

## City of Belleair Beach Neighborhood Traffic Calming Policy

### INTRODUCTION

The City of Belleair Beach is committed to ensuring the overall safety and livability of residential neighborhoods. One way to meet this commitment is through a collaboration of City staff and property owners to manage traffic in neighborhoods and address documented traffic concerns. The City of Belleair Beach Neighborhood Traffic Calming Policy provides a process to request, evaluate, and implement appropriate traffic calming measures.

### CONSIDERATIONS

Traditional transportation improvements have generally focused on capacity, speed and safety. While these are still concerns, another dimension, traffic calming, is often added to maintain or restore the livability of a neighborhood. This is done by incorporating physical elements that prohibit and/or slow vehicular traffic. The Institute of Transportation Engineers (ITE) defines traffic calming as:

*“...the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for nonmotorized street users.”*

Unlike traffic control devices such as stop signs and speed limit signs which require enforcement, traffic calming measures<sup>1</sup> are self-enforcing. Traffic calming measures generally serve one of the following three functions<sup>2</sup>:

- Precludes through-traffic and only allows local traffic
- Discourages, but still allows through-traffic
- Allows through- and local traffic

Determining the appropriate type of traffic calming for a roadway requires coordination and consideration of how the existing roadway network functions. The City’s existing roadway network is a traditional layout<sup>3</sup> which:

- Allows distribution of traffic over a network of streets, thus reduces the need to widen roads;
- Creates a highly interconnected network that provides a choice of routes, thus providing options for detour routes and accessibility for emergency services;

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<sup>1</sup> Traffic Calming Measure - an element of a traffic calming plan selected from among those devices authorized herein for use within the city.

<sup>2</sup> Federal Highway Administration “*Traffic Calming State of the Practice*” (FHWA-RD-99-135)

<sup>3</sup> “*Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways*”, commonly referred to as “The Florida Greenbook,”

- Provides the ability to choose the most direct route to a destination, thus reducing the travel distance and the associated time and fuel;
- Creates smaller blocks of development that can be highly supportive of pedestrian, bicycle, and transit modes of travel;

Because of the layout of the City's road network, traffic calming measures that hinder the distribution of traffic may result in the need for widening other roadways, delaying emergency response time, or causing drivers to seek routes to bypass the traffic calming. For that reason, consideration of the function and type of roadway is necessary. Within the City's roadway network, the streets and roads are classified as local and arterial, depending on the use and function as described below:

- Local streets allow direct access to abutting property and characteristically have lower volume, lower speed, shorter trip lengths, and less through-traffic
- Arterial roads focus on the movement of higher volumes, speeds, trips lengths, and through traffic (e.g., Gulf and Causeway Boulevard etc.).

Due to the functional nature of the roadways, traffic calming measures are commonly used on local streets and in rare circumstances arterial roads.

## **GOALS AND GUIDELINES**

To balance the community's need for transportation mobility, efficiency, safety, and livability, the City's Neighborhood Traffic Calming Policy will be based upon the following goals and guidelines:

### **Goals**

- Provide and maintain a safe traditional roadway network.
- Maintain and/or improve neighborhood livability by reducing the impact of vehicular traffic on residential streets.
- Encourage citizen involvement in the neighborhood traffic calming process.

### **Guidelines**

- Encourage, but not require, through-traffic to use higher classification roads (i.e. arterial roads).
- Re-route traffic from one street to another of equal classifications if, and only if, the result is a more equal distribution of the traffic volumes. Shifting a traffic problem from one street to another or one neighborhood to another is not an acceptable alternative.
- Reduce the average speed of motor vehicles within neighborhoods to acceptable levels.
- Implement cost-effective measures for solving identified traffic problem(s).
- Improve safety for non-motorists in the City right-of-way.
- Preserve reasonable emergency vehicle ingress/egress.
- Maintain reasonable vehicular access. Traffic calming measures should encourage and enhance pedestrian and bicycle access to and throughout the neighborhood.
- City-owned local streets are eligible to be considered for traffic calming measures following this policy, guidelines, and criteria.

