



# County of Santa Cruz

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## REDEVELOPMENT AGENCY

701 OCEAN STREET, ROOM 510, SANTA CRUZ, CA 950604000

(631) 454-2280 FAX: (831) 454-3420 TDD: (831) 454-2123

TOM BURNS, AGENCY ADMINISTRATOR

May 4, 2000

Agenda: May 23, 2000

Board of Directors  
County of Santa Cruz Redevelopment Agency  
701 Ocean Street  
Santa Cruz, CA 95060

### TRAFFIC IMPACT REDUCTION PROGRAM STATUS

Dear Members of the Board:

On March 23, 1999 your Board took a series of actions directed toward developing a Traffic Impact Reduction Pilot Program in Live Oak and Soquel, to be financed by the Redevelopment Agency and staffed by RDA and Public Works (Attachment 1). At that time, a contract was approved with an outside traffic consulting firm that specializes in traffic calming issues. Staff was directed to report back at this time with a report on the status of the program.

Since that time, a number of key steps to start up the program have taken place, including:

- the traffic consulting firm was hired and conducted an initial assessment of the neighborhoods in the pilot area;
- the Agency's annual newsletter last spring solicited nominations for the pilot program, with over 50 requests received;
- Public Works has begun the process of designing special pedestrian activated crossing lights at two key crosswalks --- at the Live Oak Library and Lower Porter Street, in Soquel; and
- your Board has updated and clarified the speed bump program administered by Public Works.

Unfortunately, over the past year, the Agency has experienced an unusually high level of staff turnover. Therefore, staff efforts have, by necessity, focused on commitments for larger capital improvement projects. As a result, additional work of the Traffic Impact Reduction Program have been delayed. It appears that a number of key staff vacancies will be filled in the near future, allowing work be resume on the program later this year.

It is therefore RECOMMENDED that your Board, as the Board of Directors for the Redevelopment Agency, take the following actions:

1. Accept and file this status report of the Traffic Impact Reduction Pilot Program; and
2. Direct the RDA Administrator to return to your Board with a further status report on the program on or before May 30, 2001.

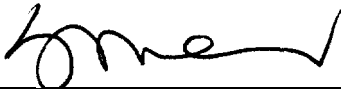
Very truly yours,



Tom Burns

Redevelopment Agency Administrator

RECOMMENDED:



Susan A. Mauriello

Redevelopment Agency Director

Attachment

cc. RDA  
Public Works

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# County of Santa Cruz ~~485~~

## REDEVELOPMENT AGENCY

701 OCEAN STREET, SUITE 200, SANTA CRUZ, CA 95060-4000 0587  
(831) 454-2280 FAX: (831) 454-3420 TDD: (831) 454-2123

TOM BURNS, AGENCY ADMINISTRATOR

March 11, 1999

Board of Supervisors  
County of Santa Cruz

Board of Directors  
County of Santa Cruz Redevelopment Agency  
701 Ocean Street  
Santa Cruz, CA 95060

**APPROVED AND FILED  
BOARD OF SUPERVISORS**

DATE: 3/23/99  
COUNTY OF SANTA CRUZ  
SUSAN A. MAURIELLO  
EX-OFFICIO CLERK OF THE BOARD

BY *Wanda Murrell* DEPUTY

Agenda: March 23, 1999

### TRAFFIC IMPACT REDUCTION PROGRAM

Dear Members of the Board:

In October of last year, your Board directed the Redevelopment Agency, in consultation with the Department of Public Works, to develop recommendations for implementing a Traffic Impact Reduction Pilot Program in Live Oak and Soquel and to report back with the information on this agenda. Since that time, Agency and Public Works staff have met and developed an overall approach for implementing the initial phase of such a program as presented in the following paragraphs.

#### The Basis for Traffic Impact Reduction Programs

Programs geared to reducing the speed and volume of traffic, also known as traffic calming and traffic management programs, have been implemented in numerous communities throughout the United States and worldwide. Closer to home, California and the western states have developed many such successful programs. The impetus for traffic impact reduction programs is always the same--residents, and the municipalities that serve them, are seeking solutions to the problems associated with ever-increasing traffic volume and speeds. Traffic impact reduction programs have proved an effective means for ensuring safer streets and an improved quality of life in residential neighborhoods, business districts, and in the vicinity of public facilities such as schools, recreational sites, and libraries. The basis for developing a traffic impact reduction program in Live Oak and Soquel follows:

- An ongoing safety concern voiced by many residents is related to vehicle traffic--there's too much of it and it is moving too fast. A traffic impact reduction program will

provide an opportunity for Public Works and Agency staff to work with residents who are interested in addressing their concerns.

- Traffic impact reduction measures are generally less intrusive within a neighborhood setting than the more traditional safety measures provided by road and sidewalk construction projects. Thus, traffic impact reduction programs can address traffic issues while maintaining the residential character of neighborhoods.
- Traffic impact reduction measures are often attractive and can visually enhance a neighborhood or business area while helping to address traffic issues.
- Since it is likely that funding will not be available for traditional sidewalk and bikelane improvements on many of our neighborhood streets, traffic impact reduction measures provide a less costly alternative to implementing road safety improvements and can often be financed, in part, through matching funds from neighborhood groups seeking to improve safety and quality of life on their streets.

#### Examples of Traffic Impact Reduction Measures

As your Board is aware, the basis-for traffic calming has already been established in the unincorporated area of the County through the incorporation of road bumps into the County's Design Criteria. This typical traffic control measure has been utilized in a number of instances where residents have requested assistance in slowing traffic on their streets or where the County has recognized the need to do so. Once the proposed road bump installation has been reviewed by Public Works and approved by the Board of Supervisors, the bump is installed in part through matching funds provided by the affected residents.

To date, road bumps have proved an effective tool for reducing traffic speeds where they have been installed. However, road bumps are only one of many possible traffic calming measures available to our community. An effective traffic impact reduction program would provide an entire menu of options, making it possible to address the wide range of traffic issues confronting our neighborhoods and affecting access to businesses and public facilities. An example of a menu of traffic impact reduction options from Boulder, Colorado's established and successful traffic calming program is provided as Attachment 1.

#### Developing a Pilot Program for Santa Cruz County

A pilot project is an appropriate first step in the future development of a more formal approach to reducing traffic impacts. As part of the annual budget process, the Redevelopment Agency has previously allocated funds for traffic impact reduction activities in Live Oak and Soquel and can provide staff for the purpose of program development and management in conjunction with Public Works. As proposed, the pilot program would span a period of approximately two years, potentially laying the groundwork for an eventual

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County-wide program. The basic elements that will need to be considered in the start-up of a pilot project include staffing, funding, project selection, project implementation and maintenance, and evaluation methods for individual traffic calming efforts as well as for the program as a whole.

1. Project Staffing. A pilot program will provide staff with the opportunity to develop an experienced in-house team consisting of Redevelopment Agency and Public Works staff for the purpose of implementing the program. Because traffic calming is a unique area of expertise in the field of traffic engineering and because of limited staff time, the Agency and Public Works are recommending contracting for traffic consulting services during the pilot project. An agreement with a firm that specializes in the design and implementation of traffic calming measures is provided as an attachment to this letter. It is anticipated that the consultant will also be able to assist staff as necessary in developing a public awareness component of the project to help ensure the success of the program. Because of the unique nature of the projects in this program, the proposed contract includes a slight modification to the County's standard indemnification language.
2. Financing Traffic Impact Reduction Measures. \$270,000 in funds are available in the Redevelopment Agency's budget for approximately two to three years of designing and constructing traffic calming measures, depending on how many measures are implemented each year and the costs involved. Because it is essential that the majority of residents adjacent to the location of a traffic calming measure support the effort, many traffic impact reduction programs require that the residents of the affected street or neighborhood contribute some amount of matching funds to the project. Part of the purpose of the pilot project would be to determine when such a match is appropriate and what percentage of total costs the match should be.
3. Project Selection Process. Typically, the locations on which specific traffic calming measures will be implemented are selected from a pool of requests made by the residents from a street or neighborhood. Initiating a traffic impact reduction pilot project at this time is opportune in that suggestions from residents and neighborhoods can be solicited through the Redevelopment Agency's community newsletter which is scheduled for mailing to all Live Oak and Soquel residents in the spring/summer of this year. The newsletter can be used to explain what traffic calming is and to inform residents how their requests should be forwarded for consideration.

