



City of Carlsbad Traffic Management Program

Updated 2026

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About this program

Introduction

Being able to walk or ride bicycles without being confronted by speeding cars and trucks is a key factor in a neighborhood's quality of life. But residents in all areas of Carlsbad, like those in other U.S. cities, often face unsafe or undesirable conditions because of drivers speeding on their neighborhood streets or using them instead of the major arterial roadways. Community members have continued to express concerns about these traffic problems to city officials, the Police Department and Traffic & Transportation staff, asking that their neighborhood quality of life be improved by reducing vehicle speeds and volumes.

The City Council approved the Carlsbad Residential Traffic Management Program in 2001 to provide a comprehensive citywide program to minimize excessive speeds and high traffic volumes in neighborhoods across the city. The program, based on an approach developed by a committee of community members, provides the means for residents to ask the city to make improvements to address their concerns about speeding and traffic in their neighborhoods, the process by which city staff evaluates such requests and a set of traffic calming measures to be considered as possible measures to slow drivers down and discourage cut-through traffic.

The program is structured around three key requirements:

- The first is the support of the residents in any neighborhood where traffic calming is needed.
- The traffic calming measures must also meet with the approval of emergency agencies so that they do not significantly impact response times.
- The residents must be willing to live with the actual traffic calming measures designed to slow traffic and reduce cut-through traffic in their neighborhood.

The City Council approved an update to the program in 2011.

As modes of travel and traffic volumes evolve, so do traffic calming measures, techniques and methodologies. Accordingly, this update is intended to update the program and traffic management tools to reflect the best current traffic safety practices and simplify the program to better address residents' traffic concerns.

Non-residential streets

The processes established in this program were specifically designed for residential streets rather than commercial streets or the city's main transportation corridors, which have very different uses and characteristics. Requests for traffic calming measures on non-residential streets will be reviewed by city staff. A Traffic Calming Review Committee, as defined in Phase 1 of this program, will evaluate the requests to determine if a project would be appropriate, feasible and would balance the needs of all users of the roadway system, including emergency response. Traffic calming projects on non-residential streets, which are generally much more complex and costly than traffic projects on residential streets, may then be developed as Capital Improvement Program projects, as appropriate.

Traffic calming measures considered for non-residential streets should follow the guidelines described in the Mobility Element, the element of the city's General Plan that covers transportation. The Mobility Element provides guidelines for the city's livable street system, which is designed to support safe, comfortable travel for everyone — pedestrians, cyclists, transit riders and drivers — while reinforcing the character and quality of surrounding neighborhoods. It identifies the modes of travel that are prioritized on different street typologies to provide a balanced mobility system that meets the mobility needs for all modes and people of all ages and abilities. It also identifies preferred attributes for each of the street types and provides guidance on traffic calming measures that should be considered according to these typologies.

(Since this update also addresses traffic calming on non-residential streets, the name of the program has been changed to the City of Carlsbad Traffic Management Program.)

Goal and approach

Carlsbad's traffic management program is designed to safely reduce excessive traffic speeds without creating new problems for drivers or emergency responders or others who use the roadways.

The program evaluates areas where excessive speeds have been reported and addresses those concerns through a collaborative program that can involve a range of traffic calming measures.

These traffic calming measures can take many forms, including what are known as the three Es:

Education: Increase awareness and knowledge among road users about safe and responsible behaviors to promote safe speeds, discourage distracted driving and compliance with traffic laws.

Enforcement: Police presence and selective enforcement of vehicle code violations.

Engineering: Physical measures and other techniques such as speed cushions, traffic circles or, in certain situations, stop signs. These measures are based upon engineering principles, financial, public safety response and environmental considerations.

Strategies

Managing traffic is a key component in improving and maintaining the community's quality of life. The City of Carlsbad follows the following strategies to identify and address issues about speeding and safety concerns on city streets:

- Promoting neighborhood safety for pedestrians, bicyclists, motorists and residents
- Maintaining reasonable vehicular access
- Preserving emergency service response times, evacuation routes, and accessibility for oversized utility vehicles and emergency equipment
- Maintaining, encouraging and enhancing pedestrian, bicycle, transit and alternative modes of travel
- Encouraging and incorporating resident participation

- Balancing on-street needs such as parking with the reasonable and safe function of the street
- Using city resources and funds efficiently and effectively
- Considering achievable options for funding
- Using a combination of education, enforcement and engineering (the three Es)
- Satisfactorily addressing legal and liability issues
- Developing recommendations that adhere to state law

According to the Institute of Transportation Engineers resource, “Transportation and Land Development,” residential streets should ideally be designed and constructed to a “residential neighborhood scale” to achieve vehicle speeds and traffic volumes consistent with typical neighborhood uses. Residential neighborhood scale is typically accomplished by restricting roadway length so that a driver slows, stops or makes a significant turning movement every 300-700 feet.

Complaints related to excessive vehicle speeds often originate on residential streets that have not been designed to this residential neighborhood scale. The City of Carlsbad Traffic Management Program attempts to resolve speeding issues through education and enforcement first. If education and enforcement still do not address speeding concerns, staff can then consider installing a series of traffic management measures based on residential neighborhood scale to encourage compliance with the speed limits in residential neighborhoods.

Traffic calming overview

The City of Carlsbad wants residents to feel safe in their neighborhoods. If a resident is concerned about speeding and other unsafe conditions in their neighborhood streets related to speeding, the traffic management program provides access to traffic calming resources that can help.

What is traffic calming?

"Traffic calming" is a term that generally refers to a method of slowing vehicles that uses physical design, signs, painted markings, road use rule changes and other transportation engineering measures to improve safety for motorists, vehicle drivers, pedestrians and cyclists.

Let's work together

The City of Carlsbad Traffic Management Program is designed to facilitate neighborhood collaboration to identify traffic safety concerns and weigh potential solutions.

Laws, regulations and policies

City staff can consider a variety of tools and solutions to address neighborhood concerns about traffic safety including the California Manual on Traffic Control Devices, which establishes the state's standards for the design, placement, and use of traffic signs, signals and pavement markings. All of the possible solutions are in keeping with the authority and responsibility given to local authorities by the California Vehicle Code and California Fire Code to protect public health and welfare.

