



CHAPTER TWO

Infrastructure &
Community Services

4.0 CIRCULATION

I.	STATUTORY REQUIREMENTS.....	4-1
II.	CONSTRAINTS AND OPPORTUNITIES (ISSUES).....	4-2
	A. Foothill Transportation Corridor.....	4-2
	B. Freeway Access.....	4-2
	C. City Street System.....	4-2
	D. Future Growth.....	4-2
	E. Level Of Service.....	4-2
	F. Transportation Improvements.....	4-3
	G. Transportation Demand Management.....	4-3
III.	OVERVIEW OF CIRCULATION POLICIES.....	4-4
	A. Circulation Vision.....	4-4
	B. Circulation Plan Alternatives.....	4-4
IV.	GOALS, OBJECTIVES AND POLICIES.....	4-5
	A. General.....	4-5
	B. Level Of Service.....	4-6
	C. Intercity and Regional Transportation.....	4-7
	D. Transportation Demand Management.....	4-8
	F. Public Transportation.....	4-8
	F. Bicycle, Pedestrian and Equestrian Facilities.....	4-10
	G. Parking.....	4-11
	H. Coastal Access.....	4-11
V.	CIRCULATION PLAN.....	4-13
	A. Roadway Facility Designations.....	4-13
	B. Performance Criteria.....	4-15
	C. General Plan Circulation System.....	4-17
	D. Public Transportation Plan.....	4-17
	E. Bikeway Plan.....	4-17
VI.	IMPLEMENTATION PROGRAMS.....	4-24
	A. Existing and Proposed Street System.....	4-24
	B. Circulation Facility Design Manual.....	4-25
	C. Off-Site Traffic Impacts.....	4-25
	E. Alternate Transportation Programs.....	4-26
	F. Transportation Demand Management Program.....	4-26
	G. Parking Management.....	4-27
VI.	GLOSSARY.....	4-28

I. STATUTORY REQUIREMENTS

California state law requires that a General Plan incorporate a Circulation Element. California Government Code Section 65302(6) states:

"...the Circulation Element shall consist of the general location and extent of existing and for proposed major thoroughfares, transportation routes, terminals, and facilities, all correlated with the Land Use Element of the plan."

The Circulation Element should provide 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.

II. CONSTRAINTS AND OPPORTUNITIES (ISSUES)

The following circulation issues have been identified and are later addressed by the proceeding goals, objectives and policies located in section IV.

A. Foothill Transportation Corridor

The most vital improvement to the existing circulation system will be the completion of the Foothill Transportation Corridor (FTC), a six-lane controlled access toll road. The facility will provide an additional regional circulation link between central Orange County and the south County areas, and will significantly influence future travel patterns in San Clemente. The City currently supports the construction of the "Modified CP" alignment of the FTC and construction of the Avenida Pico interchange.

B. Freeway Access

San Clemente is virtually divided in two by Interstate 5, which separates the developing areas to the east and the established communities to the west. Since existing north-south local circulation in the city is inadequate, the freeway is frequently used for short intercity trips, further exacerbating freeway ramp congestion.

A new interchange with Interstate 5 is planned at future Avenida Vista Hermosa, between Avenida Pico and Camino de Estrella. The construction of the FTC is also anticipated to relieve freeway ramp congestion along Interstate 5.

C. City Street System

The existing street system in San Clemente is a combination of fully and partially improved roadways. As San Clemente continues to grow, the interface of a developing urban area with limited street capacity is resulting in traffic bottlenecks and reduced levels of service, particularly during the peak hours.

Various physical factors influence the safe and efficient flow of traffic on the city's street system. Among these are street width, on-street parking, frequency of driveways, intersection location and intersection configuration.

D. Future Growth

Projections based on buildout of the Land Use Element of the General Plan indicate significant increases in traffic within the city limits and surrounding area. A planned system of roadways is needed to serve currently undeveloped areas which are developing both within the city and in outlying regions. Continuity of facilities connecting future development with existing development is a key objective in the design of a well-planned network of roadways.

E. Level Of Service

To maintain desired levels of service within the city (and adhere to County requirements for transportation improvement funding), peak hour and daily level of service criteria should be met.

F. Transportation Improvements

The San Clemente Regional Circulation Financing and Phasing Program (RCFPP) is a transportation improvement funding mechanism that assists in implementing the Circulation Element. Adopted in 1989, it establishes cost allocations for major circulation improvements in the northern portion of the city and the Specific Plan areas of the inland ranches.

Recent legislation on Measure M and Proposition 111 has made additional funding available through the County's Growth Management Plan (GMP) and Congestion Management Plan (CMP).

G. Transportation Demand Management

San Clemente recently adopted an ordinance for a comprehensive and coordinated Transportation Demand Management (TDM) Program. Implementation of a TDM program, in compliance with recent Air Quality legislation, would reduce vehicle trips on the roadway through provisions such as carpooling, van pooling, park-and-ride lots, on-site shower amenities, etc.

III. OVERVIEW OF CIRCULATION POLICIES

This portion of the Circulation Element establishes goals, objectives, policies, and implementation programs to guide the development and maintenance of the community's circulation systems. The General Plan process requires a total commitment from the local legislative body in the adoption of these policies, so these goals and objectives may be realized. Policies stated in this section contain a direct relationship to the desired goals and the identified issues of the community. These policies are the tools in achieving San Clemente's vision for the future.

A. Circulation Vision

The Circulation Element must provide a transportation system to facilitate the safe and efficient movement of people and goods throughout the community while supporting the designated uses of the General Plan's Land Use Element. The San Clemente Circulation Element specifically addresses the following:

1. Ensuring a circulation system in balance with the City's Land Use Element.
2. Providing an adequate circulation capacity while minimizing community impacts.
3. Maintaining a desired level of service on all streets and intersections.
4. Ensuring that the location, intensity and timing of development is consistent with the provision of adequate transportation infrastructure.
5. Supporting the development of regional transportation facilities.
6. Supporting the development of a Transportation Demand Management (TDM) System.
7. Promoting and participating in alternative modes to automobile travel.
8. Providing city-wide bicycle and pedestrian routes.
9. Providing on-street and off-street parking facilities.
10. Maintaining and Improving public coastal access.

