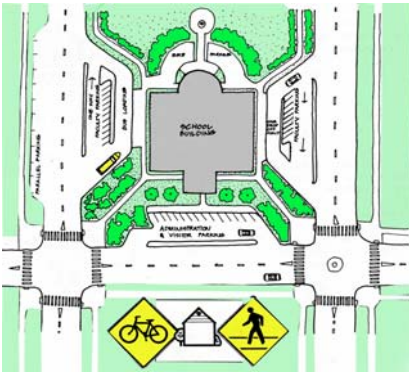


# Chapter Three

## Part 1: Recommended Improvements For Walking



### Overview

*Chapter Three highlights the key recommendations of this plan to improve walking, bicycling, land use policies and intersection design.*

*Walking, bicycling and livable, healthy streets must be provided the highest possible levels of support. Most of Marina's growth has occurred in America's well funded, policy driven, post-auto suburban-style development era. This timing produced many ill effects. Transportation in Marina today is highly car dependent. Many land use, roadway and intersection designs unintentionally overlooked the needs of people-centered activities in favor of auto convenience. Support for automobiles led to significant off-street parking requirements, poor connectivity, and single-use zoning.*

*This situation has had the unintended result of making Marina residents highly car dependent, leading to degradation of air quality, water pollution and many social ills. It has also resulted in poor transit links, poor bicycling conditions, and poor access for youths, seniors and people with disabilities.*

*Most unfortunate, this situation has led to the highest possible per capita costs for personal mobility, poor social interaction, low levels of identifying Marina as a distinct community, generally poor place-making and a non sustainable urban fabric. Of course, not all of these ills will be solved through this plan. However, without close adherence to the principles of walkability and good town-making these significant problems will not be overcome.*

*Many conventional bicycle and pedestrian master plans try to soften these effects and create enclaves*

*where people can go to walk or bicycle. These plans dedicate trails, find safe routes to school, and designate those roadways that can be altered to make basic links to key destinations. This plan takes a more holistic approach and proposes healing the many injuries caused by poor planning and road building practices.*

*This community healing requires changing many roadway-making, operations, maintenance and funding policies and practices. Revised policies and practices should focus on always providing choice in transportation. Through partnership with land use policies and practices, active transportation options should become preferred modes. Walking and bicycling are viewed as healthier for people and towns. These actions call for changing many existing local, county, regional, state and federal guides.*

*This plan provides policies for creating new walking and bicycling environments. It establishes a set of public and private responsibilities to make walking and bicycling truly enjoyable. Half-hearted attempts to make walking work are insufficient. Today, and in the future, the basic needs of people-centered mobility must be addressed.*

### Format of Recommendations

*Chapter Three has four sections addressing recommendations for walking, bicycling, land use, intersections and street crossings. Chapters Four and Five provide policy recommendations and prioritized projects. Part II provides detailed guidelines for carrying out recommendations chapters. The Pattern Book should be read to provide a full understanding of*

*the dynamics of healthy streets and healthy*  
**City of Marina's Plan for All People**

*transportation systems.*

**People in Context**

A quick review of those people walking in the City of Marina today reveals that the vast majority is doing so (1) from necessity, or (2) because they enjoy walking and have worked hard to find interesting places to walk. A comparison of people walking in Marina with those walking in nearby towns such as Monterey and Carmel-by-the-Sea reveals no surprises. Most pedestrians in Marina are children, people without cars, seniors and people with disabilities. Those with higher levels of transportation choice, i.e. those specifically able to afford cars and of driving age, are making use of autos for most of their trips.

This situation is not so much a reflection of popular transportation preferences but of the many auto-dominated land use and transportation decisions that created present day Marina.

**Walkable Communities Have Proven to be More Prosperous.** Towns around the nation with the most positive economic growth and solid resources from tourism, general retail and other sources are towns where *all people* can come and feel comfortable, including senior citizens, teenagers, youth, and people with disabilities. On a Walkability Scale of 1-10 (with 10 being the best) present day Marina scores a 2.

Although the plan emphasizes the needs of youth, seniors, people with disabilities and many others who do not own cars by choice or need, this plan is also crafted to attract many people missing from today's street scenes. Healthy towns always have a diversity of folks, and the streets are alive and active with people all hours of the day.

**City of Marina  
Pedestrians**





## Implementing the Plan

Many roadways and intersections in Marina are overly wide, fast, stark, hot, discomforting and unappealing for walking, bicycling and transit modes. Many missing street connections make walking journeys as short as 100 yards “as the crow flies” into long treks. Just one missing link or one overly challenging intersection prevents many people from walking, bicycling or using transit. Impacts of the auto-centric design – noise, high speed, risk and more – require new or improved systems for walking and bicycling.

Much of Marina lacks connectivity, pathways, trails, sidewalks, trees and bike lanes. These features must now be created or enhanced in many areas of town.

Recommendations in this chapter include general treatments, such as placing sidewalks and bike lanes on all major roadways. Other recommendations are highly specific, such as making links to specific parks. One example below: De Forest Avenue today appears overly wide and unfriendly for bicycling. By marking bike lanes the street will appear narrower. Similar treatments in other towns have reduced speeds from 2-7 mph.



Above: Existing Marina streets are wide, stark and unappealing to people living, walking, bicycling and driving. Below, a street of similar width effectively channels and moves traffic, while encouraging walking, bicycling and socializing. In scenes such as the one depicted here, residents are more involved, aware and have more friends and associates close to where they live. Green, balanced streets are considered more livable and valuable.



Solutions don't have to be expensive or long term. This plan provides dozens of recommendations that can be implemented within one year, bringing substantial new levels of walkability and bicycling to the City of Marina. Left: Adding painted lines to key streets can be implemented for as little as \$3,000 per mile. Planting street trees on both sides of an urban block can cost \$8,000, bringing more than \$50,000 in added value to residences.

## Walking Scale, Walkable Streets

Today Del Monte Boulevard has the visual feel of no place in particular – it was heavily influenced by early suburban style street-making. Most people driving along this boulevard would not consider this area as a place to spend time outside their cars.

Today the street environment is focused on automobiles and motorists' comfort and convenience. Since the businesses and services do little to visually compete with those in adjacent areas, there is no compelling reason to stop.

Meanwhile, the people-scaled and focused scene (below) of the same street has sufficient design features, scale and interest to be visually competitive with the best towns and villages in the region. Economic vitality would bloom along a street like this.

Del Monte Boulevard of the future will likely require two lanes in each direction. However, it can be greatly enhanced by inserting on-street parking on both sides of the street, and far side curb parking next to the trail, if warranted. The street could also have curb extensions, non-essential driveways could be eliminated, and a mixed use, village-style center could be developed.

For maximum walking comfort here, human scale height-to-width ratios must be applied. The greatest comfort would result from a height-to-width ratio between 1:3 and 1:2, as measured from building fronts. Del Monte Boulevard's 80 foot street width (including sidewalks) calls for building heights of 35-40 feet — three or four story buildings — and tall trees to complete the balance.

Three story buildings work well in infill locations by providing essential village densities and services. Without these densities, village life cannot be expected to come to full vibrancy. A threshold of activity is needed to bring a feeling of security and to provide enough services to compete with other area villages.

Several street variations can work on Del Monte Boulevard. Another street alternative is to reduce the number of travel lanes to one in each direction, to insert diagonal parking on the east side, parallel parking next to the median and to provide a buffer

lane to the diagonal parking in order to maintain low speed, free-flow traffic.



**Del Monte Boulevard – From current conditions in 2003 (above) to Walkable Scale by 2007-09 (below)**





## Village Oasis – Revitalizing Reservation Road

Reservation Road is likely to remain a 4-lane roadway, but even though it moves moderate volumes of traffic efficiently, it has excessive width, speeds and noise.

Significant space can be dedicated to parking, wider sidewalks and bike lanes. Over time the higher building walls can complete the character of the urban center. Although parallel parking is a likely and easy transition, there may be so much space to capture to get the roadway down to village-scale, that diagonal parking may be considered.

Trees and tall buildings built within 20 feet of the street are both essential to establishing a comfortable, human-scaled walking and driving space.

### Buildings and Trees Slow Speeders, Reduce Noise

Two issues identified in the City of Marina Walking Audit were the significant levels of speeding and traffic noise. These factors are discomfoting to pedestrians, and they detract from the ability to conduct business near the road. By placing 3-4 story buildings and tall trees within 20 feet of the street, it is reasonable to anticipate speeds reduced to the 25-30 mph range.

Walking comfort will also be enhanced by awnings, canopies, colonnades and other architectural and landscape features that create shade and protection from wind and other harsh weather. Well lighted and active streets will also allow Reservation Road to become a prominent promenade street during evening hours.

