

# **CITY OF LEBANON TRAFFIC MANAGEMENT PROGRAM**

## **Revision 1 – 9/18/2019**

### **INTRODUCTION**

#### **Application**

The purpose of the Traffic Management Program is to provide procedures for application, evaluation, and implementation of traffic calming techniques on existing local, residential streets. Collector and arterial streets and streets that are located in commercial zoning districts will not be considered for traffic calming. All aspects of the procedure are performed with neighborhood consensus and public participation.

### **PROCESS**

Projects that are being considered for the program must follow the procedure that is outlined below. The City of Lebanon will apply this process to all requests received. Variations in this process may be approved by the City of Lebanon when deemed appropriate due to unique circumstances.

#### **STEP 1: Initial Traffic Calming Request**

Neighborhood representatives or a homeowner's association must submit a written request for traffic calming on a specific street segment or segments to the City of Lebanon Engineering Department to the attention of the Traffic Engineer. The request must identify the perceived traffic problem and must include contact information for a representative of the homeowners' association/group. Individual citizens are not eligible to initiate project requests. The initial application for the City of Lebanon Traffic Management Program can be found on the City's website.

#### **STEP 2: Petition Process**

Upon receipt of the written request, Engineering staff will define the petition area. The petition area will typically include properties along the street that is being considered for traffic calming measures as well as along any street that is expected to receive significant increases in traffic volumes as a result of the traffic calming installation.

Engineering staff will prepare a petition packet that includes the petition form, a copy of the traffic calming policy, a map of the study area, and the names and addresses of the property owners within the petition area. The petition packet will be given to the requester, who will be responsible for conducting the petition. Prior to conducting the petition, the traffic calming request and petition should be presented at a neighborhood meeting that is publicized by the homeowners' association/group. After the meeting, the requester must obtain supporting signatures, or "yes" votes, that represent 51 percent of the households within the petition area. Missing signatures will be counted as "no" votes. The requester will have 90 days after the date of the neighborhood meeting to submit the petition results to the Engineering Department. If the petition is successful, then the project request will proceed to Step 3. If the petition fails, or if the petition is not returned by the petition deadline, then the project request is terminated, and the neighborhood will be ineligible to submit another request for traffic calming for a period of one year.

### **STEP 3: Evaluate Problems and Identify Possible Solutions**

Engineering staff will evaluate the project to determine the need for traffic calming measures. This evaluation will typically include a site visit and the collection of data, such as traffic volumes and traffic speeds. In order for a project to be considered for traffic calming measures, the following criteria must generally be met:

- The Average Daily Traffic (ADT) volume is greater than or equal to 400 vehicles per day (vpd).
- The 85th percentile speed is at least 7 mph faster than the posted speed limit.
- The posted speed limit is 35 mph or less.
- The street is a through street.
- The maximum grade on the section of roadway that is being considered for traffic calming measures does not exceed eight percent.
- The section of roadway does not have roadway geometrics, such as horizontal or vertical curves, that would result in inadequate stopping sight distance for motorists as they encounter the traffic calming devices.
- The street is not a primary emergency access route.

If Engineering staff determine that the street segment does not have a traffic volume or a traffic speed problem, then the project will be terminated. The project will be ineligible to submit another request for traffic calming for a period of two years unless Engineering staff determine that changing conditions have resulted in a traffic volume or speeding problem.

If Engineering staff determine that a street segment has a traffic volume or a traffic speed problem, but the above criteria are not met, then Engineering staff will work with the Lebanon Police Department and the neighborhood association/group to address the problem with education and enforcement efforts. However, the street will not be considered for other traffic calming measures at this time. Also, the project will be ineligible to submit another request for traffic calming for a period of two years unless Engineering staff determine that changing conditions during this time have resulted in a traffic volume or speeding problem.

If Engineering staff determine that a street segment has a traffic volume or a traffic speed problem, and if the above criteria are met, then the project will proceed. Engineering staff will identify feasible and appropriate traffic calming solutions to address the identified traffic problem. Examples of traffic calming techniques are provided in Appendix A. Traffic calming strategies and techniques shall be designed and developed in conformance with sound engineering practices. Engineering staff will then either meet with a representative(s) of the homeowner's association/group to present the results of the analyses and identified solutions or email the information. The homeowner's association/group must then hold a publicized neighborhood meeting to present the results of the analyses and the identified solutions. Engineering staff will also attend the neighborhood meeting. Based on comments received at the meeting, Engineering staff will revise the solutions as appropriate. The project will then proceed to Step 4.

