Appendices

Appendix A: Bicycle and Pedestrian Suitability Model Overview

The Bicycle and Pedestrian Suitability Model was developed to determine the most likely areas within the City of San Clemente where cyclists and walkers are likely to ride to and come from. The model was created to prioritize areas and projects to benefit the largest number of cyclists possible. The Bicycle and Pedestrian Suitability Model identifies existing and potential bicycle activity areas citywide utilizing existing data within an extensive GIS database.

Bicycle and Pedestrian Suitability Model Description

The overall model is comprised of three basic models: the Attractor, Generator and Detractor Models. When these three interim models are combined, they create the Bicycle Suitability Model.

The model identifies the characteristics of each particular area in geographic space and assigns a numeric value for each of these characteristics. The score per area is then added to create a ranking for that particular area in geographic space.

Attractor Model Methodology

The Bicycle and Pedestrian Suitability Model identifies activity areas by utilizing cycling-related geographic features likely to attract cyclists. Bicycle and pedestrian commuter trips to nearby shopping centers, restaurants and work are typically short, usually between two and five miles each way. More avid cyclists will commute over 20 miles round trip. School age children will normally ride or walk to school no more than a few miles round trip. The closer these attractors are to neighborhoods and primary cycling and pedestrian generators the more they are conducive for trips by bicycle or walking and are then given a higher weighting score. A one mile maximum distance in the model was given to encompass the majority of the shorter bicycle trips and maximum pedestrian trips. The many attractors are close enough that they would overlap within the mile.

The point scoring for the given attractors are based on a multitude of cycling and walking opportunities and bicycle amenities such as bicycle parking connections with other modes of transportation. For example, elementary schools are typically in neighborhoods to accommodate the younger population. Some elementary school aged children walk or rely on their bicycle as a mode of transportation to get to school compared to high school kids who hold a drivers license. See Table AB 1 for features used in the Attractor Model.

a. The twelve features used were schools, parks and recreation facilities, neighborhood and community retail, neighborhood and neighborhood civic facilities (i.e. post offices, libraries, major attractions, and transit stations and stops.

b. Points were assigned to several categories in each feature type (See Table AB 1), recognizing certain features were more likely to attract cyclists than other features.

c. Once identified, distance buffers were applied to each location using the GIS street database to simulate the actual cycling distance and to develop an accurate distinction of cycling patterns. Each buffer increases in distance from the feature's center point. Distances can be found in Table AB 1.

d. Weighted distance values were then assigned to each buffer. For example, a quarter mile network buffer is assigned a higher value than a half mile network buffer, since more people are likely to ride their bicycle to a destination a quarter of a mile away than half a mile. These weight allows flexibility of priority attractors over others identified by the City's unique attractions and by City staff, the consultant team and public input.

e. The values assigned to each feature type were multiplied by the weighted distance values for each network buffer.

f. Each of the individual buffered feature types with their multiplied weighted values were overlaid on the city-wide cell grid. These cells contain values based on the scoring criteria found in Table AB 1. For example, if a 1/4 mile cell of an elementary school (7.5 points) overlays with a park with a 1/2 mile cell (3 points) then the value of that particular cell is 10.5 (7.5 + 3). This methodology applies to all the sub-models (Attractors, Generators and Detractors) of the Bicycle Suitability Model.

g. Within each cell, the features points were multiplied by the weighted values and then added to the other feature point scores with a resulting total attractor value assigned to the cell.

h. The areas with high concentrations of cells with high values were identified. These high concentration areas identify existing and potential high cycling activity areas throughout the City.

Table AB 1: Mobility Attractors

		Weighted Multiplier			
Mobility Attractors*	**Points***	**1/4 mile**	**1/2 mile**	**3/4 mile**	**1 mile**
San Clemente Pier	5	7.5	5	3.75	2.5
Commercial Districts	5	7.5	5	3.75	2.5
Elementary Schools (Including Private)	4	6	4	3	2
Beaches	4	6	4	3	2
Amtrak Stations	3	4.5	3	2.25	1.5
Middle Schools	3	4.5	3	2.25	1.5
Neighborhood and Community Retail	3	4.5	3	2.25	1.5
Trail Heads	2	3	2	1.5	1
Neighborhood Civic Facilities (Libraries, Post Office & Religious Facilities)	2	3	2	1.5	1
Bus Stops	2	3	2	1.5	1
High Schools	1	1.5	1	0.75	0.5
Parks and Recreation (excludes non-useable open space)	1	1.5	1	0.75	0.5

Generator Model Methodology

The Bicycle and Pedestrian Suitability Model also utilizes demographic data as indicators of potential volume of cyclists and walkers based on how many people live or work within the activity areas identified in the Attractor Model. This particular component is called the Generator Model. Existing and projected total population and employment were used, as well as other demographic data such as age and use of public transportation. The weighted multiplier scores were derived from City staff input, previous applications of the model and the factors that most influence bicycle and walking trips within the City. Cycling and walking activity areas that contain a greater number of people living or working within them are more likely to walk or ride their ride to these areas. Refer to Table AB 2 for the features used in the Generator Model.

Detractor Model Methodology

Detractors discourage or detract people from riding their bicycles or walking. Relevant factors are more related to the vehicular intensity and perceived safety of the cycling and walking environment. Streets with high traffic volumes and high speeds tend to deter people from cycling and walking due to the amount of traffic adjacent to their route. Known areas of high bicycle and pedestrian-related collisions are also a deterrent since people may reroute their trip to avoid certain streets and intersections where safety may be a concern. The point system and weighted multipliers were derived from City input, public input through surveys, past applications of the model and available City data. Refer to Table AB 3 for the features used in the Detractor Model.

Composite Model

The Bicycle and Pedestrian Suitability Model then combines the Generators, Attractors and Detractors.

a. The Attractor, Generator, Barrier and Issues grid cell models were overlaid to produce the Bicycle and Pedestrian Suitability Model.

b. The combined grid cells that contain generators, attractors and detractors were added to provide a total composite value for each combined cell.

c. The composite value identifies the areas that have a higher cycling activity point total.

d. In some cases, the areas that have a high cycling activity score are areas that already have facilities, but further improvement can be made to enhance the cycling environment.

Refer to Figure XX: Bicycle and Pedestrian Suitability Model, for the results of overlaying the four previous mapping efforts.

Table AB 2: Mobility Generators

Mobility Generators	Points	Weighted Multiplier	Final Score
Cycling Mobility: People who bike to work (1)			
>.5%	2	3	6
< .5%	1		3
Non-Vehicular Transportation: People who use public transportation to work (1)			
> 2%	2	3	6
< 2%	1		3
Walking Mobility: People who walk to work (1)			
> 2%	2	3	6
< 2%	1		3
Population Density (3)			
> 10	3	2	6
5 - 10	2		2
1 - 5	1		2
Employment Density (6)			
> 5	3	2	6
2 - 5	2		2
1 - 2	1		2
Age Percentage: Children per acre (under 16 years old) (2)			
> 25%	3	2	3
15 - 25%	2		1
< 15%	1		1
Age Percentage: Seniors (65 years and over) (2)			
> 25%	3	2	3
15 - 25%	2		1
< 15%	1		1
Disability Percentage: People with Disabilities (2)			
> 25%	3	2	3
15 - 25%	2		1
< 15%	1		1
Proposed Regional Priority Routes (4)			
	2	1	2
Household Income (Affects Transportation Options) (5)			
< $34,500	3		3
$34,500 - $63,400	2	1	2
> $63,400	1		1

Table AB 3: Mobility Detractors

Mobility Detractors	Points	Weighted Multiplier	Final Score
Collisions Per Year (1)			
> 2	2	4	8
1	1		4
No collisions	0		0
Traffic Counts: Highly congested intersections (2)			
> 5,000	4	3	12
2,000 - 5,000	3		9
0 -2,000	2		6
Speed as it Affects Perception of Safety			
45+	3	2	6
Speed under 25 mph			
< 25 mph	1	1	2
Freeway as Barriers Related to Pedestrian and Cycling Travel			
	2	*1*	1
Railways as Barriers to Pedestrian and Cycling Travel			
	2	1	2
Non-ADA Compliant Curb Ramps (1)			
	2	1	2
Slope and Canyons as Barriers to Pedestrian and Cycling Travel			
Landform Feature with Slope > 25%	2	1	2
Landform, Walkway or Street Slope 10-25%			
Walkway Slopes < 10%	0	1	0
Slope and Canyons as Barriers to Cycling Travel			
Landform Feature with Slope > 25%	2	1	2
Landform, Walkway or Street Slope 10-25%	1		1
Walkway Slopes < 10%	0		0

Table AB 2 Notes:

(1) Percentage of total census block working population, 2000 US Census
(2) Percentage of total census block population, 2000 US Census
(3) Persons per acre, 2000 US Census
(4) 2009 OCTA Commuter Bikeways Strategic Plan
(5) 2000 US Census
(6) Persons per acre, 2010 SCAG Estimates

Table AB 3 Notes:

(1) 100ft buffer applied to each collision
(2) 1/4 mile applied to each intersection where data was collected

Appendix B: Project Scoring Criteria

Bicycle Facility Priority Criteria and Implementation

The projects in this chapter are a combination of planned and candidate bicycle facilities. Since the planned projects have yet to be implemented, prioritizing them along with the candidate projects subjects all of them to the same priority and implementation criteria. These projects were then itemized into Prioritized Projects, which are those that will have a significant impact on the existing bikeway system, such as closing major gaps and extending or developing bicycle paths, lanes or routes along major transportation corridors.

The following prioritization criteria were used to help identify which routes are likely to provide the most benefit to the City's bikeway system. The numbering used to identify projects within each bikeway facility class in the following sections does not necessarily imply priority.

Bicycle Suitability Model (total of 4 points)

The Bicycle Suitability Model acquires the routes total model score and is then divided by the acreage of that project. This technique normalizes the scores throughout all the projects. This allows projects with smaller footprints to be addressed using the same scoring parameters as larger projects. The breakdown in points is as follows:

1. Scoring breakdown: 1 - 4 points

- High: >1,500 = 4 points
- Moderately high: 1,000-1,500 = 3 points
- Moderate: 500-1,000 = 2 points
- Low: <500= 1 point

Mobility and Access (total of 9 points)

2. Provides access to major bicycle traffic generators: 1 - 3 points

- Provides access to areas of high bicycle traffic generation = 3 points

(Ex: Project is over a mile long and travels through single family and/or multi-family residential and high employment densities such as office parks)

- Moderately access to areas of high bicycle traffic generation = 2 points

(Ex: Project is less than a mile long and travels through or near single family residential, a school and moderate employment densities such as schools, commercial areas)

- Low access to areas of high bicycle traffic generation = 1 point

(Ex: Project near low or rural density residential land use and low to moderate employment densities)

3. Closes gap in significant route: 1 - 3 points

- Closes gap in an existing high bicycle traffic facility = 3 points
- Closes gap in a non-existent high bicycle traffic facility = 2 points
- Closes gap to connect facilities with little bicycle use = 1 point

4. Adequate access to activity centers, schools and transit sites: 1 – 3 points

- Provides direct access to major activity center, elementary school and/or transit center = 3 points
- Provides direct access to activity center, middle and/or high school or bus stop = 2 points
- Route is not near activity center, school and/or transit center but is important for connections = 1 point

Safety (total of 6 points)

5. Improves locations where bicycle crashes have occurred: 1 - 3 points

- Fatal collisions have occurred directly on this route = 3 points
- Injury and non-injury related bicycle collisions have occurred on or near this route = 2 points
- No collisions have occurred on this route = 1 point

6. Improves routes with high vehicular traffic volumes: 1 - 3 points

- Improves routes with high average daily trips (>5,000*) = 3 points
- Improves routes with moderate average daily trips (2,500-5,000*) = 2 points
- Improves routes with low average daily trips (<2,500*) = 1 point

Note: ADTs are typically much higher. These categories were based on available GIS files provided by the City

Existing Conditions (total of 6 points)

7. Roadway able to accommodate bikeways: 1 – 3 points (Class 2 Only)

- Roadway can accommodate the candidate facility with no construction and/or redesign = 3 points

(Ex: Add striping and signage)

- Roadway can accommodate the candidate facility with minimal to moderate construction and/or re-design = 2 points

(Ex: Median or curb removal or realignment, re-striping lanes, etc)

- Roadway will need extensive construction and/or redesign to accommodate the candidate facility = 1 point

(Ex: Parking removal, sidewalk/planting strip removal and reinstallation, roadway realignment, utility realignment, etc)

Regional Significance (total of 6 points)

8. Route has regional significance in the bikeway system: 1 – 3 points

- High significance, connects major bicycle facilities and activity centers = 3 points

(Ex: Part of OCTA Commuter Bikeway Strategic Plan network, connections to adjacent City's bicycle facilities)

- Moderate significance, connects some routes and activity centers = 2 points

(Ex: Important internal connections to regional routes and major activity centers, schools and colleges)

- Little significance, does not directly connect to activity centers, etc, but is still important in the bikeway system = 1 point

(Ex: Project travels through neighborhoods and makes connections to other facilities)

9. Route has aesthetic attributes: 1 – 3 points

- Majority of route has significant aesthetic attributes, such as visible open space, waterway corridors, parks, beaches, etc. = 3 points
- Parts of route has moderate aesthetic attributes, such as visible open space, waterway corridors, parks, beaches, etc. = 2 points
- Little to none of route benefits from open space, waterway corridors, parks, beaches, etc. = 1 point

The maximum possible score was 31 points for Class 2 facilities and 28 for Class 1 and Class 3 facilities. Proposed projects can be rated periodically at whatever interval best fits funding cycles or to take into consideration the availability of new information, new funding sources, updated crash statistics, etc. Bikeway facility prioritization and implementation should be fine tuned and adjusted accordingly based on future circumstances.

Pedestrian Facility Priority Criteria and Implementation

The following pages are the results of the pedestrian prioritization process. These worksheets are based on the criteria found in Chapter 3. These worksheets can be used to rank new projects when a series of pedestrian improvements are to be made.

Table AC 1: Avenida Pico

Project Name:	**Avenida Pico between Calle de Industrias and Avenida Presidio**
Issues Addressed:	Narrow sidewalks, lack of bicycle facilities, no pedestran buffer, high volume traffic, unsafe on-off ramp crossings
Improvements Proposed:	Widen sidewalks, add bike lanes, improve pedestrian signals and crosswalks. Implement Avendia Pico Corridor Plan

PEDESTRIAN DEMAND CRITERIA*			Total Score for this Criteria =	**2**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**7.2**	High (1,001-1,500)	3	
Model priority raw score:	**6,841**	Medium (501-1,000)	2	2
Normalized Score (model raw score / acres)	**950**	Low (<500)	1	

FEASIBILITY CRITERIA	Total Score for this Criteria =	**6**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	2
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	1

SAFETY CRITERIA	Total Score for this Criteria =	**3**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations):	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	3
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	Total Score for this Criteria =	**8**
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	Total Score for this Criteria =	**9**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	3
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	1
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	1
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	

WALKABILITY CRITERIA	Total Score for this Criteria =	**4**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	**30**
TOTAL SCORE (includes pedestrian demand levels)**:**	**32**

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available		
Contributing factors sheets	***Yes***	***No***
Attached maps or diagrams	***Yes***	***No***
Other information available		
Refer to specific page# in bike / ped master plan		***111***

Table AC 2: El Camino Real

Project Name:	**El Camino Real from Camino Capistrano to Avenida Pico**
Issues Addressed:	High volume use for pedestrian and cyclists. Lack of adequate sidewalk width and continuity
Improvements Proposed:	Implement 12' multi-use bike path

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**4**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	4
Acres around the project site evaluated in the model:	12	High (1,001-1,500)	3	
Model priority raw score:	19,366	Medium (501-1,000)	2	
Normalized Score (model raw score / acres)	1,614	Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**0**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	**Total Score for this Criteria =**	**3**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations)?	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	3
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**8**
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	2
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**7**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	3
Missing routes to schools will be added or substantially improved from current conditions:	2	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	1
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**4**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)***:	22
TOTAL SCORE (includes pedestrian demand levels)****:	26

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available

Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan	*111*	

Table AC 3: Camino De Los Mares

Project Name:	**Camino de Los Mares between Marbella and I-5**
Issues Addressed:	Numerous sidewalk obstructions, enough density for a park-once district but currently poor pedestrian environment.
Improvements Proposed:	Complete Street Project to remove obstructions while preserving street trees, study to limit vehicular entry/exit points.

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**2**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	6	High (1,001-1,500)	3	
Model priority raw score:	3,731	Medium (501-1,000)	2	2
Normalized Score (model raw score / acres)	622	Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**2**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	2
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	**Total Score for this Criteria =**	**3**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations)?	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	3
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**6**
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**4**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	
Missing routes to schools will be added or substantially improved from current conditions:	2	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	1
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**4**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	**19**
TOTAL SCORE (includes pedestrian demand levels)**:**	**21**

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available

Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan	*111*	

Table AC 4: Avenida Del Presidente

Project Name:	**Avenida del Presidente between Ave de Los Lobos Marinos and Avenida Junipero**
Issues Addressed:	Missing sidewalks
Improvements Proposed:	Add missing sidwalks

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**3**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**5.1**	High (1,001-1,500)	3	3
Model priority raw score:	**6,748**	Medium (501-1,000)	2	
Normalized Score (model raw score / acres)	**1,323**	Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**6**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	3
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	**Total Score for this Criteria =**	**1**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations):	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	1

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**5**
Will accessibility be improved by this project by removing barriers or adding new facilities:	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**10**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	3
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	1
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	1
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**4**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	**26**
TOTAL SCORE (includes pedestrian demand levels)**:**	**29**

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available		
Contributing factors sheets	***Yes***	***No***
Attached maps or diagrams	***Yes***	***No***
Other information available		
Refer to specific page# in bike / ped master plan		***111***

Table AC 5: Avenida Vista Hermosa at Interstate 5

Project Name:	**Avenida Vista Hermosa over I-5**
Issues Addressed:	High speed traffic, high speed turns and close pedestrian proximity along routes to school
Improvements Proposed:	Enhance freeway crossing for pedestrians

PEDESTRIAN DEMAND CRITERIA*			Total Score for this Criteria =	3
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**2.6**	High (1,001-1,500)	3	3
Model priority raw score:	**3,481**	Medium (501-1,000)	2	
Normalized Score (model raw score / acres)	**1,339**	Low (<500)	1	

FEASIBILITY CRITERIA	Total Score for this Criteria =	2
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	2
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	Total Score for this Criteria =	2
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations):	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	2
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	Total Score for this Criteria =	6
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	

CONNECTIVITY CRITERIA	Total Score for this Criteria =	3
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	Total Score for this Criteria =	4
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	17
TOTAL SCORE (includes pedestrian demand levels)**:**	20

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available		
Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan		*111*

Table AC 6: Avenida Vista Hermosa between Via Turqueza and Camino Faro

Project Name:	**Avenida Vista Hermosa between Via Turqueza and Camino Faro**
Issues Addressed:	Public comments reported on sidewalk abruptly ending and missing walkway accross from school
Improvements Proposed:	Install sidewalk on west side of the street

PEDESTRIAN DEMAND CRITERIA*			Total Score for this Criteria =	1
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**4.6**	High (1,001-1,500)	3	
Model priority raw score:	**1,830**	Medium (501-1,000)	2	
Normalized Score (model raw score / acres)	**398**	Low (<500)	1	1

FEASIBILITY CRITERIA	Total Score for this Criteria =	6
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	3
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	Total Score for this Criteria =	2
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations)?	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	2
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	Total Score for this Criteria =	8
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	Total Score for this Criteria =	3
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	Total Score for this Criteria =	4
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	23
TOTAL SCORE (includes pedestrian demand levels)**:**	24

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available		
Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan	*111*	

Table AC 7: Avenida Vista Hermosa between Camino Faro and Interstate 5

Project Name:	**Avenida Vista Hermosa between Camino Faro and I-5**
Issues Addressed:	Continuation of missing walkway adjacent to school
Improvements Proposed:	Continuation of installation of sidewalk on west side of the street.