Visual stimulus is important. Proper placement of buildings, trees and other streetscape elements gives pedestrians a sense that their steps are leading somewhere. In contrast, car-oriented design, with large building setbacks and “gray” field parking gives motorists a sense of progress, but only at high speeds.

It took decades for architects to adapt cities to the higher speed of cars (see top photo). They did this by smoothing out the routes, elongating and simplifying buildings, graying the mass in front of buildings, removing significant, rewarding architectural detail. The street on the bottom right is pedestrian-focused, providing visual details, treats and rewards through color, form, shape, proximity, vertical height, green elements, and interesting variations in pattern, texture and materials.

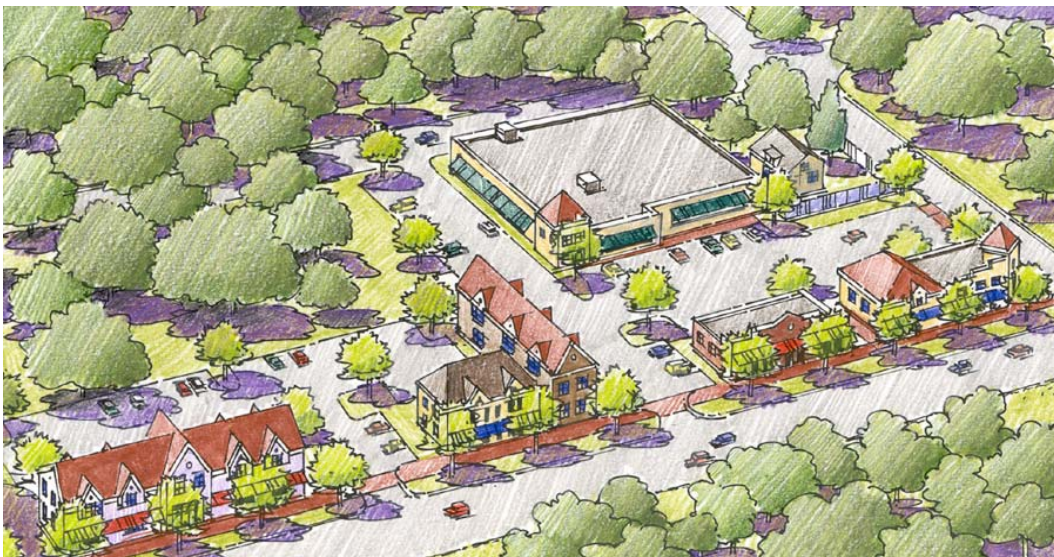


## Village-Style Development

The illustration below shows how a typical section of roadway like Reservation Road may be converted over time. Although there is physical space for walking in the top scene, the drawing below has a well developed and engaging walking network and is more secure, due to near proximity of liner buildings. It is more convenient with many stores relating to the needs of customers. There is an efficient way to move about the organized space. And now shade, benches and other services welcome pedestrians. Village-style development patterns will be needed to bring about high levels of walking and less auto dependency in Marina.

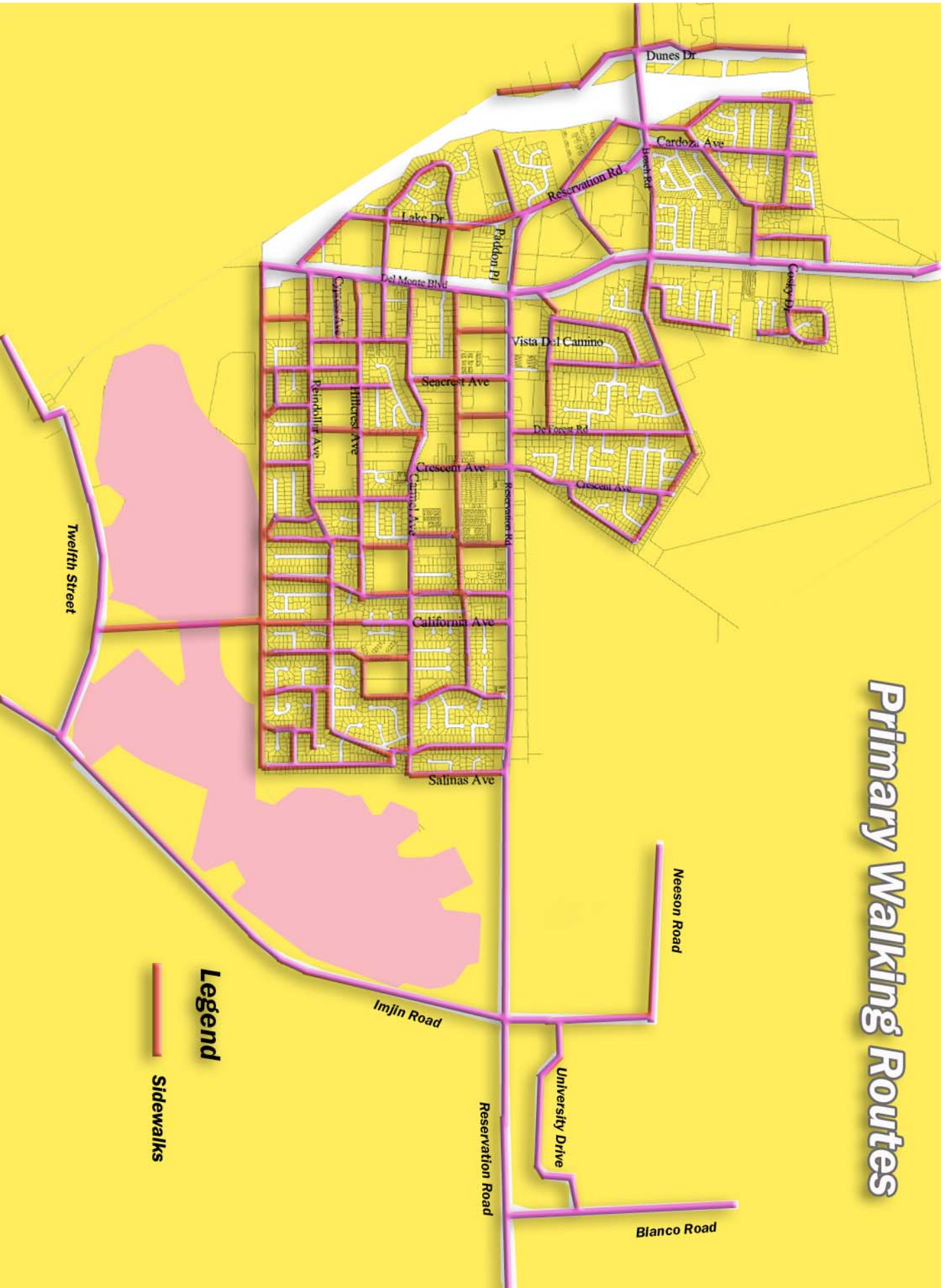
### Primary Walking Routes

Highlighted on the map on the next page are streets in the City of Marina suggested as primary walking routes. Each of these streets should receive special consideration and treatment. Levels of quality must be maintained at “good” or better on these routes. Sidewalks do not exist in some areas. Table 3.1 identifies recommended walking infrastructure projects on major streets. Whenever roadways are improved or when developers build new roads, comfortable sidewalks on both sides of streets should be included.





