



A G E N D A

CITY OF SEASIDE
TRAFFIC ADVISORY COMMITTEE

REGULAR MEETING
CONFERENCE ROOM
440 Harcourt Avenue
Tuesday, May 17, 2016
5:00 PM

PLEASE TURN OFF YOUR CELL PHONES UPON ENTERING THE MEETING

1. **CALL TO ORDER**

David R. Pacheco	Committee Member
Vicki Myers	Police Chief
Brian Dempsey	Fire Chief
Rick Medina	Senior Planner
Tim O'Halloran	City Engineer

2. **REVIEW OF AGENDA**

If there are any items that arose after the 72-hour posting deadline, this is the point in the meeting where a vote may be taken to add the item to the agenda. (A 2/3-majority vote is required).

3. **PUBLIC COMMENT**

Members of the public wishing to address the Traffic Advisory Committee on matters within the jurisdiction of the City of Seaside, but not on this agenda, may do so during the Public Comment period for up to three minutes. Public Comments on specific agenda items are heard under that item. For the public record, please state your name.

4. **APPROVAL OF MINUTES**

A. **REGULAR MEETING MINUTES OF APRIL 19, 2016**

5. **BUSINESS ITEMS**

A. **DISCUSS TRAFFIC CALMING PROGRAM FOR RESIDENTIAL STREETS**

6. **STAFF COMMUNICATION**

7. **ADJOURNMENT**

Next Regularly Scheduled Meeting:
5:00 PM
Seaside City Hall
June 21, 2016

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The City Council Chambers is equipped with a portable microphone for anyone unable to come to the podium. Assisted listening devices are also available.

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<http://cvp.telvue.com/player?id=T01629&video=52314&noplaylists=1&width=400&height=300> Videos of past meetings are available on demand through the City's website: <http://www.ci.seaside.ca.us>

Agenda-related writings or documents provided during public meetings are available for public inspection during the meeting or from the office of the City Clerk. This agenda is posted in compliance with California Government Code Section 54954.2(a) or Section 54956.



**CITY OF SEASIDE
STAFF REPORT**

Item No.: 4.A.

TO: Traffic Advisory Committee

BY: Leslie Llantero, Assistant Engineer

DATE: May 17, 2016

SUBJECT: REGULAR MEETING MINUTES OF APRIL 19, 2016

PURPOSE

The purpose of this item is to review the minutes from the April 19, 2016 Traffic Advisory Committee meeting.

RECOMMENDATION

It is recommended to approve the April 19, 2016 TAC minutes.

BACKGROUND

Attached are the minutes from the April 19, 2016 TAC meeting.

FISCAL IMPACT

There is no fiscal impact associated with this item.

ATTACHMENTS

1. MEETING MINUTES 4.9.16
-

**CITY OF SEASIDE
TRAFFIC ADVISORY COMMITTEE
REGULAR MEETING MINUTES
APRIL 19, 2016**

1. CALL TO ORDER – 5:03 p.m.

ROLL CALL

Roll call was taken with the following members in attendance:

Dave Pacheco X Rick Riedl X Louis Lumpkin X Rick Medina X Brian Dempsey X

Staff: Scott Ottmar and Leslie Llantero

2. REVIEW OF AGENDA

3. PUBLIC COMMENT

Jeff Feldeisen, Juarez resident spoke about the lack of on street parking in his neighborhood.

Tara Feldeisen, Juarez resident spoke about the lack of parking in her neighborhood and a box van that blocks views of oncoming vehicles while exiting her street.

Shenae Morrow, Judson resident, spoke in regards to getting a one-way sign on her street. She indicated that several vehicles go the wrong way on her street.

4. APPROVAL OF MINUTES – March 14, 2015

Dempsey/Medina M/S/P approval March 14, 2015 minutes.

5. BUSINESS ITEMS

A. Consider red curb at the south & north east corners of Luxton Street and La Salle Avenue.

Ms. Llantero presented staff report. Several residents spoke in support of red curb.

Lumpkin/Dempsey M/S/P – Approve to install 20 feet of red curb on the southeast and southwest corners of La Salle Avenue and Luxton Street.

B. Consider traffic calming on the 1800 block of Luxton Street. Several residents spoke in support of red curb.

Ms. Llantero presented staff report. Several residents spoke in support of traffic calming.

Lumpkin/Dempsey M/S/P – Deny request for phase 1 traffic calming on the 1800 block of Luxton Street.

- A. Consider 100 feet of red curb along the west side of Del Monte north of the northernmost driveway of 1739 Del Monte.

Mr. Ottmar presented staff report. The property owner spoke in support of red curb.

Lumpkin/Riedl M/S/P – Approve to place 100 feet of red curb north of the northernmost driveway approach of “The Masters” located at 1729 Del Monte Boulevard.

6. STAFF COMMUNICATION

Mr. Riedl informed the committee that West Broadway Urban Village project will be presented to Sustainable Seaside this coming Tuesday, April 26, 2016.

Mr. Ottmar informed the committee that the RV Ordinance will be before the Council for a first hearing on Thursday, April 21, 2016.

7. ADJOURNMENT

The meeting was adjourned at 5:50 p.m.

Respectfully submitted:

Leslie Llantero



**CITY OF SEASIDE
STAFF REPORT**

Item No.: 5.A.

TO: Traffic Advisory Committee

BY: Leslie Llantero, Assistant Engineer

DATE: May 17, 2016

**SUBJECT: DISCUSS TRAFFIC CALMING PROGRAM FOR RESIDENTIAL
STREETS**

PURPOSE

The purpose of this item is to review the Traffic Calming Program and discuss thresholds for residential streets.

RECOMMENDATION

It is recommended to provide staff with direction on the Traffic Calming Program for residential streets.

BACKGROUND

The Traffic Calming Program was approved by the City Council on November 17, 2011. The Program identifies approved traffic calming measures and the process by which they may be implemented.

Since the implementation of the program, staff has received two requests and has implemented traffic calming on Plumas Avenue following the procedure outlined in the program.

The program criteria and procedure will be discussed in addition to any suggested revisions for streamlining the process for residential streets.

FISCAL IMPACT

There is no fiscal impact associated with this item.

ATTACHMENTS

1. Traffic Calming Program

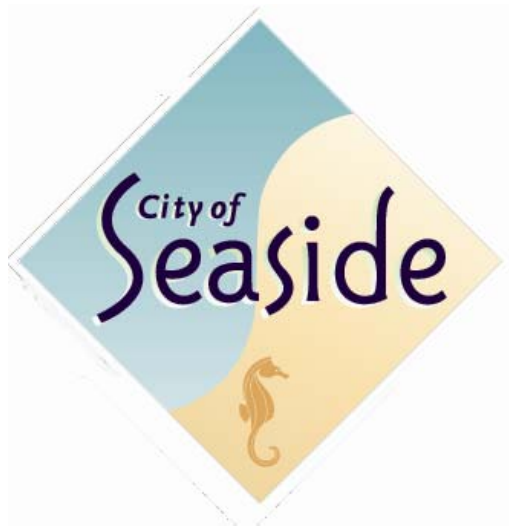


CITY OF SEASIDE TRAFFIC CALMING PROGRAM

APPROVED
NOVEMBER 17, 2011
MODIFIED JULY 17, 2014

ACKNOWLEDGEMENTS

THE CITY OF SEASIDE
TRAFFIC CALMING PROGRAM
MODIFIED
JULY 17, 2014



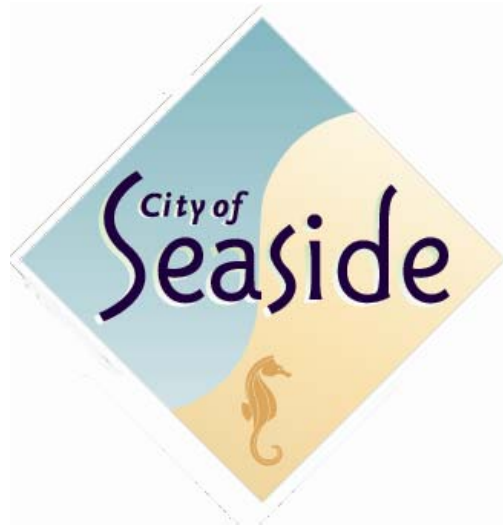
SEASIDE CITY COUNCIL
Ralph Rubio, Mayor
Ian Oglesby, Mayor Pro Tem
Dennis Alexander
Alvin Edwards
Dave Pacheco

TRAFFIC ADVISORY COMMITTEE
Dave Pacheco, City Councilmember
Tim O'Halloran, P.E., City Engineer/Public Works Services Manager
Rick Medina, Senior Planner
Judy Stradan, Police Chief
Brian Dempsey, Fire Chief

CITY OF SEASIDE STAFF
Leslie Llantero, Assistant Engineer
Scott Ottmar, Assistant Engineer

ACKNOWLEDGEMENTS

THE CITY OF SEASIDE TRAFFIC
CALMING PROGRAM
ADOPTED
NOVEMBER 17, 2011



SEASIDE CITY COUNCIL
Felix Bachofner, Mayor
Steve Bloomer, Mayor Pro Tem
Dennis Alexander
Ian Oglesby
Alvin Edwards

TRAFFIC ADVISORY COMMITTEE
Steve Bloomer, City Councilmember
Tim O'Halloran, P.E., City Engineer/Public Works Services Manager
Rick Medina, Senior Planner
Vicki Meyers, Police Chief
Steve Prelsnek, Acting Fire Chief

CITY OF SEASIDE STAFF
Leslie Llantero, Assistant Engineer
Scott Ottmar, Junior Engineer

CITY OF SEASIDE
TRAFFIC CALMING PROGRAM
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CITY OF SEASIDE TRAFFIC CALMING PROGRAM

A. EXECUTIVE SUMMARY

The Seaside General Plan states that the City shall: “Use traffic calming methods within residential and mixed use areas where necessary to create a pedestrian-friendly circulation system” (Policy C-1.5). The City of Seaside Traffic Calming Program was developed by Engineering and Planning Department staff with input from the Police and Fire Departments. In addition, the program was reviewed by the City Attorney and City Risk Manager. The traffic calming program is meant to be a “living document”, which will be revised as traffic calming projects are implemented and assessed.

This traffic calming program explores the pros and cons of a variety of traffic calming measures; evaluates these measures; provides recommendations for use of these measures; identifies criteria for traffic calming requests and outlines the process for the implementation of the improvements.

Traffic Calming in the City of Seaside is to be accomplished by identifying the nature and extent of traffic-related problems on a given street or a given area, then selecting and implementing cost-effective measures for addressing identified problems. The program is organized into two phases. All requests for traffic calming require meeting the minimum criteria to implement Phase I measures. If predetermined thresholds continue to be met or are exceeded after Phase I, then Phase II traffic calming measures will be considered. Phase II traffic calming measures involve physical modification of the street, such as partial medians or street closures. Phase II traffic calming projects require council approval to receive funding prior to design and implementation. The Traffic Advisory Committee will recommend appropriate traffic calming measures for each phase to directly address potential traffic issues.