Requests from residents would take the form of a brief description of a traffic related problem in their neighborhood that might be addressed through traffic calming measures. Agency and Public Works staff would review requests and select projects

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for potential implementation. Prior to further consideration, projects would most likely require a petition from residents to ensure majority support and participation in cost-sharing, similar to the process already adopted for road bumps.

Public Works and Agency staff have discussed the importance of a flexible selection process during the pilot program, one in which staff and the traffic consultant are free to choose the most creative and effective solution for a particular situation. Clearly, solutions would need to be properly engineered but would not necessarily be provided for in the County's Design Criteria at this time. Traffic calming measures that proved to be effective during the pilot program could then be incorporated into the Design Criteria at a later date.

Most traffic impact reduction programs concentrate on local and neighborhood streets. However, in some instances traffic calming measures can greatly enhance safety on larger streets, such as collectors and arterials, particularly in the vicinity of public facilities that by their very nature attract a large volume of pedestrians and bicyclists. It is anticipated that several such locations, including Portola Drive at the Live Oak Library and Porter Street at Soquel Elementary School, could be evaluated for traffic calming in terms of safer pedestrian crossings. As part of this pilot program, it is recommended that a new pedestrian activated safety lighting system be tried in these two locations.

4. Implementation, Maintenance, and Monitoring of Traffic Impact Reduction Measures. Once petitions had been received from a majority of residents supporting a solution to a particular traffic problem, staff would work with that neighborhood group to suggest and evaluate potential solutions. Once a solution was identified, it would be engineered and a cost estimate developed, including an estimate of the County's share and the percentage of neighborhood matching funds. The solution would then be presented to the Board of Supervisors for review and approval prior to implementation. Once installed, the measure would be monitored for its effectiveness in addressing the original traffic issue and for any potential impacts to adjacent neighborhoods or streets.
5. Evaluating the Pilot Project. It is anticipated that it will require several years of operating a pilot project to determine its success and whether or not to proceed with a County-wide effort. Clearly, a County-wide effort would also have funding considerations to address. With the implementation of each traffic impact reduction project, staff will have a better understanding of the process for selecting and implementing measures, including the community process. As noted, your Board will be updated regarding the progress of the pilot program as each proposed measure is reviewed by the Board of Supervisors prior to implementation. Additionally, a

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status report will be developed at the end of each year of the pilot program.

### Summary

The goal of the proposed pilot project, to reduce the impacts of traffic in Live Oak and Soquel, is twofold: 1) to develop an effective strategy for addressing traffic issues that is sensitive to the needs of pedestrians, bicyclists, and vehicles alike and that is geared to the character of these communities, and 2) to determine if such a program would be appropriate on a County-wide basis. The process for developing both a pilot project and a more expanded program is fairly complex, involving a wide range of issues and challenges. However, it is clear that an effort to reduce the impacts of traffic can result in safer neighborhoods, business districts, and public gathering locations and an improvement in the quality of life, through the design, financing, and installation of cost-effective traffic calming measures.

It is therefore RECOMMENDED that your Board, as the Board of Directors for the Redevelopment Agency, take the following actions:

1. Approve the Live Oak/Soquel Traffic Impact Reduction Pilot Program as outlined and direct the Redevelopment Agency, in conjunction with the Department of Public Works, to move forward with program implementation, including pedestrian crossing safety measures at the Live Oak Library and Soquel Elementary School;
2. Approve a contract for traffic consulting services for an amount not to exceed \$15,000 with Fehr & Peers Associates (Attachment 2); and
3. Provide a status report, in conjunction with the Department of Public Works, on the Live Oak/Soquel Traffic Impact Reduction Pilot Program on or before May 23, 2000.

It is further RECOMMENDED that your Board, as the Board of Supervisors, take the following actions:

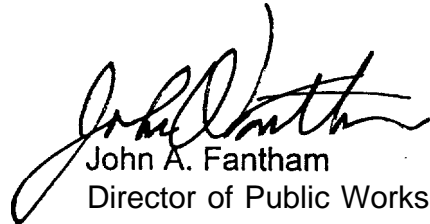
1. Approve the Live Oak/Soquel Traffic Impact Reduction Pilot Program as outlined and direct the Department of Public Works, in conjunction with the Redevelopment Agency, to move forward with program implementation; and
2. Direct the Department of Public Works to work with the Redevelopment Agency and traffic engineering consultants to design and install pedestrian crossing safety measures at the Live Oak Library and Soquel Elementary School.

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Very truly yours,



Tom Burns  
Redevelopment Agency Administrator  
TB:[ch]



John A. Fantham  
Director of Public Works

RECOMMENDED:

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Susan A. Mauriello  
County Administrative Officer/Redevelopment Agency Director

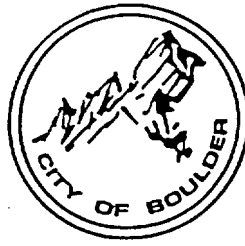
Attachments:

- Attachment 1 - Example of a Neighborhood Traffic Mitigation Program Tool Kit
- Attachment 2 - Contract for Services

cc. Fehr & Peers, Associates  
Public Works  
RDA

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## **Neighborhood Traffic Mitigation Program**

### **Tool Kit**

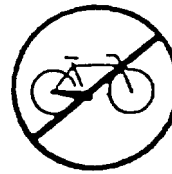
**SPEED LIMIT SIGNS**

<p><b><u>Definition:</u></b> Signs that inform drivers of the maximum safe driving speed under normal conditions.</p>		
<p><b><u>Temporary:</u></b> Can be tried for six months to test effectiveness.</p> <p><b><u>Street Type:</u></b> Any streets, but may be unnecessary on many low volume residential streets.</p>	<p><b><u>Best Used If:</u></b></p> <ul style="list-style-type: none"> <li>• Clear need to inform drivers of the speed limit.</li> </ul> <p><b><u>Benefits:</u></b></p> <ul style="list-style-type: none"> <li>• Inexpensive.</li> </ul>	<p><b><u>Don't Use If:</u></b></p> <ul style="list-style-type: none"> <li>• Neighborhood doesn't want the "visual pollution".</li> </ul> <p><b><u>Nega fives:</u></b></p> <ul style="list-style-type: none"> <li>• Unattractive in neighborhoods.</li> <li>• Does not effect vehicle speed.</li> </ul>
<p><b><u>Consideration:</u></b></p> <ul style="list-style-type: none"> <li>▸ Posting of <b>artificially</b> low speed limits will require constant enforcement and breed disrespect for traffic control devices.</li> </ul>		

