TRAFFIC CALMING POLICY

TOWN OF WAYLAND, MA

Effective March 31, 2011

Adopted by the Board of Public Works on

March 8, 2011 for:

Department of Public Works (DPW)

41 Cochituate Road

Wayland, MA 01778

www.wayland.ma.us

INTRODUCTION

"Traffic calming" measures are physical road design elements intended to reduce vehicle speeds and improve driver attentiveness. The Institute of Traffic Engineers 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."

When used in the appropriate settings, the reduction in vehicle speeds obtained through traffic measures reduces both the frequency and severity of collisions and improves the safety of both pedestrians and bicyclists.

Put simply, traffic calming is building and redesigning roadways with certain features and characteristics to induce drivers to slow down and pay more attention to their surroundings.

The Board of Public Works has studied programs of several other communities, best practices identified by Massachusetts DOT, the Institute of Traffic Engineers, and various publications to develop this Traffic Calming Policy as a guideline for the implementation of traffic calming measures for the Town of Wayland.

HOW WILL TRAFFIC CALMING BENEFIT WAYLAND?

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

- Reduction in the probability and severity of accidents.
- Increased safety for other drivers, including those entering/exiting roadways at intersections or driveways.
- Increased safety for pedestrians, bicyclists and other forms of sustainable modes of transportation.
- Reduction of dangerous driving behaviors.
- More attractive streets and neighborhoods through the addition of sidewalks, trees, signs, street lights and other aesthetic features of traffic calming.
- Reclaiming streets so that walking and biking are safe and attractive options throughout the town.

HOW IS TRAFFIC CALMING ACHIEVED?

Successful traffic calming requires a comprehensive approach that does not rely on any single solution (e.g. speed humps) or strategy. While there are various techniques that Wayland will look to deploy, a sound approach revolves around **Education, Enforcement, and Engineering**.

Education: Informs motorists how they can ease traffic impact through behavioral changes, and advises them about traffic management activities and opportunities for involvement.

Enforcement: Engages the Wayland Police Department to focus traffic and speed enforcement efforts in areas of particular concern.

Engineering: Combines physical measures to reduce the negative impact of motor vehicles, alter driver behavior, and improve conditions for pedestrian and non-motorized street traffic.

The Massachusetts Department of Transportation's Highway Division divides traffic calming into three (3) major categories of design measures:

1. Narrowing the real or apparent width of the street through:

   - Presence or placement of trees along the street;
   - Street furniture including lights, benches, and other elements;
   - Edge treatment of the pavement, including raised curbs; and
   - Pavement cross-section including pavement narrowing, bike lanes, travel lanes, auxiliary lanes, medians, and islands.

2. Deflecting the vehicle path from an otherwise straight path through:

   - Deflection measures including lane offsets, short medians, crossing islands and mini-traffic circles; and
   - Intersection measures including roundabouts, traffic circles, curb extensions and crossing islands.

3. Altering the street profile through:

   - Speed humps and speed tables;
   - Raised crosswalks and intersections; and
   - Textured pavement (e.g., pavers, stamped concrete, rumble strips, etc.)

See Description of Traffic Calming Measures at the end of this policy for a more detailed discussion of traffic calming measures.

OBJECTIVES OF THE WAYLAND TRAFFIC CALMING POLICY

The primary objective of Wayland's Traffic Calming Policy is the safe usage of Wayland's public roadways by motor vehicles, cyclists and pedestrians, **together**. Additional objectives include:

- Improve the safety and livability of Wayland'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 town 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; and
- Welcome citizen input and involvement in all phases of the program.

PROCESS FOR INITIATING A TRAFFIC CALMING REQUEST

For Wayland, the Traffic Calming Policy is designed to provide a strong, consistent framework to guide traffic calming efforts, and to ensure:

- A formal and consistent process for evaluating requests for traffic calming
- A forum for public involvement in the process
- A formal and consistent process for evaluating the efficacy of traffic calming efforts
- Maximum community awareness and support for traffic calming
- A clear funding strategy to implement recommended traffic calming measures

The following process will be followed when considering requests for developing, designing, and implementing traffic calming measures on Wayland roadways.

