#### Attachment A



### NEIGHBORHOOD TRAFFIC CALMING PROGRAM

## DRAFT

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Department of Public Works

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#### NEIGHBORHOOD TRAFFIC CALMING PROGRAM

One of the most persistent traffic concerns raised by residents is speeding on local residential streets. Typically, the physical design of the street determines traffic speeds whether it is providing a wide clear area for vehicles to travel fast in, or narrow and winding encouraging lower speeds. Streets that are wide and have long straight, uninterrupted stretches provide an environment for speeding. In addition, a street with higher traffic volumes increases the number of vehicles speeding as well as increased noise. The modern car allows drivers to be more comfortable at higher speeds. This is due to better suspension and steering as well as improved safety measures such as anti-lock braking and (on newer cars) collision avoidance warnings. The Neighborhood Traffic Calming Program is a city-wide initiative to empower citizens to address traffic calming issues. Traffic Calming can be defined as reducing vehicle impacts, by slowing and reducing traffic, while improving livability and increasing safety of pedestrians, bicyclist, and motorists.

The City's Neighborhood Traffic Calming Program (NTCP) presents a programmatic approach to addressing traffic issues and is aimed at making local residential neighborhood streets safer and more usable by a wider variety of non-motorized users. This is done by implementation of regulatory devices and installation of physical changes to the street that have shown to reduce traffic speeds and/or traffic volumes.

#### **Traffic Calming for Livable Neighborhoods**

Traffic calming is the combination of policies, education, and implementation measures that help mitigate the negative impacts to residential neighborhoods caused by motor vehicles. The overall objective of the City's NTCP is to utilize, where applicable, traffic calming to improve the quality of life in residential neighborhoods. Traffic calming measures were developed to reduce speeding problems and heavy traffic flow on local residential streets. By making residential streets more "calm" it makes the neighborhood more livable. Although "livable" in terms of a neighborhood does not have a precise definition, a livable neighborhood can be described as having the following characteristics:

- Ability to feel safe and secure,
- Opportunity to interact with neighbors,
- Ability to enjoy a quiet environment in your home or yard.
- Ability to walk and ride a bicycle safely to local destinations,
- Ability to experience a sense of home and privacy, and
- A sense of community identification.

In essence, when a resident contacts the City regarding speeding traffic on their street, they are requesting the city make their street more livable. However, a stopgap approach

such as installing a multi-way stop sign may often not be the most appropriate application and could potentially decrease safety and usability by all modes of travel. Stop sings are considered a traffic control device and not a traffic calming measure. They are intended to control the flow of traffic and assign right-of-way. That is why this program brings a comprehensive approach.

Many different traffic calming measures have been developed over the years because neighborhoods and their streets are all a bit different. Measures that are allowed to be used for the City's program are listed in the recommended program. However, other options may be considered for the Level 2 signing and striping options, but may require additional research, review, and approval by the City before being considered.

The overall objectives for the NTCP are:

- Improving neighborhood livability by mitigating the impact of vehicular traffic on residential neighborhoods.
- Promote a safe and pleasant condition for motorists, bicyclists, pedestrians and residents on neighborhood streets by slowing vehicle speeds and reducing traffic volumes.
- Encouraging citizen involvement in solving neighborhood traffic concerns.
- Making efficient use of City resources by prioritizing issues.

#### **Effect on Emergency Vehicle Response Times**

Any traffic calming technique that physically controls traffic may have a negative impact on some emergency vehicles. The City, as well as its residents and businesses, place a very high priority on minimizing emergency response times. However, installation of traffic calming measures such as roundabouts or speed cushions can increase emergency response time. This is especially true for fire apparatus and ambulances. Because of the heavy weight of fire engines and the delicate instruments and patients within ambulances, these vehicles must slow when they encounter a speed hump or bump, severe dip, or sharp curve. While these maneuvers will cause moderate discomfort and delay for normal passenger vehicles, they may cause a much greater concern for emergency response vehicles. Some studies have been done to confirm this effect of traffic calming devices on emergency response time. Those responsible for emergency response are concerned about the affect these devices have on response times which is why this program allows for initial review and support of all proposed changes involving some Level 2 and all Level 3 measures. This impact will be addressed for each project.