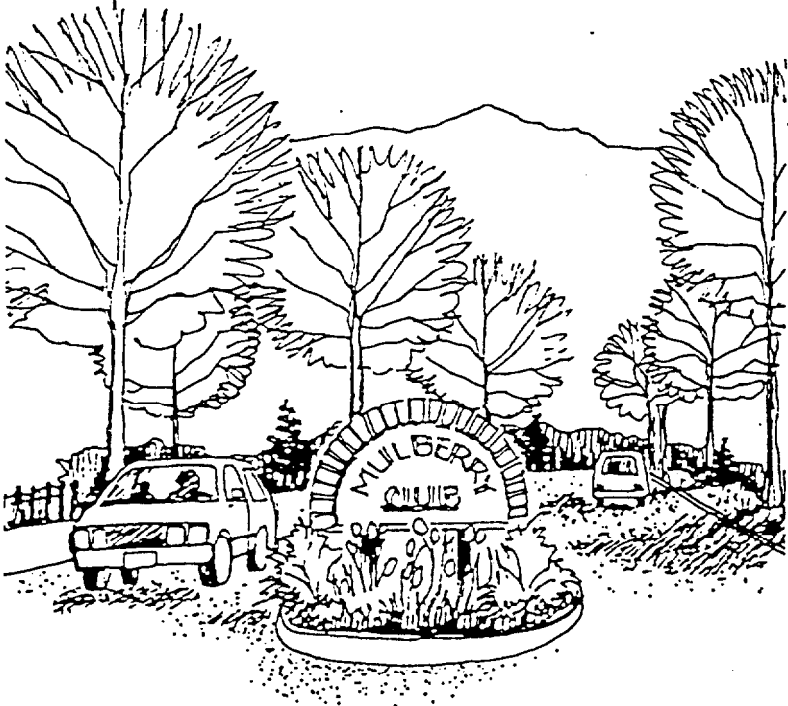



## NEIGHBORHOOD SPEED CONTROL PROGRAM

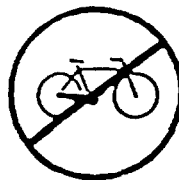
<p><b><u>Definition:</u></b></p> <p>A neighborhood education process in which neighbors become more aware of the specifics of their speeding problems. Neighborhood representatives are loaned radar guns by the Police Department, to monitor speed and identify chronic speeders. The City will then send letters to offending drivers calling their attention to their behavior and requesting them to change it.</p>	<p><i>Neighborhood Speed Watch</i></p>	
<p><b><u>Temporary:</u></b></p> <p>Should be in place for two months or longer in order to gain maximum educational benefit.</p> <p><b><u>Streets:</u></b></p> <p>More likely to be effective on local streets.</p>	<p><b><u>Best Used If:</u></b></p> <ul style="list-style-type: none"><li>• Neighborhood willingness to participate.</li><li>• Most traffic is local traffic.</li><li>• Neighborhood Speed Watch has not yet been attempted.</li></ul> <p><b><u>Benefits:</u></b></p> <ul style="list-style-type: none"><li>• Can effectively address traffic problems that are caused by neighbors.</li><li>• Can heighten general awareness of neighborhood traffic concerns.</li><li>• Can serve to unify neighborhoods.</li><li>• Can be a good first step toward building consensus on physical mitigation measures.</li></ul>	<p><b><u>Don't Use If:</u></b></p> <ul style="list-style-type: none"><li>• No willingness on the part of the neighborhood to participate.</li></ul> <p><b><u>Negatives:</u></b></p> <ul style="list-style-type: none"><li>• Not likely to be as effective on non-local traffic.</li><li>• May make neighbors feel 'spied on' by one another.</li><li>• Hand-held devices resemble real HANDGUNS.</li></ul>
<p><b><u>Considerations:</u></b></p> <ul style="list-style-type: none"><li>• Participation in Neighborhood Speed Watch will be limited to two neighborhoods at a time.</li><li>• Training in use of the radar gun will be provided by the Police Department.</li><li>• Neighborhoods representatives will be asked to sign an agreement to take proper care of the equipment and to use it only as specified by program guidelines.</li></ul>		



## NEIGHBORHOOD IDENTIFICATION ISLAND, SIGN OR OBELISK

<p><b><u>Definition:</u></b> An island in the center of a street that includes a monument identifying a neighborhood and marks the entrance to the neighborhood or a sign, banner or other structure that helps to communicate a sense of neighborhood identity.</p> <p><b><u>Temporary:</u></b> Can be temporary but removal unlikely.</p>		
<p><b><u>Street Type:</u></b> Collector street or local street neighborhood entrance off of collectors or arterials.</p> <p><b><u>Maintenance:</u></b> Depends on type of installation.</p>	<p><b><u>Works Best If:</u></b></p> <ul style="list-style-type: none"> <li>• Neighborhood boundary definition is desired.</li> </ul> <p><b><u>Benefits:</u></b></p> <ul style="list-style-type: none"> <li>• Alerts drivers that a change in their driving behavior is being requested.</li> <li>• Helps give neighborhood more of a sense of identity.</li> <li>• Allows neighborhoods creativity and participation in design.</li> </ul>	<p><b><u>Don't Use If:</u></b></p> <ul style="list-style-type: none"> <li>•</li> </ul> <p><b><u>Negative:</u></b></p> <ul style="list-style-type: none"> <li>• </li> </ul>
<p><b><u>Considerations:</u></b> A neighborhood identification island is an entryway treatment that can be used most effectively in conjunction with other tools, if speed reduction is desired.</p>		

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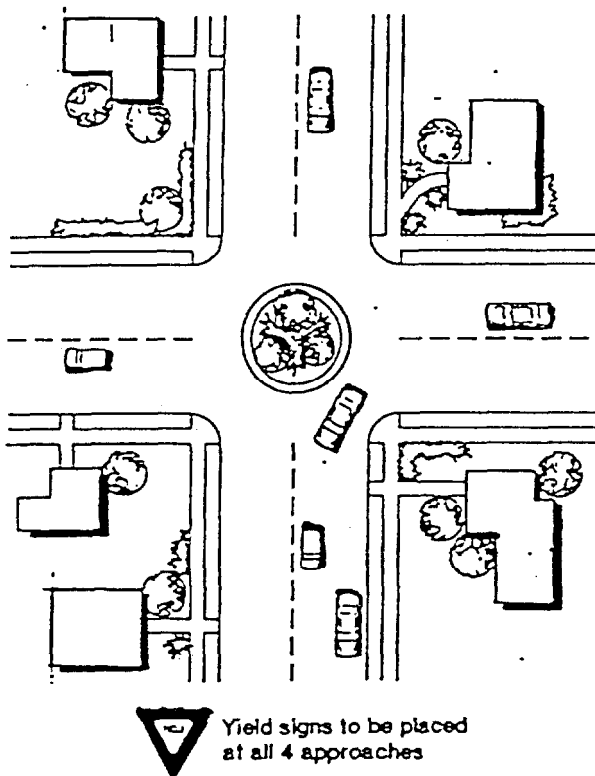


0597

## TRAFFIC CIRCLES

### Definition:

Traffic circles are raised circular areas (like medians) placed in an existing intersection. Drivers travel in a counter-clockwise direction around the circle. Traditional circles are 'yield upon entry,' meaning that cars in the circle have the right of way and cars entering the circle must wait to do so until the path is clear. When a traffic circle is placed in an intersection,, no automobile can travel in a straight line.



### Temporary:

Can be tried on a temporary basis, using essentially 'portable' materials. The traffic circle should be made permanent or removed within 12 months.

### Street Types:

Traffic circles can be use on high and low volume streets.

### Best Used If:

- Insufficient gaps for cross street traffic to traverse or access the higher volume street.
- A speeding problem exists.

### Benefits:

- Reprioritizes traffic to increase accessibility for local residents.
- Cross traffic may become a mitigation tool in itself.

### Don't Use If:

- Creation of gaps is the primary motivation for pursuing mitigation.

### Negatives:

- May make pedestrian crossing more confusing at the intersection

### Considerations:

Special consideration to bike and pedestrian safety must be given if traffic circles are installed in high volume intersections.

- Traffic circles may not reduce speed unless other mitigation tools are present on the street.

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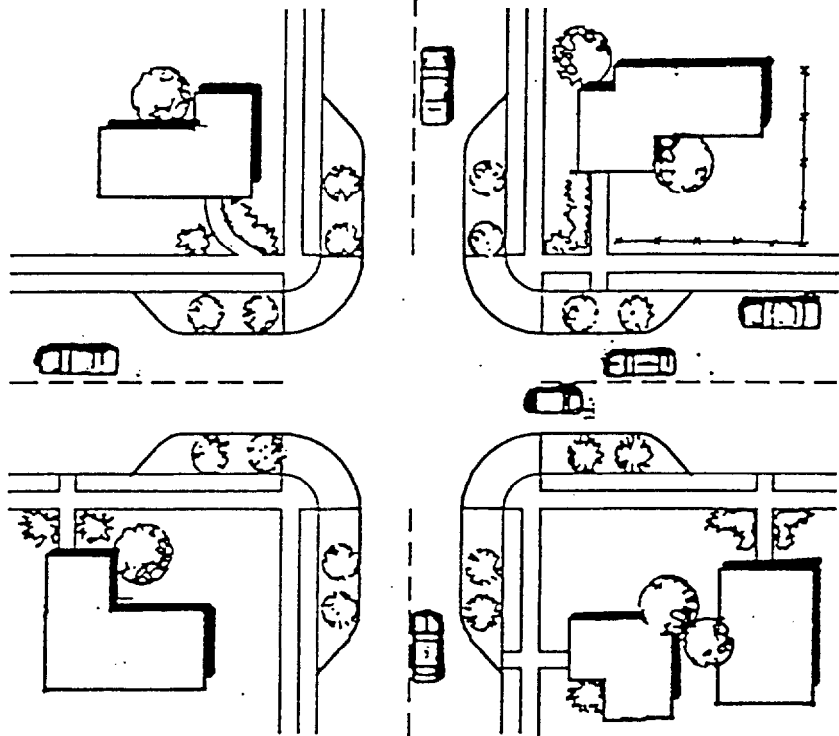


0598

## NECKDOWNS

### Definition:

Physical reduction of road width at intersections or mid block. Neckdowns differ from chokers in that they are attached to the curb and do not maintain an 'at grade' bike lane lateral to the neckdown.



### Temporary:

Can be tried on a temporary basis.

### Street Types:

Appropriate for most street types.

### Best Used:

- Where speed and/or volume make pedestrian safety a concern.
- In conjunction with other physical mitigation tools.

