

**AGENDA SUMMARY
SPECIAL TRAFFIC COMMISSION MEETING
MONDAY, JANUARY 25, 2016
6:00 P.M.
ARROYO GRANDE CITY COUNCIL CHAMBERS
215 E. BRANCH STREET, ARROYO GRANDE**

1. CALL TO ORDER

2. ROLL CALL

3. FLAG SALUTE

4. COMMUNITY COMMENTS AND SUGGESTIONS

This public comment period is an invitation to members of the community to present issues, thoughts, or suggestions on matters not scheduled on this agenda. Comments should be limited to those matters that are within the jurisdiction of the Parks and Recreation Commission. The Brown Act restricts the Commission from taking formal action on matters not published on the agenda.

5. CONSENT AGENDA

5.a. Approval Of Minutes

Recommended Action: Approve the minutes of the Regular Traffic Commission Meeting on November 16, 2015.

Documents: [TC 05a Approval of 11-16-15 Minutes.pdf](#)

6. BUSINESS ITEMS

6.a. CONSIDERATION OF ADDITIONAL PARKING RESTRICTION ADJACENT TO 603 CORNWALL AVENUE'S DRIVEWAY LOCATED ON BELL STREET

Recommended Action: It is recommended that the Traffic Commission direct staff to restrict parking 16 feet on either side of an existing driveway on Bell Street for the property located 603 Cornwall Avenue

Documents: [TC 06a 603 Cornwall Ave.pdf](#)

6.b. CONSIDERATION OF PARKING RESTRICTION ON NEVADA STREET FROM EAST BRANCH STREET TO EAST LE POINT

Recommended Action: It is recommended that the Traffic Commission direct staff to restrict parking on Nevada Street, 70 feet on the east side and 35 feet on the west side.

Documents: [TC 06b Nevada Street.pdf](#)

6.c. CONSIDERATION OF TRAFFIC CALMING WORK ON CALIFORNIA STREET

Recommended Action: It is recommended that the Traffic Commission:

1. Receive public input regarding vehicular traffic on California Street;
2. Direct staff to obtain vehicle speed information;
3. Direct staff to increase enforcement if warranted; and

Direct staff to return to the Traffic Commission with the results of this work effort.

Documents: [TC 06c Calif Street.pdf](#)

6.d. CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE

Recommended Action: It is recommended that the Traffic Commission receive an update on several alternatives that may address congestion at the intersection of East Grand Avenue at East Branch Street.

Documents: [TC 06d West Branch Street.pdf](#)

6.e. CONSIDERATION OF APPOINTING ONE TRAFFIC COMMISSIONER TO SERVE AS A STAKEHOLDER FOR THE EAST BRANCH STREETSCAPING PROJECT AND ONE ALTERNATE STAKEHOLDER

Recommended Action: It is recommended that the Traffic Commission:

1. Appoint one Traffic Commissioner as a Stakeholder for the East Branch Streetscaping Project; and
2. Appoint one Traffic Commissioner as a Alternate Stakeholder for the East Branch Streetscaping Project.

Documents: [TC 06e Streetscape Stakeholder Appt.pdf](#)

6.f. CONSIDERATION OF DRAFT NEIGHBORHOOD TRAFFIC CALMING GUIDELINES

Recommended Action: It is recommended that the Traffic Commission review and direct staff to implement any required changes to the Draft Neighborhood Traffic Calming Guidelines.

Documents: [TC 06f Traffic Calming Guidelines.pdf](#)

7. DISCUSSION ITEMS

8. COMMISSION COMMUNICATIONS

Correspondence/Comments as presented by the Commission.

9. ADJOURNMENT

All staff reports or other written documentation, including any supplemental material distributed to a majority of the Traffic Commission within 72 hours of a regular meeting, relating to each item of business on the agenda are available for public inspection during regular business hours in the Community Development Department, 300 East Branch Street, Arroyo Grande. If requested, the agenda shall be made available in appropriate alternative formats to persons with a disability, as required by the Americans with Disabilities Act. To make a request for disability-related modification or accommodation, contact the Legislative and Information Services Department at 805-473-5414 as soon as possible and at least 48 hours prior to the meeting date.

This agenda was prepared and posted pursuant to Government Code Section 54954.2. The Agenda can be accessed and downloaded from the City's website at www.arroyogrande.org. If you would like to subscribe to receive email or text message notifications when agendas are posted, you can sign up online through our [Notify Me](#) feature.

**ACTION MINUTES
REGULAR MEETING OF THE TRAFFIC COMMISSION
MONDAY, NOVEMBER 16, 2015
COUNCIL CHAMBERS, 215 E. BRANCH STREET
ARROYO GRANDE, CA**

1. CALL TO ORDER

Chair Ross called the meeting to order at 6:00 p.m.

2. ROLL CALL

Traffic Commissioners: Commissioners Aaron Henkel, Janette Pell, Kenneth Price,
Vice Chair Jim Carson, Chair Steven Ross

Staff present: Matt Horn, City Engineer, Matthew Downing, Associate
Planner, and Jane Covert-Lannon, Office Assistant II.

3. PLEDGE OF ALLEGIANCE

Chair Ross led the pledge of allegiance.

4. COMMUNITY COMMENTS AND SUGGESTIONS

Chair Ross opened the Community Comments and Suggestions.

Hearing no public comment, Chair Ross closed the Community Comments and Suggestions.

5. CONSENT AGENDA

5.a. Approval of Minutes

ACTION: Chair Ross moved to approve the minutes of the October 26, 2015, special meeting as submitted. Vice Chair Carson said that under public comment, one of the speakers mentioned Oak Park and Halcyon and since they do not cross, said he thought he meant Fair Oaks. The minutes were accepted as amended on a voice vote.

AYES: Henkel, Price, Carson, Ross

NOES: None

ABSTENTION: Pell

ABSENT:

6. **BUSINESS ITEMS**

6.a CONSIDERATION OF LOT MERGER 15-004 AND CONDITIONAL USE PERMIT 15-007; CONSTRUCTION OF A 51-ROOM BOUTIQUE HOTEL; LOCATION - 325 EAST BRANCH STREET; APPLICANT – NKT COMMERCIAL; REPRESENTATIVE – STEVEN PUGLISI ARCHITECTS.

RECOMMENDATION: It is recommended that the Traffic Commission review the proposed project and provide comments and advisement to the Planning Commission.

Commissioner Henkel stepped down from the dais due to previous comments he made regarding this project.

City Engineer, Matt Horn gave the staff presentation to the Commissioners.

Chair Ross opened the public comment on this item and the following people spoke:

- Otis Page – 606 Myrtle - said that this project would make traffic in the village worse and suggests the mitigations be put in place to help the traffic problem. He said he likes the project.
- Shirley Gibson – Halcyon – said as a member of the HRC, she recused herself, however, came to the Traffic Commission representing her son who owns a home on Mason. She supports a hotel as the Village previously had hotels. She is concerned about the amount of traffic and the walkability of the village with the additional traffic. She suggested approving the project with less units.
- Patty– said that this project would negatively impact parking in the Village. She said she is disappointed in the hotel, the village needs a grocery store that would benefit the locals.

Upon hearing no more Public Comments, Chair Ross closed public comment.

Discussion ensued on this project.

ACTION: Commissioner Price made a motion to approve the project as presented. Vice Chair Carson seconded the motion and the motion passed on the following vote:

AYES: Price, Carson, Pell, Ross
NOES: None
ABSENT: Henkel

Commissioner Henkel returned to the dais.

6.b CONSIDERATION OF TRAFFIC COMMISSION APPOINTMENT TO THE COMMUNITY SERVICE GRANT PANEL.

RECOMMENDATION: It is recommended that the Traffic Commission appoint one Committee Member and one alternate to serve as a representative on the Community Service Grant Panel.

City Engineer, Matt Horn gave the staff presentation to the Traffic commission.

ACTION: Chair Ross volunteered to be the Traffic Commission representative and Commissioner Pell volunteered to be the alternate. Commissioner Henkel made a motion to accept Chair Ross as the representative to the Community Service Grant Panel and Commissioner Price seconded the motion. The motion passed on the following vote:

AYES: Henkel, Pell, Price, Carson, Ross
NOES: None
ABSENT: None

ACTION: Commissioner Pell volunteered to be the Traffic Commission alternate to the Community Service Grant Panel and made a motion. Chair Ross seconded the motion and the motion passed on the following vote:

AYES: Pell, Ross, Henkel Price, Carson
NOES: None
ABSENT: None

7. DISCUSSION ITEMS

Commissioner Henkel thanked City Engineer Horn for his effort in getting the Soccer Mart parking lot, curbing and Grand Avenue turning lanes improved.

8. COMMISSION COMMUNICATIONS

Chair Ross updated the Commissioners on the Bridge Street Bridge Stakeholders meeting.

10. ADJOURNMENT

Chair Ross adjourned the meeting at 7:15 p.m.

Steven Ross, Chair

ATTEST:

**Jane Covert-Lannon
Office Assistant II**

(Approved at TC Mtg)



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

**SUBJECT: CONSIDERATION OF ADDITIONAL PARKING RESTRICTION
ADJACENT TO 603 CORNWALL AVENUE'S DRIVEWAY LOCATED
ON BELL STREET**

DATE: JANUARY 25, 2016

RECOMMENDATION:

It is recommended that the Traffic Commission direct staff to restrict parking 16 feet on either side of an existing driveway on Bell Street for the property located 603 Cornwall Avenue.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

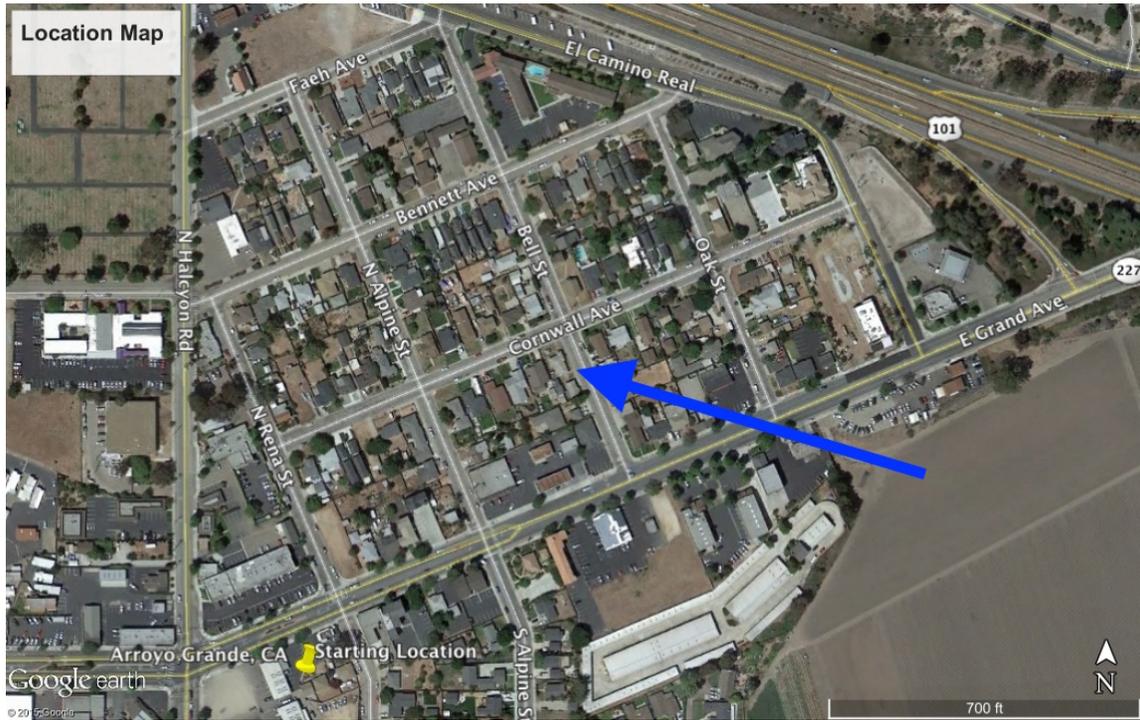
A minor amount of funding and staff time will be required to complete this work. The total cost is estimated to be less than \$100 in materials and require less than 1 hour of staff time to complete.