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**2**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**2.9**	High (1,001-1,500)	3	
Model priority raw score:	**1,758**	Medium (501-1,000)	2	2
Normalized Score (model raw score / acres)	**606**	Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**6**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	3
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	

SAFETY CRITERIA	**Total Score for this Criteria =**	**2**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations):	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	2
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**5**
Will accessibility be improved by this project by removing barriers or adding new facilities:	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**3**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins:	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**4**
How will this project improve walkability and decrease the harshness of the walking environment:	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	**20**
TOTAL SCORE (includes pedestrian demand levels)**:**	**22**

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available		
Contributing factors sheets	***Yes***	***No***
Attached maps or diagrams	***Yes***	***No***
Other information available		
Refer to specific page# in bike / ped master plan		***111***

Table AC 8: Sidewalks near Las Palmas Elementary School

Project Name:	**Sidewalks near Las Palmas Elementary School**
Issues Addressed:	Sidewalk gaps near the school
Improvements Proposed:	Add missing sidewalks

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**2**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:	**200**	High (1,001-1,500)	3	
Model priority raw score:	**139,181**	Medium (501-1,000)	2	2
Normalized Score (model raw score / acres)	**696**	Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**7**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	3
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	1

SAFETY CRITERIA	**Total Score for this Criteria =**	**3**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations)?	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	3
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**8**
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**7**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	1
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	1
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**4**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	**29**
TOTAL SCORE (includes pedestrian demand levels)**:**	**31**

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available

Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan		*111*

Table AC 9: "Old" San Clemente Sidewalk Study

Project Name:	**"Old" San Clemente Sidewalk Study**
Issues Addressed:	Sidewalk gaps throughout "Old" San Clemente need furthur study to determine how to systematically correct.
Improvements Proposed:	Update sidewalk network data, measure public right-of-way. Review possible solutions including one-way street network or right-of-way acquisition. Determine ranking system to decide which gaps to fill first

PEDESTRIAN DEMAND CRITERIA*			**Total Score for this Criteria =**	**0**
Based on the Pedestrian Priority Model, the area has a pedestrian activity and issue score of:			**Max Points (10)**	**Activity Points****
Lineal feet of improvement:		Very High (>1,500)	4	
Acres around the project site evaluated in the model:		High (1,001-1,500)	3	
Model priority raw score:		Medium (501-1,000)	2	
Normalized Score (model raw score / acres)		Low (<500)	1	

FEASIBILITY CRITERIA	**Total Score for this Criteria =**	**7**
How beneficial, innovative or practical is this project?	**Max Points (10)**	**Feasibility Points**
The project will have high value to pedestrians with an overall low project cost:	3	3
The project meets state and federally approved designs and guidelines for funding eligibility with no waivers required:	3	3
The project will have high value to pedestrians but with an overall moderate to high project cost:	2	
The project includes innovative treatments that require experimental waivers or elements that are not state approved:	1	
Similar projects are already planned as indicated in other city and regional documents or plans:	1	1

SAFETY CRITERIA	**Total Score for this Criteria =**	**7**
Have there been collisions (peds/bikes/cars) between 2006-2009 (excluding DUIs, illegal movements or yield violations)?	**Max Points (10)**	**Safety Points**
One or more fatalities have occurred at this location:	4	4
Multiple collisions between vehicles (or bikes) and pedestrians with serious injuries have occurred in this general area:	3	3
A low number of collisions between vehicles, bikes and/or pedestrians with minor injuries in this general area:	2	
No collisions noted but the public has expressed safety concerns in the area:	1	

ACCESSIBILITY CRITERIA	**Total Score for this Criteria =**	**8**
Will accessibility be improved by this project by removing barriers or adding new facilities?	**Max Points (10)**	**Access Points**
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:	3	3
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):	2	2
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):	2	
Pedestrian facilities that are not in conformance with current ADA standards, will be brought up to the current standards:	1	1
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:	1	1
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:	1	1

CONNECTIVITY CRITERIA	**Total Score for this Criteria =**	**10**
How will connections be added or improved or barriers to connectivity be removed between major destinations and origins?	**Max Points (10)**	**Connectivity Points**
Missing routes to transit centers will be added or substantially improved from current conditions:	3	3
Missing routes to schools will be added or substantially improved from current conditions:	2	2
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:	2	2
Connections will be added or substantially improve movement between major housing origins and major public facilities:	1	1
Connections will be added or substantially improved between major housing origins and major retail or neighborhood serving functions:	1	1
Connections will be added or substantially improved between major housing origins, recreation and employment areas:	1	1

WALKABILITY CRITERIA	**Total Score for this Criteria =**	**10**
How will this project improve walkability and decrease the harshness of the walking environment?	**Max Points (10)**	**Walkability Points**
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:	4	4
Bright, hot or highly reflective walking areas will receive shade from trees:	3	3
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:	2	2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, lighting, etc) will improve the possible walkability:	1	1

SUB-TOTAL SCORE (does not include pedestrian demand levels)*:**	42
TOTAL SCORE (includes pedestrian demand levels)**:**	42

NOTES:

** The Pedestrian Demand section is considered optional but should be used when applying for grant applications*

***Do not exceed the maximum points from the column to the left*

****As an optional ranking system, the Pedestrian Activity Level has not been included in the Sub-Total Score*

*****This Total Score includes the Pedestrian Activity Levels*

Supplemental Information Available

Contributing factors sheets	*Yes*	*No*
Attached maps or diagrams	*Yes*	*No*
Other information available		
Refer to specific page# in bike / ped master plan		*111*

Appendix C: Planning References

The following are excerpts from the referenced documents as they relate to the City of San Clemente's bikeway and pedestrian planning efforts.

City, County and State Planning Documents

City of San Clemente General Plan (2012)

The City of San Clemente General Plan is the City's primary planning policy document. California State law (Government Code Section 65300) requires that each city prepare and adopt a comprehensive, long-term general plan for its development. It must contain seven elements including land use, circulation, housing, conservation, open space, noise, and safety. In addition, it permits the inclusion of other elements that address specific needs and objectives of the city.

The General Plan is the foundational policy document of the City of San Clemente. It defines the framework by which the City's physical and economic resources are to be managed and utilized over time. City decisions on land use, building and open space design and character, conservation of existing and provision of new housing, provision of supporting infrastructure and public and human services, environmental resource protection, protection of residents from natural and man-caused hazards, and allocation of fiscal resources, are guided by the Plan. The General Plan acts to clarify and articulate the City's intentions with respect to the rights and expectations of the general public, property owners, and prospective investors and business interests. Through the General Plan, the City can inform these groups of its goals, policies, and development standards, and communicate what is expected of the City government and private sector to meet its objectives.

The General Plan defines and sets forth the policies and standards by which the community will be permitted to develop. The General Plan guides all planning, environmental decisions and development over the next twenty years. Among other things, the General Plan establishes what kinds of land uses will be permitted and where and how dense development may be. Objectives and policies addressing overall bicycle and pedestrian facility development in the General Plan are included in the Circulation Element.

The Circulation Element guides the development and maintenance of the community's circulation systems and provides for the accommodation of vehicular trips, or how people, goods and services circulate through the community. This element is largely dependent upon, and related to, the issues and policies contained within the Land Use Element. Bicycle and pedestrian policies for certain areas are more specifically addressed in the General Plan Coastal Element (see following sections).

City of San Clemente Coastal Element

The Coastal Element is an element of the City of San Clemente General Plan and is the adopted policy statement for growth, development, and preservation of the coastal zone, making the Coastal Element the primary planning document for reviewing coastal-related issues and development in the coastal zone. Its enabling legislation, the Coastal Act of 1972, directs local governments to provide for maximum public access to the shoreline.

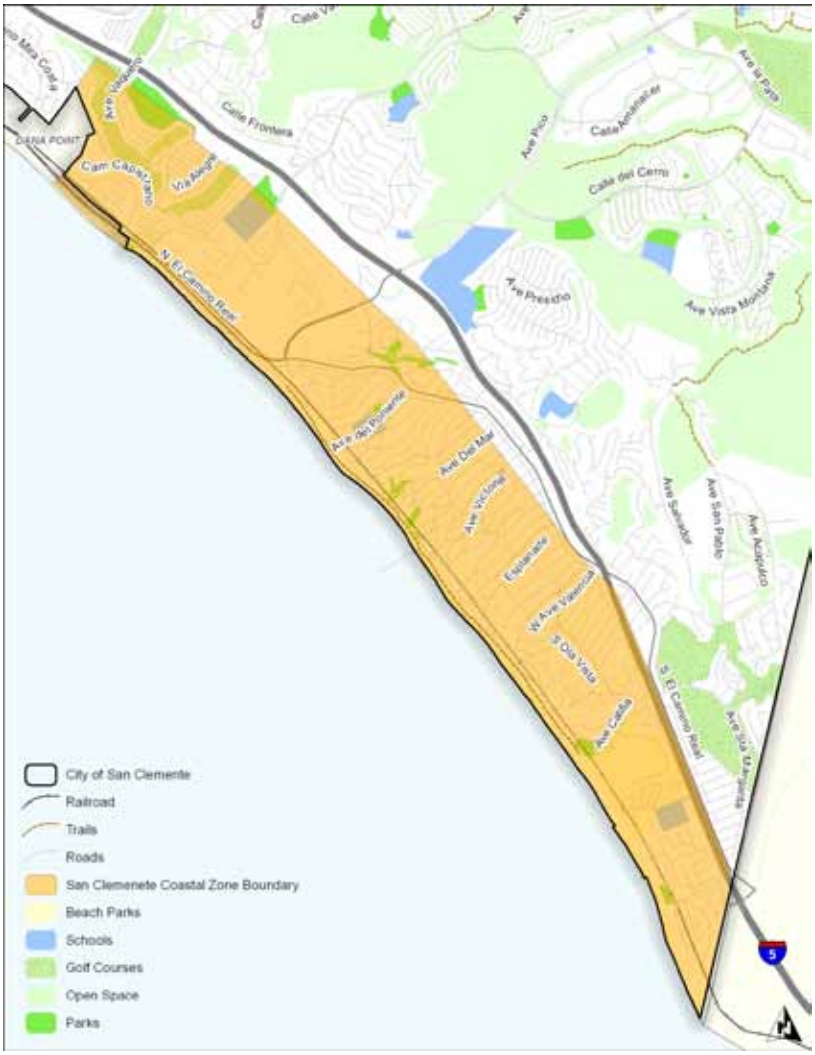
The Coastal Element identifies specific goals and policies regarding the use and development of land and the preservation and enhancement of coastal resources. It also establishes the appropriate locations for residential, commercial, recreational and mixed use development within the coastal zone. The document also identifies areas that should remain free from development to preserve the remaining coastal canyons, coastline, coastal bluffs and coastal access points.

The policies in the Land Use Element of the General Plan provide the guiding policies for the Coastal Element. The supplemental policies in the Coastal Element are consistent with the policies contained throughout the General Plan.

The Coastal Element addresses bicycle circulation in *Chapter 2, Section 204: Access Routes, Subsection D: Bike and Pedestrian Circulation*. Within the coastal zone, it specifically mentions two bikeways running parallel to the coast, on El Camino Real and on South Ola Vista, as well as three north/south routes on Avenida Pico, Camino De Los Mares and Avenida Vista Hermosa.

Pedestrian circulation is addressed in Section 205: Shoreline Access, primarily as it relates to beach access throughout the coastal zone area via major local roadways. To distinguish the various beach access points, the coastline is divided into four areas based on the coastal access points within each area and sharing common coastal circulation routes from Interstate 5 and Pacific Coast Highway (El Camino Real).

City of San Clemente Coastal Zone



OCTA Commuter Bikeways Strategic Plan - CBSP (2009)

The *Commuter Bikeways Strategic Plan* (CBSP) was developed by the Orange County Transportation Authority (OCTA) to encourage the enhancement of Orange County's regional bikeways network as a way to make bicycle commuting a more viable and attractive travel option.

A number of challenges must be overcome for Orange County to excel as a bicycling region, including improving safety and access to key destinations, providing better plan coordination and support facilities. Cycling can play a significant role in mitigating congestion, climate change and oil dependency. The goal of the CBSP is to help address these many challenges by providing:

- A strategy for improving the regional bikeway network
- Eligibility for state Bicycle Transportation Account (BTA) funds
- Identification of roles and responsibilities for OCTA regarding bikeways
- Documentation of existing and planned Orange County bikeways

The projects described in the CBSP are a compilation of projects planned by Orange County Cities and the County of Orange. The CBSP is a long range, financially unconstrained planning document. It will be the responsibility of each implementing agency to identify funding sources for the projects within their purview.

There are more than 1,000 miles of bikeways in Orange County, with roughly another 700 miles planned. It is the responsibility of the local jurisdictions to plan, implement and maintain bikeways in Orange County. These local jurisdictions include all of the 34 Orange County cities, the County of Orange and the California Department of Transportation (Caltrans).

According to the 2005 U.S. Census, less than one percent of Orange County's population commutes by bicycle and the vast majority (77.3 percent) commutes to work by driving alone. Orange County's 2005 population of 3,059,950 is expected to grow by nearly 600,000, more than 19 percent, by 2035, which will put more demand on transportation infrastructure.

Much of southern Orange County was developed as planned communities over the last 30 years. The roadway networks are generally wider and more circuitous than those to the north and many of them were designed with Class 2 bicycle lanes. However, the southern portion of the County has more hilly topography, and the planned communities tend to be relatively low density with housing separated from work and shopping centers. This layout often results in longer trips and the lower densities consequently result in fewer job opportunities near residential communities. Even so, many opportunities still exist, such as providing improved access and facilities at transit stations.

Applying the strategies discussed in this Plan and implementing the local jurisdictions' projects will help to create a regional bikeway network that will benefit Orange County communities, from the bicycle-dependent, to casual cyclists, and people of all income levels.

According to the CBSP, OCTA's role in bikeway planning includes suggesting regional priorities for optimal use by local jurisdictions, assisting in coordinating plans between jurisdictions, providing planning and design guidelines and participating in outreach efforts to encourage more bicycle commuting.

The only priority bikeway in San Clemente listed in the CBSP is the 1.01 miles of Class 1 path along Avenida Vista Hermosa between Avenida La Pata and Avenida Pico. Three other Class 1 segments were proposed totaling 2.01 miles, as well as 18 Class 2 bicycle lane projects totaling 10.04 miles, and 15 Class 3 bicycle route projects totaling 6.69 miles.

City of Dana Point Bicycle and Pedestrian Trails Master Plan (2007)

The City of Dana Point forms the northwestern boundary of the City of San Clemente. The referenced plan indicates two existing bikeway facilities that connect into the City of San Clemente, a Class 3 route on Camino Capistrano and Class 2 lanes and a section of Class 1 path on Pacific Coast Highway. Proposed connections include Class 3 routes on Calle El Molina, Calle Naranja and Avenida Las Palmas, as well as Class 2 lanes on Avenida De Estrella, which becomes Camino De Los Mares north of Interstate 5, then crosses this portion of San Clemente and is planned to continue into the City of San Juan Capistrano.

City of San Juan Capistrano

The City of San Juan Capistrano forms much of the northern boundary of the City of San Clemente, but does not have a bikeway or pedestrian plan in place at this time. Primarily due to terrain, there are few roadway connections with the City of San Clemente, but this may increase as new development occurs along their shared border.

State Satutes and Guidance

Complete Streets Act AB 1358

The Complete Streets Act of 2007 is intended to ensure that the transportation plans of California communities meet the needs of all users of the roadway including pedestrians, cyclists, users of public transit, drivers, children, the elderly and the disabled. It does so by requiring the legislative body of a city or county, upon revision of the circulation element of their general plan, to identify how the jurisdiction will provide for the routine accommodation of all roadway users.

The bill also directs the Governor's Office of Planning and Research to amend guidelines for the development of general plan circulation elements so that the building and operation of local transportation facilities safely and conveniently accommodate everyone, regardless of their mode of travel.

Caltrans Complete Streets, Deputy Directive 64-R1

Deputy Directive 64-Revision #1: Complete Streets: Integrating the Transportation System (DD-64-R1) is Caltrans's guidance on how to provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities on the State Highway System. The directive instructs Caltrans personnel to address all transportation improvements (new and retrofit) as opportunities to improve safety, access and mobility for all travelers, as well as recognize bicycle, pedestrian and transit modes as integral elements of the transportation system.

The directive goes on to state that Caltrans is to develop integrated multimodal projects in balance with community goals, plans and values and that addressing the safety and mobility needs of cyclists, pedestrians and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is to be facilitated by creating "complete streets," beginning early in system planning and continuing through project delivery, maintenance and operations. Finally, the directive makes it clear that developing a network of complete streets will require collaboration among all Caltrans units and stakeholders. Therefore, the agency is to consult the City involving any projects within its right-of-way and strive to provide for all transit modes in project design. The full text of this directive can be found in Appendix F.

State of California Title 24 Summary

The federal *ADA Accessibility Guidelines* and California Title 24 differ in several technical respects, but the most important distinction between the two is that the ADA is civil rights legislation and Title 24 is a building code. Another important difference is that ADA applies to existing facilities, while Title 24 only applies when alterations, additions or new construction takes place. Therefore, if remedial work is performed to eliminate a physical barrier, the more stringent of *ADA Accessibility Guidelines* or Title 24 applies.

The ADA and Title 24 are also enforced differently. The ADA can be enforced only in a court of law when no other resolution is possible, while Title 24 is enforced by state and local building departments, either when a building permit is obtained or when a citizen complaint is filed in regard to an existing facility. Title 24 is the regulation that most directly affects the built environment in San Clemente and provides the state leverage for implementing the federal ADA through the building review, approval and inspection process.

Federal and State Disabled and Universal Access Guidelines

The Americans with Disabilities Act effectively set the federal standard for disabled accessibility. Prior to this, California had some of the most comprehensive standards regarding accessibility. The standards are contained in the State Title 24, first enacted in 1978 and updated periodically. Newly constructed facilities must be free of architectural barriers that restrict access or use by individuals with disabilities.

Cities in California use two technical standards for accessible design: the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG) for places of public accommodation and commercial facilities covered by Title 3 of the ADA and the *State Architectural Regulations for Accommodation of the Physically Handicapped in Public Facilities*, found in Title 24 of the California Code of Regulations, also known as the California Standards Building Code.

Although local building agencies are limited in that they can only enforce the provisions of the State of California (Title 24), a provision was added to the California Civil Code that a violation of ADA is also a violation of the California Civil Code. Compliance with Title 24 does not preclude a potential violation of the federal ADA standard.

Street Design Guidance

Legal Standing

Local jurisdictions generally follow some established standards for designing streets. Much confusion exists as to what they must follow, what is merely guidance, when they can adopt their own standards, and when they can use designs that differ from existing standards. The text below untangles the myriad of accepted design documents. It is critical for cities and counties to understand how adopting this manual meshes with other standards and guides. The most important of those standards and guides are the following:

- American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets* (the "Green Book")
- California *Highway Design Manual*
- *Manual on Uniform Traffic Control Devices* (MUTCD)
- California *Fire Code*
- California *Streets and Highways Code* and *California Vehicle Code*

A discussion of the federal-aid roadway classification system helps to frame the requirements of each of these documents. Local governments that wish to use certain federal funds must use a street classification system based on arterials, collectors, and local streets. These funds are for streets and roads that are on the federal-aid system. Only arterials and certain collector streets are on this system. The federal aid system encourages cities to designate more of these larger streets, and to concentrate modifications along these larger streets. Nevertheless, for the purposes of understanding design standards and guides, this is the existing system of street classification for federal funding.

AASHTO Green Book

The Green Book provides guidance for designing geometric alignment, street width, lane width, shoulder width, medians and other street features. The Green Book applies only to streets and roads that are part of the National Highway System (NHS). These are the interstate freeways, principal routes connecting to them and roads important to strategic defense. These streets and roads comprise about 14 percent of all federal-aid roadway miles in California, and about four percent of all roadway miles. Although the Green Book's application is limited to these streets, some cities apply its recommendations to all of their streets.

Further, the Green Book provides guidance that cities often unnecessarily treat as standards. The Green Book encourages flexibility in design within certain parameters, as evidenced by the AASHTO publication A Guide to Achieving Flexibility in Highway Design. For example, 10 foot lanes, which cities often shun out of concerns of deviating from standards, are well within AASHTO guidelines.

California Highway Design Manual

The California Highway Design Manual (HDM) applies only to State Highways and bikeways within local jurisdictions. Cities that deviate from the minimum widths and geometric criteria for bikeways spelled out in Chapter 1000 are advised to follow the exemption or experimental process, as applicable. The HDM does not establish legal standards for designing local streets. However, like the Green Book, some cities apply HDM guidance to all streets. As of this writing, Caltrans is in the process of revising the HDM to meet Caltrans' commitment to Complete Streets in Deputy Directive 64-R1.

Local Street Manuals

Local jurisdictions follow the Green Book, the HDM, or design guidance from organizations such as the Institute of Transportation Engineers (ITE) out of liability concerns. Neither federal nor state law mandates adoption or adherence to these guides. However, municipalities often adopt them to protect themselves from lawsuits. Further, many don't have the resources to develop their own standards and practices, so they adopt those in the Green Book, the HDM, or another previously adopted manual, or those of other cities.

A question often posed by plaintiffs' attorneys in traffic-related crashes is, "*Did they follow established or prevailing designs, standards, and guidance?*" If the attorneys can prove that the local jurisdiction deviated from these, they enhance their chances of winning a judgment against the jurisdiction. Therefore, protection from liability is paramount.

Cities are authorized to adopt or modify their own practices, standards, and guidelines that may reflect differences from the Green Book and the HDM. If these changes generally fall within the range of acceptable practice allowed by nationally recognized design standards, the adopting agencies are protected from liability to the same extent they would be if they applied the Green Book or the HDM. Most changes to streets discussed in the MDMLS fall within the range of the guidelines or recommended practices of nationally recognized organizations such as AASHTO, ITE, Urban Land Institute (ULI), and Congress for the New Urbanism (CNU).

Working within previously established regional guidelines generally should result in a design that is protected from liability. The Green Book and the HDM are silent on many design features, and do not consider the needs within unique contexts. In these cases, cities can develop their own guidelines and standards and incorporate international equivalents or practices from other cities. Cities may adopt the guidance in this manual, which compiles best practices in creating living streets. This manual could, in effect, become the legal prevailing standard by which liability would be assessed.

Cities can also utilize designs that fall outside the ranges specified by nationally accepted guidelines and standards, but these practices can potentially increase liability unless done with great care.