The following lists recommended traffic calming measures to be considered in the City of Seaside:

	Type of Measure	Used for	Existing Neighborhood	New Development
1	Bulbouts/Curb Extensions	Speed	Yes	Yes
2	Digital Speed Signs (Phase I)	Speed	Yes	Yes
3	Entry Islands/ Neighborhood Signs	Speed	Yes	Yes
4	Lateral Shifts	Speed	No	Yes
5	Mid-Block Bulbouts/Curb Extensions	Speed	Yes	Yes
6	Neighborhood Sign Programs	Speed	Yes	Yes
7	Partial Medians	Speed	Yes	Yes
8	Pavement Treatments/Striping(Phase I)	Speed	Yes	Yes
9	Police Enforcement (Phase I)	Speed	Yes	Yes
10	Raised Intersections	Speed	Yes	Yes
11	Realigned Intersections	Speed	Yes	Yes
12	Speed Monitoring Trailers (Phase I)	Speed	Yes	Yes
13	Speed Tables	Speed	Yes	Yes

	Type of Measure	Used for	Existing Neighborhood	New Development
14	Traffic Circles/Roundabouts	Speed	No	Yes
15	Speed Cushions	Speed	Yes	Yes
15	Full Street Closure	Volume	Yes	No
16	Partial Street Closures	Volume	Yes	No
17	Restricted Movement Signage	Volume	Yes	Yes
18	Traffic Diverters / Forced Turn Islands	Volume	Yes	Yes

Following is a list of measures that are not recommended for use (refer to Appendix 2, page 14 for more information):

- Chicanes
- Speed Cameras
- Speed Bumps
- Speed Humps
- Speed Limit Signs
- Unwarranted Stop Signs

The traffic calming implementation process starts with the submittal of a traffic-calming project request to the Engineering Department by interested community members. Staff will conduct a study (including speed, volume and accident data) to determine whether or not traffic calming measures meet the predetermined thresholds. If thresholds are met and there is neighborhood consensus for traffic calming, then Phase I will be initiated. Phase I includes solutions that do not involve the use of physical controls or impediments on the roadway system. These are primarily education and enforcement based measures. Follow-up data collection will be obtained 3 to 6 months after Phase I is implemented to determine if traffic calming measures are successful. If the predetermined thresholds continue to be met or are exceeded, then staff will initiate Phase II. Phase II requests need to be authorized by the City Engineer supported by both Phase I traffic calming follow-up data and supported by the neighborhood to be considered by the City Council. Once the City Council has authorized a city funded traffic calming study, City staff will work with the public to develop neighborhood traffic calming plan that incorporates both Phase I and Phase II traffic calming measures.

B. INTRODUCTION

The City of Seaside Traffic Advisory Committee (TAC) regularly receives requests from local residents to calm traffic in their neighborhoods. In the past, these requests have been considered on a case-by-case basis. The Seaside General Plan states that the City shall: “Use traffic calming methods within residential and mixed use areas where necessary to create a pedestrian-friendly circulation system” (Policy C-1.5). The purpose of the City of Seaside Traffic Calming Program is to formalize the traffic calming process, in order to provide a consistent program for neighborhood traffic management.

What are Traffic Calming Measures?

The Institute of Transportation Engineers (ITE) defines traffic calming as: “changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes, in the interest of street safety, livability, and other public purposes.” Traffic calming measures are an attempt to enhance traffic and pedestrian safety and preserve neighborhood character and livability. There are a number of traffic calming measures that are available to achieve this effect. The specific measures are described in more detail in appendix 5, but are generally used to address problems with speeding, cut-through traffic, increased volume, and safety. The City often receives requests from residents and business owners for devices that are not appropriate to be used for calming traffic, including stop signs, “Children at Play” signs and traffic signals. A more detailed explanation is given in Appendix 2, Devices Not to be Used for Traffic Calming. When traffic calming measures are implemented successfully, they are effective and self enforcing.

C. GOALS AND OBJECTIVES OF TRAFFIC CALMING PROGRAM

The goals of the traffic calming program are to:

- Improve local residents' sense of well-being about their neighborhood streets and enhance pedestrian and vehicle safety in residential areas; and
- Calm traffic in commercial areas to foster a more pedestrian- and bicycle-friendly atmosphere in commercial districts where appropriate.

The objectives (not in priority order) of the traffic calming program are to:

- Encourage positive driver behavior in residential neighborhoods;
- Improve neighborhood livability by encouraging adherence to the speed limit;
- Encourage public involvement in the traffic calming process through workshops to identify concerns and appropriate calming devices for use in each neighborhood or business area;
- Improve the shopping experience for shoppers and encourage motorists to patronize local business, rather than speeding past them;
- Effectively balance public safety interests, including traffic mitigation and emergency response;
- Maintain emergency response routes by restricting the use of vertical devices (such as raised intersections) on emergency response routes;
- Design streets to respond to special needs of groups such as elderly, children and the disabled;
- Consider impacts to bicycle and pedestrian traffic when evaluating traffic control measures;
- Consider impacts to transit routes;
- Improve safety for pedestrians and bicyclists;
- Maintain capacity on collector and arterial streets;
- Enhance and maintain primary visitor routes;
- Integrate education, engineering, enforcement and enhancement; and
- Evaluate the effectiveness of traffic calming devices after installation.

D. EVALUATION OF TRAFFIC CALMING MEASURES

There are numerous traffic calming measures that may be implemented to address various traffic conditions. Some traffic calming measures are used to control traffic speed, some to control traffic volume, or in some case both. The following traffic calming measures were considered and have been divided into those designed to control traffic speeds and those designed to control volumes.

Speed Control Measures

1. Bulbouts
2. Chicanes (Not Recommended)
3. Digital Speed Signs
4. Entry Islands with Neighborhood Identification Signs
5. Lateral Shifts
6. Mid-Block Bulbouts
7. Neighborhood Sign Programs
8. Partial Medians
9. Pavement Treatments
10. Police Enforcement
11. Raised Intersections
12. Realigned Intersections
13. Speed Cameras (Not Recommended)
14. Speed Bumps (Not Recommended)
15. Speed Humps (Not Recommended)
16. Speed Limit Signs (Not Recommended)
17. Speed Monitoring Trailers
18. Speed Tables
19. Traffic Circles
20. Speed Cushions

Volume Control Measures

20. Full Street Closures
21. Partial Street Closures
22. Restricted Movement Signage
23. Traffic Diverters / Forced Turn Islands

Factors considered in this analysis included: impact on emergency vehicle response (refer to Appendices 5 - Emergency Response Issues; roadway functional classification (refer to Appendix 4 - Roadway Functional Classifications); appearance; cost; effectiveness; potential liability to the City; bicycle/pedestrian impacts; maintenance costs; and impact on street sweeping operations.

Appendix 2 – Not Used Traffic Control Measures and Appendix 3 – Recommended Traffic Control Measures details each of these measures, including descriptions, best applications, costs, pros and cons.

E. TRAFFIC CALMING CRITERIA

The following criteria and thresholds will be used to determine if the requested location qualifies for traffic calming measures:

- 1) Residential, Collector, or Minor Arterial Streets; the City will not implement traffic calming measures on arterial streets. A map of the “Roadway Classification Map” is identified in Appendix 4. Staff can identify other actions if the street does not meet this basic criterion.
- 2) Neighborhood Support; prior to any data collection by the City, the applicant is requested to present a petition in conjunction with the Traffic Calming Request that identifies a majority of residents/property owner within the neighborhood block having the same concern for the speeding or traffic issue.
- 3) Residential Speeding Thresholds; request for traffic calming for speed related complaints will be eligible for traffic calming if the 85% speed is greater or equal to 7 miles over the speed limit. Residential speed limit is 25 mile per hour.
- 4) Collector and Minor Arterial Streets: requests for traffic calming for speed related complaints will be eligible only on streets with volumes less than 1,000 vehicles per day and the 85% speed is greater or equal to 7 miles over the speed limit.
- 5) Cut through traffic Thresholds; request for traffic calming for cut through traffic complaints for residential streets will be eligible for traffic calming if the average daily traffic is more than 1,600 vehicles per day. Traffic calming requests for cut through traffic complaints for collector and minor arterial streets will not be considered.

Criteria Matrix

STREET TYPE	NEIGHBORHOOD SUPPORT	SPEEDING THRESHOLD	CUT THROUGH THRESHOLD
Local/Residential	Majority of Block in Support	85% speed > 32 mph	ADT > 1,600 vpd
Collector Streets less than 1,000 vehicles per day	Majority of Block in Support	85% speed $\geq$ 7mph over posted speed limit	Not Considered
Minor Arterial Streets less than 1,000 vehicles per day	Majority of Block in Support	85% speed $\geq$ 7mph over posted speed limit	Not Considered
Arterial Streets	Not Considered	Not Considered	Not Considered

F. PROCESS FOR TRAFFIC CALMING REQUESTS

Staff will complete the traffic calming studies on a “first come – first serve” basis. Traffic calming measure will be implemented when funding becomes available. The traffic calming request process is illustrated by flow chart in Appendix 1.

Step 1 – Report the Issue

The first step is to report the issue or concern to the City of Seaside Engineering Division staff at (831) 899-6825. City staff will note the complaint and provide the applicant with a Traffic Calming Request Application (Appendix 6). This application will also be available at www.ci.seaside.ca.us. The application must be accompanied by a list of property owners and/or residents in support of the project. There is an application fee of \$50 dollars due at the time of application submission. When the application is submitted, City staff will evaluate the request to determine the nature of the problem, and determine if the location qualifies. Requests would then be reviewed and verified by the Seaside Traffic Advisory Committee (TAC). The TAC would determine if an application area is currently under study or has been studied before and warrants an updated review. Upon receipt of several complaints/issued specific to a neighborhood, City staff will report to the TAC on a quarterly basis and will initiate a petition to neighboring residents of said affected location upon the direction from TAC.

Step 2 – Data Collection

When it is determined by the TAC that an application warrants a review, a request for data collection is forwarded to the Seaside Public Works Division staff, which will then determine a project study area, collect traffic volume, speed data and observe traffic patterns. At this time staff will confirm that a majority of residents within the project study area perceive a problem and support an implementation of traffic calming. The above mentioned thresholds identified in Section E will determine eligibility for traffic calming. Cut through or volume related requests will be evaluated with Phase II traffic calming measures.

Step 3 – Phase I Traffic Calming

If the street location exceeds the thresholds identified above, City staff will first suggest possible solutions that do not involve the use of physical controls or impediments on the roadway system. These are primarily education and enforcement based measures called Phase I traffic calming. These measures may include:

- Radar Speed Trailer Deployment – This is a temporary device that is primarily used to educate motorists regarding the fact that they may be significantly exceeding the posted speed limit.
- Traffic Enforcement Actions – This is traditional enforcement activity on the part of the Public Safety’s traffic enforcement officers. The intent is to modify behavior to result in a safer situation for all drivers and neighbors.
- Traffic Signing and Pavement Markers – Public Works staff will review all traffic signing and pavement markings in the area. If necessary, staff will install additional signing or striping. When appropriate, changes and additions will be reviewed with the interested neighbors.

