

***CITY OF EL SEGUNDO CIRCULATION ELEMENT OF THE GENERAL PLAN***

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***City of El Segundo***  
***Circulation Element***

*Prepared for:*

City of El Segundo  
Planning and Building Safety Department  
350 Main Street  
El Segundo, CA 90245

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September, 2004

*El Segundo General Plan*

**4. Circulation Element**

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## 4. Circulation Element

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### Introduction

The circulation system is one of the most important of all urban systems in determining the form and quality of the El Segundo environment. The circulation modes used, location of routes, operational policies and the operating levels of service influence the nature of urban development, the physical organization of the City, and can enhance or limit the social and economic activity within the City.

### Purpose and Authority

The purpose of the Circulation Element is to assist the City in providing a safe, convenient, and efficient circulation system. The Circulation Element identifies a system capable of responding to growth occurring consistent with the policies and Land Use Plan presented in the Land Use Element. The Circulation Element identifies physical improvements that will be needed to attain the Circulation goals and objectives, as well as alternative techniques to improve the City's circulation system.

The Circulation Element is part of the City of El Segundo's General Plan. State law requires that a circulation element be incorporated into the general plan. The pertinent government code sections are as follows:

- Government Code Section 65302(b): The general plan shall include . . . a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.
- Government Code Section 65303: The general plan may . . . address any other subjects which, in the judgment of the legislative body, relate to the physical development of the County or City.

### **Related Plans and Programs**

Circulation issues and travel patterns extend far beyond the El Segundo city limits. Consequently, the circulation system within the City is heavily impacted by land use and circulation plans and developments of other jurisdictions. The impact to the City's circulation system of projected land use changes and circulation system improvements of other jurisdictions, as projected during the development of the General Plan, were incorporated into the analysis and preparation of the Circulation Element.

## **Summary of Existing Conditions**

### **Existing Street System**

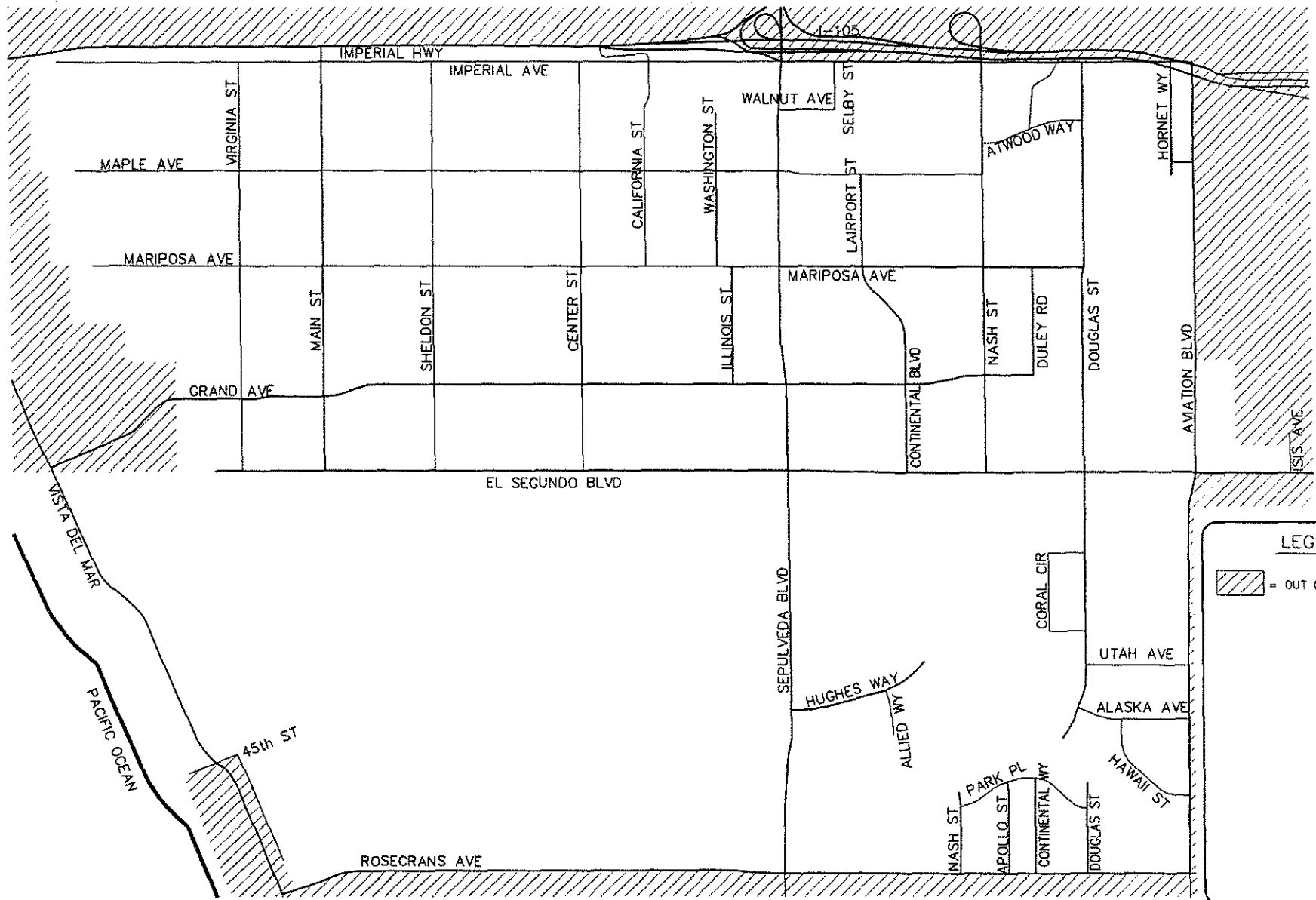
The City of El Segundo is served by the existing network of roadways shown on Exhibit C-1. The existing street network is essentially a grid system of north/south and east/west roadways. The primary north/south roadways are Aviation Boulevard, Douglas Street, Nash Street, Sepulveda Boulevard, Center Street, Main Street, and Vista Del Mar. The primary east/west streets are Imperial Highway, Imperial Avenue, Maple Avenue, Mariposa Avenue, Grand Avenue, El Segundo Boulevard, and Rosecrans Avenue. Each of these arterial roadways is described in the Existing Conditions Report.

#### **Daily Operating Conditions on Existing Street Network**


Daily operating conditions were analyzed on each of the arterials designated on the City's Master Plan of Roadways. This was done by comparing the average daily traffic volume for each arterial to the estimated daily capacity and developing a corresponding Level of Service (LOS) estimate of operating conditions. The daily traffic volume, and estimated roadway capacity, and resulting LOS for each of the key roadways in the City are shown on Exhibit C-2. A definition of Level of Service (LOS) for urban arterial roadway segments is included in Exhibit C-3.

A review of Exhibit C-2 reveals that most roadways in the City of El Segundo operate at LOS "C" or better. Several roadway links operate at LOS "D," which is considered marginally acceptable. These are:

- Aviation Boulevard between Hawaii Street and Rosecrans Avenue
- Imperial Highway between Main Street and California Street
- Sepulveda Boulevard between El Segundo Boulevard and Rosecrans Avenue
- Sepulveda Boulevard between Mariposa Avenue and Grand Avenue



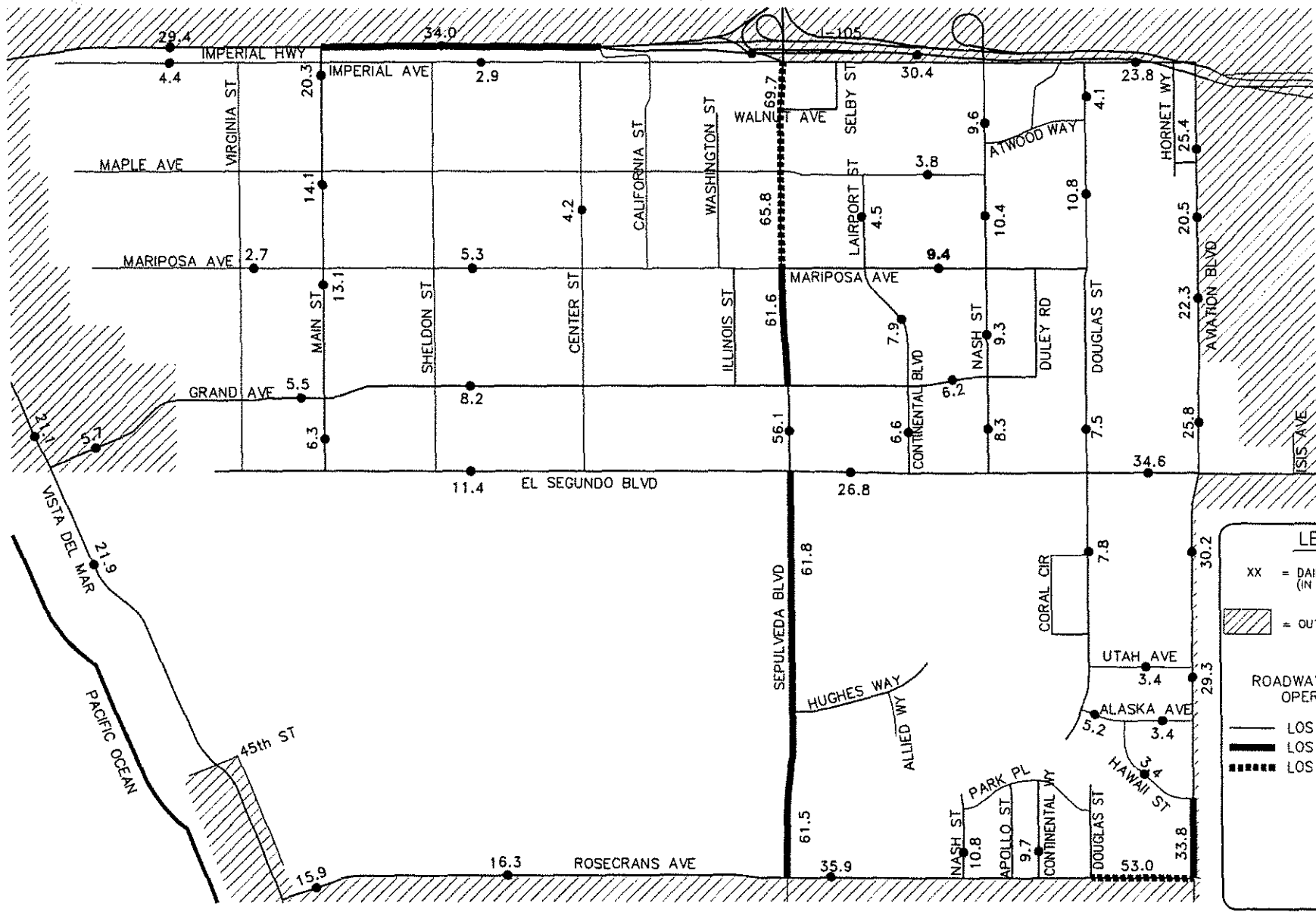
**LEGEND**

 = OUT OF CITY LIMITS

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

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# Existing El Segundo Street Network



**LEGEND**

XX = DAILY TRAFFIC VOLUME (IN THOUSANDS)

= OUT OF CITY LIMITS

ROADWAY SEGMENTS OPERATING AT

LOS C OR BETTER

LOS D

LOS E

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# Summary of Existing Daily Roadway Operation

exhibit  
**C-2**

Level of Service (LOS)	Operating Conditions
A	Free flow, with no restrictions on maneuvering or operating speeds. Minimal or no delay.
B	Stable flow, with some restrictions on maneuvering or operating speeds. Nominal delays.
C	Stable flow, with more restrictions on speed and maneuverability. Some delays.
D	Approaching unstable flow. Restricted speed and maneuverability. Delays encountered at intersections.
E	Unstable flow, with some stoppages. Constitutes maximum capacity by definition. Extensive delays at some locations.
F	Forced flow, with many stoppages. Low operating speeds, extensive queuing and very extensive delays.

SOURCE: HIGHWAY CAPACITY MANUAL, 2000

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## Level of Service for Urban Arterials

exhibit  
**C-3**

The following roadway segments operate at LOS "E," which is considered unacceptable:

- Sepulveda Boulevard between Imperial Avenue and Mariposa Avenue
- Rosecrans Avenue between Douglas Street and Aviation Boulevard

While no traffic volumes on any of the roadways in the City now exceed LOS E traffic volume thresholds, portions of Rosecrans Avenue and Sepulveda Boulevard carry traffic volumes very close to the threshold.

**Analysis of Peak Hourly Operating Conditions on Existing Street Network**

In addition to the analysis of roadway segments on the basis of daily traffic volume and capacity, peak hourly traffic conditions at several key intersections throughout the City were also evaluated. Analysis of intersection operations was conducted using the Intersection Capacity Utilization (ICU) methodology. An explanation of the ICU methodology and Intersection LOS is included in Exhibits C-4 and C-5 respectively.

The results of the intersection analysis are presented graphically on Exhibit C-6. A review of Exhibit C-6 reveals that according to the peak hour intersection analysis, several intersections within the City currently operate at unacceptable Levels of Service (LOS). The following intersections currently operate at LOS "E" or "F" during the AM or PM peak hour:

- Sepulveda Boulevard at Imperial Highway (LOS E AM Peak only)
- Sepulveda Boulevard at Mariposa Avenue (LOS E in AM Peak only)
- Sepulveda Boulevard at Grand Avenue (LOS E in both AM and PM Peak)
- Sepulveda Boulevard at El Segundo Boulevard (LOS E in AM Peak, LOS F in PM Peak)
- Sepulveda Boulevard at Rosecrans Avenue (LOS F in PM Peak only)
- Rosecrans Avenue at Aviation Boulevard (LOS E in AM Peak, LOS F in PM Peak)
- Aviation Boulevard at El Segundo Boulevard (LOS E in AM and PM Peak)

During the AM and PM peak hours, at least one movement carries higher volumes than the available capacity at the unsignalized intersection of Douglas Street at Utah Avenue.