B. Circulation Plan Alternatives

The Circulation element (policies and plan) reflects a system to accommodate the mobility need for each of the two alternative land use scenarios (1) General Plan Policy Buildout Capacity; and (2) the General Plan Policy with revised Forster Ranch as discussed within the Land Use Element and depicted on **Figure 1-1**. Once a preferred plan is selected, references to the other alternative development scenario will be deleted.

IV. GOALS, OBJECTIVES AND POLICIES

The following goals, objectives and policies form the basis for providing a circulation system which adequately serves the development intensity anticipated in the Land Use Element. They are designed to reflect and support the city-wide objectives of the General Plan, and acknowledge the changing economic and environmental conditions in the city and surrounding regions.

A. General

Goal

Provide a transportation system that supports the Land Use Element of the General Plan and facilitates the safe and efficient movement of people and goods throughout the city while minimizing environmental impacts.

Objective

- 4.1 Ensure that the circulation system is in balance with the City's Land Use Element.

Policies

- 4.1.1 Promote the completion of the planned circulation system through the improvement of substandard roadway segments and intersections, and the construction of missing roadway links and related facilities by adopting the Circulation Plan contained in subsection V of this element (I 4.1).
- 4.1.2 Monitor and participate in applicable county, regional, state and federal transportation plans and proposals regarding traffic and circulation (I 4.1).
- 4.1.3 Maintain compliance with the County's Congestion Management Plan (CMP) and Growth Management Plan (GMP) (I 4.1).
- 4.1.4 Comply with traffic goals and standards identified in the Growth Management Element (I 4.1).

Objective

- 4.2 Provide adequate capacity for the City's circulation needs while minimizing negative impacts.

Policies

- 4.2.1 Maintain circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, capacity, maximum grades and associated features such as medians and bicycle lanes as specified in subsection V of this element (I 4.4).
- 4.2.2 Develop a circulation system which highlights environmental amenities and scenic areas (I 4.1).

- 4.2.3 Designate primary truck routes that sustain an effective transport of commodities while minimizing the negative impacts on local circulation and on noise-sensitive land uses (I 4.1).

B. Level of Service

Goal

Provide a circulation system which supports existing, approved and planned land uses throughout the city while maintaining a desired level of service on all streets and at all intersections.

Objective

- 4.3 Comply with adopted performance standards for acceptable levels of service. (See "Performance Criteria" in the Circulation Plan.)

Policies

- 4.3.1 Maintain a city-wide level of service (LOS) not exceeding LOS "D" for intersections during the peak hours, with the exception of the intersection of the I-5 southbound ramps at Avenida Pico, unless the City determines an exception is warranted on an interim basis in accordance with the adopted "exception process" specified in the Growth Management Element (I 4.2).
- 4.3.2 Maintain a city-wide level of service (LOS) for links not to exceed LOS "C" for Primary arterials, Secondary arterials and Local streets; not to exceed LOS "D" for Major arterials; and not to exceed LOS "E" for Commercial facilities (I 4.2).

Objective

- 4.4 Identify and improve roadways and intersections that are approaching, or have approached, unacceptable levels of service.

Policies

- 4.4.1 Continue to execute the city-wide annual traffic count monitoring program including monitoring congestion at the Interstate 5 interchange ramps (I 4.2).

Objective

- 4.5 Ensure that the location, intensity and timing of development is consistent with the provision of adequate transportation infrastructure and standards defined in the Growth Management Element.

Policies

- 4.5.1 Require new development projects to mitigate off-site traffic impacts to the maximum extent feasible (I 4.5).
- 4.5.2 Maintain the Regional Circulation Financing and Phasing Program (RCFPP), which enables regional circulation improvements to be funded by new development in the inland ranch areas in a manner that maintains the specified performance standards (I 4.6).

- 4.5.3 Address capacity limitations at I-5 interchange locations, operational constraints and right-of-way obstacles, prior to intensification of land uses (I 4.5).
- 4.5.4 Require that driveway access points onto arterial roadways be limited in number and be located to ensure the smooth and safe flow of vehicles and bicycles (I 4.4).
- 4.5.5 Require new development to install traffic signals at intersections on arterials which, based on individual study, are shown to satisfy traffic signal warrants (I 4.4).

C. Intercity and Regional Transportation

Goal

Support development of regional transportation facilities which ensure the safe and efficient movement of people and goods from within the city to areas outside its boundaries, and which accommodate the regional travel demands of developing areas outside the city.

Objective

- 4.6 Support the completion of the Orange County Master Plan of Arterial Highways.

Policies

- 4.6.1 Support the construction of the most preferable alignment, currently the "Modified CP" alignment, of the Foothill Transportation Corridor (FTC), and the Avenida Talega and Avenida Pico interchanges (I 4.3).
- 4.6.2 Work with adjacent cities to ensure that the traffic impacts of development projects do not adversely impact the City of San Clemente (I 4.6).

Objective

- 4.7 Enhance accessibility to the regional transportation system.

Policies

- 4.7.1 Attempt to improve access to and across Interstate 5 (I 4.6).
- 4.7.2 Promote the completion of the I-5/Avenida Vista Hermosa interchange at the earliest date possible (I 4.6).
- 4.7.3 Support the addition of capacity and noise mitigation improvements such as high-occupancy vehicle lanes, general purpose lanes, auxiliary lanes and noise barriers to Interstate 5 (I 4.6).
- 4.7.4 Maintain a proactive and assertive role with appropriate agencies dealing with regional transportation issues affecting the City (I 4.6).

- 4.7.5 Identify safe and expedient travel routes for emergency evacuation of the City (I 4.6).

D. Transportation Demand Management

Goal

Develop and encourage a transportation demand management (TDM) system to assist in mitigating traffic impacts and in maintaining a desired level of service on the circulation system.

Objective

- 4.8 Pursue transportation management strategies that can maximize vehicle occupancy, minimize average trip length, and reduce the number of vehicle trips.

Policies

- 4.8.1 Encourage non-residential developments to provide employee incentives for utilizing alternatives to the conventional automobile (i.e., carpools, vanpools, buses, bicycles and walking, etc.) (I 4.9).
- 4.8.2 Encourage the implementation of employer TDM requirements included in the Southern California Air Quality Management District's (AQMD) Regulation 15 of the Air Quality Management Plan (I 4.9).
- 4.8.3 Encourage industry to use flex-time, staggered working hours and other means to lessen commuter traffic (I 4.9).
- 4.8.4 Encourage the use of multiple-occupancy vehicle programs for shopping and other uses to reduce midday traffic (I 4.9).
- 4.8.5 Support national, state and regional legislation directed at encouraging the use of carpools and vanpools (I 4.9).
- 4.8.6 Promote ridesharing through publicity and provision of information to the public (I 4.9).
- 4.8.7 Require that proposals for major new non-residential developments include submission of a TDM plan to the City (I 4.9).

