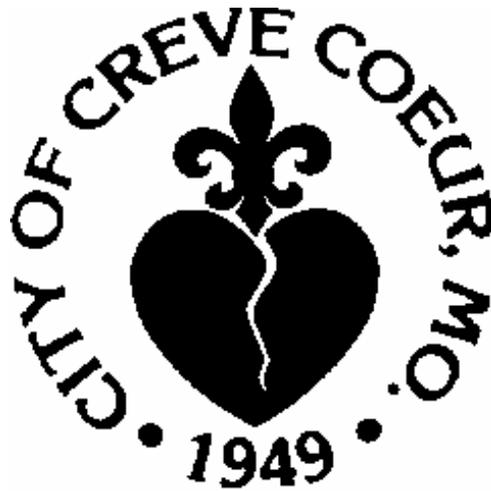


Traffic Calming/Traffic Mitigation Program



Approved
March 11, 2002

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Traffic Calming/Traffic Mitigation Program

I. Introduction, Intent, and Purpose:

The purpose of the **Traffic Calming/Traffic Mitigation Program** in the City of Creve Coeur is to assist residents and neighborhoods with a wide range of traffic problems within and around residential areas by helping residents: identify and evaluate the problems, develop a menu of possible traffic calming/corrective measures, and implement and evaluate the selected measures. While it is not the intent of the Traffic Calming/Traffic Mitigation Program to establish road construction standards, the city is encouraged to apply traffic calming and traffic safety principles in future development and redevelopment road system projects, whenever possible.

Traffic Calming/Traffic Mitigation is a form of traffic planning that seeks to balance the use of streets among automobiles, pedestrians, bicyclists, residents, and playing children. Traffic Calming/Traffic Mitigation measures may include public education and awareness, traffic enforcement, road design changes and the installation of traffic calming devices. Traffic calming measures are designed to reduce speed and traffic volume while maintaining maximum mobility and access. They seek to modify driver behavior to that which is more appropriate for residential streets. That driver behavior may include greater voluntary compliance with posted speed limits and other traffic regulations, as well as motivating drivers to use other routes such as collector and arterial roads (whenever possible).

Frequently, the immediate need for traffic calming is to reduce the speed of traffic to an acceptable level for the functional class of the street and the surrounding activity(ies). At times, the purpose/need for traffic calming is to reduce the volume of "cut-thru" traffic occurring on a specific street. The primary goal of traffic calming is to prevent, minimize and/or solve traffic problems. The goal is not to just shift the problem elsewhere or necessarily eliminate vehicles, but rather to make drivers aware they are sharing the road with others.

Citizen involvement is a critical element of a successful Traffic Calming/Traffic Mitigation program. It is important the perceived problem be clearly stated and understood from the onset. It is critical the problem be assessed and identified objectively. It is essential the Traffic Calming/Traffic Mitigation process and the proposed measures and solution be fully understood.

To successfully implement traffic calming/mitigation improvements, the transportation system must be considered as a whole for the area and community affected. Underlying causes, such as arterial congestion and/or poor road system design or management, must be addressed to create community understanding and support. It is important to distinguish between those most affected by the problem, and those that may be most affected by the measures designed to correct the problem. Citizen understanding of the problem, buy-in and ownership of the selected traffic calming measures/solutions is important to reducing and/or solving the problem.

II. Goal(s) and Objectives

1. To improve the quality of life and safety of all citizens by mitigating/improving traffic conditions throughout the City of Creve Coeur, to include:
 - Reducing excessive speeds of automobiles within residential areas
 - Increasing pedestrian and bicycle safety
 - Reducing volume of cut-through traffic within residential subdivisions and shifting excessive cut-through traffic on residential subdivision streets to residential collector and arterial streets designed to carry higher traffic volumes
 - Improving road design, signage, striping, and pedestrian/bicycle passageways;
 - Improving effective traffic calming measures and devices that considers/satisfies all community needs.

2. To provide a process that will help the City address concerns regarding traffic management and traffic safety in an objective, consistent manner; to include:
 - Providing citizens various means/methods by which traffic management/traffic safety problems and concerns can be reported, i.e. mail-ins, facsimiles and web-links;
 - Encouraging resident involvement in assessing and solving neighborhood traffic problems;
 - Making efficient use of City resources in responding to traffic management/safety issues.

3. To reduce the need for traffic enforcement.
 - Encourage voluntary compliance with speed limits and other traffic control regulations.
 - Make citizens aware of the benefits of traffic calming measures.