To address some of these concerns in advance, Public Works staff has worked with the LASD and LACFD for approval of a speed cushion design that minimizes the impacts to emergency vehicle response. These cushions use a grouping of speed cushions that allow wider wheelbase vehicles such as fire trucks to straddle the vertical deflection portion of the cushion. These devices will be the only kind that is allowed in the City unless otherwise approved.

#### **Loss of Parking**

It is often necessary to prohibit on-street parking in the immediate vicinity of traffic calming measures. For instance, the approaches to a roundabout need to create a deflected path of travel therefore, parking will have to be removed just before the intersection to accommodate the realigned vehicle path and relocated pedestrian crossing. There are also on-street parking impacts from measures such as curb extensions, medians, and (in some cases) turning movement restrictions. Adjacent residents should be aware that a loss of on-street parking in front of their residence will occur, and the permanent installation will require their support.

#### **Visual Impacts and Aesthetic Concerns**

While some traffic calming measures can have favorable aesthetic impacts, others can be, by their nature, unsightly; particularly with temporary measures used to determine the effects of a permanent measure prior to installation. These temporary installations may include delineators, rubber curbing, and limited landscaping. Speed cushions pose no opportunity for the incorporation of aesthetics and can have negative visual impacts. Virtually all Level 2 and 3 traffic calming actions require reflective devices, signs and striping which may negatively affect the aesthetics of a neighborhood. In no instance will a permanent traffic calming measure be installed unless it meets minimum aesthetic design standards. These standards could consist of installing colored concrete pavers, landscaping where feasible, and raised curbing.

#### **Private Streets**

Consistent with State law, it is the general policy of the City to not allow temporary or permanent closure of any public street to vehicular traffic. However, some streets in the City have been either initially built as privately owned or have been converted over to private. The City does not have ownership or control over these existing private streets for either enforcement, installation of traffic control devices, or placement of physical changes to the roadway surface or curb lines. Owners of a private street may install traffic calming devices on their private roads, without any need for City permission, as long as the project does not change the general circulation pattern, street location, or any access points to and from any property. Any changes to the subdivision map would require City Public Works and City Planning review and approval.

#### **Traffic Calming Standards**

Neighborhood traffic calming measures covered by this policy include all "official traffic control devices" authorized by the California Vehicle Code and detailed in the California

Manual of Uniform Traffic Control Devices (CA MUTCD) such as signage, markings, and electronic devices. Some measures such as medians, curbs, traffic barriers, speed cushions, or other roadway design features include a combination of traffic control devices and physical roadway changes. Physical roadway changes are not traffic control devices and their designs are covered by the City's roadway design policies and standards and consistent with Fire Department requirements.

#### NTCP PROCEDURES

Requests for implementation of traffic calming measures will be considered for public roadways based on the criteria and procedures outlined in this NTCP on a first come, first served basis. The City will review each request to ensure that the proposed location and circumstances meet all the criteria outlined in this document and allowed by City Standards, City Municipal Code, and State law. The purpose of this document is to set forth the process and criteria by which implementation of traffic calming measures may be considered. The NTCP applies to requests initiated by neighborhood property owners. It does not apply to measures or programs initiated by the City Council or City staff to address specific traffic safety issues or to comply with State and Federal laws and City policies. The NTCP does not apply to temporary changes in traffic that are needed to stage special events, to conduct maintenance and construction activities, or address public emergencies. The goal of the NTCP is to enhance and protect the quality of life in the City's neighborhoods by making them safer for children, pedestrians, bicyclists, and residents living in these neighborhoods.

Traffic calming measures work best when incorporated into a programmatic approach that includes a planning process, overall community participation, and public safety service support. By developing a programmatic approach, it encourages citizens to become actively involved throughout the process. In this way, the City and the neighborhood can work together to create a long-term solution.

#### **Neighborhood Traffic Calming Program Process**

The NTCP has a three-level process that goes from less restrictive measures like education and enforcement to more restrictive measures such as signing and striping changes to the most restrictive such as roundabouts and speed cushions. All requests must start at Level 1 and work their way through the process so that the least restrictive measure that is effective can be found.

#### Level 1

**Level 1** is the first set of measures to initially address resident(s) concerns, is less restrictive or impactful on the physical environment, and can be relatively easily and quickly be implemented. Typically, this includes speed education devices such as placement of a speed radar display trailer and speed enforcement. This level does not require initial public outreach or demonstrated community support. The focus is on driver education and enforcement.