To minimize liability, local jurisdictions either need to adopt their own standards (which should be based on rationale or evidence of reasonableness), or they can conduct an experimental project. When conducting an experimental project, agencies need to show that they are using the best information that is reasonably available to them at the time, document why they are doing what they are doing, use a logical process, and monitor the results and modify accordingly. This is because the agency may be required

in the future to show that its design is reasonable, and the agency may not be able to cite a nationally published guideline or recommendation to support its local action. Often, these experimental projects are conducted because the design engineer has reason to believe that the new or evolved design will be safer or otherwise more effective for some purpose than if the project had prevailing standards and guides been used. These reasons or rationales are based on engineering judgment and should be documented to further minimize exposure to liability.

Manual of Uniform Traffic Control Devices (MUTCD)

The MUTCD provides standards and guidance for the application of all allowed traffic control devices including roadway markings, traffic signs, and signals. The Federal Highway Administration oversees application of the MUTCD. California cities must follow the California MUTCD, which generally mirrors the federal MUTCD, but not always.

The rules and requirements for the use of traffic control devices are different than for street design criteria. Local agencies have limited flexibility to deviate from the provisions of the California MUTCD in the use of traffic control devices due to the relationship between the MUTCD and state law. The California MUTCD does provide flexibility within its general provisions for items such as application of standard traffic control devices, use of custom signs for unique situations, traffic sign sizes, and sign placement specifics. In contrast, agencies do not generally have the flexibility to develop signs that are similar in purpose to signs within the manual while using different colors, shapes, or legends. Agencies are also not authorized to establish traffic regulations that are not specifically allowed or are in conflict with state law. The provisions of the California MUTCD and related state laws thus make it difficult to deploy new traffic control devices in California. This can result in complications, especially in the areas of speed management, pedestrian crossings, and bikeway treatments.

The State of California and the Federal Highway Administration have procedures that allow local agencies to experiment with traffic control devices that are not included in the current MUTCD. Such demonstrations are not difficult to obtain from the Federal Highway Administration for testing of new devices, especially as they relate to pedestrian and bicycle facilities, but the requesting agency must agree to conduct adequate before-and-after studies, submit frequent reports on the performance of the experimental device, and remove the device if early results are not promising. The State process can be more difficult for obtaining approval. Federal approval must be obtained first. The California Traffic Control Devices Committee advises Caltrans, which must then agree to allow the experiment to be conducted and determine that the experiment is not in conflict with State law. Once approval is granted for the experiment, the city has been given some legal immunity from liability suits. Since the California Vehicle Code is written to mirror the MUTCD, provisions within the Vehicle Code may not allow the experiment to proceed. The need to modify the Vehicle Code can complicate obtaining State permission to experiment.

Both the federal and California MUTCD are amended through experimentation. After one or more experiments have shown benefit, the new devices are sometimes adopted into these manuals. In California, the Vehicle Code must be changed first if the Vehicle Code prevents use of the new device.

The federal MUTCD and California MUTCD establish warrants for the use of some traffic control devices. For example, stop signs, traffic signals, and flashing beacons are expected to meet minimum thresholds before application. These thresholds include such criteria as number of vehicles, number of pedestrians or other uses, distance to other devices, crash history, and more. These warrants often prevent local

engineers from applying devices that, in their opinion, may improve safety. For example, trail and/or pedestrian crossings of busy, high-speed, wide arterial streets may need signals for user safety, but they may not meet the warrants.

As with street design guidelines, cities may establish their own warrants or modify those suggested by the California MUTCD to suit their context in order to use some traffic control devices. In special circumstances that deviate from their own warrants, cities need to document their reasons for the exception. For example, they may say the trail crossings or school crossings qualify for certain traffic control devices.

California Fire Code

The California Fire Code can impede street design in limited circumstances. The state legislature has adopted the National Fire Code. The National Fire Code is written by a private agency and has no official legal standing unless states or municipalities adopt it, as has been done in California. The primary barrier caused by this adoption is the requirement for a minimum of 20 feet of an unobstructed clear path on streets. To comply with this, streets with on-street parking on both sides must be at least 34 feet wide. This prevents municipalities from designing "skinny" and "yield" streets to slow cars and to make the streets safer, less land-consumptive and more hospitable to pedestrians and cyclists.

There are ways around this requirement. If the local jurisdiction takes measures such as installing sprinklers and adding extra fire hydrants, or the adjacent buildings are built with fire retardant materials, it may be able to get the local fire department to agree to the exception.

Alternatively, the state legislature could repeal its adoption of the 20-foot clear path requirement due to:

- The arbitrary and unresearched nature of the provision
- The safety problems associated with the resulting excessively wide streets
- The contradiction that this provision causes with properly researched guidelines and standards by ITE, CNU, AASHTO, and others for streets under 34 feet wide
- The potential liability that the 20-foot clear provision creates for designers who maintain, modify, or design streets that do not provide 20-foot clear paths

It is likely that the state legislature was unaware of these issues when it adopted the code in its entirety.

California Streets and Highways Code and California Vehicle Code

The California Streets and Highways Code and the California Vehicle Code include laws that must be followed in street design. These are embodied in the California MUTCD. Changes to the *Streets and Highways Code* and the *Vehicle Code* may cause the California MUTCD to change.

Los Angeles County Model Design Manual for Living Streets (MDMLS)

Municipalities depend on street manuals for guidance to design their streets, to retrofit and to modify existing streets with new development, and when new subdivisions are built. Along with land use planning, street manuals play a large role in determining urban form. Street manuals, in effect, serve as the "DNA" of streets. As such, they help to determine how walkable and bicycle-friendly neighborhoods and communities are, how conducive cities are to transit use, and how livable communities become.

The manuals that many jurisdictions use today embody principles based on moving motor vehicle traffic as the primary role of streets. The result is many wide, high-speed streets that move cars but compromise other important community goals and work against present day community needs. Common direct outcomes of existing manuals include the following:

- Streets nerve-racking and not safe for pedestrians to cross
- Streets not safe to bicycle on
- Streets that encourage high speeds
- Streets that are not safe for the motorists they are designed to serve
- Narrow sidewalks not comfortable to walk along
- Inconvenient street crossings for people in wheelchairs
- Unsightly and uninviting streets
- Auto-oriented land uses that are uninviting and intimidating to people walking, biking, and using transit
- Street water runoff systems that funnel rainwater to the storm drains and directly to waterways
- Poor selection of street trees, if any
- Excessive exposed hardscape leading to a rise in summer temperatures – the heat-island effect

These indirectly cause a number of problems for communities, including the following:

- Obesity from inactive life styles
- Rising diabetes, heart disease and cancer rates and other sedentary lifestyle negative health outcomes
- Senior citizens being trapped inside a small neighborhood because they can't cross streets
- Children becoming overweight, unnecessary neighborhood congestion, and air pollution around schools, all due to children being driven to school rather than walking
- Unnecessary driving for short trips
- Overconsumption of energy
- Unnecessary emission of global warming gases
- Economic hardship and recession when energy prices rise
- Streets that don't support neighborhood retail
- Neighborhoods that lack livability
- Polluted waterways
- Underground water aquifers drying up
- Dehydrated streetscapes causing unnecessary importation of water for landscaping
- Uplifted sidewalks

The MDMLS is based on complete streets principles for people of all ages and physical abilities and accommodates all travel modes. The MDMLS goes beyond complete streets to living streets. Living streets principles embody complete streets and also include consideration of other issues related to economic vibrancy, equity, environmental sustainability, aesthetics and more. This manual offers another way to design streets and provides guidance for those municipalities that decide to adopt these principles. The result will be more livable neighborhoods with healthier residents due to opportunities for active transportation (walking and cycling).

California cities can use the MDMLS to assist them with new requirements of the California Complete Streets Act (AB 1358) mandating that new circulation elements of general plans be based on complete streets principles. The MDMLS helps cities comply with the law and implement these principles. Any city that adopts complete streets principles may also use the manual as a key component of implementation. It has been excerpted extensively in this Plan.

Unless otherwise noted, everything in the MDMLS can readily be adopted and incorporated without fear of increased liability. In addition, the manual carries the credibility of the many top-level experts who produced it.

In some cases, AASHTO design guidelines may not provide information on innovative or experimental treatments that have shown great promise in early experiments and applications. Since AASHTO is a design guide, agencies have some flexibility to use designs that fall outside the boundaries of the AASHTO guide. Deviation from the range of designs provided in the AASHTO guide requires agencies to use greater care and diligence to document their justification, precautions, and determination to deviate from the guidelines. In California, the precautions to establish "design immunity" should be followed. These include consideration/analysis and approval by a registered engineer qualified to sign the plans, and certification by the city council or reviewing body clearly indicating the agency's intent. This process documents the engineering judgment that went into the design.

Many cities today use various traffic calming measures to slow traffic and to improve neighborhood livability. Traffic calming measures are not traffic control devices and therefore the state exercises no jurisdiction over them.

Local agencies may currently use many other reports and documents to guide their roadway design and transportation planning. Other documents provide valuable procedure and reference data, but they do not set standards. They can be referred to and defined as standards by local agencies, but the local authority often has the flexibility to selectively endorse, modify, or define how these informational documents can be used or incorporated into its engineering and planning processes. Also, newer versions of these documents have additional information that can conflict with the local historical approach.

The expected results of the design approaches presented in this document are generally intended to improve safety and/or livability. As a result, implementation of these features should generally reduce liability and lawsuits. There is no way to prevent all collisions or lawsuits, but adopting policies, guidelines, and standards and doing experimental projects with reasonable precautions is a defensible approach.

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Appendix D: Funding Sources

Federal, state and local government agencies invest billions of dollars every year in the nation's transportation system. Only a fraction of that funding is used in development projects, policy development and planning to improve conditions for cyclists. Even though appropriate funds are limited, they are available, but desirable projects sometimes go unfunded because communities may be unaware of a fund's existence, or may apply for the wrong type of grants. Also, the competition between municipalities for the available bikeway funding is often fierce.

Whenever federal funds are used for bicycle projects, a certain level of state and/or local matching funding is generally required. State funds are often available to local governments on the similar terms. Almost every implemented bicycle program and facility in the United States has had more than one funding source and it often takes a good deal of coordination to pull the various sources together.

According to the Federal Highway Administration's (FHWA) publication, *An Analysis of Current Funding Mechanisms for Bicycle and Pedestrian Programs at the Federal, State and Local Levels*, where successful local bicycle facility programs exist, there is usually a full time bicycle coordinator with extensive understanding of funding sources. Cities such as Seattle, Washington, Portland, Oregon and Tucson are prime examples. Bicycle coordinators are often in a position to develop a competitive project and detailed proposal that can be used to improve conditions for cyclists within their jurisdictions. Much of the following information on federal and state funding sources was derived from the previously mentioned publication.

Pedestrian and Bicycle Federal Sources

U.S. Department of Transportation Enhancement Funds SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users)

In 1991, Congress reauthorized the collection and distribution of the federal gasoline tax and related transportation spending programs. The legislation, the Intermodal Surface Transportation Enhancement Act (ISTEA), was seen as particularly significant because the focus of 30 years of federal transportation investment, the Interstate Highway System, was nearing completion. The legislation provided the opportunity to rethink transportation priorities and philosophies. This act was reauthorized in 1997 as the Transportation Equity Act (TEA-21), and again in 2005 as the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This grant has been extended several times.

SAFETEA-LU funding is managed through state and regional agencies. Most, but not all, of the funding programs are oriented toward transportation versus recreation, with the emphasis on reducing auto trips and providing intermodal connections. Funding criteria include completion and adoption of a bicycle master plan, quantification of the costs and benefits of the system (including saved vehicle trips, reduced air pollution), proof of public involvement and support, National Environmental Protection Act (NEPA) compliance and the commitment of local resources. In most cases, SAFETEA-LU provides matching grants of 80 to 90 percent. The amount of money available through SAFETEA-LU is substantial, but there is always strong competition to obtain those funds.

Federal funding through the SAFETEA-LU program provides the bulk of outside funding. SAFETEA-LU is comprised of two major programs, Surface Transportation Program (STP) and Congestion Management and Air Quality Improvement (CMAQ), along with other programs such as the National Recreational Trails Fund, Section 402 (Safety) funds, Scenic Byways funds and Federal Lands Highways funds, though municipalities are unlikely to be eligible for funding from all of these sources. Among the new concepts

in the original legislation were intermodalism, transportation efficiency, funding flexibility and planning, all of which had direct benefits for cycling. The legislation also created a wide range of funding opportunities for bicycle-related activities, including the following that may represent opportunities for the City:

Surface Transportation Program (STP)

Section 1007 (a)(I)(b)(3) allows states to spend their allocation of Surface Transportation Program (STP) funds on a range of activities similar to those of the National Highway System. Bicycle facilities are specifically listed as eligible items. STP funds can also be used for "non construction bicycle projects related to safe bicycle use." Section 1007 (b)(2)(C)(c) created a new category of transportation enhancement activities (TEA) on which states were required to spend at least 10 percent of their Surface Transportation Program funds. TEAs are very broadly defined as:

"...with respect to any project or the area to be served by the project, provision of facilities for pedestrians and cyclists, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures or facilities including historic railroad facilities and canals, preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails), control and removal of outdoor advertising, archaeological planning and research and mitigation of water pollution due to highway runoff."

STP funds are allocated to the Caltrans and 75 percent are programmed by regional agencies such as Orange County and OCTA under state law. The federal government does not allocate funds to specific projects. Therefore, for a bicycle project to be funded, it must appear on the list of potential projects under consideration at the state, regional, or City level, whichever is appropriate.

Transportation Enhancements Activities

Transportation Enhancement (TE) activities offer funding opportunities to help expand transportation choices and enhance the transportation experience through 12 eligible TE activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation. TE projects must relate to surface transportation and must qualify under one or more of the 12 eligible categories.

Eligible Activities

1. Provision of pedestrian and bicycle facilities
2. Provision of pedestrian and bicycle safety and education activities
3. Acquisition of scenic or historic easements and sites
4. Scenic or historic highway programs including tourist and welcome centers
5. Landscaping and scenic beautification
6. Historic Preservation
7. Rehabilitation and operation of historic transportation buildings, structures, or facilities
8. Conversion of abandoned railway corridors to trails
9. Control and removal of outdoor advertising
10. Archaeological planning and research
11. Environmental mitigation of highway runoff pollution, reduce vehicle-caused wildlife mortality, maintain habitat connectivity
12. Establishment of transportation museums

Safe Routes to School Programs

There are two separate Safe Routes to School Programs administered by Caltrans. There is a state-legislated program referred to as SR2S and a federal program referred to as SRTS. Both programs are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so. The differences between the two programs are as follows:

Legislative Authority

SR2S - Streets & Highways Code Section 2330-2334
SRTS - Section 1404 in SAFETEA-LU

Expires

SR2S - AB 57 extended program indefinitely
SRTS - Pending SAFETEA-LU reauthorization. Extensions have been granted through December 31, 2011

Eligible Applicants

SR2S - Cities and counties
SRTS - State, local, and regional agencies experienced in meeting federal transportation requirements. Non-profit organizations, school districts, public health departments, and Native American Tribes must partner with a city, county, MPO, or RTPA to serve as the responsible agency for their project.

Eligible Projects

SR2S - Infrastructure projects
SRTS - Stand-alone infrastructure or non-infrastructure projects

Local Match

SR2S - 10 percent minimum required
SRTS – None

Project Completion Deadline

SR2S - Within 4 ½ years after project funds are allocated to the agency
SRTS - Within 4 ½ years after project is amended into FTIP

Restriction on Infrastructure Projects

SR2S - Must be located in the vicinity of a school
SRTS - Infrastructure projects must be within 2 miles of a grade school or middle school

Targeted Beneficiaries

SR2S - Children in grades K-12
SRTS - Children in grades K-8

Funding

SR2S - $24.25M annual funding
SRTS - $23M annual funding

The Safe Routes to School Program funds non motorized facilities in conjunction with improving access to schools through the Caltrans Safe Routes to School Coordinator. For more information visit: http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Local Planning

Section 1024 (a) requires each metropolitan area (with a population greater than 200,000) to develop an annual or biannual Transportation Improvement Program (TIP) that *"shall provide for the development of transportation facilities (including pedestrian walkways and bicycle transportation facilities) which will function as an intermodal transportation system."*

These TIPs must be based on available funding for projects in the program and they must be coordinated with transportation control measures to be implemented in accordance with Clean Air Act provisions. Final project selection rests with the California Transportation Commission (CTC), with technical input from Caltrans.

State Planning

Two sections of the Act explicitly require the state to develop a TIP to *"consider strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects, throughout the state,"* (Section 1025 (c)(3)), and to *"develop a long range plan for bicycle transportation facilities and pedestrian walkways for appropriate areas of the state, which shall be incorporated into the long range transportation plan,"* (Section 1025 (e)). These provisions are important on a municipal level because they are crucial for getting incidental bicycle projects funded. The intent behind these sections is to ensure that if bicycle facilities are identified in a TIP or long range plan as being necessary in a corridor and construction or reconstruction work in those corridors is planned, then the relevant bicycle improvements called for in the planning must be included and implemented. Opportunities for incorporating bicycle projects are not limited to large transportation projects and not even to actual construction projects. Independent bicycle and pedestrian projects, such as trails away from highway corridors and non construction projects, such as mapping, also need to be incorporated into state and city planning documents if they are to be funded.

Section 1033 states that the federal share under SAFETEA-LU of bicycle transportation facilities is to be 80 percent. The remaining 20 percent of the funds must be matched by the state or local government agency implementing the project. The section also states that, to be funded, a bicycle transportation facility must be principally for transportation rather than recreation purposes. This has been defined by the FHWA to mean:

> *"Where federal aid highway funds are used, these projects should serve a transportation function. A circular recreation path, for example, would not be eligible. However, any type of facility which does serve a valid transportation need while also fulfilling recreation purposes would be eligible."*

The section goes on to describe a "*bicycle transportation facility*" as: *"new or improved lanes, paths or shoulders for the use of cyclists, traffic control devices, shelters and parking facilities for cyclists."*

Congestion Mitigation and Air Quality Program (CMAQ)

Section 1008 is referred to as the Congestion Mitigation and Air Quality Program (CMAQ). This part of the legislation is intended to fund programs and projects likely to contribute to the attainment of national ambient air quality standards under the 1990 Clean Air Act Amendments. Areas of eligibility include transportation activities in an approved State Implementation Plan (SIP) developed under the Clean Air Act Transportation Control Measures listed in Section 108 (b)(1)(A) of the Clean Air Act:

(ix) Programs to limit portions of roadway surfaces or certain sections of the metropolitan area to the use of non motorized vehicles or pedestrian use, both as to time and place.
(x) Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of cyclists in both public and private areas.
(xv) Programs for new construction and major reconstruction of paths, tracks, or areas solely for the use by pedestrians or other non motorized means of transportation, when economically feasible and in the public interest.

"Construction of bicycle and pedestrian facilities, non construction projects related to safe bicycle use and state bicycle/pedestrian coordinator positions as established in the TEA- 21, for promoting and facilitating the increased use of non motorized modes of transportation. This includes public education, promotional and safety programs for using such facilities."

To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act.

Section 402 (Safety) Funds

Section 402 funds address state and community highway safety grant programs. Priority status of safety programs for cyclists expedites the approval process for these safety efforts.

Symms National Recreational Trails Act

The Symms National Recreational Trails Act created a trust fund for the construction and maintenance of trails. At least 30 percent of the funds must be spent on trails for non motorized users and at least 30 percent for trails for motorized users. The remainder is to be allocated to projects as determined by the State Recreational Trails Advisory Board of the California Department of Parks and Recreation, which the state must have to be eligible for the funds.

Federal Transit Act

Section 25 of the 1964 Urban Mass Transportation Act states that:

"For the purposes of this Act a project to provide access for bicycles to mass transportation facilities, to provide shelters and parking facilities for bicycles in and around mass transportation facilities, or to install racks or other equipment for transporting bicycles on mass transportation vehicles shall be deemed to be a construction project eligible for assistance under sections 3, 9 and 18 of this Act."

The federal share for such projects is 90 percent and the remaining 10 percent must come from sources other than federal funds or fare box revenues. Typical funded projects have included bicycle lockers at transit stations and bicycle parking near major bus stops. To date, no projects to provide bikeways for quicker, safer or easier access to transit stations have been requested or funded.

Department of the Interior - Land and Water Conservation Fund (LWCF)

The U.S. Recreation and Heritage Conservation Service and the State Department of Park and Recreation administer this funding source. Any project for which LWCF funds are desired must meet two specific criteria. The first is that projects acquired or developed under the program must be primarily for recreational use and not transportation purposes and the second is that the lead agency must guarantee to maintain the facility in perpetuity for public recreation. The application will be considered using criteria such as priority status within the State Comprehensive Outdoor Recreation Plan (SCORP). The State Department of Park and Recreation will select which projects to submit to the National Park Service (NPS) for approval. Final approval is based on the amount of funds available that year, which is determined by a population based formula. Trails are the most commonly approved project.

National Recreational Trail Fund

This funding source is intended to pay for a variety of recreational trails programs to benefit cyclists, pedestrians and other non motorized users. Projects must be consistent with the State Comprehensive Outdoor Recreation Plan required by the Land and Water Conservation Act.

Rivers, Trails, and Conservation Assistance Program (RTCA)

The Rivers, Trails and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation and identifying other sources of funding for conversation and outdoor recreation projects.