- County-owned arterial roads will only be considered for traffic calming measures on a case by case basis and must be sponsored by a City and approved by Pinellas County. The following petition and application process does not apply to arterial roads.
- The City may employ traffic calming measures, including but not limited to the ones listed in Appendix A, to achieve the objectives identified.
- The City shall follow the Neighborhood Traffic Calming Policy to ensure there is consistency and collaborative process for the community while maintaining the efficient use of funding.
- The City shall ensure that all projects receive input from area property owners and affected organizations.
- All projects shall receive City Council approval before installation of permanent traffic calming devices.
- An application for traffic calming on a road or street which does not qualify for traffic calming may be resubmitted after three years.

### **TRAFFIC CALMING PROCESS**

The four-step process to request a traffic calming study, review and consider the request, obtain consensus from the property owners within the traffic study area, and to implement the project is described below. The Applicant is responsible for the first and third steps.

**Step 1 – Neighborhood Contact Person or Applicant<sup>3</sup> Requests Study:** A Neighborhood Contact Person or Applicant may request a traffic calming study for a local or collector roadway. To request a study, the Applicant completes and submits a request form and petition to the Public Works Department. The petition must include the signatures of at least 50% of the property owners fronting the street on which the traffic calming study is requested. A copy of the request form and petition is provided in Appendix B. Please note that only roadways classified as local are eligible to be considered for traffic calming measures under this policy.

**Step 2 - Review and Consideration of the Request by City Staff:** City Staff will review the petition and application to evaluate and determine the eligibility of the request. During this process, Staff will keep the Applicant informed of the findings of the review. Staff will review the petition to ensure an adequate number of signatures have been obtained and gather data on site conditions. If both criteria are met, Staff will conduct a traffic study, and research traffic incidents for the subject roadway. The data will be used by Staff to classify the roadway and determine if traffic calming measures are appropriate. After determining that traffic calming measures are appropriate, Staff will prepare a conceptual traffic calming plan and hold a public information meeting. Based upon the results of the public information meeting, Staff will prepare a recommended traffic calming plan. These actions by City Staff are further described below.

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<sup>3</sup> Neighborhood Contact Person or Applicant – a property owner along the requested street who has submitted a request for the Traffic Calming Study and serves as a liaison between the City and the community.

**Eligibility:** To be eligible for traffic calming, all the following criteria must be met. If all criteria are met, in addition to the minimum number of signatures on the petition, the application continues in the review process. If all the criteria are not met, the application is closed, and the Applicant is notified that the road does not meet the requirements for traffic calming. To be eligible for traffic calming, the roadway shall:

- Be classified as a local or collector roadway
- Not be designated an emergency and evacuation route.
- Have no more than two travel lanes.
- Be under the jurisdiction of the City.
- Be at least 500 feet in length.

**Data Collection:** If the eligibility criteria mentioned above is met, the following data will be collected to determine roadway conditions.

- Site conditions: Visual survey to confirm that the roadway has proper signage, pavement markings and sight distance. Any irregularities will be corrected.
- Traffic Study: A traffic count<sup>4</sup>, speed study<sup>5</sup>, and classifications of vehicles using the roadway will be collected and recorded.
- Incident records: Crash records and other traffic incident reports will be collected.

**Traffic Conditions:** The collected data will be reviewed and used to document traffic conditions and determine if traffic calming measures are appropriate for the roadway. The four types of traffic conditions and recommended traffic calming are outlined below.

Type I - Minor Excessive Speed and Volume: This designation is provided for roadways with traffic that meet the following conditions:

- The measured 85<sup>th</sup> percentile speed<sup>6</sup> is between 5 and 8 miles per hour above the posted speed limit and;
- Average annual daily trips (AADT) are between 50 and 500 vehicles per day (vpd).

Roadways with minor excessive speed and volume (Type I) will be addressed through enforcement and education. The Pinellas County Sheriff's Office will be notified of the situation and requested to increase enforcement on a random basis during the hours when most the speeding violations occur. Additionally, neighborhood flyers or other such means of informing drivers using this road may be provided.

Type II - Excessive Speed and Volume: This designation is for roadways with traffic volumes greater than 500 average annual daily trips (AADT) and one of the following:

- The measured 85<sup>th</sup> percentile speed is 9 miles per hour or greater than the posted speed limit, or;
- The hourly volume is greater than 12% of the average daily traffic, or more than 10 daily trips per household.

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<sup>4</sup> Traffic Count - a manual or automated count of the number of vehicles traversing a street.