The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually greater between intersections and less at intersections because traffic flows continuously between intersections, and only during the green phase at intersections. Capacity at intersections is best defined in terms of vehicles per lane per hour of green; if the green phase is 50 percent of the cycle and there are three lanes, then the capacity is 1,600 times 50 percent times 3 lanes, or 2,400 vehicles per hour.

The technique used to compare the volume and capacity of an intersection is known as Intersection Capacity Utilization (ICU). ICU, usually expressed as a percent, is the proportion of an hour required to provide sufficient time to accommodate all vehicles on all approaches. If an intersection is operating at 80 percent of capacity, then 20 percent of the signal cycle is not used. The signal could show red on all indications 20 percent of the time and the signal would just accommodate approaching traffic.

ICU analysis consists of (a) determining the proportion of signal time needed to serve each conflicting movement of traffic, (b) summing the times for the movements, and (c) comparing the total time required to the total time available. For example, if for north-south traffic, the northbound traffic is 1,600 vehicles per hour, the southbound traffic is 1,200 vehicles per hour, and the capacity of either direction is 3,200 vehicles per hour, the northbound traffic is critical and requires 1,600/3,200 or 50 percent of the signal time. If for the east-west traffic, 30 percent of the signal time is required, then the ICU is 50 plus 30, or 80 percent. When left-turn phases exist, they are incorporated into the analysis. The critical movements are usually the heavy left-turn movements and the opposing through movements. In the ICU computation, an inefficiency or "lost time" factor is also included.

Level of Service is used to describe the quality of traffic flow. Levels of Service "A" to "C" operate quite well. While Level of Service "C" is considered desirable, Level of Service "D" is encountered commonly at busy urban intersections. Most jurisdictions consider "D" to be an acceptable Level of Service. Level of Service "E" is the maximum volume a facility can accommodate and will result in possible stoppages of momentary duration. Level of Service "F" occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration. A description of the various levels of traffic services appears in Exhibit C-5, along with the relationship between ICU and level of traffic service.

The ICU calculation assumes that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volume.

It is possible to have a ICU well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient time to satisfy its demand, and excess time exists on other movements. This is an operating problem which should be remedied.

The ICU technique is a tool to quantify existing as well as future intersection operation. The impact of adding a lane can be quickly determined by examining the effect the lane has on the intersection capacity utilization.

## SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	TRAFFIC QUALITY	RANGE OF ICU (a)
A	Low volume; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.	0.00-0.60
B	Operating speed beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak hour traffic periods.	0.61-0.70
C	Operating speeds and maneuverability closely controlled by other traffic, between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; recommended ideal design standard.	0.71-0.80
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; often used as design standard in urban areas.	0.81-0.90
E	Capacity, the maximum traffic volume an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.	0.91-1.00
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service "E."	Over 1.00

(a) ICU means Intersection Capacity Utilization. Refer to Exhibit C-4 for explanation.

## UNSIGNALIZED INTERSECTIONS

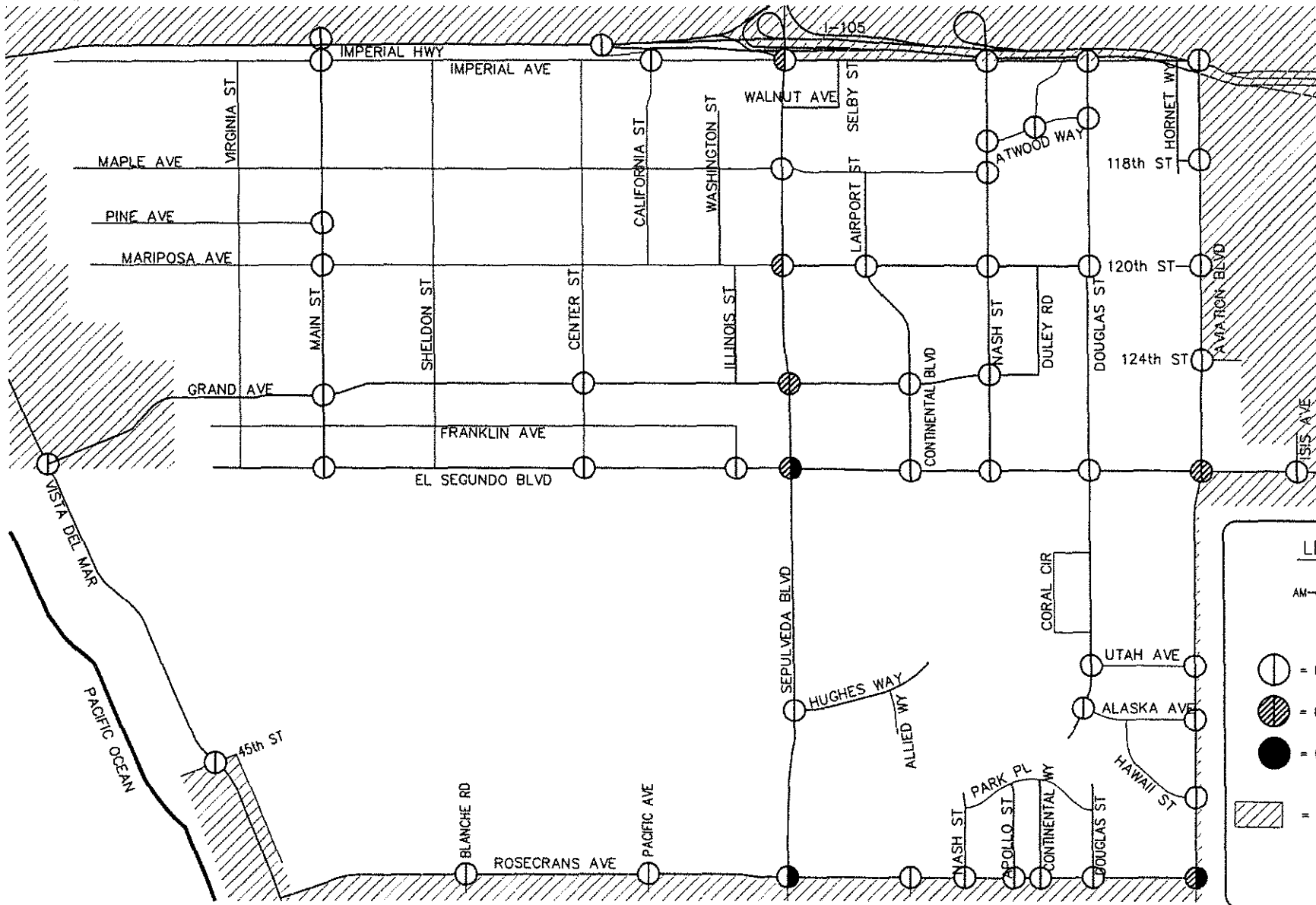
Level of Service	Average Control Delay (s/veh)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

SOURCE: HIGHWAY CAPACITY MANUAL, 2000

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# Level of Service Description for Intersections

exhibit  
**C-5**



**LEGEND**

AM — PM

○ = LOS D OR BETTER

▨ = LOS E

● = LOS F

▨ = OUT OF CITY LIMITS

SOURCE: INTERSECTION COUNTS IN 2003

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# Summary of Existing Peak Hourly Intersection Operation

exhibit  
**C-6**

### **Street Classification and Function**

The magnitude of traffic volumes on a particular street represents but one element of hierarchy in an overall circulation system. The system provides a balanced linkage between high traffic corridors and low volume streets. The presently adopted City circulation system consists of local streets, collector streets, secondary arterials, major arterials and freeways. There are a myriad of other categories or names for the components of a circulation system. However, it should be recognized that the classification is not as important as the function to be fulfilled.

The functions of the above street categories are as follows:

- **Local Streets** principally provide vehicular, pedestrian, and bicycle access to property abutting the public right-of-way with movement of traffic acting only as a secondary function.
- **Collector Streets** are intended to serve as the intermediate route to handle traffic between local streets and arterials. In addition, collector streets provide access to abutting property.
- **Major and Secondary Arterials** function to connect traffic from collectors to the major freeway system. They move large volumes of automobiles, trucks and buses, and link the principal elements within the City to other adjacent regions.
- **Freeways** are controlled access, high speed roadways with grade separated interchanges intended to expedite movement between distant areas in a metropolitan community or region.

The basic principles of network circulation, using these various functional street types, is important because it establishes the rationale by which the existing and recommended El Segundo circulation system was evaluated, and by which new proposals should be evaluated in the future. The variety of street types is designed for a specific function to provide adequate service to the community.

In addition to the desired function within the circulation system, the differing roadway classifications should be designed to carry differing amounts of traffic volumes. The capacity of a specific roadway section will be affected by a number of factors, including street width, number of travel lanes, number of crossing arterials and collectors, the number and type of signals, amount of parking, and the number of driveways. Although the capacity on a given roadway link will vary, daily capacities for each of the City's roadway classifications listed, in Exhibit C-7, were determined to be representative of roadway operating conditions in the City of El Segundo. Therefore, these capacity estimates are presented for general planning purposes and for use in traffic analysis throughout the City.

## ESTIMATED DAILY ROADWAY CAPACITY

Master Plan Roadway Classification	Number of Roadway Lanes (a)	Estimated Daily Roadway Capacity (b)
Major Arterial	8LD	70,000
Secondary Arterial (Six Lane Divided)	6LD	53,000
Collector (4-Lane Divided)	4LD	40,400
Collector 4-Lane	4LU	31,000
Collector 2-Lane	2LU	14,000
Local	2LU	10,000

- (a) 8 LD = Eight (8) lanes divided  
 6 LD = Six (6) lanes divided  
 4 LD = Four (4) lanes divided  
 4 LU = Four (4) lanes undivided  
 2 LU = Two (2) lanes undivided

(b) Estimated Daily Roadway Capacity at Level of Service "E" is considered to be the carrying capacity of the roadway. Numbers indicate vehicles per day for roadway system planning. Volume to Capacity (v/c) ratios are computed on the basis of LOS E capacity. If the v/c ratio exceeds 1.00, the roadway LOS would be F. A v/c ratio between 0.81 and 0.90 indicates LOS D, and a v/c ratio between 0.91 and 1.00 indicates LOS E.

Note: It is the goal of the City of El Segundo to achieve and maintain LOS D or better on the City's arterials. The City considers LOS C to be desirable and LOS D to be marginally acceptable for roadway segments. LOS E and LOS F are not acceptable.

## Future Conditions

### Streets and Highways

The Circulation Element goals and objectives presented later in this Element, combined with the future traffic demand as indicated by the Land Use Element, formed the basis for planning the future system of streets in El Segundo.

#### El Segundo Street Classifications and Standards

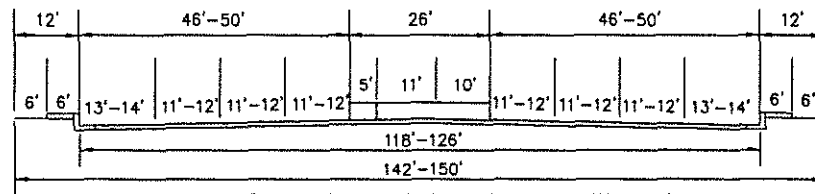
The recommended street classifications and standards are illustrated in Exhibit C-8 and described in the following paragraphs. These are consistent with regional standards and classifications. For example, the Los Angeles County Plan of Highways indicates a 100-foot right-of-way for a major highway. This would be equivalent to a secondary arterial in the El Segundo Circulation Element.

Any street segment which is constructed to geometrics that are inconsistent with the geometrics shown on Exhibit C-8 for the corresponding street classification is generally considered to be substandard. When new roadways are constructed or existing roadways are improved, the standards shown on Exhibit C-8 should be used as a guide to ensure that adequate rights-of-way exist to provide sufficient width of travel lanes, parking lanes, curbs, sidewalks, and medians where appropriate. It should also be noted that right-of-way may be needed beyond the standards shown in Exhibit C-8 in special locations, such as approaches to major intersections.

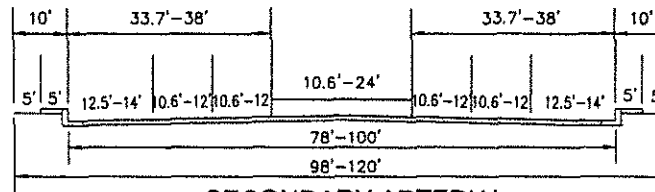
The right-of-way, lane and on-street parking widths shown in Exhibit C-8 are intended to be minimum widths. Ranges are provided in order to provide flexibility depending on the existing and future anticipated development, roadway volumes, and right-of-way widths, as well as conformance with the goals, policies and objectives of the General Plan. The evaluation of future development should consider all of these issues in order to determine the appropriate right-of-way dedication.

#### Freeways

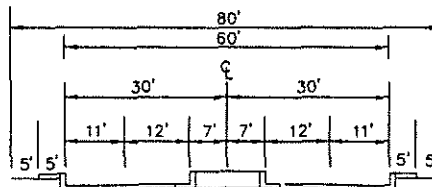
Freeways are controlled access, high speed roadways with grade-separated interchanges intended to expedite movement between distant areas in a metropolitan community or region. Planning, design, and construction of freeways in California are undertaken by Caltrans. As a result, they fall outside the jurisdiction of a city. Nonetheless, the City played an important role in the selection of the I-105 Freeway alignment, in determining the number of lanes required to carry projected traffic loads, and in locating the major interchanges along the freeway to serve the City street system. Since



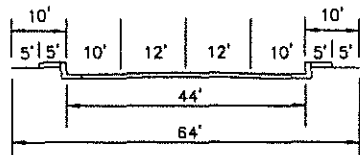
MAJOR ARTERIAL (8 LANES MINIMUM)



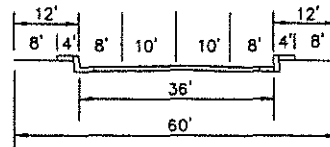
SECONDARY ARTERIAL



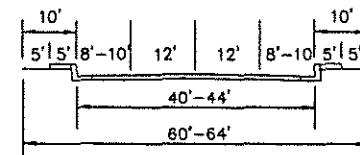
COLLECTOR  
(4 LANE DIVIDED)



COLLECTOR  
(2 OR 4 LANE)



LOCAL STREET  
(RESIDENTIAL)



LOCAL STREET  
(COMMERCIAL)

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# Street Classification and Standards

the Century (I-105) Freeway carries significant traffic volumes and plays an integral role in the City's roadway system, it is included in the City's Master Plan of Streets.