E. Public Transportation

Goal

Maintain participation in a public transit system that provides mobility to all city residents and employees as a logical alternative to automobile travel.

Objective

- 4.9 Encourage improved local and express bus service through the Orange County Transit Authority (OCTA) to the San Clemente community, and encourage OCTA to consider park-and-ride facilities for interface with regional freeways, HOV facilities, and rail facilities.

Policies

- 4.9.1 Coordinate with OCTA and other appropriate entities to improve bus service to and within San Clemente (I 4.7).
- 4.9.2 Encourage the provision of safe, attractive and clearly identifiable transit stops throughout the community (I 4.4).
- 4.9.3 Encourage OCTA to study the feasibility of construction of a Transportation Center which would provide services for rail and/or bus utilization (I 4.7).
- 4.9.4 Implement and expand, wherever feasible, programs aimed at enhancing the mobility of senior citizens and disabled persons (I 4.7).
- 4.9.5 Apply for AB2766 discretionary funds to implement a local fixed route shuttle bus system to connect transit centers, park and ride facilities, and major activity centers in the city, and possibly surrounding cities (I 4.7).

Objective

- 4.10 Promote new development that is designed in a manner which facilitates provision or expansion of transit service, provides on-site commercial/recreational facilities to discourage midday travel, and provides on-site circulation.

Policies

- 4.10.1 Encourage developers to work with agencies providing transit service with the objective of maximizing the potential for transit use (I 4.9).
- 4.10.2 Encourage employers to reduce employee vehicular trips by offering employee incentives (I 4.9).
- 4.10.3 Require proposed developments to include transit facilities, such as park-and-ride sites, bus benches, shelters, pads or turn-outs, where appropriate, in their improvement plans or as needed in proximity to their development (I 4.5).
- 4.10.4 Require that a transit center be located within the integrated development Planning Areas in the inland ranch areas (I 4.5).

Objective

- 4.11 Increase commuter rail opportunities for both residents and employees of the City.

Policies

- 4.11.1 Continue coordination with Amtrak regarding existing commuter rail service in the city (I 4.7).
- 4.11.2 Coordinate with Amtrak, Los Angeles-San Diego Corridor Commuter Rail (LOSSAN), Orange County Transportation Authority (OCTA), Metrolink and other appropriate entities to evaluate development of a commuter rail station for San Clemente, with shuttle connections to employment centers and residential areas (I 4.7).

F. Bicycle, Pedestrian and Equestrian Facilities

Goal

Provide a city-wide system of safe, efficient and attractive bicycle and pedestrian routes for commuter, school and recreational use.

Objective

- 4.12 Promote the safety of bicyclists and pedestrians by adhering to city-wide standards and practices.

Policies

- 4.12.1 Develop city-wide standards for construction and maintenance of bikeways and pedestrian walkways (I 4.4).
- 4.12.2 Develop and adopt the planned bikeway system depicted on **Figure 4-5** of subsection V, the Circulation Plan, of this element which is consistent with the County of Orange Master Plan of Countywide Bikeways, and other adopted master plans, to assure that local bicycle routes will be compatible with routes of neighboring jurisdictions (I 4.4).
- 4.12.3 Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities (I 4.5).
- 4.12.4 Where appropriate, require proposed developments adjacent to proposed bikeway routes to include bicycle paths or lanes in their street improvement plans and to construct the bicycle paths or lanes as a condition of project approval (I 4.8).
- 4.12.5 Construct safe, convenient paths for bicycles and pedestrians so as to encourage these alternate forms of transportation (I 4.9).
- 4.12.6 Require plans for bicycle and pedestrian facilities to give priority to providing continuity and closing gaps in the bikeway and sidewalk network (I 4.5).
- 4.12.7 Encourage the provision of showers, changing rooms and bicycle storage at new and existing non-residential developments and public places (I 4.9).

- 4.12.8 Develop programs that encourage the safe utilization of easements and/or rights-of-way along flood control channels, public utilities, railroads and streets wherever possible for the use of bicycles and/or pedestrians (I 4.9).
- 4.12.9 Ensure accessibility of pedestrian facilities to the elderly and disabled (I 4.4).
- 4.12.10 Require the installation of sidewalks with all new roadway construction and significant reconstruction of existing roadways (I 4.6).

Objective

- 4.13 Allow for the development of equestrian trails for recreational use.

Policies

- 4.13.1 Develop city-wide standards for construction and maintenance of equestrian trails (I 4.4).
- 4.13.2 Develop and adopt an Equestrian Trail Plan to ensure that local trails adhere to City and County standards. (I 4.4).

G. Parking

Goal

Provide sufficient, well-designed and convenient on-street parking and off-street parking facilities throughout the city.

Objective

- 4.14 Develop and implement a Parking Management Plan or other program that identifies city-wide parking requirements.

Policies

- 4.14.1 Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials (I 4.10).
- 4.14.2 Consider the use of public/private joint-ventures to provide funding sources for parking facilities (I 4.10).
- 4.14.3 Improve public access to the coast by providing better transit and parking opportunities (I 4.10).

H. Coastal Access

Goal

Maintain Local Coastal Program standards, including the improvement of public coastal access wherever possible.

Objective

- 4.15 Provide better transit and parking opportunities both on-street and in designated lots, and/or inland parking with beach transportation.

Policies

- 4.15.1 Monitor and attempt to improve the safety of pedestrians crossing El Camino Real and the Atchison Topeka and Santa Fe (AT&SF) railway along the coast (I 4.1).

V. CIRCULATION PLAN

This section of the Circulation Element defines a roadway plan for the city that meets the requirements for safe and convenient movement at the development intensity anticipated in the Land Use Element. It includes a classification system that applies to all roadways that serve the city, and identifies specific improvements that will be required to implement this plan.