<sup>5</sup> Speed Study - a study using equipment to measure, collect, and statistically analyze the speeds of vehicles.

<sup>6</sup> 85<sup>th</sup> Percentile Speed - speed at which 85% of the vehicles are traveling at or below. For the purposes of this Policy, the 85<sup>th</sup> Percentile Speed considered will be the average 85<sup>th</sup> Percentile Speed of both directions.

Roadways classified as having excessive speed or volume (Type II) will continue to the conceptual traffic calming plan phase.

**Type III – Other:** Any local or collector roadway that does not meet the minimum criteria to be classified as Type II, but the collected volume and speed data are both within 20% of the minimum criteria required (2 mph and 100 vpd), and any of the following extenuating circumstances are present:

- a large number or high frequency of accidents,
- numerous residential driveways,
- roadway geometry issues, or
- a lack of sidewalks,

Roadways classified as Type III will continue to the conceptual traffic calming plan phase.

**Conceptual Traffic Calming Plan:** Roadways that are classified as having excessive speed or volume (Type II) or other (Type III) will be further analyzed to define a Study Area<sup>6</sup> and to create a conceptual traffic calming plan.

**Public Information Meeting:** A public information meeting will be conducted to present the conceptual traffic calming plan and to obtain input from the public and affected agencies. Property owners within the study area will be given notice of the public information meeting. Means of notification include door hangers, City’s Webpage <http://www.cityofbelleairbeach.com/>, mailings, or variable message boards located within the study area.

Any property owner who is unable to attend the meeting may submit comments, in writing, for consideration. Additionally, the following agencies will be notified that traffic calming measures are being considered: Pinellas Suncoast Fire District and Pinellas County Sheriff’s Office.

**Recommended Traffic Calming Plan:** Based upon the input received from the public and agencies, Staff will develop a recommended traffic calming plan for the study area.

**Step 3 - Applicant Petition for Recommended Traffic Calming Measures:** After completion of the recommended plan for traffic calming measures, the Public Works Department will provide a petition form and a map highlighting the study area, as well as the type and locations of the recommended traffic calming devices to the Applicant. The Applicant will need to obtain signatures of 60% of the property owners within the study area indicating that they support the construction of the proposed traffic calming measures.

**Step 4 - Project Implementation by City Staff:** City Staff will implement the mechanisms needed to fund, design, obtain City Council approval, construct, and evaluate the project after construction as further described below.

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<sup>6</sup> Study Area - the defined area which has been determined to be impacted by proposed traffic calming measures. The Study Area may cross traditional neighborhood boundaries.

**Funding:** The design and construction of traffic calming measures will not begin until a funding source is identified and secured. Potential funding options may include, but are not limited to: private sources, public/private partnerships, City’s Five-Year Capital Improvement Program Budget.

**Design:** A professional engineer licensed to work in Florida will prepare the traffic calming construction plans and estimate of construction cost based upon the recommended plan.

**City Council Consideration:** The petition with the signatures of 60% of the property owners in support of the traffic calming plan, the construction plans, probable cost estimates, construction funding sources, and a construction schedule will be submitted to City Council for review and consideration.

**Construction:** Upon City Council approval and funding availability, the traffic calming measures will be constructed within one year.

**Project Evaluation:** Approximately six months after the traffic calming project is completed, traffic data will be collected and compared to the previously collected “before” data. The comparison will evaluate the traffic calming measures to determine if corrective measures or other actions are needed.

### **REMOVAL OF TRAFFIC CALMING MEASURES**

With the approval of City Council, traffic calming measures may be removed or altered at any time for the following reasons:

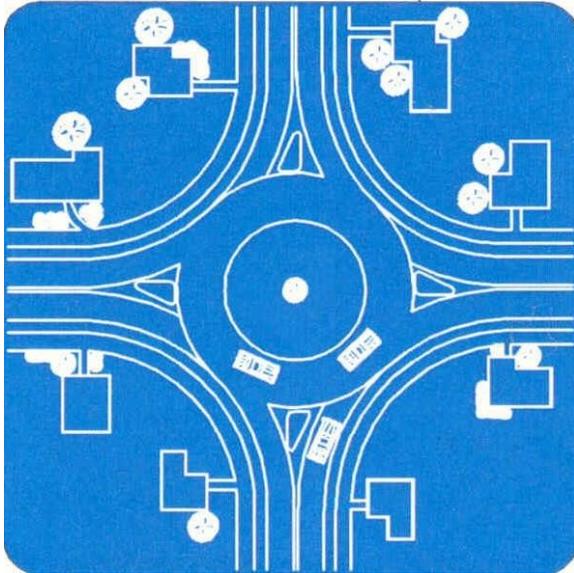
- Emergency response is significantly impacted.
- The traffic count for the street exceeds 2,000 vehicles per day.
- Determination by the City Engineer that it is in the best interest of public safety.

