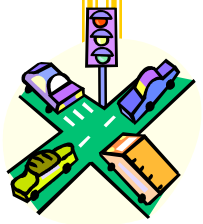
NTMP

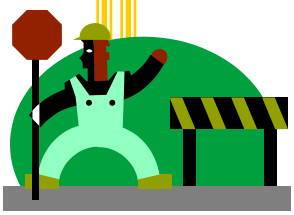
Neighborhood Traffic Management Program

Protecting your right to safety...one street at a time....



Collier County
Growth Management Division
Transportation Planning Department

Using This Booklet



Introduction

NTMP

Neighborhood Traffic Management Program

The Neighborhood Traffic Management Program (NTMP) was created to ensure the safety of our Collier County neighborhoods from speeding drivers and to restore local streets to the residents.

Typical speeding complaints from homeowners living on residential streets in Collier County illustrate that a majority of motorists drive over the 30 mph speed limit. Those who exceed the speed limit come from all age groups. Why do they speed? The studies show that:

- Local residents drive faster on their local streets because they feel familiar and comfortable.
- Outsiders use local streets as short cuts to busy arterial roads.

Traffic conditions on residential streets can greatly affect neighborhood livability. When our streets are safe and pleasant, the quality of life is enhanced. When traffic problems become a daily occurrence, our sense of community and personal well-being are threatened. By addressing high vehicular speeds and cut-through volumes, traffic calming can increase both the real and perceived safety of pedestrians and bicyclists, and improve the quality of life within the neighborhood.

This revised NTMP was developed, specifically, by Collier County and the Traffic Calming Task Force. It's mission is to identify, qualify and address dangerous driving behaviors. Traffic calming may be defined as: The combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.

Note: This program was *not* designed as a regulatory arm for neighborhood control of internal traffic, which would then become an enforcement issue.

Goals Objectives & Policies

Goals:

It is the goal of the Collier County Neighborhood Traffic Management Program (NTMP) to establish procedures and techniques that will promote neighborhood livability. Although livability has no precise definition, it can be thought of as encompassing the following characteristics:

- The opportunity to walk or bike within the roadway area with a feeling of safety.
- The opportunity to interact socially with neighbors without traffic related distractions or threats.
- A sense of community and neighborhood identity.
- A balanced relationship between the multiple uses and needs of a neighborhood.

Objectives:

- To promote safe and pleasant conditions for residents, pedestrians, bicyclists, and motorists on neighborhood streets.
- To reduce vehicular speeding on local neighborhood streets.
- To preserve and enhance pedestrian and bicycle access to neighborhood destinations.
- To enhance a sense of community and neighborhood identity.
- To encourage citizen involvement in neighborhood traffic management activities.
- To provide a process that will address neighborhood traffic management requests.

Policies:

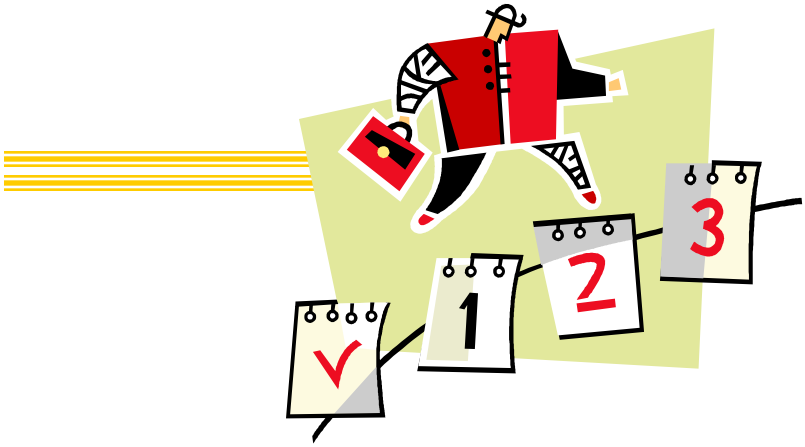
- Through traffic should be routed to the major roadways designated in the Transportation Element of the Collier County Growth Management Plan.
- Re-routed traffic that results from a traffic management project should be evaluated on a project-by-project basis.
- Emergency vehicle access should be preserved.
- Roadways as shown in Exhibit “A” are not eligible for the NTMP.
- Collier County shall employ a variety of traffic calming devices to achieve the NTMP’s objectives. Such traffic calming devices shall be planned and designed in conformance with sound engineering and planning practices.
- To implement the NTMP, certain procedures shall be followed in processing neighborhood traffic management requests in accordance with applicable codes and related policies and within the limits of available resources. At a minimum, the procedures shall provide for:

    - Submittal of project proposals.
    - Evaluation of proposals by staff.
    - Citizen participation in plan development and evaluation.
    - Methods of temporarily testing traffic management plans when needed.
    - Communication of any test results and specific findings to area residents and affected neighborhood organizations before installation of permanent traffic calming devices.
    - Review and prioritization of traffic calming projects requiring funding.
    - Follow-up study and findings report.