A. *Roadway Facility Designations*

The future roadway system in San Clemente is defined using a classification system which describes a hierarchy of facility types. The categories of roadways included in this classification system differentiate the size, function and capacity of the roadway links for each type of roadway. There are five basic categories in the hierarchy, ranging from "freeway" with the highest capacity to "local" streets with the lowest capacity and can be summarized as follows:

Freeway - A six- to ten-lane divided arterial roadway with full access control, grade separations at all intersections and a typical right-of-way width in excess of 150 feet, designed and maintained by the State Department of Transportation.

Major - A six-lane divided roadway with a typical right-of-way width of 120 feet and a curb-to-curb pavement width of approximately 100 feet.

Primary - A four-lane divided roadway with a typical right-of-way width of 100 feet and curb-to-curb pavement width of approximately 84 feet.

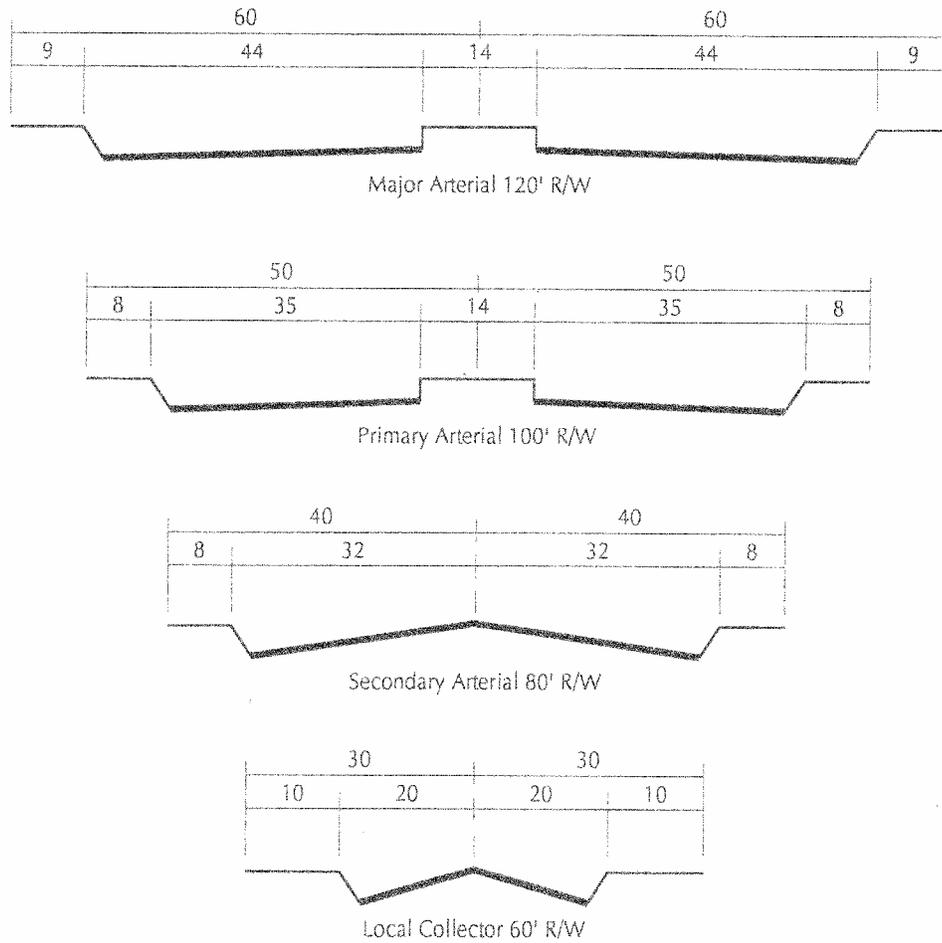
Secondary - A four-lane undivided roadway, with a typical right-of-way width of 80 feet and a curb-to-curb pavement width of approximately 64 feet.

Local Collector - A two-lane undivided roadway with a typical right-of-way width of 60 feet and a pavement width of approximately 40 feet. This category of roadway is designed to provide access to individual parcels in the City.

In addition to the five basic categories, roadways can be designated as "augmented," "commercial," or "augmented/commercial." These qualifiers are related to the amount of actual capacity on the individual roadway and are described later in this Section.

Schematic cross sections of each category of arterial roadway are provided in **Figure 4-1**. Variation in right-of-way width and specific road improvements will occur within each of the roadway classifications, based on existing conditions and other factors. In particular, the median width in six-lane and four-lane roadways will vary according to the area being served and the available right-of-way. Also, any of the arterial classifications listed above may deviate from the standards where physical constraints exist or where preservation of community character dictates special treatment.

The desirable goal for every classified street section is that it carry the designed volume of traffic at the desired level of service. Within this requirement, descriptions of width and facilities are offered as non-exclusive alternatives; variation in design is expected, depending on different community design characteristics. Different optional facilities are also expected (on-street parking, sidewalks versus pathways, bicycle lanes or paths, extra parkway or median landscape treatment, etc.).



Note: Widths are approximate

SOURCE: Austin-Foust Associate, 1992

TYPICAL CROSS-SECTIONS

SAN CLEMENTE GENERAL PLAN 

FIGURE 4-1

B. Performance Criteria

Evaluating the ability of the circulation system to serve the desired future land uses requires establishing suitable "performance criteria". These are the means by which future traffic volumes are compared to future circulation system capacity, and the adequacy of that circulation system assessed.

Performance criteria have a policy component which establishes a desired level of service (LOS) and a technical component which specifies how traffic forecast data can be used to measure the achievement of the criteria. The performance criteria used for evaluating volumes and capacities on the City street and highway system were identified as part of the General Plan update process and summarized in Table 4-1. Average Daily Traffic (ADT) link volume and peak hour intersection volume criteria have been included.

Four classifications of roadway are used to describe the characteristics of each roadway on the Circulation Plan including "major", "primary", "secondary" and "local". These depict the basic right-of-way requirements and operational cross-sections. Each classification may have qualifiers which depict additional capacity needs for the type of land use being served.

An "augmented" qualifier is applied to those roadways where additional ADT link capacity is required, and the intent is to provide a means of increasing the capacity of a given arterial by maximizing the utilization of the basic right-of-way and lane configuration. Such augmentation provides additional capacity equivalent to one lane on a roadway and can range from simply adding auxiliary lanes at intersections, to adding or expanding a median and/or other measures to improve traffic flow and reduce side friction.