Step 4 – Follow Up Data Collection

If one or more of the Phase I traffic Calming measures is implemented, City staff will collect speed and/ or volume data approximately three to six months after Phase I implementation to measure Phase I traffic calming effectiveness. If the measure/s were successful, and the thresholds identified in Section E above are not met or exceeded then the traffic calming process will end at this point. Repeat request will not be eligible for review within the first 3 years after last evaluation.

Step 5 – Phase II Traffic Calming: Plan Preparation, Design, Installation and Maintenance

Phase II requests must be recommended by the Traffic Advisory Committee and authorized by the City Engineer, supported by both Phase I traffic calming follow-up data and neighborhood support. Annually the City Council will be presented with Traffic Calming Phase II requests in conjunction with the City's budget process. The City Council will prioritize request based upon a recommendation from the TAC. Criteria used to evaluate the prioritization will include public support, proposed cost estimate, accident history, speed data, traffic volume, proximity to schools or parks, availability of funding and matching funds. In the absence of City funding to implement Phase II traffic calming, residents of a neighborhood may also elect to fund traffic calming measure implementation improvements or create a special assessment district.

Step 6 – Preparation and Implementation of a Phase II Traffic Calming Plan

Once the City Council has authorized a city-funded traffic calming study, city staff will work with the public to develop neighborhood traffic calming plan that incorporates both Phase I and Phase II traffic calming measures. Possible solutions could involve physical modifications of the street intended to control traffic speeds and/or volumes. These traffic calming measures have been included in Appendix 3. The following general criteria must be met to consider the installation of any Phase II traffic calming measure:

- Installation should not significantly result in traffic diversion to other neighborhood streets.
- Depending on which Phase II traffic calming measures are used in a traffic calming plan, diversion may occur on adjacent streets, or in adjacent neighborhoods. For traffic calming plans where extensive diversion is expected, the City Council must approve an environmental review of the traffic calming plan as required by the California Environmental Quality Act (CEQA).
- At least 60% of the impacted residents as identified within the plan shall support the installation. Impacted residents include those fronting onto a street receiving the proposed traffic calming devices as well as those within an "area of impact" determined by the City Engineer.
- Devices shall be located a minimum of 25 feet from driveways, manholes, drain inlets, water valves, street monuments, and other appurtenances as deemed necessary and feasible.
- Devices shall be located a minimum of 25 feet from fire hydrants where feasible.
- Devices shall be installed only where a minimum safe stopping distance can be provided.
- Seaside Fire Department shall review the plan and make recommendations to assure that emergency response times or access are not negatively affected within designated emergency routes. Emergency routes are identified in Appendix 5.

Other subjective information will be considered:

- Physical characteristics (road width, alignment, parking);

- Neighborhood characteristics (Land uses, number of residents affected, setback of houses, potential impact of improvement(s);
- Accident history;
- Timing (can traffic calming be incorporated into scheduled infrastructure or development projects).

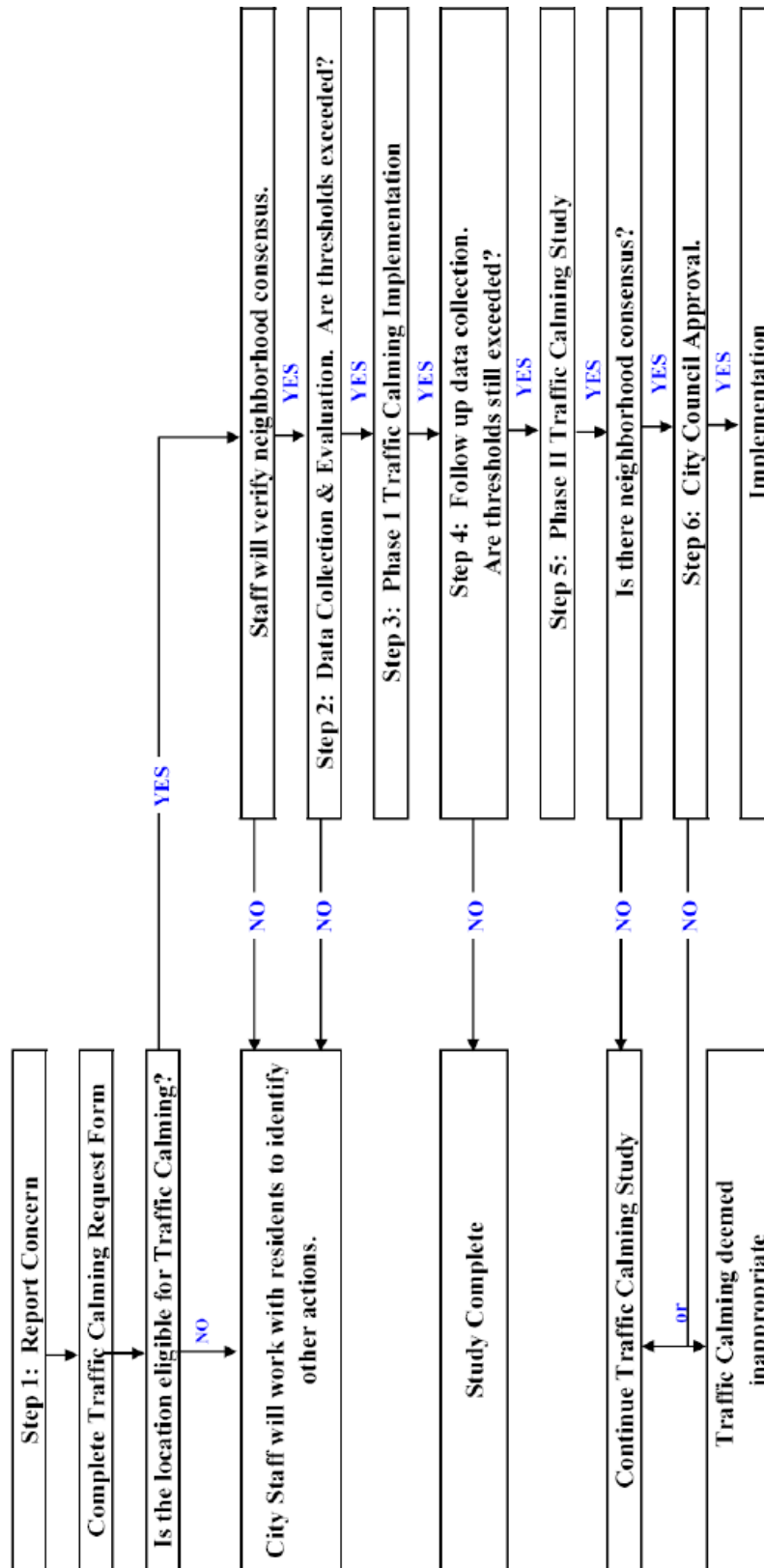
Step 7 – Follow Up Studies

Staff will monitor on an on going basis after implementation for effectiveness.

G. APPENDICES

- Appendix 1. Traffic Calming Flow Chart
- Appendix 2. Measures Not to be Used for Traffic Calming
- Appendix 3. Recommended Traffic Calming Measures – Speed & Volume Measures
- Appendix 4. Roadway Functional ClassificationS
- Appendix 5. Emergency Response Issues
- Appendix 6. Traffic Calming Request Application

APPENDIX 1 – TRAFFIC CALMING PROCEDURE FLOW CHART



APPENDIX 2. DEVICES NOT TO BE USED FOR TRAFFIC CALMING

The following devices are NOT to be used for traffic calming on City of Seaside streets:

Stop Signs: Stop signs are traffic control devices intended to control the right-of-way at intersections. Stop signs have not been found to be effective for use as speed control devices; in fact, they have been found to aggravate speeding conditions between stop locations. In addition to a number of negative environmental impacts from excessive use of stop signs (noise, air quality, fuel consumption), stop signs penalize all drivers, those driving the speed limit as well as those speeding. The City of Seaside follows state and federal warrants for the use of stop signs and unwarranted stop signs have been found to create more problems than they solve.

Traffic Signals: Traffic signals, like stop signs, are traffic control devices intended to control the right-of-way at intersections. Traffic signals are designed to improve safety and are installed where significant traffic conflicts require them. Traffic signals are generally used on higher volume, higher classification roadways and diminish the residential feel of a street. The City of Seaside follows state and federal warrants for the use of traffic signals based on traffic volume and accident history.

“Children at Play” Signs: Although commonly requested, these signs are not standard traffic control devices or warning signs. Studies made in cities where “Children at Play” signs were widely posted in residential areas show no evidence of having reduced pedestrian accidents or vehicle speed. Because there are children in most residential areas, the signs would warn of common conditions and could arguably be placed on every residential block. In fact, signs installed to warn motorists of normal conditions in residential areas usually fail to achieve the desired safety benefits. Even though some parents believe “Children at Play” signs increase safety, they cannot provide any degree of protection. The “Children at Play” sign is a direct and open suggestion that it is acceptable for children to play on residential streets. Obviously, children should not be encouraged to play in the roadway. “Children at Play” signs on City streets do not meet adopted signing standards. Specific warnings for schools, playgrounds, parks and other recreational facilities are available for use where warranted.

Chicanes: Chicanes consist of a series of bulbouts or curb extensions that narrow the street to one lane at selected points and force motorists to slow travel speed to maneuver between them. Also known as deviations, serpentine, reversing curves, or twists. Chicanes are designed to reduce vehicle speeds on long blocks (over 500 feet) that have an average daily traffic under 1,500 vehicles per day. Chicanes are not recommended for use in the City of Seaside because they may encourage “race car” behavior, with motorists traveling in straight line rather than with the alignment of the street, causing potential for head on collisions. They are not recommended for use in any area of the City.

Speed Cameras: Camera which catches and records speed data as well as unlawful driving. Speed cameras are often used as “red light cameras” to catch red signal runners. Can be used in place of enforcement as a device to monitor speeders and take pictures of their license to send them a ticket. Due to the controversial nature of speed cameras, they are not recommended for use in the City of Seaside.

Speed Bumps: Speed bumps are an abrupt raised area in the pavement surface which are typically 3 to 6 inches in height with a travel length of 6 inches to 3 feet. They can be manufactured or made of asphalt concrete. They are effective at controlling speeds on low volume, low speed roads, especially private driveways and parking lots. Speed Bumps are not recommended for use in the City of Seaside. There is a potential for City liability due to auto damage from bottom out and passenger injury from excessive speed over the hump. Emergency vehicles may have difficulty traveling over the humps and there is potential for response time delays. There is a potential for City liability due to auto damage from bottom out and passenger injury from excessive speed over the hump.