This process provides for the submission of traffic calming requests and their evaluation by the town and input by the affected neighborhood and the appropriate town boards and departments.

The process does <u>not</u> apply to:

1. Traffic calming measures that are required on town streets to comply with State and Federal standards or warrants;
2. Temporary changes in traffic patterns needed to stage special events;

3. Experimental traffic calming measures installed temporarily for research and evaluation by the town;
4. Installation of traffic control devices (e.g. signals, stop signs, etc.); and
5. The installation of traffic calming devices that may be required on a Wayland roadway as mitigation for a commercial, residential, mixed-use, or other development project.

SUBMISSION OF TRAFFIC CALMING REQUESTS

For a traffic calming plan to be considered, a "Traffic Calming Request Form" must be completed and submitted to the Department of Public Works, 41 Cochituate Road, Wayland, MA 01778, Attn: DPW Director. **A copy of the Traffic Calming Request Form is a separate attachment to this Policy and is available online at** http://www.wayland.ma.us/Pages/WaylandMA_DPW/TRAFFICCALMINGREQUESTFORMFinal30811.pdf .

A Traffic Calming Request Form must contain signatures from at least ten (10) households or 50% of the residences or businesses on the street, whichever is less, for the town to begin consideration of a traffic calming plan. A Traffic Calming Request Form may be made by: (1) a resident, with the required signatures; (b) a business or property owner, with the required signatures; or (c) any town department, board or committee.

PRELIMINARY EVALUATION OF TRAFFIC CALMING REQUESTS

Traffic calming requests meeting the criteria above will be put on the Board of Public Works (the Board) agenda within sixty (60) days of receipt. The Department of Public Works (DPW) shall notify the petitioner(s) and property owners in the affected area of the date of said meeting to allow for greater public input. At this meeting, the Board will determine if additional data is needed to consider the petitioners' request for traffic calming measures, or deny the petitioners' traffic calming request with reason(s) stated on the record.

If the Board determines that additional data is needed, it will request that the Wayland Police Department complete a traffic assessment (speed, volumes, accident history) for the affected area (unless such a study has been completed within the previous 18 months). The timing of this assessment will be based on the availability of measurement equipment, queue of previous traffic calming requests, and town budget to conduct the necessary analyses.

Upon completion of the traffic assessment, the results will be made available to the public and the Board's review of the traffic assessment will be placed on the Board's agenda within sixty (60) days of its release. The Board will then make a determination as to whether or not the request for traffic calming merits further consideration, or deny the petitioners' traffic calming request with reason(s) stated on the record.

If the Board determines that the traffic assessment demonstrates a need for a "Traffic Calming

Needs Assessment", then the project will move forward and it shall request that the DPW prepare a Traffic Calming Needs Assessment report within ninety (90) days, unless prevented by weather, budget limitations, pre-existing queue of assessments, or other mitigating circumstances, for presentation at a Board meeting within sixty (60) days upon completion.

TRAFFIC CALMING NEEDS ASSESSMENT

In making a determination that a Traffic Calming Needs Assessment is warranted, The Board will consider the availability of town 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 other facility; and
3. Streets that lack a wide shoulder, sidewalk, or other means of separating pedestrian and bicycle traffic from vehicular traffic; and
4. Streets that have been scheduled by the DPW for reconstruction in the near future and thereby present opportunities to leverage reconstruction efforts to simultaneously undertake traffic calming installation.