#### **Major Arterials**

Major arterials function to connect traffic from collectors to the major freeway system as well as to provide access to adjacent land uses. They move large volumes of automobiles, trucks and buses, and link the principal elements within the City to other adjacent regions. These facilities handle inter-city and intra-city vehicular trips in the magnitude of 40,000 to 75,000 vehicles per day (vpd). They should be planned for eight lanes of through traffic. In the majority of cases in El Segundo, curb parking will be prohibited during peak periods. Bicycle traffic would travel with vehicular flow or be separated by a path behind the curb. Raised medians can be used to separate opposing flows of vehicular traffic as necessary. Access points, (i.e., driveways and minor intersecting streets) should be minimized.

Separate left-turn lanes at major signalized intersections would be mandatory with double left-turn lanes the rule rather than the exception. Separate right-turn lanes which also serve as bus loading areas would be considered at locations indicating high turn volumes. At some intersections up to three left turn and up to two right turn lanes may be provided, if needed, and if acquisition of additional right-of-way is practical.

#### **Secondary Arterials**

Secondary arterials are similar to major arterials in function. They connect traffic from collectors to the major freeway system. They move large volumes of automobiles, trucks and buses, and link the principal elements within the City to other adjacent regions. These streets handle intra-city trips in the magnitude of 25,000 to 55,000 vpd and are not as continuous in length as major arterials. At least six through lanes should be provided to handle these needs along with single or double left-turn lanes (the latter preferably) at major signalized intersections. Curb parking would be prohibited during peak periods. Bicycle traffic would have to use paths behind the curb, separate bicycle lanes, or travel in the street with autos, trucks and buses.

#### **Collector Streets**

The collector street is intended to serve as an intermediate route to handle traffic between local streets and arterials. In addition, collector streets provide access to abutting property. Collector streets are anticipated to carry traffic volumes between 15,000 to 40,000 vpd and serve important internal functions within the community. A collector street may have one through lane per



direction; but more realistically, it should have a minimum of two through lanes (at least during peak periods). In some cases, a 4-lane collector may have a median divider. Curb parking can be accommodated if abutting property owners have insufficient off-street parking. The function of the collector, however, is to "collect" vehicles from the local street system and transport them to the arterial system as efficiently as possible.

Signalization of collector/local street intersections should be timed to permit the majority of the traffic flow on the collector while allowing local street access. Restriction of free flow along collectors due to unwarranted STOP controls should be discouraged.

#### **Local Streets**

Local streets principally provide vehicular, pedestrian, and bicycle access to property abutting the public right-of-way. Cross sections of local streets vary, depending on the abutting land uses, parking requirements, street trees, and other considerations. Where both sides of the street are served equally in residential areas, the common right-of-way width for a local street is 60 feet with a 36-foot pavement width.

In multi-family areas where there is continuous parking throughout the day, a minimum of 40 feet of pavement may be required to provide room for two moving lanes of traffic in addition to street parking on both sides. In commercial and industrial areas, a minimum pavement width of 40 feet is considered necessary. In industrial areas, consideration of the predominant type of trucking, and whether or not maneuvering of trailers must be provided, may require a pavement width of more than 44 feet.

When pavement widths exceed 40 feet on local streets, rights-of-way should be increased above 60 feet. Each parkway width should be 12 feet, including landscaped area and sidewalk. Sidewalk width should be 4 feet in residential areas and 5 feet in commercial or industrial areas.

The overall system design of local streets can greatly affect traffic. Unduly long streets build up traffic volumes and act as collectors. Cross streets and intersections with acute angles are likely to contribute to accidents. Good practice precludes carrying local streets into arterials since such intersections create unnecessary friction points and cause related congestion on the arterials. A far better approach is to bring local streets into collectors which then feed into arterials.

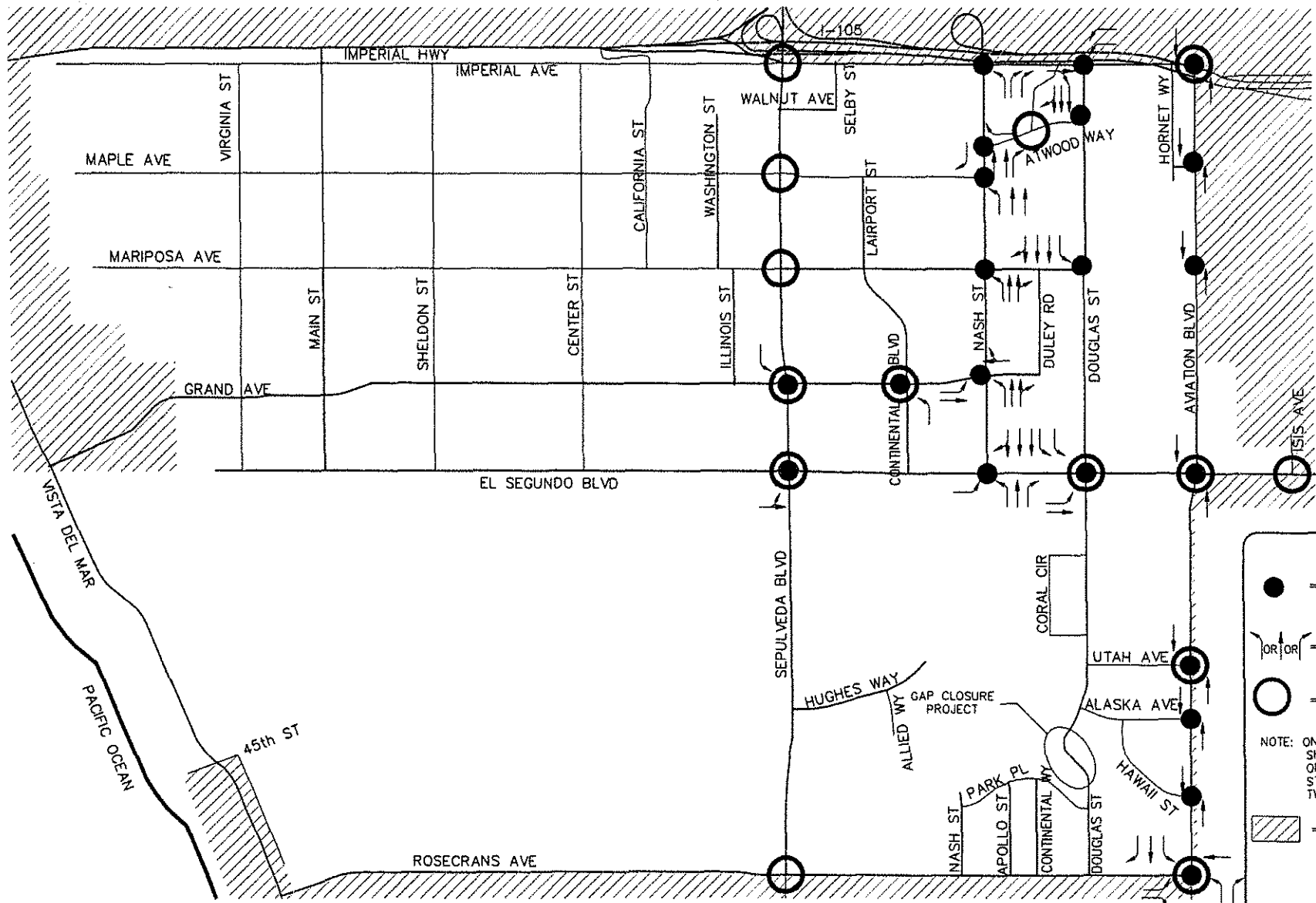
### **Planned or Funded Roadway Improvements**

A series of roadway improvements are either planned, funded or currently under construction. The traffic model forecasts have included these roadway improvements since they will be completed prior to buildout of the Land Use Element. These roadway improvements are illustrated in Exhibit C-9 and listed below.

***Widening of Aviation Boulevard - Rosecrans Avenue to Imperial Highway.*** The scope of work involves adding one lane in each direction. The following intersections will benefit from this project.

- Aviation Boulevard/Imperial Highway - Add one through lane in each direction for northbound and southbound movements, resulting in dual lefts, 3 through and one right turn only lane for both movements.
- Aviation Boulevard/120th Street - Add one through lane in each direction for northbound and southbound movements, resulting in one left and 3 through lanes for both movements.
- Aviation Boulevard/El Segundo Boulevard - Add one through lane in each direction for northbound and southbound movements, resulting in one left, 3 through and one right turn only lane for the southbound movement; one left and 3 through lanes for the northbound movement.
- Aviation Boulevard/Utah-135th Street - Add one through lane in each direction for northbound and southbound movements, resulting in one left and 3 through lanes for both movements.
- Aviation Boulevard/Rosecrans Avenue Improvements - The intersection improvements are being implemented by the City of Hawthorne. The proposed lane additions are:
  - Add second left-turn lane on northbound, southbound and eastbound approaches.
  - Add a fourth through lane and one exclusive right lane on the southbound movement.
  - Add a third through lane on the westbound approach.
  - Add an exclusive right-turn lane on the northbound and eastbound approaches.

***Construct left-turn pocket for northbound Continental Boulevard at Grand Avenue*** - This improvement will result in one left and three through lanes for the northbound movement.



**LEGEND**

- = INTERSECTION WITH PLANNED IMPROVEMENT
- OR OR = INDICATE ADDED LANES
- = ADDITIONAL INTERSECTION IMPROVEMENTS

NOTE: ONLY ADDED LANES ARE SHOWN. IMPROVEMENTS ON NASH AND DOUGLAS STREETS ARE FOR TWO-WAY OPERATION

▨ = OUT OF CITY LIMITS

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# Planned Improvements

***Douglas Street Extension from Park Place to Alaska Avenue*** – This improvement will connect the discontinuous street between Park Place and Alaska Avenue.

***Construct left-turn pocket*** for southbound Sepulveda Boulevard at Grand Avenue.

***Convert one through lane to a shared through/left-turn lane*** on eastbound El Segundo Boulevard at Sepulveda Boulevard.

***Convert Nash and Douglas Streets to two-way operation*** between Imperial Avenue and El Segundo Boulevard. Make all necessary intersection improvements to accommodate two-way operation.

***Other Additional Intersection Improvements*** identified in the Traffic Analysis Report and EIR for the Circulation Element to further improve intersection levels of service which may require additional right-of-way beyond the street classifications in Exhibit C-8.

**Future Travel  
Forecasts**

In order to plan for the future travel conditions in El Segundo, traffic forecasts were developed for buildout of the City's Land Use Plan as presented in the Land Use Element. The traffic forecasts incorporated the type and density of future land uses within the City, the location and potential interaction of various land use types, as well as the characteristics and capacity of each of the City's roadways. The following types of development activity in the City have been considered:

- **Approved and Active Projects** - Those projects which have already received discretionary approval or are being reviewed. Approved or active projects are summarized in Table III-3 of the Traffic Analysis Report for the Circulation Element.
- **Vacant Parcels** - Potential development of all vacant parcels has been assessed, assuming appropriate zoning categories and floor-area-ratios. The results are presented in Table III-4 of the Traffic Analysis Report for the Circulation Element.
- **Recyclable Parcels** - Parcels which currently have buildings but which are likely to be recycled within the time frame of the Circulation Element have been assessed. Potential development on vacant parcels and recyclable parcels is summarized in Appendix C of the Traffic Analysis Report for the Circulation Element.

Due to the fact that El Segundo is located in an urbanized area with many jurisdictions and a variety of planners and decision makers, planning for the City's future must incorporate projected activities in the jurisdictions neighboring the City and in the region as a whole. Therefore, projected traffic using the City's streets that would be generated by land use changes outside the city was incorporated into the analysis of buildout traffic conditions. In addition, regional initiatives and activities, due to air quality and congestion concerns, are projected to have an impact on future travel patterns and traffic conditions in the region. The effect of regional air quality and congestion reduction activities was also considered and incorporated into the analysis of future traffic conditions.