III. General Policies/Procedures:

A Traffic Calming/Traffic Mitigation program may be reactive, responding to citizen requests for action; or proactive, with City staff identifying problems and initiating mitigating action prior to complaints, accidents and other negative consequences of traffic occurring. This section provides the policies and procedures for accepting, collecting, considering, evaluating and resolving requests for traffic calming measures.

1. Generally, an area wide approach to requesting a traffic calming/traffic improvement (flow) assessment is preferred. This means that although a resident may request a review or assessment of a Traffic Calming/Traffic Mitigation improvement (flow) issue, it is preferred that such requests or proposals be submitted by a community official/representative, or a Community or Neighborhood Association. City Staff may also request/propose a traffic assessment in the same manner as a citizen or other community group.

NOTE: The purpose of this policy is not to preclude any citizen or resident from contacting the Police Department with complaints about traffic related incidents, but rather to suggest traffic problems should generally be viewed as a problem by more than a single individual. The Police Department conducts informal assessments of individual traffic complaints in a very similar fashion to those formally conducted under the Traffic Calming/Traffic Mitigation Program. Traffic situations or traffic incidents that need immediate attention because of immediate/imminent safety concerns should always be phoned into the Police Department in a timely manner.

2. Requests/proposals for Traffic Calming/Traffic Mitigation improvement (flow) assessments shall be submitted on the Neighborhood Traffic Audit Form or the Street Inventory Form. These forms are available on the City of Creve Coeur web site (www.creve-coeur.org) or can be requested by contacting the Creve Coeur Police Department Records Room at 314-872-2528.
3. Completed request forms can be submitted in the following manner:

U.S. Mail to: Creve Coeur Police Department or Fax: 314-432-5691
Attn: Traffic Safety Section
300 N. New Ballas Road See Web page for link
Creve Coeur, MO 63141

4. Upon receipt of the request, a representative of City Staff or the Police Department's Traffic Safety Section will contact the requesting party in order to ensure the reported concern and conditions are understood before the assessment process begins.
5. A preliminary evaluation by city staff and/or the police department will be conducted to gather data regarding traffic speeds, traffic volumes and other information necessary to identify conditions and contributing circumstances, and to determine whether further action (i.e. formal Traffic Calming or Traffic Mitigation assessments/measures) is warranted.

6. Generally, the preliminary evaluation will identify one or more circumstances, conditions or factors contributing to the problem(s), depending on whether the contributing circumstances relate to a traffic flow/congestion problem or a “traffic calming” problem. If the issue is a traffic flow/congestion problem, the Police Department will submit its findings and make recommendations for improvements. It is recognized that any recommendations for design or engineering changes/improvements are made without any formal engineering qualification, but rather are based on the Police Department's knowledge and experience in public safety/traffic safety matters, as well as its overall experience in assessing community traffic issues.

If the findings suggest traffic enforcement is one solution warranted, the Police Department will place the subject location on its list of concentrated/targeted education, awareness and enforcement areas. Enforcement will take into consideration all of the Police Department's commitments and priorities.

If the issue is a “traffic calming” problem and the location meets the City's preliminary Traffic Calming Qualification Criteria, the Police Department will implement Phase 1 of the Traffic Calming Response Plan. **NOTE: THE POLICE DEPARTMENT CONSIDERS THE TRAFFIC CALMING RESPONSE PLAN TO BE A COMMUNITY POLICING-PROBLEM SOLVING INITIATIVE, WHICH MEANS: POLICE HELPING THE COMMUNITY SOLVE ITS PROBLEM.**

7. **Traffic Calming/Traffic Mitigation Response-Phase 1:** The first phase of the Traffic Calming/Traffic Mitigation response plan will be an education, awareness and enforcement program of current traffic laws.
 - a. The education aspect may include any/all of the following: written notice of the extent of the problem(s) distributed to the individual/community affected; written notice of violation to identified violator(s), if applicable; request for neighborhood/resident (speed) pledge for compliance if the traffic violations are attributable to subject resident/community; speed display trailer; community signage (i.e. "**traffic calming assessment/program in effect/progress**").
 - b. The enforcement aspect of Phase 1 of the response plan will include a combination of concentrated/targeted enforcement by select police officers, as well as random enforcement by the officer assigned to patrol the subject area. Implementation of a "neighborhood speed/traffic watch" and/or photo-radar may be considered for future enforcement options. Phase 1 enforcement efforts will continue for a period of three (3) months at which time the Police Department will re-assess the degree of change in violations versus compliance.
 - c. If circumstances have improved to an acceptable level, Phase 1 will be considered a success and concentrated enforcement will cease. **An acceptable level includes Traffic Calming Qualification Points dropping below 4; or if speeding is the problem, then bringing the 85th Percentile speed down to within 5mph of the posted speed limit.** Random monitoring and/or enforcement by the Police Department will continue for an

additional three (3) months.