Property owners within the traffic calming area may request removal of the traffic calming measures after the measures have been in place for two years by submitting a petition to the City. The petition shall request removal of the traffic calming measures, acknowledge that the property owners will pay for the removal, and include the signatures of at least 60% of the property owners within the calming area. Upon receipt of the petition, the City will assess the property owners within the traffic calming area for the costs and then remove the traffic calming measures.

# Appendix A

## Examples of Traffic Calming Measures

## Roundabouts



A raised circular structure that deflects the flow of traffic in a counterclockwise direction around the circle. The objectives of roundabouts are to slow traffic and reduce the number and severity of crashes. Roundabouts are designed to accommodate all sizes of vehicles. Unlike traffic circles, roundabouts are used on higher volume streets.

**Good for:** Locations with a history of accidents, intersections with irregular approaches or high U-turn volumes.

### Advantages:

- Moderate traffic speeds
- Landscaping and hardscape can make it aesthetically pleasing
- Enhanced safety compared to traffic signals
- Minimizes queuing at the approaches
- Less expensive to operate than traffic signals.

### Disadvantages:

- May be difficult for large vehicles to circumnavigate
- May require the elimination of some on street parking
- Landscaping must be maintained by the property owners or by the municipality.
- Requires more right-of-way than signalized intersection

**Cost Estimate:** \$250,000 - \$1,250,000

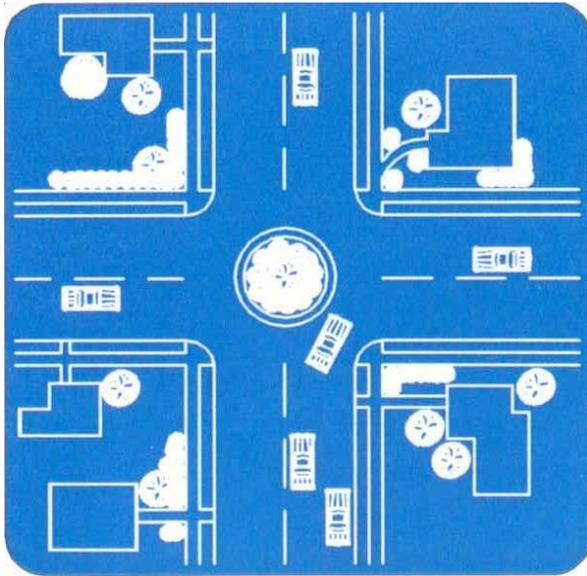
### Effectiveness:

- Average 29% reduction in accidents, with a reduction from 9.3 to 5.9 accidents per year (from a sample of 11 sites; source: *Roundabouts: An Informational Guide*)

### Similar Measures:

- By constructing a small island in a neighborhood intersection and leaving the existing curbs, you have a Traffic Circle

## Traffic Circles



Traffic circles are raised islands, placed in intersections, around which traffic circulates. Not intended for high volume or large vehicle traffic. Traffic circles sometimes employ stop or signal control or give priority to entering vehicles. Some traffic circles impose control measures within the circulating roadway or are designed with weaving areas to resolve conflict movement.

**Good for:** Calming intersections, especially within neighborhoods, where large vehicle traffic is not a major concern but speeds, volumes, and safety are problems.