### Benefits:

- Reduce road surface/crossing distance.
- Can add aesthetically if landscaped.

### Don't Use If:

- The street is an established bike route.

### Nesatives:

- Can be bad for cyclists, if not designed to accommodate them.
- Unless the **neckdown** significantly reduces road width (i.e. not just eliminates parking spaces or bike lanes) neckdowns do not affect speed.

### Considerations:

- Neckdowns alone are a pedestrian amenity, however they must be used in conjunction with other mitigation tools to be effective for speed reduction.

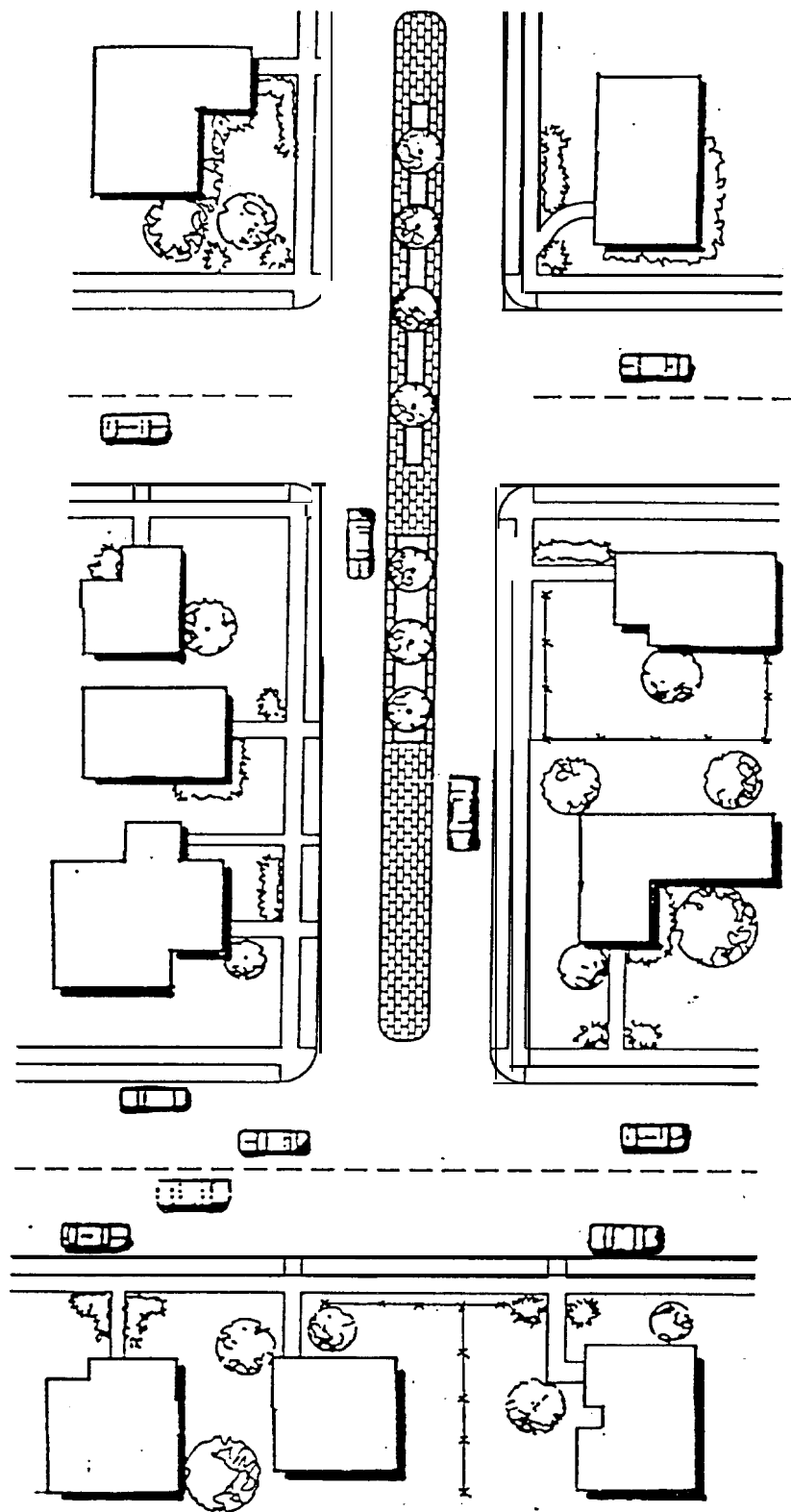
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0599

## **LANE ELIMINATING CHOKER** (mid-block)

<p><b><u>Definition:</u></b> Large lamb chop shaped islands placed mid-block on either side of a street to reduce street width to one lane. Cars may travel in either direction, but must queue and takes turns. Bike lanes are maintained on the outer sides of the choker.</p>		
<p><b><u>Temporary:</u></b> Chokers can be tried on a temporary basis for 6-12 months.</p> <p><b><u>Street Types:</u></b> Chokers will work best on low volume neighborhood streets.</p> <p><b><u>Maintenance:</u></b> Care needs to be taken by maintenance workers to keep mow out of the bike/ped areas.</p>	<p><b><u>Best Used On:</u></b></p> <ul style="list-style-type: none"> <li>• Low volume neighborhood streets with speed and/or cut-through traffic problems.</li> </ul> <p><b><u>Benefits:</u></b></p> <ul style="list-style-type: none"> <li>• Straight access for bikes.</li> <li>• Crossing distance is reduced for pedestrians.</li> <li>• Likely-to-reduce cut-through traffic and speed.</li> </ul>	<p><b><u>Don't Use If:</u></b></p> <ul style="list-style-type: none"> <li>• High volume location.</li> <li>• The street is a snow route.</li> </ul> <p><b><u>Negatives:</u></b></p> <ul style="list-style-type: none"> <li>• Expensive if drainage issues involved.</li> </ul>
<p><b><u>Considerations:</u></b></p> <ul style="list-style-type: none"> <li>▶ Adequate public information should be provided, since this is a new treatment for Boulder.</li> <li>▶ The bike lanes and choker should be well marked.</li> <li>▶ The bike lanes should be wide enough for bike trailers.</li> </ul>		



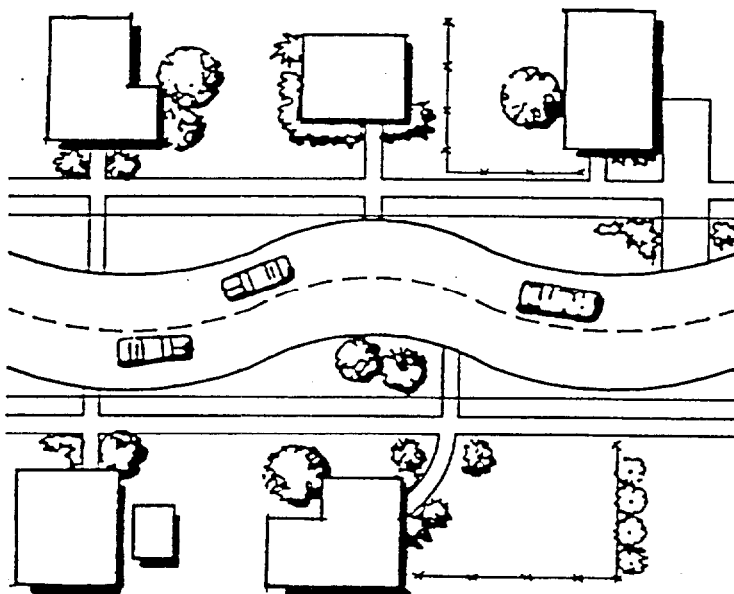
Median barrier



## DEVIATIONS

### Definition:

Deviations redraw the path of travel so that the street is not straight (by the installation of offset curb extensions).



### Temporary:

May be tried on a temporary basis for 6-12 months.

### Street Types:

Any street with adequate right-of-way.

### Maintenance:

Landscape maintenance will constitute an ongoing expense.

### Best Used For:

- Excessive speed on straight street.
- Adequate right-of-way exists to after curbline.

### Benefits:

- Accepted by public as speed control devices.
- Aesthetically pleasing.
- Reduce speed without significantly impacting emergency response.

### Don't Use If:

- Roadway is already narrow.

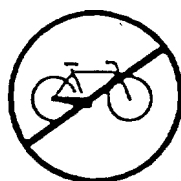
### Nesatives:

- Expensive.

### Considerations:

- Deviations are not very effective unless significant offsets are created.
- Neighbors may be responsible for landscape maintenance.