#### **Level 1 Traffic Calming Steps – Education and Enforcement**

Requests regarding traffic speeding or traffic volume concerns will be considered for all public streets for implementation of Level 1 measures before consideration of Level 2 measures. The Level 1 measures include, but are not limited to, non-physical or minor changes to the roadway environment. Typical measures for Level 1 are:

- 1. Police enforcement of speeds, turning movements, and other moving or parking violations.
- 2. Temporary speed display radar trailer placement. May occur at one or more locations along the street or in the neighborhood.

The following are the steps to be followed:

- Step 1a. Resident(s) inform(s) the City regarding a concern about speeding or cut-through traffic. This can be done through any currently available standard City staff contact methods.
- Step 1b. Staff will review the location(s), which will include traffic speed and volume data collection, and make initial recommendation for a Level 1 technique and discuss with resident(s). Following this, staff will implement the Level 1 technique(s).
- Step 1c. After the Level 1 measures are in-place, the City will conduct additional speed and volume data collection to evaluate the results.

#### Level 2

**Level 2** is a group of mid-level measures that will be considered only after Level 1 has been completed. These measures include minor physical changes such as posting of speed limit signs, striping narrower vehicle lanes, turning movement restrictions, or commercial vehicle restrictions. The focus is on relatively easy implementable and cost-effective solutions.

#### **Level 2 Traffic Calming Process – Signing and Striping**

If residents are still concerned, about speeding or traffic volumes, the resident(s) may request that Level 2 measures be considered. Requests for Level 2 signing and striping measures will only be considered for streets that have already implemented Level 1 within the last 12 months and the NTCP criteria thresholds below are met.

#### **Qualifying Criteria for Level 2 and 3**

Requests for the implementation of neighborhood traffic calming measures on public streets will be considered by the City only for those streets meeting <u>all</u> of the following criteria:

- 1. The street shall be designated as a local street (not an arterial or collector street) by the City's General Plan and is primarily residential in nature.
- 2. The street shall have fronting residential buildings in a density that matches the California Vehicle Code local street designation and for setting speed limits (13 separate dwelling houses or business structures per ¼ mile on one side or 16 per ¼ mile on both sides).
- 3. Vehicular traffic volumes in both directions are equal to or exceed 800 vehicles per day.
- 4. Speeds measurements show that the 85% measured speed is at least 7 mph over the legally posted speed limit.
- 5. Street must have a grade of 8% or less to be considered for Level 3 speed cushions.
- 6. Any proposed changes in traffic flow are not expected to divert a significant amount of traffic to other local residential streets.
- 7. The LA County Sheriff and Fire Departments do not have significant evidence of any major public safety concerns regarding the proposed neighborhood traffic Calming measures.

Level 2 measures include, but are not limited to, minor changes to the roadway environment. Typical measures for Level 2 are:

- 1. Posting of speed limit signs (in more frequent locations if already posted on non-prima facia 25 mph streets).
- 2. Installing a permanent speed display board.
- 3. Striping of narrower vehicle travel lanes.
- 4. Turning movement restrictions.
- 5. Enhancing existing signage or other traffic markings.
- 6. Posting of commercial vehicle restrictions.

Step 2a. Resident(s) must complete the "Neighborhood Action Request Form" shown as Attachment "1" in this policy. The form requires a written description of the residents' concerns and requires signatures from at least seven separate residents in the impacted area.

Step 2b. After receiving the Neighborhood Traffic Calming Request Form, the City will prepare an existing condition traffic analysis based on speed and data collected during Level 1. If applicable, Level 2 measures will be recommended by City staff to the residents that have submitted the Neighborhood Action Request form (see sample in Attachment 1) based on speed, volume, physical characteristics of the roadway, and a discussion

with the lead requester. Level 2 measures will be implemented by the City following public outreach, which may include, public notice, direct mail, or meeting.

Step 2c. The City may, but is not required to, conduct a neighborhood workshop 6 months after implementation of Level 2 measures. This meeting is to be used to update the community on the effectiveness of implemented measures and may be used to develop recommended Level 3 measures. It is anticipated that, at a minimum, a representative from the City's Public Work's Department and LASD will attend the workshop.