BACKGROUND:

On December 21, 2015 the City received a letter regarding parking adjacent to a driveway on Bell Street for 603 Cornwall Avenue (see Attachment 1). This letter has requested increased parking restriction adjacent to the driveway in order for easier driveway access.

Both Cornwall Avenue and Bell Street are local roadways adjacent to East Grand Avenue. Both streets provide for two-way traffic with one travel lane in each direction as well as parking on both sides of the roadway. The curb-to-curb width of both streets is approximately 37 feet. The Speed Limits are not posted, therefore the default or prima facie Speed Limit is 25 MPH.

**CONSIDERATION OF ADDITIONAL PARKING RESTRICTION ADJACENT TO 603
CORNWALL AVENUE'S DRIVEWAY LOCATED ON BELL STREET
JANUARY 25, 2016
PAGE 2**



Location of Traffic Parking Restriction Request



Photo of Subject Driveway

**CONSIDERATION OF ADDITIONAL PARKING RESTRICTION ADJACENT TO 603
CORNWALL AVENUE'S DRIVEWAY LOCATED ON BELL STREET
JANUARY 25, 2016
PAGE 3**



Photo of Subject Driveway with Cars

The existing driveway on Bell Street currently has 5 feet of red curbing or restricted parking.

ANALYSIS OF ISSUES:

The existing parking restrictions adjacent to the driveway shown above appear to be ignored or unseen. While the California Vehicle Code Section 22500 provide authority to cite vehicles parked adjacent to the subject driveway, a longer section of red curbing might provide for both improved visibility and compliance.

**CONSIDERATION OF ADDITIONAL PARKING RESTRICTION ADJACENT TO 603
CORNWALL AVENUE'S DRIVEWAY LOCATED ON BELL STREET
JANUARY 25, 2016
PAGE 4**

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

PUBLIC NOTICE AND COMMENT:

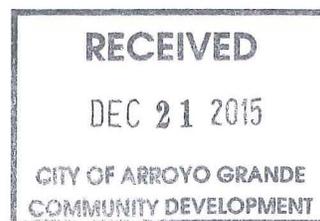
The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016. The staff report and a letter requesting participation in this meeting was mailed to the following addresses:

- 603 Cornwall Avenue
- 112 Bell Street
- 113 Bell Street
- 114 Bell Street

Attachments:

1. Letter from Louis Brazil – 603 Cornwall Avenue

City of Arroyo Grande Traffic Commission
300 East Branch Street
Arroyo Grande CA, 93420



To the Arroyo Grande Traffic Commission and to whom it may concern, my name is Louis Brazil and I live at 603 Cornwall Ave in Arroyo Grande, which is located on the south west corner of Cornwall Ave and Bell St. I have lived at this location for over 69 years and the parking issues have increased. Businesses on Grand Ave use the residential streets for their employees.

My garage faces Bell St. and because of the age off the residential area the setbacks are very close to the road. The face of the garage is six feet from the city right of way and when I back out of the garage the visibility is zero when vehicles are parked to close to the driveway apron. Seven years ago I wrote a similar request and the Traffic Commission heard my request and had the city paint red curb approximately five feet on either side of the driveway apron. Over the last seven years the problems have gotten worse and on several occasions I got honked at because I can't see oncoming traffic while backing into the street.

The current red curb is ignored often because it is such a short red curb people ignore it and when the police are called each officer has a different interpretation of the red curb violation. I am requesting that the red curb be extended on both sides of my drive way to 16 feet from the top of the drive way apron to give me the visibility that is required to back into the street safely. The last time I went to the Traffic Commission they reduced the red curb to five feet on both sides and told me to return if the issue was not resolved. I have tried to work around the issues for an additional seven years and I feel it is time to increase the red curd for my safety and the safety of other drivers.

Thank you for your consideration and please contact me with any questions.

Louis Brazil

603 Cornwall Avenue

Arroyo Grande Ca, 93420

(805) 489-2776



PICTURE GARAGE DOOR



PICTURE DRIVERS WINDOW

PICTURE STREET





PICTURE YARD



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

**SUBJECT: CONSIDERATION OF PARKING RESTRICTION ON NEVADA STREET
FROM EAST BRANCH STREET TO EAST LE POINT**

DATE: JANUARY 25, 2016

RECOMMENDATION:

It is recommended that the Traffic Commission direct staff to restrict parking on Nevada Street, 70 feet on the east side and 35 feet on the west side.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

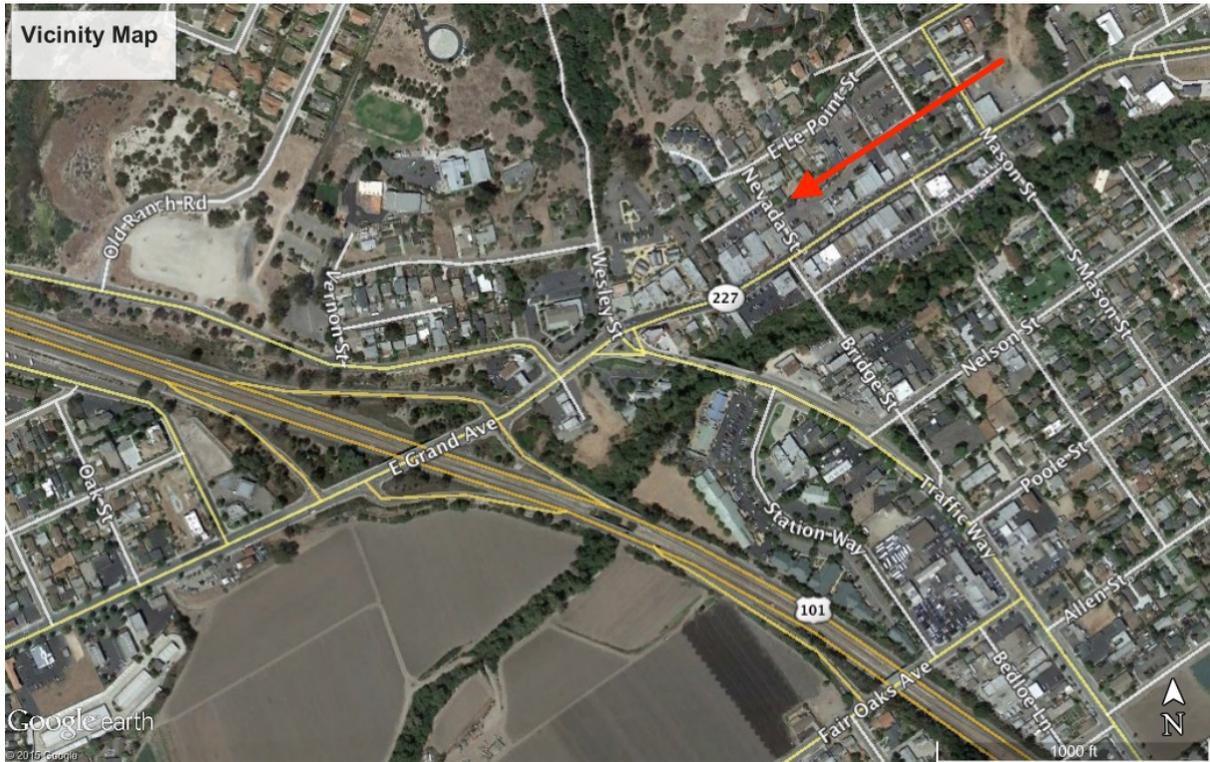
A minor amount of funding and staff time will be required to complete this work. The total cost is estimated to be less than \$100 in materials and require less than 1 hour of staff time to complete.

BACKGROUND:

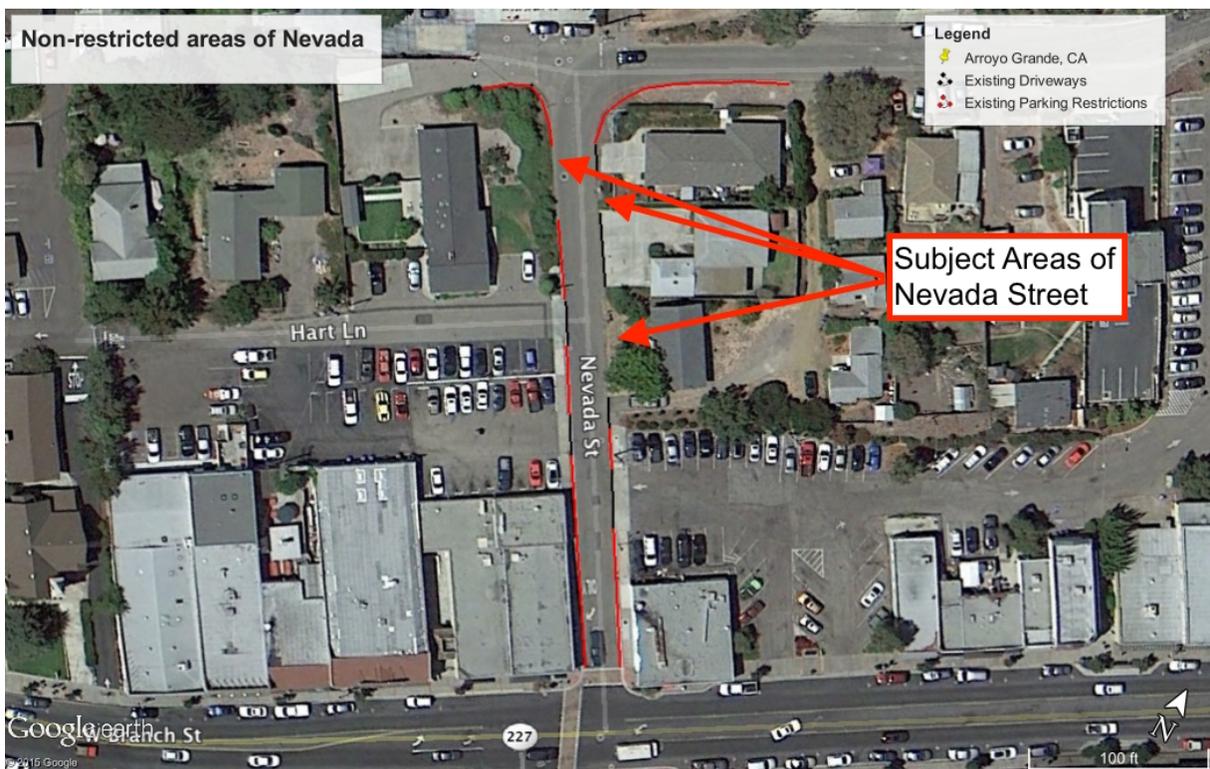
On January 13, 2016 the City received a third request in approximately three months requesting additional parking restrictions on Nevada Street. The requestor indicated that when vehicles are parked on Nevada Street there is not enough roadway space for moving vehicles.

Nevada Street is a local street connecting East Branch Street to East Le Point Street in the Village. Nevada Street provides two-way traffic with one travel lane in each direction. The majority of Nevada Street is parking restricted because Nevada Street is approximately 22 feet wide. The speed limit is not posted, therefore the default or prima facie speed limit is 25 MPH.