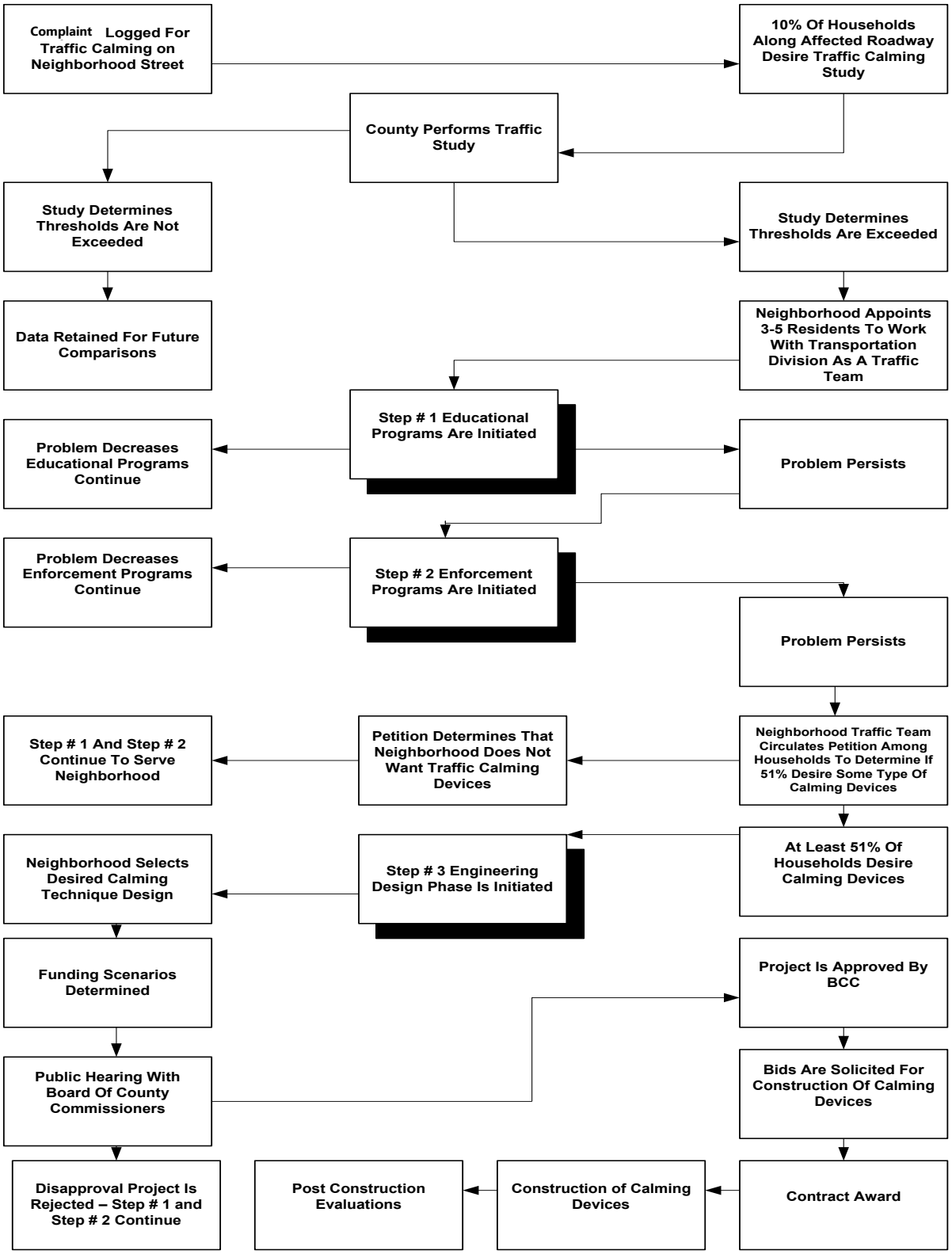
How the NTMP works

The process in a nutshell:

- The NTMP Project Manager receives and reviews requests for traffic calming.
- The requests are then subjected to a qualifying process that includes field counts and observations, and input from citizens in the affected area(s).
- Working as a team and with the "three E's" process" (education, enforcement, and engineering), citizens and staff derive solutions that may be implemented to address specific problems.
- Next it is determined who will fund the project.
    - Funding for the county road NTMP projects must be sensitive to the prioritization criteria. Qualified projects, approved for private road systems, are normally funded by HOA's or Municipal Service Benefit/Taxing Units (MSB/TU's). Homeowners requesting calming devices along dead-end streets are required to fund those installations.
- Once qualified, traffic calming projects are integrated into the existing schedule of county traffic calming projects.
- Following the installation of the project, county staff will begin it's evaluation in order to review it's effectiveness and impact.



The NTMP Public Road Process



What do I do?

Community approval is one of the most important steps in any traffic calming program.

1. **LODGE A COMPLAINT:**

   A complaint needs to be made directly to County staff. It can be made by any person or group living in the affected area such as: a citizen(s), a Home Owners Association (HOA), or by a city or County staff member such as the Collier County Community Traffic Safety Team.

   Please note: Only county owned, residential streets are eligible for any county assistance other than for general consulting services. A listing of in-eligible (non-residential) roads are shown in Exhibit "A".

   To lodge a complaint, please contact the Transportation Planning Department:

   By PHONE: NTMP Project Manager 239-252-2926

   By MAIL: NTMP Project Manager, Collier County Transportation Division
   2685 Horseshoe Drive South, Naples, FL 34104

2. **COMPLETE AN APPLICATION:**

   A completed application must be submitted to the County.

   Please use the official NTMP Application form shown as Exhibit "B". The completed application identifies the contact person, address, phone number, date and nature of the complaint.

3. **CIRCULATE PETITION #1:**

   The resident, citizen, or group must obtain a show of community support and backing by circulating a petition and acquiring signatures of at least **10%** of the households along the affected roadway.

Please use the official NTMP Petition form shown as Exhibit "C".

CRITERION	LOCAL RESIDENTIAL STREETS
1. Minimum Traffic Volume	> 2,000 vpd or 200 vph
2. 85th percentile speed	5 mph > speed limit

Minimum Requirements for Consideration: 1 of 2

4. **TRAFFIC STUDY PERFORMED:**

The County staff then reviews the problem at the site and orders a traffic study in order to determine if minimum eligibility criteria are met.

The chart above shows the criteria.

5. **CIRCULATE PETITION #2:**

If minimum criteria are met, a second and broader petition must be circulated by the citizen, resident, or group within the identified petition area. This time, signatures must be obtained from more than **51%** of households and/or businesses in the petition area.

6. **NEIGHBORHOOD WORKSHOP:**

Once the second petition is submitted, county staff will call a neighborhood meeting to review data findings. A neighborhood "traffic team" is established to be a point of contact with the county and the group will be educated about the practice of "Traffic Calming". The County staff and Traffic Team begin developing a project concept involving the "three E's":

Education	Programs that remind speeders of the negative effects of their action
Enforcement	Police presence to enforce speed limits.
Engineering	The construction of a physical change to the roadway to deter speeding. Examples include: Deflections, Obstructions and/or Roadmarkings. It can also include the use of signs and pavement markings to obtain the desired effect.

What do I do?

7. **START *EDUCATION* PROCESS**: (more detail on pg. 13)
   Traffic Calming Education produces activities that inform and seek to modify driver behavior. Techniques include printed information, meetings and work shops with staff, interaction with neighbors, signing campaigns, neighborhood speed watches, school programs, and parent outreach.

8. **START *ENFORCEMENT* PROCESS:** (more detail on pg. 14)
   After a pre-defined period of time, the results of the educational process will be evaluated. If additional measures are required, then the enforcement process will begin. Enforcement involves a more intensive police presence and a greater allocation of time to enforcing the speed limit in a particular neighborhood. Unfortunately, it is often not practical to maintain a police presence at the level needed to permanently lower speeds. However, consistent visible enforcement does lead to respect of the speed limit by motorists.

9. **COMMUNITY MEETING & *ENGINEERING* OPTIONS:** (more detail on pg. 15)
   The County staff and Traffic Team now meet again to determine if next steps are necessary. If they are, ENGINEERING concepts and options will be discussed.

   The Traffic Calming Task Force examined many different traffic calming ***engineered*** techniques. Realizing that Collier County's/Naples' neighborhoods are not all the same and there are a variety of street designs within neighborhoods, the Task Force include a wide range of techniques in this program that can be considered to address the differing traffic conditions.

   An appropriate engineering technique for the community and it's traffic problem will be decided on at this meeting.

10. **DETERMINATION OF FUNDING:**

Also decided at the above meeting will be who will finance the project. Only county owned local roads are eligible for any application for funding from the county. To be considered for an NTMP grant, the project must be ranked according to the "Project Prioritization" criteria. Exhibit "D" Rankings indicate which projects, or portions thereof, are to receive funding as well as the prioritization of the project within the county schedule. Privately owned residential neighborhoods such as gated communities must privately fund and manage their own projects. These neighborhoods, while not part of the funding prioritization process, are still subject to applicable planning and engineering review and permitting as identified in this document.

11. **BOARD APPROVAL:**

If County funding is available, the community's request for an *engineered* traffic calming project is included on the agenda at the next available Board of Commissioners' meeting. At this public meeting, the Board will vote to approve/disapprove the request.