### Advantages:

- Very effective in moderating speeds and improving safety • If designed well, they can have positive aesthetic value
- Placed at an intersection, they can calm two streets at once

### Disadvantages:

- Difficult for large vehicles (such as fire trucks) to circumnavigate
- May require the elimination of some on street parking
- Landscaping must be maintained by the property owners or by the municipality

**Cost Estimate:** \$25,000 - \$150,000

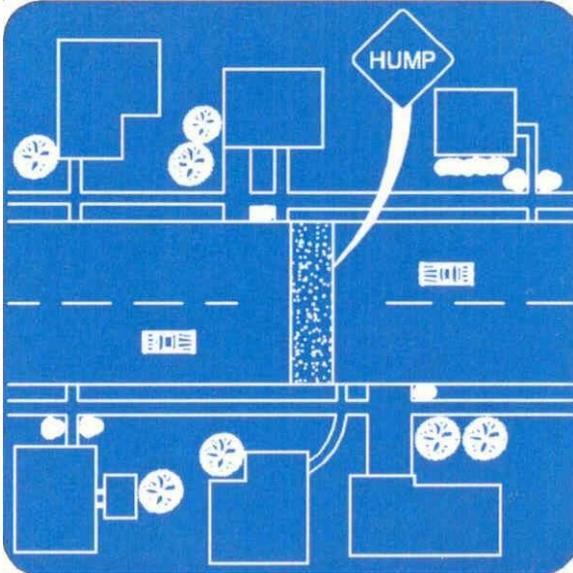
### Effectiveness:

- Average of 11% decrease in the 85th percentile travel speeds, or from an average of 34.1 to 30.2 miles per hour (from a sample of 45 sites)
- Including a large sample from Seattle, an average of 73% decrease in accidents, or from an average of 2.2 to 0.6 accidents per year (from a sample of 130 sites)

### Similar Measures:

- By placing a raised island in a midblock location, you have a Center Island Narrowing
- By enlarging the intersection and the center island, inserting splitter islands at each approach, setting back the crosswalks away from the circulating lane, and implementing yield control at all approaches, you have a Roundabout

## Speed Humps



Speed humps are rounded raised areas generally 10 to 14 feet long (in the direction of travel), making them distinct from the shorter "speed bumps" found in many parking lots, and are 3 to 4 inches high. Speed humps shall not be used on primary access routes. The objective is to slow traffic and reduce the number and severity of crashes.

**Good for:** Locations where very low speeds are desired and reasonable and where noise and exhaust fumes are not a major concern.

### Advantages:

- Relatively inexpensive • Relatively easy for bicycles to cross if designed appropriately
- Very effective in slowing travel speeds

### Disadvantages:

- Causes a "rough ride" for drivers, and can cause severe pain for people with skeletal disabilities
- Forces large vehicles, such as emergency vehicles, to travel at slower speeds
- Increases noise and air pollution
- Questionable aesthetics

**Cost Estimate:** \$5,000 - \$12,000 each

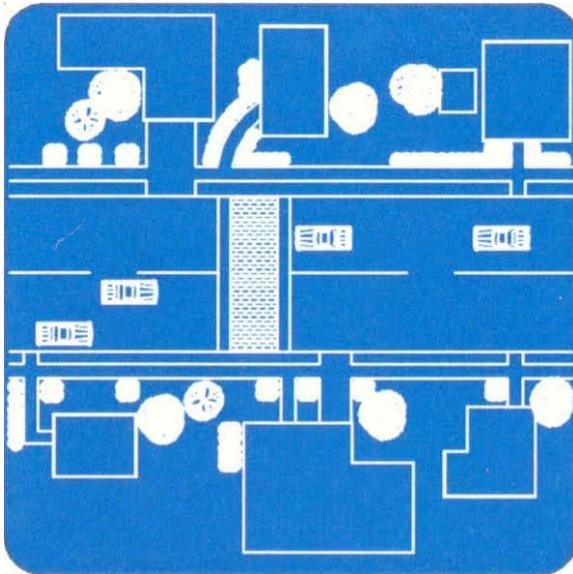
### Effectiveness (12' Hump):

- Average of 22% decrease in the 85th percentile travel speeds, or from an average of 35.0 to 27.4 miles per hour; (from a sample of 179 sites)
- Average of 11% decrease in accidents, or from an average of 2.7 to 2.4 accidents per year (from a sample of 49 sites)

### Similar Measures:

- By lengthening the hump with a flat section in the middle, you have a Speed Table
- By turning an entire crosswalk into a speed hump, you have a Raised Crosswalk; and
- By raising the level of an entire intersection, you have a Raised Intersection

## Speed Tables



Speed tables are flat-topped speed humps often constructed with brick or other textured materials on the flat section. The tables are generally 3 to 4 inches high, have a six-foot sloped approach, with a ten-foot top, and a six-foot sloped departure profile. Speed tables are typically long enough for the entire wheelbase of a passenger car to rest on the flat section. The long flat areas with gently sloped ramps give speed tables higher speeds than speed humps. The brick or other textured materials improve the appearance of speed tables, draw attention to

them, and may enhance safety and speed reduction.