Speed Humps: Rounded raised area placed across the road. Speed humps typically raised 3 inches over 12 feet. Speed Humps can be manufactured or be created with asphalt.

Speed Limit Signs: Clearly posted signs defining the legal speed limit under normal conditions. Speed limit signs have not been shown to reduce traffic speeds, they are not recommended for use in the City of Seaside unless paired with a significant enforcement effort.

APPENDIX 3. RECOMMENDED TRAFFIC CONTROL MEASURES

This appendix describes speed and volume control recommended traffic control measures for use in the City of Seaside.

SPEED CONTROL MEASURES CONSIDERED

1. Bulbouts
2. Digital Speed Signs
3. Entry Islands with Neighborhood Identification Signs
4. Lateral Shifts
5. Mid-Block Bulbouts
6. Neighborhood Sign Programs
7. Partial Medians
8. Pavement Treatments
9. Police Enforcement
10. Raised Intersections
11. Realigned Intersections
12. Speed Monitoring Trailers
13. Speed Tables
14. Traffic Circles
15. Speed Cushions

1. Bulbouts

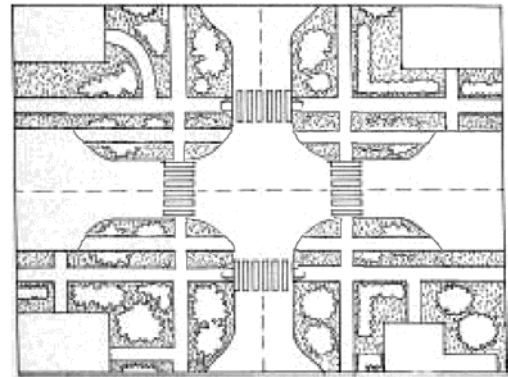
Description

Narrows an intersection through a set of curb bulbouts to create a narrow, single-lane for both travel directions. Also known as neckdowns, knuckles, curb extensions or intersection narrowing.

Best Application

Typically used at intersections where parking is able to be restricted. Narrowed street must restrict cars from passing each other through the intersection at higher than posted speeds. Best when street volumes are between 600 and 2,000 average daily traffic (ADT).

To assist large-vehicle entry, design intersection to enhance right-turn movements (place curb extension on right-side of entry). Recommended for use on minor arterials and collectors where an intersection must provide speed control and pedestrian accessibility.



Costs

- ❑ Installation: \$5,000 to \$20,000 per intersection depending on landscaping¹
- ❑ Maintenance: May be high depending on landscaping and street cleaning schedule

Pros

- ❑ Slows vehicles at an intersection entry-point.
- ❑ Improves visibility for pedestrians at intersections; helps to “pedestrianize” intersections by “reclaiming” pavement for pedestrian and streetscape amenities
- ❑ Reduces speed of turning motor vehicles due to reduced turning radius at intersection
- ❑ Encourages pedestrians to cross at designated locations
- ❑ Increases sight distance by preventing motorists from parking at corners
- ❑ Improves access for emergency responders and large vehicles at narrow streets that might otherwise be blocked by on-street parking
- ❑ Improves compliance with Americans with Disabilities Act (ADA) specifications
- ❑ Adds to public space and potential for community pocket park

Cons

- ❑ Limited vehicle speed reduction when design lacks substantial vertical or horizontal diversion to travel path
- ❑ Relatively high cost of curb and drainage modification and potentially addition of landscaping, decorative pavement or street furniture
- ❑ May create restrictions to bikeway capacity, depending on design
- ❑ May cause problems for trucks and right turn movements

Recommendation: Bulbouts are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development

¹ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

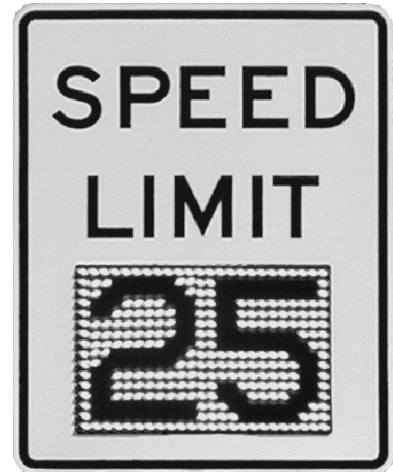
2. Digital Speed Signs

Description

Speed sign in place of or mounted with a traditional speed limit sign with radar displaying motorist actual speed.

Best Application

Streets where speeding is a problem but legal speed limit knowledge and motorist actual speed is thought to be misunderstood or misguided. Recommended for use in school zones or on local and collector streets to heighten motorist attention. These signs are most effective if moved from location to location.



Costs

- ❑ Installation: \$2,000 - \$4,500 per application²
- ❑ Maintenance: Very low if signs are durable and vandalism is not present

Pros

- ❑ Educate motorists of their speed
- ❑ Popular with the Public, interpreted as City action
- ❑ Effective for temporary speed reduction needs
- ❑ Come with a variety of options including: solar, data collection, alarm, strobe light.
- ❑ Can be removed and relocated to different existing speed signs

Cons

- ❑ Traffic can easily disobey signs
- ❑ Duration of effectiveness is limited
- ❑ Not self enforcing
- ❑ Some motorists speed up in an effort to register a high speed

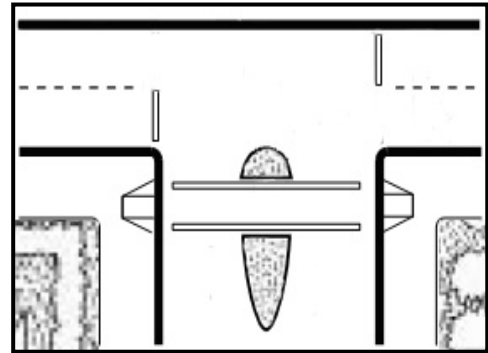
Recommendation: Digital speed signs are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

² "Domestic and US Speed Signs." Ingram Technologies. 13 Oct. 2008 <http://www.ingram-tech.com/us_signs.htm>.

3. Entry Islands with Neighborhood Identification Signs

Description

A raised island in the center of a two-way street that identifies the entrance to a neighborhood. Typically occurs at an intersection of a neighborhood street with another through street.



Best Application

Best where a local residential street meets a street with a higher roadway classification. Pedestrian visibility should be maintained at adjacent crosswalks.

Recommended for local street intersections and intersections between collectors and local streets.

Costs

- ☐ Installation: Low cost when installed within existing right-of-way
- ☐ Maintenance: Dependent upon type of landscaping

Pros

- ☐ Notifies motorists of a change in the roadway character
- ☐ Helps to slow traffic as it enters a new neighborhood or lower street classification
- ☐ Provides opportunities for landscaping and/or monument signage
- ☐ May discourage neighborhood cut-through traffic
- ☐ Helps to enhance neighborhood identity

Cons

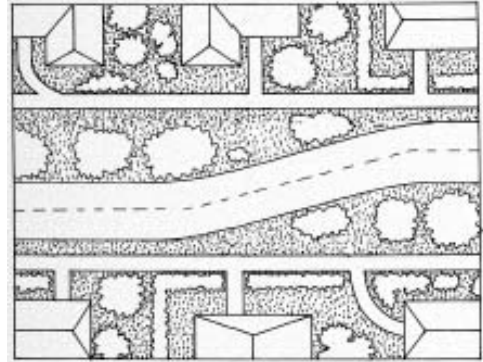
- ☐ May require maintenance and water for irrigation when landscaping is included
- ☐ May reduce road width for bike lanes
- ☐ May eliminate on-street parking where right-of-way is narrowed from the center
- ☐ Could make it difficult for turning vehicles
- ☐ Could fragment the City

Recommendation: Entry Islands are recommended for use new residential development. They should be carefully considered before placement in existing City of Seaside residential neighborhoods since they could fragment the City.

4. Lateral Shifts

Description

Curb extensions on otherwise straight streets that cause travel lanes to bend one way and then bend back to the original direction of travel. Also referred to as axial shifts, staggers, or jogs. With the correct angle of deflection, may be used on collectors or arterials with higher traffic volumes and posted speeds. Where possible, shifts may be combined with center medians to prevent short-cutting travel deflection.



Best Application

Best for new roads due to extent of shift in travel path. For best results in speed reduction, design for lateral shifts of at least one-lane width and angles of deflection of up to 45 degrees. Recommended for use on low volume arterials .

Costs

- ☐ Installation: May be significant if applied to existing roadway
- ☐ Maintenance: Depends on extent of landscaping

Pros

- ☐ May be created at moderate costs using protected parking bays, maintaining existing curb
- ☐ Can create attractive public park or open space where shift occurs
- ☐ Minimal impact on emergency response
- ☐ No impact to bikeway or on-street parking when roadway width is maintained

Cons

- ☐ Requires significant public right-of-way
- ☐ Typically results in only minor speed reductions if travel path is not significantly restricted
- ☐ Can eliminate on-street parking
- ☐ Cannot be used where right-of-way is restricted
- ☐ High cost of curb alignment and landscaping if roadway is redesigned

Recommendation: Lateral shifts are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

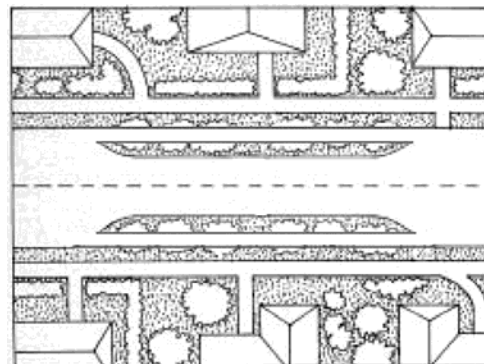
5. Mid-Block Bulbouts

Description

Curb extensions at midblock that narrow a street by widening the sidewalk or side planting strip. Also called pinch points, midblock narrowings, midblock yield points, or constrictions. May be parallel or angled.

Best Application

Narrow mid-block point to at least 18 feet or less than standard two lane width for desired effect; must restrict two-way travel to adequately reduce speeds. Best when street volumes are between 600 and 2,000 average daily trips (ADT). Recommended for use on local and collectors.



Costs

- ❑ Installation: \$5,000 to \$20,000 each depending on site conditions and desired landscaping³
- ❑ Maintenance: Moderate, depending on extent of landscaping

Pros

- ❑ Improves pedestrian and motorist safety; helps to “pedestrianize” mid-blocks
- ❑ Increases visibility for pedestrians due to heightened driver attention when negotiating obstacle
- ❑ Encourages pedestrians to cross at designated locations; provides opportunity for safe mid-block crossing
- ❑ Maintains emergency vehicle access; minimal response time impacts
- ❑ Improves compliance with Americans with Disabilities Act (ADA) specifications
- ❑ Adds to public space and potential for community pocket park and landscaping

Cons

- ❑ May have limited effect on vehicle speed reduction where substantial vertical or horizontal diversion is lacking
- ❑ Relatively high cost of curb and drainage modification and potentially addition of landscaping, decorative pavement or street furniture
- ❑ Perception that one-lane chokers are unsafe due to potential for approaching traffic head-on collision; 1.5-lane chokers create uncertainty for drivers of safety in passing oncoming traffic through choker.
- ❑ Significantly reduces on-street parking and bikeway capacity

Recommendation: Mid-block bulbouts are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

³ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

6. Neighborhood Sign Programs

Description

Signs distributed within a neighborhood to inform and encourage motorists to observe the posted speed limits, calming measures and redirection rules. Signs must be in accordance with the California Edition of the Manual on Uniform Traffic Control Devices (MUCTD)



Best Application

Any street or neighborhood where speeding is problematic. Best when used in conjunction with police enforcement. Recommended for use on local and collectors.