12. PROJECT IS DESIGNED AND INITIATED

If the go ahead is given by the Board, then County staff schedules the design and implementation of the project according to the scores of the prioritization rankings.

13. MONITORING AND IMPACT STUDIES

Immediately following the installation of the project, County staff will begin an evaluation of it including field observations, traffic counts, speed studies, and other data collection as staff feels may be appropriate to review the effectiveness and impacts of the traffic calming project.

Private Roads

Privately maintained street(s) with Home or Property Owners Association (HOA or POA):

1. Community HOA to complete application and submit to NTMP Coordinator.
2. Community HOA to complete and pass resolution by majority vote of Board to show community support and submit to County NTMP Coordinator.
3. Professional engineer to submit to County NTMP Coordinator.
4. Community HOA to complete and pass resolution by majority vote of Board to proceed with traffic calming project. Community to submit resolution to County NTMP Coordinator.
    a. Traffic calming projects on private roads must be privately funded and funding source must be established.
    b. Community hires professional engineer to design traffic calming project.
    c. Community, via professional engineer, submits plans and appropriate fees to County via:
        i. Insubstantial Change to Plans (ICP)
        ii. Insubstantial Change to Site Development Plan (SDPI)
        iii. Insubstantial Change to Site Improvement Plan (SIPI)
        iv. Other administrative process, as appropriate

    d. Community hires contractor to have traffic calming project constructed.
    e. Community hires professional engineer to inspect and certify that traffic calming project was completed in accordance with plans and standards.
    f. Certification is submitted to County to close project application.

Privately maintained street(s) with no Home or Property Owners Association (HOA or POA):

A. Community establishes a HOA or some other representative entity (Entity)
    Follow same process as above for HOA or POA.

B. Community doesn't establish a HOA or other sort of representative entity:
    1. Resident or group to complete application and submit to County NTMP Coordinator.

2. Resident or group to complete petition to obtain community support with at least 10% of the households along the affected street.
3. Resident or group hires professional engineer to complete traffic study per NTMP.
4. Professional engineer to submit to County NTMP Coordinator.
5. If minimum criteria is met per NTMP:
6. A resident or group completes petition within identified petition area(this may not be the same area as 2 above) and must have signatures of at least 51% of household and/or businesses in the petition area.
7. If 6 above meets the 51% threshold, professional engineer leads neighborhood meeting to review findings. Community Traffic Team established.
8. The Community Traffic Team along with professional engineer discusses and establishes appropriate traffic calming techniques and locations.
9. The Community Traffic Team determines funding availability.
10. Since roads are private, traffic calming project must be privately funded and funding source must be established.
    a. Professional engineer to design traffic calming project.
    b. Professional engineer submits plans and appropriate fees to County via:
        i. Insubstantial Change to Plans (ICP)
        ii. Insubstantial Change to Site Development Plan (SDPI)
        iii. Insubstantial Change to Site Improvement Plan (SIPI)
        iv. Other administrative process, as appropriate
    c. Resident or group hires contractor to have traffic calming project constructed.
    d. Resident or group hires professional engineer to inspect and certify that traffic calming project was completed in accordance with plans and standards.
    e. Certification is submitted to County to close project application.

Traffic Calming Techniques

The implementation of traffic calming measures has the potential to create controversy, so it is recommended that it occurs as the final step of a three-step process referred to as *the "three E's*" (education, enforcement, and engineering). Let's examine each of these in detail.

Step # 1: **EDUCATION**

Educational programs seek to remind speeding drivers of the negative effects of their actions, often by stressing that the community's children and elderly are the most at risk. Educational campaigns may use brochures or neighborhood newsletters to spread this message. Newsletters may also contain information on speeding fines (particularly in school zones), pedestrian and bicycle safety tips, and information on average speeds in the neighborhood.

Techniques also include printed information, meetings and workshops with staff, interaction with neighbors, signing campaigns, neighborhood speed watches, school programs, and parent outreach.

Signs:

One method of educating the driving public is to install a sign informing them that traffic calming devices have been installed.

Advantages:

- Informs and alerts driver of oncoming devices;
- Improves safety of the technique or device being used; and
- Improves effectiveness of the technique or device.

Disadvantages:

- More signage on the street, sometimes considered unsightly.

Step # 2: **ENFORCEMENT**

Enforcement involves a more intensive police presence and a greater allocation of time to enforcing the speed limit in a particular neighborhood. There are a variety of methods used by the police.

Mobile radar display: advises motorists of the speed at which they are traveling

Advantages:

- Educational tool;
- Very good public relations tool; and
- Useful especially in school and construction zones where spot speed reduction is important.

Disadvantages:

- Requires periodic enforcement;
- Effective for limited duration; and
- Unit moves frequently, which requires personnel.

Periodic monitoring by police: for speeding and other violations .

Advantages:

- Good temporary public relations tool; and
- Serves to inform public that speeding is undesirable behavior, for which there are consequences.

Disadvantages:

- Effect is not permanent; and
- Enforcement is an expensive tool.

Step # 3 : **ENGINEERING**

If Education and Enforcement Procedures have not controlled the traffic problem, then the county, along with the community traffic team, will begin to explore options for an engineered change to the road.

Neighborhoods are not all the same and there are a variety of street designs within neighborhoods. With this in mind, the Task Force has included a wide range of techniques in this program that can be used to address differing traffic conditions.
The selection of traffic calming measures should be based on the following:

- **The measure of potential to address volume or speed reduction on affected roadways.**
- **The type of roadway.**
- **Actual site conditions.**

Techniques:

When choosing a technique to use, both the physical and psychological nature of the problem is examined. The **physical** problem itself is usually addressed by changing the width of the street since wider roads encourage higher automobile speeds. Techniques such as ***neck downs***, ***roundabouts*** and ***medians*** all decrease road width.
The **psychological** aspect involves understanding how the motorist thinks. If a motorist can see into the distance, the tendency is to increase speed. The interruption of sight lines, with changes in the road's direction will cause motorists to slow down. Using techniques such as ***chicanes*** and ***roundabouts,*** or breaking the road into smaller visual units by changing the surface pavement, such as ***brick pavers*** or ***stamped concrete***, causes the driver to slow down. It also means motorists widen their vision field, becoming much more aware of pedestrians and bicyclists. Changes in the road

design force traffic to travel at a slower, more even pace. Traffic calming may also be achieved by changing the psychological feel of the street. Streets using different ***surface types***, ***vertical landscaping*** or ***narrowed lanes*** create the appropriate space for a relaxed, pedestrian-friendly feel. These psychological changes give motorists cues that they are no longer on a major roadway but are in a different environment that is shared with people.

All traffic calming techniques have a limited range of effectiveness. To achieve traffic calming objectives, some techniques need to be placed every 250-400 feet. If traffic calming techniques are used too sparsely, traffic may slow close to the installation, but the overall speed will probably not decrease. One technique may be used multiple times or multiple techniques may be used in conjunction with one another. Most techniques will affect noise, air quality, congestion, fuel consumption and many other factors. Some techniques can improve these conditions, others may cause these problems to increase.