CONSIDERATION OF PARKING RESTRICTION ON NEVADA STREET FROM EAST BRANCH STREET TO EAST LE POINT
JANUARY 25, 2016
PAGE 2



Location of Parking Restriction Request



Subject Areas of Parking Restrictions

**CONSIDERATION OF PARKING RESTRICTION ON NEVADA STREET FROM EAST BRANCH STREET TO EAST LE POINT
JANUARY 25, 2016
PAGE 3**



Photo of Easterly Area of Proposed Restriction



Photo of Westerly Area of Proposed Restriction

ANALYSIS OF ISSUES:

The American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets indicates that a standard vehicle

**CONSIDERATION OF PARKING RESTRICTION ON NEVADA STREET FROM EAST BRANCH STREET TO EAST LE POINT
 JANUARY 25, 2016
 PAGE 4**

parking space should be sized as 9 feet wide and 20 feet long. If parking is only available for a compact car then that size may be reduced to 8 feet wide and 15 feet long.

The Highway Design Manual (HDM) also refers to AASHTO, A Policy on Geometric Design of Highways and Streets for local street traffic lane width requirements. The AASHTO document indicates that lane widths may be as small as 9 feet but generally preferred to be 12 feet in width. The California Manual for Uniform Traffic Control Devices (MUTCD) also provides guidance on minimum lane widths indicating that 9 foot lanes may be used but only on a temporary basis.

Nevada Street needs to be a minimum of 38 feet wide to support two travel lanes and parking on both sides of the road. Nevada Street is currently 22 feet wide.

	Existing Width	Required Width	Recommended
South Bound Parking	-----	9 feet	-----
South Bound Travel Lane	11 feet	10 feet	11 feet
North Bound Travel Lane	11 feet	10 feet	11 feet
North Bound Parking	-----	9 feet	-----
Total Width	32 feet	38 feet*	22 feet
* Total required roadway width is 16 feet wider than existing roadway and not currently feasible to implement.			

The above recommended roadway layout matches the existing roadway with additional clarification at three locations on Nevada Street that parking is not available.

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

PUBLIC NOTICE AND COMMENT:

The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016. The staff report and a letter requesting participation in this meeting was mailed to the following addresses:

- 121 Nevada Street
- 101 Le Point Street
- 105 Le Point Street
- 106 Le Point Street
- 118 Nevada Street
- 116 Nevada Street
- 120 Nevada Street

Attachment:

1. Letter Requesting Parking Restrictions

RECEIVED

JAN 19 2016

CITY OF ARROYO GRANDE
ENGINEERING DEPARTMENT

ROBERT E. MOSHER
372 Miller Way
Arroyo Grande, Ca. 93420

Phone 805-481-9387
Cell 805-710-1033

January 10, 2016

Mr. Matt Horne
City Engineer
300 E. Branch St.
Arroyo Grande, Ca.

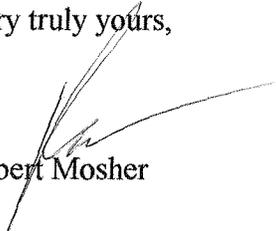
Dear Mr. Horne,

Confirming our phone call of last week:

I called to recommend that last 60-100 feet of the Nevada Street western curb at the intersection of Nevada Street and Le Point Street be painted red just like the rest of Nevada Street.

Currently, two cars cannot pass in this area if there is someone parked on the opposite side of Nevada.

Very truly yours,


Robert Mosher



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

SUBJECT: CONSIDERATION OF TRAFFIC CALMING WORK ON CALIFORNIA STREET

DATE: JANUARY 25, 2016

RECOMMENDATION:

It is recommended that the Traffic Commission:

1. Receive public input regarding vehicular traffic on California Street;
2. Direct staff to obtain vehicle speed information;
3. Direct staff to increase enforcement if warranted; and
4. Direct staff to return to the Traffic Commission with the results of this work effort.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

No expenditure of funds is required for this work effort. Staff time will be required to obtain vehicle speed information, complete analysis of the speed data, increase enforcement efforts, and prepare future staff reports. This work effort is estimated at 20 staff hours.

BACKGROUND:

On September 10, 2015 the City received a letter regarding unusual vehicle activities and travel speeds in excess of reasonable limits on California Street (see Attachment 1). This letter has requested a series of speed bumps be installed on California Street to reduce or eliminate the likelihood of these activities in the future. Speed bumps are one tool used to reduce vehicular speeds or calm traffic.

California Street is a local roadway connecting Fair Oaks Avenue to West Cherry Avenue adjacent to Arroyo Grande High School. California Street provides two-way traffic with one travel lane in each direction as well as parking on both sides of the roadway. The curb-to-curb width of California Street is slightly less than 40 feet. The Speed Limit on California Street is not posted, therefore the default or prima facie Speed Limit is 25 MPH.

**CONSIDERATION OF TRAFFIC CALMING WORK ON CALIFORNIA STREET
JANUARY 25, 2016
PAGE 2**



Location of Traffic Calming Work

ANALYSIS OF ISSUES:

Neighborhood traffic calming is a term used to describe a process of Education, Enforcement, and finally Engineering.

Education

The education component typically is completed using a neighborhood meeting in which residents can share concerns and help identify the problem. Additionally, education can also include physical improvements such as speed limit signs, revised roadway striping, and speed feedback indicators such as permanently mounted signs or temporarily placed trailers to better identify what drivers should be doing.

Enforcement

After the education phase is complete, enforcement activities are typically implemented. In this phase, the drivers should now be well informed and compliance is now achieved through monetary penalties in the form of traffic tickets. Enforcement work is highly effective to calm traffic speeds when officers are present to enforce. Since it is not feasible to devote officers to one area for a prolonged duration, lasting results will vary.

Engineering

The last course of action is Engineering. This phase would incorporate physical changes to roadway geometry which might include speed humps, speed tables, chokers, and medians.

**CONSIDERATION OF TRAFFIC CALMING WORK ON CALIFORNIA STREET
JANUARY 25, 2016
PAGE 3**

Staff recommends receiving public input and based on need as well as public input begin speed data collection and increased enforcement if warranted.

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

PUBLIC NOTICE AND COMMENT:

The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016. The staff report and a letter requesting participation in this meeting was mailed to the following addresses:

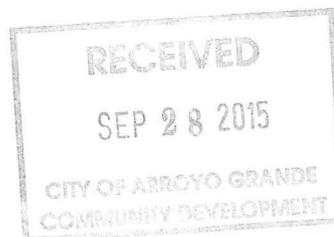
- 400 California Street
- 408 California Street
- 413 California Street
- 414 California Street
- 418 California Street
- 419 California Street
- 422 California Street
- 425 California Street
- 426 California Street
- 429 California Street
- 432 California Street
- 436 California Street
- 437 California Street

Attachments:

1. Letter from Residents of California Street

Sept. 10, 2015

City of Arroyo Grande
300 E Branch Street
Arroyo Grande, CA 93420



To the City of Arroyo Grande,

We the residents of California Street in the city of Arroyo Grande requesting that action be taken. The 20 mph traffic law within the school zone is not being followed during school hours. Furthermore, the residential speed limit is constantly being violated as well on the streets surrounding the high school.

We understand there is continual traffic due to our proximity to the school, however the high speeds at which drivers are traveling is very dangerous in a school zone that is mixed with a high volume of foot and bike traffic.

Over the years we have made countless calls to the Arroyo Grande police department. They are exceptionally good about responding. Unfortunately, their response time is usually not effective in catching the high speed drivers. We are thankful for our law enforcement officers, however this is a constant problem. We understand they can not be present at all hours of the day.

In order to correct this problem we are asking that a series of speed bumps be installed to slow traffic down near the school, specifically on California Street. The number of high school students that speed is an extremely high percentage. It is only a matter of time before a neighborhood child or a high school pedestrian is hit and injured.

Below are some of the incidents that occur on our street:

Racing down the street between the parking lot near the tennis courts and Fair Oaks intersection, using the opposing lane to go same direction for a race.

Racing down the street both vehicles in reverse using both lanes.

Vehicle with old couch being pulled behind it with a rope.

Vehicles racing multiple laps using a 2 block radius.

Thank you for your attention to this matter. We hope that you will consider a series of speed bumps on our street for the safety of everyone.

The residents of California Street.

Name

Address

Phone No.

Joist Dubberm 425 Calif St 363-3408

Annie & Chris Chabot 418 California St. 245-8929

Erin Bishop 400 California St 805-503-9031

JEANNE PETERSON 419 CALIFORNIA ST (805) 712-3235

ZACHAR MALKO DEDER 413 CALIFORNIA ST (352) 613 3412

Margaret Rodriguez 408 California St (408) 441-9177

Al Rodriguez 408 California St (408) 458-9048

ROBERT MACLEAN 422 CALIFORNIA ST (805) 459-1043

April MacLean 422 California St ⁸⁰⁵ 459-7347

Kattina Zamora 426 California St. (805) 489-6271

Mike Thomas 432 CALIFORNIA ST. (805) 431-3840

Dave Fabe 414 California St. 805 709-1633



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

SUBJECT: CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE

DATE: JANUARY 25, 2016

RECOMMENDATION:

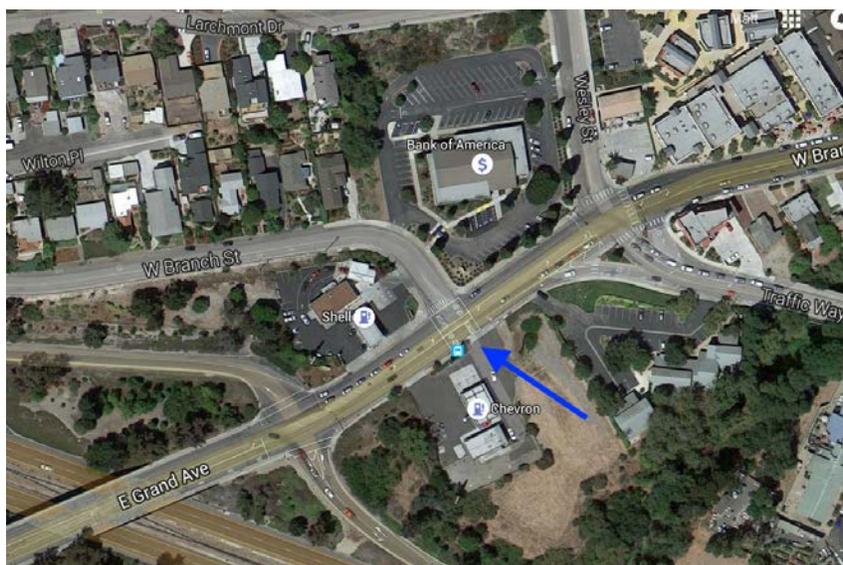
It is recommended that the Traffic Commission receive an update on several alternatives that may address congestion at the intersection of East Grand Avenue at East Branch Street.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

None.

BACKGROUND:

On November 16, 2015 the Traffic Commission reviewed the Branch Hotel Project. This project identified operational issues at the East Grand Avenue at West Branch Street intersection. The intersection of East Grand Avenue and West Branch Street does not meet operational performance policy goals.



Location Map

CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE

JANUARY 25, 2016

PAGE 2

The intersection currently operates at a Level of Service (LOS) F. The 2001 General Plan update recognized this intersection's deficiencies and included a Statement of Overriding Consideration. The Statement of Overriding Consideration recognizes this deficiency but also recognizes the benefit allowing future projects to be developed that impact this intersection.

During the Traffic Commission's November 16, 2015 meeting, the Commission indicated a preference to look at different alternatives that could increase operational efficiencies at this intersection. Several alternatives have been identified in Traffic Impact Studies that are currently under development. Those known alternatives are included in this report.