The California Fire Code, as adopted by the city, sets requirements for road standards and prohibits traffic calming unless approved by the fire code official. It applies to all roadways that are required for emergency vehicle access including neighborhood streets. The Fire Code is also considered to ensure adequate road width, access for emergency response, appropriate road surface and ability to turn around.

State law sets the baseline for those who can use public streets and how cities may regulate travel. It is the policy of the State of California that all people have an equal right to use public streets and that no agency may restrict the use of streets to only certain individuals. With certain exceptions provided for in the California Vehicle Code, the specific authority to regulate travel upon streets can only occur in specific instances related to implementation of the city's Mobility Element, among other exceptions.

How the program works

The program is designed in such a way that residents of each street with identified concerns, and with neighborhood support and commitment, can play a part in the program. The procedures to implement traffic management measures and techniques are described on the following pages and are referred to as phases.

In general, the established procedures are consistent with the methodology currently used in Carlsbad to address any traffic-related concerns. The procedures require, and are designed to encourage, substantial neighborhood participation, following the process used by staff to formulate solutions to problem locations and the methods for proposing those solutions to the Traffic Safety & Mobility Commission for support of the recommendation and to the City Council for final resolution.

The City of Carlsbad Traffic Management Program has two main phases. The cost, complexity, effectiveness and impact on residents increase with each phase:

- Phase 1 Education and Enforcement**
Phase 1 focuses on awareness and behavior, using education and targeted enforcement to encourage safer driving habits. These tools are typically low-cost, can be implemented quickly, and rely on city staff to address speeding concerns before more intensive traffic management measures are considered.

- Phase 2 Traffic Management**
Phase 2 measures consist of cost-effective traffic management features that may reduce vehicle speeds.

Is your neighborhood eligible?

Participation in the City of Carlsbad Traffic Management Program generally requires a street to meet all of the following requirements:

1. Meets the definition of a residence district (as defined by California Vehicle Code Section 515) or a designated school zone (as defined by the California Manual on Uniform Traffic Control Devices Section 1A.13)
2. Meets the definition of a “local street” under California Vehicle Code Section 40802
3. A resident has made a request that staff consider a street for the City of Carlsbad Traffic Management Program process
4. The street has not been evaluated as part of the program in the past two years

This program does not preclude the Traffic Calming Review Committee, the City Manager or the City Council from separately considering traffic calming measures for a street that does not meet these eligibility criteria.

Phase 1: Education and Enforcement

The process is initiated when the Transportation Department’s Traffic & Mobility Division receives a traffic-related request from a resident or group of residents.



Step 1.1 Initiating a traffic request procedure

A resident or group of residents can initiate a request by sending an email to traffic@carlsbadca.gov, calling (442) 339-5332, or submitting a request through the Carlsbad Connects app. The following information is required for requests:

- Name and contact information of requester(s), including home addresses
- Specific location of the street(s) (e.g., Nueva Castilla Way from La Costa Avenue to Levante Street)

Upon receiving the correspondence and verifying that the street satisfies program eligibility requirements, staff will assign an engineer to investigate and conduct an engineering study of the street(s).



Step 1.2 Investigation/studies

Staff will gather preliminary data about the concern. Field reviews and appropriate traffic studies will be conducted. They may include:

- Geometric conditions of the road
- Parking availability, restrictions
- Vehicle, pedestrian and bicycle counts

- Location of existing traffic control devices on streets that are near or intersect with the proposed street
- Location of existing traffic calming measures on other sections of the road or on streets that intersect with the proposed street
- Collision analysis
- Speed data
- Other studies as determined appropriate

The Phase 1 strategy will be formulated after the data is collected.



Step 1.3 Evaluation by the Traffic Calming Review Committee

The City Manager will establish a Traffic Calming Review Committee consisting of staff from the Traffic & Mobility Division, Fire and Police departments and other staff as determined by the City Manager.

- After Traffic & Mobility Division staff collect data from the field reviews, the Traffic Calming Review Committee will discuss the request.
- The Police Department will analyze the capabilities and limitations of enforcement in addressing traffic concerns.
- The Fire Department will analyze potential impacts on emergency response routes and fire safety considerations, providing input to ensure that traffic management solutions maintain essential public safety functions.
- The Traffic Calming Review Committee will then make recommendations on possible Phase 1 measures, if needed.



Step 1.4 Recommending Phase 1 measures

Phase 1 measures from the City of Carlsbad Traffic Management Program toolbox (Appendix A) may be recommended by the Traffic Calming Review Committee and implementation of these measures can be accomplished by city personnel. Traffic & Mobility Division staff can issue work orders for the installation of signs or striping by city staff.

Traffic & Mobility Division staff can implement temporary speed feedback signs on the subject street as a tool to collect speed data in Step 1.2 and to educate drivers of their speed.

These speed feedback signs typically will be in place for two weeks. In the first week, the displays on the units will be turned off to collect speed data. During the second week, the displays will be turned on and will display the speed of approaching vehicles to educate drivers about their speed.

Where applicable, the Traffic Division of the Police Department will develop, implement and monitor an enforcement strategy under the direction of the officer in charge.



Step 1.5 Communication with residents

Information on appropriate traffic calming strategies and techniques proposed to address the identified concern will be shared with the resident(s) who initiated the request, including information about the issuance of work orders. Traffic & Mobility Division staff will also outline the engineering and enforcement approach that will be used to mitigate the traffic-related concerns.



Step 1.6 Phase 1 monitoring

Effectiveness of the implemented measures and/or strategies will be monitored by Traffic & Mobility Division staff and, as appropriate, by the Police Department. The residents who originated the request will be informed of the monitoring results.

Approximately six months after completion, staff will take another speed measurement to evaluate the effectiveness of Phase 1 measures in reducing speeds.

Phase 2: Traffic Management

If all applicable Phase 1 options have been completed and do not appear to adequately address the problem after being in place for at least six months (as determined by a follow-on speed measurement completed in Step 1.6), Phase 2 of the City of Carlsbad Traffic Management Program may be considered.