A "commercial" qualifier recognizes that the peak hour-to-ADT relationships for commercial use are different than that of other uses since most commercial activity occurs after the morning peak hour on the roadway and is somewhat consistent throughout the remainder of the day. As such, the traffic impacts of commercial use are heaviest during the non-peak hours, in contrast to the heaviest peak hour traffic impacts of most other land uses. The commercial designation is, therefore, applied in those corridors with significant amounts of retail use and allows for a higher non-peak usage of the roadway (a 10 percent increase in capacity).

A third qualifier, "Augmented/Commercial," is applied to those roadways that are located in commercial areas which require additional improvements over those of a standard street section. As discussed above, a commercial designation implies a 10 percent increase in capacity, an augmented designation implies additional capacity equivalent to one lane on a roadway, and an augmented/commercial designation implies both.

While it is typical to base General Plan circulation system analyses on ADT volumes, an evaluation has also been made based on peak hour data. Capacity needs tend to be most important at intersections, and the use of peak hour data enables intersection capacity needs to be determined. With the detailed forecasting capability of the San Clemente Traffic Model (SCTM), it is possible to forecast long-range peak hour data on the circulation system with a reasonable level of accuracy.

TABLE 4-1

Circulation System Performance Criteria

The following are the performance criteria used for comparing traffic volumes and capacities on the city street and highway system:

AVERAGE DAILY TRAFFIC (ADT) LINK VOLUMES	
Level of Service C	Primary and Secondary arterials, and local street
Level of Service D	Major arterials
Level of Service E	Commercial designations

Table A below shows the ADT volumes corresponding to these levels of service.

PEAK HOUR INTERSECTION VOLUMES	
Level of Service D	All roadways

Table B below shows how these levels of service are specified.

Table A ADT Level of Service Volumes						
				LEVEL OF SERVICE		
				Aug- mented	Com- mercial	Aug/ Com
CLASSIFICATION	C	D	E	E	E	E
Freeway (per lane)	16,500	18,500	20,500	-	-	-
Major (6 lanes divided)	45,000	50,600	56,300	65,700	61,900	72,300
Primary (4 lanes divided)	30,000	33,800	37,500	46,900	41,300	51,600
Secondary (4 lanes undivided)	20,000	22,500	25,000	31,300	27,500	34,400
Local (2 lanes)	10,000	11,300	12,500	18,800	13,800	20,700

Table B Peak Hour Level of Service	
Peak hour intersection Level of Service (LOS) to be based on Intersection Capacity Utilization (ICU) values calculated as follows:	
Saturation flow rate	1600 Vehicles Per Hour (VPH)
Clearance interval	None
Levels of Service values are as follows:	
LEVEL OF SERVICE	MAXIMUM ICU VALUE
A	.60
B	.70
C	.80
D	.90
E	1.00
F	Above 1.00

The City of San Clemente has established level of service (LOS) "D" as the target level of service for peak hour intersection volumes. For ADT link volumes, the threshold level of service (LOS) is "C" for primary arterials, secondary arterials and local streets; LOS "D" for major arterials; and LOS "E" for commercial designations. Such criteria would be applied consistently for evaluating land use and circulation system changes and are the basis for the General Plan circulation recommendations contained in this report.

Table 4-2 describes the traffic flow quality for different levels of service.

C. General Plan Circulation System

The goals and policies included in this Element emphasize the need for a circulation system that is capable of serving both existing and future residents while preserving community values and character. The location, design and constituent modes of the circulation system have major impacts on air quality, noise, community appearance, and other elements of the environment.

The highway network designated in the Circulation Plan is illustrated in **Figure 4-2**, and indicates all of the designated Major arterials, Primary arterials, Secondary arterials and Local streets. Because Interstate 5 and Pacific Coast Highway traverse or are adjacent to the City, freeway facilities are also indicated.

The roadway network focuses on a number of major improvements with regard to the roadway system in the City. Most of these roadway improvements are included in the County of Orange Master Plan of Arterial Highways (MPAH), which documents the classification and alignment of both existing and planned facilities within the County. However, several discrepancies occur between the City's Circulation Plan and the changes should be forwarded to the County for inclusion in the next update to the MPAH.

D. Public Transportation Plan

The San Clemente community is served by two public transit routes which provide access to employment centers to the north, shopping and recreational areas. Illustrated in **Figure 4-3**, OCTA Route 91 provides service between Laguna Hills and San Clemente primarily along PCH/El Camino Real, and OCTA Route 394-A provides service to the pier area, via Avenida Pico, Calle Frontera, and Pacific Coast Highway .OCTA Route 85 provides service between San Clemente and Santa Ana. OCTA Route 1 provides service between San Clemente and Newport Beach, via Pacific Coast Highway.

As indicated in the public transportation policies, the City should continue to coordinate with the Orange County Transit Authority (OCTA) to identify transit needs and improve service to meet these needs. This is important because of the population and employment increase projected for the city. Potential transit routes are reviewed each year for ridership demand and operational feasibility, and the plan shown here will then be expanded.

