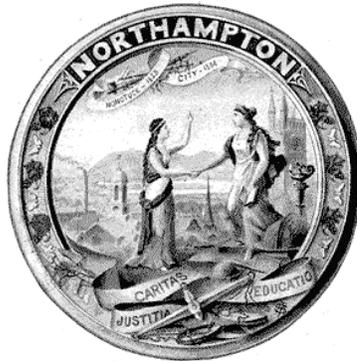


TRAFFIC CALMING MANUAL

CITY OF NORTHAMPTON, MA



September 2008

**Transportation and Parking Commission (TPC)
210 Main Street, Room 18
Northampton, MA 01060**

www.northamptonma.gov/tpc

TABLE OF CONTENTS

INTRODUCTION.....	3
HOW WILL TRAFFIC CALMING BENEFIT NORTHAMPTON?	3
HOW IS TRAFFIC CALMING ACHIEVED?	4
WHAT TRAFFIC CALMING IS NOT	4
OBJECTIVES OF THE NORTHAMPTON TRAFFIC CALMING PROGRAM.....	5
PROCESS FOR INITIATING AND IMPLEMENTING TRAFFIC CALMING PROJECTS.	6
SUBMISSION OF TRAFFIC CALMING REQUESTS	6
PRELIMINARY EVALUATION OF TRAFFIC CALMING REQUESTS	7
TRAFFIC CALMING NEEDS ASSESSMENT	7
REVIEW OF NEEDS ASSESSMENT AND FINAL RECOMMENDATION	8
PRIORITY LIST OF TRAFFIC CALMING PROJECTS.....	9
TABLE 1: CRITERIA FOR RANKING OF TRAFFIC CALMING PROJECTS	10
PROGRAM MONITORING/REVIEW	11
SOURCES/REFERENCES	11
TRAFFIC CALMING REQUEST FORM	12

INTRODUCTION

Speeding traffic is a major concern in the City of Northampton because of its detrimental impacts on the safety and livability of our streets.

Neighborhoods where speeding occurs experience unsafe conditions for pedestrians, bicyclists, and other drivers, as well as the negative environmental impacts of noise and air pollution. Many communities around the state and nation have turned to engineering solutions for speeding commonly known as “traffic calming”.

The Institute of Traffic Engineers (ITE) defines traffic calming as, “the combination of mostly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized users”.

In plain English, traffic calming is building or retrofitting roadways with certain features and characteristics that induce drivers to slow down and pay more attention to their surroundings.

The Transportation and Parking Commission has developed this comprehensive manual to guide the implementation of traffic calming in the City of Northampton.

HOW WILL TRAFFIC CALMING BENEFIT NORTHAMPTON?

Reduced vehicle speeds and increased driver attentiveness obtained through the appropriate use of traffic calming offer Northampton the following benefits:

- ✓ Reduction in the probability and severity of crashes.
- ✓ Increased safety for other drivers, including those entering/exiting the roadway at intersections or driveways.
- ✓ Increased safety for pedestrians, bicyclists, and transit users promoting greater use of these sustainable modes of transportation.
- ✓ Reduction of dangerous driving behaviors.
- ✓ More attractive streets and neighborhoods through the addition of sidewalks, trees, street furniture and other aesthetic features of traffic calming.
- ✓ Reclaiming streets so that walking and biking are safe and attractive options throughout the City.

HOW IS TRAFFIC CALMING ACHIEVED?

The Massachusetts Highway Department divides traffic calming into three major categories of design measures.

- 1) Narrowing the real or apparent width of the street.
 - Pavement cross-section features including on-street parking, spot narrowing, bike lanes, travel lane width reduction, medians, islands, and road diets.
 - Placement along the street of buildings, trees, signage, and street furniture (e.g. lights, benches, bike racks, bus shelters, etc.).
 - Pavement edge treatments like raised curbs, neckdowns, chokers, and bulbouts.