**Good for:** Locations where low speeds are desired but a somewhat smooth ride is needed for larger vehicles.

### Advantages:

- Smoother on large vehicles (such as fire trucks) than speed humps
- Effective in reducing speeds, though not to the extent of speed humps

### Disadvantages:

- Questionable aesthetics if textured materials are not used
- Textured materials, if used, can be expensive
- May increase noise and air pollution

**Cost Estimate:** \$10,000 - \$15,000 each

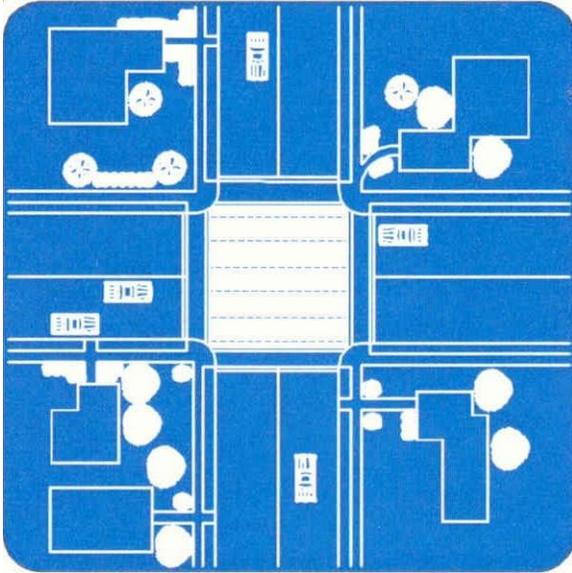
### Effectiveness (22' Table):

- Average of 18% decrease in the 85th percentile travel speeds, or from an average of 36.7 to 30.1 miles per hour; (from a sample of 58 sites)
- Average of 45% decrease in accidents, or from an average of 6.7 to 3.7 accidents per year (from a sample of 8 sites)

### Similar Measures:

- By removing the flat section in the middle, you have a Speed Hump
- By placing a crosswalk on the flat section, you have a Raised Crosswalk; and
- By raising the level of an entire intersection, you have a Raised Intersection

### ***Raised Intersections***



Raised intersections are flat raised areas (3 to 4 inches) that cover an entire intersection with ramps on all approaches and often with brick or other textured materials on the flat section. By modifying the level of the intersection, crosswalks are more readily perceived by motorists to be "pedestrian territory". The objectives are to slow traffic and reduce the number and severity of crashes.

**Good for:** Intersections with substantial pedestrian activity and areas where parking spaces need to be retained

**Advantages:**

- Improves safety for both pedestrians and vehicles
- Can have positive aesthetic value
- Calms two streets at once

**Disadvantages:**

- Expensive, varying by materials used
- Impacts to drainage need to be considered
- Less effective in reducing speeds than speed humps, speed tables, or raised crosswalks

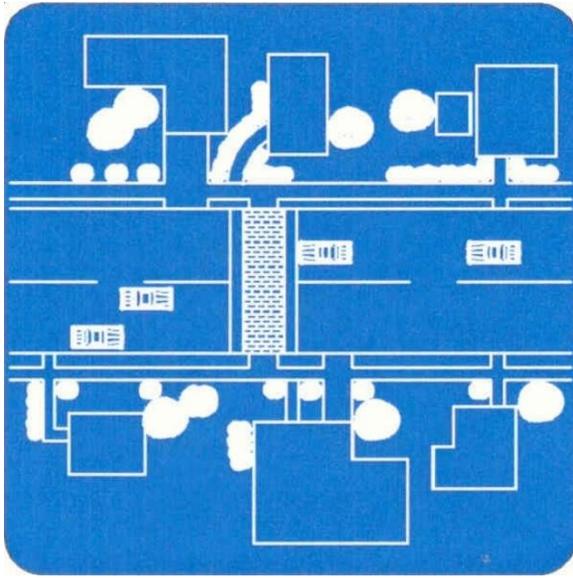
**Cost Estimate:** \$25,000 - \$50,000

**Effectiveness:**

- Average of 1% decrease in the 85th percentile travel speeds, or from an average of 34.6 to 34.3 miles per hour; (from a sample of 3 sites)