E. Bikeway Plan

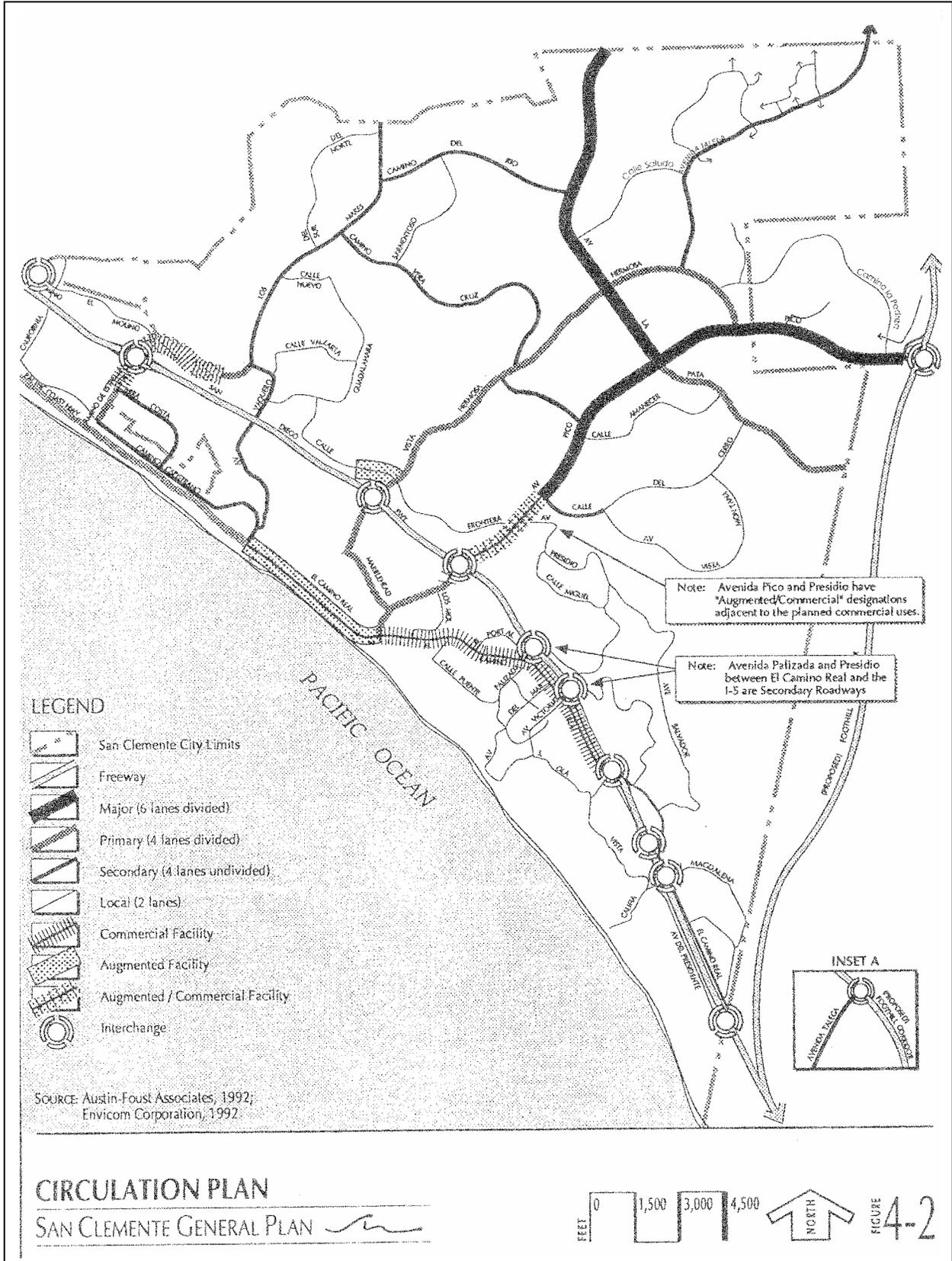
The existing bikeway system as given in the 1986 County of Orange "Arterial Bikeway System" is illustrated in **Figure 4-4**. The network of bicycle routes is only partially