If a road is already scheduled for reconstruction, the Board will look at the appropriate data to determine if traffic calming should be considered for that location. No further action may be required under this policy on requests that can be reasonably addressed by the following traffic-calming measures: expanded enforcement of existing traffic and/or parking regulations, low-cost engineering improvements, and new signage or markings. In these cases, the DPW, Police Department, or other town departments and boards with relevant jurisdiction (e.g. Board of Selectmen, Historic District Commission) will pursue agreed upon solutions and provide periodic updates to the Board on their progress, as required.
As appropriate, the following traffic data and information may be collected and analyzed as part of the Traffic Calming Needs Assessment:

- Street classification and Area Type;
- Traffic volumes;
- Traffic speeds;
- Posted speed limits and other signage;
- Physical data (# of lanes, width, grade and alignment, parking);
- Location of nearest community facilities, schools, parks, and businesses;
- Accident data reports, and other relevant reports;
- Status of each street as emergency vehicle, bus, truck, or bicycle route;
- Extent of cut-through traffic on street (where obtainable);
- Pedestrian crossing volumes; and

- Other field observations, as needed.

The DPW will determine the necessary boundaries of the study area which will encompass the identified problem area, and may also include adjacent streets and intersections that might be indirectly affected by the potential diversion of traffic resulting from the installation of various traffic calming measures. Consultant services may be retained, from time to time, to assist the town in the collection and evaluation of the necessary data and information. This report will summarize the findings of the above field inventory and data collection effort. Key elements included in this report that will provide the basis for any traffic calming recommendation may be found in Table 1. The baseline conditions described in the Traffic Calming Needs Assessment report, along with the scores obtained based on Table 1, will provide the basis for the identification of those traffic calming measures likely to be most effective in addressing the traffic problems confirmed to exist on each street(s). Additionally, the Town's Public Safety officials (Police and Fire) will be consulted and may provide guidance on any proposed recommendations to ensure the continued safety of Public Safety officials when responding to emergencies.

REVIEW OF TRAFFIC CALMING NEEDS ASSESSMENT AND FINAL RECOMMENDATION

Following the above data collection effort, a Traffic Calming Needs Assessment report will be prepared and submitted to the Board within sixty (60) days of completion. The DPW will present the findings and recommendations of its Traffic Calming Needs Assessment to the Board. Once again, the petitioner(s) and affected neighborhood property owners will be given advance notification of said presentation. Additional public comment will be accepted by the Board during this meeting.

Upon review and discussion of the Traffic Calming Needs Assessment report, the Board may elect to vote to "Recommend" or "Not Recommend" that the requested traffic calming project be placed on the Town of Wayland's "Priority List of Traffic Calming Projects". Alternatively, the Board may opt to pursue other mitigation methods that a majority of the Board deems appropriate. Depending on the extent of the recommended traffic mitigation, the Board may require a full engineering assessment from a third party consultant to ensure safety, and any potential drainage and snow removal concerns are properly addressed. Funding for such assessment must be granted as part of the Town's annual capital planning process.

In the event that the Board 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 at least two (2) years before they can be resubmitted from the date of the "Not Recommend" vote.

PRIORITY LIST OF TRAFFIC CALMING PROJECTS AND BUDGET

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

A priority ranking of traffic calming projects will be created and maintained by the DPW based on the set of objective, needs-driven criteria developed during the data collection phase of the Traffic Calming Needs Assessment (see Table). These criteria will guide the prioritization of traffic calming projects.

Each fiscal year, as part of the annual Town's capital budget process, the DPW will include a funding request for anticipated traffic calming measures to include the design and/or construction of recommended projects in ranked order on the Priority List of Traffic Calming Projects.

Funding of all traffic calming projects, like all other capital budget items will be subject to final approval at Town Meeting.

PROGRAM POLICY REVIEW

The Town of Wayland's Traffic Calming Policy is designed to enable community support for traffic education, facilitate the identification of specific traffic concerns, collect data, develop solutions, and evaluate the impact of these solutions.