- d. During Phase 1, (1st three months) a Neighborhood Assessment Committee shall be established. The initial responsibility for organizing the committee falls on the citizen who submitted the request for assessment. The Police Department and/or a City Traffic Committee Member may assist the citizen in initially organizing this committee. The Neighborhood Assessment Committee should include between 5 and 7 citizens from both the Direct and Indirect Impact Areas. Subdivision trustees will be strongly encouraged to participate. One member of the Police Department and one member of the City's Traffic Committee will serve on the Assessment Committee. The nature of the problem may require a member of the City's Public Works Department participate. A representative from the appropriate Fire District will also be invited to serve on the Neighborhood Assessment Committee.

The Police Department will assist in determining the survey criteria/variables needed to objectively survey and assess the traffic problem/conditions. During Phase 1, the Committee is responsible for determining what the extent of the education/awareness effort will include. Citizen members of the Committee may be responsible for certain administrative aspects of the education and awareness problem while the Police Department focuses on the field aspects of the education/awareness and enforcement process. Citizen members may, on request by the Police Department, assist in collecting data and monitoring traffic conditions.

- e. A follow-up volume count and speed survey (or other applicable survey) will be conducted at the six (6) month mark. If, at that point, Phase 1 efforts related to traffic calming problems have not improved, the Neighborhood Assessment Committee will implement Phase 2 of the Traffic Calming/Traffic Mitigation Response Plan (review the matter and consider further/formal traffic calming measures).

NOTE: Seasonal differences will be considered when conducting traffic counts and speed surveys, and in drawing conclusions regarding traffic assessments.

8. **Traffic Calming/Mitigation Response Plan-Phase 2:** Generally, Phase 2 will be applied to resolving traffic calming problems and not necessarily traffic congestion or traffic flow issues. In Phase 2, the Neighborhood Assessment Committee will systematically evaluate the problem and subject location according to the point system outlined in this document. Projects must meet the outlined point threshold before Phase 2 of the Traffic Calming Plan/Traffic Mitigation is further considered or developed. The Preliminary Traffic Evaluation criteria requires the street to:

- Be primarily residential.
- Have a posted speed limit of 25 mph or less.
- Have two lanes.
- Not be a primary emergency response route.

In evaluating a traffic-calming request, the existing street conditions and original design purpose must also be considered when evaluating acceptable traffic speeds and volume. These conditions

include street width, grade or slope, curves, location of parks, schools or churches, curbs, sidewalks, and street classification. This is to ensure that standard engineering principles are considered and applied when possible.

9. After assurance the Preliminary Traffic Evaluation criteria has been met, the City Staff will apply traffic volume and speed data to assess Traffic Calming Qualification Points based on the following table of criteria:

- ❖ Accidents deemed significant by Police Department. Points = (avg. # accidents per year x 3)
- ❖ Speed Hazard Points = (85% speed – posted limit) /5
- ❖ Residential Volume Points = [avg. cars/day – (# impacted homes x 8)/400]
- ❖ Non-resident (Cut-thru) Volume Points = 1pt for every 25% over # of impacted homes x 8
- ❖ Inadequate pedestrian passageways (e.g. No sidewalks). Points = 1
- ❖ Presence of 1 or more pedestrian generators within Primary Impact Area (e.g. school, school bus stop, church, park). Points = 1

The criteria listed above is based on the Institute of Transportation Engineers (ITE) Report: Traffic Calming: State of Practice, 1999. Committee members, City staff, and others involved in the plan development should be familiar with the above source document.

10. Implementing/installing traffic calming measures/devices will involve identifying the areas/group to be impacted. Two areas/groups of impact will be defined. The Direct Impact Area will be the area of residents impacted by the problem itself and is generally defined as those residents that live on, or front, the street in question. The Indirect Impact Area will be the area of residents indirectly affected by the problem, but because they must use the traffic calmed road as their primary means of ingress or egress from the neighborhood, may also be effected by the implementation of a solution. This is generally defined as any resident that resides within one (1) mile of any traffic calming device, on a contiguous residential street absent of any intervening arterial or collector road.