Emergency vehicle access and response time must be considered when designing and installing traffic calming devices. Emergency vehicles, particularly ambulances, have more difficulty with "vertical" devices such as ***speed humps*** than with "horizontal" devices such as ***centerline and edgeline striping***. Likewise, bicyclists and pedestrians must be kept in mind when developing a traffic calming strategy, as some devices can obstruct their movements. Many devices can be modified to allow bicyclists and pedestrians to by-pass them. For instance, a ***diverter*** can be fitted with a ***bicycle/pedestrian link to allow for through movement.***

Do's and Dont's of the Planning Process

Do the following:

• Install temporary traffic calming features and monitor them for a period of time before installing the permanent features. Testing features on site prior to permanent installation will relieve resident anxiety about the impact on their own driving patters and driving behaviors will adjust to the new route circumstances.

• Have an organized program including public involvement with plans and policies approved and supported by the local government. Emphasize the selected treatments(s) will be initially in a "test" mode, with permanency pending the outcome measurement. Be able to describe what is being done to keep traffic off residential streets.

• Channel public resources by prioritizing traffic calming request according to documentable criteria, setting thresholds of volume, speed, etc., to merit treatment.

• Involve the local service agencies, including fire, police, and emergency medical services personnel, from the start.

• Consult with fire department and EMS personnel to develop the preferred design, particularly with speed humps and traffic circles.

• Review traffic patterns in the neighborhood as a whole. Avoid solving the problem on one neighborhood street by just shifting the traffic to another neighborhood street.

• Make certain that all signing, pavement markings, and channelization is in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), the AASHTO Policy on Geometric Design of Highways and Streets, and the Florida Roundabout Guide.

• Check sight distances for vehicles, pedestrians, and bicyclists. Sight distance should be consistent with the dimensions shown in CHAPTER 3 – GEOMETRIC DESIGN or CHAPTER 16 – RESIDENTIAL STREET DESIGN of the FDOT Manual of Uniform Minimum Standards.

• Become familiar with the traffic calming features used in other communities and assemble references so that residents can be directed where to see them.

• Check sight distances by visiting the site before and after installation. Do parked cars obstruct sight distances? Do landscaping or other features obstruct sight distance?

• Review the illumination at night. Are additional street lights needed? Does landscaping block the light? Is there a shadow on one side of a median or traffic circle that might hide pedestrians from view?

• Review the channelization during the day and at night. Is it a clear approach from all directions? Can it be seen at night? Watch the traffic: Is the driving public confused by the signing and channelization? Make adjustments as needed.

• Review the site for utility conflicts. Is there a fire hydrant? Does it need to be moved? Are there existing utilities in the way?

• Check the storm water drainage. Will the storm drain system need to be moved or revised? Can the runoff flow through or around the device?

Don't do the following:

• Install neighborhood traffic calming features without a well-engineered program supported by the public.

• Install neighborhood traffic calming features on arterial or collector streets as shown on Exhibit “A”.

• Install neighborhood traffic calming features on streets without curbs unless supplemental features or other design considerations are included to keep vehicles within the traveled way.

• Place neighborhood traffic calming features in front of driveways.

• Neglect to check for conflicting utilities or drainage considerations.

INAPPROPRIATE TRAFFIC CALMING TREATMENTS

Stop Signs

When used for traffic calming, stop signs often do one or more of the following:

• Increase midblock speeds along the street because of drivers trying to make up for lost time.
• Increase noise because of quick accelerations and decelerations.
• Increase pollution.
• Reduce drivers’ expectation of a uniform flow.
• Relocate the problem.
• Cause disrespect for stop signs by drivers and bicyclists.

For these reasons, stop signs **should not be used** for traffic calming.

Signage

• Novelty signs -While signs such as CHILDREN AT PLAY, SENIORS CROSS HERE, SLOW DEAF CHILD, and DEAR CROSSING (meaning loved one) may make an infrequent roadway user aware of a specific local population, most regular users of the roadway are unaffected by the signs.

• Odd speed limit - NEIGHBORHOOD SPEED LIMIT 23 MPH and other odd speed limit signs place a high dependence on police to monitor speeders and are not consistent with the national practice required by the MUTCD of posting speeds limits in 5 mph increments.

• Crosswalks – Standard crosswalks marked only with signs and pavement markings do not affect motorists' speeds and should not be used by themselves as traffic calming treatments.

• Bike lanes – Standard bike lanes are not traffic calming treatments. They can be used to provide additional space between the sidewalk and motor vehicle traffic, but should not be used by themselves for traffic calming.

• Speed trailers – While speed trailers can be used as part of a traffic calming program for educational awareness, they have no lasting effect on motorists' behavior.

• Reduced speed limit signs – Reduced speed limits without physical traffic calming measures do not slow drivers and should not be used for traffic calming.

• Rumble strips – These applications have high maintenance requirements and can cause severe noise problems. Also, they can be an obstacle to bicyclists.

Source: Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Types of Traffic Calming Devices

County Funded:

- Speed Tables

Privately Funded:

- Speed Humps

Commercial Parking Areas:

- Speed Bumps

TECHNIQUES

SPEED CONTROL

Vertical Deflection

- Raised Crosswalks
- Speed Humps
- Speed Tables
- Speed Cushions
- Textured Pavement
- Speed Kidneys

Horizontal Deflection

- Centerline and Edgeline Striping

Horizontal Narrowing

- Mid-block Median

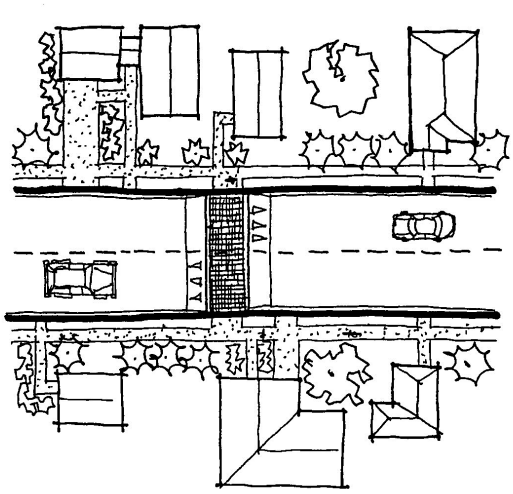
VOLUME CONTROL

- Full Closure
- Cul-De-Sac
- Modified Intersection
- Landscaping

SPEED CONTROL: Vertical Deflection

Raised Crosswalks a.k.a. Raised crossings, sidewalk extensions

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



Advantages:

- Raised Crosswalks improve safety for both pedestrians and vehicles;
- If designed well, they can have positive aesthetic value;
- They are effective in reducing speeds; and
- They are good for locations where pedestrian crossings occur at haphazard locations and vehicle speeds are excessive.