The primary focus of any initial traffic calming changes will be to change driver behavior, and doing so with tools that tend to be less controversial and less expensive. This includes: neighborhood traffic safety campaigns (mailers distributed to surrounding areas, communication with DPW and Public Safety departments in communities sourcing cut through traffic), speed display units, targeted police enforcement, pavement marking changes, signage ("Drive Slow," "Children at Play," etc.). Further traffic calming tools may be used if these tools fail to address the identified traffic issues. These additional tools may include: speed humps / bumps / tables, curb alterations, or potentially other physical alterations warranted and in compliance with recognized traffic calming standards as identified by Mass DOT, Institute of Transportation Engineers and AASHTO.

The DPW will monitor the results of any traffic calming installation. The DPW may remove any installed traffic calming devices if they are no longer deemed necessary.

ELIGIBILITY

To be eligible for traffic calming devices that require physical alteration to the roadway or other installation, the roadway must meet the following thresholds:

- Street must be a public roadway. Private roadways are not eligible for Town traffic calming efforts, as these are not Town-owned roadways.
- Roadways classified as **collectors** (streets designed to serve 15 or more existing, proposed or potential dwelling units and to act as a connection to other streets) or **arterials** (streets designed to carry through-traffic that does not have its origin or destination within that neighborhood) may not be eligible for speed humps or other physical installations if these result in a significant change to previously established and accepted traffic flow patterns in Wayland.
- Street may not have more than two travel lanes and requires a posted speed limit of 35 mph or less.
- Speed humps or raised crosswalks may not be installed on primary emergency response routes as determined by the Board of Public Works in collaboration with the Wayland Fire Chief and Police Chief.

RESUBMISSIONS OF TRAFFIC CALMING REQUESTS

Any traffic calming request that is denied at any stage of the process described above may not be re-submitted for a minimum of two (2) years from the time that the request was denied by the Board. However, the Board may initiate a review within two (2) years if the Board determines a new review is warranted.

FUTURE POLICY CHANGES & PROGRAM MONITORING/REVIEW

The Board and DPW will continue to review and revise this traffic calming policy as the Town's needs changes evolve, Mass. DOT changes state policies and/or guidelines, as a result of community feedback, and through continued process improvement efforts.

The DPW will monitor this program and conduct a formal review of its progress on an annual basis and report its findings to the Board. The Board must approve modifications to this Policy based on the town's experience and public feedback in managing traffic calming projects. The public is encouraged to offer feedback on the program to the DPW, 41 Cochituate Road, Wayland, MA 01778, Attn: DPW Director.

SOURCES/REFERENCES

- ◊ *Traffic Calming – State of the Practice*, Institute of Transportation Engineers, Washington, D.C., August, 1999.
- ◊ *Project Development and Design Guide*, Massachusetts Department of Transportation Highway Division, 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.
- ◊ *Traffic-Calming Policy,* City of Northampton Transportation and Parking Commission, Northampton, MA, September 2008.
- ◊ *Traffic-Calming Policy,* Town of Lexington Traffic Safety Advisory Committee, Lexington, MA, November 2009.
- ◊ *Neighborhood Traffic Calming Program,* Town of Greenwich, CT, Traffic Engineering Division, Department of Public Works, April, 2007.
- ◊ *Pennsylvania's Traffic Calming Handbook,* Publication No. 383, Pennsylvania Department of Transportation, Bureau of Highway Safety and Traffic Engineering, January 2001.

Table: Criteria for Ranking of Traffic Calming Projects

TRAFFIC CALMING PROJECT PRIORITIZATION CRITERIA			
Criteria	**Points Allowed**	**Points Awarded**	**Comments**
Volume	Up to 20		1 point for each 150 vehicles per day.
Speeding	Up to 20		Using measured 85th percentile speed, 2 points for each mile per hour over the speed limit.
Accidents	Up to 10		1 point for each accident reported within the past three years.
Sidewalks	Up to 10		5 points if sidewalk on one side of street. 10 points if no sidewalks.
Planned DPW Roadwork	10		10 points if roadway has been programmed for DPW resurfacing, rehabilitation, or reconstruction in the next 2 years.
Pedestrian Activity	Up to 20		5 points for each pedestrian generator (e.g. school, bus stops, park, community center, or commercial use that generates significant pedestrian traffic).
Alternative Funding	Up to 10		1 point for every $5,000 up to $50,000 funded by source other than Town of Wayland.
TOTAL	100 Max		

Attachment: Description of Traffic-Calming Measures

1. Speed Humps: Speed humps are raised devices, parabolic in shape, placed across the road to slow traffic. They are often considered the most traditional traffic calming solution. Speed humps slow traffic more gradually than speed bumps, although less so than speed tables.