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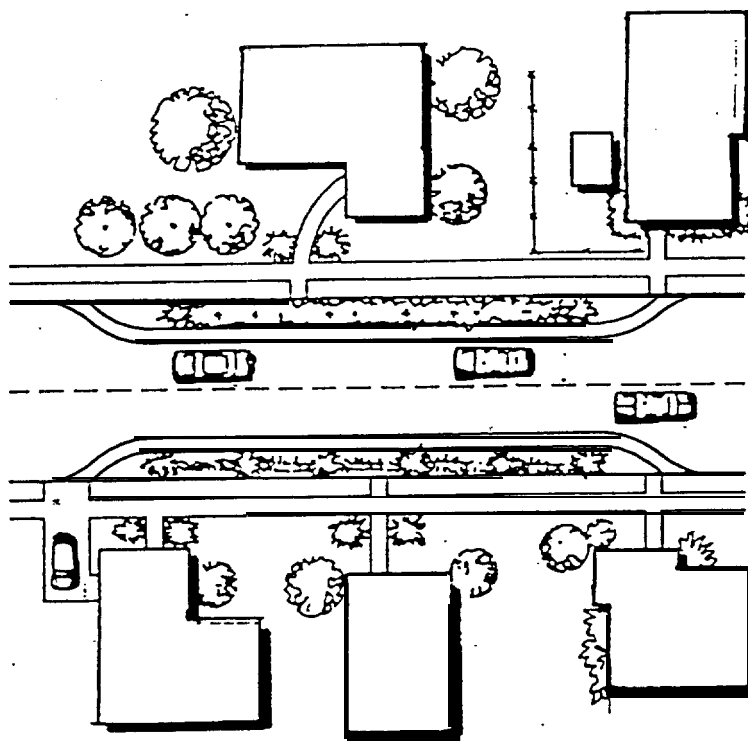


0602

## LANE NARROWING

### Definition:

A lane physically narrowed to nine to eleven feet, expanding sidewalks and landscaped areas, adding medians, 'sideians', onstreet parking, etc.



### Temporary:

Can be tried on a temporary basis for 6-12 months.

### Street Types:

Appropriate for most street types.

### Maintenance:

Landscaping maintenance. (May need to involve neighborhood participation.)

### Best Used If:

- Excessive speed due primarily to street width.

### Benefits:

- Good for pedestrians due to shorter crossing distance.
- Slows traffic without seriously affecting emergency vehicle response time.

### Don't Use If:

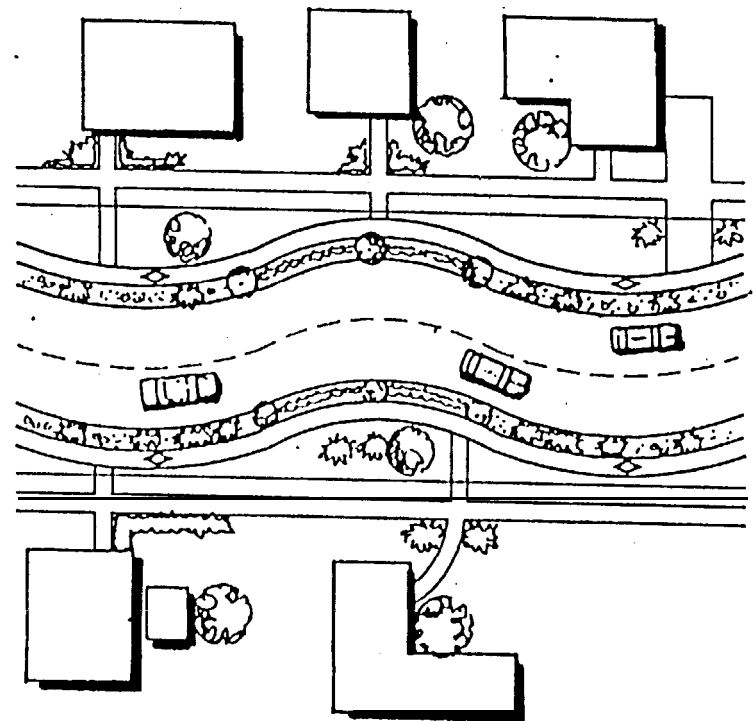
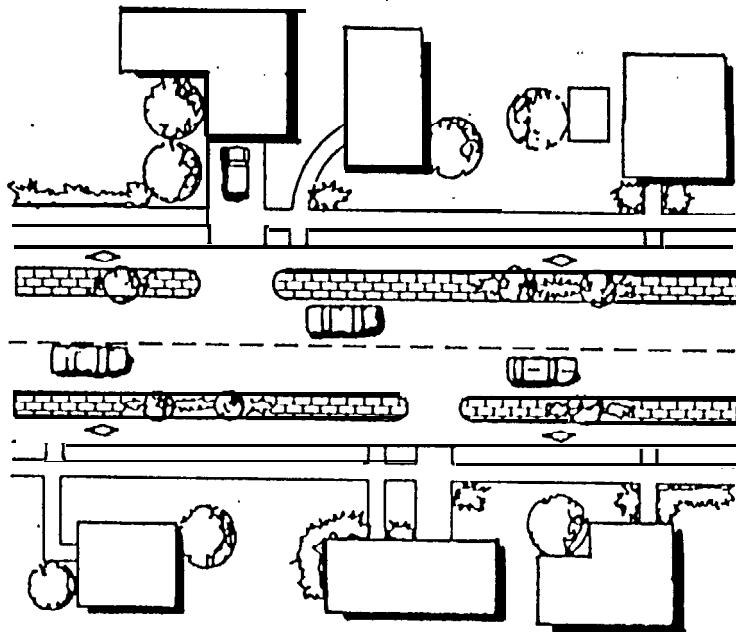
- No possibility of eliminating on street parking.
- Inadequate right-of-way to do a safe, effective treatment.

### Negatives:

- Can be dangerous for bikes.

### Considerations:

- For lane narrowing to slow cars, it helps to include visual distractions, such as bushes, trees, transverse markings, and other psycho perception techniques.
- May increase accident potential because opposing vehicle streams are brought closer together.
- Physical restrictions must be installed. Simply restriping streets is not effective.



“Sideians”



0604

## PSYCHO-PERCEPTION

<p><b><u>Definition:</u></b> Any material or message placed around or in a street that heightens driver response or induces the desired behavior. Example is transverse markings (striping) with inconsistent spacing that gives the illusion of increased speed. Novelty signs and use of landscaping are other examples.</p>		
<p><b><u>Street Type:</u></b> Can be tried on any type of street, although not all methods are appropriate to all streets.</p>	<p><b><u>Best Used if:</u></b></p> <ul style="list-style-type: none"><li>• Neighborhood desire to try them.</li></ul> <p><b><u>Benefits:</u></b></p> <ul style="list-style-type: none"><li>• Gives the neighborhood an opportunity to be creative with their response to traffic concerns.</li><li>• Can be aesthetically pleasing to the neighborhood.</li></ul>	<p><b><u>Don't Use If:</u></b></p> <ul style="list-style-type: none"><li>• <b>Specific</b> technique has been proven dangerous or ineffective.</li></ul> <p><b><u>Negatives:</u></b></p> <ul style="list-style-type: none"><li>• Most psycho-perception tools are not likely to be effective in the long run, due to their dependence on novelty.</li></ul>
<p><b><u>Considerations:</u></b> It is important that psycho-perception tools make driving fast on the street seem less safe, but that they don't actually increase danger.</p>		



0605

## STOP SIGNS

### Definition:

Red hexagonal signs displaying the word 'STOP'. Stop signs are used to designate the right of way at intersections.



### Temporary:

Stop signs can be tried on a temporary basis. Before the signs are installed, the objectives for installation should be clearly defined. After 6 months, if the goals have been met and the neighborhood still wants the sign(s), the installation can be made permanent. If the objectives have not been adequately met, the signs will be removed.

### Street Types:

Stop signs are primarily used at low volume street intersections with high volume streets, or on all four approaches of an intersection with relatively equal volumes and/or a significant, correctable accident history.

### Maintenance:

Low maintenance.

### Best Used If:

- An unusually high number of accidents involving right of way.
- Significant cross traffic at the intersection.

### Benefits:

- Very inexpensive.
- If there is a lot of cut-throat traffic, stop signs might work as a diversion.
- Insignificant traffic volumes.

### Don't Use If:

- Steep grades.
- Insignificant traffic volumes.
- Insignificant history of correctable accidents.
- Need and intention is for speed control.