Step 2.1 Phase 2 eligibility determination

Not all residential streets and/or residential areas will qualify to participate in Phase 2 of the City of Carlsbad Traffic Management Program based upon the established process. All of the following eligibility criteria must be met for a street to be considered for further processing through the program:

1. Completion of Phase 1 of the City of Carlsbad Traffic Management Program
2. The critical or 85th percentile speed (the speed at which 85% of the vehicles are traveling at or below) must be greater than 32 mph as determined by speed data collected in Phase 1¹
3. A petition showing 67% or more residents and non-resident owners of residences in the project's area of influence support the traffic calming consideration
4. Assessment of eligibility by the city's Traffic Calming Review Committee that traffic calming would not hamper emergency response (e.g., connector streets to arterials may not be eligible)

The data collected in Step 1.6 will also be considered for further processing to Phase 2 of the program. The need for a traffic calming measure and its effectiveness is reduced when measured speeds are less than 32 mph.



Step 2.2 Determining the project area of influence

The street or streets directly impacted by potential solutions, including all dwelling units or other land uses bordering the subject street or streets, comprise the project area of influence.

The project area of influence will be established by the Traffic Calming Review Committee based on the characteristics of the street, location of concerns received and potential diversion of traffic due to traffic calming. The establishment of the project area of influence shall

¹ The Federal Highway Administration reports that findings have shown that a critical speed above 32 mph corresponds to a marked increase in the risk of severe injury to a pedestrian.

consider the implementation of measures on a roadway system as opposed to singular, isolated installations.



Step 2.3 Phase 2 concept plan development and neighborhood meeting

City staff, using the data collected in Phase 1, will prepare a draft concept plan within the boundaries of the project's area of influence. Appropriate Phase 2 measures will be selected from the City of Carlsbad Traffic Management Program Toolbox (Appendix A). Traffic & Mobility Division staff will present the draft concept plan to the Traffic Calming Review Committee for review and approval to present at a neighborhood meeting.

All residents and property owners from the project area of influence will be invited to a neighborhood meeting hosted by the city. At the meeting, staff will explain the Phase 2 process that may lead to the installation of the traffic management measures proposed for their neighborhoods.

Discussion will include:

- Neighborhood concerns
- Traffic data gathered
- Evaluation results from Phase 1
- Potential Phase 2 solutions
- Advantages/disadvantages of specific Phase 2 features
- Phase 2 approval process

Representatives of the Fire and Police departments will be invited to attend the meeting to explain response needs of the emergency service providers, enforcement and any concerns with potential traffic management on the street.

Upon presentation of the draft Phase 2 concept plan at the neighborhood meeting and taking into consideration the neighborhood's input, the Traffic Calming Review Committee may amend the draft concept plan.



Step 2.4 Mailing a survey for Phase 2 concept plan support

This amended traffic calming plan will then be presented to the neighborhood through a survey mailed to homes in the project area. The purpose of the survey will be to determine if the neighborhood (as defined by the project area of influence) is in favor of the proposed plan. The survey will include data gathered in Phase 1 and will include any potential impacts to public safety response.

Residents and non-resident owners within the project area of influence are eligible to participate in the support survey via regular mail. The survey will be considered valid if a minimum of 67% of the residents contacted fill out and return the completed survey. Staff will then analyze the returned surveys to determine if 67% or more of the project area of influence respondents support the Phase 2 plan.

The return rate and support rate shall be calculated by staff and reported as a whole number, rounded down to the nearest whole number as appropriate. For example, a 66.9% return or support rate will be truncated to 66% not rounded up to 67%.

For projects that include connecting cul-de-sac streets within the project area of influence, staff will calculate mail survey results in two ways as listed below:

- 1) Mail surveys returned within the entire project area of influence
- 2) Mail surveys returned on the affected street(s) only

The results of these surveys will show the level of support from residents living on the subject street segment and those who are not, for information purposes only. The 67% requirement will remain the respondents in the project area of influence.

If fewer than 67% of the surveys are returned, the resident(s) may request that staff reevaluate the street starting from Phase 1. Reevaluation will be conducted by city staff after a minimum of one year after the failed survey.



Step 2.5 Recommendation by the Traffic Safety & Mobility Commission and final approval by the City Council

The resident-approved Phase 2 concept plan will be brought to the Traffic Safety & Mobility Commission to hear public testimony on the matter and for the commission's recommendation. A duly noticed public meeting will be held by the City Council to receive the recommendations of the Traffic Safety & Mobility Commission for Phase 2 implementation.

If the City Council decides that the Phase 2 concept plan is acceptable as presented, the City Council will adopt a resolution authorizing the installation of the proposed measures and authorizing the appropriation of any necessary funding. The City Council may consider other options such as returning the Phase 2 concept plan to the neighborhood for refinement.



Step 2.6 Phase 2 implementation

Depending on the scope of the proposed measures, implementation of Phase 2 in most cases will require preparation of project design plans, specifications and cost estimates either by city staff or private consultants. Project construction will be performed by contractors awarded construction contracts through the city's standard construction bidding process.