American Recovery and Reinvestment Act 2009

The $789 billion economic stimulus package provides $27.5 billion to modernize roads and bridges and includes a three percent set aside of each state's share of the $27.5 billion for the Transportation Enhancements Program. At least half of the funds must be obligated by states within 120 days, or the U.S. Secretary of Transportation can recall up to 50 percent of the unobligated funds.

Also included is $8.4 billion to increase public transportation and improve transit facilities, $8 billion for investment in high speed rail and $1.5 billion for a discretionary surface transportation grant program to be awarded competitively by the Secretary of Transportation.

The Federal Highway Administration (FHWA) and Federal Transit Administration have issued guidance to assist state and local agencies in preparing for implementation of the stimulus bill. The guidance includes Q&As and actions that can be taken to expedite economic recovery projects.

Other Bicycle Pedestrian Infrastructure Funding Options

Additionally, another $5 billion is provided for the Energy Efficiency and Block Grant Program. This provides formula funding to cities, counties and states to undertake a range of energy efficiency activities. One eligible use of funding is for bicycle and pedestrian infrastructure.

State Sources

Streets and Highways Code – Bicycle Transportation Account (BTA)

The Bicycle Transportation Account (BTA) funds non motorized facilities and access to cities and counties that have adopted bikeway master plans. Section 2106 (b) of the Streets and Highways Code transfers funds annually to the BTA from the revenue derived from the excise tax on motor vehicle fuel. The Caltrans Office of Bicycle Facilities administers the BTA.

For a project to be funded from the BTA, the project shall:

i) Be approximately parallel to a state, county, or city roadways, where the separation of bicycle traffic from motor vehicle traffic will increase the traffic capacity of the roadway

ii) Serve the functional needs of commuting cyclists

iii) Include but not be limited to:

- New bikeways serving major transportation corridor
- New bikeways removing travel barriers to potential bicycle commuters
- Secure bicycle parking at employment centers, park and ride lots and transit terminals
- Bicycle carrying facilities on public transit vehicles
- Installation of traffic control devices to improve the safety and efficiency of bicycle travel
- Elimination of hazardous conditions on existing bikeways serving a utility purpose
- Planning
- Safety and education

Maintenance is specifically excluded from funding and allocation takes into consideration the relative cost-effectiveness of the proposed project.

State Highway Account

Section 157.4 of the Streets and Highways Code requires Caltrans to set aside $360,000 for the construction of non motorized facilities that will be used in conjunction with the state highway system. The Office of Bicycle Facilities also administers the State Highway Account fund. Funding is divided into different project categories. Minor B projects (less than $42,000) are funded by a lump sum allocation by the CTC and are used at the discretion of each Caltrans District office. Minor A projects (estimated to cost between $42,000 and $300,000) must be approved by the CTC. Major projects (more than $300,000) must be included in the State Transportation Improvement Program and approved by the CTC. Funded projects have included fencing and bicycle warning signs related to rail corridors.

Transportation Development Act Article III (Senate Bill 821)

TDA funds are based on a ¼ percent state sales tax, with revenues made available primarily for transit operating and capital purposes. By law, the Orange County Auditor's office estimates the apportionment for the upcoming fiscal year. TDA Article 3 funds may be used for the following activities related to the planning and construction of bicycle and pedestrian facilities:

- Engineering expenses leading to construction
- Right-of-way acquisition
- Construction and reconstruction
- Retrofitting existing bicycle facilities to comply with ADA requirements
- Route improvements, such as signal controls for cyclists, bicycle loop detectors and rubberized rail crossings
- Purchase and installation of bicycle facilities such as improved intersections, bicycle parking, benches, drinking fountains, rest rooms, showers adjacent to bicycle trails, employment centers, park-and-ride lots, and/or transit terminals accessible to the general public

Traffic Congestion Relief Program (TCRP)

In FY 2001, the Governor of California initiated a funding program (TCRP) in an effort to relieve congestion statewide. The TCRP was created as a result of a budget surplus. However, with the continuing budget deficit, TCRP allocations haven been sporadic. TCRP funds are based on the priority list of TCRP allocations.

Other State Bicycle Project Funding Sources

Governor's Energy Office (Oil Overcharge Funds)

The federal government forced oil companies to repay the excess profits many of them made when they violated price regulations enacted in response to the energy crisis of the early 1970's. Few states have taken advantage of this fund, but some have received grants for bicycle coordinators and facilities. The types of projects eligible for funding vary by state, as does the level of allocation available.

Local Sources

Assembly Bill 2766/434

In 1990, California Assembly Bill 2766 was signed into law (Health & Safety Code Sections: 44220 - 44247) and the funding program described in that law has since been known as the "AB2766 program" or just "AB2766." This bill funds air pollution reduction projects related to alternate modes of transportation. The Air Pollution Control Board (APCB) administers this fund and approximately $3 million is made available annually.

Developer Impact Fees

As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class 2 facilities for portions of on-street, previously planned routes. They can also be used to provide bicycle parking or shower and locker facilities. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

New Construction

Future road widening and construction projects are one means of providing on street bicycle facilities. To ensure that roadway construction projects provide bicycle lanes where needed, it is important that the review process includes input pertaining to consistency with the proposed system. Future development in the City of San Clemente will contribute only if the projects are conditioned.

Restoration

Cable TV and telephone companies sometimes need new cable routes within public rights-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of curb lanes, it may be possible to request reimbursement for affected bicycle facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new bikeway facilities following completion of the cable trenching, such as sharing the use of maintenance roads.

Other Sources

Local sales taxes, fees and permits may be implemented as new funding sources for bicycle projects. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi use paths. For example, a local college design class may use such a multi use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right-of-way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can "adopt" a route or segment of one to help construct and maintain it.

Most Likely Sources

According to City of San Clemente sources, the most likely local sources of bikeway funding are the following:

1) BTA (Bicycle Transportation Account)
2) State and federal Safe Routes to School
3) Developer Impact Fees
4) City General Fund

Private Sources

Private funding sources can be acquired by applying through the advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations wanting to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources.

Tables AE 1 - AE 5 summarize some of the numerous funding sources available.

Table AE 1: Federal Funding Sources

Federal Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
Land and Water Conservation Act of 1965		California Department of Parks and Recreation	December	50%	Funding subject to North/South split. Funds for outdoor recreation projects
SAFETEA-LU - Surface Transportation Program (STP)	$639 million in 2009*	FHWA/ Caltrans	June 1	20%	STP funds may be exchanged for local funds for non-federally certified local agencies. No match required if project improves safety
SAFETEA-LU - Transportation Enhancement Activities (TEA)	$80 million in 2010*	FHWA/ Caltrans	STIP cycle	20%	Contact State TE Coordinator
SAFETEA-LU - Bridge Replacement and Rehabilitation Program (BRP)	$386 million in 2009*	FHWA/ Caltrans	Jan/list of projects	20%	Contact Caltrans Division of Structures, Office of Local Programs, Program Manager
SAFETEA-LU - National Highway System	$587 million in 2009*	FHWA/ Caltrans		20%	Bike projects must provide a high degree of safety
SAFETEA-LU - Scenic Byways Program	$740,000 in 2009	FHWA/ Caltrans		20%	Should apply first for TEA funds until TEA runs out
SAFETEA-LU - Public Lands Highway	Varies - averages $7 million/yr. state-wide	FHWA/ Caltrans	June 7	20%	For roads and bikeways leading to and serving National Forests
SAFETEA-LU - Safe Routes to School (SRTS)	$23 million in 2009*	FHWA/ Caltrans		20%	For pedestrian facilities and bikeways leading to schools. Five E's must be incorporated
SAFETEA-LU - Highway Safety Improvement Program	$98 million in 2009*	FHWA/ Caltrans		20%	Bike projects must provide a high degree of safety
SAFETEA-LU - Transportation, Community and System Preservation Program (TCSP)	$61 million in 2010	FHWA	June 3		Verify if funding has been extended at http://www.fhwa.dot.gov/discretionary/tcsp2011info.htm.

Federal Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
Forest Highway Program	$19 million in 2009*	FHWA/ Caltrans	Oct. 30	20%	For roads and bikeways leading to and serving National Forests
Transportation Investments Generating Economic Recovery (TIGER)	$527 million thru 2013	FHWA	October	20%	Primary funding for road, rail, transit and port projects. However, bicycle and pedestrian improvements can be included
Congestion Mitigation and Air Quality Improvement Plan (CMAQ)	$370 million in 2009	FHWA/ Caltrans	Annually to Multi-Year. Depends on MPO	20%	The amount of CMAQ Funds depends on the state's population share and on the degree of air pollution
Regional Trails Program (RTP)	$5 million in 2010	California Department of Parks and Recreation	October	12%	Different requirements depending on the grant funds being requested
Rivers, Trails and Conservation Assistance Program (RTCA)		National Park Service	August		Expenditures include bikeway plans, corridor studies and trails assistance
Energy Efficiency and Block Grant Program	$3 million	FHWA			Provided formula funding for cities, counties and states to take part in energy efficient activities
Transportation Enhancement Program	$74 million in 2009	FHWA	Every 2 years, proposals due in 2013	STIP 11.47%, local 25%	At least half of the funds must be obligated by states within 120 days, or the U.S. Secretary of Transportation can recall up to 50 percent of the un-obligated funds.
Community Development Block Grants (CDBG)		Council Districts	Annual Budget		Available for low-income neighborhoods to improve land use and transportation infrastructure. Can be used for accessibility improvements citywide.
FDA Nutrition Network Mini Grants		San Diego Nutrition Network	6 years or longer		Federal block grant program for projects in Clean Air Act non-attainment areas that will help attain the national ambient air quality standards stated in the 1990 Clean Air Act amendments.
Federal Lands Highway Program	$611 million between 2008-10	FLH/FHWA	3 year cycles		Maybe used to build bicycle and pedestrian facilities in conjunction with roads and parkways at the discretion of the grantee

*Source: Summary of FY 2009 Apportionments for RTA-000-1664A, * California Only*

Federal Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
Land and Water Conservation Fund (LWCF)	$3 million in 2009	California Department of Parks and Recreation	Annual (May)	50%	LWCF grants may be used for statewide outdoor recreational planning and acquiring and developing recreational parks and facilities, especially in urban areas.
Active Community Transportation Act of 2010	$2 billion over 5 years. Set aside from STP.	FHWA/ Caltrans	Annually	50%	H.R. 4722 would enable communities to compete for targeted funds to complete active transportation networks to enable Americans to walk or bike safely and conveniently. Not yet passed as of 2010.
Sustainable Communities Regional Planning Grants	$68 million	HUD	Annually	20%	Funding for preparing or implementing regional plans for sustainable development
American Recovery and Reinvestment Act of 2009 (ARRA)	$73 million in California for 2010	FHWA	Ongoing		http://www.recovery.gov

Table AE 2: State Funding Sources

State Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
State Highway Account (SHA): Bicycle Transportation Account (BTA)	$7,200,000/ yr. state-wide	Caltrans	Consult Local Assistance Office	10%	Available for planning grants
Transportation Development Act (TDA) Section 99234			Annually	None	2% of TDA total
AB 2766 Vehicle Registration Funds		Caltrans			Competitive program for projects that benefit air quality
Vehicle Registration Surcharge Fee (AB 434) RCF		APCB	July	None	Competitive program for projects that benefit air quality
Vehicle Registration Surcharge Fee (AB 434) PMF	40% from grant source	APCB	April	None	Funds distributed to county communities based on population
Developer Fees or Exactions	Project-specific	Cities	Ongoing	None	Mitigation required during land use approval process

State Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
State Gas Tax (local share)		Allocated by State Auditor-Controller	Monthly allocation	None	Major Projects, >$300,000
State and Local Transportation Partnership Program (SLPP)	Est. $200 million/yr. state-wide	Caltrans	June 30	None	Road projects with bike lanes are eligible
Caltrans Minor Capital Program	Varies (Est. $4 million/yr. for District 12)	Caltrans	Ongoing after July 1	None	Projects must be on state highways, such as upgraded bike facilities
Environmental Enhancement and Mitigation Program (EEM)	$10 million/ yr. state-wide	State Resources Agency	October annually	None required, but favored	Individual grants limited to $350K
Petroleum Violation Escrow Account (PVEA)	Varies	Caltrans, CA Community Services and Development, Air Resources Board	March	None	Projects must save energy, provide restitution to the public and be approved by CA Energy Commission and US DOE
Community Based Transportation Planning Demonstration Grant Program	$3 million annually	Caltrans	November	20%	Projects must have a transportation component or objective
Habitat Conservation Fund Grant Program (HCF)	$2 million	CA Dept of Park and Recreation	October	50%	Will only be available until July 1, 2020
Office of Traffic Safety Program (OTS)	Varies	Office of Traffic Safety	January	None	Program objective is to reduce motor vehicle fatalities and injuries through a national highway safety program. Program to include education, enforcement and engineering
Safe Routes to School Program (SR2S)	$24 million in 2009	Caltrans	April	10%	Eligible for projects in the vicinity of a school and grades K-12
State Transportation Improvement Program (STIP)	Varies	Caltrans	Every 4 years	None	Gives metropolitan regions more control over how state transportation funds are invested

State Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
California Conservation Corps (CCC)		California Conservation Corps			The CCC provides emergency assistance & public service conservation work. In San Diego County, the CCC has installed bike lockers for Caltrans.
Environmental Justice (EJ) Planning Grants	$9 million in 2010	Caltrans	Annually	10%	EJ planning grants help engage low-income and minority communities in transportation projects early in the planning process to ensure equity and positive social, economic and environmental impacts occur.

Table AE 3: Local Funding Sources

Local Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
Parking Meter Districts		City	Annual Budget	N/A	Districts can use parking meter revenues for streetscape improvements such as ped facilities, landscaping and lighting.
Redevelopment Tax Increment Financing (TIF)		City	Annual Budget	None	TIFs apply to redevelopment areas where bonds are issued based on expected increased tax revenues. Used for improved infrastructure, including ped. facilities.
Transient Occupancy Tax (TOT)		City	Annual Budget	None	Created to cover expenses and improvements related to tourism and to encourage more tourists to visit. This fund may be appropriate in areas where heavy tourism exists such as along the waterfront, major parks and historic neighborhoods.

Table AE 4: Private Funding Sources

Private Sources					
Grant Source	**Annual Total**	**Agency**	**Funding Cycle**	**Match Required**	**Remarks**
SRAM Cycling Fund	$400,000+/yr	SRAM	Ongoing	None	Community and organizational grants to encourage more people to ride bikes for transportation and health
Surdna Foundation	Project-specific	Surdna Foundation	Ongoing	None	The Surdna Foundation makes grants to nonprofit organizations in the areas of environment, community revitalization, effective citizenry, the arts, and the nonprofit sector
Bikes Belong	$180,000 annually	Bikes Belong Coalition	Three times a year	50%	Community grants focus on funding facilities and programs
Kaiser Permanente Community Health Initiatives	$54 million annually	Kaiser Permanente	Ongoing	None	Numerous programs to help with Healthy Initiatives
Health Foundations		Various foundations	Ongoing		Focus pedestrian improvements for an obesity prevention strategy. Examples include California Wellness Foundation, Kaiser and California Endowment
Rails to Trails Conservancy		Rails to Trails Conservancy			Provides technical assistance for converting abandoned rail corridors to use as multi-use trails
Donations		Depends on nature of project	Ongoing		Corporate or individual donations, sponsorships, merchandising or special events
In-kind Services		Depends on nature of project	Ongoing		Donated labor and materials for facility construction or maintenance such as tree planting programs or trail construction

Table AE 5: Summary of Eligible Projects

Bicycle and Pedestrian Funding Opportunities	Transportation Enhancements	Congestion Mitigation and Air Quality Improvement (CMAQ)	Surface Transportation Program	Federal Safe Routes to Schools	Recreational Trails Program	Highway Safety Improvement Program (HSIP)	State and Community Highway Safety Grant Program (Section 402)	National Highway System	Scenic Byways	Federal Lands Highway Program	Highway Bridge Program	Caltrans BTA	TransNet	OCTA	California Safe Routes to School
Bicycle and pedestrian plan		x	x											x	x
Bicycle lanes on roadways	x	x	x	x		x		x	x	x	x	x	x		x
Paved Shoulders	x	x	x	x		x		x	x	x	x	x	x		x
Signed bike route	x	x	x	x				x	x	x		x	x		x
Shared use path/trail	x	x	x	x	x			x	x	x	x	x	x		x
Singletrack hike/bike trail					x										
Spot improvement program	x	x	x	x		x									
Maps		x	x	x			x					x		x	x
Bike racks on buses	x	x	x	x									x	x	x
Bicycle parking facilities	x	x	x	x					x			x	x		x
Trail/highway intersection	x	x	x	x	x			x	x			x	x		x
Bicycle storage/service center	x	x	x	x										x	x
Sidewalks, new or retrofit	x	x	x	x				x	x	x	x		x		x
Crosswalks, new or retrofit	x	x	x	x				x	x	x			x		x
Signal improvements	x	x	x	x				x				x	x		x
Curb cuts and ramps	x	x	x	x				x					x		x
Traffic calming			x	x								x	x		x
Coordinator position		x	x	x											x
Safety/education position		x	x	x			x								x
Police Patrol			x	x			x								x
Helmet Promotion	x		x	x			x					x		x	x
Safety brochure/book	x	x	x	x	x	x	x					x		x	x
Training	x	x	x	x	x	x	x							x	x

Source: http://www.fhwa.dot.gov/ENVIRonment/bikeped/bp-guid.htm#bp4

Appendix E: Community Input

The Public Input for the Bicycle Master Plan awas conducted through an on-line survey and public workshops. The following are the results from the on-line survey.

On-line Survey Summary

The following comments were compiled verbatim from the on-line survey.

Bicycle Survey Comments

There are almost no bike racks in San Clemente, which can be very frustrating. My girlfriend was unable to locate a bike rack near her workplace and had to lock her bike to an office railing at Kehoe Plaza (302 N. El Camino). The building manager decided this was unacceptable, cut her lock and delivered her bike to the Sheriff's station. It took a week to get her bike back.

Pico Avenue near the High School/Interstate 5 intersection is always a scary spot on a bicycle. Also, the marked roads through South San Clemente from North Beach to Cristianitos are usually a source of congestion and confrontation. There are way too many stop signs and blind intersections. With so many cyclists traveling through San Clemente to San Onofre/Pendleton, there should be a specific bicycle path that allows for less mixing of drivers and cyclists.

More places to lock up my bike, especially in the downtown area would be great.

It is all about providing safe routes to ride, whether that is by a totally separate roadway or at least one where the bike lane does not allow cars to park in it!

I would like to see a good safe path along Coast Highway from Camino Capistrano to North Beach that can be seamlessly integrated with the Dana Point path.

The biggest problem are the drivers who think cyclists are a nuisance and they don't look out for people on bikes. Having a bike lane painted will give drivers a constant reminder to pay attention for cyclists.

Bike loop at South El Camino Real and San Luis Rey and Avenida Presidente.

Speed limits should be lowered via use of road diets etc., treatments to make streets safer for all users. Wide straight roads make for high speed traffic, increasing noise pollution that make pedestrians and cyclist less likely to not drive.

Our family has adopted a bike only day once a week with no car travel. This continues to be difficult as there is no clear/safe way to shopping and it is very unsafe without designated paths or enforcement of speed laws for drivers on main roads.

Del Cerro, off Pico, is a very dangerous street that I no longer ride on. I used to leave my house and ride to Dana Point Marina, but I am scared to death to do so anymore.

Providing safer biking trails and roads away from heavy traffic and one along the coast because the current beach trail does not allow bikes in certain spots.

Improve the connector (currently city streets, lots of stop signs, lots of cops) between the train station and Christianos.

It would greatly improve, in my opinion, the amount of cyclists coming to downtown and pier events if there were more racks at theses locations.

Pico between I5 and Calle Del Cerro needs bike lane back.

Bike riding to Shorecliffs from Hermosa is very dangerous at freeway off ramp. Cyclists need to ride against the traffic.

Fix ridiculous overzealous cops writing bicycle tickets in San Clemente. It is an insult to almost get run down by a car not obeying traffic and then get a ticket because I protect myself but do not obey the letter of the law.

More routes on beach front, like other cities such as Huntington Beach, Newport Beach, etc.

I have been riding my bike in this town since 1965. I'm gald to see work being done to keep this a safe place to ride. I would also like to see more biking events in this city.

I love the new light at PCH and North Beach Train Station. It makes it much safer to cross PCH.

Ola Vista aouth of del Mar needs a bike path. Maybe we could turn the alleys south of El Camino Real in SW San Clemente into bike paths. Also, del Presidente has a bike path (we ride to Concordia Elem from SW San Clemente) but the kids use the sidewalk as it is safer. That sidewalk needs to be widened and made legal for children cyclists. The turns into Concordia need to be widened on the sidewalks as there is often a botleneck of kids. Maybe move some electrical boxes, and signs. There is also space on the freeway side of del Prez that could be a bike path, or the street could be moved closer to the freeway and allow for the wider sidewalk/bikepath. Maybe we could have an easement through State Park. Also, south of Concordia on del Prez, there are so many driveways, a child cycling on the sidewalk could get blindly hit by a driver coming out of a driveway. Maybe that part of del Prez needs a bike path on the freeway side.