- 2) Deflecting (introducing curvature to) the vehicle path.
 - Mid-block deflection measures including chicanes, lane offsets, short medians, crossing islands and mini-traffic circles.
 - Intersection measures including roundabouts, traffic circles, curb bulbouts, lane offsets, crossing islands, and neckdowns.

- 3) Altering the vertical profile of the vehicle path
 - Speed humps and speed tables.
 - Raised crosswalks and intersections
 - Textured pavement (e.g. pavers, stamped concrete, etc.)

WHAT TRAFFIC CALMING IS NOT

Citizen complaints about speeding traffic are often accompanied by requests for new Stop signs, traffic signals, turn restrictions, speed limit signs and the like. These are not traffic calming devices, but rather regulatory traffic controls that are governed by either national engineering guidelines, state laws, or both.

The Northampton Department of Public Works (DPW) frequently receives requests for new Stop signs to “slow down traffic” and “improve safety” on a local street. Not only are Stop signs not a traffic calming measure, but research shows that installing unnecessary Stop signs can often result in more collisions and more speeding.

Another common traffic-related request involves the lowering of posted speed limits on Northampton roadways. This is another regulatory control governed jointly by the Massachusetts Highway Department and the Registry of Motor Vehicles through a state approval process that requires documented speed and engineering studies. Again, most research concludes that driver speed is less a function of posted speed limits and more a function of real or perceived driving conditions.

Unlike the aforementioned regulatory traffic controls that require some form of legal enforcement, traffic calming measures are designed to be self-enforcing. Drivers are slowed down by the physical characteristics of the roadway, not by an artificially imposed speed limit or Stop sign.

Traffic calming is also not specifically aimed at reducing the volume of traffic, though it may have that effect when installed on local streets subject to speeding cut-through traffic.

OBJECTIVES OF THE NORTHAMPTON TRAFFIC CALMING PROGRAM

- Improve the safety and livability of Northampton's streets and neighborhoods by using appropriately designed and implemented traffic calming measures to mitigate the impacts of traffic while creating safer streets for residents, motorists, pedestrians, and bicyclists;
- Maintain a traffic calming project selection process guided by objective, needs-driven criteria to ensure that limited City of Northampton resources are utilized in a cost-effective and efficient manner;
- Implement traffic calming measures that are appropriate and effective for a given situation or roadway and improve public safety without jeopardizing emergency response needs, creating hazards or nuisances, or impeding public transit or commercial truck routes;
- Ensure that any proposed traffic calming installation has public support in the affected neighborhood(s) before it is implemented.
- Welcome citizen input and involvement in all phases of the program.

PROCESS FOR INITIATING AND IMPLEMENTING TRAFFIC CALMING PROJECTS

To achieve the aforementioned objectives, the following process will be followed when considering requests for developing, designing, and implementing traffic calming measures on Northampton roadways.

This process provides for the submission of traffic calming requests and their evaluation by the City; the investigation of potential traffic calming solutions and potential development of traffic calming designs by City engineers or consultants; and the continual input and review by the affected neighborhood, the appropriate Boards and Commissions, and elected officials.

The process does not apply to:

- a) Traffic calming measures that may be required on City streets to comply with State and Federal standards or warrants;
- b) Temporary changes in traffic patterns needed to stage special events;
- c) Experimental traffic calming measures installed temporarily for research and evaluation by the City and/or a partner agency or consultant;
- d) Installation of traffic control devices (e.g. signals, Stop signs, roundabouts, etc.);
- e) The installation of traffic calming devices that may be required on a Northampton roadway as mitigation for a commercial, residential, mixed-use, or other development project.

SUBMISSION OF TRAFFIC CALMING REQUESTS

Citizens, City Boards, and Departments may make requests for traffic calming. A Northampton Traffic Calming Request form must be completed and submitted to the Transportation and Parking Commission, 210 Main Street, Room 18, Northampton, MA 01060. A minimum of one resident signature on the form is required, but additional space is provided for the signatures of multiple residents of a given area or neighborhood.