# Primary Walking Routes



**Table 3.1. List of Projects for Improved Walking Infrastructure**

<b>Project Type</b>	<b>Project Location and Description</b>	<b>Length of Construction (feet)</b>	<b>Length of striping (feet)</b>
Crosswalks	Restripe 4 bent crosswalks: N side of Del Monte @ Palm; N and E sides of Del Monte @ Reservation; S side of Reservation and Crescent		800
Maintenance	Realign programmed signal heads on west approach at Reservation and DeForest - currently cannot be seen adequately by all lanes of traffic.		
Maintenance	Repair broken pushbutton on the SE corner of Reservation Road and DeForest Road		
Maintenance	Repair broken pushbutton on the SW corner of Del Monte and Reservation		
Maintenance	Repair broken pushbuttons on the NE and NW corners of Reservation and Crescent		
Restriping & signal timing	Remove one of the two right turn lanes from Del Monte Blvd to Reservation Road		
Sidewalks	Abdy Way - fill gap on northwest side just east of Cardoza	650	
Sidewalks	Abdy Way - fill gap on southeast side just south of Healy Avenue	300	
Sidewalks	Abdy Way - fill gap on west side just north of Healy Avenue	200	
Sidewalks	Beach Road - build sidewalks on both sides across railroad tracks at Del Monte Blvd	200	
Sidewalks	Beach Road - fill gap on south side at Michael Drive	300	
Sidewalks	Beach Road and Reservation Road - fill gap on north side between Cardoza and Marina Drive	800	
Sidewalks	California Avenue - east side from Tamara Court to the dead end	120	
Sidewalks	California Avenue - west side from Reservation Road to Carmel Avenue	1530	
Sidewalks	Cardoza Avenue - east side from Abdy Way to Ora Court	200	
Sidewalks	Carmel Avenue - fill gaps on north side from Seacrest to Crescent	450	
Sidewalks	Carmel Avenue - fill gaps on south side from Seacrest to Crescent	600	
Sidewalks	Carmel Avenue - fill small gap on north side between Crescent and Vaughan	100	
Sidewalks	Carmel Avenue - gaps on north side from Del Monte Blvd to just east of Sunset	480	
Sidewalks	Carmel Avenue - north side from Bayer St. to Salinas Avenue	310	
Sidewalks	Carmel Avenue - south side from Del Monte Blvd to Sunset Avenue	860	
Sidewalks	Crescent Avenue - east side from Carmel to Reservation	1520	
Sidewalks	Crescent Avenue - fill gaps on west side from Carmel Avenue to Reservation Road	450	
Sidewalks	Del Monte Blvd - fill gap on east side between Palm Avenue and Mortimer Lane	450	
Sidewalks	Del Monte Blvd - fill gap on east side between Reservation Road and Beach Road	1750	
Sidewalks	Healy Avenue - north side from Abdy Way to Paul Davis Drive	530	
Sidewalks	Healy Avenue - south side from Abdy Way to Marina Drive	770	
Sidewalks	Lake Drive - fill gaps on east side from Messinger Drive to Hilo Avenue	540	
Sidewalks	Lake Drive - north side from Hilo Drive to Reservation Road	110	
Sidewalks	Marina Drive - fill gaps on west side between Palm Avenue and Paddon Place	700	
Sidewalks	Marina Drive - west side from Legion Way to Healy Avenue	320	
Sidewalks	Paddon Place - fill gaps on south side between Lake Drive and Marina Drive	400	



<b>Project Type</b>	<b>Project Location and Description</b>	<b>Length of Construction (feet)</b>	<b>Length of striping (feet)</b>
Sidewalks	Palm Avenue - fill gaps (both sides) from Lake Drive to Del Monte Blvd	540	
Sidewalks	Palm Avenue - north side from Elm to Sunset	600	
Sidewalks	Redwood Drive - west side from Hillcrest to Carmel	550	
Sidewalks	Reindollar Avenue - fill gap on north side between California Avenue and Eddy Circle	450	
Sidewalks	Reindollar Avenue - fill gaps on both sides from Vera Lane to Vaughan Avenue	700	
Sidewalks	Reindollar Avenue - gap on north side west of Redwood; Redwood Drive - gap on west side north of Reindollar	650	
Sidewalks	Reindollar Avenue - gap on south side between Del Monte Blvd and Sunset Ave.	200	
Sidewalks	Reservation Road - fill gap on south side from Cardoza to Beach Road	220	
Sidewalks	Reservation Road - fill gaps on north side from Ocean Terrace to Lynscott	2200	
Sidewalks	Reservation Road - fill gaps on Southwest side from Del Monte to Lake Drive	1000	
Sidewalks	Reservation Road - fill gaps on west side from Lake Drive to Beach Drive	1350	
Sidewalks	Salinas Avenue - fill gaps on west side from Carmel Avenue to Reservation Road	680	
Sidewalks	Seacrest Avenue - fill gap on east side just north of Carmel Avenue	180	
Signal Timing	For pedestrian phases concurrent with major street vehicle movements, put ped signals on recall to walk		
Signal Timing	Re-time all pedestrian signals for a 4 ft/s walking speed using the full crosswalk length		

## Good Connectivity Needed For Walking

Adequate sidewalk facilities should be supplemented with good connectivity and permeability in neighborhoods. People should not have to walk long distances to common destinations, such as parks, schools, transit stops, stores, town hall and other service centers. People like to be linked to friends and family living in adjacent neighborhoods.

The City of Marina was laid out with highly inefficient conventional, cul-de-sac patterns, forcing high levels of auto travel. In some cases very short connectors can make it possible, safer, more efficient and fun to walk rather than to make the trip by car. Davis, California, is an example of a community that is providing many links and connections everywhere. Even though they have a high level of cul-de-sac style development, Davis has achieved a 40% non-auto trip generation rate.

When new neighborhoods are built, even greater connectivity should be stressed. In general, block lengths should be no more than 400 feet, with properties no deeper than 80-100 feet. This allows 16-30 homes to be placed on each block. Although some of the block lengths in Marina greatly exceed 400 feet, in many locations it is possible to make trail connections at more frequent intervals.

Links may be 100 yards to a half mile long when they cover significant distances to provide access to parks or schools. Meanwhile the majority of links that are needed can be as short as 50-100 feet, such as one that links two cul-de-sacs. Links need to be attractive, add to neighborhood security (more people walking) and allow for pleasant landscaping. Note that the short cul-de-sac connection illustrated in the photo at the top allows a place for mail deliveries and extra resident parking.

Some especially well designed connectors can assist emergency responders by allowing them added access into difficult portions of isolated neighborhoods. In general, connectors should offer multiple benefits to the community, not just simply allow added walking and bicycling access.



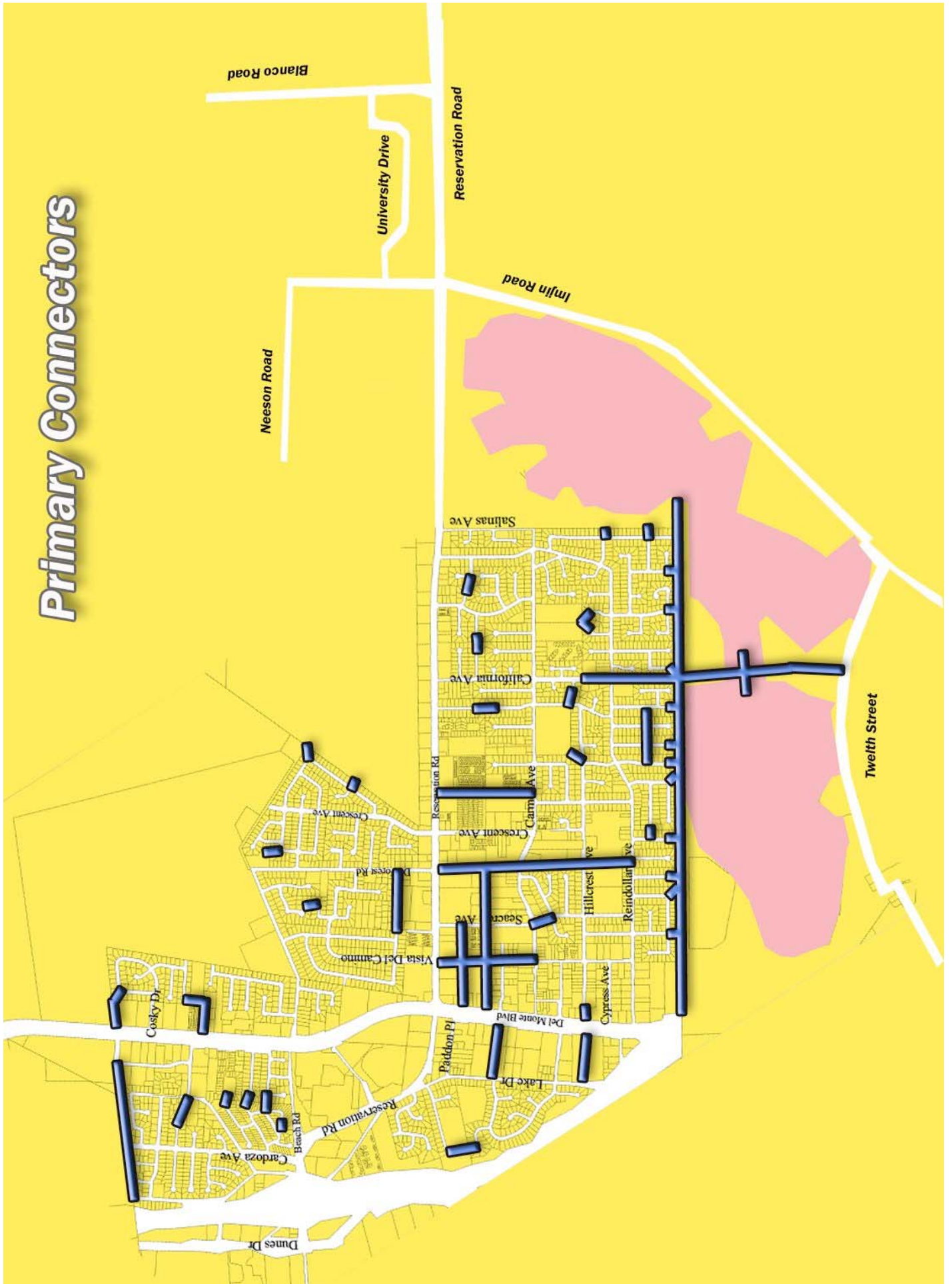


Future development in the City of Marina will require more focus on connectivity. Repairing broken street connections in developed parts of the City of Marina may be challenging. The City of Marina should develop a connectivity plan that will select several neighborhoods and assist local residents in identifying locations and issues for creating connections.