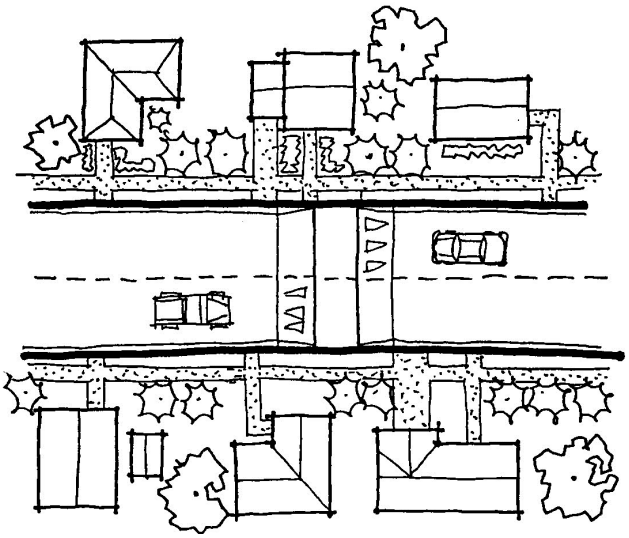
Disadvantages:

- Textured materials, if used, can be expensive;
- Impacts on drainage needs to be considered; and
- Noise and air pollution may increase.

SPEED CONTROL: Vertical Deflection

Speed Humps a.k.a. Road humps, undulations.

Speed humps are rounded raised areas placed across the roadway. They are 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. The profile of a speed hump can be circular, parabolic, or sinusoidal. They are often tapered as they reach the curb on each end to allow unimpeded drainage.



Advantages:

- Speed Humps are relatively inexpensive;
- They are relatively easy for bicycles to cross if designed appropriately;
- They are very effective in slowing travel speeds; and
- They are good for locations where very low speeds are desired and reasonable, and noise and fumes are not a major concern.

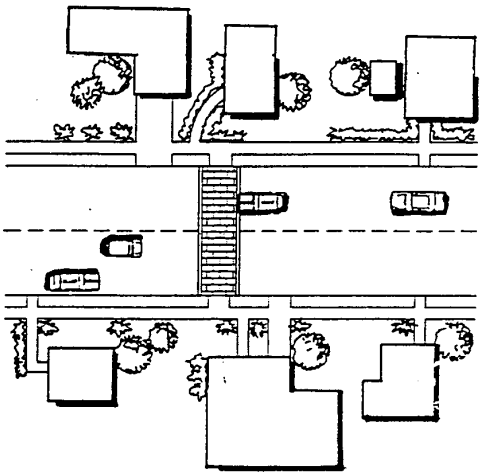
Disadvantages:

- They cause a "rough ride" for all drivers, and can cause severe pain for people with certain skeletal disabilities.
- They force large vehicles, such as emergency vehicles and those with rigid suspensions, to travel at slower speeds;
- They may increase noise and air pollution; and
- They have questionable aesthetics.

SPEED CONTROL: Vertical Deflection

Speed Tables a.k.a. Trapezoidal humps, speed platforms.

Speed tables are flat-topped speed humps, also 3 to 4 inches high but with a sloped approach taper on each side of a flat top. They are generally 20 to 24 feet wide. Comfortable speed limited to 20 to 25 mph.



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- Speed Tables are relatively inexpensive;
- They are relatively easy for bicycles to cross if designed appropriately;
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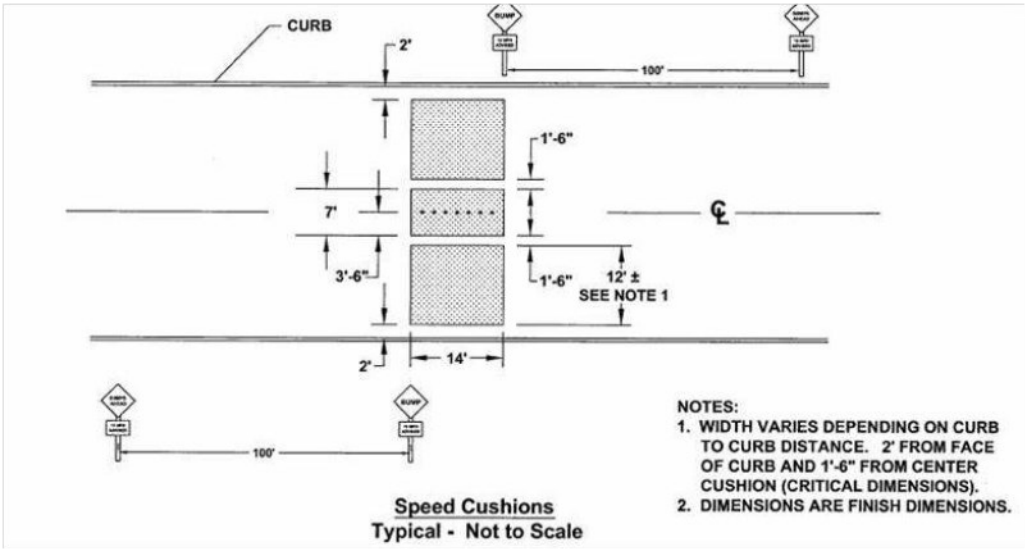
Disadvantages:

- They cause a “rough ride” for all drivers, and can cause severe pain for people with certain skeletal disabilities.
- They force large vehicles, such as emergency vehicles and those with rigid suspensions,
- to travel at slower speeds;
- They may increase noise and air pollution; and
- They have questionable aesthetics.

SPEED CONTROL: Vertical Deflection

Speed Cushions

Speed cushions are several small speed humps installed across the width of the road with spaces between them. They are generally installed in a series across a roadway resembling a split speed hump. The design of speed cushions forces cars to slow down as they ride with one or both wheels on the hump.



Speed Cushions
Typical - Not to Scale

Advantages:

- The wider axle of fire engines allows them to straddle the cushions without slowing down;
- They are relatively easy for bicycles to cross if designed appropriately;
- They are less costly than speed tables but are considered just as effective; and
- They are good for locations where very low speeds are desired and reasonable, and noise and fumes are not a major concern.

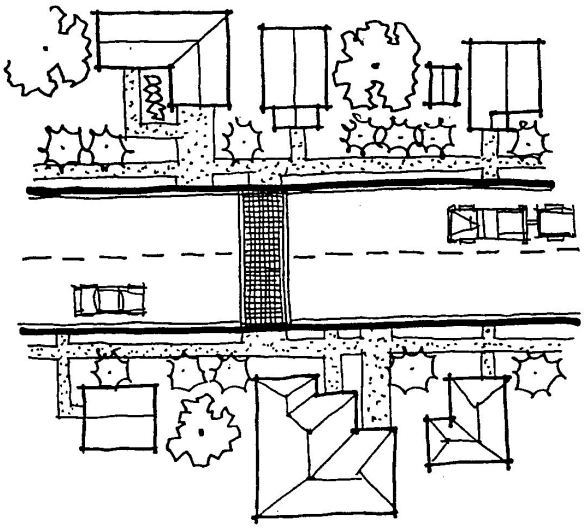
Disadvantages:

- They cause a “rough ride” for all drivers, and can cause severe pain for people with certain skeletal disabilities.
- They force large vehicles, such as ambulances and those with rigid suspensions, to travel at slower speeds;
- They may increase noise and air pollution; and
- They have questionable aesthetics.