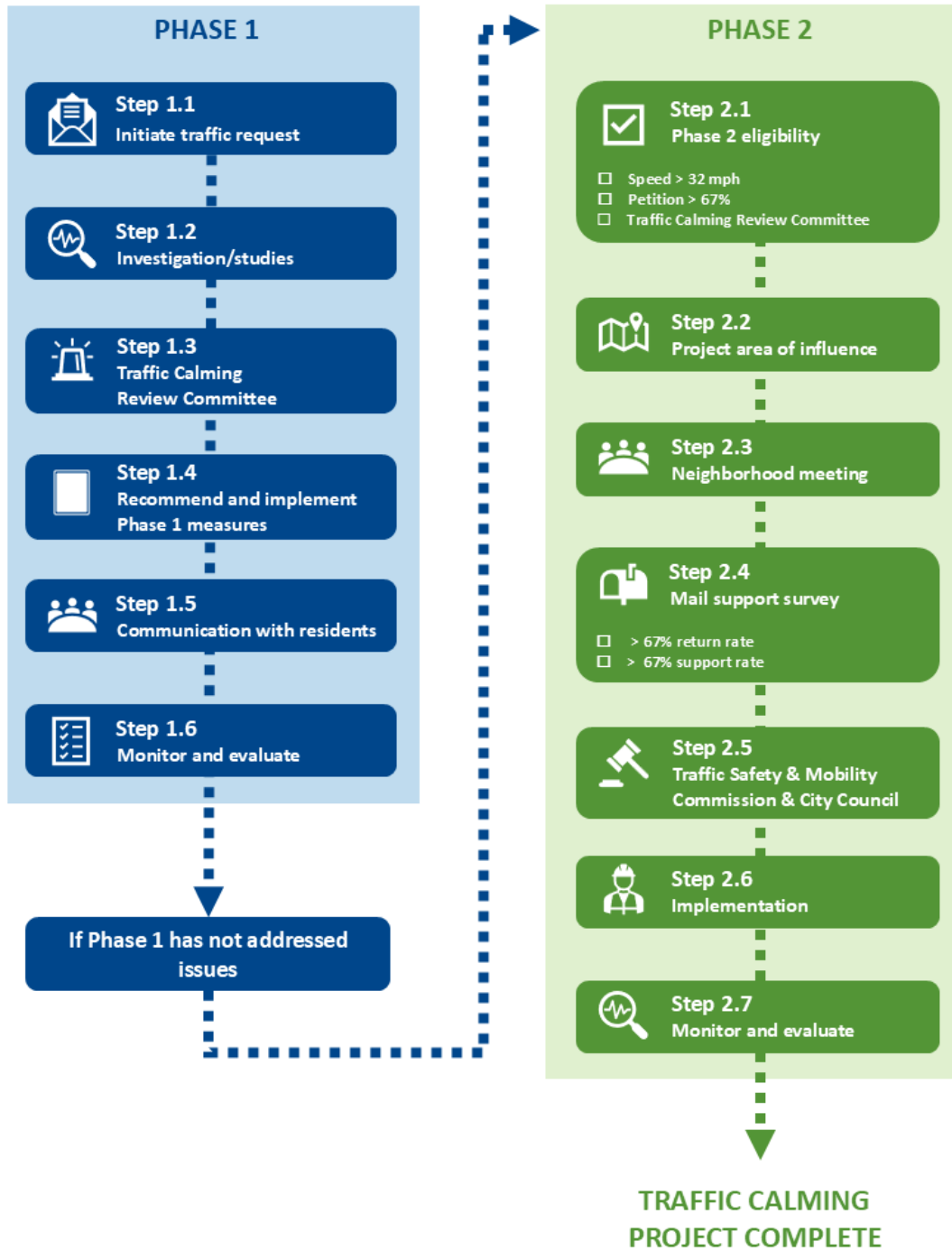
Step 2.7 Phase 2 monitoring

Phase 2 measures that have been installed will be monitored for effectiveness during the first year following completion of the installation. Staff will analyze traffic data results, accident history, observed deficiencies and/or impacts of the Phase 2 measures, comments, and suggestions or complaints received.

Traffic is measured by "critical speed," or the 85th percentile speed, which is the speed at which 85% of the vehicles are traveling at or below. If the "after" speed measurement indicated that the implemented measures are not effective in reducing speeds on the subject street, i.e. the critical speed is higher than the 32-mph threshold, staff could repeat the Phase 2 process with a modified traffic calming plan for the street.

If the implemented measures are deemed to be effective, defined as reducing the critical speed to less than the 32 mph threshold, but residents of the neighborhood believe that the impacts and results of the Phase 2 measures still do not fully address their concerns, they may request removal or revision of the implemented measures. The request must follow the Traffic Calming Measures Removal/Revision Process and be submitted no earlier than one year from the date of installation of the Phase 2 traffic calming measures.

City of Carlsbad Traffic Management Program Process



Traffic calming measures removal/revision process (Phase 2)

Individual residents within a neighborhood may suggest that one or more traffic calming measures be removed or revised even after critical speed is measured to be less than 32 mph. If so, a resident-led petition favoring the change signed by at least 67% of the residents and non-resident owners within the project area of influence or expanded project area of influence, if applicable, must be sent to staff. The petition shall indicate the proposed revision or removal of the traffic calming measures. Eligibility criteria for signing the petition will be the same as for previously indicated voting procedures (one signature per household or property). A sample petition is provided on the next page for use by the neighborhood contact person to collect signatures.

Staff will review the petition, determine if the 67% minimum threshold is met, and notify all residents and non-resident owners within the project area of influence of the results. A petition will not be accepted by staff during the monitoring year, which is the first year after the Phase 2 measures are implemented.

If the petition has 67% or more valid signatures, it will be submitted to the Traffic Safety & Mobility Commission for consideration. All individuals within the project area of influence will be notified in writing of the meeting and will have an opportunity to address the commission with their concerns. The Traffic Safety & Mobility Commission recommendation, whether to deny or uphold the petition, will be forwarded to the City Council for final approval.

All residents and non-resident owners within the neighborhood project area of influence will be notified by mail of the date when the City Council will consider their request for removal or revision of the traffic calming measure(s). Each interested resident will have an opportunity to address the City Council. A final decision will be made by the City Council based upon staff input, Traffic Safety & Mobility Commission recommendations and resident comments.

As appropriate, staff will initiate action on the City Council's decision. All residents and non-resident owners within the project area of influence will be notified of the City Council decision by mail.

Petition

Request to remove/revise traffic calming measure(s)

CONTACT NAME: _____ DATE: _____

CONTACT ADDRESS: _____

CONTACT EMAIL ADDRESS: _____

CONTACT TELEPHONE NUMBER:: _____

The undersigned state they that they are requesting that the City of Carlsbad consider removing or revising the traffic calming measure(s) installed on _____ (*street name*).

The measure or measures to be removed/revise are: _____

The undersigned further state that they have read the Travel Calming Removal/Revision Process section contained in the City of Carlsbad Traffic Management Program.

Name (<i>please print</i>)	Address (<i>please print</i>)	Email address and telephone number	Signature

(attach additional sheets as necessary)

Program update procedures

It is intended that the City of Carlsbad Traffic Management Program be dynamic and subject to change. Traffic calming measures, techniques and/or methodologies continue to evolve. What was once in favor and popular to implement may have been subsequently found by agencies or the community to be undesirable, unworkable or unacceptable to the neighborhood.

Revisions to the City of Carlsbad Traffic Management Program are expected. When revisions are suggested, a formal review and approval process of the revision(s) will be followed.

Step 1 Initiation of revision

A change or revision may be initiated by the City Council, staff or a resident. The requested revision should be made in writing, with the reasons for or the intent of the revision clearly stated. A compelling reason to initiate the update process or to change the process must be offered to be favorably received.

Step 2 Review by staff

Suggested revisions will be thoroughly researched and reviewed by city staff, including emergency services, to determine if they are appropriate for inclusion in the City of Carlsbad Traffic Management Program based on possible outcomes of the proposed revisions. As necessary, comments from stakeholders will be solicited. Changes to traffic calming measures, procedures or methodologies will only be considered by the Traffic Safety & Mobility Commission once during a rolling 12-month period.

