owner in the swale areas, which are currently maintained by the adjacent property owners.

City staff will attempt to obtain agreement with property owners adjacent to proposed enhanced speed hump features prior to finalizing their locations. City staff will coordinate the mini-committee and adjacent property owners for potential speed hump locations. The mini-committee will also help determine potential speed hump locations by polling residents, canvassing the neighborhood, contacting directly with property owners, etc. Upon a property owner's agreement, verification will be made in writing clarifying his or her responsibilities for irrigating and maintaining the landscaping on the sides of the feature in the swale areas, although the City will pay for the installation and adjustment of any irrigation systems during construction. If a property owner does not agree to the installation of an enhanced speed hump feature adjacent to their property, City staff will try to find an alternative location without compromising the effectiveness of the traffic calming plan for the neighborhood. However, the ultimate locations of the enhanced speed hump features shall be determined by City staff, and adjacent property owners shall still be responsible for the landscaping maintenance and irrigation pursuant to existing City Code Section 25-251 requirements.

6. Public Meeting

All generally affected residents within the neighborhood area being considered for traffic calming will be mailed notice of a public hearing so that their views and opinions may be expressed regarding the proposed traffic calming plan for their neighborhood. The notice will include the purpose of the public meeting, identify the mini-committee members, and a description of the proposed traffic calming plan for the neighborhood.

Notification of the public meeting will be made by regular United States Postal Service mail. In addition, the residents and/or Homeowners Association initiating the request for traffic calming may produce and distribute flyers at their own cost. Copies of information brochures describing the traffic calming program and the enhanced speed hump feature

may be available to the mini-committee and/or Homeowners Association for distribution to affected residents in the area.

On occasion, signs advertising the public meeting may be posted at strategic sites in the neighborhood, and news releases may be provided to local media. Any other advertisements initiated and paid for by neighborhood residents must be approved in advance by the City. Meeting notice should be accomplished at least 20 days before the public meeting date.

The public meeting will be conducted jointly by City staff and the mini-committee. City staff will:

- Briefly present background information on traffic calming in general and the City's traffic calming program and process
- Review the boundaries of the generally affected area and identify specifically affected properties
- Review results of the traffic studies from the affected area and other applicable data as needed
- Explain the further steps required to implement the plan

The mini-committee will:

- Review the neighborhood concerns which initiated the traffic calming process and any other the background information as needed
- Help present the proposed traffic calming plan developed for the affected area

At the public information meeting, official minutes may be taken if deemed necessary by City staff. City staff present at the meeting will receive and record any concerns of the residents in the generally affected area. After the public meeting, City staff and the mini-committee will consider any concerns brought up at the meeting and investigate any issues necessary before the neighborhood traffic calming plan is finalized.

7. Vote

A notice which describes in detail the finalized proposed traffic calming plan will be mailed by the City to the owner of each parcel of property in the generally affected area, defined by the boundaries previously determined by City staff. Those specifically affected parcels eligible to vote will receive a ballot along with a copy of the finalized traffic calming plan. Property ownership will be determined from the most recent general update of the records of the Palm Beach County property appraiser. The notice will contain the following information as applicable:

- written and graphic description of the proposed traffic calming plan
- summary of data which support implementation of traffic calming
- description of boundaries of the generally affected area
- identification of specifically affected properties

- estimated cost of the traffic calming plan and funding sources
- timeline for implementation of traffic calming plan
- notice that a minimum of 50% of the specifically affected properties must return a vote and that of those returned, at least 60% must vote in favor of the project for it to go forward
- an official voting ballot form for specifically affected properties eligible to vote to be returned to the City of Boca Raton, and the voting deadline.

All notices and voting ballots will be mailed by the City of Boca Raton through regular United States Postal Service to the mailing address on record for the property owner. In order for the proposed traffic calming plan to be implemented, at least 50% of the properties in the specifically affected area must return a vote and at least 60% of the votes returned from the specifically affected properties must be in favor of the proposal.

Each specifically affected property parcel shall be counted as one vote. In the case of multiple property owners for one parcel, only one vote signed by one of the owners shall be counted for that property. In the case of a property owner owning multiple properties within the specifically affected area eligible to vote, one vote for each property owned will be accepted. If an agency or group entity (such as a real estate company) is the official property owner on record other than an individual person, an official agent of the company may sign the official voting ballot.

