

Springdale Traffic Calming Policy

Introduction

The encroachment of external traffic through neighborhood areas is an issue of concern to citizens in Springdale. This policy addresses a procedure through which neighborhoods can be considered for filtering external traffic through traffic calming measures. Traffic calming is the management of traffic through the use of roadway design features. Management of traffic can include grouping traffic, diverting traffic, altering speeds, and encouraging a change of emphasis in transportation mode. Traffic management through traffic calming is most effective if the features are both *warranted* and *properly designed*.

Traffic calming solutions may be warranted where there is a demonstrated need for traffic calming, and where solutions can be identified that will address the need. The needs to manage traffic through traffic calming devices might include the following:

- Reduce neighborhood cut through traffic
- Reduce traffic speeds through neighborhoods
- Accentuate pedestrian or bicycle use
- Control intersection traffic flow

Not only must the needs be perceived by the neighborhood, but they must also be documented to be substantive. In order for traffic calming strategies to be effective, traffic data collection and analysis must validate that calming needs are legitimate. These traffic studies may include:

- Speed studies
- Vehicle and pedestrian counts
- Through-traffic surveys
- Accident records
- Intersection capacity analysis

Effective solutions for valid needs also require that the selected traffic calming strategy be appropriate for the need, e.g., a strategy to reduce traffic speed and not to divert traffic should be used if the documented problem is excessive speed. Once an effective strategy for traffic calming has been selected, it should be properly designed in accordance with the relevant design parameters. These should include consideration of:

- Traffic volume

- Design speed
- Americans with Disabilities Administration (ADA) compliance
- Design vehicle characteristics
- Bicycle and Pedestrian Facilities

Although warranted and properly designed traffic calming strategies can have the desired benefits of managing traffic, they also can create disadvantages to adjacent streets and neighborhoods and to the traveling public at large. Traffic calming could have the potential of shifting an existing traffic problem to another street or neighborhood. Traffic calming may also increase delay for emergency response vehicles, and can increase long term maintenance costs for the City. Because of the controversy and potential disadvantages, traffic calming should be implemented only with the majority consent of those directly impacted.

This policy therefore provides guidelines for the following traffic calming activities:

- Requests for traffic calming consideration
- Documentation of traffic calming need
- Identification and approval of traffic calming strategies
- Programming of traffic calming improvements
- Design of traffic calming projects
- Evaluation of traffic calming projects

Definitions

1. ADT: Average daily traffic
2. Chicanes: curb extensions that alternate from one side of the street to the other, forming S-shaped curves.
3. Cut through traffic: traffic passing through a specific residential area without stopping or without at least one trip end within the area
4. Diagonal Diverters: barriers placed diagonally across an intersection, blocking through movements and creating two separate, L-shaped streets
5. Intersection Bulb-Out: curb extensions at intersections that reduce the roadway width from curb to curb

6. Local Streets: streets that give direct access to individual properties, do not carry more than 1,500 vehicles per day, and have a design speed up to 25 m.p.h.
7. Maintenance: All expenses, both direct and indirect, specifically identifiable with the repair and upkeep of property and equipment.
8. Mid-block Choker: curb extensions at mid-block locations that narrow a street by widening the sidewalk or planting strip.
9. Radar Trailer: Portable trailer that displays drivers' speeds
10. Single Unit Truck: a vehicle on a single frame including trucks, camping and recreational vehicles, motor homes, etc.
11. Speed Hump: rounded raised humps placed across the roadway
12. Speed Table: flat-topped speed humps often constructed with brick or other textured materials on the flat section
13. Traffic calming: the management of traffic through the use of roadway design features
14. Traffic Committee (TC): a subcommittee of the Street and Capital Improvement Committee, with the Street Department Superintendent as the committee coordinator. The mission of the Traffic Committee is to promote cooperation and coordination within the various city departments that control the planning, design, construction and regulation of the many components that comprise the traffic system of the city. The Committee is composed of representatives from the Planning Department, Police Department, Engineering Department and the Street Department. The Committee meets monthly on the first Wednesday of each month at 1:30 p.m. in the conference room at the Springdale Public Works Department to discuss the various aspects of the city's traffic system including, but not limited to, movement and congestion problems, construction and repair projects, safety considerations, signalization and lighting, signs and markings and any other areas as needed. The Traffic Committee will make recommendations and suggestions concerning its findings to the Mayor, the City Council Street Committee or any other involved organization.
15. Traffic Counts: a count of the total number of motor vehicles using a street or road at particular times.

Traffic Calming Measures

In order to address a wide range of traffic calming needs, the City has divided traffic calming measures into three levels. This is meant to limit expensive street changes when a less intrusive option may be more appropriate.