Costs

- ❑ Installation: Approximately \$350 per sign (cost based upon 2011 City of Seaside fees & charges)
- ❑ Maintenance: Very low if signs are durable and vandalism is not present

Pros

- ❑ Useful as an educational tool for motorists travelling through neighborhood.
- ❑ Effective for temporary speed reduction needs
- ❑ No reduction in bike or parking capacity

Cons

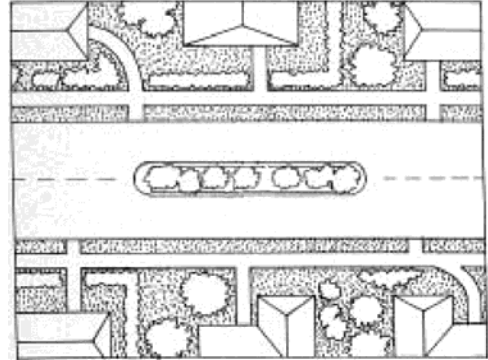
- ❑ Duration of effectiveness may be limited when motorists become used to signs without enforcement
- ❑ Not self-enforcing
- ❑ May contribute to additional 'sign pollution'

Recommendation: Neighborhood sign programs are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

7. Partial Medians

Description

Raised islands located along the centerline of a street that narrow the travel lanes. Also called midblock medians, median slow points, or median chokers. Placed at the entrance to a neighborhood, they are often called gateways. May be used effectively on curves or just outside of intersections.



Best Application

Most effective when used as short interruptions to an otherwise open street cross section, rather than long medians. Vegetation should not obscure visibility between motorists, bicyclists, and pedestrians at intersections and pedestrian crossing areas. Travel lane width should be maintained at least 12 feet wide with a maximum length between access points of 200 feet to accommodate emergency access. Recommended for use on minor arterials, collectors and local streets.

Costs

- ❑ Installation: \$15,000 to \$30,000 per 100 feet⁴
- ❑ Maintenance: Depends on extent of landscaping

Pros

- ❑ Narrowed travel lanes provide “friction” that reduces vehicle speeds
- ❑ Significant opportunity to add attractive landscape element to center of street
- ❑ Can be used to control traffic access to adjacent properties if desired
- ❑ Helps to “pedestrianize” street, especially when utilized along with a street crossing

Cons

- ❑ May narrow street right-of-way to less than design width
- ❑ Long medians may impact emergency access and operations
- ❑ May interrupt driveway access and result in downstream U-turns
- ❑ Requires removal of on-street parking
- ❑ May require bikeway to merge with travel way

Recommendation: Partial medians are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

⁴ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

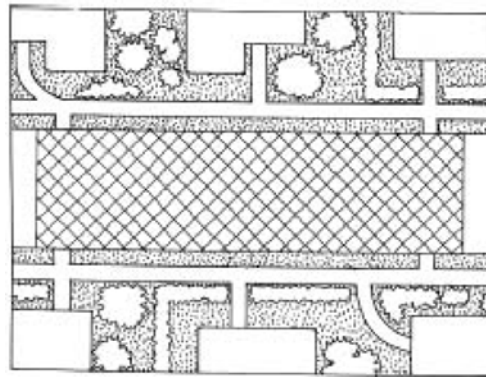
8. Pavement Treatments

Description

Varied pavement texture or color to heighten motorist awareness. Can include colored pavement, pavers or textured concrete.

Best Application

Where driver awareness needs to be heightened, for example a pedestrian crossing, center travel/turn lane, or approaching a non-highly visible intersection. Best served in commercial areas so not to interrupt adjacent residents. Recommended for use on minor arterials and collectors streets where a road section must provide motorist awareness and pedestrian accessibility.



Costs

- ❑ Installation: ~ \$30 per square foot (cost based upon 2011 estimate)
- ❑ Maintenance: Needs replacing ~twice as frequently as typical asphalt

Pros

- ❑ Add attractive pavement element to street
- ❑ Improves pedestrian safety with slowing speeds
- ❑ Pavement types are typically bicycle friendly
- ❑ Does not impact emergency response times

Cons

- ❑ More expensive than traditional asphalt
- ❑ Minimal impact on traffic speeds
- ❑ Potential noise problem for adjacent residents

Recommendation: Pavement treatments are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

9. Police Enforcement

Description

Establishment of regular police presence to monitor speeds and issue citations at problematic traffic areas.



Best Application

Streets with documented speeding problems in need of quick mitigation where established traffic restrictions are being violated. Effective in school zones or when new calming measures or restrictions are first implemented. Recommended for use on all street classifications.

Costs

Highly variable, depending on coverage area, time and staff requirements. May be partially offset by citation fees.

Pros

- ❑ Very effective calming during presence of police monitoring or expected police presence
- ❑ Flexible measure that can be implemented in almost any location with short notice

Cons

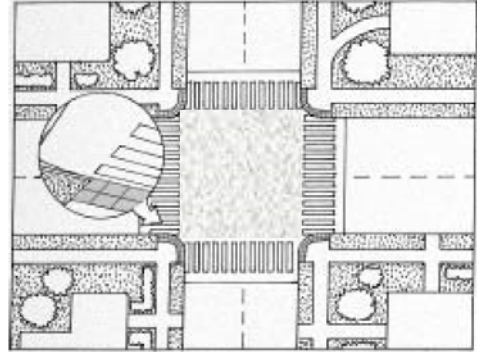
- ❑ Not self-enforcing due to temporary nature of calming when police are present
- ❑ Fines do not typically cover cost of enforcement
- ❑ May disrupt efficient traffic flow on high volume streets
- ❑ Short “memory effect” on motorists when enforcement officer is no longer present

Recommendation: Police enforcement is recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

10. Raised Intersections

Description

Flat raised area, typically 3-4 inches, covering entire intersections with ramps on all approaches often with brick or textured material on the flat section.



Best Application

Intersection where high pedestrian volume is anticipated especially when faced with high traffic speeds and little or no traffic controls (STOP sign or traffic signal). Design speed can be 20-30 mph and best used on collector or minor arterial streets.

Costs

- ☐ Installation: \$25,000 - \$70,000⁵
- ☐ Maintenance: ~\$500/year + additional paving needs (cost based upon 2011 estimate)

Pros

- ☐ No loss of on-street parking
- ☐ Safe and easy for bicyclists to cross
- ☐ Visually emphasizes a desirable intersection
- ☐ Increased Pedestrian safety at intersection

Cons

- ☐ Street cleaning vehicle consideration
- ☐ Not effective on grades
- ☐ Need sufficient sight distance
- ☐ Does not drastically reduce vehicle speeds due to non-abrupt nature of pavement rise
- ☐ Could cause some motorists to drive on and over sidewalk
- ☐ Could slow emergency vehicle response times
- ☐ City liability: Passenger damage from too quick speed over hump
- ☐ Could be noisy for nearby residents

Recommendation: Raised intersections are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development. They are not recommended for use on emergency response routes. Refer to Section D. 'Emergency Response Routes' for more information.

⁵ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

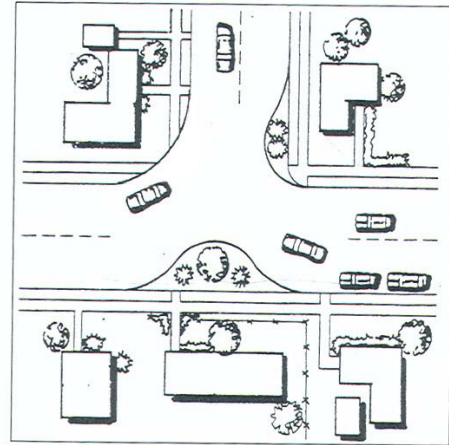
11. Realigned Intersections

Description

Realigns T-intersection to make the through movement a turning movement.

Best Application

Best on streets that approach other streets with a higher roadway classification and where traffic slowing is desired as it enters a neighborhood. Recommended for use at local street intersections and where collectors meet local streets at a T-intersection.



Costs

- ☐ Installation: High on existing streets due to total intersection re-design. Minimal additional cost for new streets.
- ☐ Maintenance: Dependent on extent of landscaping

Pros

- ☐ Provides landscaping opportunities
- ☐ Discourages traffic from continuing through a neighborhood or approaching a T-intersection at unsafe speeds
- ☐ Breaks up sight lines
- ☐ No loss of bikeway capacity, when appropriately designed

Cons

- ☐ May redirect traffic to another local street with less restriction
- ☐ May increase queue lengths at intersections
- ☐ High cost for existing intersections
- ☐ May change stop configuration and affect emergency response times
- ☐ Eliminates on-street parking where curbs are realigned

Recommendation: Realigned intersections are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

12. Speed Monitoring Trailers

Description

Mobile trailer with radar displaying motorist speed

Best Application

Streets where speeding is a problem but legal speed limit knowledge is thought to be misunderstood. Recommended for use on all street classifications. Speed trailers are most effective if moved from location to location on a regular basis



Costs

- ☐ Installation: \$3,000 per unit⁶
- ☐ Maintenance: ~\$500 per application (cost based upon 2011 estimate)

Pros

- ☐ Educate motorists of their speed
- ☐ Popular with the Public, interpreted as City action
- ☐ Effective for temporary speed reduction needs
- ☐ Some models have data collection capabilities and can be powered with solar energy

Cons

- ☐ Traffic can easily disobey signs
- ☐ Duration of effectiveness is limited
- ☐ Not self enforcing
- ☐ Some motorists speed up in an effort to register a high speed

Recommendation: Speed monitoring trailers are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

⁶ "Domestic and US Speed Signs." Ingram Technologies. 13 Oct. 2008 <http://www.ingram-tech.com/us_signs.htm>.

13. Speed Tables

Description

Flat topped raised areas placed across the road typically with textured material on the flat top region. Designed for entire wheelbase of a car to rest on top, often 3 inches high and 22 feet long. Possess higher design speeds than speed humps due to the less abrupt elevation change. Design speed approximately 25-30 mph and can be used on local streets.

Best Application

Low cost quick installation for a medium design speed street, great for improved pedestrian safety. Recommended for use on collector and residential streets. Not recommended for use on Emergency Vehicle Routes.