### Negatives:

- If there is not a significant amount of cross traffic at the intersection, compliance will not be compelled. Cyclists and pedestrians relying on stop signs can be hurt, and accidents may increase.
- Excessive use of stop signs renders them meaningless.
- Stop signs don't decrease average speed.
- Increase noise and pollution.

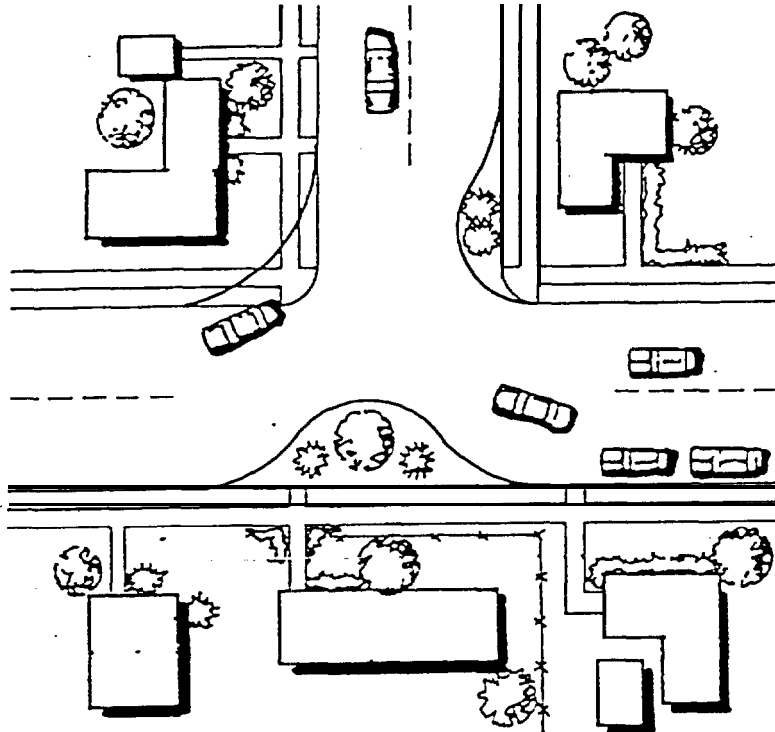
### Considerations

- Most stop signs that are warranted for right-of-way control are already installed. Neighborhoods can consider an appropriate use of stop signs as a possible mitigation tool in limited circumstances, but widespread installation of stop signs for speed control is ineffective and will not be supported.

## REALIGNED INTERSECTIONS

**Definition:**

Starting with a T intersection of a side street into a larger through street, the realigned intersection interrupts the traffic flow on the larger street by curving it into the side street.



**Temporary:**

Not feasible as a temporary installation.

**Best Used If:**

- Enough traffic to reprioritize traffic flow.

**Benefits:**

- Slows traffic when realignment is significant.

**Don't Use If:**

- No level of additional traffic on the side street is acceptable.
- Low volume street.

**Negatives:**

- Much more expensive than a stop sign.
- May encourage increased traffic volume on the affected side street.
- If not drastic enough, cyclists and cars may ignore the stop signs at the realigned intersection.

**Considerations:**

- Treatment is very expensive and probably the most appropriate tool only in rare conditions.

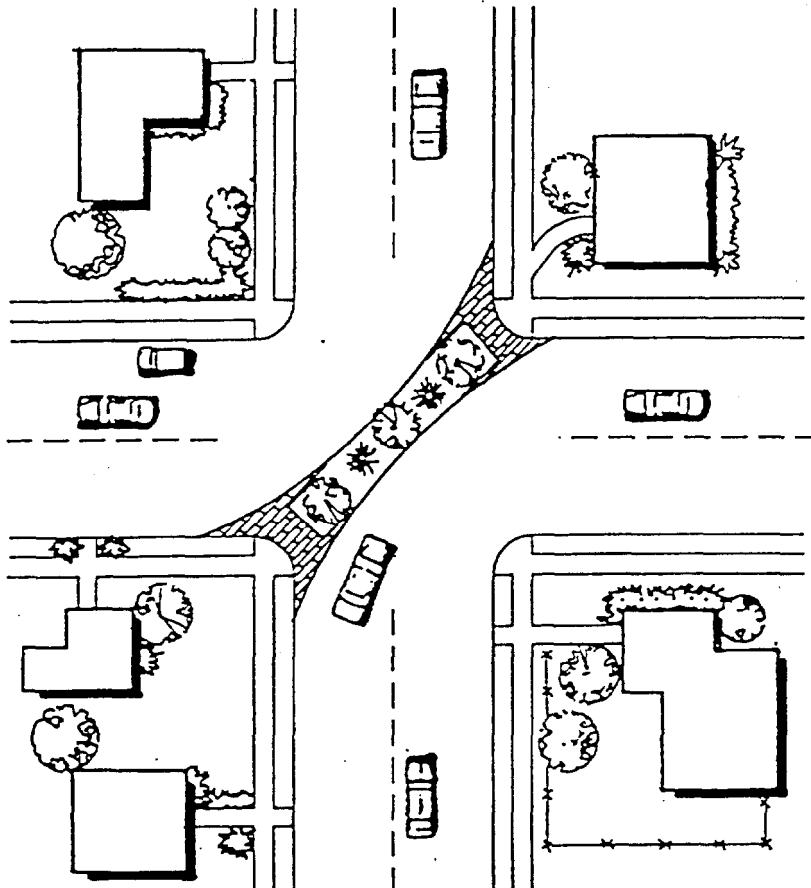


0607

## DIAGONAL DIVERTERS

### Definition:

A barrier placed diagonally across a four legged intersection, interrupting traffic flow across the intersection. These barriers can be used to create a maze-like effect in a neighborhood.



### Temporary:

Can be tried on a temporary basis for 6-12 months.

### Street Types:

Neighborhood (local) streets.

### Best Used When:

- Cut-through traffic is the primary problem for the neighborhood.

### Benefits:

- Practically eliminates cut-through traffic.
- Maintains continuous routing opportunities (unless a cul-de-sac or street closure).

### Don't Use If:

- No reasonable alternate routes available for both emergency response vehicles and through traffic.
- Cut-through traffic is not a significant issue.

### Nesatives:

- \* People can turn at higher speeds because there is no opposing traffic.
- May reduce emergency routing opportunities.
- May increase trip length for some residents.

### Considerations:

- These barriers should be traversable for bikes and pedestrians.
- Likely to increase traffic on adjacent streets, so should be considered only where appropriate alternatives are available.

\$\$

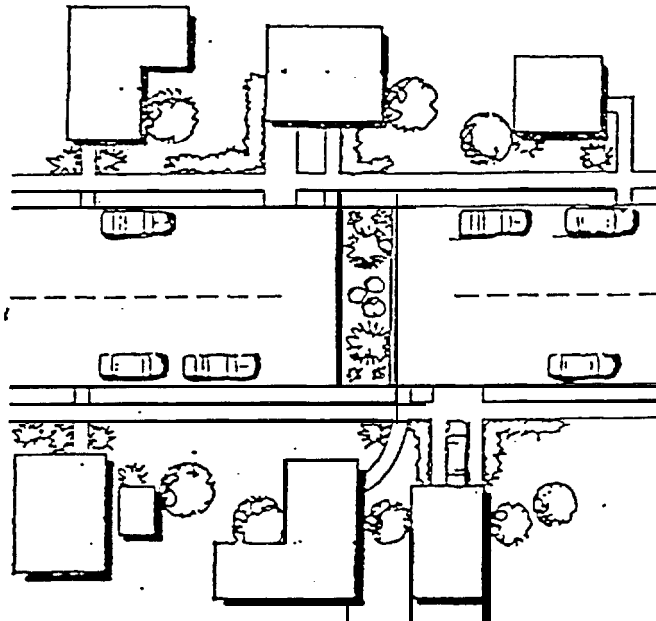


0608

## STREET CLOSURE

### Definition:

Street closed to motor vehicles using planters, bollards, or barriers, etc. Pedestrian and bike access maintained.



### Temporary:

Can be installed temporarily.

### Street Types:

Low volume streets where alternative access to homes can be provided (i.e., by alleys) and a clearly more desirable and feasible route exists.

Maintenance:  
Landscaping.

### Best Used If:

- Other mitigation devices, i.e., speed humps, diverters would be inadequate.

### Benefits:

- Eliminates cut-through traffic.