I live in Southwest San Clemente and like to bicycle downtown. However, I always take the alley way because I feel it is safer than El Camino Real (due to narrowness of street and high volume of traffic). Could the alley running the length of town somehow become an official bike/walking lane - with two lanes and stop signs at intersections?

ola vista and cristobal- when cars are parked close to the corners it's difficult to cross because you need to get out so far into the intersection to see. The end of ola vista at calafia- difficult to see to turn left along with people turning left off of the small street down the hill (can't remember the name). Cars parked in driveways but hanging out over sidewalks can make it difficult to walk with kids without going into the street. This has gotten better lately, but still a problem. Sidewalks that stop. Obstructions in the middle of sidewalks (telephone poles, fire extinguishers etc.) make it difficult to push a stroller.

Pico/Fwy intersection very dangerous for cyclists - Hermosa/Marblehead Elementary School

Vista Hermosa is a mess. The bike lane on the south/west bound side is a death trap! Two merging lanes onto the north and southbound I-5. This puts bikes and kids on the south side going west on Hermosa (opposite flow of trafic) on the sidewalk. They then must cross the off ramp where 3 lanes of cars are coming off the freeway. The drivers are looking left to merge into Vista Hermosa and not at pedestrians or bikes that are coming from their right. I have seen Soooooooooo many close calls here.

Dedicated bicycle throughfares would help tremendously

The drivers that block sidewalks used by young children should be cited. n\Need to park parallel in the street and off the path/sidewalk.

The main bicycle route (part of the Bicentennial bike route) through San Clemente has to be made safe. The HUGE problems are Calle Puente and the combo of having some intersections w/2 stop signs and some with 4 stop signs and some with no stop signs.
Also, the narrow 2 blocks of South Ola Vista (just before and after the intersection with Monterrey) must be fixed -- the best solution is to make it a one way street or by eminent domain widen the road to include bike lanes. Also, San Clemente will NEVER have a good bike network if they are unable to strategically remove one side of street parking on the streets, especially on Calle Puente, Santa Barbara, part of South Ola Vista. All that said, the best thing that San Clemente could do is to make EL CAMINO have dedicated bike lanes. That's so easy as there's really a whole lot of room already given the wide street and sidewalk. Take away one side of the street parking on El Camino and overnight, biking would triple!

Would like to see the Shorecliffs middle schoolers have a more protected PCH journey, as well as Concordia routes along Del Presidente

request the DMV to make it mandatory for people that get their drivers license to pay attention to bikers, for example, every time you turn right or left, also turn your head. When you open your car door, turn your head...

The north bound off ramp of the 5 freeway at Hermosa is a death trap for myself and the students riding/walking to school in the morning. Bikers are forced to go against traffic due to no sidewalk or bike lane on the west bound side of Hermosa. Drivers exiting the 5 north bound on Hermosa look to their left, roll into the crosswalk, and never look to their right for students/adults coming from the car's right. A school crossing sign, better enforcement, something needs to be done before someone gets hit! At least once a week, I personally witness or experience firsthand a near hit at this intersection. Thanks for reading.

PCH/El Camino Real between Camino Capistrano and Barcelona Street. Pico between Talega and North Beach.

more protected bike lanes. more areas of space between car lanes and bike lanes (like the newly striped area southbound by san o - so great to see it down to 1 car lane and more space for bikes. there's no need for 2 car lanes there. the same should be done on the northbound and both should be extended to the state park)

I ride my bike to work because gas prices are so high, however San Clemente was never intended for bikes, we have 5 way stops an I'm lucky to be seen by even one of the driver. In fact I would say that on a daily ride I have to make at least one heroic move just not to get hit. The roads just are NOT user friendly. A bike lane needs to be made, just like in Dana Point Harbor.

Ability to cross traffic making left turns at intersections, no safe route alternatives to avoid heavy traffic i.e. along Pico, Los Mares business area. Motorized traffic lanes right up to curb, no bike lanes.

Bike lanes are too short forcing me to merge with dangerous traffic. When in traffic, drivers drive into the on-coming traffic lane to get around me.

Clearer signage would be helpful. More signs that remind drivers to share the road would be great.

A designated bike path is needed to replace the beach trail. Pedestrians are not safe when bikers are present; bikes should not be allowed on the beach trail.

Pico is a nightmare -- please fix it. Also cyclists need to know that they should fully avoid El Camino. There is a safe alternate bike route. It is unclear if cyclists are aware of how dangerous El Camino is, especially since the parking "cut-outs" were created near downtown.

We have a problem getting from southwest area to north areas without having to take dangerous routes down el camino/miraposa, pico near freeway.

San Clemente is a very dangerous place to ride a bike. I would love it if the bike route through town were made safer for bicycles. It is particularly dangerous from Pico to where it hits Ole Vista.

San Clemente has too many dangerous intersections, where people cannot see oncoming traffic. This is mainly due to parked cars on neighborhood streets. It affects cyclists, pedestrians, and car drivers. The city should definitely do something to fix this.

I usually have to go to Newport/Huntington when I want to ride on a safe/flat path for miles.

Pico ave. in front of the high school is a safety issue. It would be nice if they completed vista hermosa to pico. It would be really nice if la pata was connected to the 76.

Intersections with traffic signals or stop signs need police on site. There are way too many bicyclists blowing the stop signs or red lights and getting hostile at drivers who nearly hit them due to their own stupidity.

The majority of my commute is on Calle Hermosa and Ave La Pata. Although I have never had an accident, I have had many "close calls" due to people talking or texting while driving, not paying attention, then drifting into and straddling the bike lane. I have resorted to riding on the sidewalk where possible for my own safety, even though I know I can get a ticket for it. Physically separating bike and car traffic is the best and safest solution.

I live about 2 miles from my job and would love to ride my bike, unfortunately I have no alternative route but to ride on PCH/El Camino Real from Camino Capistrano to Palizada. It just is not safe.

Most major roads are high speed and with increasing mobile phone distractions, the bike paths need to be completely separate from car traffic.

It would be great to have a bike path from Rancho San Clemente, Marblehead and Talega to north beach. Straight down Pico would be perfect. Let's get more bikes on the roads!

I would like more dedicated bike lanes/paths separated from busy streets and continuous/connected routes. Some bike routes stop abruptly and there is no logical connection.

My main reason I do not ride my bike to work is that I'm a personal trainer/coach and it's not possible for me to carry all my equipment on my bike. My biggest reason I choose a pacific route (along the pch to Camp Pendelton) is due to the safety of the bike lane. I would like to ride varied routes connecting through our neighboring cities to the north but I am concerned with my safety. I also will ride my bike to beach or post office or car mechanic and if there were safe places to leave my bike I would ride more. I ride approximately 100 miles per week on average.

More nature, off road trails please.

When using bicycles for transportation the biggest oversight is no where to SECURE and PARK the bicycle at stores etc.

Signs/flashing light along Hermosa at the freeway entrance/exit along Hermosa so that more kids could safely ride their bikes to Shorecliff Middle school from the East side of the freeway. The flashing light could be set to just go around arrival/dismissal times. Cars (i.e., distracted drivers) are not always stopping for the kids the WALK in that area.

I would like to see more cycling facilities on Camino de los Mares to and from the Ocean View Plaza/ Edwards theater area. We have stores and entertainment just down the road but no one rides their bike because it is perceived as a dangerous corridor. Mainly because there are no cycling designations. I am aware of the fact that there is no way to add a bike lane since the three traffic lanes are jammed in pretty tightly, how about a sharrow or two and some signage.

extend K-rail along coast

too many hills please make the town flat

improve road surfaces & create better bike lanes

Do what Holland does for their bikers. The paths are generally off the main streets and everyone bikes. The drivers are significantly more aware of bikers than in the states! Require all bikes to have and use a warning bell on their bikes.

There currently is no safe route on Ave Pico from the 5 Freeway to/from the beach. This is my route to get anywhere in downtown San Clemente or onto the bike path for a longer recreational ride to Camp Pendleton and it is not a safe route - especially at the underpass for the freeway.

Easier way to get from the inland side of Pico and Hermosa to the ocean.

Cyclists should be separated from walkers..because when I ride my bike slowly on the beach trail..when I do pass someone.. two problem.. they are old and don't hear me say .."On your left" until I am screaming it, by then I have startled them and they fall to the left.. SCARY!!!! and the inexperienced dog walkers.. the go to the right without thinking of their pet..and I am trying to avoid their pets nose from hitting my spokes.. CRAZY!!!!!!

Provide safe bike linkages across/under I-5. Complete missing links in system. Complete Pico and Vista Hermosa bike lanes/ class 1 trails. Complete PCH Class 1 trail.

Camino De Los Mares is very unsafe for bicycleist near the hospital and shopping centers. This leaves a big connectivity gap for bicycleist trying to access the beach areas or Metrolink. Bike routes could be identified to traverse the City that have lower travel way grade lines. Vera Cruz for example has a grade line that is too steep for many bike riders to climb. Perhaps a parallel route could be identified and delineated through the adjacent residential neighborhoods with a lower grade line.

It amazes me that hundreds of families drop their kids off at Vista Del Mar. But, walking is "dangerous." Biking would be great option, but street riding is the only option and it too is dangerous. There seems to be space for off-road, paved trails to the Calle Saluda side of the school. There would also need to be access to the school property from the park below. It is extremely eco-unfreindly to have so many SUV's and cars driving to and from the school daily.

connect the k rails with the Dana Points k rails on PCH. Make the intersection at Pico and PCH a safer for bikes, peds, and autos.

More bike lanes in all parts of SC.

i think more businesses (including residential complexes) should be required to provide parking, i.e. racks/ covered ports for cyclists.

Bikes should not be allowed on the beach trail. It has become a high use area with too many pedestrians, dogs, baby strollers. Bike riders do not understand the danger than pose to pedestrians. Moms with baby strollers (double wide in particular) need education too.

As a resident of Talega, I would love to be able to ride my bike to the beach without having to navigate the treacherous Pico/5 freeway on and off ramps. As it is now, I won't do it! I have to drive (using gas; contributing to traffic, pollution, parking problem) my car with my bike on top, park, and then ride down by the beach. Not ideal for living in a beach community (I could live anywhere inland and drive my bike to the beach.)

Make El Camino one lane of auto traffic in either direction with seperate bike lane.

what is a bike loop detection system?

Lack of safety is the only reason I don't bike more on City streets.

Have a regional plan that connect bicycle corridor between cities in OC

San Clemente is very hilly except along coast-it is a challenging area to bike even with improvements. Creating some type of bike/bus combo routes for the very hill sections makes sense. Sponsoring more bike races (mountain bikes, bmx and road races) and creating more beach bike trail (cruiser events) would go a long way toward creating a bike culture in SC.

Pico under I5 is death defying. Also where Vaquero T's into Los Mares, going south on Los Mares. Bike lane disappears.

The bike lane along Pico ends at the Frontera/Presidio intersection and it's pretty hazardous trying to ride through there. Also, maybe mark the shoulder as a bike lane on Cristianitos as you head away from El Camino Real toward the gate at Camp Pendleton. That's a great out-and-back loop that a lot of cyclists use, but cars really speed up and down that route and the brush on the side isn't trimmed often enough making cyclists have to veer into the lane to get around the brush. Thanks very much!

I used to ride my bike almost everyday when I lived in Irvine, their dedicated bike trails along the creek and to the back bay allowed me to relax and enjoy the ride. I don't ride much in San Clemente, because the circuitous "safe" bike way through town is lined with cars...the drivers open their doors into bikes, or pull out into the road with out looking for bikers, etc. I miss biking, but not enough to contend with that.

Sharrows on the North South Class III Bike Route through town

I do garage sales each Saturday A.M. Every Sat. I see individuals, and groups of cyclists totally ignoring stop signs. The groups often ride 3 or 4 wide covering not only their bike lane but the lane for autos also. Until these type of riders are dealt with bike safety improvements are a waste of time.

Current Sheriff handing out tickets on bike route is pushing many cyclists to ride on PCH which is much more dangerous. All for what? Revenue? We need bank robberies to stop not hand out bicycle tickets.

There needs to be a way to ride from the beach to Vista Hermosa without going through the school. Currently you cannot get to Visa Hermosa except on weekends by riding through the school parking lot.

Pico and the 5 freeway is a huge issue.

I would love to see a separated barrier on Pacific Coast Highway extending from Pico all the way down to North Beach on one side of the road, rather than part of it on the southbound side and the other part on the northbound side.

Lots more people riding bikes for a purpose other than recreation, traffic situations scary nearly everywhere I've seen them.

One area that I feel needs improvement is on Camino de los Mares coming from Forster Ranch up to Ocean View Plaza. The bicycle lane just disappears so it puts the bicyclist in the car lane on a blind curve. I would like to be able to ride my bike from my home to the stores there but feel it is very unsafe.

Police policy should allow bicyclists to roll cautiously and courteously past stop signs when no car is nearby. We were given brains to make evaluations and thoughtful decisions. I choose to not ride on El Camino because I think there is a high likelihood of eventually being hit by a car. I therefore must ride on Ola Vista where there are an unbearable amount of stop signs. I am a slow rider, and I ride alone, and stopping at all the stop signs ruins the fun of my ride. Please address this issue instead of blowing it off.

Pico needs separate bike lane separate from traffic, from Rancho San Clemente to North Beach.

Last summer in the Forestor Ranch neighborhood,we had our streets resurfaced, and they came out great! Thanks to the city staff who helped make this happen. The problem for cycling (especially on Portico Del Norte to Portico Del Sur) is that the lines painted on the road no longer allow a bicycle and an automobile to be traveling in the same direction, with the automobile "breaking the law" and driv-

ing across the double yellow line to avoid hitting the bicycle. So my suggestion is to redo the painting of double yellow lines where need be. 2. On trails that us pedestrians and cyclist use from about March thru October, we need to figure out a way to keep these trails clear of overgrowth and debris. The issue is we have plenty of rattlesnakes in San Clemente enjoying our great climate during these months, it will give the pedestrians and cyclists a better opportunity to spot the snakes before someone (or the snake!) gets startled. I appreciate money doesn't grow on trees, and hopefully my two suggestions are examples of the kinds of things we might be able to implement without 'breaking the bank'. Thanks! Bob Laird

Stop encouraging retail in sprawl configurations. De-emphasise automobile parking. Make SC more compact.

El Camino Real the main street which runs thru town is too narrow for autos to park on the street and allow for bikes (it is even too narrow for two lanes of cars. Why not have NO PARKING thru town as it would make for a safer bike lane and more beautiful look for our town?

My biggest gripe is the bike riders who DO NOT follow the rules of the road like the cars have to. I watch them go through red lights and stop signs all the time. I don't think any $$ should be spent on them.

Continue to seek solutions to get cyclists safely through the Pico/I-5 interchange. I know it's not new, but it's the east-west connection in the city.

Better marking of the bike routes in town. sharrows, especially on the pacific coast bike route and along school routes. roundabouts instead of stop signs along the pacific coast bike route. make drivers aware that they are required to share the road.

Cycling should be both safe and an adventure. Bike paths should be integrated with green belts and habitat corridors, and should have tree canopy coverage to the greatest degree possible. Cycling through a cool, shaded, oxygen-rich "green tunnel" is pleasant and imparts a sense of well-being. Make the experience enjoyable and people will want to repeat it.

The Pico and I-5 underpass is very pedestrian and bike UNFRIENDLY. Enforcement of bicycle laws by issuing tickets to bicyclists DISCOURAGES bicycling. Education and warnings are more appropriate to our community. I cycle for transportation to downtown and VERY FEW locations have bike racks. It would be great if the City encouraged them and possibly subsidized installation of bike racks at popular destinations.

There is no bike route between Forster Ranch and Shorecliffs and Los Mares shopping.

We need some type of safe bike path to get from one end of San Clemente to the other. El Camino Real is too dangerous. That needs a bike path or some kind of alternate route. I typically ride in the alley.

Pico is a death-trap. Particularly between Del Cerro & Ocean.

Workshop Comments
Northbound off-ramp kids riding bikes to Shorecliffs on wrong side of Vista Hermosa and cross in front of exiting traffic. Drivers not expecting bikes from that direction. (I-5 at Ave Vista Hermosa)

Limited routes for 5 and 10K runs and bike races

Widen/lengthen beach trail

More bike parking in downtown

Is beach trail bike friendly?

Pedestrian On-line Survey Comments
The following comments were compiled verbatim from the on-line survey.

stop the cops from pedestrian checks

Sidewalks are difficult because of the original design of the streets and the need for street parking. I walk every chance I get and it is one of the things I love about the City. I support the city improving/beautifying pedestrian walkways where there is room and need (i.e. Pierbowl, ALL of Camino Real). This encourages recreational walking. Directional pedestrian signage could also be placed to direct walkers to streets with sidewalks, similar to the bike path signage through town.

I live off presidio. Too many stop and go sidewalks or none at all throughout the city. As a 23 year resident, this would be my only complaint. So thanks for at last addressing it! Cheers!

Sidewalks are missing on many streets, please add them to all streets. Freeway underpasses are very uncomfortable and dangerous to walk with kids.

Speeding cars at freeway on/off ramps. Everyone on the sidewalk because there is no bike lanes on el camino. Last time my husband and I went for a walk, a car full of guys threw hot sauce all over us and we had to run home with burning eyes.

El Camino Real needs a bicycle lane in both directions from one-side of town to the other.

Many, if not most T intersections don't have any cross walk markings. I've found a lot of drivers don't realize that pedestrans still have the right-of-way at these intersection. They should all be marked.

San Clemente is just fine now for walking. We walk all the time & have done so for years. We have many more sidewalks in SC than they do in Laguna Beach. Additionally, cutting down old and beautiful trees to put in sidewalks is sad on all levels. I say do what's positive to make our city walkable and bikable, but not at the expense of trees. Develop pocket parks where abandoned gas stations now reside,(Palizada & Calle de la Industrias) where bikers & walkers can rest, get a drink & sit under a tree.

S. La Esperanza, you take your life in your hands to walk across the street, walk your dog, pull out of your own driveway, work in your own yard at curb side, and the most costly, park your car in front of your own house! Our neighbors and us have had our vehicles crashed into numerous times. One friend has had 6 cars severely damage while they were parked legally in front of the own home. We had one truck totaled and it only had 600 miles on it. Families with children have moved because it is so dangerous. The city has been notified many times to no avail!

In the Riviera where I live there is no sidewalk and the street to the beach is crowded with cars and people walking. It is very unsafe. Some time ago studies were made about putting in a sidewalk at least on one side of Ave. La Costa. Parking is very crowded here. We need parking places defined as up on Ola Vista. Also, some owners got creative with RED Paint and we lost some parking near the ocean.

This should be changed. I know the former owner who did it. Also we need red paint to protect driveways. Often they park over into the driveway here at my home.

I have been a homeowner in North Beach for 17 year. I have been walking my daughters to Las Palmas Elementary School for 8 years. We walk up West Portal (200 Block), which has no sidewalks, even though part of it is adjacent to the school (safe route to school grant?). Many parents drive too fast on West Portal since they are late for school. Others, I believe, because the street is wider than most. The worst and most dangerous part, however, is when we get to Oso Street. Cars park on both sides of Oso leaving only one lane width open. The parents dropping their children in the back parking lot of the school leave and make a right turn onto Oso. At the same time vehicles are heading East on W. Portal. Drivers park right on the south corner of W. Portal and Oso, as well as both sides of the street so there is room for only one car to pass. The driver driving up W. Portal can't see over the cars and around the corner so just as they round the corner to Oso, they often must back up around the corner. So we are walking up the street (again since there are no sidewalks) and drivers are backing down around the corner before we can make it to the short sidewalk on Oso. I suggest building a sidewalk on the North side up W. Portal adjacent to the school yard and all the way to the back school parking lot. I suggest that there be no parking on the ENTIRE west side of Oso during school pick up and drop off so cars can pass each other. My dream . . . make W. El Portal into a culdesac and make Oso pull in parking for the school or a bigger drop off pick up area. Please feel free to contact me with any questions. Susan Kendall 949-366-6695

Ola Vista east of Del Mar needs sidewalks or even a path behind houses and apts that would make it safer and more fun to walk.

I often walk my dog or run to the beach trail on Avenida Calafia. There are parking meters set up for walking access down to Calafia Beach. However, there are no sidewalks. Obviously there is a lot of traffic going down to the Calafia parking lot - especially during summer. Some people drive quite fast. Why are there no sidewalks on Avenida Calafia?

Sidewalks that stop, cars that hang out across sidewalks, and broken/cracked sidewalks make it difficult to push a stroller while walking. I live within walking distance of Del Mar but I don't like to walk there because of these issues. Also, I live within walking distance of the Ralphs center but don't like to walk there because there is no pedestrian entrance. It's not safe to walk up the driveway at Barcelona especially with kids. It's also difficult to bike there for this reason along with the fact that there's no where to put a bike in front of Ralphs.

It is difficult to ride my bike in SC because there are no bike paths and frequently drivers get very angry when they have to deal with cyclists.

The vehicles that park over the sidewalks force me to walk in the street. Ola Vista is exceptionally bad.

The area of the city north of the pier has very poor sidewalks

People running the red light at S. El Camino Real and Avenida Barcelona. Drivers not paying attention to pedestrians at the corners of S. El Camino Real and Presidio by Starbucks. Red lights are not stopped at. We walk on the inland side of S. El Camino Real north and south of Barcelona because a person doesn't have to cross streets that exit into El Camino Real. Drivers exiting onto El Camino Real are only looking for cars, not pedestrians.