ANALYSIS OF ISSUES:

Alternative 1 - Limit Left-Turn Access onto and from West Branch Street

West Branch Street is classified as an arterial roadway. Limiting the left turns from West Branch Street onto East Branch Street would improve the Level of Service (LOS) at the intersection but would redirect arterial roadway traffic to:

- Vernon Street
- Larchmont Street
- Wesley Street

which are local residential streets. The intersection of:

- Vernon at West Branch Street
- Vernon at Larchmont Street
- Larchmont at Wesley Street
- Wesley Street at East Branch Street and Traffic Way

are calculated to have capacity for the additional traffic and still operate at LOS 'C' or better, however the City's General Plan Circulation Element requires connectivity via a hierarchy of street classifications whereby local streets feed to collectors which feed arterials. Redirecting arterial traffic onto local streets is not recommended.

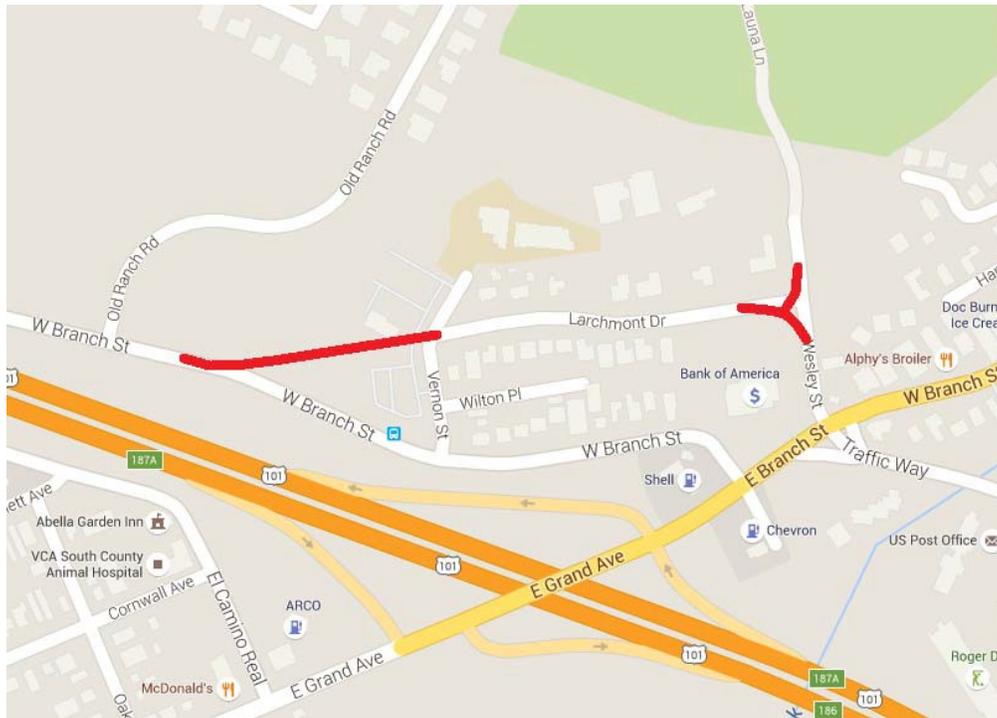
Alternative 2 - Convert a Portion of West Branch Street to One-Way

Converting West Branch Street between East Grand Avenue and Vernon Street to one-way northbound would have much the same effect as prohibiting left-turns out of West Branch Street, and with the same result of redirecting arterial traffic onto local streets as discussed above in Alternative 1.

Alternative 3 - Realign West Branch Street to Connect to Wesley Street

This alternative would consist of converting Larchmont Drive to arterial standards and realigning West Branch Street to meet East Branch Street at the existing Traffic Way signal as shown in the figure below. Although the City owns the Women's center as well as the vacant lot adjacent to Old Ranch Road, this alternative would still require significant right of way acquisition along Larchmont Drive. In addition, the existing topography would preclude designing a road which meets arterial roadway standards for maximum road grades along this alignment.

**CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST
GRAND AVENUE
JANUARY 25, 2016
PAGE 3**



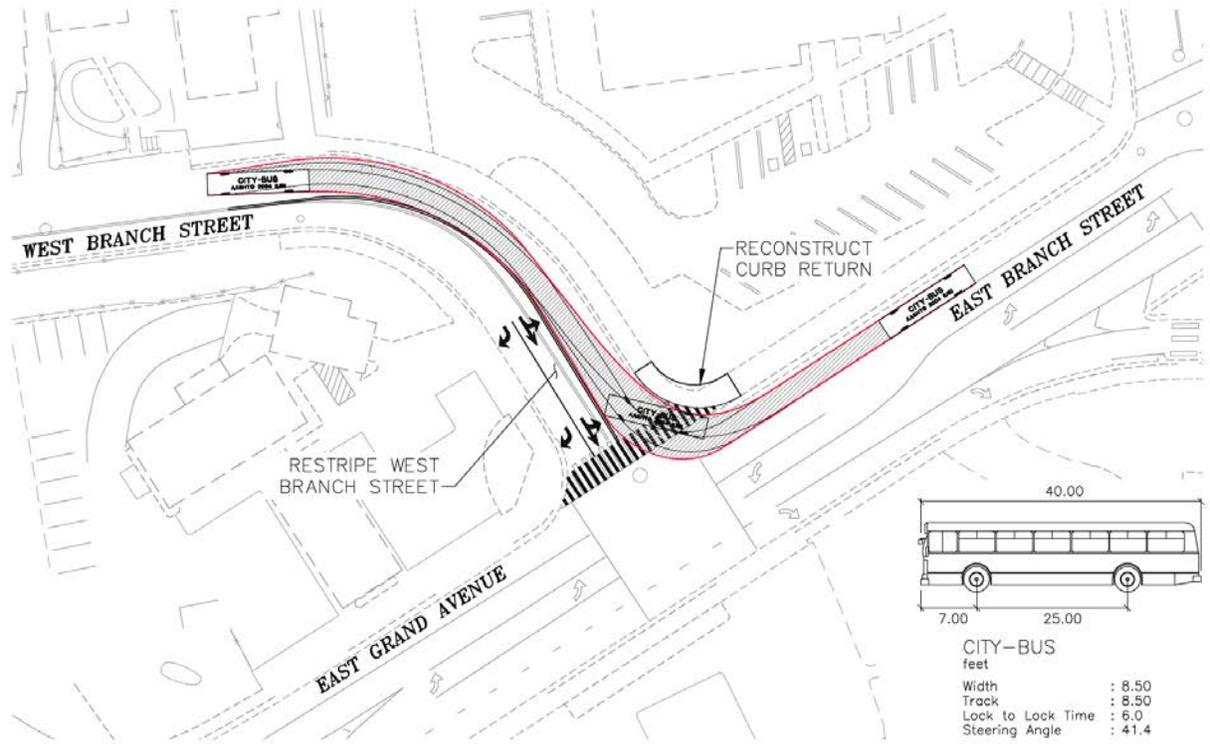
Alternative 4 - Widen East Grand Avenue and East Branch Street

This alternative could improve the level of service of East Grand Avenue, however additional lanes would make it harder for West Branch Street traffic to complete left turns and therefore would exacerbate the existing problem.

Alternative 5 - Restriping W. Branch Street Adding an Exclusive Right-Turn Lane

Modifying the lane geometry of the intersection as shown below is projected to reduce delay. Revised roadway geometry is estimated to reduce delay 30 seconds during the AM Peak and 120 seconds during the PM Peak.

**CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE
JANUARY 25, 2016
PAGE 4**



Alternative 5 Display

Alternative 6 – Construct a Roundabout at West Branch Street and East Grand Avenue
A single roundabout at the intersection of West Branch Street at East Grand Avenue would suffer from the close proximity to the adjacent intersections, lying approximately midway between the intersections and about 240 feet from either intersection. As shown below, the queuing from either intersection exceeds 240 feet toward West Branch Street which would seize the flow within the roundabout and cause operational problems.

**CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE
JANUARY 25, 2016
PAGE 5**

#	Intersection	Movement	Available Storage (ft) ¹	95th Percentile Queue Length (ft)			
				Existing Short Term + Project (Mitigated)		Cumulative + Project (Mitigated)	
				AM	PM	AM	PM
5	Traffic Way & E. Branch St	EBL	70	54	55	60	52
		EBT	183	244	236	240	237
		EBR	183	-	-	-	-
		WBL	60	86	63	90	77
		WBT	60	165	165	157	162
		WBTR	687	504	380	577	480
		NBL	700	325	224	315	409
		NBLT	700	365	279	374	456
		NBR	60	122	138	113	155
SBLTR	436	91	221	134	206		
6	E. Grand Ave/E. Branch St & W. Branch St	EBL	85	109	108	99	128
		EBT	210	204	203	169	224
		EBTR	210	73	104	53	104
		WBL	65	43	39	58	53
		WBT	183	214	178	184	225
		WBTR	183	249	233	241	246
		NBLTR	121	48	52	62	67
		SBLTR	982	96	148	138	182
7	US 101 NB Ramp & E. Grand Ave	EBL	150	191	98	189	95
		EBT	466	203	137	221	142
		WBT	210	244	157	227	200
		WBTR	210	279	203	261	246
		NBLT	484	231	220	251	192
		NBR	170	87	55	96	79

Alternative 7 – Construct a Roundabout at East Grand Avenue at US 101 NB Ramps

Another alternative would be to construct a single roundabout at the intersection of East Grand Avenue and US 101 NB ramps combined with limiting left-turn access from West Branch Street. Vehicles which currently turn left from West Branch Street (or the Shell gas station) to East Branch Street would be required to make a right turn and a subsequent u-turn at the roundabout. It would be recommended to continue to allow left turns from East Grand Avenue to West Branch Street.

Alternative 8 – Construct a Roundabout at East Grand Avenue at Traffic Way

A single roundabout at Traffic Way and E. Branch Street would not address the current operational problems at West Branch Street since left turns would still be faced with a high volume of traffic on E. Branch Street and few gaps in which to maneuver.

Alternative 9 – Construct Roundabouts on East Grand Avenue at Traffic Way and US 101 Northbound Ramps

Another alternative would be to construct two roundabouts at the intersections of:

- East Grand Avenue at US 101 NB ramps
- East Branch Street at Traffic Way

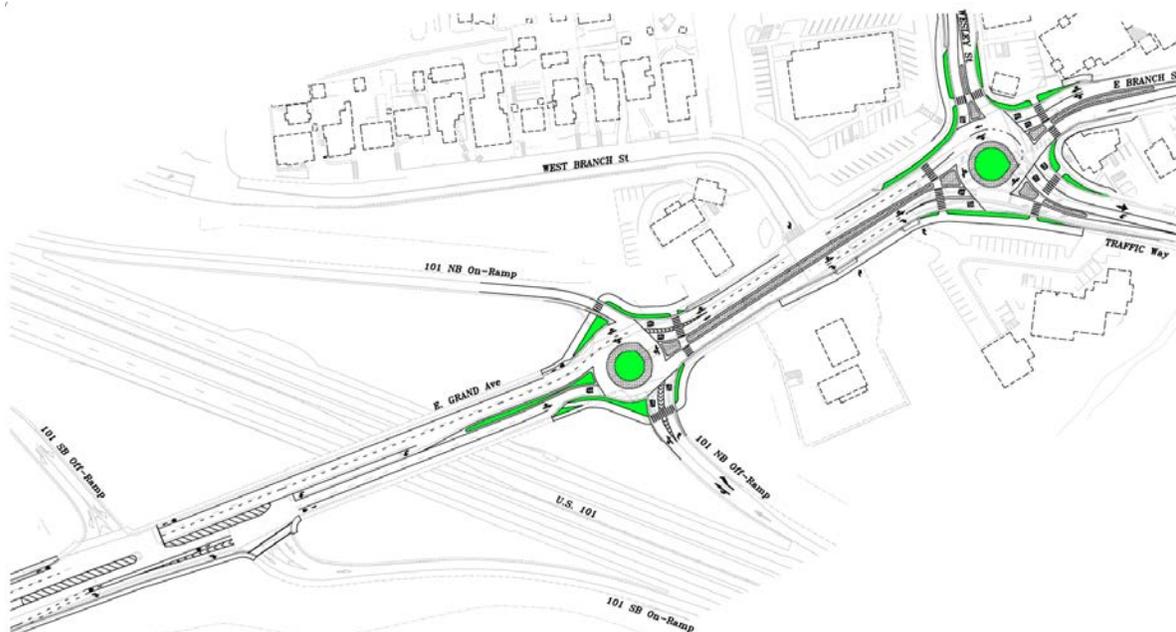
This option represents a potential long-term solution to the existing and forecast congestion in the corridor, and includes the following benefits:

CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST GRAND AVENUE

JANUARY 25, 2016

PAGE 6

- Superior Level of Service: The roundabouts are projected to operate at LOS 'B' or better. The intersection of West Branch Street at East Grand Avenue is projected to improve from an existing LOS 'F' to LOC 'B'.
- Access Management: Full access to businesses and streets is retained via u-turn movements at either roundabout. LOS and safety is significantly improved.
- Aesthetic Amenities: Roundabout central islands, landscaped medians and splitter islands provide aesthetic benefits and opportunities for City monuments, sculpture, art, and landscaping.
- Intersection safety benefits: Fewer conflict points vs. signal. No left turn head-on or right angle conflict points. Lower overall speeds and low speed differentials. Conversion of a signalized intersection to single or multi-lane roundabout is shown to result in a reduction in total collisions. Conversion of a signalized intersection into a single or multi-lane roundabout is shown to result in a significant reduction in injury/fatal collisions (65 to 90%).
- Pedestrian and bicycle safety: Roundabouts are generally safer for pedestrians and bicyclists for many reasons including: lower speeds, pedestrian crossings are shorter, involve only one direction of traffic at a time, and offer mid-crossing refuges within the splitter islands.
- Air quality benefits: Roundabouts reduce vehicle emissions with less time idling and accelerating from a stopped condition and would therefore be consistent with the City's Climate Action Plan.



Alternative 9 Display

Alternative Selection

Each alternative has different cost benefit ratios. Some alternatives are achievable in the near term and some are achievable in the long term. While each alternative needs

**CONSIDERATION OF OPERATIONAL CHANGES OF WEST BRANCH AT EAST
GRAND AVENUE**

JANUARY 25, 2016

PAGE 7

further development and study, Alternative 5 seems to provide benefit and be achievable in the near term. Alternative 9 seems to provide benefit but may require more long term planning.

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

PUBLIC NOTICE AND COMMENT:

The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016.



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

SUBJECT: CONSIDERATION OF APPOINTING ONE TRAFFIC COMMISSIONER TO SERVE AS A STAKEHOLDER FOR THE EAST BRANCH STREETSCAPING PROJECT AND ONE ALTERNATE STAKEHOLDER

DATE: JANUARY 25, 2016

RECOMMENDATION:

It is recommended that the Traffic Commission:

1. Appoint one Traffic Commissioner as a Stakeholder for the East Branch Streetscaping Project; and
2. Appoint one Traffic Commissioner as a Alternate Stakeholder for the East Branch Streetscaping Project.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

None.

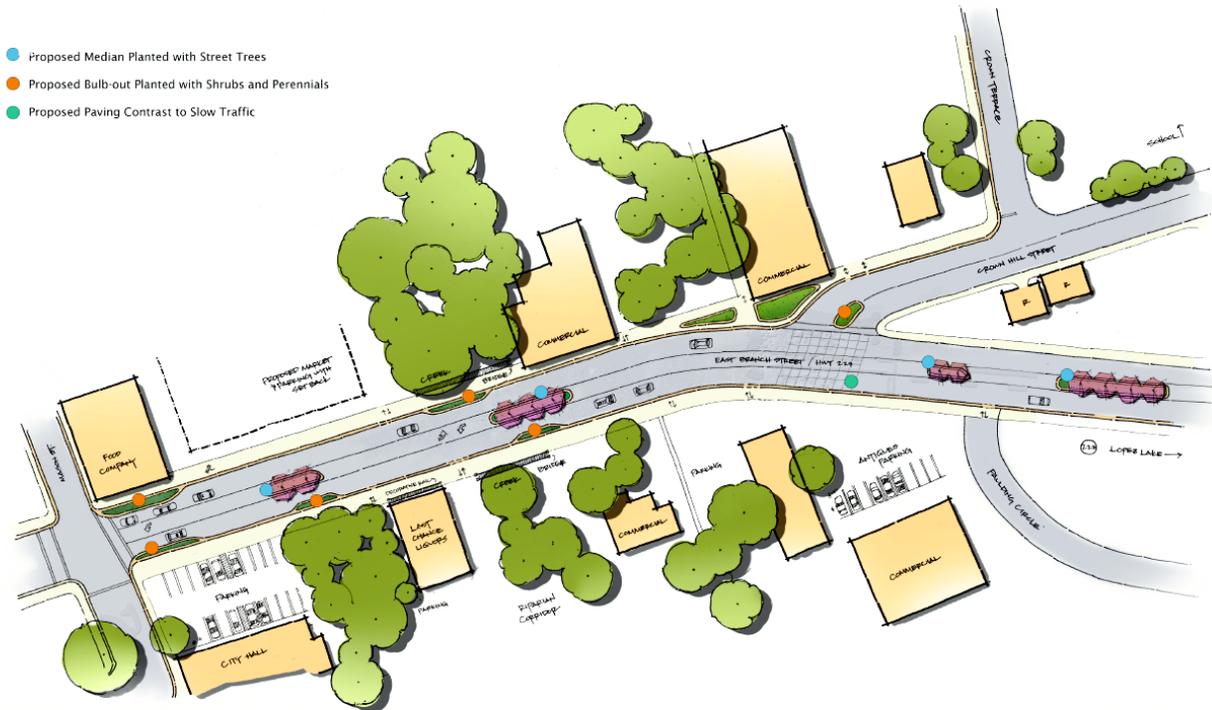
BACKGROUND:

The East Branch Streetscaping Project is a Capital Improvement Plan Project. This project will improve East Branch Street from North Mason Street to Paulding Circle installing landscape, street furniture, sidewalk, and medians in order to compliment that work that has already been completed in the western portion of the Village.

This project's improvements are guided by a stakeholders group that is compiled of members from other City Commissions and Village Businesses.

On October 26, 2015, a Traffic Commissioner was appointed to serve on this stakeholders group. That Traffic Commissioner has resigned from the Traffic Commission.

**CONSIDERATION OF APPOINTING ONE TRAFFIC COMMISSIONER TO SERVE AS
A STAKEHOLDER FOR THE EAST BRANCH STREETSCAPING PROJECT AND
ONE ALTERNATE STAKEHOLDER
JANUARY 25, 2016
PAGE 2**



OCTOBER 16, 2013: DNTS 

Conceptual Streetscaping Project Exhibit

ANALYSIS OF ISSUES:

The stakeholders group would benefit from representation of the Traffic Commission.

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

PUBLIC NOTICE AND COMMENT:

The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016.



MEMORANDUM

TO: TRAFFIC COMMISSION

FROM: TERESA MCCLISH, COMMUNITY DEVELOPMENT DIRECTOR

BY: MATT HORN, CITY ENGINEER

SUBJECT: CONSIDERATION OF DRAFT NEIGHBORHOOD TRAFFIC CALMING GUIDELINES

DATE: JANUARY 25, 2016

RECOMMENDATION:

It is recommended that the Traffic Commission review and direct staff to implement any required changes to the Draft Neighborhood Traffic Calming Guidelines.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

No direct costs are incurred by the preparation and adoption of Neighborhood Traffic Calming Guidelines. Staff time will be incurred to generate reports and presentations until adopted. Some future cost might be incurred if City Council chooses to fund future Neighborhood Traffic Calming Projects.

BACKGROUND:

On October 12, 2014, and January 26, 2015 the Traffic Commission reviewed Neighborhood Traffic concerns in the Le Point Street at McKinley Street area. After review the Traffic Commission directed staff to prepare Neighborhood Traffic Calming Guidelines.

On April 28, 2015, the City Council reviewed the Neighborhood Traffic concerns in the Le Point Street at McKinley Street area and concurred with the Traffic Commission's advisement.

ANALYSIS OF ISSUES:

Draft Neighborhood Traffic Calming Guidelines are included as an attachment for the Traffic Commission review and direction.

ALTERNATIVES:

The following alternatives are provided for the Commission's consideration:

- Approve staff's recommendation;
- Do not approve staff's recommendation;
- Provide alternate direction

**CONSIDERATION OF DRAFT NEIGHBORHOOD TRAFFIC CALMING GUIDELINES
JANUARY 25, 2016
PAGE 2**

PUBLIC NOTICE AND COMMENT:

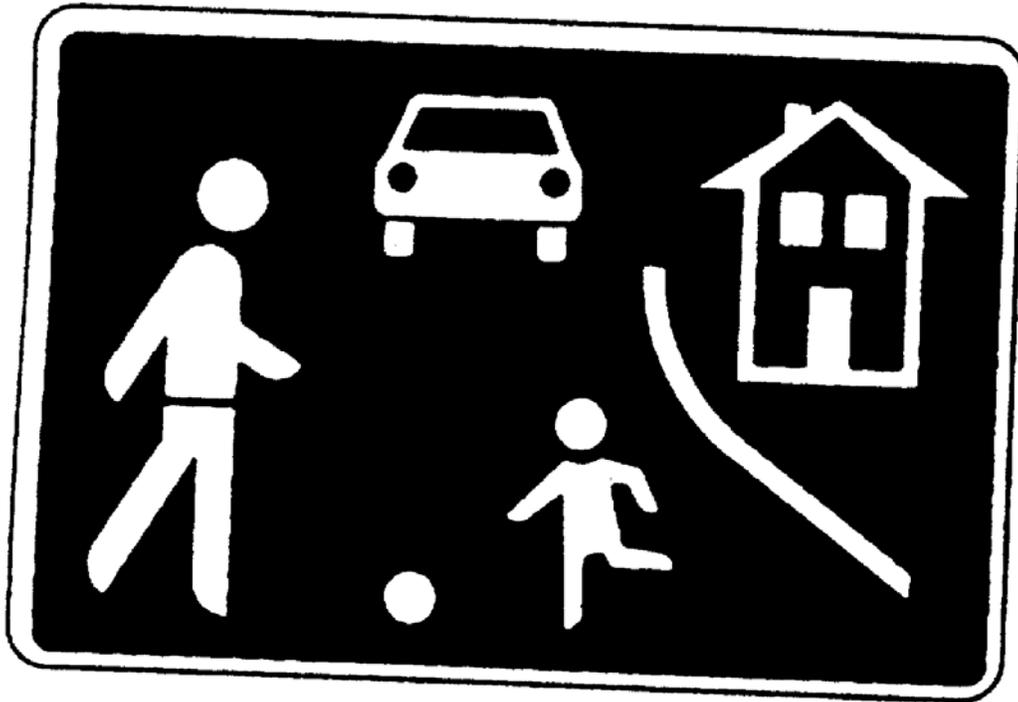
The Agenda and this staff report were posted on the City's website on Thursday January 21, 2016.