Only official ballots will be accepted; no copies or duplicates will be accepted. A replacement ballot may be provided upon the property owner's request. A property owner requesting a replacement ballot shall contact City staff directly, and another official ballot will be prepared by City staff and mailed through regular United States Postal Service to the address of the property owner on record. No replacement ballots will be mailed to alternative addresses. Replacement ballots may also be given out in person to a property owner if proper identification and proof of homeownership is provided. If a new homeowner is not included on the most recent general update of the Palm Beach County property appraiser's records, they may request a replacement ballot upon providing proof of homeownership. In such a case, a duplicate ballot for the same parcel mailed to the previous homeowner will not be accepted.

Votes are final once received by City staff. If a property owner wishes to change his or her vote after submitting the official ballot to the City and it is within the voting period, the property owner may request a replacement ballot as previously described. No ballots or replacement ballots shall be received after the official voting deadline has passed. Votes mailed to the City must be received before the expiration of the voting period.

The neighborhood liaison and committee members will be responsible for contacting area residents eligible to vote in order to obtain the required majority approval. This may include follow-up contact with owners of any vacant specifically affected property or the owners of a specifically affected property that may reside out of town. Updates may be given to the area liaison if requested on the status of the number of votes received before the end of the voting period. If needed, the City will provide the neighborhood liaison

copies of mailing lists or a list of those property owners who have yet to return a ballot as the voting deadline approaches, as appropriate.

The voting period shall be 60 calendar days from the date of the official ballot. No votes will be accepted after the expiration of the voting period. A one-time extension of an additional 30 days may be granted according to the following criteria: If, at the time of the original voting deadline, at least 35% of the votes from specifically affected properties have been returned and 45% of the votes returned are in favor of the traffic calming plan, a one-time extension may be requested by the neighborhood mini-committee in order to obtain the required minimum 50% return and 60% majority. The extension must be requested by the neighborhood traffic calming mini-committee or the neighborhood liaison contact with the City within five (5) calendar days from the expiration of the voting period. If an extension is granted, the additional 30 days will be measured from the previous voting deadline.

Voting ballots may be returned by mail directly to the City or may be collected by the neighborhood area liaison and hand delivered to the City prior to the voting period deadline. At the conclusion of the voting period, official ballots received by City staff will be verified. If at least 50% of the specifically affected properties have returned ballots and 60% of those returned are in favor of the traffic calming plan, the neighborhood traffic calming project will be implemented and scheduled for construction. After the conclusion of the voting period, City staff will notify the area liaison, mini-committee, and/or applicable Homeowner's Associations of the final voting results. It will be the responsibility of the area liaison and the mini-committee to notify all specifically and generally affected property owners of the results, whether by canvassing the neighborhood or including the results in an area newsletter. City staff will provide any available information to the area liaison for this purpose, but will not directly contact each property owner in the traffic calming neighborhood.

If the necessary voting majority has not been achieved within the full voting period provided or the results of the vote are not in favor of the proposed traffic calming plan, the area shall not be reconsidered for traffic calming for a period of **three (3)** years from the date the petition was received by City staff, unless the City Traffic Engineer determines that a significant change in area conditions affecting traffic has occurred. Such significant changes may include new construction, roadway improvements, changes in land use, or similar changes creating regional impacts. A new petition will be required after the three-year waiting period to initiate the traffic calming process again.

8. Construction.

If the vote results in favor of traffic calming, the locations of the enhanced speed hump features will be forwarded to staff or a contractor hired by the City to install the features. The contractor will then coordinate with City staff on scheduling the installation of the enhanced traffic calming features. If there are multiple neighborhoods who have voted for

traffic calming, a waiting list may be developed by City staff until such time as the features can be constructed.

During the initial stages of construction, necessary temporary signs or other warning devices may be installed as needed to alert drivers to an upcoming traffic calming project or that traffic calming features have been installed in a neighborhood.

PRIORITIZATION

A point system shall be used for evaluating and prioritizing traffic calming requests. The point system criteria are based on traffic volume studies, 85th percentile vehicular speeds, and historical crash report data. The point total or rank received will determine the priority for the allocation of funding and scheduling construction of traffic calming projects. A minimum of 2.5 points is required for a traffic calming petition to be considered for traffic calming. Petitioning neighborhood areas which score less than 2.5 points will not be eligible for traffic calming through this program unless the neighborhood area Homeowner Association or group of property owners provide full funding for a proposed traffic calming project (see “Funding Section”, below).

A priority list for the purposes of distributing funds for traffic calming projects and scheduling them for construction shall be maintained by the City, that lists the order of neighborhoods to received traffic calming. One priority list will be maintained, as opposed to a separate priority list used previously for each year petitions were received. Future petitions received will be ranked according to severity based on the above-mentioned traffic engineering studies.