11. After original design of the proposed traffic calming measure, but before implementation, resident support for the plan must be demonstrated. The primary focus for involvement should be those residents impacted by the problem. To that end, 75% of the residents in the Direct Impact Area must sign a petition in support of the selected traffic calming design plan. The secondary focus should be those residents that may be affected by the implementation of a traffic calming measure. **Twenty-five percent (25%) of the residents in the Indirect Impact Area must sign a petition for the selected plan.** Only one (1) vote per household will count.

12. **Traffic calming measures/devices will not be implemented in residential areas where speeding or other moving violations have been identified as contributing factors to the problem, and said violations are found to be committed most frequently by residents of the affected (direct and indirect) impact areas, unless a minimum of 75% of the driving residents have signed a speed/traffic compliance pledge (Unless the neighborhood**

organization wants to finance the project).

13. Traffic calming measures will be implemented and traffic calming devices will be installed in accordance with the procedures described in this document, as well as in accordance with existing applicable city ordinances and state statutes, sound engineering practices and within limits of available resources. Design and installation costs of any project will be funded by the city (if applicable) in order of priority rating. Acquisition of any needed right-of-way and/or easement and funding of any ongoing landscaping maintenance requirements will be the responsibility of the requesting neighborhood (**unless said project includes State or County involvement**).
14. Projects meeting all qualification criteria will be implemented in order of priority rating based upon the number of points assessed under the **Traffic Calming Qualification Point System** previously outlined in Section 9.
15. City Staff is responsible for reporting/submitting to the City Council all traffic calming plans that involve a recommendation to install significant traffic calming devices. Final approval for any such traffic-calming plan will rest solely with the City Council, which may take any action on the recommendation that it deems appropriate. Expenditures related to traffic calming plans will be handled in accordance with applicable budget/procurement policies of the City.
16. The Creve Coeur Police Department is responsible for maintaining, at a minimum, all documentation pertaining to the Traffic Calming/Traffic Mitigation administrative process. Said documents shall be maintained in accordance with State of Missouri record management standards.

IV. Design Principles/Setting Goals

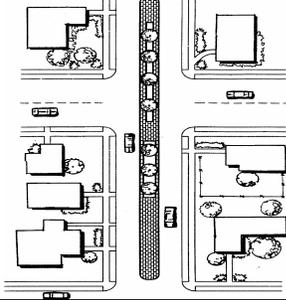
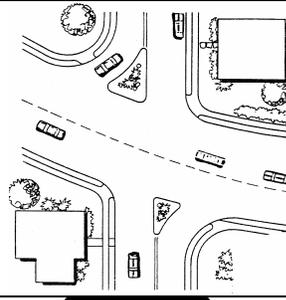
1. Education tools include yard signs, speed monitoring trailers, neighborhood speed watch, and neighborhood speed pledge. Enforcement tools include photo radar and traditional officer speed enforcement.
2. The City of Creve Coeur will approach neighborhood traffic calming through a comprehensive neighborhood planning process unless the traffic problem identified is a site specific concern that can be addressed with simple signing or other site specific solution(s). Neighborhood plans should be developed which address the specific problems defined for the neighborhood and minimize the negative effects.
3. Traffic calming plans will take into account the safe design capacity, street classification, and uses of the roadway in question.
4. When designing a traffic-calming plan and or setting goals for a specific project the unique factors of each street must be considered. These include street width, grade or slope, curves, location of schools, bus stops, parks or churches, curbs, sidewalks, lane configuration, and other streetscape modification.
5. All proposed traffic calming measures/devices will be reviewed and approved by the Fire Protection District, Police Department, and EMS in relation to the impacts of the proposed measures upon emergency response time, concern for patient/victim and employee safety, and concern for emergency services equipment. Key consideration will be given to lane width, turning radii, and encroachment into oncoming traffic. Generally, the minimum lane width required by the fire department apparatus is twelve feet (12').
6. Negative effects upon nearby streets must be considered as a component of the comprehensive planning process for a project. While shifting traffic from residential subdivision streets to residential collector and arterial streets through traffic calming measures is desirable, shifting traffic from one residential subdivision street to another residential subdivision street may be unacceptable. Inconvenience to cut-through traffic by limitation of access is not considered to be a negative impact.
7. Reasonable auto access will be preserved. Street closings, either full or partial, are strongly discouraged and will be considered only as a possible last resort solution when other measures prove unsuccessful in reducing traffic volumes on residential subdivision streets. Resident consensus must be widespread (75% of the residents whose ingress and egress is via the street where a restrictive device is proposed).
8. When both traffic speed and traffic volume are identified as problems, a combination of restrictive (reduces volume) and non-restrictive (reduces speed) measures should be considered.
9. Aesthetics are an important influence on the acceptance of traffic calming measures. A balance between aesthetics and other objectives of traffic calming should be achieved.