Costs

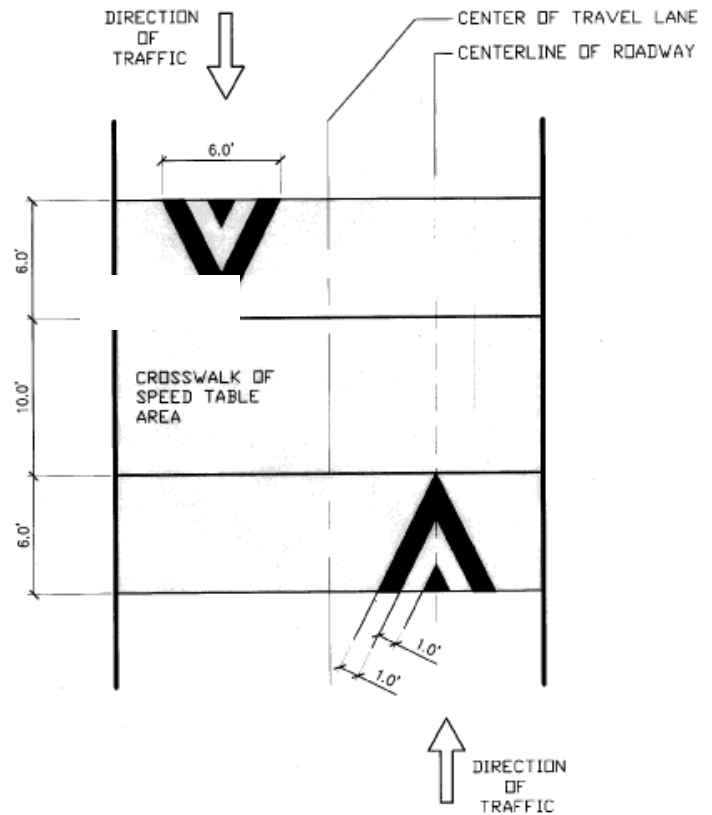
- ☐ Installation: \$5,000 - \$15,000⁷
- ☐ Maintenance: ~\$500/year (cost based upon 2011 estimate)

Pros

- ☐ Effective at reducing speeds
- ☐ No loss of on-street parking
- ☐ Bicycle friendly installation with setbacks from curb is easily achievable
- ☐ Design speeds greater than speed hump
- ☐ Less jarring on cars than speed humps
- ☐ Improved pedestrian safety as cars are more aware
- ☐ Good for localized problems

Cons

- ☐ Has minimal effect on trucks and SUV's
- ☐ Maintenance of asphalt placed non-monolithically (subject to increased cracking and potential for ponding creates maintenance problems)
- ☐ More expensive than speed humps by approx. \$500
- ☐ Could pose problems for emergency response vehicles
- ☐ Potential for City liability due to passenger damage from too quick speed over hump
- ☐ Street cleaning vehicle consideration



Recommendation: Speed tables are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development. They are not recommended for use on emergency response routes. Refer to Section D. Emergency Response Routes for more information.

⁷ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

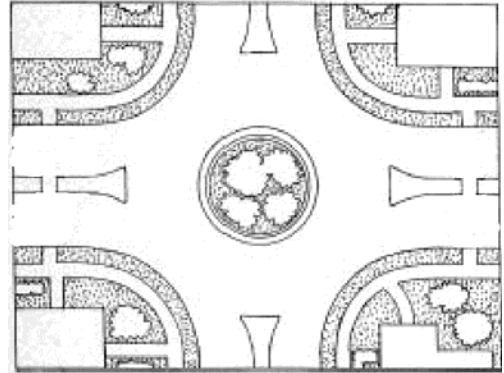
14. Traffic Circles

Description

Raised islands placed in intersections which cars circle around counterclockwise, typically controlled by YIELD signs on all approaches.

Best Application

Intersections with low traffic volumes and good sight distance where stop signs could be replaced for higher vehicle efficiency or where intersection speed calming is desired. Any design speed can be met. Should be applied on collector or local streets where left turn movements are limited.



Costs

- ❑ Installation: \$8,000 - \$15,000⁸
- ❑ Maintenance: Varies with landscape vs. sculpture vs. mountable

Pros

- ❑ Can be bicycle friendly as they would YIELD just as a car and circle
- ❑ Eliminates straight through traffic using high speeds
- ❑ Breaks up sight-lines on straight streets
- ❑ Can be designed as mountable for buses and other large vehicles

Cons

- ❑ Landscaping suggested for visibility (watering concerns)
- ❑ Large sight distance and good visibility required to remain safe when entering the intersection
- ❑ Potential loss of on-street parking to achieve good visibility
- ❑ Must have large intersection to accommodate full circle (Circle diameter should be minimum 90 feet)
- ❑ Large vehicle (such as fire emergency vehicles) inability to turn small-radius circles
- ❑ Potential for emergency response time delays of up to 6 seconds
- ❑ Makes pedestrian crossing difficult

Recommendation: Traffic circles are recommended for use in new developments. They are not recommended for existing neighborhoods. This is because in order to be effective, these circles should be at least 90 feet in diameter. There is not sufficient right-of-way in most existing neighborhoods to construct a circle that large.

⁸ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

15. Speed Cushions

Description

Speed cushions are designed as several small speed humps across the width of the roadway with spaces between them. They are designed to force cars to slow down as they ride with one or both wheels on the humps and allow for larger vehicles, with wider axle, to straddle the cushions. Speed cushions can be designed using hot mix asphalt (HMA) or can be installed as rubberized units. Rubberized units come in 18" widths 42" long and can be pieced together to form the required width needed for any width of the street.



Best Application

Low cost quick installation for a medium design speed street. Recommended for use on low volume collector, residential streets and can be used on Emergency Vehicle Routes.

Costs

- ❑ Installation: \$8,000 - \$15,000⁹
- ❑ Maintenance: Very little maintenance.

Pros

- ❑ Can be bicycle friendly
- ❑ Eliminates straight through traffic using high speeds
- ❑ Speed cushions do not present any notable disadvantages for emergency vehicles.

Cons

- ❑ Potential loss of on-street parking
- ❑ Subject to streets with a speed limit of 30 mph or lower
- ❑ May divert traffic through neighboring streets

Recommendation: Speed cushions are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

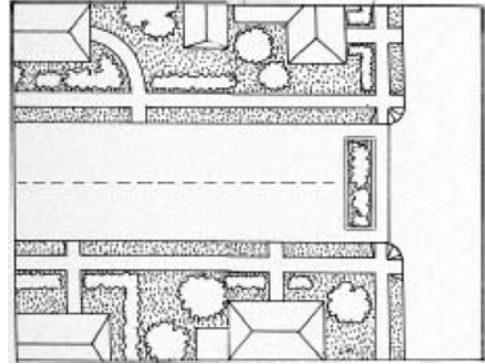
VOLUME CONTROL MEASURES

- 14. Full Street Closures
- 15. Partial Street Closures
- 16. Restricted Movement Signage
- 17. Traffic Diverters / Forced Turn Islands

14. Full Street Closures

Description

Barriers placed across a street to close the street completely to through traffic, usually leaving only sidewalks or bike paths open. Also called cul-de-sacs or dead-ends. May consist of landscaped islands, walls, gates, side-by-side bollards, or other obstructions that leave an opening smaller than the width of a small passenger car. A turn around area must be provided.



Best Application

Best used to eliminate cut-through traffic. Often used as a last resort after other calming measures are determined to be ineffective. May be designed to allow emergency access through temporary barriers. Recommended for use on local streets only.

Costs

- ❑ Installation: \$30,000 - \$100,000¹⁰
- ❑ Maintenance: Varies with landscape vs. sculpture vs. mountable

Pros

- ❑ Provides lower traffic volumes on targeted streets (only accessible to local traffic)
- ❑ Create bike and pedestrian zones when designs include parks, paths, public plazas or other public spaces

Cons

- ❑ May be controversial to local residents when limiting access
- ❑ Not effective as a speed reduction method as access is denied and speed problems are transferred to other routes
- ❑ Raises opposition from emergency responders when access is denied
- ❑ Reduces street network connectivity and capacity
- ❑ May increase traffic on parallel streets that carry diverted traffic
- ❑ Local residents are often resistant to change
- ❑ Could pose emergency response issues

***Note:** A Full Street Closure may cause through traffic to use parallel streets, thus creating a traffic volume problems on different streets. They should be used only where traffic is to be directed away from a residential neighborhood towards a collector or arterial in a commercial area.*

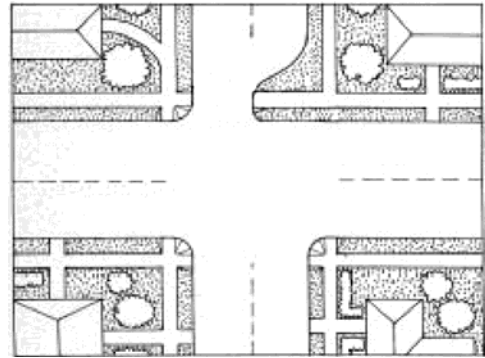
Recommendation: If carefully planned, full street closures are recommended for use in existing City of Seaside residential neighborhoods.

¹⁰ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

15. Partial Street Closure

Description

Barriers that block travel in one direction for a short distance on otherwise two-way streets. Usually located at intersections of an arterial street onto a residential street where access to the residential street must be deterred.



Best Application

Most effectively installed in staggered sets to make travel through neighborhoods with gridded streets circuitous rather than direct. Design should include measures that make violations of partial closure difficult and awkward (i.e., extended barriers, angled exits to deter turns into partially closed street, signage and physical deterrents). Should not be used on emergency routes. Recommended for use on local streets.

Costs

- ❑ Installation: \$12,000 to \$20,000, depending on landscaping and size¹¹
- ❑ Maintenance: Depends on extent of landscaping and type of closure design

Pros

- ❑ Allows limited egress for local residents compared to full closure
- ❑ Reduces the use of a street as a cut-through street, when undesirable
- ❑ Restricts access to a street without making it a one-way street
- ❑ Can create pocket parks and street landscaping

Cons

- ❑ May increase distance that residents must travel to reach destination
- ❑ Reduces street network connectivity and capacity
- ❑ May increase traffic on parallel streets that carry diverted traffic
- ❑ Local residents are often resistant to change
- ❑ Allows occasional access to emergency responders or school buses when adequately designed

***Note:** A Partial Street Closure may cause through traffic to use parallel streets, thus creating a traffic volume problems on different streets. They should be used only where traffic is to be directed away from a residential neighborhood towards a collector or arterial in a commercial area.*

Recommendation: If carefully planned, partial street closures are recommended for use in existing City of Seaside residential neighborhoods

¹¹ Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

16. Restricted Movement Signage

Description

Signs that limit or prohibit certain movements at an intersection

Best Application

Streets where reducing cut-through traffic or cross-traffic turns is desired. Recommended for use on arterial and high volume collectors.