Oh my God! How can San Clemente allow illegal parking with cars sticking out of the driveways and into the street. San Clemente's lack of proper enforcement of bad/illegal parking is the #1 problem. The 2nd problem is simply the lack of sidewalks. How did San Clemente become like that? It's worse than Third World as our 1st World society has so many cars and vehicles that a lack of sidewalks and cars blocking pedestrians is truly a travesty. We absolutely need sidewalks on both sides of the street on every single road in the city.

People hanging out in the alley.

Palizada underpass is dangerous.

Crossing from North Beach to the bike/pedestrian lane (behind the barriers) on the opposite side of the road.

trail maps needed

The crossing at El Portal needs to be fixed so that when cars are turning right from El Portal to go South on El Camino they are square with the road and not looking behind them to see if there are cars coming which is a danger for the people crossing El Camino in front and to the right of them. Also the walk way into the boys and girls club is very dangerous. Also the sidewalks along Calle Puente to Palizada and up to the library are very unfriendly to pedestrians. Also, please fix Max Berg Park so that the road is not an oval around the park and kids have to cross so many lanes of traffic to get to the park. Please make the turns right angles.

We definitely need more sidewalks! Too many front yards don't have them. Street parking should be removed on streets without sidewalks, and then the city could use that space to develop pedestrian and bike paths.

The walking path along the railway is such a great improvement! More pedestrian-friendly sidewalks and benches for resting would be nice.

calle las bolas and sacramento the testasterone highway

The areas around our school need the sidewalk focus first and foremost for their safety in walking to and from school and to encourage walking as a lifetime habit.

I love the beach trail and we need more trails like that with easy parking

The section of Pico from Calle del Cerro to PCH is not very conducive to pedestrian travel.

I live at the corner of La Paloma and Puente. From my kitchen window I can see mothers pushing strollers accompanied by one, two, or three youngsters headed for Las Palmas school. There are no adequate sidewalks for them to walk on and the children are in the street. It is very dangerous. I would like to see a "Zebra" crossing at the Stop sign on La Paloma so the drivers would let me safely cross. I hold my breath every time a family walks this route.

Del Presidente sidewalk need to be completed. Sidewalk south of Junipero broken off. Lighting at night not sufficient for walking safely. This is much used path to Concordia School. Very concerned also pedestrian crossing if measure A passes. Summer traffic/beachgoing from east side of El Camino Real plus Marblehead community. right now PCH is bumper to bumper when freeway clogs.

Del Presidente sidewalks need to be completed. This is a main path to school. Concern about 30 mph speed limit.

Areas around north beach and las palmas are unsafe areas with questionable people hanging out on the streets.

Living in Talega my biggest issue is getting down to the beach (pch) at such roadways/intersections all pretty much have to do with passing under I-5. For example, I would like to use Hermosa but the walking path stops on the north side of road near I-5 and there is no over ramp walk way. I use Pico but the walking path stops on one side and it's a little dangerous crossing at the walkways under the 5. I have also use the intersection by the DMV (forget the road name) and Goodwill. I think it's called villereal and PCH?

sidewalks for the peds not for bycylists. sidewalks and seating sidewalk cafes should be encouraged

Many streets near Del Mar and the beach do not have sidewalks. I live on W. Palizada and do not always feel safe walking up or down the street with my nephew or dog. There are many points that you have to walk around cars out into the street and into on coming and sometimes fast driving traffic. In order for the streets in this area to be safe and more efficient for both pedestrians and automobiles; more of them need to be turned into one-way streets. This would provide room for a sidewalk and bike lane.

the north side of vista hermosa from marblehead to frontera needs a sidewalk

Area east of I5 around Cotton Hill or Cross Hill does not have sidewalks or consistent sidewalks. I would suggest taking some of our property tax money and put the sidewalks in.

Improve accessible parking at Pier Bowl. Many of the HC stalls far exceed ADA limit (2%). Moving location in the lot could greatly improve accessibility. My daughter is a quadriplegic and getting her in and out of the car and into her wheel chair is difficult on a 10% slope. For the farmers market close the street and have the vendors in the street. The current arrangement often does not allow accessible paths along the sidewalk and make it difficult for wheelchairs to move around and enjoy the event.

Pico and PCH are very dangerous for peds, bikes and drivers. It ss now and has been for a long time. I think a bridge like Dana Point has put up near the harbor would be very good use of tax payers $$$.

I walk on the beach trail nearly daily with my dog, friends, or alone. I have had close calls when I was narrowly missed by a bicycle or double wide stroller. These in themselves or not dangerous but their users do not realize the amount of space required to pass pedestrians. I have overheard bike riders joke about being ticketed for riding a bike on the bridge at Mariposa pt. If we have laws we need police to enforce them.

We need some sort of overcrossing on El camino at the north end of town by the train station. I've almost been hit by cars since the protected area, behind the white barricades, is the safest place to walk, is on the other side of the street. People have to jaywalk there in order to cross.

Sidewalks should be on both sides of ALL streets! More stringent traffic enforcement! Ticket phone talking drivers! Keep cyclists and skaters off sidewalks!

In the North Beach area, there is a roundabout at the intersection of Calle Las Bolas and Boca De La Playa. There are yield signs at all 3 entrances to the roundabout but people drive at excessive speed and VERY frequently disregard the yield signs. There needs to be stop signs or speed bumps at these points and at the end of Pico. In fact, a pedestrian was killed approximately 12 months ago in this area.

North Beach is especially dangerous for pedestrians. Pico, El Camino Real, Boca de la Playa and Calle Desecha are not safe to cross or even walk along in North Beach. Also, safe routes to schools would be a wonderful improvement throughout the City.

1st to the credit of the City, the sidewalk program is helping in downtown. However, drivers at high speeds on wider streets like Miramar, Barcelona, and other connector streets are becoming more and more dangerous. Need connectivity from Talega to North Beach via Pico with a Class I path. In addition, a safe connection at the Pico & El Camino Real intersection to connect Coastal Trail is needed. Sharrows Symbol(Shared Bike/Vehicle Lane)should be considered for the Class III Bike Route North and South through town.

The biggest concern as a pedestrian is the lack of attention drivers afford to those not in vehicles. I have repeatedly have had to avoid being hit while in cross walks in the intersections of Camino De Estrella and Camino Mira Costa, Camino Mira Costa and Camino Capistrano, Camino Capistrano and Camino De Estrella.

We need to have flatter walking paths with trees. The kids have many playgrounds and facilities at school with trees. We have to walk on the “paths” in Talega that are nothing more than maintenance roads. Too hilly for seniors and no trees. We call them fake recreational walking paths developed to sell homes. We are hoping the new park at La Pata & Hermosa will develop the walking path early on and plant trees soon so we have one place besides the beach path to walk before we die. Walking is truly the best exercise when you are older. The beach path has become very dangerous at times because of the classes with double wide strollers who yell at you to get off the path as they run by in a pack. Why is that allowed?

A dedicated and separate pathway system needs to be set up to accommodate pedestrians and cyclists. Mixing these activities with autos is not the best practice for competing with other cities and for promoting the potential for quality of living enhancements. Great potential was lost in the master planning of Talega. Think of pedestrians and cyclists first. Then think of autos. If needed, close some streets and dedicate them to something other than autos.

South of bridge on ECR: uneven sidewalks, too many breaks in curbs: up & down makes for more chances to fall.

Just today I walked from our home to the Forster Ranch Park with my granddaughter in a stroller. We have to cross Camino Vera Cruz, which has a crosswalk but no signal. They used to have a signal there but took it out. I don’t know why it was removed since it would make it a lot safer for pedestrians to cross there, especially children coming from the park and school. Drivers drive through there at a high rate of speed and there is a slight curve coming from one direction so you don’t see the cars and the drivers don’t see the pedestrians until they are fairly close. Another area I think is a concern is Vista Hermosa at the offramp heading north. Drivers are looking left to merge with oncoming traffic but I have seen kids riding their bikes to Shorecliffs Middle School on the wrong side of the street come flying across that intersection. It would be very easy for them to be hit since the driver is focused on oncoming traffic from the left.

To make walking more enjoyable and also simply to please our aesthetic sensibilities San Clemente needs more trees and pretty, accessible landscaping with comfortable benches located on almost every block. The current City benches made of concrete with a rounded back are extremely uncomfortable and generically ugly. Instead of the one-bench-fits-all-locations dull yellow standard, a variety of bench designs throughout town, chosen especially to fit the specific neighborhood location, would be far more attractive. Also, cute, lush neighborhood parks would be a nice walking destination for nearby residents, getting people outside quite pleasantly, conveniently and without driving. Laguna Beach provides many examples of darling small neighborhood parks. One fantastic example of a tiny city park in Laguna Beach is on the ocean side of coast highway just north of Legion Street. San Clemente needs to be more careful with its hardscape choices in parks. Hardscape sets the mood and feeling of the park and can be either artistic and inviting or ugly and scary like the slump block at Max Berg Park. I volunteer for the bench and park design committee!

Need crosswalk at Camino San Clemente and El Camino Real. Most people run across rather than walk all the way down to the Arco Station.

Benches for rest stops at destination/vista points.

People blowing the red light on a right turn from PCH onto Camino Capistrano

Beach trail: Bike riders don't walk on the bridge. Bike riders in narrow areas of the trail are inconsiderate & ride too fast. People on the trail with too many dogs. Dog waste not cleaned up. People with tandem strollers that are too wide. Bike riding on the trail is not safe for pedestrians & banned. Rules of the road on trail are not enforced. We walk the trail about 5 times per week.

In old SC, scarce monies should be spent on traffic calming, not sidewalks. Peds can walk in the streets if the cars can be slowed down. Except for arterials, cars should go 10mph max. Power to pedestrians!

walkers & joggers MUST use the crosswalk buttons....they walk right into traffic!

sidewalks need to be wider and without driveway flares and utility obstructions. We need sidewalks that are at least 6 feet wide and fully ADA compliant to be useful for everyone.

Street-level greenscape, tree canopy coverage and better infrastructure (especially along El Camino Real).

Need a better walking environment to connect Forster Ranch and Shorecliffs with Los Mares shopping center. Explore opportunity to create a safe path or sidewalk up Calafia, connect beach trail to Trestles access point.

Bicycle On-line Survey Results

Questions	Responses	%
1. Do you currently ride your bike for transportation?		
No	67	42%
Yes	94	58%
Total Answers	161	
2. How often do you ride your bike for transportation purposes (not recreation)?		
Daily	12	13%
4-6 days per week	14	15%
2-3 days per week	27	29%
Once a week	15	16%
A few times a year	8	9%
2-3 times per month	15	16%
Never	3	3%
Total Answers	94	
3. Do you ride your bike to work?		
No	107	68%
Yes	50	32%
Total Answers	157	
4. How often do you ride your bike to work?		
Daily	11	20%
4-6 days per week	7	13%
2-3 days per week	21	39%
Once a week	5	9%
A few times a year	4	7%
2-3 times per month	6	11%
Never	0	0%
Total Answers	54	
5. What is the distance of your commute roundtrip?		
Less than 2 miles	9	17%
2-5 miles	17	31%
5-10 miles	8	15%
More than 10 miles	20	37%
Total Answers	54	

Questions	Responses	%
6. Do you ride your bike for recreation?		
No	14	9%
Yes	147	91%
Total Answers	161	
7. How often do you ride your bike for recreation?		
Daily	10	7%
4-6 days per week	26	18%
2-3 days per week	61	42%
Once a week	25	17%
A few times a year	8	6%
2-3 times per month	15	10%
Never	0	0%
Total Answers	145	
What factors discourage you from bicycling?		
8. Drivers that do not follow the rules of the road		
Great extent	53	36%
Moderate extent	71	48%
Not at all	25	17%
Total Answers	149	
9. Aggressive drivers that make riding unsafe		
Great extent	78	50%
Moderate extent	59	38%
Not at all	18	12%
Total Answers	155	
10. Bicycle unfriendly roadways		
Great extent	115	73%
Moderate extent	37	24%
Not at all	5	3%
Total Answers	157	
11. No secure bicycle parking at destinations		
Great extent	31	21%
Moderate extent	55	37%
Not at all	62	42%
Total Answers	148	
12. Lack of shower/changing facilities		
Great extent	7	5%
Moderate extent	29	20%
Not at all	111	76%
Total Answers	147	

Questions	Responses	%
13. Lack of off-road bike paths		
Great extent	50	33%
Moderate extent	59	39%
Not at all	43	28%
Total Answers	152	
14. Lack of time		
Great extent	8	5%
Moderate extent	52	35%
Not at all	88	59%
Total Answers	148	
15. Lack of interest		
Great extent	3	2%
Moderate extent	5	3%
Not at all	139	95%
Total Answers	147	
How would the improvements listed below affect your decision to bike more?		
16. Provide bike paths separated from the road and from busy traffic		
Great extent	134	84%
Moderate extent	24	15%
Not at all	2	1%
Total Answers	160	
17. Emphasize safe routes to schools and to local parks		
Great extent	96	60%
Moderate extent	43	27%
Not at all	20	13%
Total Answers	159	
18. Provide more bike lanes painted on safe streets		
Great extent	114	73%
Moderate extent	35	22%
Not at all	8	5%
Total Answers	157	
19. Mark safe routes (no painted lanes, just signs) on low volume/low speed streets		
Great extent	47	30%
Moderate extent	76	49%
Not at all	32	21%
Total Answers	155	

Questions	Responses	%
20. Increase maintenance along routes, removing potholes and debris		
Great extent	58	37%
Moderate extent	72	46%
Not at all	28	18%
Total Answers	158	
21. Provide more bike friendly facilities and services at transit stations/stops		
Great extent	47	30%
Moderate extent	68	43%
Not at all	42	27%
Total Answers	157	
22. Fix bike unfriendly intersections that have high speed merge lanes		
Great extent	101	65%
Moderate extent	44	28%
Not at all	10	6%
Total Answers	155	
23. Improve public education of drivers with an emphasis on sharing the road with bikes		
Great extent	79	50%
Moderate extent	56	35%
Not at all	23	15%
Total Answers	158	
24. Improve public education of cyclists for obeying the rules of the road and riding safely		
Great extent	61	39%
Moderate extent	60	39%
Not at all	34	22%
Total Answers	155	
25. Improve enforcement of laws that apply to drivers and cyclists		
Great extent	46	30%
Moderate extent	67	43%
Not at all	42	27%
Total Answers	155	
26. Improve intersection bike loop detection systems		
Great extent	65	42%
Moderate extent	59	39%
Not at all	29	19%
Total Answers	153	

Questions	Responses	%
27. Create a more connected system by filling in missing gaps in bicycle facilities		
Great extent	98	63%
Moderate extent	37	24%
Not at all	20	13%
Total Answers	155	
28. Provide more secure bicycle parking at major destinations and public facilities		
Great extent	53	34%
Moderate extent	64	41%
Not at all	38	25%
Total Answers	155	
29. If you have a school age child, do they ride their bike to school?		
No	30	19%
Yes	35	22%
Not applicable	92	59%
Total Answers	157	
30. Select the school(s) which your child(ren) currently attend		
Bernice Ayer Middle School	3	7%
Truman Benedict Elementary School	3	7%
Concordia Elementary School	9	20%
Clarence Lobo Elementary Schoo	1	2%
Marblehead Elementary School	6	13%
San Clemente High School	5	11%
San Onofre Elementary School	1	2%
Shorecliffs Middle School	10	22%
Vista Del Mar Elementary School	3	7%
Vista Del Mar Middle School	2	4%
Early Explorations	1	2%
Serra Preschool	1	2%
Total Answers	45	
31. What prevents your child(ren) from biking to school? (check all that apply)		
Too far to ride their bike	0	0%
They have to be at school too early to allow them to ride their bike	2	6%
Concern over safety at street crossings	23	70%
Concern over criminal activities	5	15%
I can't get them motivated to ride their bike to school	3	9%
Total Answers	33	

Pedestrian Online Survey Results

Questions	Responses	%
1. How often do you walk in San Clemente to run an errand rather than using your car?		
Daily	13	14%
4-6 days per week	8	9%
2-3 days per week	16	17%
Once a week	14	15%
A few times a year	15	16%
2-3 times per month	8	9%
Never	19	20%
Total Answers	93	
2. How often do you walk in San Clemente for exercise, recreation or enjoyment?		
Daily	29	31%
4-6 days per week	28	30%
2-3 days per week	23	25%
Once a week	4	4%
A few times a year	5	5%
2-3 times per month	3	3%
Never	1	1%
Total Answers	93	
What are some of the reasons why you choose to walk? Please select how often these topics are (or are not) the reason you walk.		
3. To go shopping		
Frequently	23	29%
Once in a while	32	41%
Never	24	30%
Total Answers	79	
4. To get to work		
Great extent	3	5%
Moderate extent	9	14%
Not at all	54	82%
Total Answers	66	

Questions	Responses	%
5. To get to public transportation		
Great extent	4	6%
Moderate extent	14	21%
Not at all	50	74%
Total Answers	68	
6. To get to school		
Great extent	5	7%
Moderate extent	8	12%
Not at all	55	81%
Total Answers	68	
7. To walk my pet		
Great extent	38	49%
Moderate extent	7	9%
Not at all	32	42%
Total Answers	77	
8. To get exercise		
Great extent	75	83%
Moderate extent	10	11%
Not at all	5	6%
Total Answers	90	
9. Just for relaxation		
Great extent	58	69%
Moderate extent	20	24%
Not at all	6	7%
Total Answers	84	

Questions	Responses	%
10. Why don't you walk more frequently? (check all that apply)		
No sidewalks or pathways	49	23%
Difficult and unsafe streets to cross	42	20%
Fast drivers that do not pay attention	41	19%
Poor health	3	1%
Too far to walk where I want to go	43	20%
Unpleasant walking environment	25	12%
Concern over criminal activities	9	4%
Total Answers	212	
11. If you have a school age child, do they walk to school?		
No	15	17%
Yes	18	20%
Not applicable	57	63%
Total Answers	90	
12. Select the school(s) which your child(ren) currently attend		
Bernice Ayer Middle School	3	8%
Truman Benedict Elementary School	2	5%
Concordia Elementary School	6	15%
Las Palmas Elementary School	3	8%
Clarence Lobo Elementary School	1	3%
Our Lady of Fatima School	1	3%
Our Saviors Lutheran School	1	3%
San Clemente High School	9	23%
Shorecliffs Middle School	9	23%
Vista Del Mar Elementary School	1	3%
Vista Del Mar Middle School	1	3%
Early Explorations	1	3%
Serra Preschool	2	5%
Total Answers	40	
13. What prevents your child(ren) from biking to school? (check all that apply)		
Too far to walk	10	37%
They have to be at school too early to allow them to walk	5	19%
Concern over safety at street crossings	9	33%
Concern over criminal activities	2	7%
I can't get them motivated to walk to school	1	4%
Total Answers	27	

Safe Routes to School Surveys

The following tables are the results of the Safe Routes to School efforts.

Methodology Notes
1) This survey was implemented early in the outreach process because almost no parents submitted the 150-200 walk/bike audit forms distributed through San Clemente schools. Given the expense of printing the audit forms, personally conducting the surveys was much more effective b/c more data was collected from more residents. All surveys were done on a volunteer basis by Brenda Miller, San Clemente resident and founder of PEDal.
2) When conducting interviews for these surveys, the simple question was asked as follows: "Does/has your child ever walked or biked to school? Why or why not?" Often, parents can't immediately recite reasons why they choose to drive their children to school, so I often prompt them by saying, "For example, . . . " and mention some of the typical concerns in **GREEN** here. That always serves to stimulate their thinking a bit so they reply on their own with a variety of concerns, which were logged as a simple tally on a printed survey form.
3) Results reflect inherent bias of people surveyed. Nearly all of the parents surveyed (except BAMS, 06/3/2011) were waiting in their cars for school to adjourn. Conclusion is that those are the parents least likely to let their children walk or bicycle to school, for a variety reasons.
4) Generally speaking, I was not permitted to speak with kids while on school property. Thus, mostly parents were interviewed.
5) B/c of school Principals' potential concerns in re: having people they don't know surveying parents, I didn't recruit other volunteers to help.
6) Note the Truman Benedict survey on 06/03, which interviewed only parents NOT waiting in cars--results were distinctive.
7) Vista del Mar School principals would not allow me to walk the school parking lot to survey parents. Thus, that school's surveys were conducted on City sidewalks at Ave. Talega @ Portofino.
8) I did notify all schools' principals of my presence and location before the surveys were conducted. They all have my contact information.
9) Vista del Mar surveys were very difficult to conduct b/c there were too many kids & parents together simultaneously to properly interview them. Most hadn't heard of the City's Bike/Ped Master Plan effort, despite my presentation to the schools' PTA, but some made constructive comments as noted.
10) Due to the issues noted above, most of my efforts at Vista del Mar were confined to distributing official City flyers for the online BPMP surveys.
11) B.A.M.S. & Truman Benedict schools were easy to survey b/c both schools use the same parking lot.