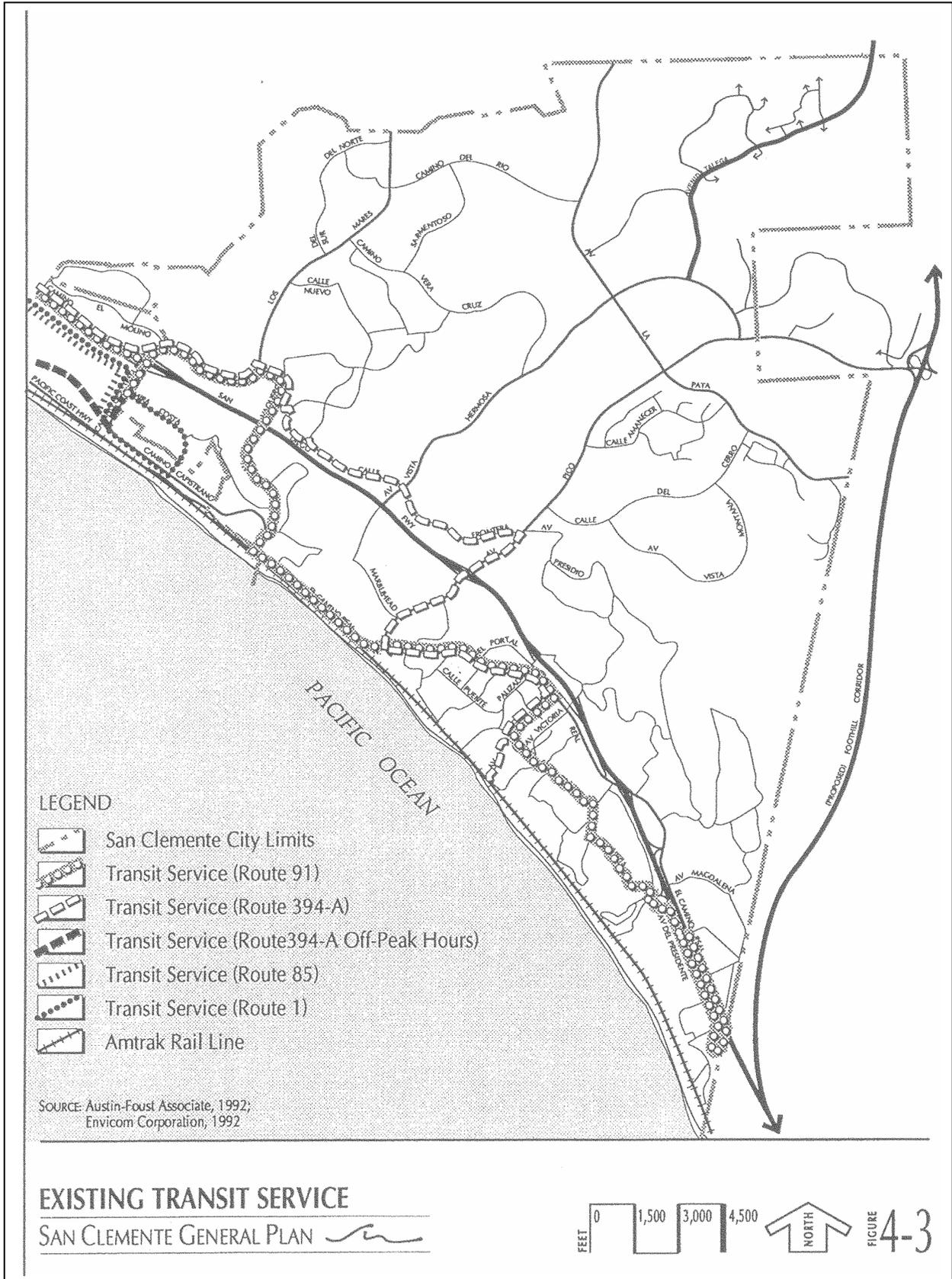
TABLE 4-2

Standards for Roadway Levels of Service

LEVEL OF SERVICE	TRAFFIC CONDITIONS	ICU VALUE
A	Primarily free flow operations at average travel speeds usually about 90 percent of free flow speed. Vehicles can maneuver unimpeded within the traffic stream. Delay at signalized intersections is minimal	0.00-0.60
B	Reasonably unimpeded operations at average travel speeds usually about 70 percent of free flow speed. Ability to maneuver is only slightly restricted and stopped delays are not bothersome. Drivers are not subjected to appreciable tension.	0.61-0.70
C	Represents stable operations, however, ability to maneuver and change lanes in locations may be more restricted. Longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of free-flow speed. Drivers will experience some appreciable tension.	0.71-0.80
D	Borders on a range in which small increases in flow may cause substantial increases in approach delay, and hence, decreases in arterial speed. Causes range from adverse signal progression, inappropriate signal timing, high volumes, or any combination. For planning purposes, this Level of Service is the lowest that is considered acceptable. Average travel speeds are about 40 percent of free-flow speed.	0.81-0.90
E	Characterized by significant approach delays and average travel speeds of one-third of free-flow speed or lower, caused by adverse progression, high signal density, extensive queuing at critical intersections, inappropriate signal timing, or some combination.	0.91-1.00
F	Characterized by arterial flow at extremely low speeds below one-third to one-quarter of free flow speed. Congestion is likely at critical signalized intersections, resulting in high approach delays. Adverse progression is frequently a contributor to this condition.	Above 1.00

Source: Arterial Highway Section of 1985 Highway Capacity Manual

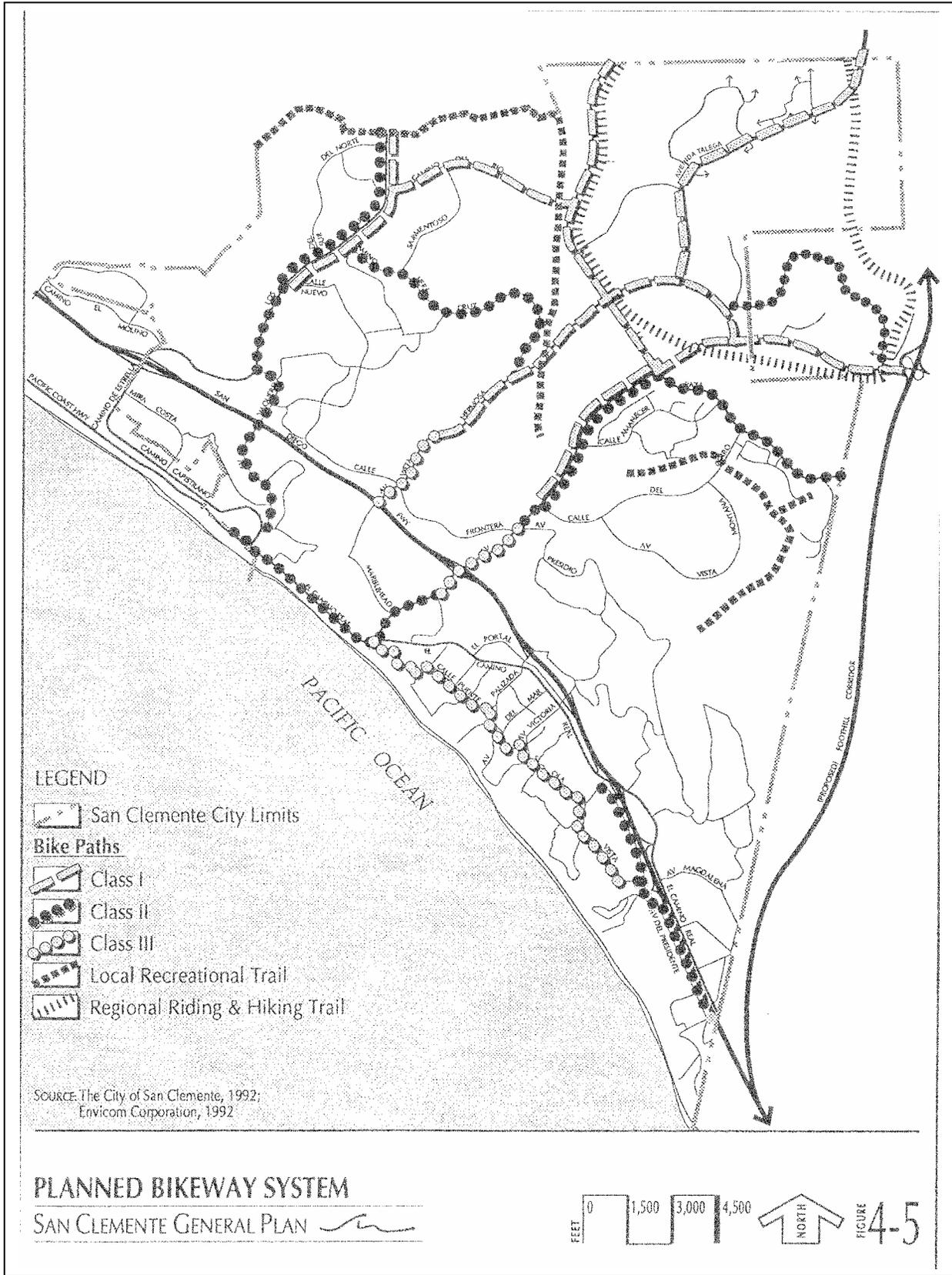




established and most bicycles are forced to compete with automobiles along the rights-of-way. At completion, bike lanes will be included on most of the City's arterial streets and these are illustrated in **Figure 4-5**. The following outlines the three categories of bikeways:

- Class I:** Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.
- Class II:** Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.
- Class III:** Provides for use of shared facilities. These bikeways share the street with motor vehicles. In both of these conditions, bicycle use in a secondary function of the pavement.

The biking network in San Clemente connects with other trails and paths, and adjacent communities in southern Orange County. Several new bike trails have been proposed, including a Class I bikeway through the eastern portion of Rancho San Clemente westward to the beach.