Attachments:

1. Draft – Neighborhood Traffic Calming Guidelines

Neighborhood Traffic Calming Guidelines

ADOPTED BY THE CITY COUNCIL OF ARROYO GRANDE
BY RESOLUTION NO. XXX
XXX XX, 2016



COMMUNITY DEVELOPMENT DEPARTMENT ENGINEERING DIVISION

300 East Branch Street
Arroyo Grande, CA 93420
(805) 473-5420

Table of Contents

Introduction.....	3
Traffic Calming Measures.....	4
Passive Traffic Calming Measures.....	4
Active Traffic Calming Measures.....	5
Volume Reduction Measures.....	5
Impacts of Traffic Calming Measures.....	5
Passive Traffic Calming Measures.....	6
Police Enforcement.....	6
High-Visibility Crosswalks.....	7
Radar Trailer, Speed Feedback Trailer.....	8
Speed Feedback Signs.....	8
Pavement Striping.....	9
Signed Turn Restrictions.....	9
Truck Restrictions.....	10
Active Traffic Calming Measures.....	11
Speed Humps.....	11
Speed Tables or Raised Crosswalk.....	12
Raised Intersection.....	13
Speed Cushion.....	14
Mid-Block Chokers.....	15
Medians.....	16
Bulbouts.....	17
Chicanes.....	18
Volume Reduction Measures.....	19
Diverters.....	19
Partial Closure.....	20
Full Street Closure.....	21
Guidelines for Installation or Warrants.....	22
Passive Traffic Calming Measures.....	22
Active Traffic Calming Measures.....	22
Volume Reduction Measures.....	23
Approval and Implementation Process.....	23

Neighborhood Traffic Calming Guidelines

Introduction

“Traffic calming” measures are means to respond to unacceptable motoring behavior. The Institute of Traffic Engineers (ITE) defined traffic calming as:

“Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.”

The guiding principals of the “Traffic Calming Measures” include:

- The design and installation of “Traffic Calming Measures” should use sound traffic engineering principles.
- The development and selection of “Traffic Calming Measures” should encourage and facilitate public involvement.
- Installation of traffic calming measures should minimize diverted traffic to other local or residential collector streets.
- Emergency vehicle access, including safety and response times must be considered.
- Traffic calming devices must be designed to minimize adverse impacts to maintenance activities.
- Only State/Federal approved regulatory and/or warning signs may be installed.
- Bicycle and pedestrian travel should be enhanced through traffic calming and congestion relief.

Traffic calming measures are not solutions for all:

- Speeding;
- Cut-through;
- Congestion; or
- Traffic safety concerns.

Each neighborhood will have its own unique set of problems that will require an evaluation to identify appropriate traffic calming options. Residential streets are planned and designed to provide access to and from our residential neighborhoods. These facilities are neither designed nor intended for the use of non-local traffic. However, when congested conditions occur on collector and arterial roadways, these local streets will often provide an attractive alternative route.

It is the intent of this program to identify traffic calming measures, which can alter travel behavior to the betterment of the neighborhoods being affected. The intent here is to improve safety, encourage bicycle and pedestrian travel, and to positively affect a resident’s quality of life. The objectives of the local residential streets program are:

- Reduce vehicular speed where appropriate
- Reduce cut-through traffic
- Improve safety for bicycle and pedestrian travel
- Enhance the neighborhood environment

Residential areas adjacent to school zones need to meet the same basic criteria for implementation, including evaluation of the potential negative impacts that can result. School zone traffic tends to be extremely peaked, occurring at the time when children are arriving or departing class. While the condition requiring attention is short term in nature, the impacts of the traffic calming device extend throughout the day, and continue during school holidays and vacation. Traffic calming devices must take these issues into consideration and consider the following objectives:

- Improve the safety environment for children
- Increase awareness of motorist to school sites
- Improve safety for bicycle and pedestrian travel

This document outlines some basic traffic calming measures as well as the process for implementation. It is important to note that after the community agrees upon what is the appropriate solution, those cost to implement the traffic calming work may be borne by the City, the Neighborhood, or some combination of the two. This determination will be made by City Council upon plan approval.

Traffic Calming Measures

The tools available for use in resolving neighborhood traffic problems are many and diverse in both their cost and effectiveness. This program has identified levels of traffic calming measures:

- Passive Traffic Calming Measures
- Active Traffic Calming Measures
- Volume Reduction Measures

Traffic calming measures may include devices that do not directly affect driver behavior and are not self enforcing. These measures are generally included within the Passive Traffic Calming Measures. If Passive Traffic Calming Measures do not provide desired results, more restrictive measures may be warranted. More restrictive traffic calming measures, those found in the Active Measures and Volume Reduction categories, mandate driver behavior change and may be effective where Passive Traffic Control Measures have failed.

While some Traffic Calming Measures are identified in this document, not all are. This is not intended to restrict the use of other Traffic Calming Measures. Traffic Calming is an ever evolving area. Site specific analysis should be completed at the time of Traffic Calming implementation based on the best available current practices and design guidance.

Passive Traffic Calming Measures

Passive Traffic Calming Measures are intended to regulate, warn, guide, inform, and educate pedestrians, bicyclists and motorists. They include standard striping and signing measures, minor

roadway design measures to improve visibility and safety, and enforcement by police. Passive Traffic Calming Measures are used primarily in those areas where traffic impacts have been found and traffic control and/or education has been determined to be appropriate. Some common Passive Traffic Calming Measures include:

- Education
- Police Enforcement
- High-Visibility Crosswalks
- Permanent Speed Feedback Signs
- Permanent Striping
- Signed Turn Restrictions
- Truck Restrictions

Active Traffic Calming Measures

Active Traffic Calming Measures are traffic control devices and roadway design features primarily designed to slow traffic. They are employed when the use of Passive Traffic Calming Measures cannot, or has not, effectively addressed speeding issues. Active Traffic Calming Measures may be used in conjunction with Passive Measures. Active Measures may have a limited effect on traffic volume as well. Some common Active Measures include:

- Speed Humps
- Speed Tables
- Raised Crosswalks
- Raised Intersections
- Speed Cushions
- Mid-Block Chokers
- Medians
- Bulbouts
- Chicanes

Volume Reduction Measures

Volume Reduction Measures are traffic control devices and roadway design features primarily designed to discourage residential street cut-through traffic. Volume reduction devices may be used by themselves or in conjunction with Passive and Active Measures. Some common Volume Reduction Measures include:

- Diverters
- Partial Closure
- Full Street Closure

Impacts of Traffic Calming Measures

Prior to installing traffic calming measures, it is important to carefully consider potential impacts. While many of the measures offer positive results, there are potential problems, which may be more significant than the original concern. This section attempts to describe some of the possible impacts of the use of speed reduction or volume reduction traffic calming tools.

- Effect on Emergency Vehicles Response Times: Speed, and to a lesser extent, volume traffic calming measures have potential for negatively impacting emergency vehicle response because they physically affect speed and maneuvering. Many Active Measures may increase emergency response time. These concerns should be considered for each location where Active Measures and Volume Reduction Measures are recommended.
- Traffic Diversion: Another concern is the potential for traffic calming techniques to move, rather than solve, a problem. Proposed Volume Reduction Measures should include an adequate study to evaluate traffic diversion impacts.

- Impacts on Transit and Utility Vehicles: Some Active Measures and Volume Reduction Measures could potentially impact bus routes. South County Transit and Lucia Mar Unified School District should be consulted whenever Active Measures and Volume Reduction Measures options are considered.
- Noise Impacts: The noise impact to adjacent residents resulting from vehicles braking and going over and around traffic calming devices can have an impact on the acceptability of these devices by residents.
- Loss of Parking: It may be necessary to restrict or prohibit on-street parking in the immediate vicinity of certain traffic calming features. There can also be significant on-street parking impacts from many speed reduction and volume reduction options.
- Liability Exposure Implications: Speed reduction and volume reduction traffic calming devices may result in varying degrees of liability exposure to the City. This exposure stems from the potential negative impact to emergency vehicle response times. It is also possible that traffic calming devices themselves could result in damage or injury if improperly used.
- Increased Maintenance Costs: Street maintenance costs will increase in two areas. First, landscaping associated with such devices as neighborhood traffic circles, roundabouts, chokers and chicanes, etc., will require regular maintenance. Second, devices such as speed humps will have to be reinstalled each time a residential street is overlaid which will increase these costs.

Passive Traffic Calming Measures

Police Enforcement

Police enforcement entails the presence of police to monitor speeds and issue citations. This method is used as an initial attempt to reduce speeds on streets. It is most applicable on streets with documented speeding problems and the need for quick mitigation. It can also be used during the learning period when new devices or restrictions are first implemented. For police enforcement, contact the Police Department.

Positive Aspects

- Effective while officer is actually present at the location
- Can be targeted to specific time periods that are deemed to be most problematic
- Can be implemented on short notice
- Targets violators without affecting normal traffic

Approximate cost: No direct additional cost to the City.

Negative Aspects

- It is a temporary measure
- Enforcement may be limited by police availability and other policing duties
- Long term financial commitment of police personnel
- It is labor intensive and expensive



High-Visibility Crosswalks

A high-visibility crosswalk is a crosswalk that incorporates striped patterns, pavement lights or flashing beacons, and signing to improve the visibility of the crosswalk. This measure is most applicable on local streets where speed control and pedestrian crossing designation is desired. It can also be used to discourage cut-through traffic. This type of crosswalk is most appropriate near schools and recreation facilities, but typically not at signalized intersections.

Positive Aspects

- Slows traffic
- Increases driver awareness of crosswalk
- Requires minimal maintenance for striped crosswalks

Approximate cost: \$20,000 to \$50,000 - (2016 dollars)

Negative Aspects

- May require removal of parking in the vicinity of the crosswalk
- May result in significant maintenance for embedded pavement lights or advance flashing lights



Radar Trailer, Speed Feedback Trailer

This is a mobile trailer-mounted radar display that informs drivers of their speed. This measure is applicable on any street where speeding is a problem.

Positive Aspects

- Educational tool
- Good public relations for neighborhoods
- Effective for temporary speed reduction needs

Approximate cost: No direct additional cost to the City.

Negative Aspects

- Not self-enforcing
- Duration of effectiveness is limited
- May require temporary lane closures



Speed Feedback Signs

This is a permanent-mounted radar display that informs approaching drivers of their speed. This measure is applicable on any street where speeding is a problem.

Positive Aspects

- Educational tool
- Good public relations for neighborhoods
- Permanent reminder of travel speed

Approximate cost: \$4,000 to \$6,000 – (2016 dollars)

Negative Aspects

- Not self-enforcing
- Duration of effectiveness is limited
- Maintenance/theft



Pavement Striping

Striping is used to create narrow lanes, which give the impression of a narrow street. This makes the motorist feel restricted, which helps reduce speeds. It is most applicable to long, wide residential streets where speeding traffic exists.

Positive Aspects

- Easy to install and modify as necessary
- Low cost of implementation

Approximate cost: \$2,500 to \$15,000 – (2016 dollars)

Negative Aspects

- May not be self-enforcing



Signed Turn Restrictions

Signs may be installed which prohibit certain movements at an intersection, e.g., “No Left Turn”. This measure is applicable on streets where cut-through traffic exists. This method can be tailored to be applicable during the most problematic times by defining a time period for the restriction.

Positive Aspects

- Redirects traffic to main streets
- Reduces cut-through traffic
- May address time-of-day problems

Negative Aspects

- Not self-enforcing
- May increase trip length for some commuters
- May redirect traffic to other neighborhood streets
- May confuse motorists unfamiliar with time-of-day restrictions

Approximate cost: \$1,500 to \$5,000 – (2016 dollars)



Truck Restrictions

Restricting the entry of trucks into residential neighborhoods can be achieved through the posting of truck restriction signs. This method is most applicable on residential streets to reduce cut-through traffic of commercial vehicles.