The map on the next page illustrates many of the possible links. Some are highly logical and easy to assemble. Others, for a variety of reasons, will be more difficult or not worth the effort. This plan recommends that City of Marina officials prepare a connectivity implementation plan using a fair and effective community process to assemble appropriate connectors in each neighborhood.



# Primary Connectors





# City of Marina Sidewalk Specifications by Travelway Type and Location

## Local Travel Ways

Alleys, No sidewalks  
 Lanes, None under 10 houses  
 Streets, None under 10 houses

## Schools

Elementary  
 Middle, High  
 Colleges

## Primary Roads

Avenues  
 Boulevards

## Commercial Areas

Main Street  
 Other Commercial

## Special

Transit Parks  
 Pedestrian Parks  
 Woonerven (People Streets)  
 Other Special Use



Lane



Elementary School



Avenue - Mixed Use



Main Street



Transit Station



Street



Campus



Boulevard



Other Commercial



Waterfront District

## Sidewalk

5 foot width  
 Two ramps per corner  
 Concrete preferred  
 Non-mountable curb

8 foot width

Two ramps per corner  
 Concrete preferred  
 Non-mountable curb

6 foot width

Two ramps per corner  
 Concrete preferred  
 Non-mountable curb  
 For attached walks  
 add 2 foot width

8-20 foot width

Two ramps per corner  
 Concrete /pavers OK  
 Non-mountable curb

15 or more width

Two ramps per corner  
 Concrete preferred  
 Non-mountable curb

## Planter Strip

6 foot width  
 Trees, 30-50 feet  
 Lighting optional

6 foot width

Trees, 30-50 feet  
 Lighting required

6 foot width

Trees, 30-50 feet  
 Lighting  
 recommended

6 foot width

Trees, 30-50 feet  
 Lighting required

6 foot width

Trees, 30-50 feet  
 Lighting required

## Details

Both sides of street  
 Underground utilities  
 Barrier-free  
 Walls, add 2 feet

Both sides of street  
 Underground utilities  
 Barrier-free  
 Walls, add 2 feet

Both sides of street  
 Underground utilities  
 Barrier-free  
 Walls, add 2 feet

Both sides of street  
 Underground utilities  
 Barrier-free  
 Walls, add 2 feet

Both sides of street  
 Underground utilities  
 Barrier-free  
 Walls, add 2 feet

# Chapter Three

## Part 2: Recommended Improvements For Bicycling



*Part Two of this chapter identifies the recommended improvements for bicycling in order to make it safer, more convenient and more enjoyable for both transportation-related and recreational bicyclists. The goal for Marina should be to increase bicycle use by 100% by the year 2010.*

*This is readily achievable, since Marina has excellent opportunities for developing a good bicycle network. Many collectors and arterials are overly wide and can be restriped to add bike lanes. New paths on separate rights-of-way should be constructed where feasible. Short connecting paths, described above in the walking improvements section, also serve to provide connectivity for bicyclists.*

### Bicycle Lanes

Bicycle lanes should be provided on most arterial streets – Marina has several overly wide arterials that can be easily restriped. Del Monte Boulevard, Reservation Road, and Beach Drive are all good candidates for restriping to add bike lanes.

Bike lanes should also be added on a number of collectors, particularly those that are overly wide and currently invite speeding. Crescent Avenue (below) is an example of such an extremely wide street.



**This wide portion of Del Monte Boulevard (above) invites speed and confusion. A recent utility cut creates an uneven surface. There is no distinct curb line. In the future this entire area can be dedicated to an urban village. Parking would be placed along the street. Meanwhile, as a first step the City of Marina can add bike lanes by placing stripes as shown below. Bike lanes will add many benefits to area traffic, helping reduce the tendency to speed.**





## Shared Use Trails

The City of Marina has vast reserves of undeveloped land that can benefit from a well-planned system of greenways, open space and trails. A significant trails network should be developed to form convenient connections between present day Marina services, and future village style development. Trails should be planned in consideration of preservation lands, wetlands, coastal and other environmental issues.

Trail art and trail interpretive programs should be developed with participation of the arts community.

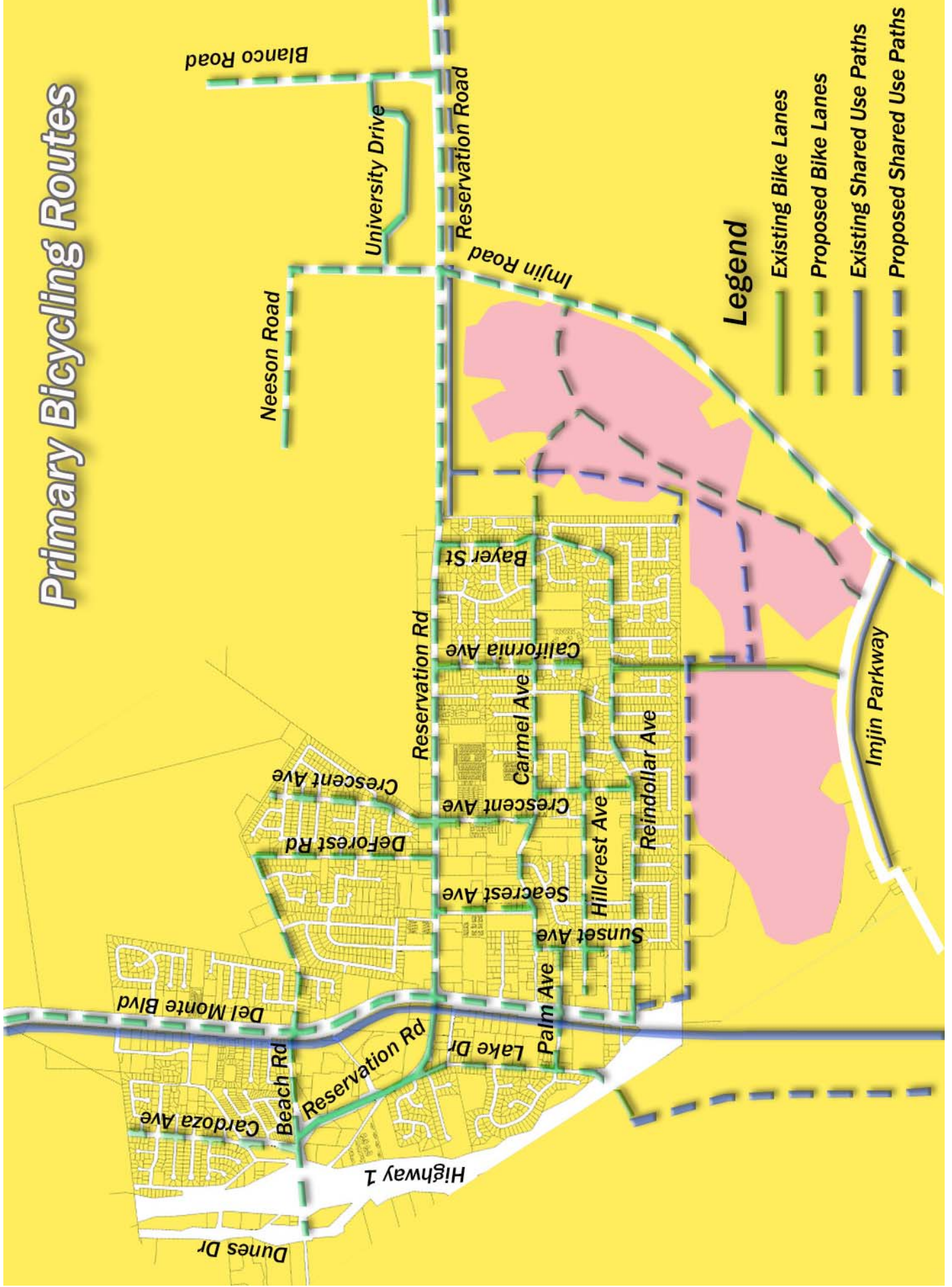
Trails should be specifically linked to the full system of routes to Monterey, Santa Cruz, Salinas and other area communities.