Step 3 Response to initiator

Staff will respond in writing to the individual(s) proposing the revisions, commenting on their suitability or requesting additional information as needed. Revisions deemed unacceptable by staff will not be processed further. Revisions recommended by staff for further consideration will be scheduled for discussion at a Traffic Safety & Mobility Commission meeting.

Only those suggested revisions that significantly enhance the overall City of Carlsbad Traffic Management Program as determined by the city's Traffic Calming Review Committee, which consists of staff in Public Works Transportation, Fire and Police departments at a minimum, will be considered for acceptance and submitted to the Traffic Safety & Mobility Commission.

Step 4 Review by the Traffic Safety & Mobility Commission

All revisions proposed during any 12-month period will be reviewed by the Traffic Safety & Mobility Commission by the end of that 12-month period. The recommendations of the Traffic Safety & Mobility Commission for all such proposed revisions will be forwarded to the City Council for approval. The Traffic Safety & Mobility Commission review meetings will be duly noticed and open to the public for their input on revisions or changes.

Step 5 Review and approval by the City Council

In a public meeting, the City Council will consider the recommendations of the Traffic Safety & Mobility Commission. Staff may be directed by the City Council to implement the revisions to the program and the supporting documents or to take no action on the requested revision or to return at a later date taking into consideration input from the public and City Council discussion. Noticing procedures for the City Council meeting will be the same as for the Traffic Safety &

Mobility Commission meeting, and all interested residents will be encouraged to attend the City Council meeting to make their opinions known.

Proposed revisions will not interfere with or delay the processing of a neighborhood traffic calming program in progress. A neighborhood that has started development of its traffic calming program will continue the process without change.

APPENDIX A

TRAFFIC CALMING TOOLBOX

Traffic control vs. traffic calming

Traffic control devices focus on *directing* vehicle flow with official signs, signals and striping placed in the public right-of-way advising drivers on how they should behave while traveling. Common examples of recognized traffic control devices include stop signs, speed limit signs, curve warning signs and centerline striping. These devices have been officially approved by the State of California Department of Transportation (Caltrans) in keeping with the legislative authority provided for in the California Vehicle Code.

Conversely, traffic calming measures focus on *altering* vehicle flow by using physical road changes to force drivers to slow down and behave more safely in residential/pedestrian areas. Common examples of recognized traffic calming measures include speed humps, road narrowing, and traffic circles. Not all traffic calming measures have been officially approved by the State of California but still remain available as a safe and viable “tool” in a jurisdiction’s “toolbox.”

Put another way, traffic control devices inform drivers of the rules of the road, while traffic calming measures introduce physical features that drivers must negotiate as they travel along the roads.

Each tool listed is unique and has a specific purpose for addressing residential street traffic concerns that require some form of traffic calming. Each tool has its own set of advantages and disadvantages. More than just a structural feature on a street, traffic calming tools also encompass education, enforcement and engineering.

Alternative methods for reducing speed

Though this program provides some tools in the toolbox, there are alternative features that could also be considered as a part of a traffic calming plan. While the California Manual on Uniform Traffic Control Devices does not recommend the use of stop signs as speed control devices, stop signs do have the effect of causing vehicles to slow at intersections. Although stop signs are not shown as a traffic calming measure in the toolbox in Appendix A, the city may consider stop signs as a possible traffic calming alternative where appropriate and warranted as determined by staff and as authorized by the City Council.

The following pages identify tools that have been endorsed and are available for use in Carlsbad. These tools were selected based on their demonstrated efficacy in addressing traffic concerns and consideration of impacts on emergency response times, evacuation routes and accessibility for large public utility and service vehicles. This approach ensures that traffic management solutions enhance neighborhood safety while preserving critical community functions.

Each traffic calming measure is briefly described with application and possible advantages and disadvantages.

Phase 1

Education**Description**

Conversations, meetings, emails, letters and handouts to residents regarding neighborhood traffic and pedestrian safety issues.

Application

Traffic education is intended to make residents aware of local residential speed limits and other neighborhood traffic and safety concerns.

**Advantages**

- Allows residents to express views and obtain answers
- Identifies issues of concern and solutions

Disadvantages

- Effectiveness may be limited
- Limited audience

Special considerations

- Meetings need to stay focused on specific traffic issues

Phase 1

Police Enforcement

Description

The Police Department deploys officers to observe drivers' behavior, perform targeted enforcement on residential streets.

Application

Targeted police enforcement used to make drivers aware of local speed limits and to reduce speeds by issuing citations.



Advantages

- Effective, visible enforcement
- Driver awareness increased
- Can be used on short notice
- Can reduce speeds temporarily

Disadvantages

- Temporary measure
- Requires long-term use to be effective
- Limited police resources

Special considerations

- Typically, it is only used on residential streets with documented speeding problems
- Typically, it is only effective while an officer is monitoring speeds
- Benefits are short-term without regular periodic enforcement

Phase 1

Temporary Speed Feedback Signs

Description

A portable device equipped with a radar unit that detects, displays and records the speed of passing vehicles. The sign can be set to display the speed on its screen or show a blank screen for data collection only.

Application

Temporary speed feedback signs may help discourage speeding on neighborhood streets through education (when set on display mode) by showing drivers their current speed.



Advantages

- Educational tool
- Good public relations tool
- Encourages speed compliance
- Can reduce speeds temporarily

Disadvantages

- Not an enforcement tool
- Ineffective on multi-lane roadways
- Less effective on high-volume streets
- Limited resources to install
- Signs required to be mounted on existing infrastructure like streetlight poles and roadside signposts
- May not be effective at lowering vehicle speeds

Special considerations

- Can be installed on a standard streetlight where a resident indicates there is a speeding problem
- Typically, it is only effective in reducing speeds when the sign is present and set on display mode

Phase 1

Speed Limit Signs

Description

25-mph speed limit signs are installed on neighborhood residential streets that meet the legal definition of a residence district in the California Vehicle Code.

Application

Speed limit signage encourages slower vehicle speeds along residential streets. Signs are only installed along streets where speeding is a problem.