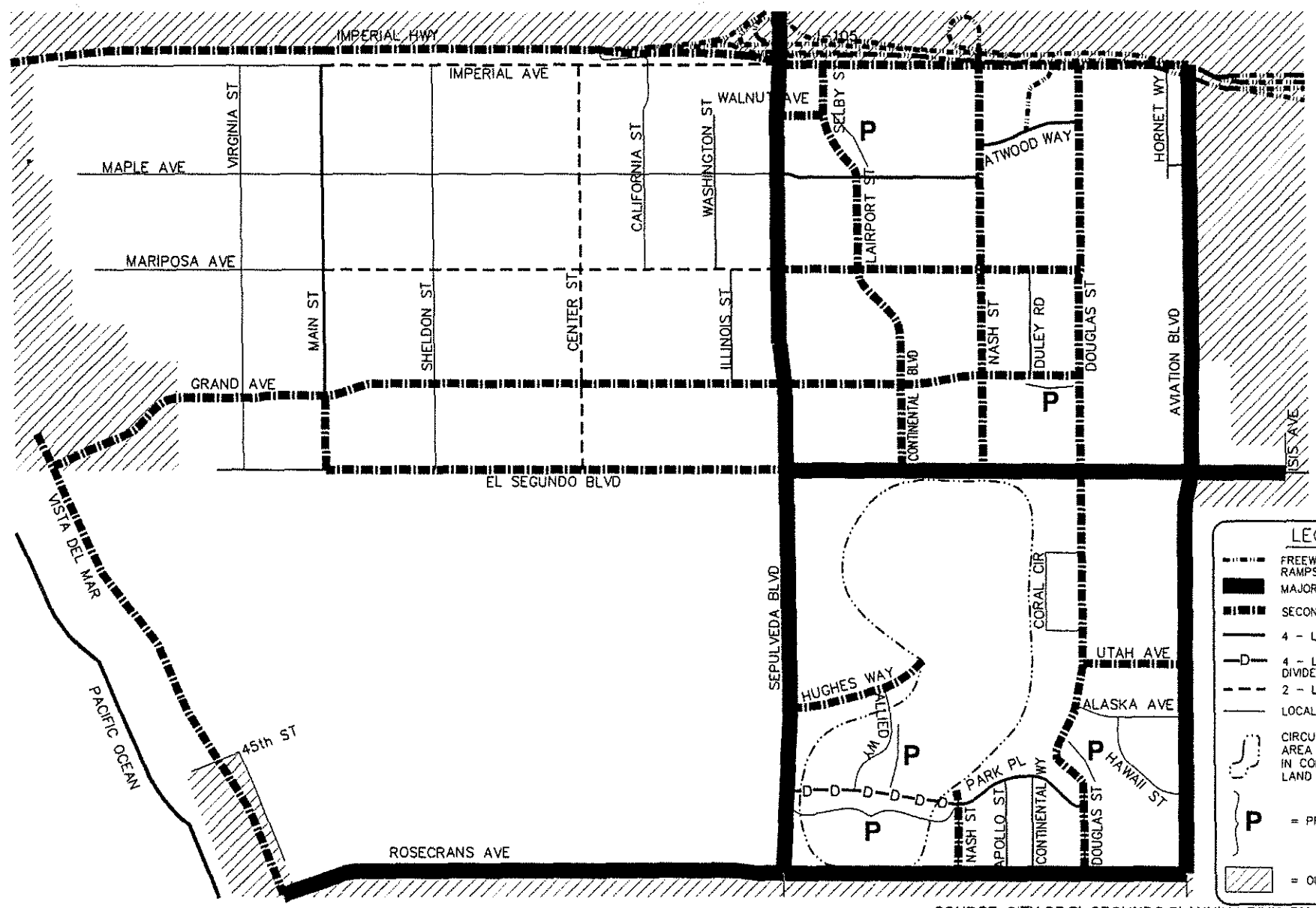
## Master Plan of Streets

The Master Plan of Streets is presented in Exhibit C-10. The Master Plan of Streets has been revised since the existing Master Plan was adopted in 1992 and has been developed taking into consideration existing street alignments, constraints in the City, the potential for new routes, and future traffic volumes, all predicated on the types of existing and future land uses and their spatial relationships.

The Master Plan of Streets designates a preferred number of traffic lanes to support buildout of the General Plan Land Use Element. Accordingly, the Master Plan of Streets would be developed with the full cross section of lanes for each street designation, as shown in Exhibit C-8. Thus, all streets designated as 6-lane roadways would have three through lanes in each direction (six through lanes total) in the future, all streets designated as 8-lane roadways would have four through lanes in each direction.

The Master Plan of Streets differs from the Master Plan of Streets adopted in 1992 in the following aspects:

- The previously planned extension of Grand Avenue from Douglas Street to Aviation Boulevard is no longer included in the Master Plan of Streets.
- The previously planned extension of Mariposa Avenue from Douglas Street to Aviation Boulevard is no longer included in the Master Plan of Streets.
- The previously planned direct connection of Nash Street north of Rosecrans Boulevard is no longer included in the Master Plan of Streets.
- The previously planned direct connection of Hughes Way to Utah Avenue is no longer included in the Master Plan of Streets.



**LEGEND**

- FREEWAY AND FREEWAY RAMP
- MAJOR ARTERIAL
- SECONDARY ARTERIAL
- 4 - LANE COLLECTOR
- 4 - LANE DIVIDED COLLECTOR
- 2 - LANE COLLECTOR
- LOCAL
- CIRCULATION IN THIS AREA TO BE DEVELOPED IN CONJUNCTION WITH LAND DEVELOPMENT
- = PROPOSED
- = OUT OF CITY LIMITS

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

CITY OF EL SEGUNDO · GENERAL PLAN

# Master Plan of Streets

exhibit  
**C-10**

- Nash and Douglas Streets are designated as two-way streets between Imperial Avenue and El Segundo Boulevard, representing a change from the existing one-way operation on those streets
- The designation of a future transportation corridor in the southeastern part of the city to include extensions of Park Place and Allied Way.
- The designation of Park Place between Nash Street and Douglas Street as a collector, rather than a local street.

A discussion of these changes and the reasons for change are presented in the following paragraphs.

### **Unconstructed Master Plan Street Extensions**

The Master Plan of Streets, adopted in 1992, included some unconstructed street system extensions. None of these street extensions would be expected to serve through traffic since none would provide continuous travel routes for regional through trips. Therefore, the main purpose of each street extension is to serve local parcels of land as they are developed and provide access to each parcel. In general, given the grid-like circulation system, the parcels can be efficiently served by a series of well designed access points, driveways and internal roadways as opposed to new through streets.

One of the serious concerns associated with the previously planned east/west through streets is the potential to also increase traffic flow on streets west of Sepulveda Boulevard. This concern is especially critical for Mariposa Avenue and Grand Avenue. Extension of either street through to Aviation Boulevard would likely result in increased traffic volume on those streets to the west of Sepulveda Boulevard as a result of the creation of new convenient routes.

#### **Grand Avenue**

The Master Plan of Streets, adopted in 1992, included the extension of Grand Avenue from Duley Road east to Aviation Boulevard. Based on significant traffic growth in the vicinity of Grand Avenue between Continental Boulevard and Douglas Street, Grand Avenue is maintained in the Master Plan as far as Douglas Street. This will help to relieve congestion at the intersections of Nash Street/El Segundo Boulevard and Douglas Street/El Segundo Boulevard. The segment of Grand Avenue from Douglas Street to Aviation Boulevard is no longer included in the Master Plan of Streets. This will protect the segment of Grand Avenue west of Sepulveda Boulevard from becoming a through route for commuter traffic.

#### **Mariposa Avenue**

The Master Plan of Streets, adopted in 1992, included the connection of Mariposa Avenue from Douglas Street to Aviation Boulevard. The construction of this street extension would primarily serve the land uses

in that vicinity as they are developed. This would likely increase traffic volumes on Mariposa Avenue in the residential neighborhoods west of Sepulveda Boulevard. For this reason, the street extension has been deleted from the Master Plan.

**Lairport Street**

The Master Plan of Streets, adopted in 1992, included the connection of Lairport Street from Maple Avenue to Selby Street. This connection would serve though traffic volumes from the area south of Maple Avenue, however, little growth is forecast in the area between Maple Avenue and Imperial Highway. This link would connect Lairport Street to Imperial Highway relatively close to the intersection with Sepulveda Boulevard. This street extension is maintained in the Master Plan.

**Douglas Street**

The Master Plan of Streets, adopted in 1992, included connection of Douglas Street from its current terminus through to existing Douglas Street near Park Place (for connection through to Rosecrans Avenue). Given the significant forecast congestion on both Sepulveda Boulevard and Aviation Boulevard, as well as the forecast increase in trips along Douglas Street north of Rosecrans Avenue, this connection is warranted and remains in the Master Plan. The future traffic model forecasts included the Douglas Street extension improvements as an assumed baseline condition since it is anticipated to be completed prior to buildout of the Land Use Element.

**Nash Street**

The Master Plan of Streets, adopted in 1992, included the direct connection of Nash Street from El Segundo Boulevard to the existing terminus north of Rosecrans Avenue. Due to current and anticipated future land use patterns, this connection is not likely to be feasible within the time frame of the Circulation Element. It is therefore not included in the Master Plan.

**Hughes Way**

The Master Plan of Streets, adopted in 1992, included the connection of existing Hughes Way to Utah Avenue to the east. Due to current and anticipated future land use patterns, this connection is not likely to be feasible within the time frame of the Circulation Element. It is therefore not included in the Master Plan.

**Future Transportation Corridor**

At this time, there are emerging plans for redevelopment of a significant portion of the southeast portion of the City (north of Rosecrans Avenue and east of Sepulveda Boulevard). If redevelopment activity occurs in the future, there may be a need for additional roadway capacity to support the increased trips that would occur as a result of the development activity. Although the Nash Street



and Hughes Way extensions are not warranted at this time, and neither is included in the Master Plan of Streets, the City expects to establish a future transportation corridor in that quadrant of the City. The Corridor will allow the City to reserve potential right-of-way, to be determined as development is proposed, to complete the necessary transportation networks which will serve the new development. At this time, it is not possible to designate the precise alignment of roadway connections; however, it must be recognized that additional east/west and north/south circulation capacity will be required. This may include an extension of Park Place from Nash Street to Sepulveda Boulevard and an extension of Allied Way south to connect to Park Place. The City should evaluate the need for additional east/west and north/south capacity based upon development proposals as they arise. The alignment of the transportation facilities will be determined based upon further studies and should include capacity to serve the new development as well as anticipated through traffic that may use the new roadways. With the potential extension of Park Place, it is appropriate to redesignate the portion of Park Place between Nash Street and Douglas Street from a local street to a collector street to be consistent with the designation of the Park Place extension.

**Nash/Douglas One Way Couplet Versus Two-Way Traffic Flow**

Nash and Douglas Streets currently operate as one-way streets from El Segundo Boulevard to Imperial Highway. In 1996, the change to one-way operation was completed in response to the opening of the I-105 Freeway and concerns associated with freeway access and related congestion. Since the conversion to one-way operation there have been concerns related to the circuitous travel paths created for some businesses. Conversion to two-way flow, with appropriate mitigation measures would provide more desirable traffic operating conditions. Based on the technical findings and the City's strong desire to return to two-way flow, these two streets are included as two-way streets in the Master Plan of Streets.

**Future Redevelopment of the Chevron Refinery**

The current land uses and activities on the Chevron Refinery site are expected to remain throughout the life of this General Plan and Circulation Element. However, potential redevelopment of this site will have a significant impact on all aspects of the City, including circulation. Redevelopment of the Chevron site will require reevaluation and possibly an update of the General Plan and require reevaluation of the Circulation Element. The potential redevelopment of this site may require significant roadway system improvements beyond those identified in the Master Plan of Streets. All future roadways within the Chevron site would be planned and constructed consistently with the City's Master Plan of Streets to ensure system continuity and use of appropriate standards.

#### **Projected Traffic Volumes on El Segundo Arterial Roadways**

The projected future traffic volumes are shown on Exhibit C-11 for each of the City's arterial roadways.

#### **Transportation System and Transportation Demand Management**

It is recognized that there are physical limitations to the amount of street width that can be provided. The buildout traffic projections in many instances cannot be accommodated solely by conventional roadway widening techniques. The use of Transportation System Management (TSM) and Transportation Demand Management (TDM) techniques (discussed later in the Circulation Element) to handle the projected "person trips" in the area must also be considered.

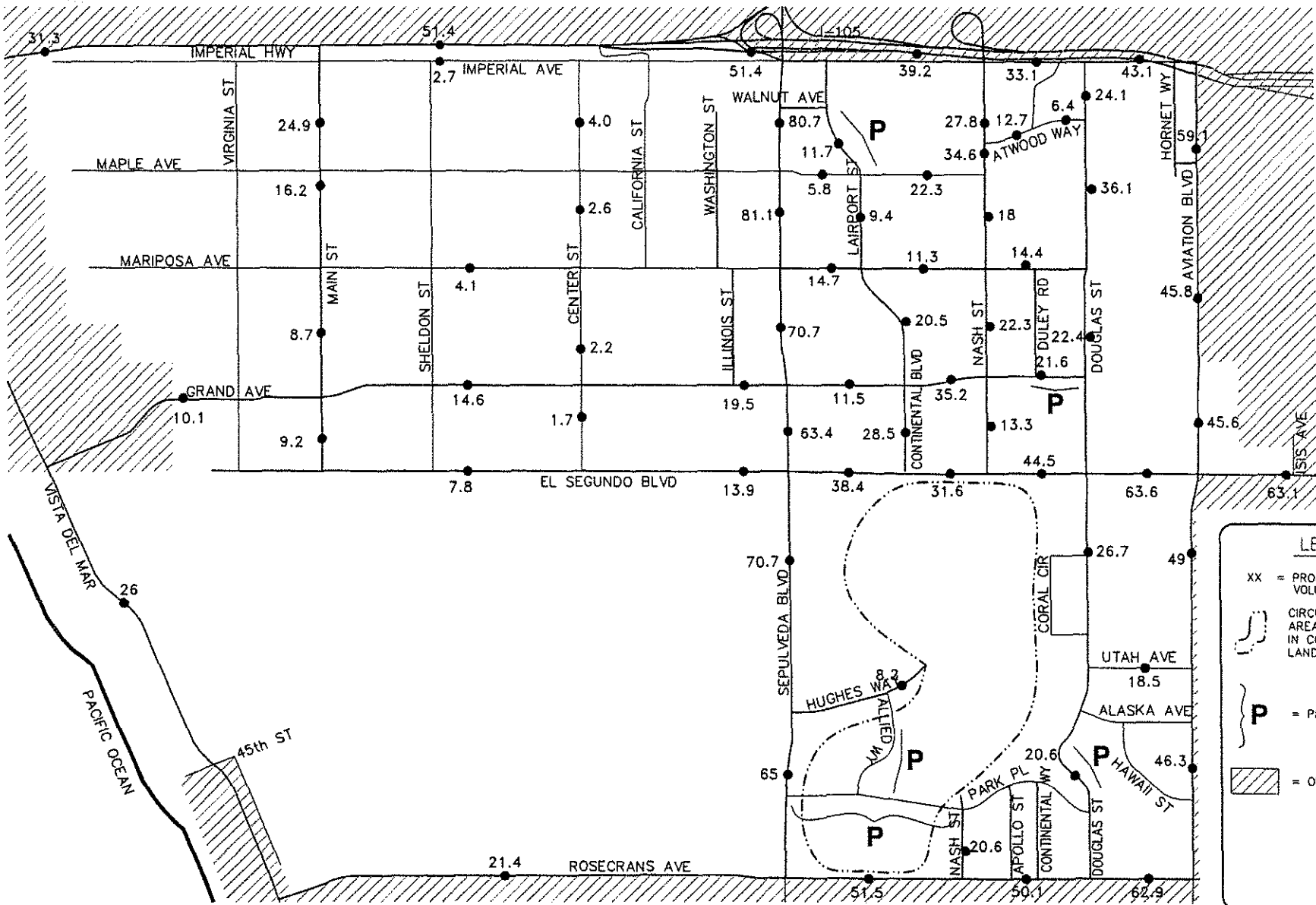
Such TSM and TDM techniques should be considered both:

- As a general augmentation to implementation of the Master Plan of Streets and Highways generally; and
- As an alternative to site specific Master Plan implementation if it can be reasonably demonstrated that the TSM alternative will have at least as great a mitigating impact, and the property owner is willing to enter into a legally binding agreement with the City to implement such TSM alternatives.