#### Level 3

**Level 3** is the most aggressive level and includes more expensive and restrictive measures that make changes to the physical driving environment to discourage higher speeds and/or volumes. Typically, this includes medians, curb extensions, speed cushions, neighborhood roundabouts. This level will only be considered if Level 2 measures do not reduce either traffic speeds or traffic volumes below the qualifying criteria below. This level does require demonstrated neighborhood support and public outreach prior to the City considering installation.

#### **Level 3 Traffic Calming Process – Physical Changes**

Level 3 measures will be only considered for streets that have already implemented Level 2 technique(s) within the last 12 months, the NTCP Level 2 and 3 criteria thresholds are still met, and residents are interested in considering a more physical improvement to address their continued concerns. In order to consider Level 3 measures, the community will need to go through a petition process for the City to consider Level 3 measures. Level 3 measures are physical changes to the roadway environment. Allowable measures for Level 3 are:

- 1. Placement of median(s).
- 2. Placement of curb extension(s).
- 3. Placement of speed cushions.
- 4. Placement of neighborhood roundabout(s).

Step 3a. Residents shall prepare a petition as outlined further in this policy (see sample in Attachment 1). If area wide support is demonstrated through the petition process, the City will implement temporary Level 3 measures using temporary materials for a trial period of at least 180 days. This will require support from each of the property owners in the immediate vicinity of each measure.

Step 3b. At the end of the trial period, residents will advise the City through a City administered survey if the temporary Level 3 measures should be removed or made permanent.

Step 3c. All final decisions related to permanent Level 3 traffic calming measures shall be approved by the City Council prior to design or construction of the permanent measures.

#### **Petition Requirements**

The following procedures must be followed for submitting a petition for Level 3 measures to the City:

- 1. Prior to circulation of the petition, the residents shall coordinate with City staff on a recommendation, which may include a staff analysis of the technical feasibility and anticipated impacts of the proposed traffic calming technique. This review will include items such as State law, the Circulation Element of the City's General Plan, the type of road or street involved, compliance with engineering regulations, existing traffic conditions, projected traffic conditions, discussions with emergency services, the potential for traffic diversion to adjacent streets, impacts to emergency vehicle response times and the increased liability exposure for the City or conflicts with future planned improvements.
- 2. The City Engineer, or designee, will determine the boundary of the "affected area" to be petitioned and balloted. The affected area will include those property owners where necessary travel routes to and from their residential property are to be altered by the proposed neighborhood traffic calming technique(s), and/or properties which are likely to be significantly impacted by traffic that is to be diverted to their street through implementation of the technique(s). The City will provide a map of the affected area and listing of all property owners addresses. The City will also determine the boundary of any surrounding areas that may be impacted by the implementation of a traffic calming technique, defined as the "area of concern," and will be included in notification of any implementation of the Level 3 technique and of any public meetings.
- 3. A petition will be prepared by the resident(s). The petition shall be approved by the City Engineer, or designee, prior to circulation for signatures. The petition requesting the neighborhood traffic calming measures must be supported by a minimum of 67 percent of the total number of properties contacted. The petition should include property owners, within the "affected area." Persons submitting petitions must attempt to contact all affected parties. At a minimum, 90 percent of all property owners in the affected area must be contacted for the petition to be accepted by the City. This requirement will be satisfied by signatures on the petition from 90 percent of the affected property owners. The petition will include a way for the property owners to indicate support or non-support for the Level 3 traffic calming measures.
- 4. At a minimum, petitions submitted to the City for review must include the following unless otherwise waived by the City Council:

- a. The petition language must also clearly explain, and show on a drawing or plan, the location, and the nature of the proposed traffic flow modifications and potential impacts. The plan will be provided by the City.
- b. A current address, phone number, and email for each property owner who signs the petition.
- c. Only one signature per property will be accepted.
- d. Only signatures from the property owner listed in the Assessor Parcel information will be accepted. In the case of entity or trust ownership, a representative of the entity or trust may sign the petition.
- e. The petition language and attached drawing must be reviewed and approved by the City Engineer, or designee, prior to circulation to ensure its accuracy and ability to be clearly understood.
- f. A sample petition has been provided as an attachment to this Program.