Positive Aspects

- Redirects commercial traffic through main streets
- Reduces noise and air pollution due to trucks in residential streets

Approximate cost: \$500 to \$2,500 – (2016 dollars)

Negative Aspects

- Not self-enforcing



Active Traffic Calming Measures

Active Traffic Calming Measures are primarily designed to lower travel speeds on the streets where they are installed.

Speed Humps

Speed humps are areas of pavement raised 3 inches in height over a minimum of 14 feet in length. The combination of different heights, lengths and approach ramps will affect the speed a vehicle can comfortably go over the hump. Speed humps are marked with signs and pavement markings. Speed humps are applicable on local streets where speed control is desired or where cut-through traffic is to be discouraged. Speed humps are not recommended for use on streets designated as primary response routes for emergency vehicles.

Positive Aspects

- Slows traffic
- Self-enforcing
- Requires minimum maintenance

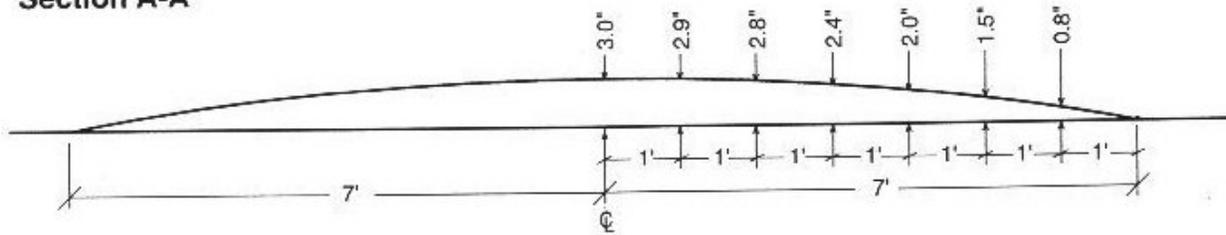
Negative Aspects

- May increase emergency response times
- May damage emergency response vehicles if not carefully designed
- May increase traffic noise in the vicinity of the bump

Approximate cost: \$3,500 to \$5,000 – (2016 dollars)



Section A-A



Speed Tables or Raised Crosswalk

Raised crosswalks are flat-topped speed humps, 22 feet in length, built as a pedestrian crosswalk, with vehicle ramps on the approaches. This type of crosswalk is applicable to local streets where speed control and pedestrian crossing designation are desired. It can be an effective safety tool near schools and recreation facilities and can also be used to discourage cut-through traffic. Raised crosswalks are well-marked and may contain special paving or textures.

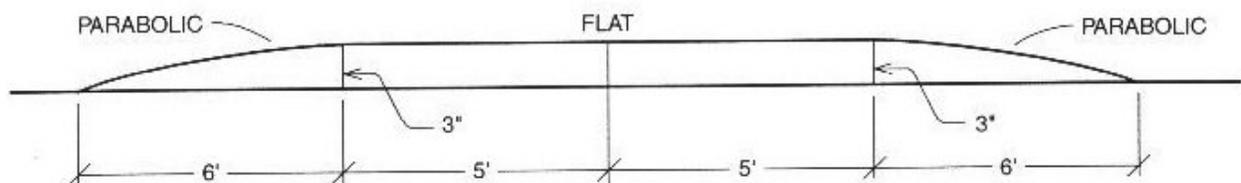
Positive Aspects

- Slows traffic
- Increases pedestrian visibility in the crosswalks
- Requires minimal maintenance

Negative Aspects

- May increase emergency response times
- May damage emergency response vehicles if not carefully designed
- May increase traffic noise in vicinity of crosswalk
- May create drainage issues where raised crossing extends from curb to curb
- May require extensive warning signs to be effective

Approximate cost: \$4,000 to \$6,000 – (2016 dollars)



Raised Intersection

Like raised crosswalks, the raised intersection is a flat-topped speed hump built over the entire area of intersecting streets at curb height, creating a flat surface over the entire intersection area. Raised intersections are constructed with ramps (gentle approaches 1:40) on all vehicle approaches, using bollards to define the pedestrian zone. They are often constructed with textured materials on the flat sections and the approach ramps. These are commonly used in area-wide traffic calming installations. This type of installation is applicable to arterial and collector streets where speed control and pedestrian crossing designation are desired. It can be an effective safety tool near schools and recreation facilities and can also be used to discourage cut-through traffic. Raised intersections are used in locations where loss of on-street parking would be acceptable.

Positive Aspects

- Slows traffic
- Increases pedestrian visibility in the crosswalks
- Requires minimal maintenance
- No impact on access

Negative Aspects

- May increase emergency response times
- May increase traffic noise in vicinity of the intersection
- May create drainage issues where raised crossing extends from curb to curb

Approximate cost: \$25,000 to \$75,000 – (2016 dollars)



Speed Cushion

Speed cushions consist of either recycled rubber or asphalt, raised about 3 inches in height. The length of the cushion is about 10 feet. The spaces between the cushions allow emergency vehicles to partially straddle the device. These devices are most effective if used in a series at 300' to 500' spacing or in conjunction with other traffic calming devices.

Positive Aspects

- Reduces vehicle speed
- Can reduce vehicular volumes
- No restrictions to on-street parking
- Does not restrict access
- Requires minimum maintenance
- Minimal impacts to emergency response times

Approximate cost: \$3,500 to \$5,000 for set – (2016 dollars)

Negative Aspects

- May increase emergency response times
- Not aesthetically pleasing
- May increase road maintenance costs



Mid-Block Chokers

Chokers are raised islands in the parking zone that can be detached from the curb line to allow for drainage. Mid-Block chokers narrow the roadway and are most applicable on wide streets with speeding and cut-through problems.

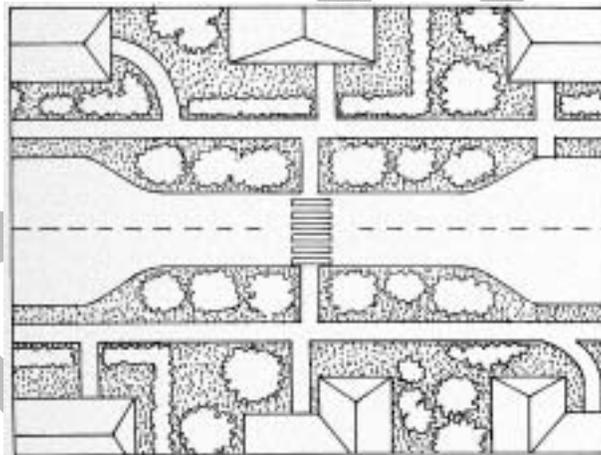
Positive Aspects

- Speed reduction
- Breaks up driver's sight-line
- Reduces pedestrian crossing
- Increases pedestrian and motorist visibility

Negative Aspects

- May require partial or total removal of on-street parking
- Increases maintenance for areas where street sweeping equipment cannot reach between the choker and the curb line

Approximate cost: \$15,000 to \$35,000 – (2016 dollars)



Medians

Medians are raised islands in the center of the roadway that separate traffic directions. Medians are used on wide streets to narrow the travel lanes, interrupt sight distances down the center of the roadway, and ease pedestrian crossings.

Positive Aspects

- Narrowed travel lanes can slow vehicle speeds
- Shortens pedestrian crossing
- Opportunity for landscaping and visual enhancements to the neighborhood
- Properly placed medians can result in congestion relief and capacity increases
- Congestion Relief

Approximate cost: \$35,000 to \$100,000 – (2016 dollars)

Negative Aspects

- Long medians may interrupt emergency access and operations
- May interrupt driveway access and result in U-turns at the end of medians
- May require removal of parking
- High cost to construct and maintain



Bulbouts

Bulbouts narrow the street width, and create smaller corner radii, creating a shorter and safer pedestrian crossing and encouraging drivers to slow down. Construction of bulbouts requires altering the curb, gutter and sidewalk. Bulbouts may contain special paving or landscaping and are generally used at intersections where parking is restricted.

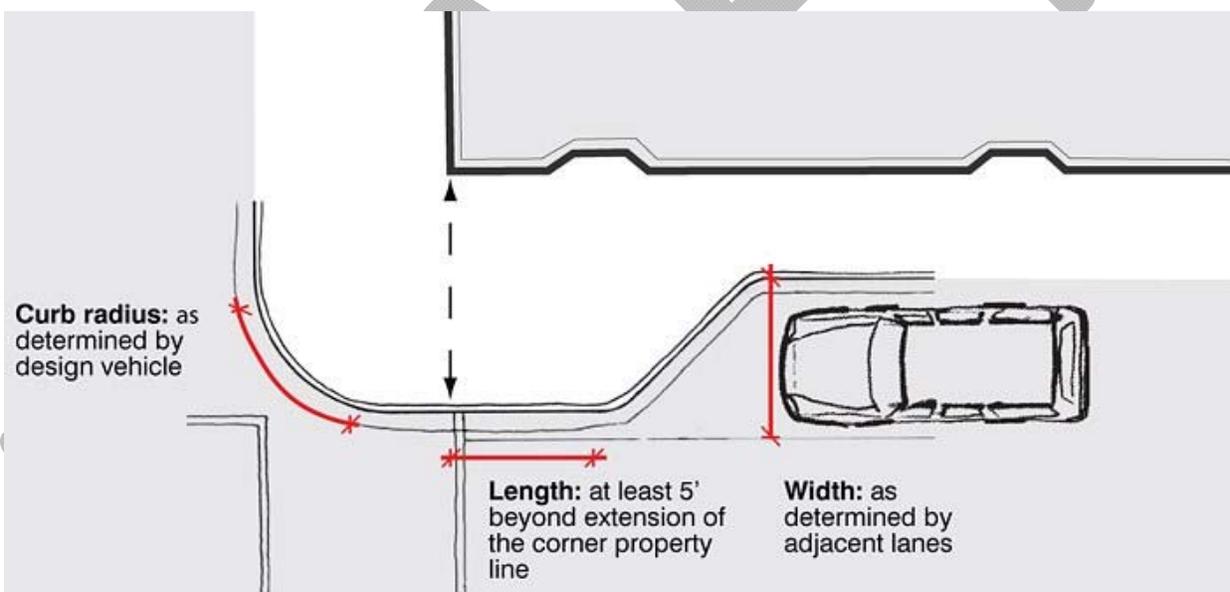
Positive Aspects

- Pedestrian crossing distance is reduced
- Narrowed roadway section may contribute to reduction of speeds
- Breaks up driver's sight-line
- Opportunity for landscaping and visual enhancements to the neighborhood

Negative Aspects

- May reduce visibility for cyclists who are less visible to turning and cross traffic
- May require partial or total loss of parking
- Could result in a minor increase on maintenance
- Care should be taken to keep motorists from hitting bulbouts

Approximate cost: \$15,000 to \$35,000 – (2016 dollars)



Chicanes

A curved street alignment that can be designed into new developments or retrofitted in existing right-of-ways is called a chicane. The curvilinear alignment requires additional maneuvering and shortens drivers' sight-lines, resulting in lower average speeds. This device can be applied to any street where speed control is desired, provided the street is wide enough to accommodate the curvilinear design.