Each year, the priority list will be readdressed to re-rank those petitions who have been waiting for one or more years. One additional point will be added to the point total of those petitions waiting more than one year from the date the voting period expired. If a neighborhood petition waits a second year or more, it will receive an additional point that next year the prioritization list is readdressed.

It is anticipated that multiple neighborhoods may develop proposed traffic calming plans through the Traffic Calming Program simultaneously and can be scheduled for construction on an on-going basis. Therefore, the prioritization list shall be used as a guideline for the installation of enhanced speed hump features. However, if one neighborhood requires additional time to complete the development of their traffic calming plans but has a higher point total than another neighborhood that has completed its plan and voting process, construction of the traffic calming project should proceed in the neighborhood ready to go so that the Traffic Calming Program continues in an efficient and timely manner citywide. It is anticipated that the streamlined process described within this Traffic Calming Policy will greatly reduce the time it takes to schedule construction of an approved traffic calming plan and relying on the prioritization list to schedule projects if a waiting list develops should rarely be necessary.

FUNDING

The City supports the Traffic Calming Program on an on-going basis by allocating funds annually through the budgetary process. Enhanced speed hump features are the only traffic calming features funded by the City of Boca Raton through the Traffic Calming Program described in this Policy.

Developers may also contribute funding on a voluntary basis to a specific project in an effort to address community concern. For a development or redevelopment project that impacts an adjacent residential roadway in a neighborhood that has petitioned for traffic calming, the developer may install one or more traffic calming features, such as an enhanced speed hump feature, mini-traffic circle or other during the construction of the project. If it is not feasible for a developer to install traffic calming as part of their project, the developer may donate funds to the City that will be reserved for use when the City installs traffic calming in the adjacent affected neighborhood area. Any contributions to the traffic calming program by developers will be on a voluntary basis.

In cases where a Homeowner Association or group of property owners within a neighborhood wish to provide full funding for traffic calming, the proposed traffic calming project shall be coordinated with and approved by City staff. Although the timeline for implementation may be reduced, the proposed traffic calming project shall be subject to the same petitioning and voting procedures and policy guidelines described under this Traffic Calming Policy. An engineering permit will be required for the Homeowner Association or group of property owners to proceed with hiring a contractor on their own to construct the traffic calming project.

SPECIAL TRANSITION PERIOD

Ten (10) neighborhoods have participated in the traffic calming process under previously approved Traffic Calming Policies to the extent that they have developed consensus traffic calming plans and voted, but have been on a waiting list for funding. The following special process has been established for addressing how they should proceed.

1. A Mini-Committee shall be created for each neighborhood that meets with City staff to revise their neighborhood traffic calming plans with the new enhanced speed hump traffic calming feature. This will include additional time and field reviews by City staff necessary to determine enhanced speed hump locations in coordination with the Mini-Committee, similar to Step 4 of the process described above.
2. Adjacent property owners will be contacted with the help of the Mini-Committee and City staff will verify their agreement to maintain and irrigate the feature in writing as per Step 5 of the process described above. In the event the redesigned plan results in one or more streets with significant revisions and City staff feels it is necessary, additional approval from property owners may be required. The Mini-committee may be required to canvass the neighborhood or parts of it.
3. One public informational meeting will be held with each petitioning neighborhood to give property owners the opportunity to submit their opinions or concerns regarding changes to the traffic calming consensus plan. The meeting notice will be mailed out to all *generally* affected residents. The Mini-Committee and City staff will then take the suggestions received at the meeting under advisement when developing the final revisions to the plan.
4. The finalized redesigned plan will then be mailed out to all *generally* affected residents with an explanation of the revisions and the new status of the traffic calming program. This mailing will be for informational purposes, and should be signed by both City staff and the Mini-Committee. No vote will be required. However, stipulation will be made for an “Upset Rule” (see below) and explained in the mailing.
5. If there is no objection and if a petition has not been received according to the Upset Rule after **45 days** from the date of the mailing, the redesigned plan becomes final.
6. The priority ranking already established for the 10 neighborhoods will remain. Construction will then be scheduled for the installation of the enhanced speed humps in the revised consensus plans. Future traffic calming petitions will be ranked and prioritized after these 10 already approved neighborhoods from the previously approved Traffic Calming Policy that have been and are currently on the waiting list.

