

Mr. David V. Martin
Public Works Director
708 West Summer Street
Greeneville, TN 37743

Mr. Martin:

You requested information from MTAS on traffic calming. I understand that the Town of Greeneville is interested in applying traffic calming measures on certain streets. Here's some basic information on:

- The definition of traffic calming,
- The general benefits of traffic calming,
- When and how traffic calming measures should be applied, including policy of the governing body, and
- Types and approximate costs of common devices.

What is Traffic Calming?

According to the Institute of Transportation Engineers (ITE), traffic calming is defined as *“changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes, in the interest of street safety, livability, and other public purposes.”*

Traffic calming began in Holland in the 1960's and quickly spread to other European countries by the 1990's. Seattle, WA was the first U.S. city to adopt traffic calming in the 1970's. Since then, many U.S. cities have adopted traffic calming programs.

What are the Benefits?

- Decreased traffic speed and volume
- Decreased number and severity of accidents
- Reduced noise levels
- Decreased air pollution
- Less through traffic
- Fewer child pedestrian injuries and fatalities

How should city governments approach application of traffic calming measures?

First, the city's governing body should develop policy and procedures for its neighborhood traffic management program. Important elements of such a policy would include:

1. Setting goals for the program.
2. Defining how requests for traffic calming measures will be processed. An essential element of the process is requiring neighborhood participation. A minimum of 50% of the residents in the neighborhood should be in support of the effort.
3. Defining where the program will apply. Most cities limit traffic calming measures to neighborhood streets. Neighborhood streets are defined as *local or collector streets* where at least 85% of the abutting land use is for residential use.
 - a. Where traffic volume is consistent with the density of residential development. A *local street* could vary in volume between 1,000 – 2,000 vehicles per twenty-four hour day. A *collector street* could have up to 8,000 vehicles per day. If vehicle counts are less than 500 vehicles per day, then traffic calming measures are probably not appropriate. If vehicle counts are greater than 3,000/day, speed humps and speed tables are probably not appropriate.
 - b. Where vehicles speeds are excessive. On *local streets* vehicle speeds should be equal to or less than 25 mph. On *collector streets*, vehicle speeds should be equal to or less than 35 mph.
 - c. Streets in the vicinity of schools, parks and other high pedestrian use areas may be good candidates for traffic calming applications.
 - d. Neighborhood streets experiencing a large volume of 'unwanted' traffic may need traffic calming.
4. Use of a three step approach including education, enforcement and engineering.
 - a. The education step could include use of a traffic trailer device on the street that alerts motorists of the posted speed limit versus their actual speed. Other education methods could include public service announcements, neighborhood meetings, etc.
 - b. The enforcement step could include stepped up police enforcement efforts. A citizen radar program could be implemented. Neighborhood representatives could monitor speed and identify chronic speeders. The police department would then send letters to offending drivers.
 - c. **Only** after the first two steps are completed should the city consider the engineering step.
5. Next, the city should use a traffic engineer to conduct traffic studies. The objectives of the study are to verify the problem and identify solutions. During this stage, the traffic engineer may conduct traffic counts and speed studies. He/she will have to gain the support of the neighborhood. Some cities require a minimum of 75% of the residents to support traffic calming measures before they are installed. Some cities require a financial participation by the residents.

6. Any plan that the traffic engineer recommends should be presented to and approved by the city council before it is implemented.

Proper engineering and governing body approval are important steps because application of traffic calming measures can (and probably will) lead to legal challenges. If not properly engineered, installed and maintained, traffic calming devices could end up impeding emergency response vehicles and causing other problems.

What types of traffic calming devices are commonly used?

Speed humps – usually used on local streets (not collectors); estimated cost ~ \$2,000.

Speed Tables/Raised Crosswalks – used at high volume pedestrian crossings; estimated cost up to \$4,000.

Neighborhood Entry Island – an island with landscaping and a monument in the middle of the street; estimated cost \$10,000 +.

Medium Islands – an island in the center of the street used to narrow traffic lanes and force slower speeds; restricts left turn in or out of driveways; estimated \$75,000 + per city block.

There are many other types of traffic control configurations.

I hope this information provides ‘food for thought’. If the Town of Greeneville decides to develop a traffic calming program, I will be glad to provide further information.

Sincerely,

Sharon Rollins, P.E.
Manager of Technical Consulting