School	Las Palmas Elem	Shorecliffs Middle	Shorecliffs Middle	B.A.M.S.	B.A.M.S.	Truman Benedict Elem	Truman Benedict Elem	Vista del Mar Elem & Mid	Vista del Mar Elem & Mid	Vista del Mar Elem & Mid
Date	6/10/2011	4/26/2011	6/17/2011	6/2/2011	6/3/2011	6/2/2011	6/3/2011	6/20/2011	6/23/2011	6/20&23/2011
Survey start time	1:45 PM	2:30 PM	3:11 PM	2:45 PM	2:45 PM	1:20 PM	2:00 PM	2:30 PM	12:20 PM	
Survey end time	2:45 PM	4:00 PM	3:42 PM	3:45 PM	3:45 PM	2:30 PM	3:45 PM	3:45 PM	1:00 PM	
ASK: Does/has your child ever walk or bike to school? Why or why not?								See comments		
Number of interviews	18	30	17	21	19	31	18			
NO (w/o qualification)	10	30	10	18	16	17	0	N/A	N/A	
NO b/c too far	8	17	11	9	8	9				
NO b/c driving is a habit		5	1							
NO b/c stuff to carry				1						
YES (w/o qualification)	7	0	0	1	4	8	16	N/A	N/A	
YES b/c no worries at all	1				3	5	4			
SOMETIMES	1	0	0	2	0	6	2			
P1) No sidewalks, paths or shoulders	2		2			2				
P2) Sidewalks or paths NOT continuous	1	1				2				
P3) Sidewalks blocked with poles, plants, etc	1									
P4) Sidewalk too narrow for two people				1						
P7) Sidewalk next to busy street w/o buffer		1								
P8) Too many driveways to cross		1								
P13) No pedestrian crosswalks OR crossing guards	1	1	2	4		2	1			
P14) Personal safety issues (dogs, unfriendly people)	2	3		9	5	7	2			
P15) Dirty, lots of litter or trash										
P16) Students cross street between parked cars		1	1							
B1) No bicycle lanes/routes	1		2				1			
B3) Cars parked in the bike lane				1						
B4) Bike lane too close to cars		3	1	3	2		1			
V2) Too much traffic along the road	3	5	3	2	9	7	1			
V3) Cars seem to be going too fast	3	5	3	5	8	12				
V4) Drivers don't stop at stop signs	1	1	1	1	4		3			
V5) Drivers don't yield to pedestrians	1	1	1	7	4	8	2			

School	Las Palmas Elem	Shorecliffs Middle	Shorecliffs Middle	B.A.M.S.	B.A.M.S.
NOTES & COMMENTS	Most kids/families who walk to school are Hispanic & live nearby.	This survey was done at the Soccoro parking lot.	This survey was done in the Vista Hermosa parking lot.	Concerns in re: gangs/drugs @ stairs in park adjacent	Counted (17) bicycles leaving school from the bike rack area, but didn't speak to those students.
			(6) parents said they drive child to school b/c Vista Hermosa Fwy interchange is so dangerous	Concerns in re: Del Rio @ Sarmentoso having no X-Guard	
				School bus driver said that most of SC is non-compliant w/ a law requiring 12 ft. b/n bus & far edge of sidewalk for bus stops.	
School	Truman Benedict Elem	Truman Benedict Elem	Vista del Mar Elem & Mid	Vista del Mar Elem & Mid	Vista del Mar Elem & Mid
NOTES & COMMENTS	(1) parent said she'd like to walk w/ her special needs child, but the infrastructure is too unpredictable to allow safe passage.	This survey focused on parents escorting their kids on bikes & scooters, so the results are very different from other surveys.	VdM Middle School students are mostly unaccompanied by parents.	Today was the last day of school.	Due to extremely high motor & nonmotor traffic volume, a 2nd X-guard is needed on the SW corner of Ave. Talega@ Portofino.
		(1) parent said he doesn't like the use of one X-guard for (2) street crossings.	Distributed dozens of BPMP City flyers directly to parents, telling them the City was conducting a Safe Routes to School Survey via its official website as on the flyer. Without that explanation, people ignore my efforts.	Ave. Talega westbound @ Portofino needs an LED rt. Turn regulator into the school area b/c cars often block the crosswalk.	Significant line-of-sight issues on south side Ave. Talega due to bushes in the Calle Portofino median. Likely, that's HOA property.
			Gave City BPMP flyers to almost all Elem parents.		X-Guard suggested that Portofino's X-walk needs botdots before the X-walk begins b/c cars ALWAYS encroach upon the pedestrian area w/o stopping first.

Appendix F: Bicycle Demand Assessment

Bicycle Counts

Bicycle counts for this project were conducted by members of PEDal (San Clemente's bicycle and pedestrian advocacy organization) at over 20 locations throughout the City during 2011, primarily on weekend mornings. Counts were conducted at locations along five corridors, including Avenida Pico, Camino Capistrano, Camino De Los Mares, the Pacific Coast Bike Route and the Beach Trail. Count methodology reflected National Bicycle and Pedestrian Documentation Project (NBPD) guidelines to maintain consistency with other cities' counts. See Appendix H for count details.

The reasoning behind count locations differed due to the information desired about each one. For instance, counts on Avenida Pico were conducted to determine the level of use by cyclists of this major corridor because this corridor received more survey comments than any other in the City. Many respondents said they would like use this route to connect the residential areas to the east with the beach area, but felt that motor vehicle traffic volumes and speeds made it too dangerous. The low numbers of cyclists using the route reflect this concern.

Counts were conducted along Camino De Los Mares because of similar survey comments to those about Avenida Pico, especially the segment between Avenida Vaquero and Camino De Estrella. This roadway segment experiences relatively high traffic volumes and has multiple lanes with a number driveways to large retail complexes, and counts reveal relatively low bicycling numbers.

Counts on Pacific Coast Highway were fairly high, reflecting its popularity as a recreational route and the fact the counts were conducted on weekend mornings. However, according to the survey observer, many northbound cyclists crossed the wrong way against traffic to enter Dana Point's barricaded Class 1 bicycle path. Less than 30 percent of northbound cyclists used the crosswalk button on the north side of Camino Capistrano. Also, many southbound cyclists used the north side crosswalk to cross the Pacific Coast Highway, then cut diagonally across Camino Capistrano. During observation, several drivers were seen having to stop to wait for cyclists to clear the roadway, particularly for illegal northbound maneuvers.

The Pacific Coast Bike Route counts were conducted to determine how many cyclists are using this designated route. The numbers were considerably higher than those of Avenida Pico, and even though the route is fairly circuitous and hilly. This also probably reflects the relatively low volumes and speeds on the streets that make up this route, making it more attractive to most cyclists.

Finally, the counts along the Beach Trail reflected the popularity of this route with by far the highest use numbers.

These counts could prove valuable in the future for those routes where the City installs new or enhanced bicycle facilities. The City could continue to collect counts at some of the locations at annual intervals as facilities are implemented. Counts conducted on a regular basis can be used to gauge bicycle use as facilities are put into place. This information is extremely useful to help to justify funding for further improvements.

Projected Bicycle Demand

Bicycle Commuting in San Clemente

According to the 2010 Census, there are 23,377 workers in San Clemente. According to the U.S. Census Bureau's 2009 American Community Survey (ACS), 0.05 percent of them cycled to work, or 114 persons. It should be noted that the latest census information on bicycle commuters does not include those who bicycle to school or those who bicycle to transit before continuing to work. The census only asks for the respondent's primary mode of transport.

This following text refines the 2009 bicycle commuting rate for San Clemente by adding an established estimated proportion of students who bicycle to school and workers who bicycle to transit for their work trip. Data from the 2009 American Community Survey portion of the 2000 Census were used to develop these refined estimates.

Students Biking to School

According to the 2009 ACS, there were 15,291 students enrolled in San Clemente. If approximately one percent of these students bicycled to school, this would translate into an additional 153 cyclists.

Workers Biking to Transit

The 2009 ACS estimated that 290 San Clemente workers commuted to work by transit. If approximately one percent of transit commuters used their bicycle to access transit before continuing on their way, this would translate to an additional three bicycle commuters. The revised estimate of 384 daily cyclists in San Clemente would therefore include 114 workers, 153 students and three bike-to-transit riders.

Non-Commute Bicycle Ridership

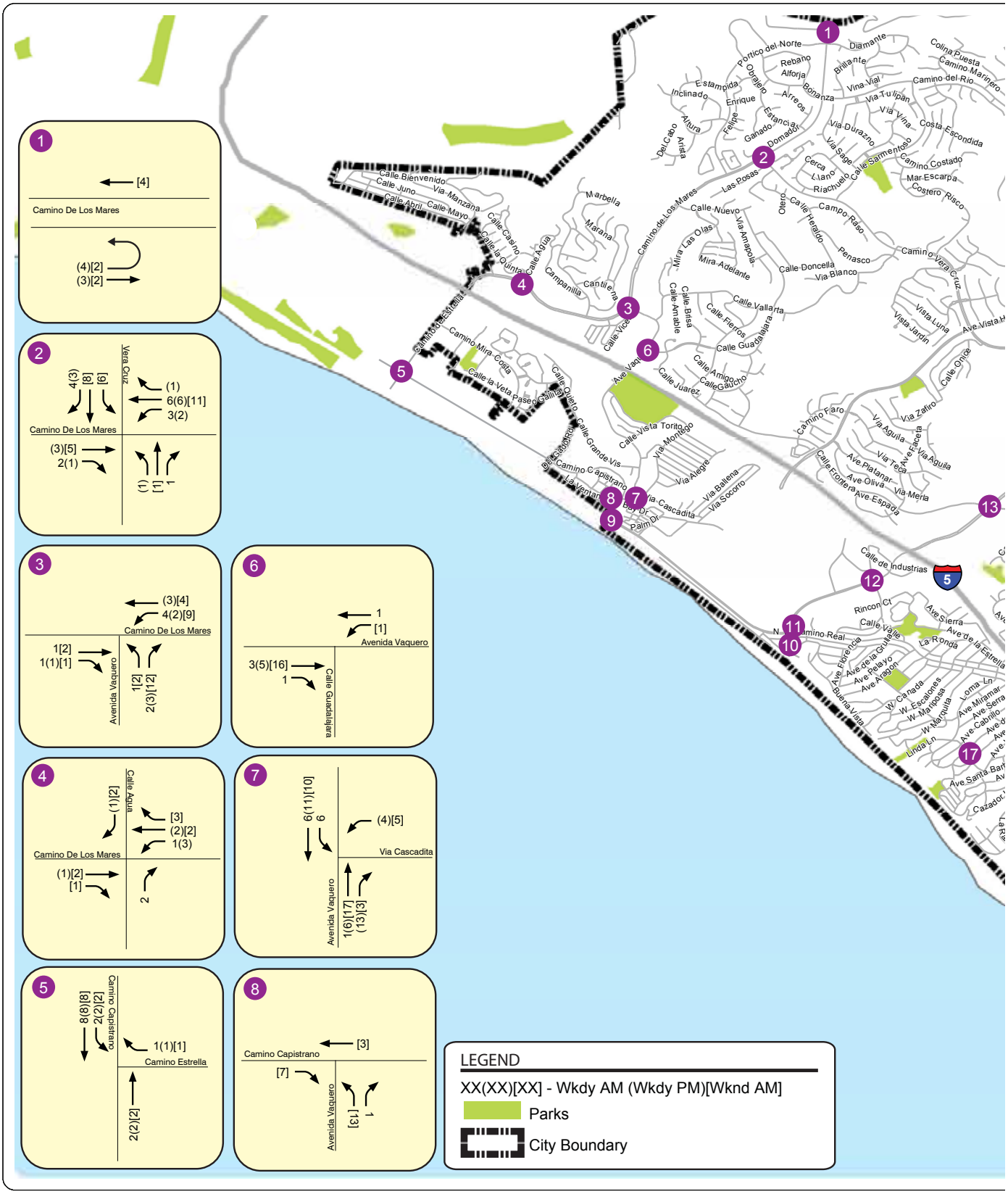
Commute trips represent a minority of bicycle trips. To get a fuller sense of bicycling in a community, it is essential to account for the other reasons that people use bicycles. The National Bicycling & Walking Study, published by the Federal Highway Administration in 1995, estimated that for every commute trip made by bicycle there were 1.74 trips made for shopping, social and other utilitarian purposes. Using that figure, we can estimate the number of these other bicycle trips in San Clemente as follows:

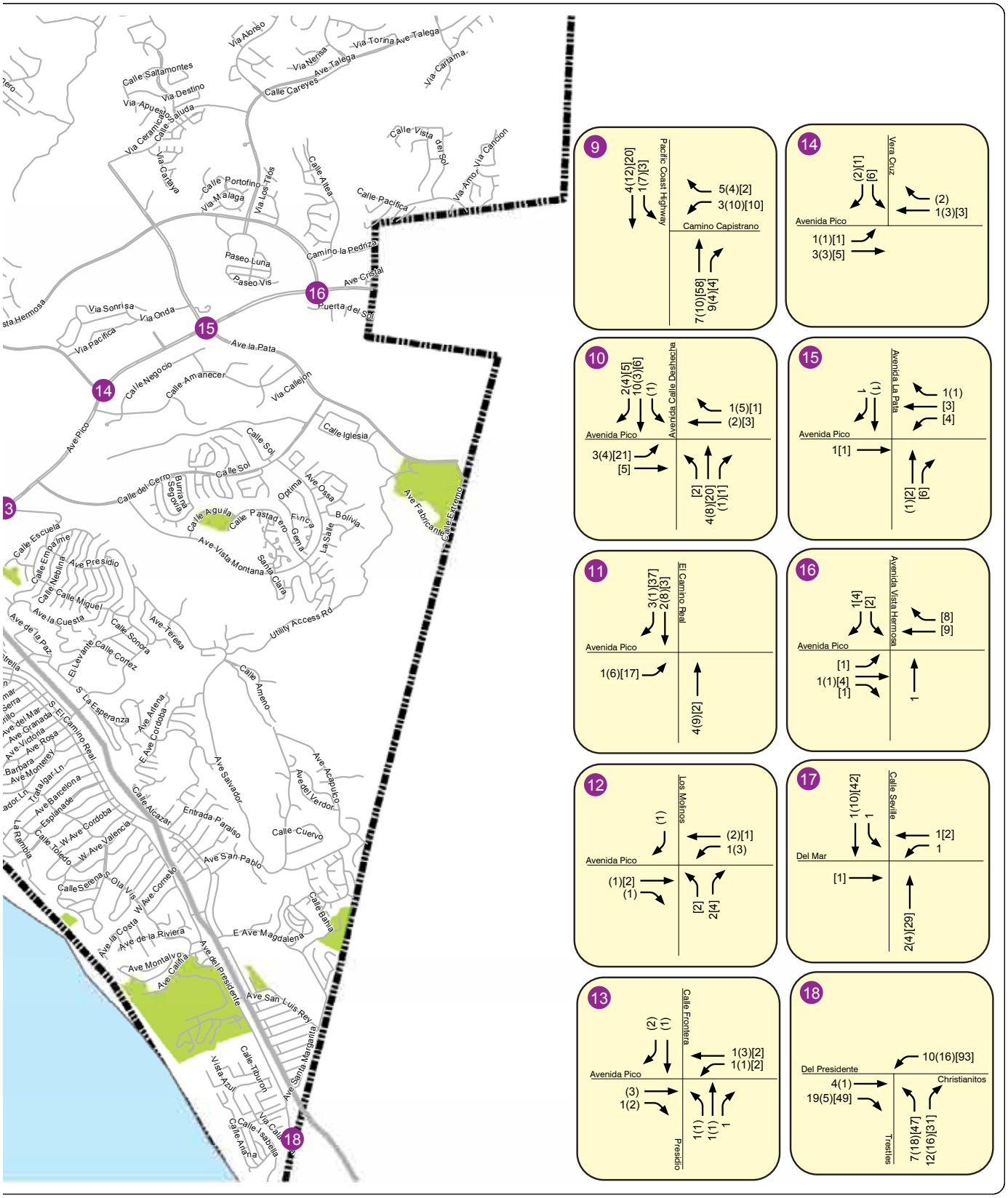
- Number of daily bicycle commuters: 384
- Number of daily trips per commuter: Two (Assuming one trip from home to work and one trip back)
- Number of daily bicycle commute trips: 768 (384 x 2)
- Daily bicycle trips for non-commute purposes: 1,336 (768 x 1.74)

Finally, many people ride bicycles primarily for recreation. While the bicycle portion of this Master Plan is intended to focus on bicycling for transportation, it is important to keep recreational riders in mind in the formulation of projects and programs. With enough encouragement, including supportive infrastructure, some recreational riders can be expected to make the transition to bicycle commuters. While reliable figures are not readily available, San Clemente likely has a substantial number of recreational cyclists.

The City is well poised to support increased cycling given its mild weather, advocacy groups and coastal routes, though locally hilly topography likely plays a large part in the relatively low numbers of bicycle commuters. Long and sometimes steep grades deter some people from commuting to work.

Bicycle Counts

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Ave Cresta
Puerta del Sol
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Via Onda
Via Pacifica
Ave la Pata
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Calle Amanecer
Via Callejon
Ave Pico
Calle Iglesia
Calle Sol
Calle del Cerro
Burriana
Segovia
Calle Aguila
Calle Pastadero
Finca
Optima
Ave Ossa
Bolivia
La Salle
Ave Fabricante
Ave Vista Montana
Santa Clara
Calle Escuela
Calle Empalme
Calle Nebrina
Ave Presidio
Calle Miguel
Ave la Cuesta
Ave de la Paz
Calle Sonora
Ave Teresa
Utility Access Rd
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Ave Atlena
E Ave Cordoba
Ave Salvador
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Ave del Verdor
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Calle Serena
Ola Vis
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Ave la Costa
Ave de la Riviera
E Ave Magdalena
Calle Bahia
Ave Montalvo
Ave Calilla
Ave del Presidente
Ave San Luis Rey
Ave Santa Margarita
Calle Tiburon
Vista Azul
Calle Isabella
Calle Arizona
Via Calafia
Ave del Mar
Ave Granada
Ave Victoria
Ave Rosa
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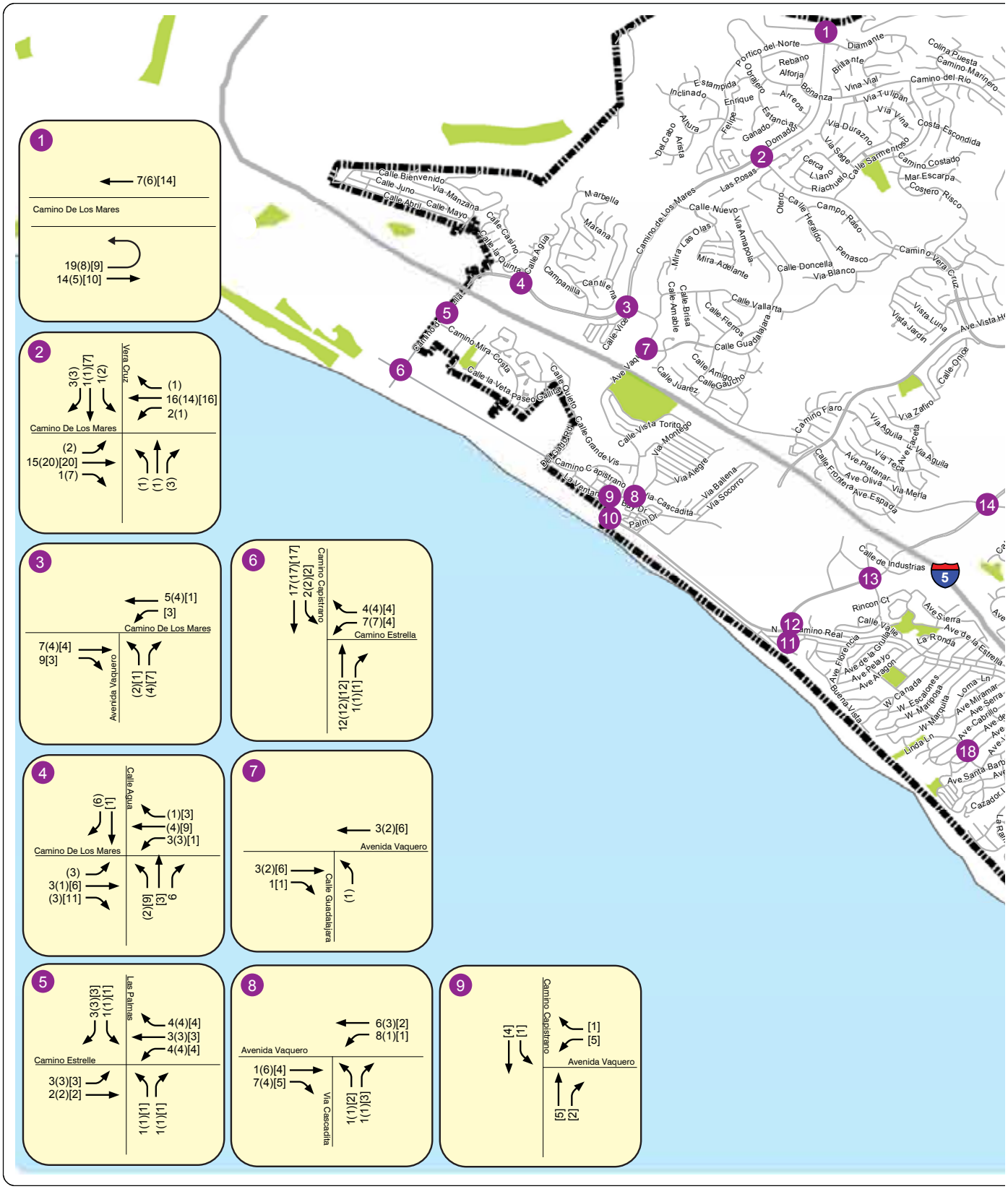
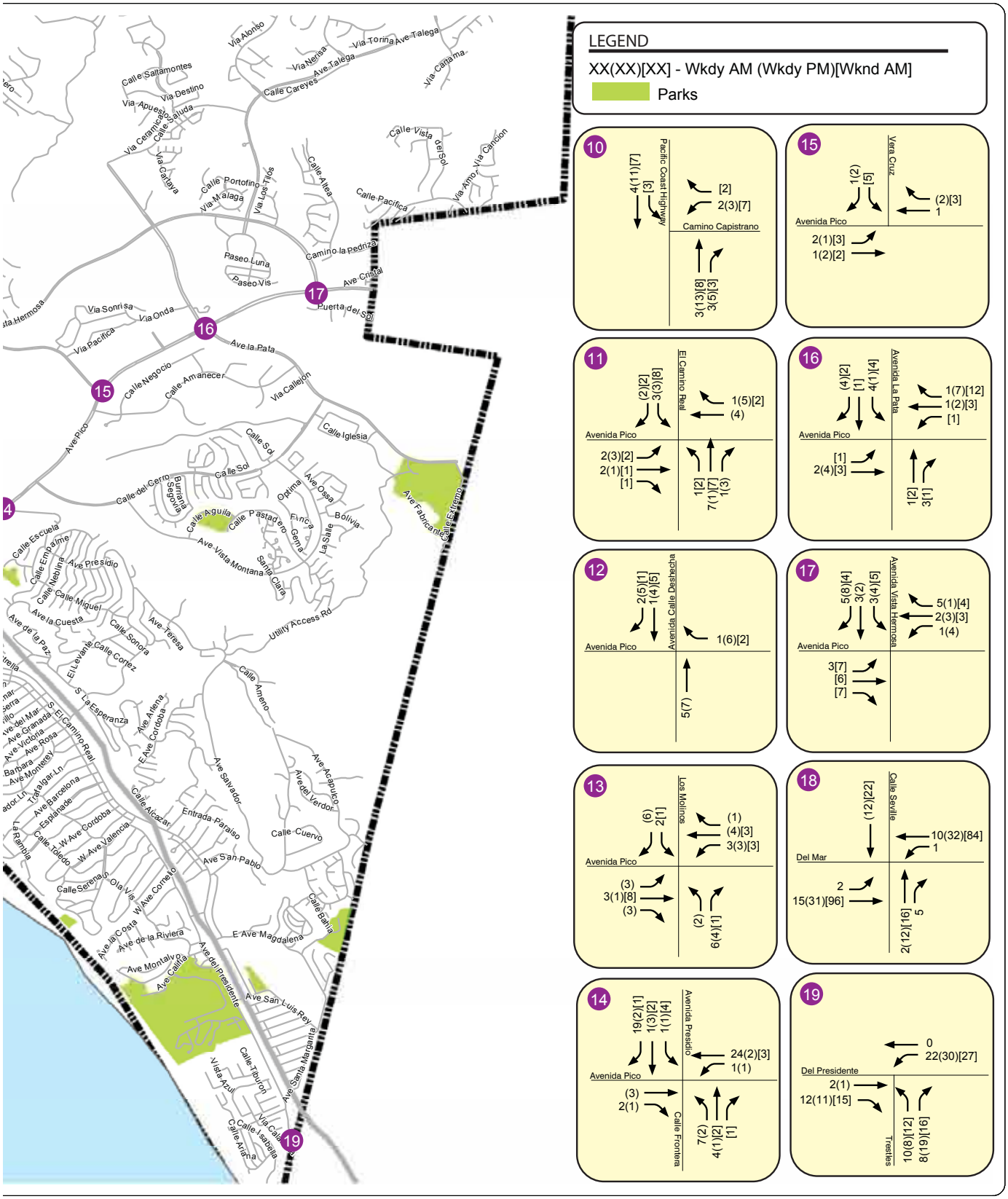
Pedestrian Counts