SPEED CONTROL: Vertical Deflection

Textured Pavement a.k.a. Change in pavement texture (such as asphalt to brick).

Textured pavements are roadway surfaces paved with brick, concrete pavers, stamped asphalt, or other surface materials that produce constant small changes in vertical alignment. Though including textured pavements among vertical features may appear a stretch to some readers, one need only observe travel speeds on old cobblestone and brick streets to appreciate the rationale.



Advantages:

- If designed well, they can have positive aesthetic value;
- They can calm two streets at once; and
- They are good for intersections with substantial pedestrian activity.

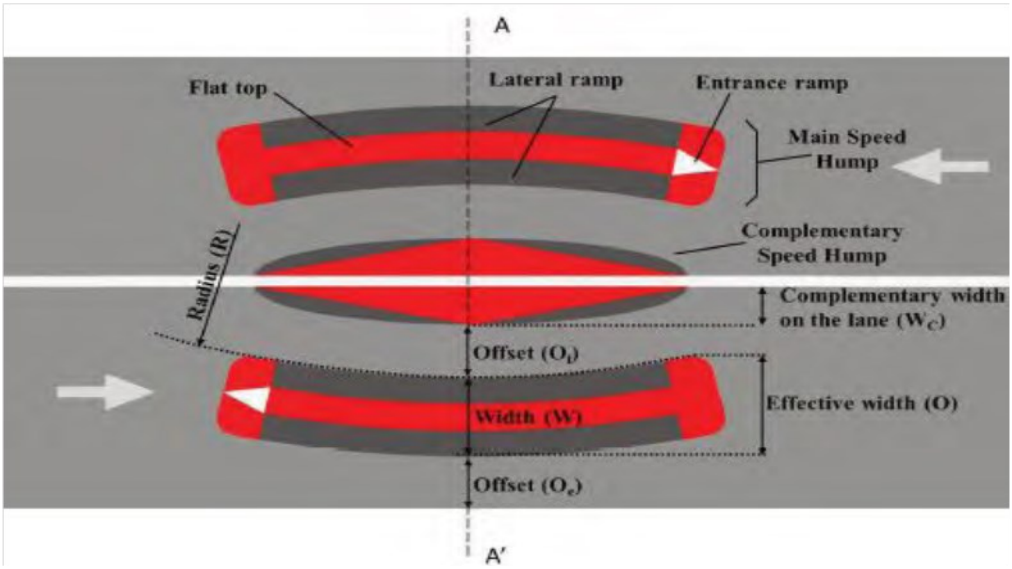
Disadvantages:

- They tend to be expensive, varying by materials used;
- Impact to drainage needs to be considered; and
- Require increased maintenance

SPEED CONTROL: Horizontal Deflection

Speed Kidney

Speed kidneys are a new traffic calming device that consist of a raised and curved area placed at the center of any lane. Drivers can choose to adopt a curved path, which moderates speed without vehicle damage or vertical discomfort.



Advantages:

- Speed kidneys are relatively inexpensive;
- No delay for emergency vehicle response time, by straddling the main speed kidney;
- No vehicle damage or vertical discomfort;
- They are very effective in moderating travel speeds; and
- They produce less negative environmental impacts than speed humps

Disadvantages:

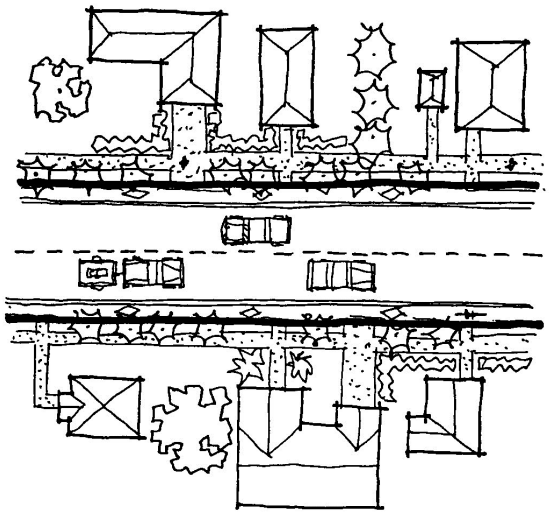
- They cause a “rough ride” for drivers if they choose to drive straight over the kidneys; and
- They have questionable aesthetics.

SPEED CONTROL: Horizontal Deflection

Centerline and Edgeline Striping

a.k.a. Visually narrowing the roadway (Psycho-Perception Control).

Painting an edgeline several feet from the pavement edge has the effect of visually narrowing the roadway. A double yellow line striped down the center of roadway might have a comparable effect, visually limiting drivers to half of the road. In theory, the perceived narrowing could cause a modest speed reduction, just as a real narrowing causes a modest speed reduction.



Advantages:

- Fast, cost effective solution; and
- They are especially appropriate for rural roads with no shoulders.

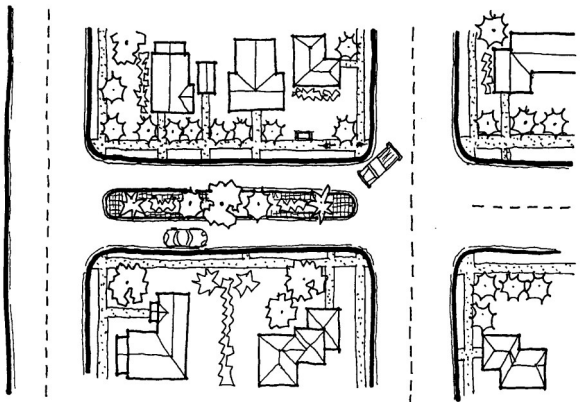
Disadvantages:

- They are not proven to be successful; and
- May be most effective immediately after initial installation;

SPEED CONTROL: Horizontal Narrowing

Mid-Block Median a.k.a. Dividing and narrowing space.

Center of street has an island or barrier that serves to segregate traffic.



Advantages:

- Provides a refuge for pedestrians and cyclists;
- May improve streetscape if landscaped;
- Provides barrier between lanes of traffic; and
- May produce a limited reduction in vehicle speeds.

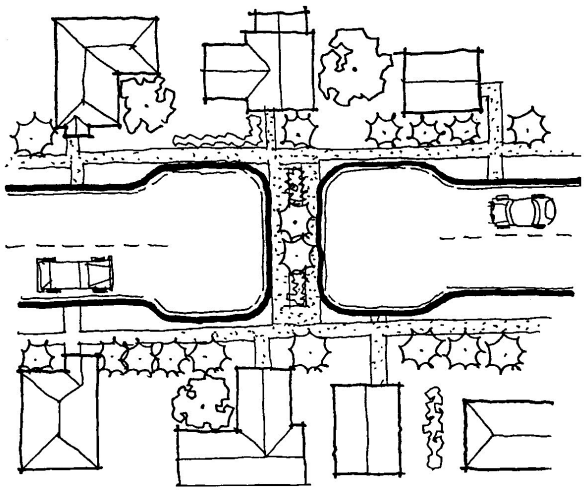
Disadvantages:

- May reduce site lines if over landscaped; and
- Increased maintenance.