Costs

- ❑ Installation: Approximately \$350 per sign (cost based upon City of Seaside 2011 fees & charges)
- ❑ Maintenance: Very low if signs are durable and vandalism is not present

Pros

- ❑ Can be very effective
- ❑ Redirects traffic to main thoroughfares and restricts turning patterns across high volume streets
- ❑ Reduces cut-through traffic in neighborhoods
- ❑ Addresses peak traffic problems
- ❑ No loss of on-street parking or bikeway capacity

Cons

- ❑ Not self-enforcing (low voluntary compliance)
- ❑ May increase trip lengths for some drivers
- ❑ May increase number of downstream turning movements
- ❑ May increase “visual pollution” from signs

Recommendation: Restricted movement signage is recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

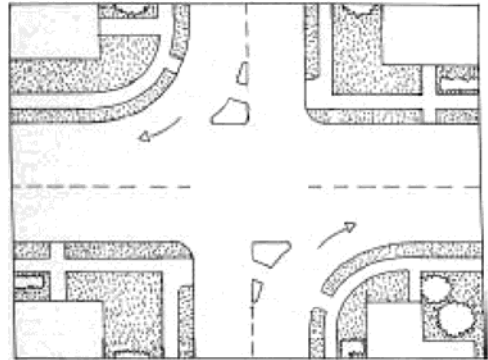
17. Traffic Diverter/Forced Turn Islands

Description

Raised islands that block certain movements.

Best Application

Intersections where traffic is strongly encouraged one direction and not the other, example: traffic leaving a complex to be directed towards city thoroughfare and away from side residential street. Also intersection median barrier placed through an intersection preventing cross-street through movements and left-turning movements. Recommended for use on collector and residential streets.



Costs

- ❑ Installation: ~ \$10,000 - \$20,000 per island¹²
- ❑ Maintenance: Varies with landscape vs. sculpture vs. mountable

Pros

- ❑ Easily direct traffic to desired streets/locations
- ❑ Design can reduce wait times by forcing a turning movement and not allowing straight through
- ❑ No effect on bicycles other than controlling their direction similar to autos

Cons

- ❑ Traffic can easily disobey signs and drive around diverter
- ❑ Landscaping or signs must be placed in them for increased visibility
- ❑ Potential loss of on-street parking depending on intersection configuration

Note: A traffic diverter or forced turn island may cause through traffic to use parallel streets, thus creating a traffic volume problems on different streets. They should be used only where traffic is to be directed away from a residential neighborhood towards a collector or arterial in a commercial area.

Recommendation: Traffic diverters / forced turn islands are recommended for use in existing City of Seaside residential neighborhoods and commercial areas as well as for new development.

¹² Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000.

**SPEED AND VOLUME CONTROL MEASURES
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Monterey, City of. City of Monterey Neighborhood Traffic Calming Program, 9/18/07

Los Angeles Department of Transportation. Traffic Calming Program, Department Headquarters, City of Los Angeles Department of Transportation, 100 S. Main St., 10th Floor, Los Angeles, CA 90012, Phone: (213) 972-8470, TDD: (213) 977-7032, Fax: (213) 972-8410, Email: ladot@lacity.org

Burden, Dan. Streets and Sidewalks, People and Cars, The Citizens' Guide to Traffic Calming. Ed. Dave Davis. Vol. April 2000. Mr. Burden was instrumental in developing many traffic calming programs, including those for the Cities of Arcata, San Diego and Santa Monica, California

Ewing, Reid H. Traffic Calming State of the Practice. Annapolis: Institute of Transportation Engineers, 1999.

Ingram Technologies. Domestic and US Speed Signs 13 Oct. 2008 <http://www.ingram-tech.com/us_signs.htm>.

Osborne, Kevin. "15 Cities Yanked Traffic Cameras." 20 Dec. 2004. Cincinnati Post. 13 Oct. 2008 <<http://www.cincinnati.com/text/post/2004/12/20/tix121804.html>>.

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Maine Department of Transportation: Traffic Issues: Speed Humps vs. Speed Bumps, <http://maine.gov/mdot/mlrc/traffic-issues/speedhumpsvsbumps.php>

Road Tech. Speed Bumps, http://www.roadtech.com/speedbumps_parkingblocks.html

APPENDIX 4. ROADWAY FUNCTIONAL CLASSIFICATIONS

Different streets serve different transportation functions. Streets within the City of Seaside receive classifications based upon the transportation function that they serve. Following are descriptions of the general street classifications:

- **Local Streets** provide direct access to abutting properties and have the function of serving local traffic movements within residential and commercial areas. All streets that are not designated as major streets are local streets.
- **Collectors** provide traffic circulation between arterials and local streets. They connect neighborhoods with neighborhood-related activity centers and provide limited direct access to abutting properties.
- **Arterials** provide the principal network for cross-town traffic. They also connect the City to external highway and freeway systems. Arterials generally have moderate traffic speeds and carry significant amounts of traffic. Primary traffic generators are and/or should be located on arterials.
- **Minor Arterials** carry lower traffic volumes and support a mix of local and through traffic.

When developing traffic calming approaches, the various functions that a street serves must be taken into consideration. Neighborhood livability must be balanced with safety concerns with transportation, transit and emergency service needs. Certain traffic calming techniques, if not implemented properly, can be counterproductive to competing needs, such as emergency services or bus routes. The figure below is a listing of City of Seaside streets and their functional classifications (from the Circulation Element of the Seaside General Plan, dated August 5, 2004):

City of Seaside Street Functional Classifications

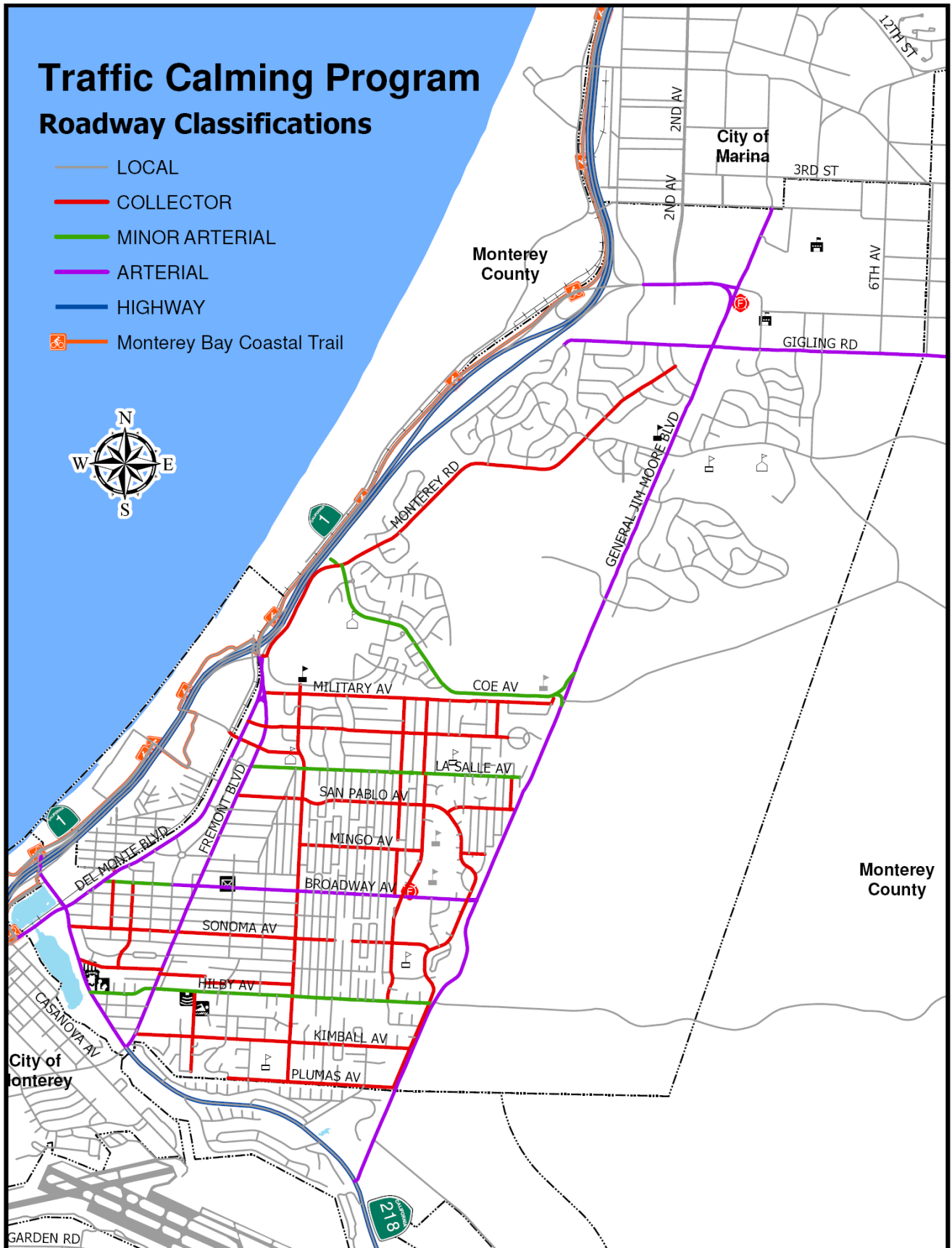
Street	Functional Classification	Emergency Route (Y/N)
Broadway Avenue (Calaveras – Gen Jim Moore Boulevard)	Arterial	Y
Canyon Del Rey Boulevard (west of Fremont Boulevard)	Arterial	Y
Coe Avenue	Minor Arterial	Y
Contra Costa Street	Collector	N
Del Monte Boulevard	Arterial	Y
Eastside Roa	Arterial	N
Fremont Boulevard	Arterial	Y
General Jim Moore Boulevard	Arterial	Y
Gigling Road	Arterial	Y
Hacienda Street	Collector	N

Street	Functional Classification	Emergency Route (Y/N)
Harcourt Avenue	Collector	Y
Highland Street	Collector	N
Hilby Avenue	Minor Arterial	Y
Hillsdale Street	Collector	N
Kimball Avenue	Collector	Y
La Salle Avenue	Minor Arterial	Y
Light Fighter Drive	Arterial	Y
Mescal Street	Collector	Y
Military Avenue	Collector	Y
Mingo Avenue	Collector	N
Monterey Road	Collector	N
Nadina Street	Collector	N
Noche Buena Street	Collector	Y
Ord Grove Avenue	Collector	Y
Playa Avenue	Collector	N
Plumas Avenue	Collector	N
San Pablo Avenue	Collector	Y
Sonoma Avenue	Collector	Y
West Broadway Avenue		Y
(Del Monte Blvd - Calaveras St)	Minor Arterial	
Tioga Avenue	Collector	N
Wheeler Street	Collector	N
Yosemite Street	Collector	Y

Traffic Calming Program

Roadway Classifications

- LOCAL
- COLLECTOR
- MINOR ARTERIAL
- ARTERIAL
- HIGHWAY
- Monterey Bay Coastal Trail



Source: City of Seaside GIS, 2008

November 9, 2011

APPENDIX 5. EMERGENCY RESPONSE ISSUES

When new traffic calming measures are considered, provisions for emergency response must be clearly addressed. Certain measures (particularly vertical devices such as speed humps, speed tables and raised intersections) are not recommended for use on emergency response routes because of their impact on emergency response times. Also, there is concern that changes in the road surface could cause damage to emergency vehicles.