#### **Petition Review Process**

The following process will be used by the City to review all petitions associated with proposed neighborhood traffic calming measures:

- 1. The City Engineer, or designee, will review any petition to verify compliance with all petition requirements set forth above. Any petition not complying with these requirements will be rejected. If the petition contains all of the required information under this policy, a sample phone call or email survey of those who signed the petition may be conducted by the City, requesting verification of their support or opposition to the proposed neighborhood traffic calming measures. Verification will occur if 90% of the sample verification phone calls match the individuals' position on the signed petition. The sample will consist of up to 20% of those who signed the petition.
- 2. If the petition contains all of the required information under this policy and is properly verified, the proposed neighborhood traffic calming measures will be referred to other City departments such as Community Development and to the City's emergency services providers.
- 3. If the petition contains all of the required information under this policy, meets the minimum number of signatures in favor or the proposed measures, is properly verified, and is acceptable to emergency service providers, the City will proceed with implementing the temporary Level 3 measures.

#### **City Survey Process**

The following process will be used by the City to survey the affected area to determine support for making temporary traffic calming measures permanent:

- The City Engineer, or designee, will prepare a before and after study of the temporary traffic calming measures and provide a summary of that information and a survey to those property owners in the affected area to determine support or non-support to make the temporary measures permanent or trying alternative temporary measures.
- The survey will be administered electronically using the emails provided in the initial petition. The survey question(s) will ask about options and may include making the temporary measures permanent, removing the temporary measures and trying another temporary measures, or removing the temporary measures and having no measures installed.
- 3. In order for the survey to be accepted, a minimum of 50 percent of the property owners must respond to the survey. In order to determine if the temporary measures will be made permanent, or another temporary measure will be tried, a minimum of 67% of the responded surveys must be in support of the measure.

#### **ATTACHMENT 1**

# SAMPLE NEIGHBORHOOD ACTION REQUEST FORM AND SAMPLE PETITION

#### **NEIGHBORHOOD ACTION REQUEST FORM**

#### **Neighborhood Traffic Calming Program (NTCP)**

We, the undersigned, believe our neighborhood traffic situation indicates that the City's Neighborhood Traffic Calming Program should be applied to address safety concerns. The following signatures representing at least seven different residents along the street indicate the neighborhood's commitment to work with the NTCP for a safer traffic environment within our neighborhood. We also understand that the program requires a progressive approach where Level 1 then Level 2 measures will be tried prior to consideration of Level 3 measures.

<u>Name</u>	Address	Email	<u>Phone</u>
1			
_			
3			
4			
5			
6			
7			
Contact Nam	e	Phone:	
Email:		Today's Date:	
Address:			
Location of C	concern (attach map):		
	ns do you have at this location?		

Thank you for taking the time to complete the Neighborhood Action Request form. After completing the form, please return it to City Hall; Public Works

PETITION TO I	NSTALL TRAFFIC	CALMING ON $\_$		STREET
BETWEEN		AND		
REQUESTING	THE INSTALLATIO	N OF		
DATE	OF SIGNATURES	:		
RECOMMENDE		ST READ THE C	ITY'S NEIGHI	RE SIGNING! IT IS BORHOOD TRAFFIC gn this petition).
do petition the C		on		ttached property map ut map.
	n in the area of imp		•	n owner of one of the change as shown on
	ture per property or illed out and be vali			in the signature lines
The person con	ducting this petition	is:	_ Email/Phon	e:
SIGNATURE	PRINT NAME	PRINT STREE	T ADDRESS	Email/Phone

# ATTACHMENT 2 SUMMARY OF NEIGHBORHOOD TRAFFIC CALMING MEASURES

#### TYPICAL NEIGHBORHOOD TRAFFIC CALMING MEASURES

(Not in priority order)

LEVEL	TRAFFIC CALMING TECHNIQUE	SPEED REDUCTION	VOLUME REDUCTION/ TRAFFIC DIVISION	NOISE POLLUTION	LOSS OF ON-STREET PARKING	ACCESS RESTRICTION	EMERGENCY VEHICLE RESPONSE IMPACTS	INCREASE IN MAINTEN- ANCE
1	Police Enforcement	Yes	Possible	No Change	None	None	None	No
1	Radar Trailer Temp or Permanent	Yes	No	No Change	None	None	None	Minor
2	Speed Feedback Sign	Yes	No	No Change	None	None	None	Yes
2	Posting 25 MPH Speed Limits	Possible	No	No Change	None	None	None	Minor
2	Striping Narrower Lanes	Yes	Possible	No Change	None	None	None	Yes
2	Turning Movement Restrictions	No	Yes	Decrease	Maybe	Yes	Yes	Minor
2	Commercial Vehicle Restrictions	Possible	Yes	Yes	None	Yes	None	Minor
3	Curb Extensions and/or Center Medians	Yes	Yes	Decrease	Yes	Minor	None	No
3	Neighborhood Roundabouts	Yes	Possible	No Change	Yes	None	Minor	Yes
3	Speed Cushions	Yes	Possible	Increase	None	None	Minor	Yes

