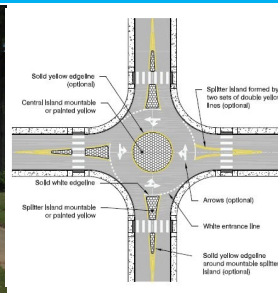
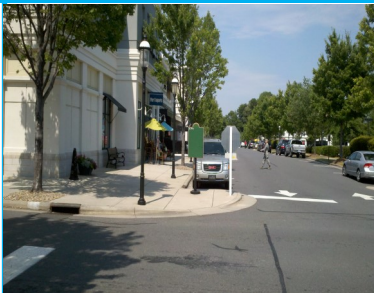




## Town of Mooresville, North Carolina

### Neighborhood Traffic Calming and Control Device Policy



Adopted January 6, 2014

Reviewed February 1, 2020

Town of Mooresville

Development Services Department





## TOWN OF MOORESVILLE

# NEIGHBORHOOD TRAFFIC CALMING AND CONTROL DEVICE POLICY

This Neighborhood Traffic Calming and Control Device Policy identifies a process for residents to request an evaluation for traffic calming or additional traffic control devices on a neighborhood street. The guidelines identified in this policy will assist Town staff in determining an appropriate course of action upon receiving a citizen's request.

### **What is Traffic Calming?**

Traffic Calming is the deliberate slowing of vehicles by narrowing of the roadway, constructing speed humps, or otherwise channeling the traffic in such a way that encourages safe speeds in residential areas. The objectives of traffic calming involve the reduction in vehicle speeds, reducing crashes, and improving the bicycle and pedestrian safety.

### **What is Traffic Control?**

While traffic calming devices are physical improvements to promote safe vehicle speeds, traffic control devices include signs or pavement striping to specifically guide the motorist along a street or through an intersection. Traffic Control Devices include stop, yield, speed limit, and curve warning signs. The appropriate use of these traffic control devices is specified in the Manual for Uniform Traffic Control Devices (MUTCD), which is the national standard for safe and appropriate installation of signage and pavement markings on public roadways.

### **What streets are addressed under this policy?**

Roadways that are defined as local or residential streets are covered under this policy. The purpose of local streets is to provide access to residential properties, often within a subdivision with closely spaced blocks. The streets must be accepted for Town maintenance in order to be considered for this policy. NCDOT maintained roadways or private streets are not covered under this policy.

### **Procedure for Initiating a traffic calming or traffic control study**

In order to initiate an engineering study to determine if traffic calming or additional traffic control devices are warranted on a neighborhood street, the Town must receive a petition from at least 75% of the property owners on the candidate blocks or a letter from the President of a Homeowners Association (HOA). The number of residents on a respective block is irrelevant as 75% is an accepted industry standard to indicate consensus for a potential traffic improvement.

In the case of speed hump requests, the Town must receive and verify the petition from 75% of the property owners, and a letter from the HOA will not be accepted. Once the petition has been verified, The process will take Town staff approximately 6-8 weeks to complete, and involves the collection and analysis of traffic count data, speed data, crash data, and the location (if warranted) of the proposed traffic calming devices.

The final approval will be required by the Town Board of Commissioners at a scheduled meeting before the device(s) can be installed.

This process will usually take 30-60 days following the approval by the Town Board of Commissioners. If a traffic calming or traffic control device is not warranted, then the Town must wait at least one year before conducting any subsequent engineering studies on the affected block or intersection. A sample petition and HOA letter can be found in the appendix of this document.

### **Types of Traffic Calming Measures**

#### ***Enforcement***

Citizens can request that the Mooresville Police Department provide additional enforcement to monitor speeding and other traffic safety issues by calling 704-664-3311.

The Mooresville Police Department also has driver speed feedback signs or speed trailers that can temporarily be installed on streets following a citizen request. It is important to note that enforcement is the most temporary form of traffic calming because it is generally only effective when drivers observe a police presence along a street.



#### ***Speed Humps***

Speed humps are a speed control device generally constructed of asphalt and designed to cause a driver to slow to approximately 20 MPH. Greater speeds may cause the driver to experience discomfort as the vehicle hits the hump. Streets that have these devices typically see a 5% to 10% reduction in speeds.

These devices are used on residential streets intended for use by local residents. Speed humps are constructed as two separate devices in each travel lane to allow emergency vehicles to drive over these devices. Residents that live near the installed speed hump may experience noise associated with vehicles braking for this device or accelerating after they have cleared the device. Another unintended consequence of speed humps is additional vehicles may divert to a parallel street to avoid these devices. The Town Board has adopted the following criteria for speed hump installation:



1. The street is maintained by the Town.
2. The street is classified as either a Local Street or a Residential Street.
3. The Posted Speed Limit is twenty-five (25) miles per hour.
4. The street must be at least one thousand (1,000) feet in length
5. The Average Daily Traffic volume shall be greater than five hundred (500) and less than four thousand (4,000) vehicles per day.

6. The street shall have no more than two (2) travel lanes and shall be no greater than forty (40) feet in width.
7. The street grade shall be eight percent (8%) or less.
8. The horizontal radius of the street shall be equal to or greater than three hundred feet (300').
9. The stopping sight distance on vertical curves shall be equal to or greater than two hundred (200) feet.
10. The speed humps shall be a minimum of two hundred (200) feet from any intersection.
11. An installed speed hump will require “No Parking” on either side of the street for 100 feet for both sides of the speed hump. No Parking signs will be installed within these zones.
12. A request for speed humps must be reviewed and receive a favorable recommendation from the Police Chief, the Fire Chief and the Public Works Manager.

Installation of a speed hump requires the ultimate approval of the Mooresville Town Board of Commissioners. Once the speed hump location is approved, then installation is typically completed by the Public Works Department within 90 days.