**Similar Measures:**

- By raising only a single crosswalk, you have a Raised Crosswalk
- By raising only a short section to a flat level (without a crosswalk), you have a Speed Table; and
- By raising an even shorter section and constructing it without a flat top, you have a Speed Hump



Raised crosswalks are speed tables outfitted with crosswalk markings and signage to channelize pedestrian crossings, providing pedestrians with a level street crossing. Also, by raising the level of the crossing, pedestrians are more visible to approaching motorists.

**Good for:** Locations where pedestrian crossings occur at haphazard locations and vehicle speeds are excessive.

**Advantages:**

- Improve safety for both pedestrians and vehicles
- Can have positive aesthetic value
- Effective in reducing speeds, though not to the extent of speed humps

**Disadvantages:**

- Textured materials, if used, can be expensive
- Impacts to drainage need to be considered
- May increase noise and air pollution

**Cost Estimate:** \$10,000 - \$15,000

**Effectiveness:**

- For a 22-foot Speed Table (the most similar device for which data is available):
  - Average of 18% decrease in the 85th percentile travel speeds, or from an average of 36.7 to 30.1 miles per hour; (from a sample of 58 sites)
  - Average of 45% decrease in accidents, or from an average of 6.7 to 3.7 accidents per year (from a sample of 8 sites)

**Similar Measures:**

- By removing the crosswalk markings and signage, you have a Speed Table; and
- By removing the crosswalk and the flat section in the middle, you have a Speed Hump
- By raising the level of an entire intersection, you have a Raised Intersection

## *Less Common Traffic Calming Measures*

***Semi-Diverter Island:*** Installed on the ingress side of the street in which entry is being prohibited. Vehicles are still allowed to exit from the street but entrance is prohibited. This feature prohibits cut-through traffic.

***Mid-Block Island:*** Constructed mid-block in the center of the roadway separating travel lanes and may reduce lane widths. Mid-block islands slow traffic. These features address vehicle speeds and may discourage cut-through traffic

***Splitter Island:*** May provide landscaping and channelization to lanes at the entrances to a neighborhood. Splitter islands slow traffic and discourage cut-through traffic.

***Roadway Narrowing:*** Reduces the width of pavement while maintaining two- way traffic. Landscaping planted in conjunction with the narrowing may further enhance the feature and impact driver behavior by reinforcing the impression that the pavement area is limited. Roadway narrowing slows and may discourage cut-through traffic.

***Chicanes:*** Changes the alignment of the roadway so that the street is not straight. This eliminates driver tendencies to accelerate on a straight street and may add beautification opportunities without significantly impacting emergency services. Two-way traffic and full access for larger vehicles and emergency services is maintained. These features address vehicle speeds and may discourage cut-through traffic.

Appendix B  
Traffic Calming  
Request Form  
and  
Petition Form

CITY OF BELLEAIR BEACH  
TRAFFIC CALMING REQUEST FORM

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Street for Review (From/To): \_\_\_\_\_

Day Phone No.: \_\_\_\_\_

Identify yourself:     Property Owner                       City Staff

Are you willing to be the "Point of Contact" regarding this Traffic Calming request in your neighborhood?

Yes     No\*

\*If no, please revise information section of form with someone willing to be the point of contact.

Please check any issues that apply to your street:

- |   |  |
|---|--|
| <input type="checkbox"/> Speed of automobile traffic  | <input type="checkbox"/> Cut-through traffic                             |
| <input type="checkbox"/> Volume of automobile traffic | <input type="checkbox"/> High pedestrian volume                          |
| <input type="checkbox"/> Number of accidents          | <input type="checkbox"/> Lack of amenities (sidewalks, crosswalks, etc.) |

Please elaborate on the specific problems on your street or in your neighborhood:

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Once completed, please send your completed request form **AND** petition sheet(s) to:

City of Belleair Beach  
444 Causeway Blvd.  
Belleair Beach, FL 33786

Date Received: \_\_\_\_\_