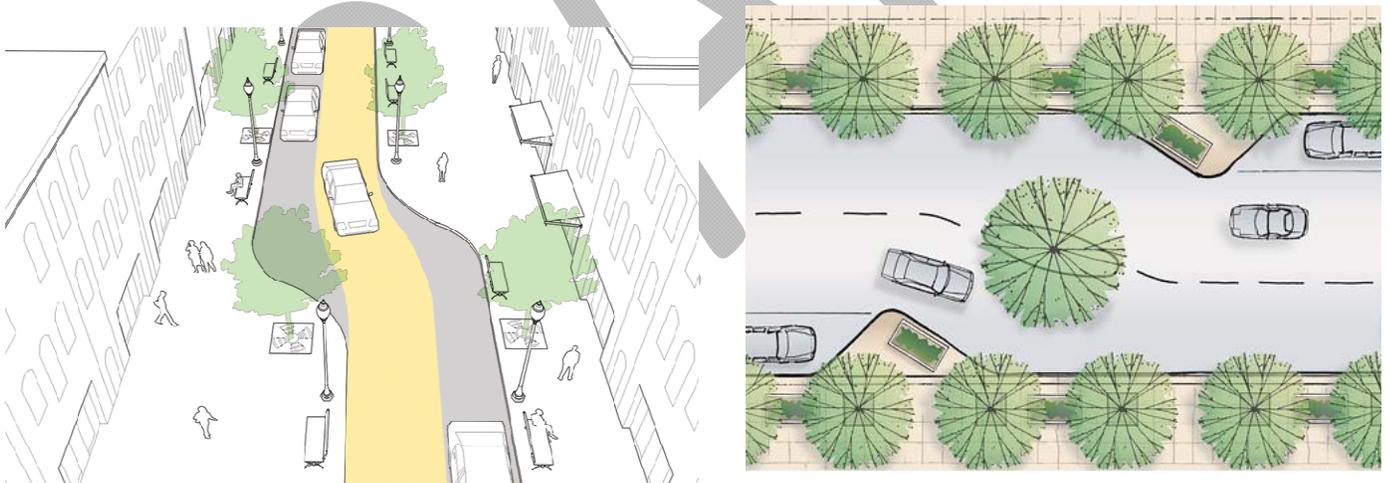
Positive Aspects

- May slow traffic
- Changes the look of the street, making it more aesthetically pleasing
- Has minimal impact on emergency response

Negative Aspects

- Involves extensive design and expensive implementation
- May require partial or total removal of on-street parking
- Additional maintenance for service vehicles to maneuver a curvilinear street
- May have little or no impact on cut-through traffic
- May require modification of drainage features and other utilities

Approximate cost: \$35,000 to \$100,000 – (2016 dollars)



Volume Reduction Measures

Volume reduction traffic calming measures are primarily designed to reduce the traffic level on the streets where they are installed.

Diverters

Diverters are raised areas placed diagonally across a four-way intersection that restrict through movements and vehicles to turn. Diverters are most applicable to local streets where cut-through traffic is a major problem.

Positive Aspects

- Reduces cut-through traffic
- Channels traffic flow, thus eliminating conflicts at an intersection
- Can be designed to accommodate emergency vehicles
- Opportunity for landscaping and visual enhancements to the neighborhood
- Can accommodate bicycle traffic through intersection

Negative Aspects

- Will re-direct traffic to other local streets
- Causes increased travel time for local residents
- Is a permanent measure, even though problem may be limited to certain times of day
- High installation costs
- May require partial or total removal of parking near intersection
- Needs significant warning and guiding signs

Approximate cost: \$15,000 to \$35,000 – (2016 dollars)



Partial Closure

A Partial closure is a physical barrier that restricts vehicles from turning into a street, while still allowing for bicycle access. The opposite lane is left open to allow vehicle exits. Two-way traffic is maintained for the rest of the block. Partial closures are applicable to local streets where cut-through traffic is a concern. It can also be a favorable traffic volume control measure.

Positive Aspects

- Restricts movements into a street while maintaining full access and movement within the street block for residents
- Reduces cut-through traffic
- Pedestrian crossing distance is reduced through a closure island
- Creates a space for street landscaping

Approximate cost: \$10,000 to \$30,000 – (2016 dollars)

Negative Aspects

- May require partial or total removal of on-street parking
- May redirect traffic to other local streets
- May increase trip length for local drivers
- Is in effect at all times, even if cut-through problem exists only at certain times of day



Full Street Closure

A complete closure of the street blocks both lanes of travel, so that the street becomes a cul-de-sac. This device eliminates all through traffic and limits street access to local residents. This device is applicable to local streets with major cut-through concerns where an emergency vehicle response route does not exist. The closure location may be designed as a pocket park with through bicycle and pedestrian access.

Positive Aspects

- Restricts all through traffic
- Effective volume and speed control measure
- Improves the aesthetic quality of the street

Negative Aspects

- May re-direct traffic to other local streets
- May increase trip length for local drivers
- May require partial removal of on-street parking
- Not applicable for designated emergency vehicle response routes
- May result in difficult turnaround conditions

Approximate cost: \$15,000 to \$35,000 – (2016 dollars)



Guidelines for Installation or Warrants

Passive Traffic Calming Measures

Generally, Passive Traffic Calming Measures are lower cost and may be used where analysis indicates a problem exists and an appropriate Passive Traffic Calming Measures can be installed with successful results. If it is not likely that the Passive Traffic Calming Measures will be successful or that the installed Passive Traffic Calming Measures has failed, more restrictive measures may be appropriate.

Active Traffic Calming Measures

The following guidelines (warrants) are recommended to govern the installation of Active Traffic Calming Measures, following analysis and study. Some or all of these guidelines may apply, depending upon the individual street characteristics.

1. The street or street segment must be a two lane residential local or collector street. The street or street segments must be improved with continuous curb and gutter, asphalt concrete berm, or curb and gutter may be constructed as part of the traffic calming project.
2. The street segment must be at least 600 feet long.
3. The impacts to response time for emergency service vehicles must be evaluated and determined negligible.
4. Guidelines apply only to streets with a speed limit of 30 miles per hour or less.
5. The 85th percentile speed must be at least seven miles per hour above the posted speed limit.
6. The median speed should exceed the speed limit.
7. The average daily traffic volume, excluding cut-through traffic, should be more than 750 vehicles per day.
8. The subject location has good visibility;
9. Vertical deflection devices should not be placed on curves.
10. Vertical deflection devices should be located at or near residential property lines and away from driveways, when possible.
11. Vertical deflection devices should be located near street lights to illuminate them for safe bike and pedestrian activity at night.
12. Vertical deflection devices should be accompanied by the appropriate advanced signage.
13. Spacing between vertical deflection devices should be as even as possible to produce uniform speed along an entire street. When placed in a series they should be placed between 200 and 600 feet apart. Spacing should allow at least one installation on each block.
14. Vertical deflections shall not be installed at locations with street grades in excess of 6%, except under conditions where there are very short sections with grades up to 8%-10%.
15. The installation will not result in diversion of traffic to other residential streets.

Volume Reduction Measures

The following guidelines (warrants) are recommended to govern the installation of Volume Reduction Measures following analysis and study. Some or all of these guidelines may apply, depending upon the individual street characteristics.

1. The impacts to response time for emergency service vehicles must be evaluated and determined negligible.
2. The average daily traffic volume should exceed 1,500 vehicles per day.
3. Cut through traffic exceeds 25% of total daily and/or peak hour traffic.

Approval and Implementation Process

Neighborhood traffic calming is a term used to describe a process of Education, Enforcement, and finally Engineering. The education component typically is completed using a neighborhood meeting in which residents can share concerns and help identify the problem. Additionally, education can also include physical improvements such as speed limit signs, revised roadway striping, and speed feedback indicators such as permanently mounted signs or temporally placed trailers to better identify what drivers should be doing.

After the education phase is complete, enforcement activities are typically implemented. In this phase, the drivers should now be well informed and compliance is now achieved through monetary penalties in the form of traffic tickets. Enforcement work is highly effective to calm traffic speeds when officers are present to enforce. Since it is not feasible to devote officers to one area for a prolonged duration, lasting results will vary.

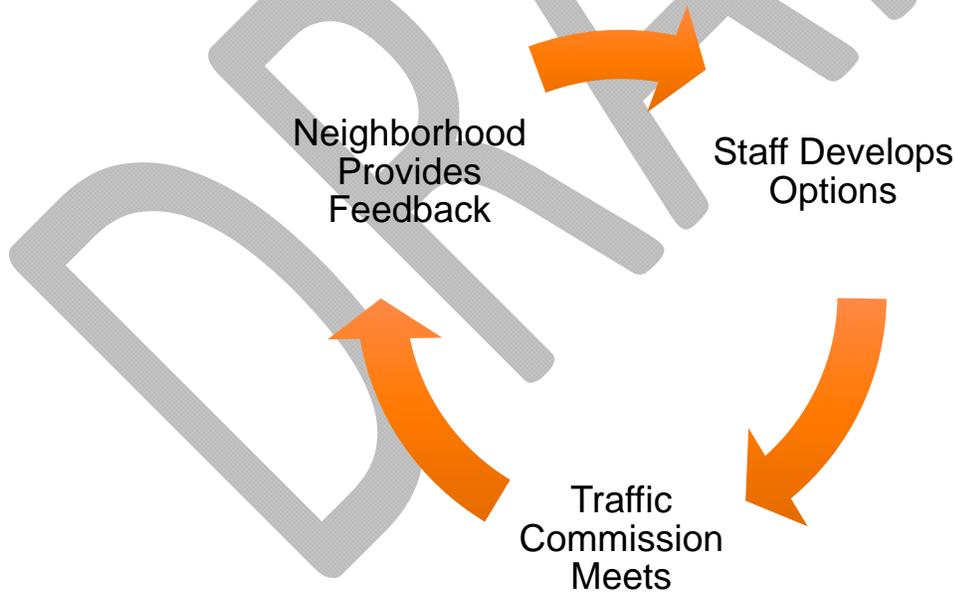
The last course of action is Engineering. This phase would incorporate physical changes to roadway geometry, which might include speed humps, speed tables, chokers, and medians.

The Neighborhood Traffic Calming process is designed and intended to be a “grass roots” effort. With this in mind, notification of Neighborhood Traffic Calming needs comes from the neighborhoods.

1. Neighborhood representative writes letter requesting consideration, obtaining as many neighbors' signature / support as available.
2. Staff receive and evaluates the request. Staff agendaize evaluation of the request for future Traffic Commission Meeting date.
3. Staff writes a letter to residents to notify them of the Traffic Commission meeting date.
4. Traffic Commission meets to evaluate request and determines if continued processing of traffic calming should be considered. If Traffic Commission determines continued processing of request is warranted, staff will begin data collection and enforcement process.



5. Data will be collected using the Speed Feedback Trailer. This allows for data collection as well as informing motorists of current travel speeds.
6. After the Speed Feedback Trailer has obtained the data and been removed, increased speed enforcement will be implemented if the data indicates need.
7. If increased enforcement was implemented, additional speed data may be obtained.
8. Staff will evaluate speed and enforcement data and prepare a report to present to Traffic Commission.
9. Staff writes a letter to residents to notify them of the Traffic Commission meeting date.
10. Traffic Commission meets to review data results and to determine if continued processing of traffic calming should be considered or if previous process has achieved desired results.
11. If the Traffic Commission determines continued processing is needed, staff will return and bring forward traffic calming alternatives. This process is iterative until a amenable plan is developed.



12. Preferred alternative is selected by Traffic Commission and Neighborhood. The requesting parties circulate a second petition within the project area. This petition must be circulated by the requesting parties, and returned containing the names and signatures of at least 66 % of the affected property owners in the project area. This petition is limited to one signature per household.

13. Staff receives petition, prepares staff report for City Council and notifies neighborhood of City Council Agenda data.
14. City Council reviews preliminary plan.
15. If City Council approves the preliminary plan, staff will request direction of City Council as to funding of the improvements. The funding source may be City funded, funded by requesting parties or neighborhood, or some combination of the two.
16. If City Council approves preliminary plan with City funding, a budget request will be prepared for consideration for the next Capital Improvement Plan budget.
17. If budget is approved, design and construction of improvements will be completed based upon funding delivery timeframe.

DRAFT