#### **Intelligent Transportation Systems (ITS)**

Nearly every jurisdiction in southern California has experienced roadway congestion problems that cannot be solved simply by adding roadway capacity. This is for several reasons including the lack of right-of-way to accomplish various widening projects as well as the environmental impacts associated with major roadway enhancements. As an alternative and supplemental improvement, many local agencies are implementing Intelligent Transportation Systems projects using advanced computer and communication technologies. The ITS projects that are being implemented provide improved traveler information, manage the flow of traffic, and utilize existing transportation systems more efficiently.

The goals of ITS are to reduce travel times, provide more reliable travel times, improve safety, reduce delay and reduce congestion. The high concentration of employment in the northeast quadrant of El Segundo makes it an area that is well-suited for application of advanced technology to accomplish the goals of ITS. This is because of the high density of employment, the large number of peak hour trips, the potentially high growth rate and the constraints on physical improvements. Examples of ITS system components include a centralized computer transportation management center, advanced transportation monitoring systems such as closed circuit TV (CCTV), transit traveler information, dynamic information displays at activity centers, bus priority treatment, real-time traffic management, coordination of local circulators, corporate Intranet information and



SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

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# Projected Daily Traffic Volumes Buildout of Land Uses Per Land Use Element

other elements. In other jurisdictions, these types of improvements have resulted in significant savings in vehicle and motorist delay, significant travel time reductions and significant environmental benefits all without major roadway widening or reconstruction projects. Recent deployment of ITS technologies has occurred throughout Los Angeles (ATSAC and other systems), Orange County (SMART STREETS), the South Bay, Santa Monica and many other agencies. Due to its many benefits and cost effectiveness, ITS could be considered as an integral part of the future transportation system of El Segundo. Similar to the City of Los Angeles methodology, a ten percent enhancement in capacity has been incorporated into the traffic modeling for the projected traffic volumes at buildout to represent the savings in vehicle stops and delays that would occur as a result of an ITS system in the City.

### **Truck Routes**

The residents and businesses of El Segundo rely heavily on trucks for the efficient movement of goods in an economical and safe manner. For this reason, the truck route system within and through the City is an important aspect of the Circulation Element.

#### **Current City Truck Routes**

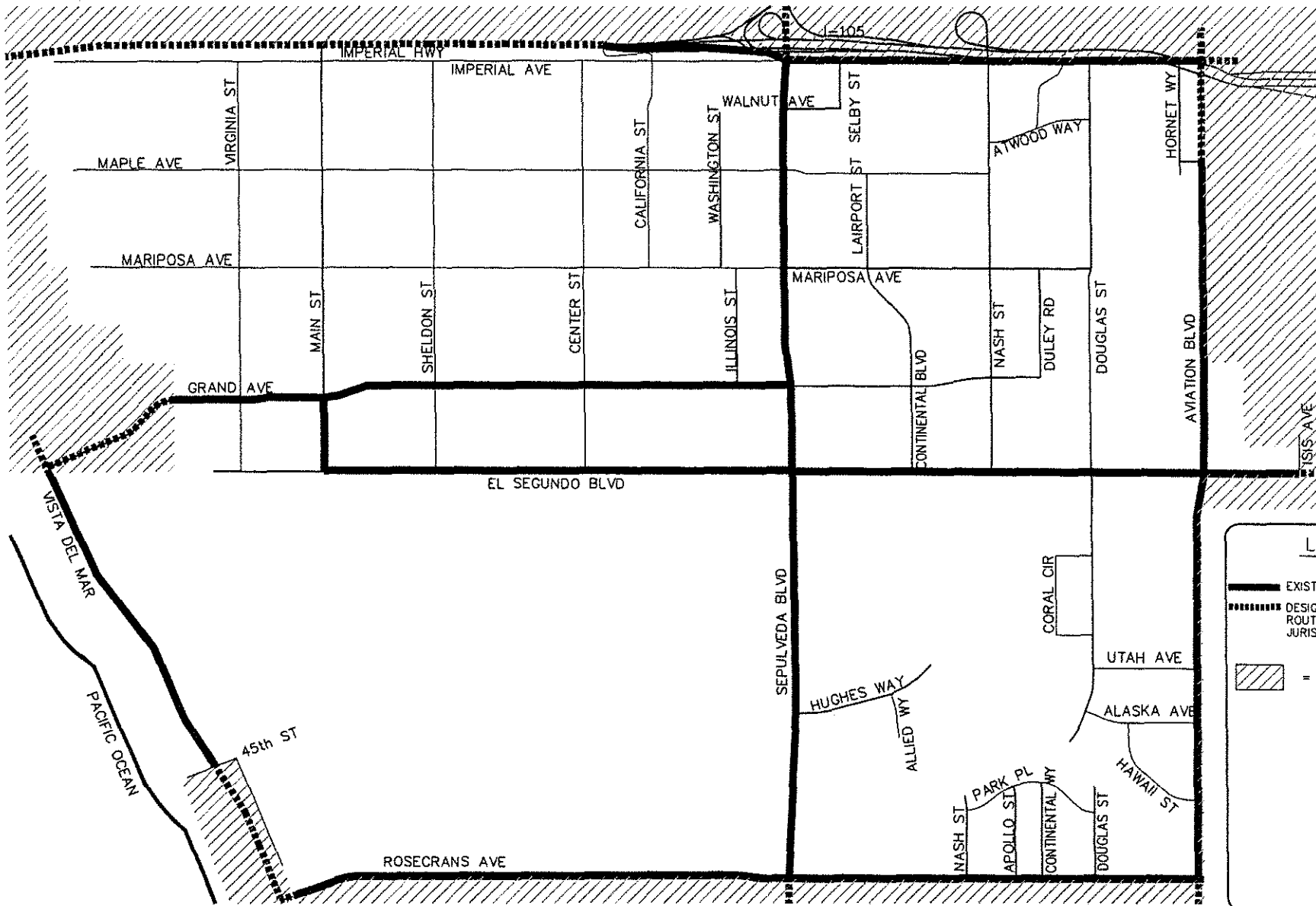
The El Segundo Municipal Code officially authorizes the City Council, by resolution, to designate truck routes on streets where vehicles in excess of three tons may travel. Existing truck routes are provided with appropriate sign posting to guide truck traffic through the City. These existing routes are shown in Exhibit C-12.

#### **Truck Route Considerations**

Selection of a truck routing system necessitates the determination of the impact of truck traffic on abutting land uses. There are land use categories that benefit from heavy truck access. Among these are industrial and commercial uses that require streets and alleys accessible to their development. Industry has to be served by trucks for deliveries of raw materials, the transfer of inventory, and the out-flow of finished goods. Commercial land uses also require access to trucks primarily for the transfer of inventory.

Conversely, there is a need to protect those land uses that are adversely affected by heavy truck traffic. In El Segundo, these include the single-family, two-family, and multi-family residential uses in the northwestern portion of the City. Heavy truck traffic within residential neighborhoods produce annoying and often excessive levels of noise, fumes, vibrations, and unsightliness. Areas in which schools, hospitals, churches, convalescent homes, and mortuaries are located must also be considered.

Establishment of a truck route system must basically follow the arterial street system. These routes must be located along those



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CITY OF EL SEGUNDO · GENERAL PLAN

# Existing Truck Routes

arterials designed to accommodate large vehicle traffic, and must, at the same time, seek to avoid fully developed residential areas where there are close and reasonable alternatives. They should also concentrate in areas of need such as the primary commercial and industrial areas in the southwest and easternmost portions of the City. The gross maximum weight restriction (6,000 pounds) in El Segundo is consistent with the weight limit imposed by most cities for non-truck route streets. The streets selected for the truck route system must be designed to support loads in excess of this limitation.

Provisions must also be made for vehicles transporting hazardous materials into and through the City along the truck route system. Current Municipal Code sections in El Segundo adequately account for such provisions.

#### **Master Plan Truck Route System**

The Recommended Master Plan Truck Route System is shown in Exhibit C-13. It incorporates the following roadways as recommended additions to the existing truck route system in El Segundo:

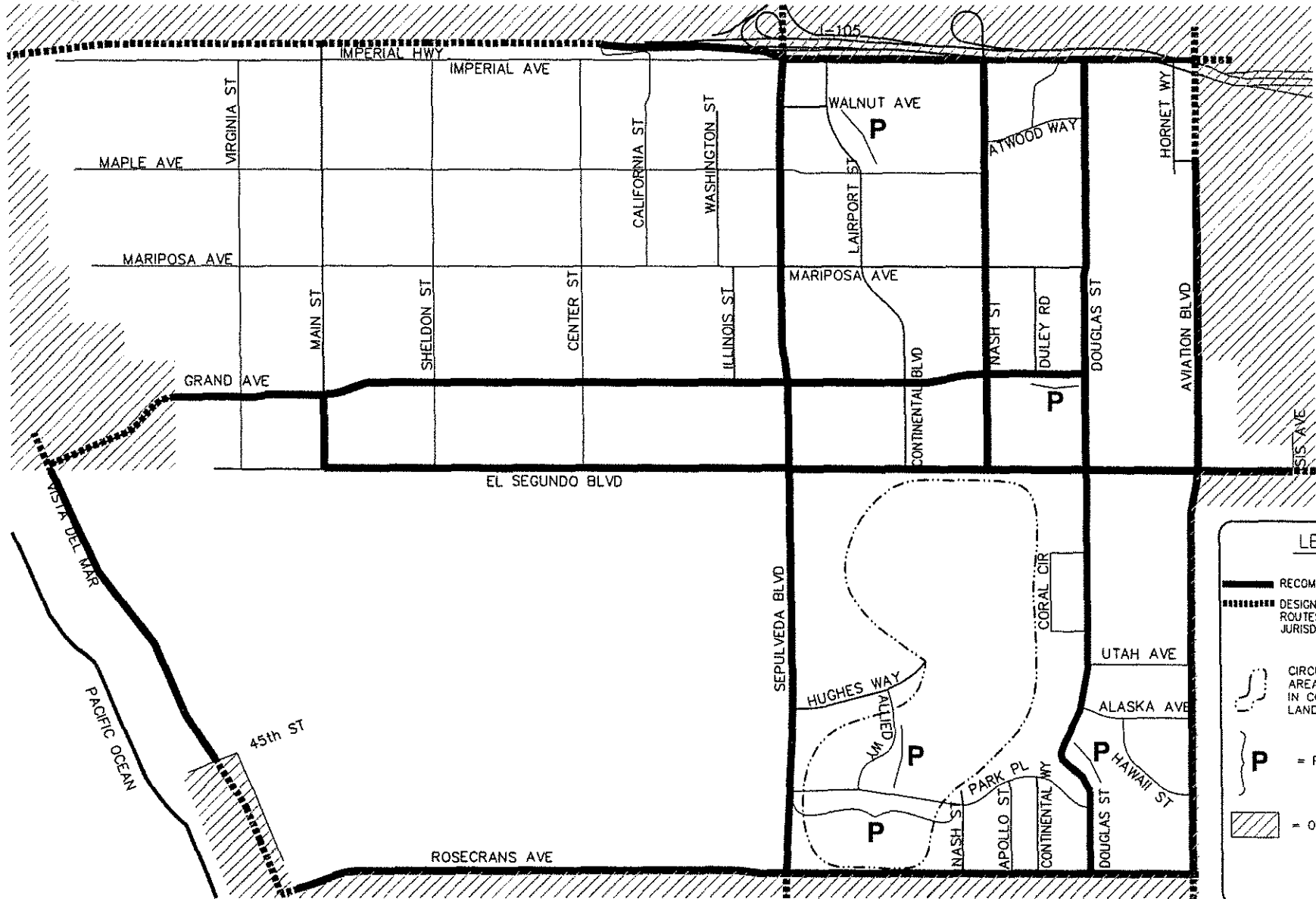
- Grand Avenue between Sepulveda Boulevard and Aviation Boulevard
- Douglas Street between Imperial Avenue and Rosecrans Avenue
- Nash Street between Imperial Avenue and El Segundo Boulevard

The recommended truck routes differ from those recommended in 1992 as follows:






- Nash Street from El Segundo Boulevard to Park Place is removed since that street extension is deleted.
- Grand Avenue from Douglas Street to Aviation Boulevard is deleted since that street extension is deleted.
- Grand Avenue from Main Street to Sepulveda Boulevard is added.
- Grand Avenue from Main Street to Sepulveda Boulevard is retained since it has been implemented and is no longer recommended for deletion.

#### **Truck Loading Zones**

There are presently narrow streets and alleys within some of the industrial areas of the City that serve as impediments to truck operation on the present street system. Current land uses and future development require truck access in many of these areas. The City needs to work toward widening the streets and alleys, eliminating the impediments for truck operation from the City's street system. In addition, the City should work toward implementing the appropriate



**LEGEND**

-  RECOMMENDED TRUCK ROUTES
-  DESIGNATED TRUCK ROUTES IN NEIGHBORING JURISDICTIONS
-  CIRCULATION IN THIS AREA TO BE DEVELOPED IN CONJUNCTION WITH LAND DEVELOPMENT
-  = PROPOSED
-  = OUT OF CITY LIMITS

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

CITY OF EL SEGUNDO · GENERAL PLAN

# Recommended Truck Routes

policies listed later in the Circulation Element in order to minimize the truck access impediments wherever street widening is not feasible.