VOLUME CONTROL

Full Closure a.k.a. Cul-de-sacs, dead ends.

Full street closures are barriers placed across a street to completely close the street to through-traffic, usually leaving only sidewalks open.



Advantages:

- Reduces traffic volumes;
- Eliminates through traffic;
- Reduces speed of the remaining vehicles;
- Improves safety for all the street users; and
- Pedestrian and bike access maintained.

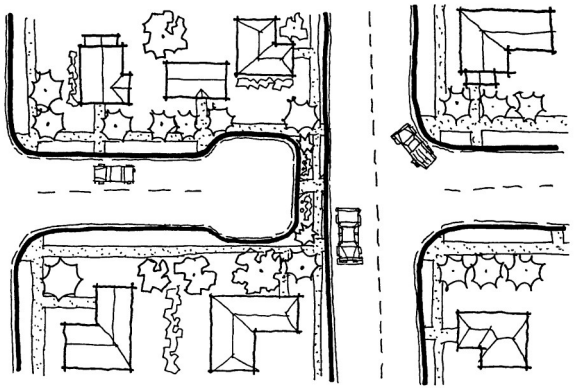
Disadvantages:

- Requires legal procedures for closure;
- Reduces emergency vehicle access;
- Reduces access to properties for residents;
- May be perceived as an inconvenience by some neighbors and an unwarranted restriction by the general public; and
- May increase traffic volumes on other streets.

VOLUME CONTROL

Cul-De-Sac a.k.a. Dead end street.

Street closed to motor vehicles using planters, bollards or barriers.



Advantages:

- Eliminates through traffic;
- Reduces speed of the remaining vehicles;
- Provides space for landscaping;
- Improves safety for all the street users; and
- Maintains pedestrian and bike access.

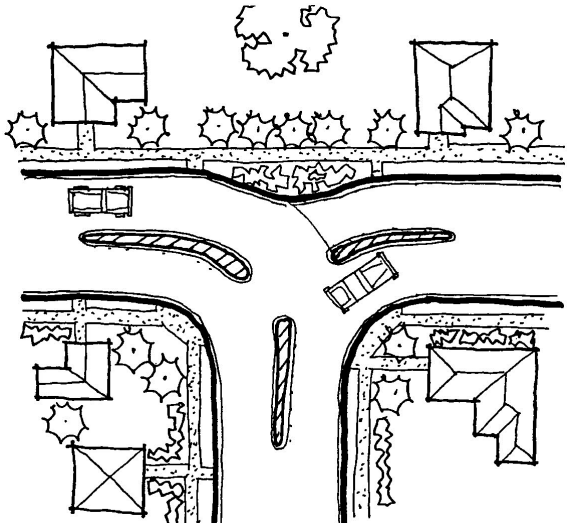
Disadvantages:

- Reduces emergency vehicle access;
- Reduces access to properties for residents;
- May increase trip length for some residents;
- May be perceived as an inconvenience by some neighbors and an unwarranted restriction by the general public; and
- May increase traffic volumes on other streets.

VOLUME CONTROL

Modified Intersection a.k.a. Forced turn channelizations.

Median devices that force turns by motorist.



Advantages:

- Reduces vehicle speed;
- Changes driving patterns;
- Necessary to enforce changes in priority from one street to another;
- Reduces through traffic; and
- May provide space for landscaping.

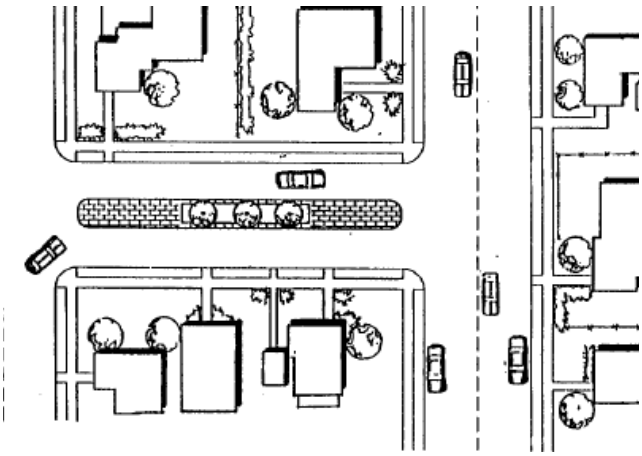
Disadvantages:

- May increase response times for emergency vehicles;
- Reduces access to properties for residents;
- May increase trip length for some residents;
- Can be aesthetically unattractive if not landscaped; and
- Maintenance responsibility if landscaped.

VOLUME CONTROL

Landscaping a.k.a. Decorative alteration and planting of grounds.

Treatment to a streetscape that focuses on landscaping to communicate a sense of neighborhood and helps make motorists aware of a change in driving environment..



Advantages:

- Positive indication of a change in environment from arterial road to residential street;
- Reduces entry speed;
- May reduce pedestrian crossing distances;
- Helps give neighborhood a sense of identity; and
- Allows neighborhood creativity and participation in design.

Disadvantages:

- May increase maintenance responsibility.

SUPPORTING DOCUMENTS

Exhibits

A	Non-Local Roadways
B	Application Form
C	Petition Form
D	Project Prioritization Criteria
	Credits
	Acknowledgements

Non-Local Roadways Exhibit "A"

Roadways in Collier County Not Eligible for Traffic Calming

All four and six lanes roads and the following two lane roads:

- Bayshore Drive
- Beck Boulevard
- Bluebill Avenue
- Camp Keais Road
- Carson Road
- County Barn Road
- CR 29/SR 29(US 41 to end of Chokoloskee Island Causeway)
- DeSoto Boulevard
- Devonshire Drive
- Enterprise Avenue
- Everglades Boulevard
- Gulf Shore Drive
- Industrial Boulevard
- J & C Boulevard
- Lake Trafford Road
- Logan Boulevard
- Magnolia Pond Drive
- Manatee Road
- New Market Road
- N. 1st Street (Immokalee)
- N. 11th Street (Immokalee)
- Oakes Boulevard
- Old 41 (CR 887)
- Orange Blossom Drive
- Progress Avenue
- San Marco Road
- Shirley Street
- SR 82
- Taylor Road
- Thomasson Drive
- Trade Center Way
- Tropicana Boulevard
- Vanderbilt Drive (111th Ave. N. to Bonita Beach Rd.)
- Veterans Memorial Parkway
- Weber Boulevard
- Westclox Road
- White Boulevard
- White Lake Boulevard
- Wiggins Pass Road
- Wilson Boulevard
- 111th Avenue North

* This is a partial listing only. Please check with NTMP Staff for updates.

Project Application Form Exhibit "B"

NTMP

NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

APPLICATION FORM

COLLIER COUNTY FLORIDA

Date: _____ Neighborhood:_____

Names of three to five Neighborhood representatives:

_____ _____
_____ _____
_____

Name of Contact Person: _____
Phone: _____
Address:
_____

Which neighborhood street(s) are of concern?

_____
_____

What traffic problems have you identified affecting the above street(s)?