VI. IMPLEMENTATION PROGRAMS

Within the Circulation Element, policies have been developed which call for specific implementing actions to be taken by the City. Other policies are set forth which call for subsequent programs and actions to be taken which will implement the provisions of the General Plan. Defined as an action, procedure, program or technique that carries out General Plan policy, the following implementation measures are intended to assist the City in realizing the goals and policies of the Circulation Element.

The following lists the programs to implement the circulation policies contained in subsection IV of this element of the plan. The capital "I" and number preceding each program are referenced by the policies which it implements.

A. Existing and Proposed Street System

- I 4.1 Monitor the existing and proposed street systems on a regular basis to identify current and potential problem areas and to develop solutions.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund fees from development applications and/or other available funding sources approved by the City.

Schedule: As development projects are submitted or as funding permits.

- I 4.2 Utilize the city-wide traffic forecasting model to determine immediate and cumulative impacts of proposed developments on the City's transportation system.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund fees from development applications and/or other available funding sources approved by the City.

Schedule: Traffic model shall be re-calibrated annually, as needed or as funding permits. Traffic model trip generation and existing/pending development database shall be quarterly monitored and updated as needed or as funding permits.

- I 4.3 Evaluate and update the City's Circulation Plan and make recommendations for needed revisions to the County of Orange, Master Plan of Arterial Highways (MPAH) as it relates to the needs of the City of San Clemente.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund, Measure M, Proposition 111 and/or other available funding sources approved by the City.

Schedule: Every five (5) years following General Plan adoption.

B. Circulation Facility Design Manual

I 4.4 Prepare and maintain a circulation facility design manual, or adopt by resolution the County's design manual, with modifications, if necessary. The manual will contain roadway standards which specify right-of-way, number of lanes, typical cross-sections and parking restrictions according to designated arterial classifications. Design guidelines will be included for driveway placement, intersection site distance, stop sign installation, medians, landscaping, bike lanes, bike paths, sidewalks, and equestrian trails.

Responsibility: City of San Clemente Community Development Department Beaches and Parks and Recreation Department.

Funding Source: City of San Clemente General Fund and/or other available funding sources approved by the City.

Schedule: Within 18 months of General Plan adoption or as funding permits.

C. Off-Site Traffic Impacts

I 4.5 Utilize the development review process to ensure that new or expanded development projects mitigate off-site traffic impacts to the maximum extent feasible; coordinate project phasing with the construction of on-site and off-site circulation improvements which maintain the specific level of service performance standard; and provide adequate off-street parking.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund, fees from development applications and/or other available funding sources approved by the City.

Schedule: As development projects are submitted or as funding permits.

I 4.6 This will enable circulation improvements to be funded by new development in the inland ranch area and, in conjunction with the City's Capital Improvement Program, will determine estimated dates for construction. A phasing/improvement plan shall be included that identifies project-specific improvement responsibilities and requires fair share funding for cumulative circulation improvements. Improvements which mitigate specific project-related impacts shall be constructed or funded by the individual project

applicant. Project applicants shall also be required to participate in the fair share funding program.

Responsibility: City of San Clemente Community Development Department/ Engineering Division.

Funding Source: City of San Clemente General Fund, development application fees and/or development conditions/fees.

Schedule: Program maintenance as development projects are submitted or as funding permits.

E. Alternate Transportation Programs

I 4.7 Continue to work toward the implementation of improved transit services, including the development of a local transit program which would serve downtown and other areas.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund and/or other avail-able funding sources approved by the City.

Schedule: Develop local transit program within 24 months of General Plan adoption or as funding permits.

I 4.8 Utilize the development review process to ensure that, where appropriate, proposed developments include bicycle paths or lanes in their street improvement plans in accordance with **Figure 4-5**.

Responsibility: City of San Clemente Community Development Department/ Engineering Division.

Funding Source: City of San Clemente General Fund and/or fees from development applications.

Schedule: Review and modify development review requirements where appropriate, in concert with the preparation of the revised zoning ordinance, within 18 month of General Plan adoption or as funding permits.

F. Transportation Demand Management Program

I 4.9 Encourage new and existing employers to comply with the Air Quality Management Plan, including participation in Transportation Demand Management (TDM) programs, and develop a program for implementing TDM strategies.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund and/or other avail-able funding sources approved by the City.

Schedule: TDM Program: Within 24 months of General Plan adoption or as funding permits.

Administration: Ongoing as funding permits.

G. Parking Management

I 4.10 Prepare and adopt a Parking Management Plan that identifies city-wide parking requirements and ensures an adequate parking supply in relation to General Plan land uses.

Responsibility: City of San Clemente Community Development Department.

Funding Source: City of San Clemente General Fund and other available funding sources approved by the City.

Schedule: Within 18 month of General Plan Adoption, or as funding permits.

VI. GLOSSARY

Certain abbreviations used throughout this document are defined below to clarify their intended meaning.

- | | | |
|--|---|--|
| A. <i>ADT</i> | - | Average Daily Traffic. |
| B. <i>Intersection Capacity Utilization (ICU)</i> | - | A factor used to measure the volume/capacity ratio for an intersection and to determine its level of service. |
| C. <i>Level of Service (LOS)</i> | - | A scale used to evaluate circulation system performance based on volume/capacity ratios of arterial segments or intersection ICU values. The levels range from "A" to "F", with LOS "A" representing free flow traffic and LOS "F" representing severe traffic congestion. |
| D. <i>Peak Hour</i> | - | This generally refers to the hour during the AM peak period (typically 7-9 AM) or the PM peak period (3-6 PM) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway. |
| E. <i>Volume-to-Capacity</i> | - | This is typically described as a percentage of capacity utilized by existing or projected traffic on a segment of arterial or an intersection turn movement. |
| F. <i>Augmented Facility</i> | - | Roadways where additional ADT link capacity is required. This type of facility provides increased capacity by maximizing the utilization of the basic right-of-way and lane configuration. |
| G. <i>Commercial Facility</i> | - | Roadways where the traffic conditions for commercial activity are heaviest during non-peak hours and therefore a commercial facility with significant amounts of retail use can allow for higher non-peak usage of the roadway (10% increase in capacity). |

H. *Augmented/Commercial* - Roadways located in commercial areas that require additional circulation improvements over those of a standard street section; in addition to the 10% increase in capacity (refer to Augmented and Commercial facilities).