UPSET RULE

The “Upset Rule” is to be applied only to the 10 neighborhoods with approved consensus plans and awaiting funding. (It is not needed for future petitions as they will participate in the regular voting process.) If any resident disagrees with the redesigned plan, the upset rule will provide an avenue to contest the revisions. The purpose of the upset rule is for those people who object to the proposed revisions that differ from the already approved consensus plan, not for people who oppose traffic calming in general. If residents wish to oppose the redesigned plan:

1. They must submit a petition signed by 35% of the *generally* affected neighborhood (similar to the petition requirements described in Step 2 of the process, above).
2. The petition must be received within **45 days** from the date of the mailing of the final redesigned plan.
3. The petition must state why and to what specific features they are objecting so that the consensus plan can be readdressed again by the Mini-Committee members and City staff. Another mailing of the redesigned traffic calming plan will then be necessary if any changes are made to the revised consensus plan.

EXPIRES

This “Special Transition Period” shall only be applicable to and shall expire after completion of the 10 already approved neighborhood traffic calming projects developed under previous Traffic Calming Policies.

OTHER TRAFFIC CALMING PROGRAM ISSUES

CONTINUAL MONITORING

After the construction of each neighborhood traffic calming plan is complete, follow-up traffic studies will be performed to continuously monitor the project for effectiveness and any remaining traffic problems for a period of **one (1)** year. A summary report of the results in each neighborhood may be compiled for informational purposes and copies distributed to the neighborhood Mini-Committee as appropriate.

ALTERNATIVE EDUCATION AND ENFORCEMENT TOOLS

Petitioning neighborhood areas which score less than the minimum 2.5 points from the combined ranking scale for crash history, traffic volumes, and vehicle speeds will not be eligible for the construction of traffic calming features through this program. However, information on education methods to increase awareness of neighborhood traffic concerns shall be provided to the petitioning property owners and neighborhood liaison. These alternative education tools include, but may not be limited to, the following:

- Neighborhood awareness brochures on traffic issues, such as speeding and its impacts, prepared and approved by the City, and distributed by area residents;
- Increased neighborhood enforcement of speeding by the Police Services Department; and
- Mobile speed-alert sign posted by Police Services at problem locations to advise motorists of the speed at which they are traveling.

REMOVAL OF TRAFFIC CALMING FEATURES

The property owners of an area in which traffic calming has been implemented may request the removal of the traffic calming features. A petition to remove the traffic calming features may be considered by City staff, subject to the following conditions:

- The traffic calming features have been in place for at least **three (3)** years;
- A request for the removal of the traffic calming features must be signed by at least 35% of the generally affected property owners within the same neighborhood boundaries used for the petition initiating the original traffic calming process;
- A 60% majority vote from the specifically affected property owners is required for the removal, with a minimum of 50% of the votes returned (same voting requirements as above for installation); and
- The removal of one or more traffic calming features does not make the remaining overall traffic calming plan less effective, unless the entire traffic calming project is being petitioned to be removed.

If the City Manager has determined that specific traffic calming features are no longer fulfilling their intended purpose or that a traffic calming feature installed under these guidelines has become a hazard, City staff may arrange their immediate removal or work with the specifically affected property owners to develop alternate traffic calming plans.

RECONSIDERATION OF TRAFFIC CALMING PETITIONS

Should a neighborhood fail to achieve the required voting majority within the specified voting period, the area shall not be considered for traffic calming for at least **three (3)** years from the date the voting period expires. A new petition will be required after the three-year waiting period to initiate the traffic calming process again. The City may allow the area to submit a new petition prior to this three-year waiting period if it is determined that significant change has taken place affecting traffic conditions in the area. Such significant change may include, but not be limited to, new development, roadway modifications, and changes in land use or similar changes creating clearly defined neighborhood impacts.

GENERAL DEVELOPMENT CONSIDERATIONS

In an effort to encourage motorists to slow down and drive responsibly, traffic calming purposely introduces additional self-enforcing physical features in the design of the roadway to effectively change the design speed. Traffic calming features are generally implemented retroactively and traditional design standards may require interpretation and modification. There are, therefore, no liability risks associated with implementing traffic calming features and projects under appropriate circumstances. A set of guidelines and policies to follow, engineering judgement and coordination with neighborhood property owners are key elements in the development of traffic calming plans.

Traffic calming measures are design features, intended to modify the character of the roadway. They are not traffic control devices, and therefore State or Federal specifications, warrants or regulations may not apply.