A copy of the Traffic Calming Request Form appears at the end of this manual or is available online at <http://www.northamptonma.gov/tpc>.

PRELIMINARY EVALUATION OF TRAFFIC CALMING REQUESTS

Requests for traffic calming will be put on the agenda of a Northampton Transportation and Parking Commission meeting scheduled within sixty (60) days of their receipt. The Commission shall notify the petitioner(s) and property owners in the affected area of the date of said meeting to allow for greater public input.

Following public comment, the Transportation and Parking Commission will make a determination as to whether or not the request for traffic calming merits further consideration under this process.

In making said determination, the Commission will consider the availability of City funding and resources and give priority to addressing traffic and safety concerns in the following areas:

- 1) Streets that provide access to a public school, or represent major walk-to-school or bicycle-to-school routes;
- 2) Streets that are/could be heavily traveled by pedestrians and bicyclists seeking access to a public park, senior center, public/government building, downtown or commercial area, or a private facility (e.g. college, hospital, etc.);
- 3) Streets that have been programmed by the Department of Public Works for reconstruction in the near future and thereby present opportunities to realize cost savings by undertaking traffic calming installation simultaneously.

No further action may be required under the Northampton Traffic Calming Program on issues that can be reasonably addressed by alternative solutions (e.g. low-cost engineering improvements, new signage or markings, expanded enforcement, etc.).

In these cases, the DPW, Police Department, or other city agency will pursue agreed upon solutions and provide periodic updates to the Commission on their progress.

TRAFFIC CALMING NEEDS ASSESSMENT

If the Commission determines that a request for traffic calming merits further consideration under the Northampton Traffic Calming Program, it shall request that the Department of Public Works (DPW) prepare a "Traffic Calming Needs Assessment" report within ninety (90) days, unless prevented by weather or other mitigating circumstances, for presentation at the next regular meeting following its completion.

The Department of Public Works (DPW), working in coordination with other relevant City departments (e.g. Police, Fire, Parking, etc.), shall compile the following data in a standardized report form on the subject area of the traffic calming request:

- Physical Description (width, grade and alignment, number of lanes and width, pavement condition, parking, sidewalks, crosswalks, school crossings, bike lanes, and any other relevant descriptors).
- Street classification (e.g. local street, major collector, etc.).
- Posted speed limits and other regulatory signage or traffic controls.
- Status of roadway as a designated route for:
 - Walking access to a public school
 - Emergency vehicles
 - Transit buses or commercial trucks
- Existing/potential demand for pedestrian and/or bicycle access
- Proximity to community facilities, schools, parks, and commercial areas.
- Traffic Volume (min. 48 hour average weekday by direction).
- Traffic Speeds (average and 85th percentile).
- Crash and Traffic Enforcement Data (5 year).
- Estimated cut-through traffic on street (if applicable).
- Alternative routes that traffic may seek out to avoid traffic calming measures.
- Engineering recommendations:
 - Is the problem area a viable candidate for traffic calming installation?
 - Which traffic calming measure(s) may be appropriate?
 - Could the measures be designed and implemented by the DPW or would outside engineering services be required.
 - Approximate design and installation costs based on local experience or state and national averages.
 - Does the problem merit experimental installation of temporary traffic calming measures before a final determination is made?

REVIEW OF NEEDS ASSESSMENT AND FINAL RECOMMENDATION

The Department of Public Works will present the findings and engineering recommendations of its Traffic Calming Needs Assessment to the Transportation and Parking Commission.

Once again, the petitioner(s) and affected neighborhood property owners will be given advance notification of said presentation. The Commission may choose to hear additional public comment during this meeting.

Upon review and discussion of the Needs Assessment, the Transportation and Parking Commission must vote to “Recommend” or “Not Recommend” that the requested traffic calming project be placed on the City of Northampton’s “Priority List of Traffic Calming Projects”.

In the event that the Commission does not have sufficient information to make a final recommendation, or a traffic problem first merits a test of experimental traffic calming measures, a vote on the matter may be tabled for a period not to exceed ninety (90) days.