### Don't Use If:

- Residents of immediate and adjacent neighborhood will not support restricted access.
- Can not substantially, adversely impact **emergency** vehicle response time.
- Boulder's 1989 Transportation Master Plan opposes street closure unless extraordinary circumstances exist.
- Conversion of street from public to private requires legal action; may need to grant easements for utilities, municipal services, etc.

### Negatives:

- May be perceived as inconvenience by **some** neighbors and an unwarranted restriction by general public.

### Consideration:

A large percentage of immediate neighborhood must want it. Adjacent neighborhoods must be willing to accept diverted traffic.



# TOOLS AND USE MATRIX

0609

Tool	Decreases Speed	Reduce Accidents	Reduces Volume	Increases Bike and/or Ped. Safety
Speed Limit Signs				
Education				
Neighborhood Speed Watch				
Radar Trailer				
Neighborhood Identification Island				
School Drop Off Zones			Adjacent to schools	
Speed Humps				
Traffic Circles				
Raised crosswalk				
Neckdowns				peds
Choker				
Lane Elim. Chokers				
Turn Prohibitions				
Semi-Divertors				
Deviations				
Lane Narrowing				
Medians				peds
'Sideians'				
Raised intersection				
Traditional Enforcement				
Psycho Perception				
Traversable Barriers				
Forced Turn Barriers				
Diagonal Divertors				
Photographic Radar				
Stop Sign				
One Way Streets				
Realigned Intersections				
Street Closure				



Primary Anticipated Effect



Possible Secondary Effect

INDEPENDENT CONTRACTOR AGREEMENT

THIS CONTRACT is entered into this \_\_\_\_ day of ---, 19\_\_, by and between the COUNTY OF SANTA CRUZ REDEVELOPMENT AGENCY, hereinafter called AGENCY, and Fehr & Peers Associates, Inc., hereinafter called CONTRACTOR. The parties agree as follows:

1. DONERACTOR agrees to exercise special skill to accomplish the following result: as described in Exhibit A. "Scone of Services and Fee Schedule."

2. COMPENSATION. In consideration for CONTRACTOR accomplishing said result, COUNTY agrees to pay CONTRACTOR as follows: as described in Exhibit A. "Scone of Services and Fee Schedule."

When CONTRACTOR'S payment rates are subject to change on a regular or irregular basis, COUNTY requires advance written notice of at least 60 days.

3. TERM. The term of this contract shall be: March 23, 1999 to June 30, 2000.

4. EARLY TERMINATION. Either party hereto may terminate this contract at any time by giving 30 days written notice to the other party.

5. INDEMNIFICATION FOR DAMAGES. TAXES AND CONTRIBUTIONS. CONTRACTOR shall exonerate, indemnify, defend, and hold harmless AGENCY and the COUNTY OF SANTA CRUZ (hereinafter called COUNTY) (which for the purpose of paragraphs 5 and 6 shall include, without limitation, their officers, agents, employees and volunteers) from and against:

A. Any and all claims, demands, losses, damages, defense costs, or liability of any kind or nature which COUNTY or AGENCY may sustain or incur or which may be imposed upon it for injury to or death of persons, or damage to property to the extent caused by the CONTRACTOR'S negligent performance under the terms of this Agreement, excepting any liability arising out of the sole negligence of AGENCY or COUNTY. Such indemnification includes any damage to the person(s), or property(ies) of CONTRACTOR and third persons.

B. Any and all Federal, State and Local taxes, charges, fees, or contributions required to be paid with respect to CONTRACTOR and CONTRACTOR'S officers, employees and agents engaged in the performance of this Agreement (including, without limitation, unemployment insurance, social security and payroll tax withholding).

6. INSURANCE. CONTRACTOR, at its sole cost and expense, for the full term of this Agreement (and any extensions thereof), shall obtain and maintain at minimum compliance with all of the following insurance coverage(s) and requirements. Such insurance coverage shall be primary coverage as respects AGENCY and COUNTY, and any insurance or self-insurance maintained by AGENCY or COUNTY shall be excess of CONTRACTOR'S insurance coverage and shall not contribute to it.

If CONTRACTOR utilizes one or more subcontractors in the performance of this Agreement, CONTRACTOR shall obtain and maintain Independent Contractor's Insurance as to each subcontractor or otherwise provide evidence of insurance coverage for each subcontractor equivalent to that required of CONTRACTOR in this Agreement, unless CONTRACTOR and AGENCY both initial here \_\_\_\_ / \_\_\_\_.

A. Types of Insurance and Minimum Limits

(1) Worker's Compensation in the minimum statutorily required coverage amounts. This insurance coverage shall not be required if the CONTRACTOR has no employees and certifies to this fact by initialing here \_\_\_\_

(2) Automobile Liability Insurance for each of CONTRACTOR'S vehicles used in the performance of this Agreement, including owned, non-owned (e.g., owned by CONTRACTOR'S employees), leased or hired vehicles, in the minimum amount of \$500,000 combined single limit per occurrence for bodily injury and property damage. This insurance coverage shall not be required if vehicle use by CONTRACTOR is not a material part of performance of this Agreement and CONTRACTOR and AGENCY both certify to this fact by initialing here \_\_\_\_ / \_\_\_\_.

(3) Comprehensive or Commercial General Liability Insurance coverage in the minimum amount of \$1,000,000 combined single limit, including coverage for: (a) bodily injury, (b) personal injury, (c) broad form property damage, (d) contractual liability, and (e) cross-liability.

(4) Professional Liability Insurance in the minimum amount of \$1,000,000 combined single limit, if, and only if, this Subparagraph is initialed by CONTRACTOR and AGENCY \_\_\_\_ / \_\_\_\_.

B. Other Insurance Provisions

(1) If any insurance coverage required in this Agreement is Provided on a "Claims Made" rather than "Occurrence" form, CONTRACTOR agrees to maintain the required coverage for a period of three (3) years after the expiration of this Agreement (hereinafter "post agreement coverage") and any extensions thereof. CONTRACTOR may maintain the required post agreement coverage by renewal or purchase of prior acts or tail coverage. This provision is contingent upon post agreement coverage being both available and reasonably affordable in relation to the coverage provided during the term of this Agreement. For purposes of interpreting this requirement,, a cost not exceeding 100% of the last annual

policy premium during the term of this Agreement in order to purchase prior acts or tail coverage for post agreement coverage shall be deemed to be reasonable. 0612

(2) All required Automobile and Comprehensive or Commercial General Liability Insurance shall be endorsed to contain the following clause:

“The County of Santa Cruz, and The County of Santa Cruz Redevelopment Agency, their officials, employees, agents and volunteers are added as additional insureds as respects the operations and activities of, or on behalf of, the named insureds performed under Agreement with the County of Santa Cruz and The County of Santa Cruz Redevelopment Agency.”

(3) All required insurance policies shall be endorsed to contain the following clause:

“This insurance shall not be canceled until after thirty (30) days prior written notice has been given to:

County of Santa Cruz Redevelopment Agency  
Agency Administrator  
701 Ocean Street, Room 510  
Santa Cruz, CA 95060.”

(4) CONTRACTOR agrees to provide its insurance broker(s) with a full copy of these insurance provisions and provide AGENCY on or before the effective date of this Agreement with Certificates of Insurance for all required coverages. All Certificates of Insurance **shall** be delivered or sent to:

County of Santa Cruz Redevelopment Agency  
Agency Administrator  
701 Ocean Street, Room 510  
Santa Cruz, CA 95060.

7. **EQUAL EMPLOYMENT OPPORTUNITY**. During and in relation to the performance of this Agreement, CONTRACTOR agrees as follows:

A. The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, physical or mental disability, medical condition (cancer related), marital status, sex, sexual orientation, pregnancy, gender, age (over 18), veteran status, or any other non-merit factor unrelated to job duties. Such action shall include, but not be limited to, the following: recruitment; advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training (including apprenticeship), employment, upgrading, demotion, or transfer. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this non-discrimination clause.

B. If this Agreement provides compensation in excess of \$50,000 to CONTRACTOR and if CONTRACTOR employs fifteen (15) or more employees, the following requirements shall apply:

0613

(1) The CONTRACTOR shall, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, physical or mental disability, medical condition (cancer related), marital status, sex, sexual orientation, pregnancy, gender, age (over 18), veteran status, or any other non-merit factor unrelated to job duties. In addition, the CONTRACTOR shall make a good faith effort to consider Minority/ Women/Disabled Owned Business Enterprises in CONTRACTOR's solicitation of goods and services. Definitions for Minority/Women/Disabled Business Enterprises are available from the COUNTY General Services Purchasing Division.