## Alternative Modes of Travel

### Public Transportation

The automobile has traditionally been the primary method of transportation in the Southern California region. However, changing lifestyles, economic pressures and greater social and environmental concerns have increased the need for alternatives to automobile travel. Public transportation is one of the alternative modes of travel that can possibly reduce the region's and the City's dependence on the present auto-oriented transportation system.

In order for a transit system to attract users away from the automobile, it must be as convenient and affordable as possible. Compared to the convenience, flexibility, and privacy of travel by car, transit travel is perceived to be less appealing, especially for recreational purposes. Thus, for transit service to provide a viable alternative to the automobile in the City of El Segundo, the City must take an active role in planning and supporting the provision of various transit opportunities.

#### Existing Public Transit

The current transit service in El Segundo is provided by the Metro Green Line light rail system and fixed bus routes operated by the Los Angeles County Metropolitan Transit Authority (MTA) and a Dial-a-Ride service by the City of El Segundo. The Green Line route and stations in El Segundo and the current fixed MTA bus routes operating within the City are shown on Exhibit C-14.

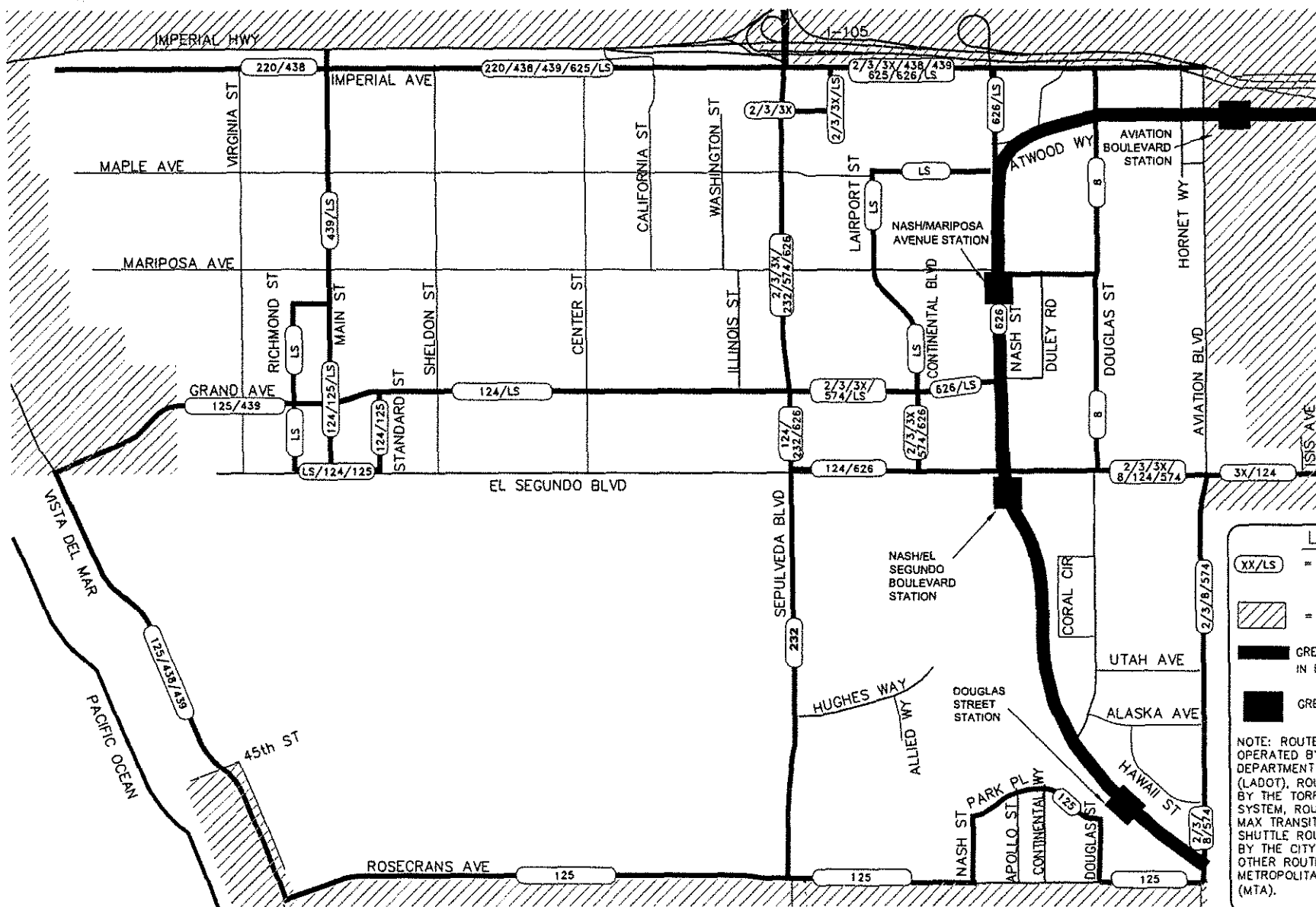
The Municipal Area Express, or MAX Transit Service, is funded cooperatively by eight cities and Los Angeles County. It is a directional bus service primarily provided for the workers in the El Segundo area. Buses run on two routes from residential areas in the South Bay to El Segundo in the AM, and from El Segundo back to the South Bay residential areas in the PM.

#### Demand Responsive Transit Service (Dial-a-Ride)

In El Segundo, the City provides one twelve-passenger van that operates on a "Dial-a-Ride" basis in response to specific demand. This service has been in operation since 1975. Residents phone for appointments, with a door-to-door response time of approximately 10 minutes.

The service is currently funded by Proposition A funds. Dial-a-Ride service is free to El Segundo residents and only operates within the City limits. The van operates from 9:00 AM to 3:00 PM Monday through Friday, and from 10:00 AM to 3:00 PM on Saturday.





**LEGEND**

- XX/LS = BUS ROUTE NUMBER / LUNCHTIME SHUTTLE
- = OUT OF CITY LIMITS
- = GREEN LINE ALIGNMENT IN EL SEGUNDO
- = GREEN LINE STATION

NOTE: ROUTES 438 AND 574 ARE OPERATED BY LOS ANGELES DEPARTMENT OF TRANSPORTATION (LADOT), ROUTE 8 IS OPERATED BY THE TORRANCE TRANSIT SYSTEM, ROUTES 2, 3, & 3X ARE MAX TRANSIT ROUTES. LUNCHTIME SHUTTLE ROUTES ARE OPERATED BY THE CITY OF EL SEGUNDO. ALL OTHER ROUTES ARE OPERATED BY METROPOLITAN TRANSIT AUTHORITY (MTA).

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

CITY OF EL SEGUNDO · GENERAL PLAN

# Existing Transit Service: Metro Green Line and Fixed Bus Routes

Ridership levels have stabilized over the years to approximately 38 passengers per day (approximately 12,000 passengers per year). The predominant users of this service are senior citizens, accounting for approximately 80 percent of the trips.

The City operates a fixed-route shuttle from mid-June to Labor Day. The service operates from 10: AM to 4:00 PM everyday and carries approximately 200 riders daily.

**Downtown Lunchtime Shuttle**

The City of El Segundo operates a lunchtime downtown shuttle service, with four 12-passenger vans. Two routes are operated, one along Grand Avenue and one along Imperial Avenue, both between Sepulveda Boulevard and the downtown area. Hours of operation are between 11:30 AM and 2:00 PM, Monday through Friday. Shuttles are operated with a frequency of about one van every 10 minutes.

**Considering Public Transit Alternatives**

Presently, the City has a variety of transit alternatives, including the Metro Green Line, the MTA bus services, the MAX Transit System, the City of El Segundo Dial-A-Ride, and Route 8 of the Torrance Transit System.

Public investment regionally in transit services can be a viable means of mitigating the effects of automobile usage while providing increased mobility to all groups of citizens and employees. It must be emphasized that transit bus or rail service cannot substitute for all automobile travel in the City, nor should it be intended to do so. The private automobile is an attractive means of travel for many people, offering an unmatched advantage for certain types of trips. Transit alternatives are only one component in the total transportation system serving the City, yet certainly the most environmentally respectful in the urban context.

Certain areas are more suitable for transit services than others. The following conditions exist and overlap in the City and adjacent urban areas and suggest that transit service would be appropriate within the City:

- High population concentration of housing and/or employment
- Excess auto demand on present highway system
- Fragile residential environment

**Rail Rapid Transit**

As illustrated in Exhibit C-14, the 2.9 mile Metro Green Line Extension running from the Century Freeway south through El Segundo provides access to the regional rail rapid transit system via rail stations at various locations in El Segundo. The following stations provide access to the Metro Green Line:

- Douglas/Rosecrans Station
- El Segundo/Nash Station
- Mariposa/Nash Station
- Aviation/I-105 Freeway Station (adjacent to the eastern boundary of El Segundo)

The Metro Green Line provides light rail service along the I-105 Freeway from Norwalk to Los Angeles Airport (LAX). Through transfer to the Metro Blue Line, Metro Red Line and Metro Gold Line, it provides El Segundo with rail service to downtown Los Angeles, Long Beach, Hollywood and Pasadena.

The Metro Green Line is elevated through the City, along the alignment shown in Exhibit C-14. Service is provided seven days a week from 5:30 AM to 1:30 AM with 6-minute headways during the peak and 20-minute headways during the off-peak. Parking is provided at the Nash/El Segundo station. Connecting bus or shuttle service is also available at all stations.

Implementation of the Metro Green Line provides the eastern portion of the City with direct rail service. The service attracts some commuters and visitors away from the automobile and thus, positively impacts the roadway system within the City. Projected impacts and usage of the Metro Green Line service and increased emphasis on transit regionally were incorporated into the analysis and development of the Circulation Element.

To ensure that the Metro Green Line is integrated into the City's circulation system and City activities in general, consideration of the rail line should be incorporated into all aspects of City planning activities and the development review process. This is particularly important in the vicinity of the rail line stations. In addition, the pedestrian and bicycle circulation system must be designed to allow convenient access to each of the stations. Further, the City should monitor the MTA and incorporate all Metro Rail planning and development into the City's planning process.

**Park-and-Ride**

"Park-and-ride" facilities provide an interface between the private automobile and public transit/mass transit. Park-and-ride facilities enable the public to access the transit system by driving to a park-and-ride facility, parking the car, then riding the transit system to complete the trip. When the location of a park-and-ride facility is coupled with highly efficient fixed transit service and an adequate collection and distribution service at the commercial end of the trip, this concept is an integral part of public transportation.

**Metro Green Line**

Within the City, a park-and-ride facility is provided at the El Segundo/Nash Metro Green Line station in addition to the Aviation/I-105 Metro Green Line station just east of the city limits. Additionally a multi-modal transit center with a park-and-ride facility is planned to be constructed on City property adjacent to the Douglas Street Metro Green Line Station as part of the Douglas Street extension project.

**Bicycle Facilities**

The bicycle is increasing in popularity as a mode of transportation for commuter travel as well as for recreation. This is due to the growing cost of motor vehicle operation, the significantly shorter portal-to-portal time when bikes are used on short trips, the increasing awareness and desire of travelers to utilize clean-air travel methods, and the acceptance of the bicycle for personal health, exercise, and increased mobility. There is a need to meet the growing demand for safe places to ride bicycles, both for recreation and commuter activities.

For many years, roadway facilities have been built exclusively to meet the needs of the motorized vehicle, resulting in street geometrics, lane widths, and intersections that have not been designed for bicyclist concerns. Bicycle safety is jeopardized due to bike/auto and bike/pedestrian confrontation on the street, and the lack of space given to bicycle movement. Conflicts between bicycles and pedestrians at intersections and on sidewalks results in the need to separate these three modes, wherever possible, to provide a safer and more efficient operational environment for each.

**Definitions**

To clarify any discussion on bicycles, a distinction must be made between the type of bicycle facilities in use. The following definitions (recognized Statewide) are identified below, and used throughout the Circulation Element:

**Bicycle Path - Class I**

This facility is a special path for exclusive use of bicycles which is separated from the motor vehicle traffic by space or a physical barrier.

**Bicycle Lane - Class II**

A bicycle facility where a portion of the paved area is marked especially as a lane for use of bicycles. It is identified by BIKELANE signing, pavement marking and lane line markings. Usually, special ordinances are necessary to legally define the area's exclusive use of bicycle traffic and to exclude mopeds and infringement by motor vehicles.

### Bicycle Route - Class III

A bicycle way designated within a public right-of-way. The purpose of the bike route is primarily that of transportation, allowing the bicyclist to travel from one point in the City to another. A "shared bicycle route" is a street identified as a bicycle facility by BIKE ROUTE signing only. No special markings on the pavement are provided.

### Existing Bicycle Route System

The existing system of bicycle facilities in the vicinity of El Segundo currently is limited to bicycle paths (Class I) along Imperial Highway, along the beach (Los Angeles County implementation), and portions of Grand Avenue approaching the beach. Exhibit C-15 illustrates existing and planned bicycle routes in the City. All routes shown on the exhibit are future planned routes unless specifically indicated as existing on the map.