## System Plan

The proposed bicycle system plan for Marina is shown on the “Primary Bicycling Routes” map shown on the next page. The plan provides high levels of continuity and service along all major roadways. Table 3.2 identifies the projects necessary to develop the system



# Primary Bicycling Routes





**Table 3.2. List of Projects for Improved Bicycling Infrastructure**

<b>Project Type</b>	<b>Project Location and Description</b>	<b>Length of Construction (feet)</b>	<b>Length of striping (feet)</b>
Bike lanes	Bayer Street from Reservation Road to Carmel Avenue		1500
Bike Lanes	Beach Road from Del Monte Blvd to De Forest Road		2770
Bike Lanes	Beach Road from Reservation Road to Del Monte Blvd	100	1430
Bike lanes	Bostick Avenue from Carmel Avenue to Reindollar Avenue		1240
Bike lanes	California Avenue from Carmel south to the dead end		720
Bike lanes	California Avenue from Reservation Road to Carmel Avenue		1530
Bike Lanes	Cardoza Avenue from Lakewood Drive to the dead end		410
Bike Lanes	Cardoza Avenue Reservation Road to Lakewood Drive		2200
Bike lanes	Carmel Avenue from Sunset Avenue to Salinas Avenue		6740
Bike lanes	Crescent Avenue from Carmel Avenue to Reservation Road	450	1520
Bike lanes	Crescent Avenue from Costa Del Mar to the north end		480
Bike lanes	Crescent Avenue from Reservation Road to Costa Del Mar		2120
Bike Lanes	De Forest Road from Reservation Road to Beach Road		2800
Bike lanes	Del Monte Blvd from Beach Road to Marina Greens Drive		2670
Bike lanes	Del Monte Blvd from Reindollar Avenue to Reservation Road		3050
Bike lanes	Hillcrest Avenue from City Hall to Redwood Drive		4440
Bike Lanes	Lake Drive from Palm Avenue to Lake Court		1220
Bike Lanes	Lake Drive from Palm Avenue to Reservation Road		2150
Bike lanes	Palm Avenue from Lake Drive to Sunset Avenue	100	1870
Bike lanes	Reindollar Avenue from Del Monte to Bostick	200	7100
Bike Lanes	Reservation Road from Beach Road to Dunes Drive		1800
Bike Lanes	Reservation Road from Del Monte Blvd to Beach Road		3090
Bike Lanes	Reservation Road from Del Monte Blvd to Salinas Avenue		7320
Bike lanes	Seacrest Avenue from Carmel Avenue to Reservation Road		1510
Bike lanes	Sunset Avenue from Carmel Avenue to Reindollar Avenue		1500
Bike lanes w/ road diet	Del Monte Blvd from Reservation Road to Beach Road		2330
Signing	Remove stop signs at signalized trail intersections, replace with R9-5 sign (Bikes Use Ped Signal)		
Trail	Formalize the use trail from the corner of Paddon Place and Marina Drive to trail along Del Monte Blvd.	100	
Trail	Through park near Reservation Road from Del Monte Blvd to Seaside Circle	2000	
Trail	Del Monte Blvd - East side from Reindollar to southern edge of "old" Marina	800	
Trail	Along south edge of "old" Marina from Del Monte Blvd. To California Avenue	5000	
Trail	Along (or near) south and east edge of old Marina from California Ave. to Reservation	5100	

# Chapter Three

## Part 3: Recommended Improvements for Land Use



*Walking and bicycling are heavily dependent on proximity to proper village style development. Successful villages are composites of small to large clusters of mixed uses including civic, retail, office and residential uses. Over time the City of Marina should alter Del Monte and Reservation as follows.*

- 1. Convert auto-dominated shopping plazas into mixed-use villages.*
- 2. Develop new model village(s) to demonstrate financial viability.*
- 3. Develop sense of place.*
- 4. Create public spaces.*
- 5. Create compact Main Street districts.*
- 6. Provide higher density mixed-income.*
- 7. Provide small village civic uses.*
- 8. Maximize use of existing infrastructure.*
- 9. Provide municipal parking and discourage private and single use parking.*
- 10. Locate parking lots behind buildings.*
- 11. Reduce commercial driveways and convert them to public streets when appropriate.*
- 12. Maximize on-street parking.*





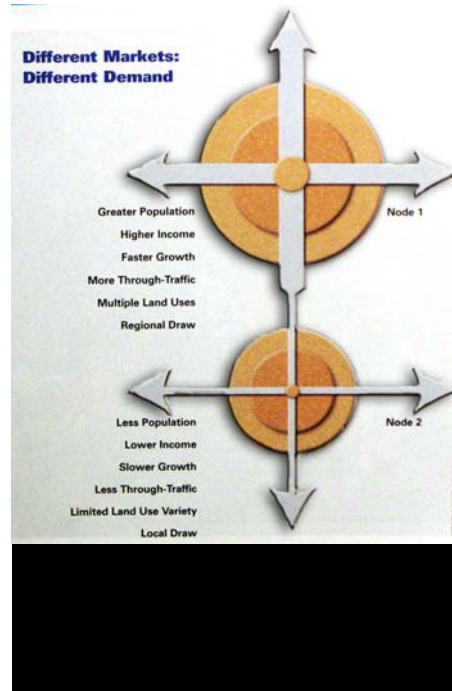
## Community of Villages

People will not walk in communities when the majority of primary commercial roads make walking experiences unpleasant.

Today commercial development along Del Monte and Reservation is thin and linear. Mixed uses have been discouraged until recently. Current strip and plaza style development favors auto travel, and penalizes other transportation choices.

In the future, Marina should ensure ongoing efforts to support the Marina General Plan by:

- Establishing a town center and a collection of small scale hamlet style centers.
- Developing a community vision plan outlining where potential walking scale villages will be centered.
- Developing and enhancing opportunities for developers to invest in new town center and other hamlet size village areas.
- Providing substantial public investments along Del Monte and Reservation.
- Providing quality streetscaping and access controls, making Del Monte and Reservation into attractive boulevard streets with on-street parking.

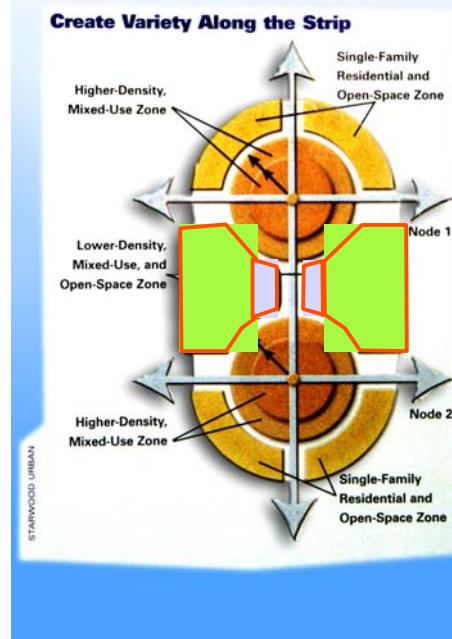


### Town Center

1. Boulevards permitted
2. 2-3 civic buildings
3. Plazas each 1/8<sup>th</sup> mile
4. Mixed income housing
5. 40,000 sq ft commercial building
6. Residential 16-40 du/a
7. Multi-family residential
8. Parking structures permitted

### Hamlet Center

1. Avenues
2. 1-2 civic buildings
3. Plaza each 1/8<sup>th</sup> mile
4. Affordable housing
5. 20,000 sq ft commercial building
6. Residential 11-16 du/a
7. Single family cottage/garden
8. Parking on street, and shared



### Develop Village Centers

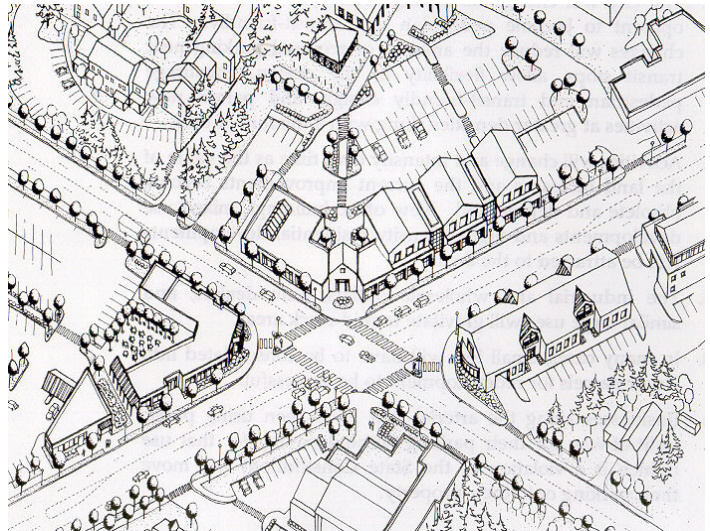
1. Enterprise Zones are established
2. Land is set aside for town or hamlet centers
3. Land swaps are made for buffers between villages
4. Buffer areas are developed with public space and appropriate lighter density settlement

## Village Locations Spaced One-Half Mile

The City of Marina should convert its primary intersections, such as Reservation and Del Monte into a village center, with buildings located close to the street. The best buildings should be on the corner, visually drawing people to this attractive town center.