Traffic calming requests that receive a “Not Recommend” vote remain eligible for future consideration, but must wait one (1) year before they can be re-submitted.

PRIORITY LIST OF TRAFFIC CALMING PROJECTS

The City of Northampton will likely have more potential traffic calming projects than it has funding and staff to implement them in a given year.

A priority ranking of traffic calming projects will be created and maintained by the Transportation and Parking Commission based on a set of objective, needs-driven criteria (see Table 1). Similar ranking systems exist for maintaining the City’s roadway and sidewalk systems.

Each fiscal year, the Department of Public Works (DPW) will submit a formal request to the City of Northampton’s Capital Improvement Program (CIP) for funding of the design and/or construction of recommended projects in ranked order on the Priority List of Traffic Calming Projects

Traffic calming projects will compete for funding as part of the City’s annual Capital Improvement Program (CIP) process. High priority traffic calming projects, if successful in that process, will then be placed on the approved CIP list as recommended to the Mayor and Finance Director by the Capital Improvements Committee.

Funding of traffic calming projects, like all other proposed expenditures of City funds, will be subject to final approval and appropriation by the Northampton City Council.

Table 1: Criteria for Ranking of Traffic Calming Projects

TRAFFIC CALMING PROJECT PRIORITIZATION CRITERIA			
Criteria	Points Allowed	Points Awarded	Comments
Volume	Up to 5		1 Point for each 1000 vehicles per day.
Speeding	Up to 10		Using measured 85 th percentile speed, ½ point for each mile per hour starting at 10mph over the speed limit.
Crashes	Up to 10		1 point for each crash per year based on the three-year average.
Sidewalks	Up to 10		5 points if sidewalk on one side of street. 10 points if no sidewalks.
Planned D.P.W. Roadwork	50		50 points if roadway has been programmed for DPW resurfacing, rehabilitation, or reconstruction in the next 5 years.
Pedestrian Activity	Up to 10		Points given for high pedestrian activity centers.
Neighborhood Support	Up to 5		One point for every 20% of households within the impacted area who sign the Northampton Traffic Calming application.
Pace Car Participation	Up to 5		One point for every 20% of households who participate in the Northampton Pace Car program. www.northamptonma.gov/pacecar
Alternative Funding	Up to 50		1 point for every \$2,500 up to \$50,000 funded by source other than City of Northampton; full 50 points for 100% funding.
Waiting List	Up to 5		1 point for each year on the waiting list.
TOTAL			

PROGRAM MONITORING/REVIEW

The Transportation and Parking Commission will monitor this program and conduct a formal review of its progress on an annual basis. The Transportation and Parking Commission must approve modifications based on the City's experience and public feedback in managing traffic calming projects.

The public is encouraged to offer feedback on the program to the Northampton Transportation and Parking Commission at 210 Main Street, Room 18, Northampton, MA 01060.

SOURCES/REFERENCES

- *Traffic Calming - State of the Practice*, Institute of Transportation Engineers, Washington, D.C., August, 1999.
- *Project Development and Design Guide*, Massachusetts Highway Department, Boston, MA, January 2006.
- *Traffic Calming*, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., May 2001.
- *North American Design Guidelines for Traffic Calming Measures*, American Public Works Association, Kansas City, MO, 2006.
- *TrafficCalming.org*, Fehr & Peers Transportation Consultants, Walnut Creek, CA, 2005.
- *Traffic Calming Policy and Procedures*, Town of Brookline Department of Public Works, Brookline, MA, April, 2001.
- *Cambridge Traffic Calming Program*, City of Cambridge Community Development Department, Cambridge, MA 2000.
- *Neighborhood Traffic Calming Program Handbook*, City of San Leandro Engineering and Transportation Department, San Leandro, CA, July 2003.
- *Administering Traffic Calming*, Diego Torres-Palma, Kala Gurung, Dwayne Henclewood, Department of Civil and Environmental Engineering, University of Massachusetts, Amherst, MA, May, 2006