#### **ATTACHMENT 3**

## DESCRIPTION OF NEIGHBORHOOD TRAFFIC CALMING MEASURES

#### **LEVEL 1 Measures**

#### **Police Enforcement**

Description: The LASD deploys traffic officers to perform radar enforcement on residential streets on a targeted basis.

#### **Positive Aspects:**

- Visible enforcement would reduce speed.
- Driver awareness about speeding on residential streets and safety is increased.
- Program is flexible and can be tailored to suit the citizens' needs.
- · Response can be quick and effective.
- Can be used along all roadway classifications.
- Can be applied on roadways that don't meet minimum criteria

#### **Negative Aspects:**

- Benefits of speed reduction are not sustained over the long-term and regular periodic enforcement is needed.
- Police may have limited resources for traffic calming concerns

#### **Speed Radar Trailer**

Description: A temporary and portable device capable of measuring vehicle speed graphically and displaying the speed of the motorist.

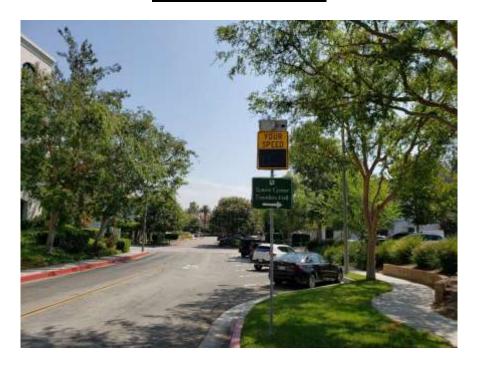
#### **Positive Aspects:**

- Speeds may be reduced where the radar is located.
- An effective public relations and educational tool.
- Can be displayed quickly and easily throughout a neighborhood.
- Can function as an educational tool to help inform residents of actual vehicle travel speeds, not perceived travel speeds.

- Only works as an educational tool, not an enforcement tool.
- (see speed feedback signs)
- Does not function as a long term solution; loses effectiveness over time with motorists who frequent the streets

#### **LEVEL 2 MEASURES**

#### **Speed Feedback Signs**



Description: A permanent device which displays approaching vehicle's speed on an electronic sign that flashes when vehicle speeds exceed posted speed limit.

#### **Positive Aspects:**

- Improves safety for vehicles and pedestrians
- Effective in reducing vehicle speeds

- Only effective for one direction of travel
- May lose effectiveness over time with repeat drivers
- Subject to vandalism
- · Requires specialized maintenance

#### Posting 25 mph Signs



Description: This option involves posting 25 mph speed limit signs on the street to remind drivers of the legal speed limit. Signage may help to increase motorist's awareness of restrictions and help to deter unsafe behavior

#### **Positive Aspects:**

- Inexpensive and easy installation that are popular with residents.
- Reduces traffic speeds if backed up with regular enforcement.
- Minimal impact to vehicle access

- High potential for violation when not enforced.
- Increases cost of sign maintenance.

#### Narrowing Lanes (Centerline/Edgeline Striping)

Description: Lane striping can serve to visibly narrower travel lanes. This gives drivers the feel of a narrow street and encourage lower vehicle speeds.

#### **Positive Aspects:**

- Changes can be relatively easily implemented.
- The striping can be easily modified if paint is used.
- Higher end speeds may decrease and safety is improved through the provision of positive guidance to drivers.
- Inexpensive option to narrow wide roads
- Can be used as a temporary measure before more effective and costly improvements

- Would increase regular maintenance.
- Residents do not always perceive striping is an effective tool for speed reduction.
- Cost of resurfacing residential streets will increase.

#### **Turning Movement Restrictions**



Description: Turning movement restrictions utilize signs to prevent undesired turning movements without the use of physical devise. These signs could be installed to reduce vehicle movements by time of day or all day to address specific issues for cut-through traffic concerns. May require City Council approval of resolution for posting of restrictions.