The “Potential Village Centers” map on the next page suggests the eventual development of seven distinct nodes. Most of these should be small hamlet style development. One true town center should be developed. The following guidelines for villages should be used:

- Village nodes are most easily centered on prime investments, such as at a new transit hub or library. Incentives should be given to developers who provide moderate to high density mixed use development. Low density, or singular land use development shall be strongly discouraged.
- Land swaps should be encouraged in order to concentrate walking scale villages in appropriate locations.
- Municipal parking lots will be convenient, easy to find and available to all land uses. Developers should be permitted to build with little or no parking requirement. As an alternative they will pay into a trust for the construction of municipal parking lots. Private or exclusionary parking will be reduced.
- Each hamlet or town center should be clearly identified through variations in streetscaping, pennants, street furniture, buildings and other architectural detailing.



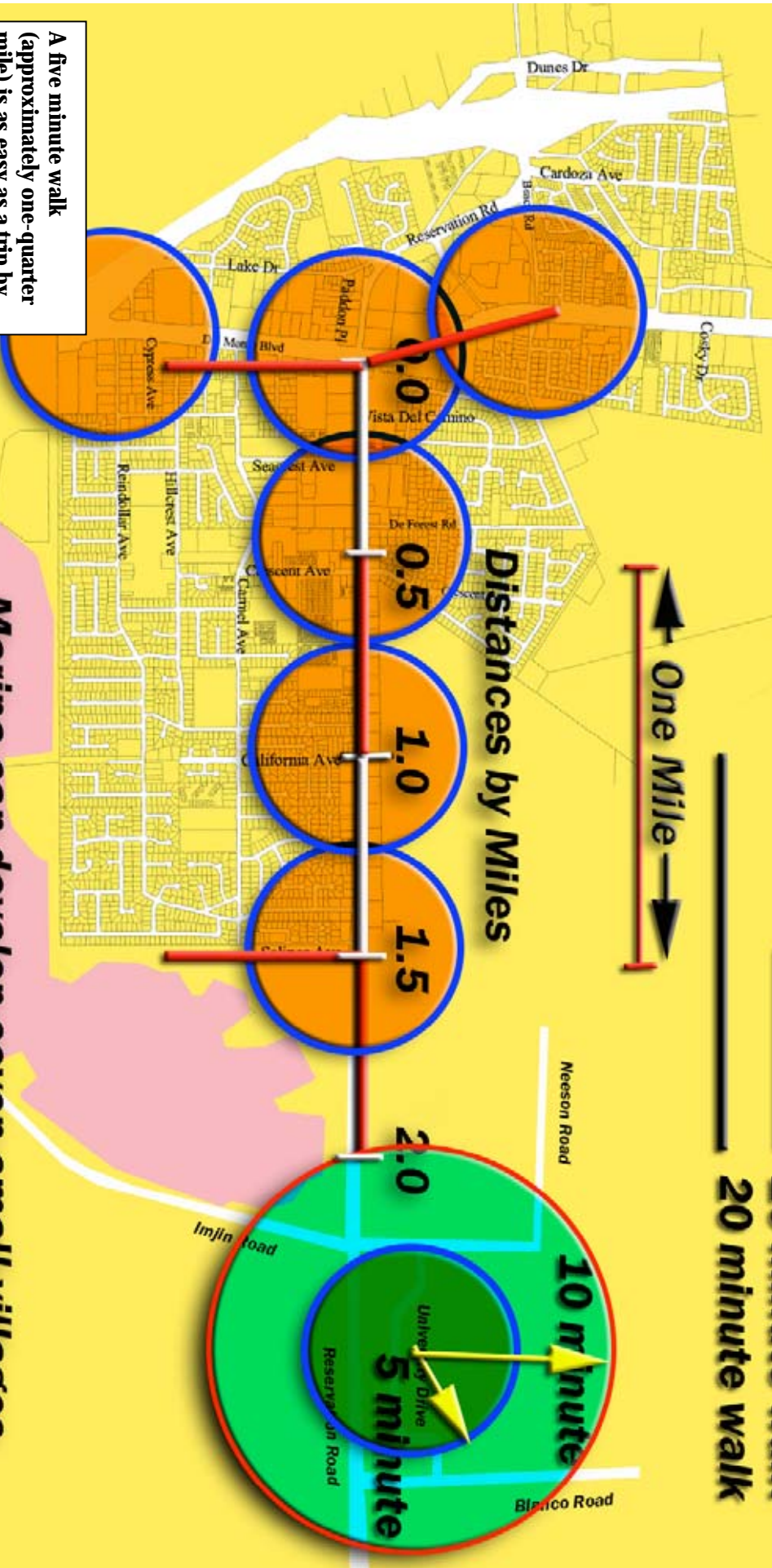


# Potential Village Centers

- 5 minute walk
- 10 minute walk
- 20 minute walk



**Distances by Miles**



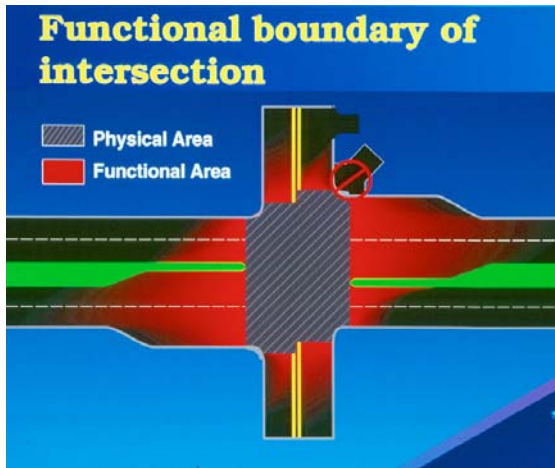
A five minute walk (approximately one-quarter mile) is as easy as a trip by car. A 10-minute walk (one-half mile) is easily achieved and is a good basis for planning a compact village. A 20 minute walk (one mile) is a reasonable distance to walk for exercise when the environment is pleasant.

**Marina can develop seven small villages over time. Each village absorbs many trips. One area, perhaps near the transit center, becomes the town center.**

# Chapter Three

## Part 4:

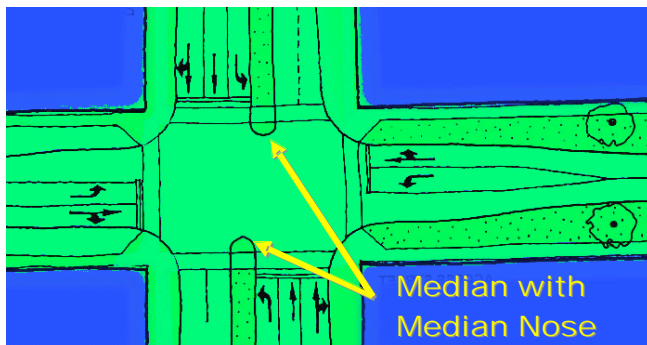
### Intersection and Street Crossing Recommendations



*This Chapter provides recommendations on intersection and street crossing planning and designs for pedestrians, bicyclists and motor vehicles. Intersections built in the City of Marina in the past favor high speed movements and congestion relief at the cost of reduced safety and choice in transportation.*

*The selection of appropriate intersection design features will enhance safety, aesthetics and place-making. These tools also reduce noise, pollution, and delay to motorists and pedestrians. The focus of this chapter is to shift emphasis from permitting speed and free-flow movement to providing improved levels of service and levels of quality to all people and vehicles making use of intersections. Intersections should be designed to provide uniform low-speed movement of motor vehicles through important commercial, industrial and neighborhood corridors.*

*This commitment to good intersections requires significant teamwork, cooperation and understanding by many diverse stakeholder groups and disciplines, including area businesses.*



#### Intersection Purposes and Elements

City of Marina intersections shall be planned, designed, constructed, operated and maintained to maximize safety, capacity and choice in transportation. In addition to providing effective movement of people and vehicles, all intersections shall be designed to maximize safety, reaction and response times through low speed designs.