Advantages

- Clearly indicates prima facie speed limit
- Usually popular with residents
- Low cost of installation

Disadvantages

- Not effective by themselves
- May add to sign pollution
- Increases cost of sign maintenance

Special considerations

- Requires police enforcement and community compliance to be effective

Phase 1

Speed Limit Pavement Legends

Description

Painting of speed limit legends on the roadway adjacent to speed limit signs.

Application

Speed limit pavement legends increase driver awareness of the speed limit to help reduce speeding.



Advantages

- Supplements speed limit signs
- May help reduce speeds
- Usually popular with residents

Disadvantages

- Not effective or enforceable by themselves
- Increases street maintenance cost

Special considerations

- Should only be installed on streets where speeding is a documented problem

Phase 1

Warning Signs

Description

Standard warning signs give drivers advanced notice of roadway conditions.

Application

Warning signs advise motorists to reduce their speed.



Advantages

- Informs drivers of roadway conditions
- Low cost of installation

Disadvantages

- May add to sign clutter
- Increases cost of sign maintenance
- Not a regulatory sign

Special considerations

- Advisory only, cannot be enforced

Phase 2

Speed Table/Raised Crosswalk

Description

Speed tables/raised crosswalks are constructed 3 to 4 inches above the elevation of the street. They feature ramps on the approaches and a flat top, typically about the length of a passenger car.

Application

Speed tables/raised crosswalks help reduce vehicle speeds at mid-block locations or intersections.



Advantages

- Reduces vehicle speeds
- Access not affected
- Generally, results in a gentler ride as compared to speed humps

Disadvantages

- May increase noise
- Affects emergency response times
- Increases in maintenance costs
- May not be as aesthetically pleasing

Special considerations

- Requires special signage and markings which may lead to sign clutter
- Careful attention required for drainage issues and other design issues
- Works well in combination with curb extensions and curb radius reductions

Fire Department and Police Department evaluation

Fire Department and Police Department shall have final approval of speed table locations and spacing.

Phase 2

Speed Cushions

Description

Field-formed asphalt approximately 3.5 inches in height and 12 feet in length installed in a series across a roadway. Transverse cuts across the cushion allow some emergency vehicles to pass without vertical deflection.

Application

Speed cushions may help reduce vehicle speeds without significantly impacting some emergency vehicle response time.



Advantages

- Reduces vehicle speeds
- May reduce vehicle volumes

Disadvantages

- May increase noise
- Aesthetics
- May divert traffic to other streets
- Increases in maintenance costs
- Affects emergency response times

Special considerations

- Requires special signing and markings
- To control vehicle speeds, the spacing must be carefully evaluated

Fire Department and Police Department evaluation

Fire Department and Police Department shall have final approval of speed cushion locations and spacing.

Phase 2

Narrowing Lanes (Striping)

Description

Striping used to narrow traffic lanes. The “extra” pavement width can be used to create or add to bicycle and/or parking lanes. Lane striping can also be used to visually simulate the hardscape features that define the horizontal traffic calming measures found in this Toolbox.

Application

Narrowing lanes with striping can be used to help slow vehicle speeds. Horizontal measures can be simulated with striping but may not be as effective as traffic calming measures that use hardscape to deflect traffic.



Advantages

- Can be quickly implemented in some circumstances
- May reduce travel speeds
- May improve safety

Disadvantages

- Not effective as a stand-alone measure
- May lead to loss of parking
- Increases regular maintenance
- Some residents may oppose striping on neighborhood streets
- Increases resurfacing costs

Special considerations

- Narrowed travel lanes may change how it “feels” to drive on the road, encouraging slower speeds
- Can be installed quickly
- Designated parking lanes can be created
- Adds striping to neighborhood streets

Fire Department and Police Department evaluation

Fire Department and Police Department shall have final approval of narrowing lanes to reduce speeds.

Phase 2

Turn Restrictions via Signs

Description

Standard “No Left Turn,” “No Right Turn” or “Do Not Enter” signs used to prevent undesired turning movements onto residential streets.

Application

Turn restriction signage can be used to help reduce cut-through traffic on residential streets.



Advantages

- Redirects traffic to main streets
- May help reduce cut-through traffic
- Low cost

Disadvantages

- May divert traffic to other streets
- Inconvenient to residents
- Enforcement required
- Adds to sign clutter
- Violation rates can be high without enforcement

Special considerations

- Installed at entry points of a neighborhood to prevent traffic from entering
- It has little or no effect on speeds for through vehicles
- With active enforcement, violation rates can be reduced

Phase 2

Speed Feedback Signs

Description

A device equipped with a radar unit that detects, displays and records the speed of passing vehicles. The sign can be set to display the speed on its screen, a slow-down message or a blank screen for data collection only.

Application

Speed feedback signs may help discourage speeding on neighborhood streets through education (when set on display mode) by showing drivers their current speed or a slow-down message.



Advantages

- Educational tool
- Positive public relations tool
- Encourages speed compliance
- Can help reduce vehicle speeds

Disadvantages

- Not an enforcement tool
- Less effective on multi-lane roadways
- Less effective on high-volume streets

Special considerations

- None

Phase 2

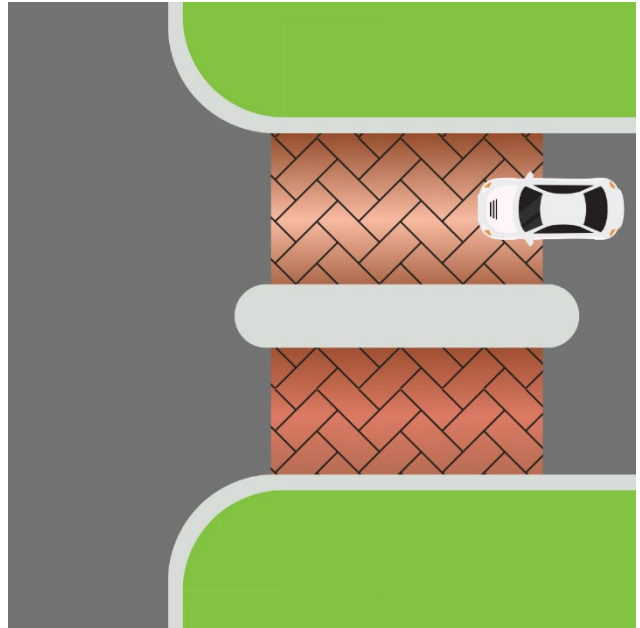
Entry Treatment

Description

Entry treatments consist of raised landscaped median islands and textured pavement features and are located at entries to neighborhoods.