1. **Level 1 – Education and Awareness.** Level 1 traffic calming measures involve providing education about traffic and road safety and increasing awareness of posted speed limits and safety issues. These are the least intrusive and lowest cost measures and should be implemented first before proceeding to Level 2 or Level 3 measures. These measures include:

- Discussions
- Radar Trailer
- Enforcement
- Signage

2. **Level 2 – Minor Street Changes.** Level 2 measures result in minor changes to the street designed to help increase awareness and improve safety. These measures include:

- High Visibility Crosswalks
- Narrowing Lanes

3. **Level 3 – Major Street Changes.** Level 3 measures require major changes to the physical character of the street and are typically associated with higher costs. They are categorized by those that control speed and those that control volume. These measures include:

Speed Control

- Speed Hump
- Speed Table
- Raised Crosswalk
- Raised Intersection
- Textured Pavement
- Intersection Bulb-out
- Chicane
- Mid-block Choker
- Center Island Narrowing
- Traffic Circle

Volume Control

- Full Closures
- Half Closures
- Diagonal Diverters
- Median Barriers

Applicability

The following criteria must be met in order to be considered for traffic calming measures:

1. Street shall be classified as local on the Master Street Plan. Collector streets and above will not be considered due to their impact on large numbers of vehicles and emergency response routes.
2. Street shall be a public street.
3. Street must not be classified as a primary route for emergency response vehicles which would produce significant evidence of emergency response delay.
4. Vehicular volumes meet or exceed 250 vehicles per day.
5. Changes in traffic flow will not result in unreasonable liability exposure to the City.
6. Changes in traffic flow will not divert significant amounts of traffic to other residential streets.

Request for Traffic Calming Consideration

Traffic calming consideration can be initiated in two ways:

1. The Traffic Committee (TC) may initiate a study to verify if traffic calming is appropriate to solve a specific concern with respect to traffic, pedestrian, or bicycle safety or operations. This concern may be identified through staff monitoring or through citizen complaints.
2. Adjacent property owners may initiate the request for a traffic calming study by submitting their petition to the TC. The petition should be signed by at least one member of fifty percent (50%) of the property ownerships facing the street(s) on which the traffic calming study is requested. A block shall consist of every developed property having frontage on the street to be studied between successive intersecting streets. A typical traffic calming petition shall include, at a minimum, a description of the street or streets which are to be included in the calming study and the signature of at least 50% of the property owners on those street(s). Where more than one person is listed as owner for each property, only one person shall be entitled to vote or sign a petition. Likewise, if multiple properties are owned by the same person or persons, the owner(s) will only be entitled to one vote or signature on the petition. This definition of property owner shall apply throughout this policy document.

The Traffic Committee or its designee will review the petition for validity, and will assess whether other streets may be impacted by implementation of traffic calming strategies. The TC will define the area of potential impact resulting from the traffic calming implementation on a case by case basis.

Documentation of Traffic Calming Needs

All traffic calming studies shall address at a minimum the following issues:

- Purpose of the study
- Emergency vehicle response
- Access of snow and ice removal equipment
- Improvement maintenance
- Physical and operational conditions of the street(s)
- Impacts to other streets

Other issues that may need to be addressed include:

- Traffic speed
- Traffic volume
- Through-traffic
- Accident experience
- Vehicle-pedestrian conflicts
- On street parking
- Storm water drainage

Traffic Committee or its designee shall be responsible for conducting traffic calming studies in accordance with these guidelines under the supervision of the City Engineer. If the TC so elects, the study may be outsourced to a qualified traffic engineering consultant. It is estimated that a typical traffic calming study will require between 50 and 120 man-hours to complete. The traffic data that will be required will include:

- 24 hour directional traffic counts
- Spot speed samples (minimum required will be not more than 4 hours total sample, or 100 vehicles, whichever comes first).

Table 1-1 Local Streets Rating Criteria

- Review of three years' accident records at the subject location (conducted by police)

A rating system will be utilized to compare competing local traffic calming projects. Table 1-1 provides the rating criteria that will be considered for each project.

A traffic calming study must score a minimum of **60 points** to be considered for traffic calming improvements. Studies will take place during months when Springdale Public Schools are in session.

Level 2 or Level 3 Traffic Impact Analysis

Criteria	Points	Basis
Speed	0 to 40	5 pts assigned for every mph greater than 5 mph above the posted speed [(85 th percentile speed limit – 5 mph – posted speed limit) x 5 pts]
Volume	0 to 40	ADT divided by 100
No Sidewalks	0 or 5	5 pts if no continuous sidewalk
Traffic Accidents	0 to 5	1 pt for each accident/ year at one location
School Crossing	0 or 10	10 pts if children must cross street to get to school
Total Points Possible	100	

The TC will recommend and examine the technical feasibility and anticipated impacts of the proposed traffic calming measures. The analysis must address each of the following issues:

1. **Master Street Plan:** What is the classification of the street as shown on the currently adopted Master Street Plan?
2. **Existing Conditions:** What are the results of the Existing Condition Traffic Study?
3. **Effectiveness:** Does or will the proposed action address the specific traffic concern? See Traffic Calming Guidebook for potential impacts.
4. **Effect on Emergency Vehicle Response Time:** What is the extent of the impact on response time for emergency vehicles? Fire and Police must address this issue.
5. **Traffic Diversion:** Will the proposed traffic calming measure divert a significant amount of traffic onto adjacent roadways?
6. **Consideration for Other Users:** How does the proposed measure impact other road users, such as bicyclists and pedestrians?
8. **Drainage issues:** Will the proposed traffic calming measure create issues for storm water drainage on the roadway or the adjacent properties?
7. **Noise Impacts:** Will the proposed measure result in extreme braking, or other noise caused by going over or around the device that could result in extreme noise pollution for residents near the device?

8. **Loss of Parking:** Will the proposed device result in an unacceptable loss of on-street parking?
9. **Visual Impact:** What is the impact of the proposed device to the visual quality of the neighborhood? Is there an opportunity for landscaping?
10. **Snow and Ice Removal:** Will the proposed device inhibit snow and ice removal from the roadway?
11. **Maintenance Costs:** What are the costs associated with maintaining the device and is the cost feasible? Cost estimates should include landscaping that requires regular maintenance, vandalism, street paving, striping, and replacement.

Identification of Traffic Calming Strategies

Traffic Committee or its designee shall present to the owners of the property located in the area of potential impact the results of the traffic calming study and rating at a meeting called for that purpose. Where traffic calming may be appropriate, as determined by a rating 60 or greater, the TC shall present relevant strategies as options for traffic calming. To ensure observations accurately portray the effects of traffic calming measures, evaluations will take place during months that Springdale Public Schools are in session.

1. Level 1 Implementation

- a. **Responsibilities.** If applicable, Level 1 traffic calming measures should be recommended first. The TC will make a recommendation to the property owners of the suggested measures. The city and property owners will share responsibility in implementing these measures, depending on the technique proposed.
- b. **Evaluation.** If Level 1 is recommended, these measures will be evaluated for a minimum of two (2) months. At the end of the evaluation period, the city will evaluate the measures by conducting the traffic count and documentation of traffic speeds as outlined in Tables 1-1. If data shows conditions are the same or have increased, the City may proceed with additional studies to determine appropriate Level 2 or Level 3 measures. If data shows conditions are improved, no further action is required.

2. Level 2 / Level 3 Implementation.

- a. **Responsibilities.** If a Level 2 or Level 3 measure involving design features is proposed, the advantages and disadvantages of each strategy will be presented at the meeting. A vote will be conducted at the public meeting to identify the

preferred strategy. A ballot will be sent out to all property owners in the area of potential impact presenting the preferred option for endorsement of the preferred strategy. Support of 75 percent (75%) or more of the property owners in the area of potential impact is required before the City will give further consideration to traffic calming implementation.

- b. **Evaluation.** An evaluation of installed traffic calming measures will be conducted approximately 6 months after installation to determine whether the traffic calming measures have adequately addressed the traffic concerns.

The costs of any traffic calming improvements, or their removal, will be evaluated on a case by case basis. The TC will make the request to City Council for approval and funding determination. This does not guarantee funding will be available at the time of the request.

Programing of Traffic Calming Improvements

Once each year, TC will prioritize those traffic calming strategies within the City. Prioritization will be based on the rating system. The City will program priority traffic calming improvements within the capital improvement budget, as approved by the City Council.

Design of Traffic Calming Projects

The design of traffic calming devices must meet the following criteria:

1. The posted speed may not be more than thirty (30) miles per hour.
2. The street shall have an ADT of less than 1,500.
3. Limited to streets having only one lane of through traffic in each direction.
4. Streets must not be primary emergency routes.
5. The design must not inhibit the removal of snow and ice by the City.
6. Based upon the traffic study and engineering judgment of the TC, certain traffic calming measures may not be used if they would create an unsafe condition for motorists driving at normal speeds under average driving conditions.
7. Streets must not be through truck routes unless an acceptable alternative route is identified and approved. Design of traffic calming features shall accommodate a single unit truck.

Evaluation of Traffic Calming Projects

Six months following the completion of Level 2 or Level 3 traffic calming improvements, the TC will undertake a follow-up study to determine if the traffic calming features have achieved the

initial purpose of the project. If unacceptable impacts are identified, corrective measures may be taken. Traffic calming measures may be removed after the evaluation period for any of the following reasons:

- Emergency response is significantly impacted.
- The problem for which the traffic calming was implemented has been transferred to another street.
- At least seventy five percent (75%) of the property owners in the defined area of impact sign a petition to remove the traffic calming measures. This option will result in complete removal of all measures. This procedure for removing traffic calming devices will not be considered for a minimum of three years following completion of the construction.