To the greatest extent practicable designs shall minimize the number of conflict points and the speed at which they occur and maximize the amount of time motorists, bicyclists and pedestrians have before encountering these conflicts. Layout and design of intersections and crossings shall also provide maximum lighting and visibility for all roadway users.

#### Access Controls

Turn movements in and out of driveways shall be minimized on primary roadways within 250 feet of signalized intersections. Shaded areas in the illustration at the top of the page are referred to as the functional area of the intersection and must be kept clear of driveways.

#### Medians and Median Noses

Medians, with median cuts, should be provided whenever practicable on multiple lane roadways to provide a refuge for people that need additional time to cross a street. Median noses also reduce the turning speed of motorists. Median noses should be added to existing medians and constructed with all new medians.



### **Curb Extensions / Bulbouts**

To aid pedestrians in crossing the street all new or reconstructed intersections should include, to the greatest extent practicable, curb extensions on each corner. These bulbouts should be designed to capture all non-essential turning space, keep turning speeds low, prevent illegal parking and create attractive corners.

### **Channelizing Islands**

In order to reduce exposed crossing widths of especially wide intersections, channelized intersections should be used when they are evaluated to be the best tool for pedestrian needs. Channelized intersections should use urban designs (see Chapter D) to minimize speed of motorists using channelized islands.

### **Universal Design**

Intersections should also be designed to provide full access to people of all levels of ability. Whenever practicable, intersections shall be designed with two ramps per corner. Ramp widths and median opening widths should be sufficient to maximize the ease and speed of pedestrians leaving and entering the safety of the corner or median.

### **Roundabouts**

Roundabouts should be considered for all major roadway intersections. When roundabouts are chosen they should be designed, constructed, maintained and operated for pedestrian friendly speeds (typically 15-20 mph in commercial areas and 20-25 mph in more remote locations.)

### **Reduced Delays**

City of Marina intersections should be designed and operated to minimize delays to motorists, pedestrians and bicyclists. Today motorists, bicyclists and pedestrians experience lengthy delays at key intersections, such as Del Monte and Reservation. For example, due to the fact that the south leg of this intersection is closed to pedestrians, anyone wishing to cross at the south side of the intersection may take up to five minutes to complete their crossing safely. Although most hours of the day motorists only experience delays of 1-2 minutes, this idling time creates pollution, noise and other problems.



The above four lane intersection in Gridley, California can be reduced to two lanes. The bottom photo, seen from the same perspective, shows a properly rebuilt intersection. The new intersection reduces speeding and crossing distances, while creating a pleasant setting for commercial mixed-use development. Funding of key intersections can be justified for safety, capacity and economic development reasons. This intersection design improves motorist travel time, reduces speeds along the corridor, and has the potential to reduce injury producing crashes by 80-90%.

## Signalized Intersections

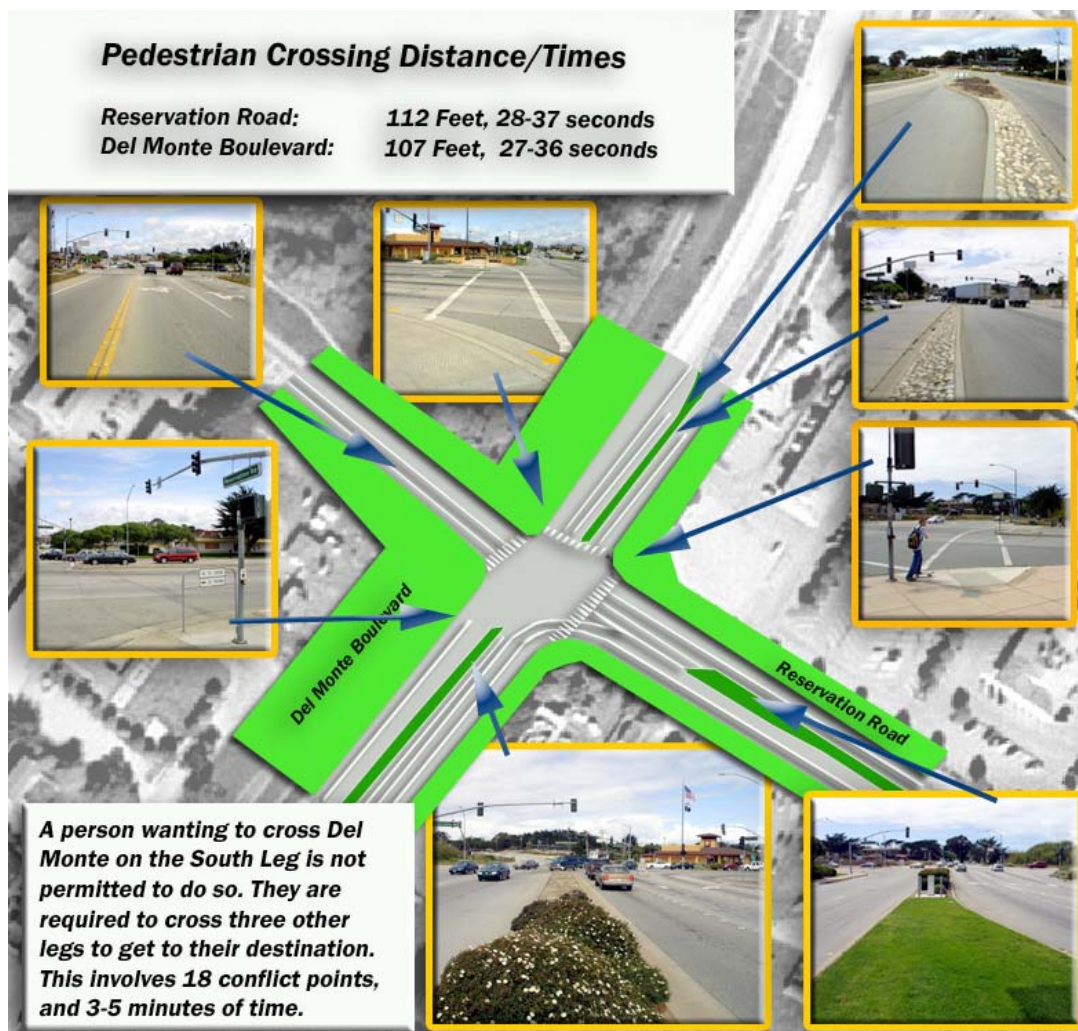
Signalized intersections in the City of Marina shall be as compact and efficient as practicable. At present key intersections are poorly designed, with excessive width on approach and storage lanes, creating excessively wide crossings for pedestrians. Wide intersections reduce the efficiency of moving both pedestrians and motorists.

For example, at Del Monte Blvd., the Reservation Road crossing of 112 feet requires a pedestrian clearance time (time it takes the pedestrian to cross the street) of at least 28 seconds. A redesign of this intersection using signals could get crossings down to 50-60 feet. This would allow the pedestrian clearance time to be cut in half.

In all cases, pedestrians are currently required to push buttons in order to cross signalized intersections. Several key intersections (e.g. South leg of Del Monte Boulevard) deny crossings to pedestrians. This has the unintended effect of forcing many pedestrians to cross the boulevard randomly at midblock locations.

All signalized intersections should be evaluated for methods to make them more pedestrian friendly.