Emergency vehicle access and timely response times shall be maintained in the City of Seaside. To these ends, the following policies have been developed to guide the traffic calming program in the City of Seaside:

1. Police and Fire Department personnel will be involved in the planning process for all proposed traffic calming measures, in order to minimize impacts to emergency response. During this review, several items will be considered, including the following: critical response routes (Refer to Figures 2A and 2B, Emergency Response Routes); special need facilities; access issues and necessary clearances (taking into consideration emergency response vehicle required turning radius, wheelbase and track width, and ground clearance).
2. The use of vertical devices such as raised intersections, speed humps and speed tables will be avoided on established emergency response routes or any street with critical speeds over 30 miles per hour or higher volume collectors (over 750 vehicles per hour).
3. Vertical devices shall not be installed in the direct vicinity of emergency response facilities.
4. The locations of features such as on-street parking and bus stops in the vicinity of proposed traffic-calming devices shall be taken into consideration and modifications shall be made as appropriate.
5. Any new traffic calming innovations will be evaluated on the basis of their affect on emergency response times, before they are approved for use.
6. Residents requesting traffic calming measures will be notified of the potential for slower response times after the devices are installed.

FIGURE 2A -EMERGENCY RESPONSE ROUTES – SEASIDE PROPER

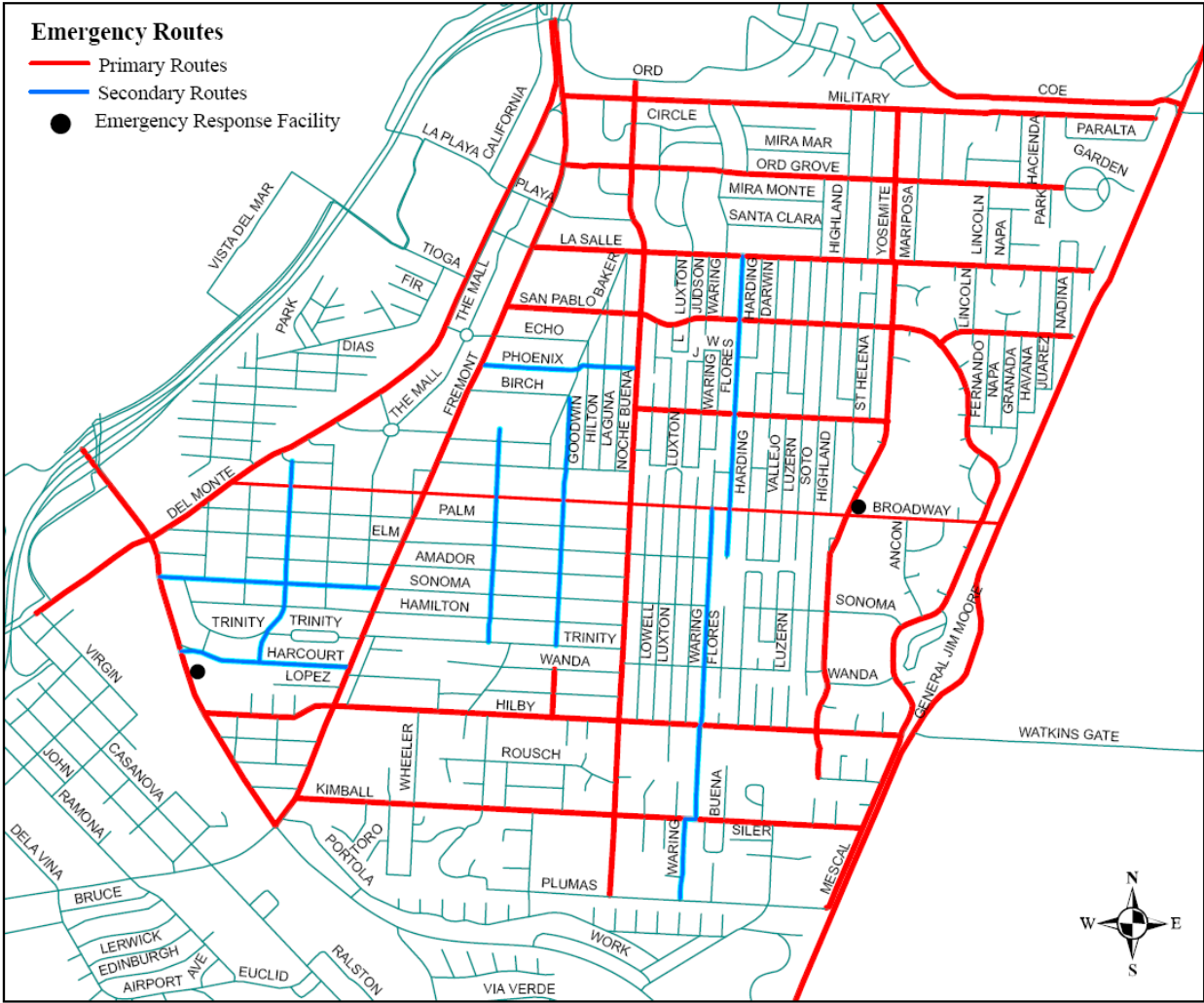
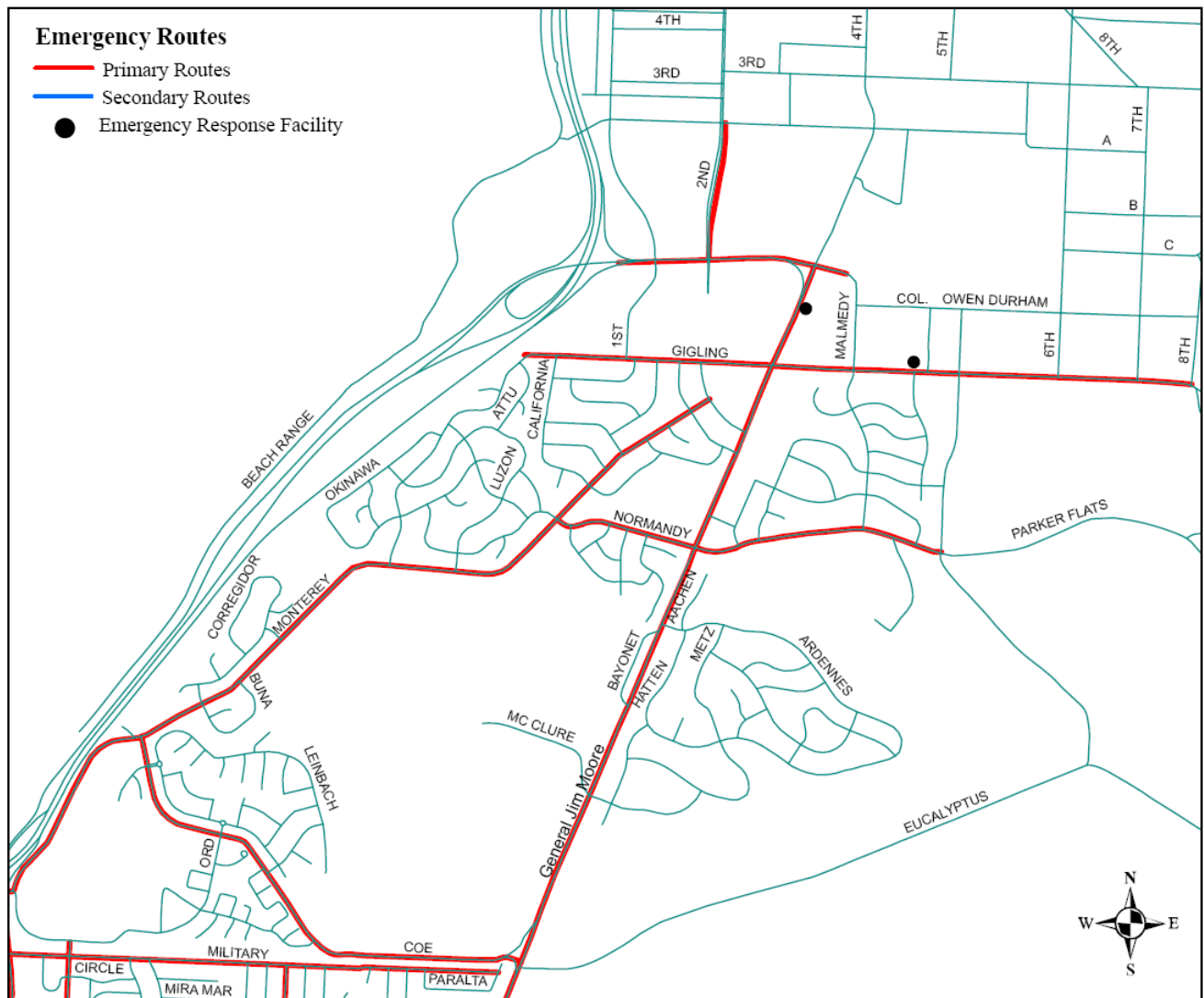


FIGURE 2B -EMERGENCY RESPONSE ROUTES – NORTH SEASIDE





APPENDIX 6
TRAFFIC ADVISORY COMMITTEE
TRAFFIC CALMING PROJECT APPLICATION

The Institute of Transportation Engineers (ITE) defines traffic calming as: “changes in street alignment, installation of barriers, and other physical measure to reduce traffic speeds and/or cut-through volumes in the interest of street safety, livability, and other public purposes.”

The following information will be used to identify the nature and extent of traffic-related concerns on a given street or a given area.

1. Contact Information

Name: _____ Date: _____

Address: _____ Phone #: _____

Email: _____

2. Please describe the location of the traffic concern. Attach a map or picture if necessary:

3. Please describe the nature of the neighborhood problem you are concerned with (attach additional sheets if necessary):

4. Please list possible solutions to the problem that you would like the City of Seaside to consider:

Date: _____ Signed: _____

CITY OF SEASIDE – PETITION FOR NEIGHBORHOOD TRAFFIC CALMING MEASURES

The undersigned agree to the following:

1. All person signing this petition do hereby certify that they reside within the impacted area, which is hereby defined as the street segment of :

2. All persons signing this petition do hereby agree of the following problem in the defined impacted area:

3. All persons signing this petition do hereby agree that the following contact person(s) represent the neighborhood as facilitator(s) between the neighborhood residents and the City of Seaside staff in matters pertaining to items 1 and 2 above:

Only one signature per address

Circle One	Name/Signature	Address	Contact Number
Owner/ Resident	Name		
	Signature		
Owner/ Resident	Name		
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Owner/ Resident	Name		
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