Application

Entry treatments help reduce speed. They provide visual cues to drivers that they are entering a residential area or that surrounding land uses are changing.



Advantages

- May reduce vehicle speeds
- Creates an identity for the neighborhood
- May help reduce cut-through traffic
- Opportunity for landscaping

Disadvantages

- Increase in noise
- May require removal of parking
- Can impede truck movements
- Creates physical obstruction
- Increases in maintenance costs

Special considerations

- Entry treatments have minimal influence on drivers' routine behavior
- Overall speeds and volumes are usually only minimally affected
- Entry treatments make drivers more aware of the neighborhood environment
- Care should be taken not to restrict pedestrian visibility at adjacent crosswalk

Phase 2

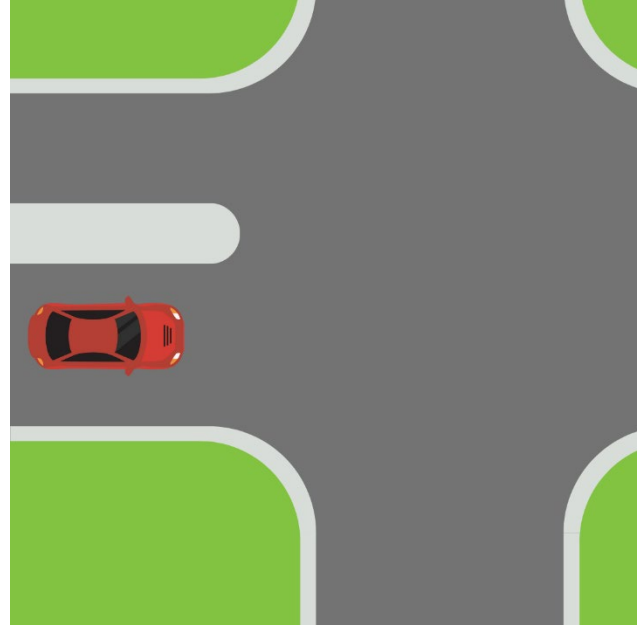
Center Island Narrowing

Description

Center island narrowing is the construction of a raised island in the center of a wide street.

Application

Center islands can be installed on wide streets to help lower speeds and/or to prohibit left-turning movements. They also provide a mid-point refuge area for pedestrians.



Advantages

- May help reduce vehicle speeds
- Can reduce vehicle conflicts
- Reduces pedestrian crossing width
- Landscaping and identity opportunity

Disadvantages

- May require parking removal
- May reduce driveway access
- May impact emergency vehicles
- May divert traffic to other streets

Special considerations

- When used to block side street access, it may divert traffic
- May visually enhance the street with landscaping
- Bicyclists prefer not to have travel way narrowed

Phase 2

Curb Radius Reduction

Description

Removal of existing larger radius curb returns at an intersection and construction of smaller radius curb returns.

Application

Curb radius reductions can slow vehicle turning speeds and shorten pedestrian crossing distance.



Advantages

- Shorter pedestrian crossing width
- Slower vehicle turning speeds
- Opportunity for landscaping

Disadvantages

- Impacts large vehicle turns

Special considerations

- Careful attention needs to be given to drainage issues
- Turning radii for larger vehicles may cause them to turn into oncoming lanes, or design corner curbs to facilitate vehicle loads so larger length vehicles can mount corner curbs.

Phase 2

Traffic Circle

Description

Traffic circles are raised circular islands installed in an existing intersection. Traffic circles require drivers to slow down to maneuver around the circle.

Application

Traffic circles can provide speed control.



Advantages

- Effectively reduces vehicle speeds
- Reduces collision potential
- Better side-street access
- Opportunity for landscaping

Disadvantages

- May increase bicycle/automobile conflicts
- Affects emergency response times
- Can restrict large vehicle access
- More expensive than some other options
- May affect left-turning movement for some vehicles
- May require parking removal

Special considerations

- Traffic circles are best used in a series or with other devices
- About 30 feet of curbside parking must be prohibited in advance of circle
- Requires the installation of signs and pavement markings
- Traffic circles are less effective at T-intersections

Fire Department and Police Department evaluation

Fire Department and Police Department shall have final approval of traffic circle locations.

Phase 2

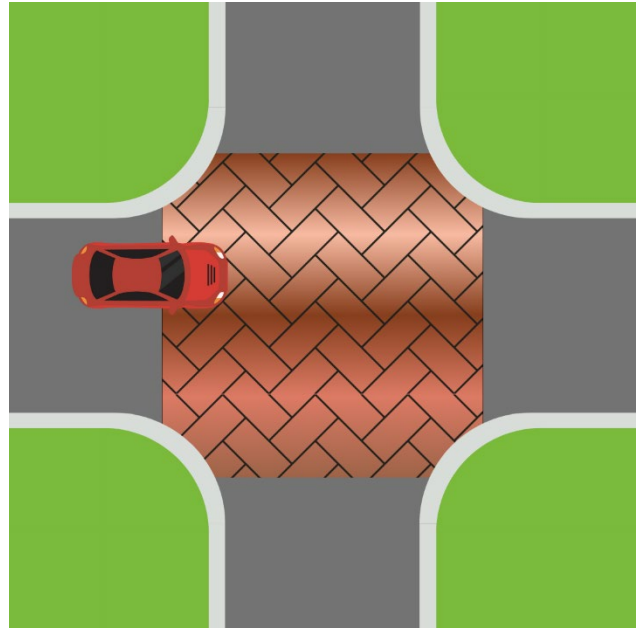
Raised Intersection

Description

A raised intersection is a flat, raised area covering an entire intersection. There are ramps on all approaches. The plateau is generally about 4 inches high. Typically, the raised intersection is finished with textured pavement.

Application

Raised intersections can reduce vehicle speeds and provide for safer pedestrian crossings.



Advantages

- Effectively reduces vehicle speeds
- Enhances pedestrian safety
- Can be aesthetically pleasing

Disadvantages

- Expensive to construct and maintain
- May require drainage modifications
- Affects emergency response times

Special considerations

- Makes intersections more pedestrian-friendly
- Special signage is required
- May require bollards around corners

Fire Department and Police Department evaluation

This measure is one of the least acceptable to the Fire Department and the Police Department and its use requires extensive evaluation of the specific location and impacts on emergency response times.