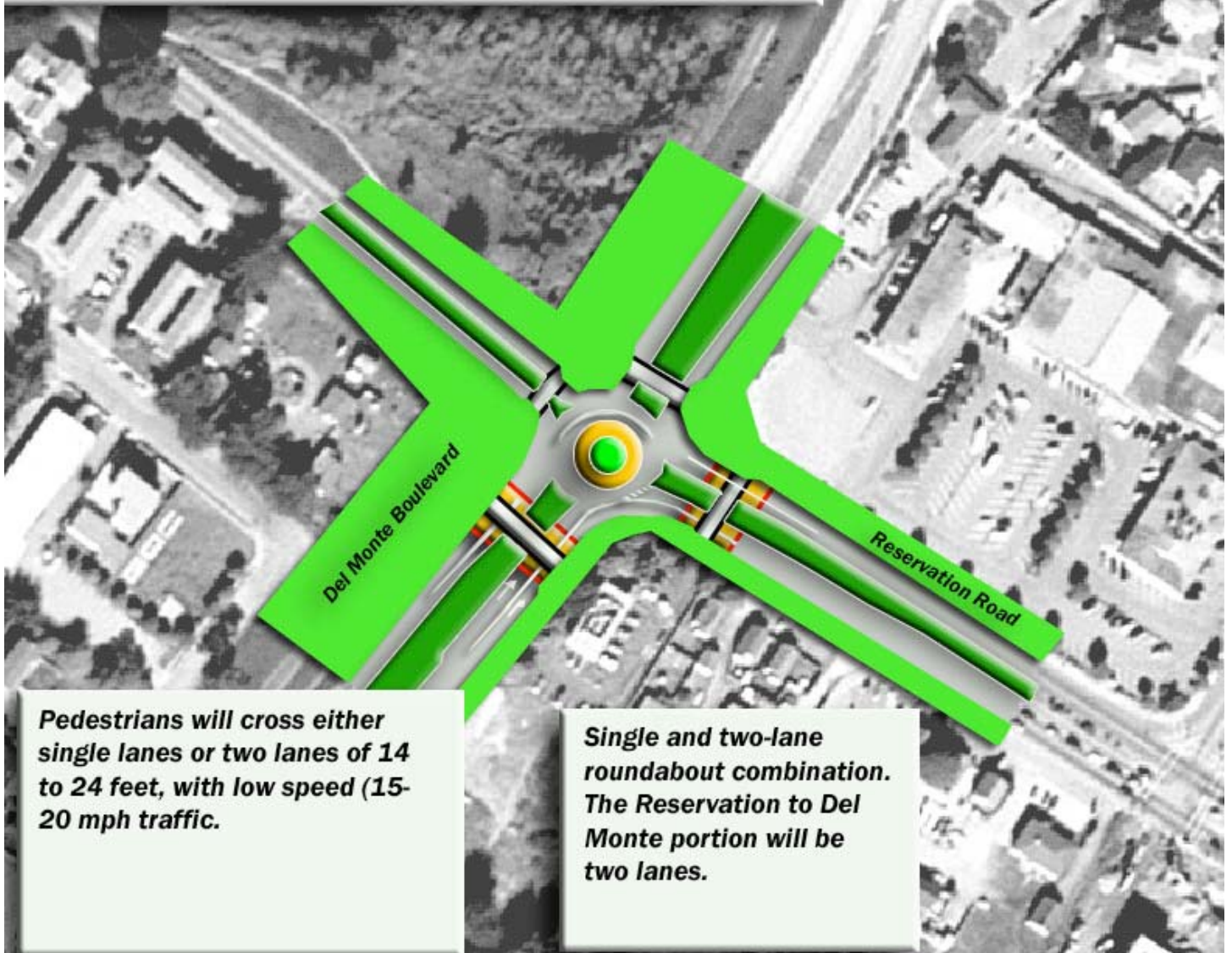
In some cases roundabouts should replace current signal controls. The proposed two-lane/one-lane roundabout for the Del Monte Boulevard and Reservation Road intersection (shown on the next page) has many benefits. Motorists and pedestrians would have less delay, potential injury producing crashes would likely be reduced 80-90%, and there would be less pollution and noise. The intersection serves as a key gateway to Marina's emerging downtown.





## ***Pedestrian Crossing Distance/Times***

***Reservation Road:*** 14-24 Feet, 3-8 seconds per side  
***Del Monte Boulevard:*** 14-24 Feet, 3-8 seconds per side

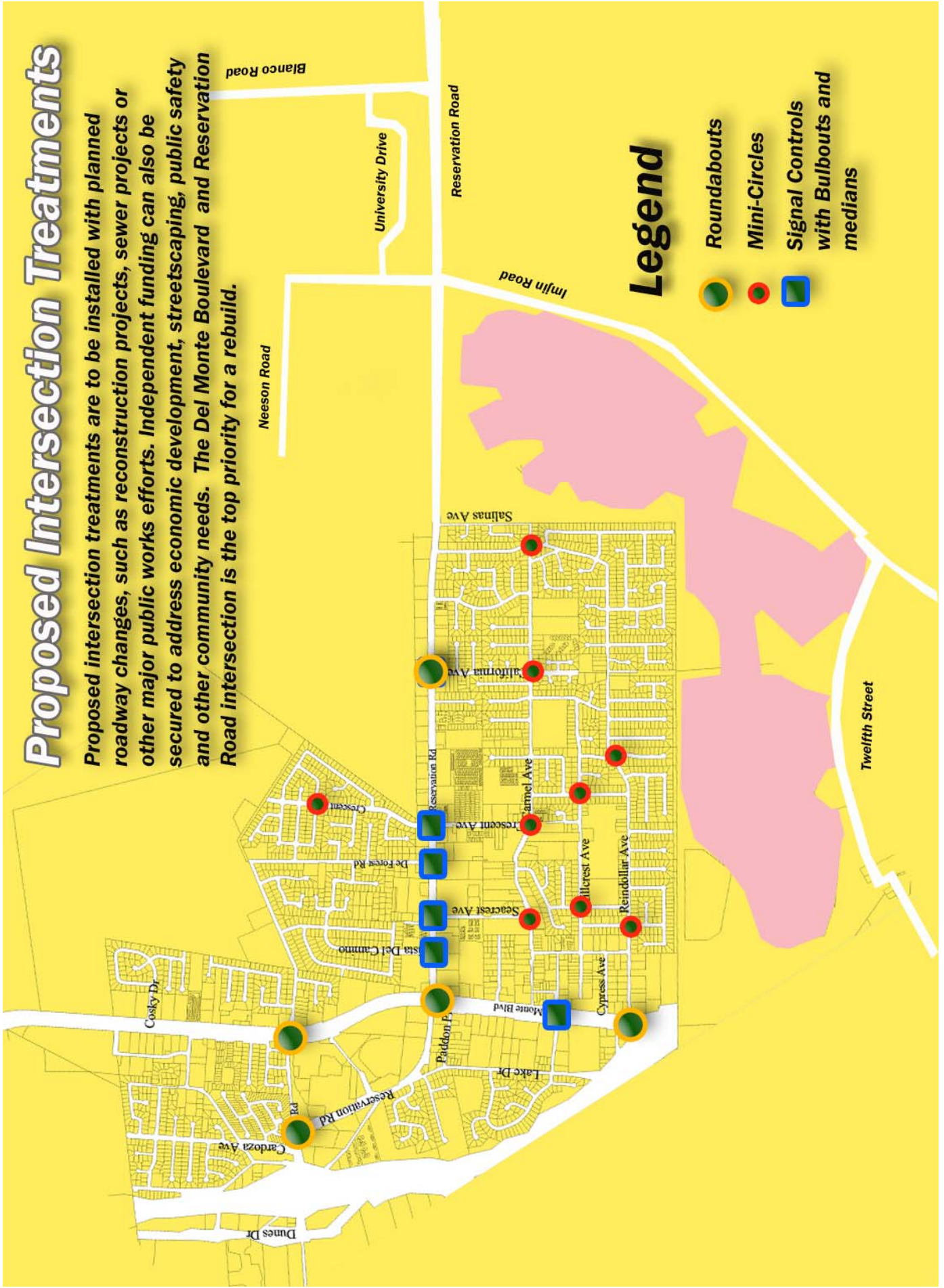


***Pedestrians will cross either single lanes or two lanes of 14 to 24 feet, with low speed (15-20 mph traffic.***

***Single and two-lane roundabout combination. The Reservation to Del Monte portion will be two lanes.***

# Proposed Intersection Treatments

Proposed intersection treatments are to be installed with planned roadway changes, such as reconstruction projects, sewer projects or other major public works efforts. Independent funding can also be secured to address economic development, streetscaping, public safety and other community needs. The Del Monte Boulevard and Reservation Road intersection is the top priority for a rebuild.



## Legend

- Roundabouts
- Mini-Circles
- Signal Controls with Bulbouts and medians



## Crossings Away From Signalized Intersections

City of Marina primary roadways currently have inadequate crossings away from signalized intersections. Due to the fact that excessive traffic signals create travel inefficiencies and safety problems for all roadway users, signal-controlled intersections are often spaced 800, 1200 or more feet apart. As signal-controlled intersections are spaced farther apart pedestrians will cross streets randomly. Pedestrians typically want to cross streets without going too far out of their desired path of travel.

### Crossing Location and Frequency

Experience shows that most pedestrians will go to a crossing if they do not have to travel more than 150 feet out of their direction of travel. Thus, quality main streets allow pedestrians to cross at organized locations every 300 feet. While this is not always practicable in suburban areas, it is more easily achieved in low-speed town center locations. Many mid-block crossings can be placed at non-signalized intersections. In some cases they can be placed across from parking lots, schools or other public buildings, or where two non-signalized streets cross

### Mid-Block Crossing Designs

Mid-block crossings of two-lane roadways should be well marked and lit. For multi-lane roadway sections, additional measures should be taken, including median refuge islands, advance stop or yield lines and either speed controls or signals.