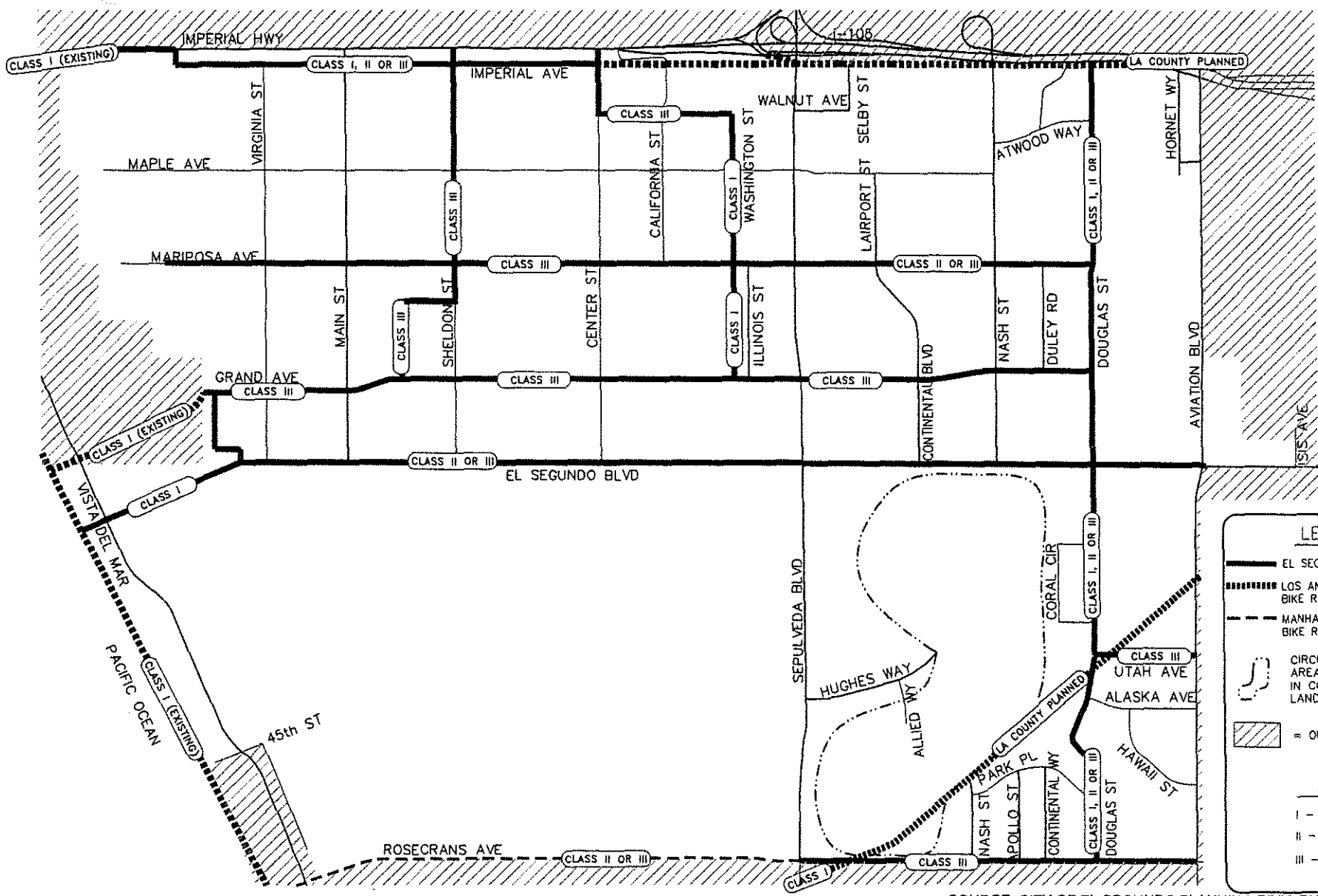
### Bicycle Route Guidelines and Standards

Implementation of any bicycle route facility, as designated on the Bicycle Master Plan, would be subject to applicable design standards and guidelines. The State of California has prepared and approved "Standards and Guidelines for the Implementation and Design of Bicycle Facilities." The evolution of design concepts for this mode of transportation continues today, but the basic conclusions and basis for design remain with the State Guidelines. The principle bicycle design areas that should be adhered to include:

- Minimum widths (8-foot minimum for two-way path; 5-foot minimum for one-way)
- Signing and striping of routes, lanes, and paths
- Design speed
- Horizontal alignment; i.e., curvature and super-elevation of paths
- Stopping sight distance
- Grades, length of crest vertical curves
- Adequate structural section
- Treatment of bicyclist at intersections
- Treatment when passing over at-grade railroad crossings, drainage grates, manhole covers, and driveway access points

### Master Plan of Bicycle Routes

The need to link the City with a system of bicycle facilities led to the development of a Master Plan of Bicycle Routes, adopted in 1992. It includes existing routes, and routes that are, or could be, developed into major bicycle-carrying corridors. The Master Plan of Bicycle Routes, shown on Exhibit C-15, is an integral part of the city's Circulation Element. No changes are proposed to the adopted Master Plan of Bicycle Routes.



**LEGEND**

- EL SEGUNDO BIKE ROUTE
- LOS ANGELES COUNTY BIKE ROUTE
- MANHATTAN BEACH BIKE ROUTE
- CIRCULATION IN THIS AREA TO BE DEVELOPED IN CONJUNCTION WITH LAND DEVELOPMENT
- = OUT OF CITY LIMITS

**CLASS**

- I - BIKE PATH
- II - BIKE LANE
- III - SHARED

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

CITY OF EL SEGUNDO · GENERAL PLAN

# Bicycle Master Plan

## **Pedestrian Circulation**

The pedestrian is an integral part of the circulation system and requires appropriate attention in the Circulation Element. The sidewalk is an area of refuge that represents a convenient and safe route for pedestrian transport. The relatively high percentage of elderly residential population in El Segundo, plus school children coupled with mid-day walkers for shopping trips and jogging, necessitate the establishment of a pedestrian circulation system that will support and encourage walking as a mode of transportation.

The El Segundo Municipal Code Section on "Street and Sidewalks" does not address the issue of sidewalk design nor the policies for sidewalk implementation. The City Department of Public Works, however, has prepared Standard Plans and Specifications for the installation of sidewalks. The primary criteria is minimum width of sidewalk on new installation which is standard at 4 feet for residential streets. Sidewalks in commercial areas should be a minimum of 8 feet wide. The only exception for commercial streets is the case where the distance from face of curb to property line is 5 feet. The sidewalk minimum requirement then becomes 4 feet, 6 inches.

Installation of sidewalks is mandatory with all new improvements in the City. Existing locations that do not have sidewalks can only require implementation on an assessment district basis; i.e., petition from the homeowners with City installation and cost of the sidewalk distributed to each homeowner on the basis of their street frontage.

The City has pursued sidewalk installation on the basis of the 1911 Act. This Act allows installation of a sidewalk by an agency in all blocks where over 50 percent of the block has existing sidewalk. Protest from the citizens can be made to nullify installation under this Act with the final decision resting with the City Council. The City of El Segundo in the past has used this Act to install sidewalks to "close the gaps" in many of the residential areas.

It is necessary to keep the sidewalk area free of obstructions to allow for the free flow of pedestrians. When there is a need to place certain obstructions, i.e., traffic signal poles, they should be designed to present the least interference to pedestrians.

In the areas of new planned development, the separation of pedestrians from autos must be considered. Utilizing pedestrian overpasses between buildings is one method of accomplishing this. The removal of the pedestrian from at-grade crossings significantly improves signal timing conditions, thus improving traffic flows.

## **Transportation System and Demand Management**

Transportation System Management (TSM) and Transportation Demand Management (TDM) techniques are cost-effective methods of improving traffic conditions. Roadway system expansion alone will not be enough to serve all projected circulation needs within the City of El Segundo. TSM and TDM techniques will have to be incorporated as an integral part of the City's package of transportation services provided in the future. The City currently has regulations in place, Municipal Code Chapters 15-16 and 15-17, which serve this function.

### **Transportation System Management (TSM)**

Transportation System Management (TSM) techniques are generally low cost methods relative to capital improvements. They involve changes to the existing system that permit improvements in operation. Caltrans defines TSM projects as "those projects designed to increase the number of person trips which can be carried on the system without significantly increasing the design capacity or the number of through lanes."

The City should evaluate a variety of TSM techniques and implement those that are deemed appropriate. Suggested TSM programs for consideration should include but are not limited to:

- Auxiliary lanes, such as acceleration and deceleration lanes
- Intersection improvements including addition of turn lanes, channelization, and implementation of signal coordination system
- Restriction of peak hour parking
- Commuter Information Systems, such as changeable message signs, highway advisory radio, computer bulletin boards, telephone call- in systems, and related links with other city or state traffic operations centers
- Improvements designed to assist traffic flow related to transit vehicles, such as bus turnouts and signal preemption systems

### **Transportation Demand Management (TDM)**

Transportation Demand Management (TDM) programs are geared toward reducing the number of vehicle trips wishing to use the circulation system. TDM techniques can be an effective tool in reducing air pollution, as well as traffic congestion. In fact, the Southern California Air Quality Management District (SCAQMD), through Regulation 2202, has required TDM plans and programs throughout the region for companies of 250 or more employees. This includes many of the businesses and a significant portion of the workers located within El Segundo. The City should encourage and assist all the businesses in El Segundo to plan and maintain TDM programs. This should be done directly or through cooperation with and support of the El Segundo Employers Association (ESEA).



Potential TDM programs and techniques should include but are not limited to:

- Flexible work schedules to reduce demand during the peak commuting periods
- Carpooling and vanpooling
- Employer subsidized transit passes
- Provision of bike storage areas and showers
- Telecommuting, such as working at home through telephone, internet and FAX machine use
- Provision of bike access and storage facilities at future Metro Green Line stations to encourage intermodal bike/rail use, reducing auto use and the need for parking at the stations

Several companies also operate employee shuttle services between their facilities contributing to an overall reduction of vehicle miles traveled.

### **Transportation Systems Interface**

The City of El Segundo is located in one of the fastest developing urban centers in the nation. The proximity to Los Angeles International Airport (LAX), active railroad lines (Union Pacific, BNSF), and a major street and freeway network, dictates the need for close interface between transportation modes and systems other than the automobile.

#### **Los Angeles International Airport (LAX)**

The Los Angeles International Airport (LAX) is adjacent to the City on the north. This includes the West Imperial Terminal and Imperial Cargo Complex which are located on Imperial Highway.

The Los Angeles International Airport (LAX) encompasses a total of almost 3,500 acres. Approximately 1,257 acres of the property are utilized for landing, takeoff, and ground maneuvering. The remaining acreage is used for the terminal complex, automobile parking facilities, airline maintenance facilities, fuel storage systems, industrial purposes, air cargo complex, and related facilities. Some land has not yet been devoted to specific airport uses, including those acquired because of noise impact.

Circulation within and around LAX is by automobile, bus, and parking lot trams. For the general public, surface traffic circulation between major facilities is on public streets.

A Central Terminal Area (CTA) serves scheduled airline operations, while the West Imperial Terminal, located along the southern boundary of the airport, services charter flights and other non-scheduled operations. The Central Terminal Area is situated at the hub of the runways with passenger boarding facilities located in

satellite buildings around its periphery. Inward from the satellites, and linked by underground passageways, are their respective ticketing buildings. These front on World Way, the main inner loop street serving all terminals. Within the loop itself is central parking, the airport administration and control tower building, the airport theme building with an elevated restaurant, and other facilities.

Air freight operations are presently concentrated east of the Central Terminal Area (CTA) serving over two million tons of freight in 1997, forecasted to increase to over three million tons by 2005. This area is served by both Century and Aviation Boulevards.

Extensive parking facilities are provided for the public, employees, and car rental firms. About half of the passenger parking spaces are located within the loop formed by World Way. The balance is located on the perimeter of the airport. The outlying spaces are lower priced and served by free buses to the CTA. Total parking spaces number approximately 24,000.

Ground access to LAX is predominantly by means of motor vehicles using the street and highway system. The I-405 Freeway is aligned in a north/south direction easterly of the airport. The I-105 freeway provides east/west access to LAX. The major access route from the freeway to LAX is Century Boulevard, a major east/west thoroughfare. Alternative access routes are Imperial Highway and Lincoln Boulevard. In a north/south direction, Sepulveda Boulevard leads directly to LAX via an interchange at Century Boulevard. Aviation Boulevard leads to the existing cargo facilities and the Imperial Cargo Complex located just north of Imperial Highway. The west end of the airport is served via City of Los Angeles streets, Vista Del Mar, and Pershing Drive. Pershing Drive terminates at Imperial Highway on the south and allows east/west flow into and out of the area. Vista Del Mar continues northerly into the Marina Del Rey/Westchester area. To the south, it serves the Manhattan and Hermosa Beach communities.

Annual passenger demand at LAX has risen steadily from 22 million in 1972 to 26 million in 1976, 32.7 million in 1981, 49.8 million in 1990 and 67.3 million in 2000. The Proposed LAX Master Plan will include an additional projected passenger growth to approximately 78 million passengers versus the 67.3 million passengers recorded in 2000.

LAX is undergoing a master planning process that may result in extensive modifications including extension of the Metro Greenline from the I-105 to the CTA, relocation of cargo facilities and rental car facilities, and potential construction of a new passenger terminal east of the CTA. These changes could significantly alter the current

transportation patterns to and from LAX and impact traffic patterns in El Segundo.

The City must monitor future plans and development at the airport, Because of the interrelationship of the City's economy and circulation system to the activity at LAX. The City must also ensure that airport plans and development are incorporated into all aspects of the City's planning process.

#### **Railroad Freight Considerations**

The City has several railroad lines that are actively used for freight transport and are shown on Exhibit C-16. Most prominently located in the southeast portion of the City are the Burlington Northern Santa Fe Railroad (BNSF) and the Union Pacific Railroad. These rail lines do not provide public transportation service.

There are twenty-one at-grade crossings of railroad lines with arterial roadways within the City of El Segundo. The crossing of freight trains disrupts vehicular traffic on the City's streets considerably, contributing to delay and congestion.