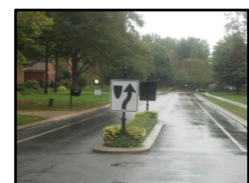
### **Other Traffic Calming Devices**

While the majority of the traffic calming devices within the Town of Mooresville currently consist of speed humps, there are other innovative traffic calming treatments that can be considered in the right context.

*Bulbout:* Bulbouts are curb extensions at intersections that reduce the roadway width from curb to curb, which provides a safety benefit to pedestrians. They also tighten the curb radii at the corners, reducing the speeds of turning vehicles.



*Center Island median:* A center island median is a raised island located along the centerline of a street that narrow the travel lanes at that location. These devices are often landscaped to provide a visual amenity. Placed at the entrance to a neighborhood, and often combined with textured pavement, they are often called “gateway islands.” Fitted with a gap to allow pedestrians to walk through at a crosswalk, they are often called “pedestrian refuges.”



*Chicanes:* Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Chicanes can also be created by alternating on-street parking, either diagonal or parallel, between one side of the street and the other. Each parking bay can be created either by restriping the roadway or by installing raised, landscaping islands at the ends of each parking bay.



**Chokers:** Chokers are curb extensions at midblock locations that narrow a street by widening the sidewalk or planting strip. Two-lane chokers leave the street cross section with two lanes that are narrower than the normal cross section. One-lane chokers narrow the width to allow travel in only one direction at a time, operating similarly to one-lane bridges. They are good for areas with substantial speed problems and no on-street parking shortage.



**Mini-Roundabout:** A Mini-roundabout consists of a circular raised island located in the middle of an intersection around which traffic circulates. These devices provide traffic calming benefits to neighborhood intersections by reducing speeds and crash severity.

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



**Raised Intersection:** Raised intersections are flat raised areas covering an entire intersection with ramps on all roadway approaches. These devices are the same elevation the sidewalk, or slightly below to provide a “lip” that is detectable by the visually impaired. By modifying the level of the intersection, the crosswalks are more readily perceived by motorists to be “pedestrian territory”.



The installation of the traffic calming devices listed above is contingent upon an engineering study and the availability of funds.

During the subdivision review process, Development Services staff shall evaluate the proposed street network to determine if the traffic calming devices within this Policy are appropriate to be included as a condition of approval.

### **Types of Traffic Control Devices**

#### ***Speed Limit Reduction***

Town residents can contact the Public Works Department to determine if a reduction in the posted speed limit is appropriate. Speed Limits on local and residential streets may only be reduced to 25 miles per hour, as lower speed limits are more difficult to enforce.

The Town must receive a petition from at least 75% of the property owners on the candidate blocks or a letter from the President of a Homeowners Association (HOA). Reduction of a posted speed limit on a Town street requires the ultimate approval of the Mooresville Town Board of Commissioners.

### ***All-Way Stop Control at Intersections***

The Town must follow the *Manual for Uniform Traffic Control Devices* (MUTCD) guidance on Multi-Way Stop applications (Section 2B.7) to ensure that all-way stops are installed at intersections that meet the federal requirements. **Stop signs are not a speed control device; rather their purpose is to assign right-of-way at an intersection.** All-way stop control is generally appropriate at a three or four approach intersection when the volume of traffic on the intersecting roads is approximately equal. When a resident requests an inquiry of an intersection for all-way stop control, the following criteria must be considered:

1. Street must be a local or residential street.
2. The decision to install an all-way stop control should be based upon an engineering study where traffic volumes are collected and crash data has been analyzed.

According to the MUTCD, the street that carries the most traffic must average at least 300 vehicles an hour over an eight hour period, and the minor approach must average at least 200 vehicles per hour over the same period of time for an all-way stop to be appropriate. The specific MUTCD criteria regarding all-way stops are listed below.

- a. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
- b. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
- c. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
3. The longest leg of a side street of the intersection being considered must exceed 400 feet in length.
4. The intersection being considered must be at least 300 feet from another stop condition.
5. Other criteria that may be considered in an engineering study may include:
  - a. The need to control left-turn conflicts;
  - b. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
  - c. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
  - d. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.
6. Petition must be signed by all property owners, as shown on the tax records, which represent a minimum of 75% of the individual properties on the street, as identified by the Town.

Installation of all-way stop control on a Town-maintained intersection requires the ultimate approval of the Mooresville Town Board of Commissioners.

### ***Installation of Other Signs for Traffic Safety***

Based upon resident inquiry, Town staff may conduct an engineering study to determine the need for installing the following signs intended to enhance roadway safety on town-maintained streets:

- Additional speed limit signs
- Curve, intersection, or stop ahead signs
- School and pedestrian crossing signs
- Dead end or no outlet signs

The Town will not install “slow children” or “Children at Play” signs because this may encourage children to play in the streets when the intended purpose of the streets are to provide transportation for vehicles, bicycles, and pedestrians.

### ***Traffic Calming Staff Contact Information***

Public Works Manager: 704-663-7282

Transportation Planner: 704-662-7040

P.O. Box 878

Mooresville, NC 28115

**APPENDIX:**

Example petition

Example letter from Homeowners Association





**EXAMPLE LETTER FROM HOA**

March 27, 2014

President

000 Homeowners Association

Mooresville, NC 28115

Public Works Department

P.O. Box 878

Mooresville, NC 28115

Dear Sir or Madam,

The 000 Homeowners Association would like to request an engineering study to determine the feasibility of installing all-way stops at the following intersections:

- A Street and B Street
- B Street and C Street
- D Street and E Street

Please let us know the outcome of the study at your earliest convenience. Thank you.

Sincerely,

President

000 Homeowners Association