(2) The CONTRACTOR shall furnish COUNTY Affirmative Action Office information and reports in the prescribed reporting format (PER 4012) identifying the sex, race, physical or mental disability, and job classification of its employees and the names, dates and methods of advertisement and direct solicitation efforts made to subcontract with Minority/Women/Disabled Business Enterprises.

(3) In the event of the CONTRACTOR's non-compliance with the non-discrimination clauses of this Agreement or with any of the said rules, regulations, or orders said CONTRACTOR may be declared ineligible for further agreements with the COUNTY.

(4) The CONTRACTOR shall cause the foregoing provisions of this Subparagraph 7B. to be inserted in all subcontracts for any work covered under this Agreement by a subcontractor compensated more than \$50,000 and employing more than fifteen (15) employees, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

8. INDEPENDENT CONTRACTOR STATUS. CONTRACTOR and AGENCY have reviewed and considered the principal test and secondary factors below and agree that CONTRACTOR is an independent contractor and not an employee of AGENCY. CONTRACTOR is responsible for all insurance (workers compensation, unemployment, etc.) and all payroll related taxes. CONTRACTOR is not entitled to any employee benefits. AGENCY agrees that CONTRACTOR shall have the right to control the manner and means of accomplishing the result contracted for herein.

PRINCIPAL TEST: The CONTRACTOR rather than AGENCY has the right to control the manner and means of accomplishing the result contracted for.

SECONDARY FACTORS: (a) The extent of control which, by agreement, AGENCY may exercise over the details of the work is slight rather than substantial; (b) CONTRACTOR is engaged in a distinct occupation or business; (c) In the locality, the work to be done by CONTRACTOR is usually done by a specialist without supervision, rather than

under the direction of an employer; (d) The skill required in the particular occupation is substantial rather than slight; (e) The CONTRACTOR rather than the AGENCY supplies the instrumentalities, tools and work place; (f) The length of time for which CONTRACTOR is engaged is of limited duration rather than indefinite; (g) The method of payment of CONTRACTOR is by the job rather than by the time; (h) The work is part of a special or permissive activity, program, or project, rather than part of the regular business of AGENCY; (i) CONTRACTOR and AGENCY believe they are creating an independent contractor relationship rather than an employer-employee relationship; and (j) The AGENCY conducts public business. 0614

It is recognized that it is not necessary that all secondary factors support creation of an independent contractor relationship, but rather that overall there are significant secondary factors which indicate that CONTRACTOR is an independent contractor.

By their signatures to this Agreement, each of the undersigned certifies that it is his or her considered judgment that the CONTRACTOR engaged under this Agreement is in fact an independent contractor.

9. NONASSIGNMENT. CONTRACTOR shall not assign this Agreement without the prior written consent of the AGENCY.

10. RETENTION AND AUDIT OF RECORDS. CONTRACTOR shall retain records pertinent to this Agreement for a period of not less than five (5) years after **final** payment under this Agreement or until a **final** audit report is accepted by AGENCY, whichever occurs first. CONTRACTOR hereby agrees to be subject to the examination and audit by the Santa Cruz County Auditor-Controller, the Auditor General of the State of California, or the designee of either for a period of five (5) years after final payment under this Agreement.

11. PRESENTATION OF CLAIMS. Presentation and processing of any or all claims arising out of or related to this Agreement shall be made in accordance with the provisions contained in Chapter 1 .05 of the Santa Cruz County Code, which by this reference is incorporated herein.

12. ATTACHMENTS. This Agreement includes the following attachments (identify by name or write "NONE"):

Exhibit A. "Scone of Services and Fee Schedule."

IN WITNESS WHEREOF, the parties hereto have set their hands the day and year first above written.

COUNTY 'OF SANTA CRUZ

By: \_\_\_\_\_  
Redevelopment Agency Administrator

Date \_\_\_\_\_

CONTRACTOR: Fehr & Peers Associates, Inc.

By: \_\_\_\_\_

Date \_\_\_\_\_

Address: 1153 Lincoln Avenue, Suite 1  
San Jose, CA 95125  
Telephone: (408) 278- 1700

APPROVED FOR INSURANCE:

By: \_\_\_\_\_  
Risk Management

APPROVED AS TO FORM:

By: *Joe M. Scott*  
County Counsel

DISTRIBUTION: County Administrative Office  
Auditor-Controller  
County Counsel  
Redevelopment  
Risk Management  
Contractor

## EXHIBIT A

## SCOPE OF SERVICES AND FEE SCHEDULE

Scope of Work:

As requested by the Redevelopment Agency, the consultant shall provide traffic engineering consulting services for the Live Oak-Soquel Traffic Impact Reduction Pilot Project. Services shall be provided on a task-order basis, with the consultant preparing a separate scope and fee estimate for each assignment selected by the Redevelopment Agency. Tasks may include but are not limited to assisting staff with the selection, design and implementation of traffic calming measures, assisting staff with the identification of criteria for the selection and design of measures, and working with neighborhood issues.

Fees Schedule:

Fees shall be based on Fehr & Peers, Associates customary rates for the traffic engineering consulting services described above, and paid on a monthly basis. The total cost charged for services shall not exceed \$15,000 for the services described. Customary hourly billing rates follow:

<u>Classification</u>	<u>Hourly Rate</u>
Senior Principal	\$150.00 - \$160.00
Principal	\$130.00 - \$145.00
Senior Associate	\$120.00 - \$140.00
Associate	\$105.00 - \$120.00
Senior Engineer/Planner	\$ 80.00 - \$105.00
Engineer/Planner	\$ 65.00 - \$ 80.00
Senior Technical Support	\$ 60.00 - \$ 70.00
Administrative Support	\$ 40.00 - \$ 65.00
Technician	\$ 50.00
Intern	\$ 35.00
Controller	\$ 90.00

Consulting Services

Consulting Technical Expert	\$70.00
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Reimbursable expenses are invoiced at cost plus 10% for handling including the following:

- Reproduction work at \$ .07 per sheet
- Plotter/Computer use at \$10 per hour
- Personal auto mileage at \$ .325 per mile
- Communication expense (telephone, fax, e-mail, etc.)



COUNTY OF SANTA CRUZ  
REQUEST FOR APPROVAL OF AGREEMENT

0617

TO: Board of Supervisors  
County Administrative Officer  
County Counsel  
Auditor-Controller

FROM:

REDEVELOPMENT

(Dept.)

a

(Signature)

3/11/99

(Date)

The Board of Supervisors is hereby requested to approve the attached agreement and authorize the execution of the same.

1. Said agreement is between the SANTA CRUZ COUNTY REDEVELOPMENT AGENCY (Agency)  
and FEHR & PEERS ASSOCIATES, INC., 1153 Lincoln Avenue, Suite 1, San Jose, CA 95125 (Name & Address)

2. The agreement will provide traffice engineering services for traffic calming program

3. The agreement is needed. because the County cannot provide these services as cost-effectively.

4. Period of the agreement is from March 23, 1999 to June 30, 2000

5. Anticipated cost is \$ 15,000.00 XXXXXXXXXXXXXXXXXXXX (Fixed amount; Monthly rate; Not to exceed)

5. Remarks:

7. Appropriations are budgeted in 611155 (Index#) 9821 (Subobject)

NOTE: IF APPROPRIATIONS ARE INSUFFICIENT, ATTACH COMPLETED FORM AUD-74

Appropriations are available and have been encumbered.  
are not will be

Contract No. 81810 Date 3/11/99

GARY A. KNUTSON, Auditor - Controller

B y Michael Ward Deputy

Proposal reviewed and approved. It is recommended that the Board of Supervisors approve the agreement and authorize the  
Agency Administrator to execute the same on behalf of the County of Santa Cruz  
Redevelopment Agency (Agency). County Administrative Officer

Remarks:

(Analyst)

By Date

Agreement approved as to form. Date

Distribution:

Bd. of Supv. - White  
Auditor-Controller - Blue  
County Counsel - Green  
Co. Admin. Officer - Conory  
Auditor-Controller - Pink  
Originating Dept. - Goldenrod

\*To Orig. Dept. if rejected.

ADM - 29 (6/95)

State of California )  
County of Santa Cruz ) ss

I                      ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz,  
State of California, do hereby certify that the foregoing request for approval of agreement was approved by  
said Board of Supervisors as recommended by the County Administrative Officer by an order duly entered  
in the minutes of said Board on                      County Administrative Officer

                     19                      By                      Deputy Clerk

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