2. Traffic Logix rubber solutions: specifically designed to be used on a permanent basis. Engineered to perform without deforming, are sturdy, long lasting, highly visible, and can withstand large traffic volumes continuously.

3. Speed Tables: Flat-topped speed humps, which are generally, long enough for the entire wheelbase of a passenger car to rest on top. The design of speed tables allows for more gradual slowing of vehicle speed than humps. This makes speed tables the ideal solution for roads with typical residential speed limits.

4. Curb Extension/Medians: Curb extensions can be used to create a variety of horizontal traffic-calming measures such as roundabouts, chicanes, neck downs and chokers.

5. Speed Cushions: Speed cushions are the newest available traffic-calming device, and perhaps the most innovative. They have several distinct advantages. Designed as three small speed humps, speed cushions force pedestrian vehicles to slow down. However, the wider axle of emergency vehicles allows them to pass without slowing down. In addition, speed cushions are more affordable than speed humps or tables since they require less material.

6. Neighborhood traffic circles (roundabouts): Raised islands, placed in the middle of an intersection, directing all traffic in the same direction. Usually larger than roundabouts.

7. Chicane: A series of narrowing or curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.

8. Choker: Curb extensions at midblock or intersection corners that narrow a street by extending the sidewalk or widening the planting strip.

9. Center island narrowing: Raised islands located along the centerline of a roadway that narrow the width at that location.

10. Bulbouts/Neckdowns: Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.

11. Diverters: Barriers placed diagonally across an intersection, blocking certain movements.

12. Forced Turn Lanes: Raised islands located on approaches to an intersection that block certain movements.

13. Raised Intersection: Flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section and ramps.

14. Police Enforcement: Employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.

[Source: U.S. Department of Transportation Federal Highway Administration]

Descriptions & Photos of Traffic Calming Devices and Techniques		
Devices & Techniques	**Descriptions**	**Photos**
Bike Lanes	A portion of a roadway, which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.	
Bulbouts/Neckdowns/ Chokers	Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.	
Center Islands	Raised islands located along the centerline of a roadway that narrow the width at that location.	
Chicanes/Lateral Shifts	Curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.	
Closures (Cul-de-sacs)	Barriers placed across roadways to completely close through vehicle traffic.	

Diverters	Barriers placed diagonally across an intersection, blocking certain movements.	
Education	Instructions given to the residents on safe on-street vehicle travel.	
Forced Turn Lanes	Raised islands located on approaches to an intersection that block certain movements.	
Median Barriers	Raised islands located along the centerline of a roadway and continuing through an intersection to block cross traffic.	
Police Enforcement	Involve employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.	
Realigned Intersections	Changes in alignments that convert T-intersections with straight approaches into curving roadways meeting at right angles.	

Roundabouts	Barriers placed in the middle of an intersection, directing all traffic in the same direction.	
Speed Humps	Rounded raised pavement devices placed across roadways to slow and/or discourage traffic.	
Speed Tables/ Textured Pavement/ Raised Crossings	Flat-topped speed humps often constructed with a brick or other textured material to slow traffic.	
Traffic Circles	Barriers placed in the middle of an intersection, directing all traffic in the same direction. Usually larger than roundabouts.	
Sources: Traffic Calming, Selected Practices, Lessons Learned and Reed Ewing, Rutgers University, Center for Urban Policy Research.		