#### **Positive Aspects:**

- Restricts vehicles using the street.
- Reduces traffic noise and volumes.
- May reduce traffic speeds if speeding is from cut-through traffic.
- Inexpensive to install

- Requires additional maintenance of signs.
- Even local residents will have to obey restrictions.
- Requires enforcement to be effective.



Description: Post commercial vehicle restrictions if commercial vehicles are the specific issue for speed or cut-through traffic concerns. May require City Council approval of resolution for posting of restrictions.

#### **Positive Aspects:**

- · Restricts commercial vehicles using the street.
- Reduces traffic noise and volumes.

- Requires additional maintenance of signs.
- · Requires enforcement to be effective.
- May restrict legitimate commercial vehicle movement (including local residents who drive commercial vehicles).

#### **LEVEL 3 MEASURES**

#### **Curb Extensions**



Description: A raised addition of sidewalk that extends the curb to effectively narrow the street at an intersection in order to reduce width of the traveled-way. Curb extensions can provide identity to a neighborhood by creating a gateway. They improve pedestrian comfort and safety by providing a better line of sight between the motorist and the pedestrian. The exact configuration of the treatment will depend upon the location and can be combined with a median.

#### **Positive Aspects:**

- Creates an identity to a neighborhood.
- May be aesthetically pleasing, if landscaped.
- Landscaping can be used for stormwater improvements.
- Good for pedestrians due to shorter crossing.
- Can discourage truck entry.

- Can impede legitimate truck movements.
- Increased maintenance costs.

#### **Median**





Description: A raised barrier which can narrow the driving lanes, eliminate turning movements, and eliminate straight-through traffic depending on the specific design. A median can take many forms to address the specific solution.

#### **Positive Aspects:**

- Provides location for aesthetic improvements
- Acts as a travel way narrowing to slow speeds.
- Increases intersection safety by reducing the number of conflicting movements.
- Reduces local street volumes.
- May eliminate the need for a traffic signal (which may induce traffic volumes and speeds)

- May shift traffic to other locations where turning movement opportunities exist.
- May get hit and require a high level of maintenance.
- This tool may inconvenience local residents who will be forced to drive longer more circuitous paths to reach their destination.
- Potential loss of on street parking

#### Neighborhood Roundabout





Description: A raised circular island placed in the center of an existing local street intersection, thus creating a roundabout. A roundabout allows for more efficient right-of-way allocation at higher volume intersections and typically found on collector streets in place of a traffic signal Both roundabouts and traffic circles force drivers to meander around the raised island which prevents speeding through the intersection.

#### **Positive Aspects:**

- A noticeable reduction in speeds; particularly in the vicinity of the roundabout.
- Reduces serious collision potential.
- Under certain conditions capacity can be increased.
- Can be used instead of stop signs or traffic signal
- Forces vehicles to slow down while navigating through roundabout.
- Less expensive to operate than a traffic signal

- Required safety signage may detract from its aesthetic quality.
- Pedestrians and bicyclist must adjust to less traditional crossing patterns.
- Parking will be lost to accommodate vehicles' deflected paths.
- May increase minor collisions until drivers become accustomed to change.
- Potential loss of on street parking
- May require major reconstruction of an intersection

#### **Speed Cushions**





Description: Series of small parabolic shaped pillows of raised paving material or recycled rubber placed across a roadway for the purpose of causing motorists to reduce their operating speed while driving over the cushion. Cushions are 3 to 4 inches high with a length of 12-feet with a width of 6-feet and have a design speed of 15 to 20 MPH. They are constructed with a taper on each side and allow unimpeded drainage between the cushion and curb. Speed cushions can only be used on local roadways with a grade less than or equal to 8%.

#### **Positive Aspects:**

- Reduces speed.
- Can cause some traffic to shift and no longer cut through the neighborhood.

- Can cause traffic to shift to other neighborhood streets.
- · May increase emergency response time.
- Contents of vehicles can be jarred.
- Increase in noise adjacent to cushion due to suspension, deceleration, and acceleration.
- Parking on cushion will leave vehicle at an angle.
- Increased cost when street is resurfaced.

# ATTACHMENT 4 CITY COUNCIL RESOLUTION