Phase 2

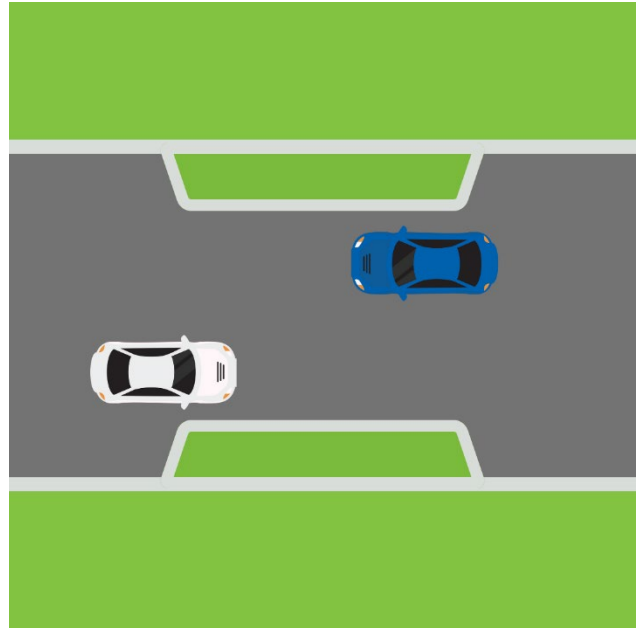
Mid-Block Choker

Description

Mid-block chokers are curb extensions that narrow a street by extending the curbs towards the center of the roadway. The remaining street cross-section consists of two narrow lanes.

Application

Mid-block chokers can help reduce speeds by narrowing the roadway so two vehicles can pass slowly in opposite directions.



Advantages

- Effectively reduces vehicle speeds
- Shorter pedestrian crossing width
- Improves sight distance
- Opportunity for landscaping

Disadvantages

- May require parking removal
- May create hazard for bicyclists
- May create drainage issues
- May impede truck movements
- May impact driveway access

Special considerations

- Preferred by many emergency response agencies to other measures
- Provides excellent opportunities for landscaping

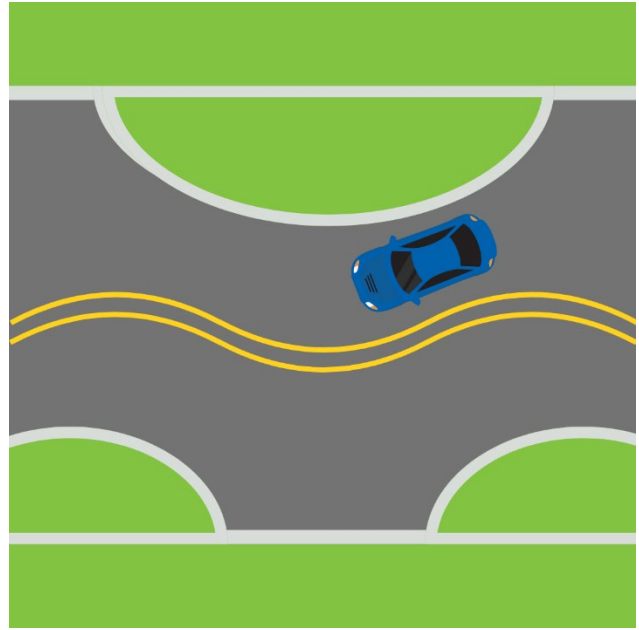
Phase 2

Chicane**Description**

A chicane is a series of two or more staggered curb extensions on alternating sides of a roadway. The horizontal deflection causes motorists to reduce speed.

Application

Chicanes help reduce vehicle speeds.

**Advantages**

- Effectively reduces vehicle speeds
- Low impact on emergency vehicles
- Opportunity for landscaping

Disadvantages

- Potential loss of parking
- Increased maintenance
- May impact driveways
- May be expensive

Special considerations

- May require removal of substantial amounts of on-street parking
- Most effective when traffic volumes are approximately equal in both directions
- May increase conflicts with pedestrians and bicyclists
- Provides landscaping opportunities
- Most residents would have their driveways affected

Phase 2

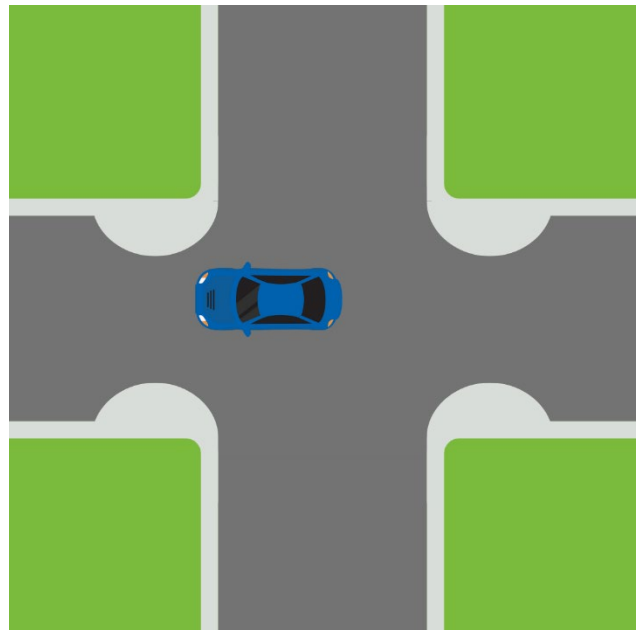
Intersection Bulb-Out

Description

Intersection bulb-outs narrow the street by extending the curbs toward the center of the roadway.

Application

Intersection bulb-outs are used to narrow the roadway and to create shorter pedestrian crossings. They also influence driver behavior by changing the appearance of the street.



Advantages

- Improves pedestrian visibility
- Shorter pedestrian crossing width
- May reduce vehicle speeds
- Opportunity for landscaping

Disadvantages

- May require parking removal
- May create drainage issues
- Impacts large vehicle turns

Special considerations

- Intersection bulb-outs at transit stops enhance service
- May require landscape maintenance to preserve sight distances
- Turning radii for larger vehicles may cause them to turn into oncoming lanes
- Consider design for bicyclists

Fire Department evaluation

- Intersection bulb-outs shall be restricted to only one of the two intersecting streets.