EMERGENCY SERVICES

Studies show traffic calming features may cause delay in emergency response times to residences in neighborhood areas where traffic calming projects have been installed. Property owners participating in the Traffic Calming Program will be provided information regarding the potential delay of emergency services due to traffic calming features. However, traffic calming features and reduced vehicular speeds may also reduce the number of incidents requiring emergency services, due to the increased safety on the roadways within a traffic calmed area.

Fire-Rescue Services participates in the development and periodic review of the “City of Boca Raton Thoroughfare Plan” in an effort to minimize the impact on emergency response times. Accordingly, traffic calming is not permitted on roads designated as “Major Arterials/Collectors”. Traffic calming is limited to features that do not include vertical deflection on roadways designated as “Minor Collectors” and “Primary Access for Emergency Services”. Fire-Rescue Services determine those roads designated as “Primary Access Routes for Emergency Services”. The Police Department and Fire Services Department participate in the planning process and will be notified when and where the construction of traffic calming features occurs.

SIDEWALKS

In areas without sidewalks, the City may recommend that residents pursue the installation of a sidewalk in accordance with the special sidewalk assessment as outlined in City Code Section 23-162; or if the City determines that sidewalks are necessary for pedestrian safety, sidewalks will be installed by the City and the costs thereof shall be assessed against the abutting properties as outlined in City Code Section 23-162(3). If approved, construction of both traffic calming and sidewalk installation projects may be coordinated together to provide for the efficient use of resources. However, funding for sidewalks is not provided through the Traffic Calming Program and must therefore be pursued by a separate special assessment and petition process or other funding source.

LIGHTING

Street lighting installations shall not be required with the installations of traffic calming features in neighborhoods. Adequate signing and pavement markings will be installed with each feature that will be reflective at night to sufficiently warn and guide a motorists traveling over a traffic calming feature.

If the mini-committee and/or area property owners desire to request street lighting in areas where traffic calming is proposed to be installed and no street lighting exists, they may request the installation street lighting separately, through existing standard City and FPL (Florida Power a& Light) procedures. Street lighting installations will not be required in conjunction with this Traffic Calming Policy.

SUMMARY

The Traffic Calming Policy allows City staff and property owners in the City of Boca Raton to work together to develop neighborhood traffic calming plans. It also provides a fair and balanced prioritization process, a streamlined procedure for the development of traffic calming plans, a reduction in the number of required public meetings, a new enhanced speed hump feature, and reduced costs.

This revised Traffic Calming Policy shall serve as the supporting guidelines for the City of Boca Raton Traffic Calming Program. It supports the City of Boca Raton transportation, planning, environmental, economic and social goals, objectives and principles. City staff has also worked and will continue to work in cooperation with a neighborhood group, the Citizens Alliance for Traffic Calming (CATC) made up of representatives from each of the 10 traffic calming neighborhoods that have already approved consensus plans and have been on a waiting list.

The enhanced speed hump feature is the only feature to be funded through the Traffic Calming Program, thereby eliminating costs associated with the construction of other, more expensive features. It also eliminates the costs associated with hiring a consultant to perform the design work previously required for each traffic calming neighborhood. At the same time, the enhanced speed hump feature provides a great opportunity to address traffic calming in the City of Boca Raton in an efficient, timely, affordable and aesthetically pleasing manner.

APPENDIX A

RANKING SYSTEM

The following are criteria to be used for the evaluation of traffic data in neighborhoods petitioning for traffic calming. Each roadway will be analyzed individually within the petitioning neighborhood area according to the below criteria. The highest point value received on an individual roadway segment within the area petitioning for traffic calming will be the point total assigned to the neighborhood petition for the purposes of ranking and prioritizing.

Vehicular Travel Speeds:

85th Percentile Speeds on an average weekday

POINTS	85th % SPEED
0.5	26 to 29 mph
1	30 to 32 mph
1.5	33 to 35 mph
2	36 to 38 mph
2.5	39 to 41 mph
3	42 mph or greater

Motor Vehicle Traffic Volumes:

Average Daily Traffic (ADT) over 24-hours on average weekday

POINTS	ADT VOLUME
0.5	500 to 1100 vehicles per day
1	1101 to 1700 vpd
1.5	1701 to 2300 vpd
2	2301 vpd or greater

Crash Report History:

Review of reported traffic crashes over 3 year period

Crashes reported at intersections of the boundary area for a neighborhood receive half weight. Fatalities within a neighborhood area receive double weight

POINTS	AVG. CRASHES ANNUALLY
1	0.501 to 0.875
2	0.876 to 1.250
3	1.251 to 1.625
4	1.626 to 2.000
5	2.001 to 2.375
6	2.376 or greater