10. Proper signage for all traffic calming measures should be consistent with the MUTCD and be sensitive to context.
11. All traffic calming project plans shall be designed and installed in conformance with sound engineering and planning practices, including established sight distance standards.

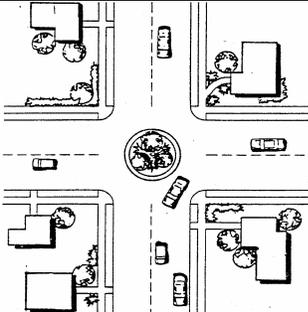
V. Menu of Traffic Calming Measures

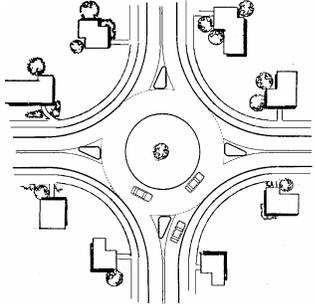
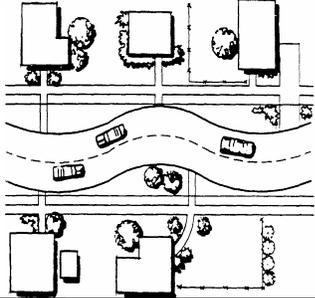
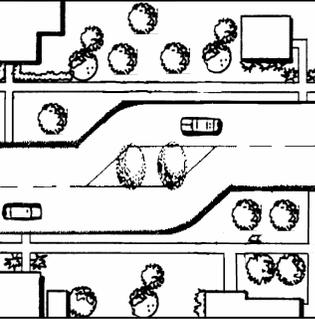
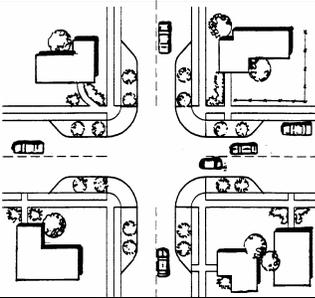
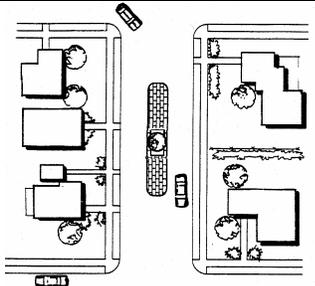
Although most traffic calming measures have some effect on both volume and speed, they are usually classified according to their dominant effect. Volume control measures include full and half street closures, diverters, median barriers, and forced turn islands. Speed control measures include sawhorses, speed humps, speed tables, raised intersections, traffic circles, chicanes, chokers, lateral shifts, and realigned intersections.

Typical volume control measures include, but are not restricted to:

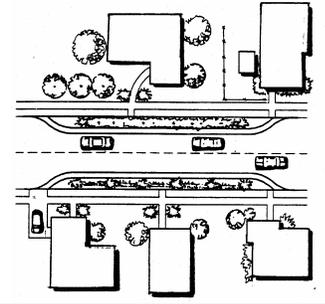
<p>1. Median barriers are raised islands located along the centerline of a street and continuing through an intersection so as to block through movement at a cross street.</p>	
<p>2. Forced turn islands are raised islands that block certain movements on approaches to an intersection.</p>	
<p>3. Time-of-Day or directional restrictions.</p>	

Typical speed control measures include, but are not restricted to:

<p>1. Traffic circles are raised islands, placed in intersections, around which traffic circulates.</p>	
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<p>2. Roundabouts require traffic to circulate counterclockwise around a center island.</p>	
<p>3. Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Other devices such as sawhorses may be used to achieve the same result.</p>	
<p>4. Lateral shifts are turns on otherwise straight streets that cause travel lanes to bend one way and then bend back the other way to the original direction of travel.</p>	
<p>5. Neckdowns are curb extensions at intersections that reduce roadway width curb to curb, as long as emergency response vehicles can safely and effectively negotiate the reduced area.</p>	
<p>6. Center island narrowings are raised islands located along the centerline of a street that narrow the travel lanes at that location.</p>	

7. Chokers are curb extensions at midblock that narrow a street by widening the sidewalk or planting strip.



For more information on the measures listed above see ITE's Traffic Calming: State of the Practice.