#### **STEP 4: Conduct Education and Enforcement Efforts**

All projects in the traffic calming program will begin with education and enforcement efforts, which will involve the coordinated efforts of Engineering staff, the Lebanon Police Department, and the neighborhood association/group. The neighborhood association/group must actively participate in this process in order for the project to continue. Education and enforcement efforts will be applied for a period of not less than three months and not more than six months. If Engineering staff determine that these efforts have not sufficiently addressed the identified problem, then the project will proceed to Step 5. If Engineering staff determine that the education and enforcement efforts have addressed the identified problem, then the project will be considered complete. Engineering staff will continue to monitor the project for a period of one year. If the identified problem returns during this time, then the requester will be notified, and the project will proceed to Step 5. If the identified problem does not develop during this one-year period, then the project will continue to be considered complete. If the identified problem returns after this one-year period, or if a new traffic volume or traffic speeding problem develops after this one-year period, the homeowner's association/group must return to Step 1 in order to be considered for the traffic calming program again.

#### **STEP 5: Project Prioritization**

Projects that reach Step 5 will be prioritized by Engineering staff based on a variety of factors, such as traffic speeds, traffic volumes, estimated implementation costs and available funding. Engineering staff will notify the requester of the project's status at this time. This prioritization will be used by Engineering staff to develop schedules for the projects based on available funding.

#### **STEP 6: Project Implementation**

Projects will be implemented according to priority and the availability of funding. Projects that have the highest priority will be implemented first. Any project can be implemented ahead of schedule if the neighborhood association/group elects to pay 100 percent of the implementation costs and as long as doing so does not affect the construction schedules of higher-priority projects. Implementation of a project will not occur until all associated maintenance/landscape/payment agreements have been finalized. Installation of the traffic calming measures will be performed by City crews or by a contractor that is selected by the City.

#### **STEP 7: Monitoring and Evaluation**

Approximately three months after the proposed traffic calming devices have been installed, Engineering staff will evaluate the project to determine if the traffic calming devices have sufficiently addressed the traffic problem identified during Step 3. Traffic counts, speed studies and other data collection will be taken as needed. If the traffic problem has been resolved, then the project will be considered complete. If the traffic problem has not been resolved, then Engineering staff will consider other solutions that were identified during Step 3. If an alternate solution is selected by Engineering staff, then the project will return to Step 3.

5. If Engineering staff determine that there are no feasible alternatives, then the project will be terminated and will not be considered for inclusion in the traffic calming program again unless changing conditions have resulted in a feasible alternative. If this is the case, it will be the responsibility of the neighborhood association/group to submit another written request for traffic calming to the Engineering Department, and the entire traffic calming process must be repeated.

#### **MODIFICATION OR REMOVAL OF A TRAFFIC CALMING DEVICE**

If Engineering staff determine that a traffic calming device should be modified or removed due to public health/safety reasons, then Engineering staff, with assistance from the Public Works Department, shall modify or remove the device. If the neighborhood association/group wishes to remove or significantly alter a traffic calming device, then the neighborhood must conduct the same petitioning process outlined in Step 2. If the petition supporting the removal/modification is successful, then the neighborhood must pay for the costs that are associated with the removal/modification. A traffic calming device will not be removed until all payment agreements have been finalized. The roadway must be left in a condition that meets the City of Lebanon approval and standards. If the removal/modification is initiated by the neighborhood association/group, then the neighborhood will be ineligible to participate in the traffic calming program for a period of seven years.

**APPENDIX A  
TRAFFIC CALMING TECHNIQUES**

There are a variety of techniques that can be used to calm traffic on local, residential streets. Techniques that are specifically permitted, as well as techniques that are specifically prohibited, in the City of Lebanon are described below. Techniques that are specifically permitted are summarized in Table A1, which also identifies the potential benefits and disadvantages of each.