_____
_____
_____

Number of households and/or businesses identified in your petition area: _____

Number of signatures received from households in your petition area: _____

Please return the completed application form along with the signed petition forms to:

NTMP Project Manager, Mike Sawyer
Collier County Transportation Services Division
Neighborhood Traffic Management Program
2685 South Horseshoe Drive
Naples, Florida 34104
Phone: 239-252-2926

Petition Form Exhibit "C"

NTMP

PAGE _____ OF _____

NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

PETITION FORM

COLLIER COUNTY FLORIDA

We, the undersigned, as residents of the _____neighborhood, hereby request the evaluation of the traffic problems on _____ street(s) and the development of a Neighborhood Traffic Management Project. The problems are identified as: _____

Please list all addresses in the petition area. One signature per address.

DATE	NAME (please print)	ADDRESS	SIGNATURE

Project Prioritization Pg. 1 Exhibit "D"

PROJECT PRIORITIZATION
(Ranking of NTMP projects for funding)

I. Safety Factors:	**Maximum 40 Points**	
Criteria	**Points**	
1. Traffic Volumes:		
Greater than 3,001 vehicles per day	10 points	_____
2,501 to 3,000 vehicles per day	5 points	_____
2,000 to 2,500 vehicles per day	2 points	_____
2. Traffic Speeds:		
85th% exceeds speed limit > 20 mph	10 points	_____
85th% exceeds speed limit > 15 mph	5 points	_____
85th% exceeds speed limit > 10 mph	1 points	_____
3. Crash history:		
> 6 accidents, past 5 years	5 points	_____
3 to 5 accidents, past 5 years	3 points	_____
1 to 2 accidents, past 5 years	1 point	_____
4. Bike/Pedestrian LOS:		
Level F	10 points	_____
Level D	5 points	_____
Level C	1 points	_____
5. Other offsetting factors:		
Provides for unusual/compelling situations not addressed in other criteria. Must be recommended by TC staff for consideration, with background specifics.	0 to 5 points	_____

Safety Factor Total: _____

Project Prioritization Pg. 2

II. Improvement to Neighborhood Value: Max. 30 points

Criteria	Points	
1. Percentage of residents expressing concern		
> 70% of residents expressing concern	10 points	_____
> 50% of residents expressing concern	5 points	_____
> 30% of residents expressing concern	2 points	_____
2. Neighborhood Aesthetics/Character:		
NTMP devices with high-level of aesthetics (contain both landscape/hardscape improvements)	5 points	_____
NTMP devices with medium-level aesthetics (contain either landscape/hardscape improvements)	3 points	_____
NTMP devices with low-level aesthetics (non-punitive) (signage)	1 point	_____
NTMP devices with low-level aesthetics (punitive) (speed humps)	3 points	_____
3. Value Benefit Area (how many homes benefit from character improvement):		
> 112 per mile	5 points	_____
81 to 111 per mile	3 points	_____
51 to 80 per mile	2 points	_____
20 to 50 per mile	1 point	_____
4. Neighborhood Cost Participation (property values > $250,000/unit):		
Neighborhood contribution 50% of cost	5 points	_____
Neighborhood contribution 25% of cost	3 points	_____
Neighborhood contribution 10% of cost	1 point	_____
4a. Neighborhood Cost Participation (property values <$250,000/unit):		
Neighborhood contribution 50% of cost	10 points	_____
Neighborhood contribution 25% of cost	5 points	_____
Neighborhood contribution 10% of cost	2 points	_____
5. Other offsetting factors:		
Provides for unusual/compelling situations not addressed in other criteria. Must be recommended by NTMP staff for consideration, with background specifics.	0 to 5 points	_____

Improvement to Neighborhood Value Total: _____

III. Neighborhood Demographic: Max. 30 points

Criteria		Points
1. Number of children in neighborhood:		
40 per mile	10 points	_____
20 per mile	5 points	_____
10 per mile	2 points	_____
5 per mile	1 point	_____
2. Number of houses facing the street (both sides):		
> 56 per mile	5 points	_____
41 to 55 per mile	3 points	_____
26 to 40 per mile	2 points	_____
10 to 25 per mile	1 point	_____
3. Number of units on adjacent streets that must use the TC street for access:		
> 56 per mile	5 points	_____
41 to 55 per mile	3 points	_____
26 to 40 per mile	2 points	_____
10 to 25 per mile	1 point	_____
4. Schools and Public Facilities adjacent to the street:		
Points for each school	5 points	_____
Points for each recreation facility (park, pool, etc)	4 points	_____
Points for each trail/walkway crossing	3 points	_____
Points for each other public facilities	1 point	_____
5. Neighborhood Services directly accessed by the street:		
Points for grocery store	5 points	_____
Points for neighborhood convenience store	3 points	_____
Points for drug/general retail (Eckerd, etc)	2 points	_____
Points for local retail (strip center, etc)	1 point	_____
Neighborhood Demographic Total……		_____

PRIORITIZATION TOTAL SCORE: I, II & III: ____

"Traffic Calming" Credits

These notes support Statements on Page 5 of this Booklet regarding the practice of "traffic calming".

The authority to implement "Traffic Calming" comes from the following sources:

1. **Collier County Growth Management Plan, Transportation Element (VI).** Goals and Objective & Policies.

   (VI) Objective 9: *The County shall encourage neighborhood involvement in the establishment and maintenance of safe and pleasant conditions for the residents, pedestrians, bicyclists and motorists on neighborhood streets, which are not classified as arterials or collectors, through the implementation of the Collier County Neighborhood Traffic Management Program (NTMP). In developing strategies and measures to encourage such conditions, the NTMP shall consider the impact of such strategies and measures on the adjacent arterial and collector systems (from a level-of-service and operational standpoint).*

2. **Board of County Commissioners Resolution 95-608**, which establishes the Neighborhood Traffic Management Program.

3. **The Unified Land Development Code (ULDC), Chapter 4**, Subdivision Design Requirements. § 4.03.05 (A) Blocks. *The length, width and shape of blocks shall be determined with due regard to:*

   (4.) *Where special topographical conditions exist, block lengths greater than 660 feet shall be approved by the County Manager or designee pursuant to procedures set forth in Chapter 10. Traffic calming devices, as approved in the Neighborhood Traffic Management Program, shall be provided in block lengths greater than 660 feet.*

Chapter 6. Infrastructure Improvements and Adequate Public Facilities Requirements. § 6.06.00 Transportation System Standards. § 6.06.01 Street System Requirements.

(G.) *Use of local streets by cut-through traffic shall be discouraged, using methods (like traffic calming) that do not compromise connectivity or reduce the number of access points to the subdivision.*

Acknowledgements

This 2013 addition of the NTMP book is an updated version of the original booklet created by the Traffic Calming Task force in 1995 and then revised in 2005. The NTMP would like to gratefully acknowledge the members of the 2013 Traffic Calming Committee. These participants worked closely with NTMP staff during the revaluation of the NTMP process to establish threshold requirements and project ranking for prioritization of future traffic calming projects.

Thanks to the following:

Reed Jarvi, PE, Transportation Planning Manager
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Norman Trebilcock, PE, Trebilcock Consulting Solutions, PA