VI. Evaluation/Review

1. All traffic calming projects will be evaluated 6 months after installation and yearly thereafter with traffic volume and speed data collection to determine whether the selected measures demonstrate reductions in speed and/or volume.
2. Success of the traffic-calming program will be measured by a drop in point qualification criteria below the 4-point threshold. In other words, it is assumed that traffic-calming measures/devices are effective if speed/volume data indicates the point threshold has been reduced and sustained/maintained below four (4) points. Traffic-calming measures/devices should never/not (prefer never) be arbitrarily modified or removed.
3. Residents may request modification or removal of traffic-calming measures/devices by submitting to the City Administrator a petition signed by 75% of the residents in the Direct Impact Area. If the point threshold is at or above 4 points, a formal traffic calming design review must be conducted prior to any such modification or removal. Said review must include involvement from the impact areas, all public safety disciplines and two representatives from the City Traffic Committee. The Traffic Committee is responsible for submitting a recommendation within 60 days to the City Council, which will make the final decision regarding the request for modification or removal of the traffic-calming measures/devices.
4. The City Council reserves the right to modify, remove or discontinue any traffic-calming measures/devices.
5. The Police Department and the Fire Departments have the authority to direct the modification/removal of any traffic-calming devices when said agencies can demonstrate and/or show proof that said devices are significantly detrimental to emergency response time; detrimental to employee or patient safety; and/or detrimental to emergency response equipment. The City Council shall direct the removal of said devices as soon as practical.

CITY OF CREVE COEUR

EMERGENCY ROUTES

The term "Emergency Route" means that no traffic calming devices are allowed anywhere on these streets:

CREVE COEUR FIRE DISTRICT

CHESTERFIELD FIRE DISTRICT

BALLAS ROAD
BAUR BLVD
COEUR DE VILLE DR.
CONWAY RD
CRAIG RD
EMERSON
GRAESER RD
LADUE RD
LINDBERGH BLVD
MASON ROAD
MOSLEY RD
NORTH OUTER FORTY
OLD BALLAS
OLD OLIVE
ORCHARD LAKES DR.
OLIVE BLVD
ROSS ROAD
SARAH LN
SCHULTE RD
SPOEDE RD.
WARSON RD

BELLERIVE ESTATES
BELLERIVE MANOR DR
FERN VIEW
GALLAGHER
MASON MANOR DR.
MASON RD.
NORTH WALLING

Glossary

Collector Street

Any 2 or 4 lane street which links an arterial street with another collector street or local street. See street system map #5 from Comprehensive Plan.

Eighty-fifth Percentile Speed

The speed at or below which eighty-five percent (85%) of the observed or measured traffic is moving.

Local Street

Any 2 lane street with a primary purpose of providing direct access to abutting residential properties. See street system map #5 from Comprehensive Plan.

Residential Cut-Thru Traffic

Traffic which uses local or collector streets to travel through a residential neighborhood without having an origin or destination within the neighborhood.

Speed Study

Using equipment to measure, collect, and statistically analyze the speeds of 100 or more vehicles.

Traffic Calming Device

An element of a traffic-calming plan selected from among those devices authorized for use within the City and accepted by the Fire Protection District.

Traffic Calming

An appraisal of traffic conditions and the development of a plan for implementing one or more traffic-calming measures/devices in a residential neighborhood.

Traffic Count

An automated count of the number of vehicles travelling a particular street in a given period.

Emergency Route

Any street used by Police, EMS, or FPD as a primary emergency route.

Indirect Impact Area

The indirect impact area will be the area of residents indirectly affected by the problem, but because they must use the traffic calmed road as their primary means of ingress or egress from the neighborhood, may also be affected by the implementation of a solution. This is generally defined as any resident that resides within one (1) mile of any traffic calming device on a contiguous residential street absent of any intervening arterial or collector road.

Direct Impact Area

The area of residents impacted by the problem itself and is generally defined as those residents that live on, or front, the street in question.

MUTCD

Manual on Uniform Traffic Control Devices:
As distributed by the U.S. Department of Transportation Federal Highway
Administration