**TABLE A1  
POTENTIAL IMPACTS OF TRAFFIC CALMING TECHNIQUES THAT MAY BE  
USED IN THE CITY OF LEBANON**

Measure	Potential Benefits			Potential Disadvantages		Cost
	Speed Reduction	Volume Reduction	Conflict Reduction	Increases Emergency Response Time	Extent of Maintenance Required	
<b>Education</b>	**	*	**	*	*	\$
<b>Enforcement</b>	**	*	**	*	*	\$-\$
<b>Signage/Pavement Markings</b>	**	*	*	*	*	\$-\$
<b>Lower Speed Limit</b>	**	*	*	*	*	\$-\$
<b>Radar Speed Limit Sign</b>	**	*	*	*	*	\$
<b>Road Diet</b>	**	*	**	*	**	\$\$-\$\$\$
<b>Curb Extensions</b>	**	*	*	*	**	\$\$
<b>Speed Table/Hump</b>	***	**	***	**	**	\$\$
<b>Traffic Circle</b>	***	**	***	**	**	\$\$\$

\* No Benefits/Disadvantages  
\$ Low Cost

\*\* Minor Benefits/Disadvantages  
\$\$ Moderate Cost

\*\*\* Substantial Benefits/Disadvantages  
\$\$\$ High Cost

## TRAFFIC CALMING PROGRAM TECHNIQUES

**Education** is a key component of all traffic calming projects in the City of Lebanon. Before implementing physical traffic calming measures, the City of Lebanon Engineering Department will work with participating neighborhoods to educate their residents regarding safe, on-street, vehicular travel. Engineering staff will assist the neighborhood associations/groups in developing educational programs for the residents. However, it will be the responsibility of the neighborhood associations/groups to implement the education programs.

**Enforcement** efforts will be combined with neighborhood education as a first step in all traffic calming projects in the City of Lebanon. The Lebanon Police Department will work with Engineering staff to help resolve traffic problems, such as speeding. Enforcement efforts may involve the use of speed trailers and may include tickets for violators.



*Figure 1: Speed Trailer*

The addition of **signage and pavement markings** may be an effective traffic calming measure for residential streets. The addition of speed limit signs is a low cost measure to bring attention to the speed. Pavement markings, including white edge lines, yellow center lines, or stop lines, may also be an effective technique where appropriate.

Establishing **lower speed limits** may help to reduce speeding and cut-through traffic in residential neighborhoods. Some local, residential roadways have speed limits that are posted at 30 mph or more. It may be desirable to lower the speed limits on these roadways to 25 mph for local, residential streets.

**Radar speed limit** signs may be used as a permanent speed control measure in residential neighborhoods. Studies have shown that the use of these feedback signs can reduce speeds by 10-20%.



*Figure 2: Radar Speed Limit Sign*

A “**road diet**” consists of reducing the number of travel lanes, or the width of travel lanes, on a roadway which can be an effective technique for calming traffic on that street. Road diets can help to reduce vehicular speeds, reduce the number of conflict points for right-of-way users, and can help make streets more bicycle and pedestrian-friendly. Within the City of Lebanon, the “road diet” is typically accomplished by utilizing pavement markings to reduce lane widths and/or by adding bike lanes.



*Figure 3: Narrowing travel lanes for motorists with bike lane markings*

**Curb extensions** are formed by extending the curb on one or both sides of the roadway into the vehicular travel lanes to reduce the paved roadway width. The reduction in width creates “pinch points” in traffic flow. Curb extensions are also commonly referred to as chokers, neckdowns, traffic throats, and pedestrian bulb-outs.



*Figure 4: Curb Extension*

A **speed table/hump** is a wide and flat undulation that is placed on a street, typically across the width of the roadway, to reduce vehicular speeds. They have a height of three to four inches and a length of 12 or 22 feet. Speed humps should be distinguished from speed bumps, which are much shorter (six to 12 inches long) and have been associated with maintenance, safety, and liability concerns.



*Figure 5: Speed Hump/Table*

A **traffic circle** is a raised, circular island that is typically placed in the center of a residential street intersection to allow traffic to flow through the intersection without being controlled by a stop sign or a traffic signal. The design of a traffic circle requires motorists to travel through the intersection in a counter-clockwise direction around the island, which reduces the number of conflict points and reduces vehicular speeds.



*Figure 6: Traffic Circle*