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Camino la Pedrera
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Burriana
Segovia
Optima
Ave Ossa
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Finca
Bolivia
Ave Fabricante
Calle Estrella
Gema
La Salle
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Ave la Cuesta
Calle Sonora
Ave Teresa
Utility Access Rd
Ave de la Paz
El Levante
Calle Cortez
S La Esperanza
Ave Arena
E Ave Cordoba
Calle Ameno
Ave Granada
Ave Victoria
Ave Rosa
Barbara
Ave Monterey
Trafalgar Ln
Ave Barcelona
Esplanade
Calle Toledo
W Ave Cordoba
W Ave Valencia
Calle Alcazar
Entrada Paraiso
Ave Salvador
Ave Acapulco
Ave del Verdor
Calle Cuervo
Ave San Pablo
Calle Serenata
Ola Vista
W Ave Cometa
Ave la Costa
Ave de la Riviera
E Ave Magdalena
Calle Bahia
Ave Montalvo
Ave Califia
Ave del Presidente
Ave San Luis Rey
Ave Santa Margarita
Calle Tiburon
Vista Azul
Via Calafia
Calle Isabella
Calle Ariana

Projected Bicycle Ridership

If other communities are any indication, implementation of the bikeway portion of this Plan will result in a sizable increase, at least in relative terms, in bicycle ridership and daily trips. Not surprisingly, bicycling studies from around the country have found a correlation between bikeway miles per capita in a given community and its percentage of cyclists. In a case study of three cities (Portland, San Francisco and Seattle) that implemented bicycle improvements, "after" bicycle ridership on improved corridors was between double and triple the "before" numbers. This is consistent with an observation in the National Bicycling & Walking Study that there are "*…three times more commuter cyclists in cities with higher proportions of bicycle lanes*." Implementation of an interconnected network of facilities, as opposed to a system of improved, but not necessarily linked corridors, would likely have an even more pronounced effect.

Assuming a potential tripling in ridership, such as that found in the *National Bicycling & Walking Study*, the implementation of the bikeway Master Plan could result in approximately 1,152 daily bicycle commuters throughout the City (384 multiplied by three). Similarly, daily bicycle trips for shopping, social and other utilitarian purposes would increase to 4,008 (1,336 multiplied by three). Though these are order-of-magnitude estimates based on limited data and informed suppositions, it is reasonable to expect that implementation of the bicycle portion of this Master Plan would yield substantive environmental and quality-of-life dividends associated with more cycling and less driving.

Bicycle Parking Assessment

For a bikeway network to be used to its full potential, secure bicycle parking needs to be provided at likely destination points. Bicycle thefts are common and lack of secure parking is very commonly cited as a reason people hesitate to ride a bicycle to certain destinations. The same consideration should be given to cyclists as to drivers, who expect convenient and secure parking at their destinations.

Bicycle racks can be found at a few major destination points such as schools, the library, North Beach, the Pier Bowl and North Beach Amtrak Stations, and major shopping centers. Although bicycle parking exists at these locations, it tends to be scarce, especially at shopping centers, downtown San Clemente and along the El Camino Real corridor. For example, bicycle parking in downtown San Clemente is limited to a few racks at the library and bikes can often be found secured to trees or benches. El Camino Real is a major corridor for businesses and tourism and bicycle racks are almost non-existent along it, except in front of bicycle shops.

Schools

Ribbon racks (undulating) are the most common bicycle racks throughout the City schools. This bicycle rack type improves space efficiency and allows at least one wheel and the bicycle frame to be locked when properly designed and sited. However, when bikes are secured improperly, available bicycle parking is minimized. Marblehead Elementary and Vista Del Mar Elementary are examples of schools that have a dedicated enclosure for bicycle parking.

Parks and Beaches

Beaches, neighborhood and community parks are daily destinations for many residents. Their amenities, activities and proximity to neighborhoods are attractive to those seeking a recreational outlet. While most parks have on-site vehicular parking, only four of the 19 parks have bicycle parking.

At the beaches, where bicycle use is particularly heavy, bicycle parking is scarce at best. Bicycle racks can be found in North Beach at the entrance to the Beach Trail, Parque Del Mar, the North Beach Amtrak Station and the Ole Hanson Beach Club Pool. The relative lack of bicycle parking probably discourages cycling because there is no secure place to lock bicycles and a number of survey comments addressed this lack.

Commercial Areas

Downtown San Clemente and the El Camino Real corridor are the main commercial districts in San Clemente. The many restaurants and shops are inviting to those traveling along these streets, but the lack of bicycle parking is an issue in these commercial areas. With the high number of businesses in downtown San Clemente, bicycle parking needs to be increased to improve the convenience and access to these shops for residents and tourists. Many bikes can be seen locked to streetlights, tree guards and restaurant patio rails.

Appendix G: Collision Summary

Bicycle Collisions

Within four years of reviewed collision data, there have been a total of 53 reported bicycle-related collisions resulting in 43 injuries and one fatality. A majority of the bicycle collisions occurred on major arterials such as El Camino Real (nine collisions) and Avenida Del Presidente (six). Of the 48 collisions, 28 were the cyclist's fault. The cyclists involved were either violating an automobile's right-of-way or riding on the wrong side of the road.

The majority of collisions occurred on El Camino Real and on an existing Class 3 route through the older coastal portion of the City. Otherwise, collisions were scattered, occurring primarily on arterials. Injuries declined every year with the largest reduction between 2007 and 2008, though the one fatality did occur in 2008. The following section is a detailed analysis followed by a map of collision locations.

Collision Analysis

On average, the City of San Clemente had 16 bicycle collisions each year, with 10 occurring in the last year. This data indicates that improvements have been made to reduce the number of collisions, but work still must be done in providing safer riding experiences for cyclists.

Cause

The most common collision cause was violation of motor vehicle right-of-way, which occurs when cyclists fail to yield to vehicles. These accounted for 38 percent of all bicycle collisions. Of the total right-of-way collisions, 89 percent were broadside collisions.

Ten collisions, which account for 21 percent of total collisions, were reportedly due to the cyclists riding on the wrong side of the road. Some cyclists believe that in the absence of bicycle lanes, they are more visible to motorists when riding against the flow of automobile traffic. Doing so, however, results in turning conflicts between bicycles and autos and poses a danger for less experienced cyclists who may unintentionally weave into the path of oncoming automobiles. Of the total collisions due to cyclists riding on the wrong side of the road, 70 percent were broadside collisions.

Other significant causes of bicycle-related collisions include traffic signals and signs (which accounted for eight percent of total collisions) and unsafe speeds (which accounted for six percent of total collisions).

The collision data provided does not indicate the party at fault in each case. It is important to state that bicycle and pedestrian fault may be biased in favor of the driver because they are typically who report the collision. Also, collision reporting forms are typically designed for vehicle-on-vehicle collisions rather than for bicycle-vehicle or pedestrian-vehicle collisions, further encouraging the potential for bias or misrepresentation in data collection.

Intersection vs. Mid-Block Locations

Bicycle collisions were almost evenly split between those occurring at intersections and mid-block locations. Broken down by cause of collision, the data also indicate that violation of vehicle right-of-way collisions were almost evenly split between those occurring at intersections and those occurring at mid-block locations.

Only 30 percent of mid-block collisions occurred due to cyclists riding on the wrong side of the road. Based on the data, cycling on the wrong side of the road becomes far more dangerous at intersections because approaching drivers may not be aware of oncoming bicycle traffic and cyclists may be crossing lanes to make a left turn.

At mid-block locations, driver behaviors such as improper driving, unsafe lane changes, and unsafe speeds become more prevalent occurring at 13, nine, and nine percent respectively, compared to 4, 0, and 4 percent, respectively, occurring at intersections.

Injury Severity

The majority of bicycle collisions resulted in the cyclists reporting "complaint of pain," or 38 percent. One cyclist was killed on Los Obreros Lane, approximately 100 feet south of Calle De Los Molinos. In addition, 35 percent of total collisions resulted in "other visible injury," 15 percent resulted in no injury, and 10 percent resulted in severe injury.

Crash Locations

The four intersections with the highest number of collisions involving cyclists were as follows:

1. El Camino Real at Avenida De La Grulla accounted for six percent of total bicycle collisions. There are no designated bicycle facilities at this intersection.
2. El Camino Real at Camino Capistrano accounted for six percent of total bicycle collisions. This intersection has bicycle lanes striped in the north/south direction.
3. Avenida Del Presidente at Avenida San Luis Rey accounted for six percent of total bicycle collisions. This intersection has bicycle lanes striped in the north/south direction.
4. Calle Puente at West Canada accounted for four percent of total bicycle collisions. There are no bicycle facilities at this intersection.

The five roadways with the highest number of collisions involving cyclists were as follows:

1. El Camino Real accounted for 46 percent of total bicycle collisions. From Calle Del Comercio to Avenida Santa Margarita, El Camino Real has a bicycle lane striped in the southbound direction.
2. Ola Vista accounted for 13 percent of total bicycle collisions. Ola Vista is a residential street with on-street parking.
3. Avenida Del Presidente accounted for eight percent of total bicycle collisions, and has bicycle lanes striped in the north/south direction.
4. Avenida Pico accounted for eight percent of total bicycle collisions. From Avenida Presidio to Calle Amanecer and from Plaza Pacifica to Camino La Pedriza, Avenida Pico is striped in both directions. From Calle Amanecer to Plaza Pacifica, the corridor is striped only in the northbound direction.
5. Calle Puente accounted for eight percent of total bicycle collisions. Calle Puente is a residential street with on-street parking.

All causes and bicycle collision rates cannot be fully assessed without information about bicycle volumes throughout the city. A heavily-bicycled street with several collisions is not necessarily less safe than a street with fewer cyclists. The more cyclists on a particular corridor, the higher the chances for collisions along that corridor.

Bicycle Riding on Sidewalks

In residential areas, where bicycle and vehicle speeds are lower, sidewalk bicycle riding by children is an accepted practice. The concern regarding cyclists riding on sidewalks is due to potential conflict with pedestrians, as well as conflict with vehicles at driveways and intersections. Pedestrians on sidewalks may suddenly change their speed and direction, leaving cyclists with insufficient reaction time to avoid a collision. At driveways and intersections, drivers scan for approaching roadway traffic and pedestrians at crossing locations, but they generally do not expect faster moving bicycles on sidewalks or in crosswalks.

Studies have shown that in most situations, it is safer for cyclists to ride on the roadway than on the sidewalk. According to the AASHTO Guide for the *Development of Bicycle Facilities*, riding on sidewalks is only recommended on high speed or heavily traveled roadways where there is inadequate space for cyclists, or on bridges.

Bicycle Violation Category

Violation Category	Collisions	Percent
Automobile Right-of-Way	18	37.5%
Wrong Side of Road	10	20.8%
Traffic Signals and Signs	4	8.3%
Unsafe Speed	3	6.2%
Unsafe Lane Change	2	4.2%
Unsafe Starting or Backing	1	2.1%
Improper Turning	2	4.2%
Driving or Cycling Under the Influence	1	2.1%
Other Hazardous Violation	2	4.2%
Other Improper Driving	5	10.4%
Unknown	5	10.4%
Total	53	100.0%
Source: City of San Clemente bicycle and pedestrian collision data 2006-09		

Bicycle Collision Violation Category by Intersection vs. Mid-Block Location

Violation Category	Mid-block		Intersection	
	Collisions	Percent	Collisions	Percent
Automobile Right of Way	8	34.8%	10	40.0%
Wrong Side of Road	3	13.0%	7	28.0%
Traffic Signals and Signs	1	4.3%	3	12.0%
Unsafe Speed	2	8.7%	1	4.00%
Unsafe Lane Change	2	8.7%	0	0.00%
Unsafe Starting or Backing	0	0.0%	1	4.00%
Improper Turning	2	8.7%	0	0.00%
Driving or Bicycling Under Influence	0	0.0%	0	0.00%
Other Hazardous Violation	0	0.0%	1	4.00%
Other Improper Driving	1	4.3%	1	4.00%
Unknown	4	17.5%	1	4.00%
Total	23	100.0%	25	100.0%

Bicycle Collision by Intersections vs Mid-Block Location

Violation Category	Collisions	Percent
Intersection	23	47.9%
Mid-Block	25	52.1%
Total	48	100.0%

Bicycle Injury Severity

Violation Category	Collisions	Percent
Fatal	1	2.1%
Severe Injury	5	10.4%
Other Visible Injury	17	35.4%
Complaint of Pain	18	37.5%
No Injury	7	14.6%
Total	48	100.0%

Intersections with Most Bicycle Collisions

Intersection	Collisions
El Camino Real at Avenida De La Grulla	3
El Camino Real at Camino Capistrano	3
Avenida Del Presidente at Avenida San Luis Rey	3
Calle Puente at West Canada	2

Roadways with Most Bicycle Collisions

Road	Collisions
El Camino Real	22
Ola Vista	6
Avenida Pico	4
Calle Puente	4
Avenida Del Presidente	4
Avenida Victoria	2
Camino De Los Mares	1

Pedestrian Collisions

The City of San Clemente had a total of 35 pedestrian collisions from 2006 to 2009. On average, approximately 12 pedestrian collisions are reported each year. The pedestrian collisions report is similar to that of bicycle collisions in the manner that pedestrian collisions were almost evenly split between those occurring at intersections and mid-block locations.

Cause

Automobile right-of-way refers to a driver's right to proceed first ahead of other vehicles, pedestrians, cyclists and transit. Other users must yield to the vehicle with right-of-way. Pedestrian right-of-way, likewise, refers to a pedestrian's right to proceed ahead of all vehicular traffic and transit. For example, when two vehicles approach an all-way stop-controlled intersection at the same time, the driver on the left must yield the right-of-way to the vehicle on the immediate right before crossing. If a pedestrian approaches the intersection, vehicular traffic moving in the conflicting direction must yield the right-of-way to the pedestrian.

The most common pedestrian collision causes were automobile right-of-way and pedestrian violation. Automobile right-of-way violation occurs when pedestrians fail to yield to automobiles and accounted for 26 percent of all pedestrian collisions in San Clemente. Pedestrian violations also accounted for 26 percent of all pedestrian collisions. Of the automobile right-of-way violations, 78 percent occurred at an intersection, suggesting that educating drivers and making pedestrians more visible at roadways crossing could be an importation mitigation measure.

Pedestrian Violation Category

Violation Category	Collisions	Percent
Automobile Right-of-Way	1	2.99%
Pedestrian Right-of-Way	9	25.70%
Wrong Side of Road	1	2.99%
Traffic Signals and Signs	2	5.77%
Unsafe Speed	4	11.40%
Unsafe Starting or Backing	1	2.99%
Improper Turning	1	2.99%
Pedestrian Violation	9	25.70%
Driving or Bicycling Under the Influence	3	8.55%
Unknown	4	11.40%

Pedestrian Collision by Intersections vs Mid-Block Location

Violation Category	Collisions	Percent
Intersection	16	45.77%
Mid-Block	19	54.33%
Total	35	100.00%

Pedestrian Collision by Intersections vs Mid-Block Location

Violation Category	Collisions	Percent
Intersection	16	45.77%
Mid-Block	19	54.33%
Total	35	100.00%

Intersection vs. Mid-Block Locations

Pedestrian collisions were almost evenly split between those occurring at intersections and mid-block locations. Unlike the pedestrian right-of-way violations at intersections, all of the pedestrian violation collisions occurred at mid-block locations, indicating that the pedestrian may have been jaywalking.

Injury Severity

All pedestrian collisions reported resulted in a fatal or other visible injury. The majority of pedestrian collisions resulted in the pedestrian reporting a "complaint of pain," which happened in 43 percent of pedestrian collisions. One pedestrian was killed in San Clemente between 2006 and 2009, on Avenida Pico, approximately 30 feet north of Boca De La Playa. In addition, 37 percent of total collisions resulted in "other visible injury," and 17 percent resulted in severe injury. Given that all of the pedestrian collisions resulted in injury, enforcement and education may be important courses of action.

Crash Location

Of the pedestrian collisions reported, no single intersection in the City of San Clemente involved more than one incident. Pedestrian collisions are generally dispersed throughout the major arterials.

The five roads in the City of San Clemente with the highest number of collisions involving pedestrians are as follows:

1. El Camino Real accounted for 37 percent of pedestrian collisions.
2. Camino De Los Mares accounted for 11 percent of pedestrian collisions.
3. Avenida Victoria accounted for nine percent of total pedestrian collisions.
4. Avenida Pico accounted for nine percent of total pedestrian collisions.

All causes and pedestrian collision rates cannot be fully assessed without information about pedestrian volumes throughout the City. As is the same with bicycle data, streets with heavy pedestrian traffic having several collisions are not necessarily less safe than a street with fewer pedestrians. The more pedestrians on a particular corridor, the higher the chances are for collisions occurring along the corridor.

Pedestrian Collision Violation Category by Intersection vs Mid-Block Location

Violation Category	Mid-block		Intersection	
	Collisions	Percent	Collisions	Percent
Automobile Right of Way	0	0.0%	1	6.33%
Pedestrian Right of Way	2	10.5%	7	43.80%
Wrong Side of Road	0	0.0%	1	6.22%
Traffic Signals and Signs	0	0.0%	2	12.50%
Unsafe Speed	3	15.8%	1	6.22%
Unsafe Starting or Backing	1	5.3%	0	0.00%
Improper Turning	1	5.3%	0	0.00%
Pedestrian Violation	7	36.8%	2	12.50%
Driving or Bicycling Under the Influence	2	10.5%	1	6.22%
Unknown	3	15.8%	1	6.22%
Total	19	100.0%	16	100.00%