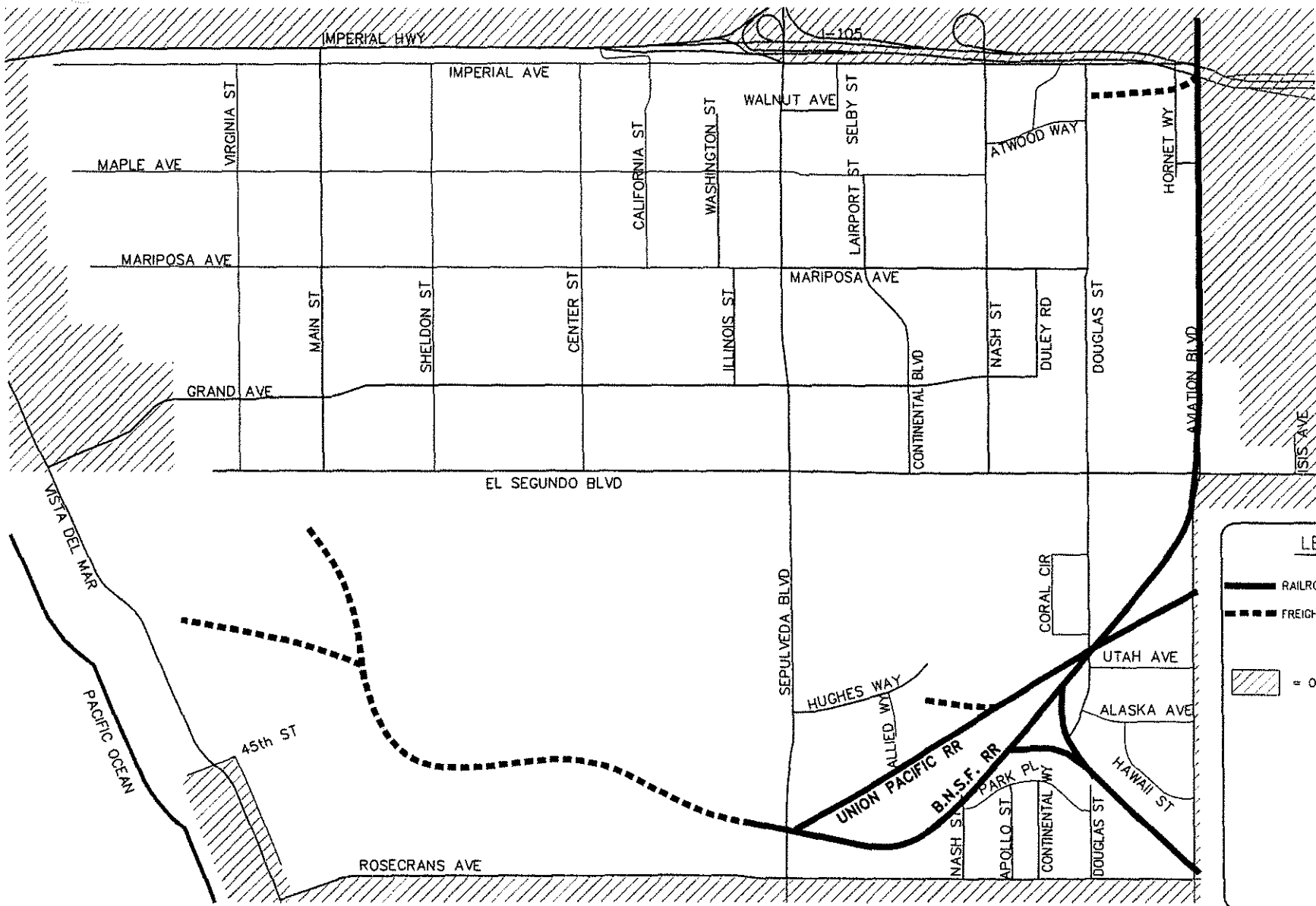
Two major grade separations of the BNSF railroad span El Segundo Boulevard and Rosecrans Avenue. The former crossing occurs immediately west of Aviation Boulevard while the latter separation diagonally crosses the intersection of Aviation/Rosecrans.

The El Segundo/Aviation railroad crossing has a middle support due to the long span across the west leg of the intersection. While the grade separation eliminated railroad/auto conflicts, its position over the road and its supports preclude roadway widening unless a large cost is incurred.




Likewise, the diagonal orientation of the separation across Rosecrans Avenue at Aviation Boulevard precludes widening of either street.

The proximity of the railroad approach embankment necessitates railroad relocation or an extremely long span if major widening were to occur.

The grade separation of the highway and rail facilities allows both to operate more safely and efficiently. Grade separation at additional rail crossings within the City should be analyzed and encouraged. However, the necessary structures should be configured to allow future alterations or expansions of both the highway and rail link without necessitating reconstruction.



**LEGEND**

-  RAILROAD LINES
-  FREIGHT SPURS
-  = OUT OF CITY LIMITS

SOURCE: CITY OF EL SEGUNDO PLANNING DIVISION

CITY OF EL SEGUNDO · GENERAL PLAN

# Existing Freight Railroad Lines

**Ports**

The City does not have a deep water port or any small craft harbors along its jurisdictional boundary. Chevron does have a marine terminal to moor offshore for the loading and unloading of its large oil tankers.

The marine terminal is located in the Santa Monica Bay, and consists of three (3) berths that are comprised of mooring buoys permanently anchored to the ocean floor. Each of the three berths has a transfer pipeline to the refinery shore facilities for discharge and loading of crude oil and refined products.

Chevron currently has no plans for expansion of the operations, nor to increase capacity through the use of supertankers.

**Small Craft Harbors**

While the Countywide demand for small craft harbors continues to grow, there are no plans for harbor facilities within the El Segundo jurisdiction. Marina Del Rey, the world's largest man-made harbor, lies to the north of El Segundo, while Kings Harbor in Redondo Beach provides berthing and mooring capacity to the south.

## Goals, Objectives, and Policies

Circulation goals, objectives, and policies are presented as part of the Circulation Element for the City of El Segundo to guide policy makers and City staff in the planning and provision of the City's circulation system. The goals, objectives, and policies were developed through consideration of existing circulation issues, projected circulation needs associated with the Land Use Element, growth outside of the City, and the interests of the residents and businesses of El Segundo. Each of the goals identifies the general direction for the City's circulation system. The objectives outline more specific circulation guidelines for the City's decision makers and staff to work toward. The implementation policies are actions or policies that will assist the City in achieving the identified goals and objectives.

### **Goal C1: Provision for a Safe, Convenient, and Cost Effective Circulation System**

**Provide a safe, convenient, and cost-effective circulation system to serve the present and future circulation needs of the El Segundo community.**

**Objective C1-1** Provide a roadway system that accommodates the City's existing and projected land use and circulation needs.

**Policy C1-1.1**

Maintain and update the citywide traffic model as needed for purposes of evaluating project-related and external traffic impacts on the City circulation system.

**Policy C1-1.2**

Pursue implementation of all Circulation Element policies such that all Master Plan roadways are upgraded and maintained at acceptable levels of service.

**Policy C1-1.3**

Provide adequate roadway capacity on all Master Plan roadways.

**Policy C1-1.4**

Construct missing roadway links to complete the roadway system designated in the Circulation Element when needed to improve traffic operating conditions and to serve development.

**Policy C1-1.5**

Implement roadway and intersection upgrades to full Circulation Element standards when needed to improve traffic operating conditions and to serve development.

**Policy C1-1.6**

Ensure that planned intersection improvements are constructed as designated in Exhibit C-9 to achieve efficient operation of the circulation system at a Level of Service "D" or better where feasible.

**Policy C1-1.7**

Provide adequate intersection capacity to the extent feasible on Major, Secondary, and Collector Arterials to maintain LOS D and to prevent diversion of through traffic into local residential streets.

**Policy C1-1.8**

Provide all residential, commercial, and industrial areas with efficient and safe access to the major regional transportation facilities.

**Policy C1-1.9**

Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles.

**Policy C1-1.10**

Ensure that new roadway links are constructed as designated in the Master Plan and link with existing roadways within the City such that efficient operation of the circulation system is maintained at an operating Level of Service of "D" or better.

**Policy C1-1.11**

Ensure that the transition from any Master Plan roadway to another Master Plan roadway at a higher classification operates safely and efficiently, incorporating the appropriate intersection configuration and any turn lanes that are necessary.

**Policy C1-1.12**

Convert Nash Street and Douglas Street from a one-way couplet to a two-way roadway operation between El Segundo Boulevard and Imperial Highway, incorporating appropriate signage, traffic controls, and other modifications to ensure motorist and pedestrian safety and efficient traffic operations.

**Policy C1-1.13**

Establish and maintain a citywide traffic count program, to ensure the availability of data needed to identify circulation problems and to evaluate potential improvements.

**Policy C1-1.14**

Require a full evaluation of potential traffic impacts associated with proposed new developments prior to project approval. Further, require the implementation of appropriate mitigation measures prior to, or in conjunction with, project development. Mitigation measures may include new roadway links on segments that would connect the new development to the existing roadway system, intersection improvements, and other measures. Mitigation measures shall be provided by or paid for by the project developer.

**Policy C1-1.15**

Pursue and protect adequate right-of-way to accommodate future circulation system improvements.

**Policy C1-1.16**

Encourage the widening of substandard streets and alleys to meet City standards wherever feasible.

**Policy C1-1.17**

Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

**Policy C1-1.18**

Review future developments to ensure uniformity of street naming and avoidance of name duplication or name inconsistencies on a continuous link.

**Policy C1-1.19**

Continue to monitor the impacts of the I-105 Freeway on local El Segundo streets. If it is determined that freeway traffic is using local streets like California Street as a short cut through the City, evaluate potential mitigations.

**Objective C1-2** Provide a circulation system consistent with current and future engineering standards to ensure the safety of the residents, workers, and visitors of El Segundo.

**Policy C1-2.1**

Develop and maintain a circulation system which shall include a functional hierarchy and classification system of arterial highways that will correlate capacity and service function to specific road design and land use requirements.

**Objective C1-3** Ensure that the City's Master Plan Truck Route System efficiently serves the shipping needs of the commercial and industrial land uses in El Segundo while balancing potential conflicts with residential and recreational land uses throughout the City.



**Policy C1-3.1**

Ensure that the City's designated truck routes provide efficient access to and from the I-105 Freeway.

**Policy C1-3.2**

Ensure that the development review process incorporates consideration of off-street commercial loading requirements for all new projects.

**Policy C1-3.3**

Require that all new construction on streets or corridors that are designated truck routes have a Traffic Index calculation as stated by the State Department of Transportation in order to provide a roadway structural section that will accommodate the projected truck volumes and weights.

**Policy C1-3.4**

Prohibit parking within the public right-of-way on either side two-way alleys. Parking on one side of a one-way alley could be allowed if the alley width is a minimum of 19 feet.

**Policy C1-3.5**

Ensure that the trucks from the cargo facility north of Imperial Highway at Main Street stay on the City truck route system and do not travel along Main Street.

## **Goal C2: Provisions for Alternative Modes of Transportation**

**Provide a circulation system that incorporates alternatives to the single-occupant vehicle, to create a balance among travel modes based on travel needs, costs, social values, user acceptance, and air quality considerations.**

**Objective C2-1** Provide a pedestrian circulation system to support and encourage walking as a safe and convenient travel mode within the City's circulation system.

**Policy C2-1.1**

Encourage the development of pedestrian linkages to and from the Metro Green Line stations to encourage and attract intermodal transit/walking trips.

**Policy C2-1.2**

Develop a citywide system of pedestrian walkways, alleviating the conflict between pedestrians, autos, and bicyclists throughout the City.

**Policy C2-1.3**

Encourage new developments in the City to participate in the development of the citywide system of pedestrian walkways and require participation funded by the project developer where appropriate.

**Policy C2-1.4**

Ensure the installation of sidewalks on all future arterial widening or new construction projects, to establish a continuous and convenient link for pedestrians.

**Policy C2-1.5**

Encourage the continued use of the 1911 Act to provide missing sidewalk sections where applicable in residential and commercial areas.

**Policy C2-1.6**

Encourage shopping areas to design their facilities for ease of pedestrian access.

**Policy C2-1.7**

Closely monitor design practices to ensure a clear pedestrian walking area by minimizing obstructions, especially in the vicinity of intersections.

**Objective C2-2**

Provide a bikeway system throughout the City to support and encourage the use of the bicycle as a safe and convenient travel mode within the City's circulation system.

**Policy C2-2.1**

Implement the recommendations on the Bicycle Master Plan contained in the Circulation Element, as the availability arises; i.e., through development, private grants, signing of shared routes.

**Policy C2-2.2**

Encourage new development to provide facilities for bicyclists to park and store their bicycles and provide shower and clothes changing facilities at or close to the bicyclist's work destination.

**Policy C2-2.3**

Develop off-street bicycle paths in corridors where appropriate throughout the City.

**Policy C2-2.4**

Encourage the use of bicycles for trips to and from elementary, middle, and high schools in the area as well as parks, libraries, and other public facilities.

**Policy C2-2.5**

Continue coordination of bicycle route planning and implementation with adjacent jurisdictions and regional agencies.

**Policy C2-2.6**

Encourage design of new streets with the potential for Class I or Class II bicycle routes that separate the automobile, bicycle, and pedestrian to the maximum extent feasible.

**Policy C2-2.7**

Although Hillcrest Street is closed between Imperial Avenue and Imperial Highway to allow emergency vehicular access only, ensure that the link in the Master Plan of Bicycle Routes is maintained, via the Hillcrest Street right-of-way or any appropriate alternative route.

**Policy C2-2.8**

Evaluate bikeway system links with the Metro Green Line rail stations and improve access wherever feasible.

**Objective C2-3**

Ensure the provision of a safe and efficient transit system that will offer the residents, workers, and visitors of El Segundo a viable alternative to the automobile.

**Policy C2-3.1**

Work closely with the Los Angeles County Metropolitan Transportation Authority (MTA), Torrance Municipal Bus Lines, the El Segundo Employers Association (ESEA), and private businesses to expand and improve the public transit service within and adjacent to the City.

**Policy C2-3.2**

Ensure that transit planning is considered and integrated into all related elements of City planning.

**Policy C2-3.3**

Evaluate and implement feeder bus service through the City where appropriate. Feeder bus service could potentially take commuters from the fixed transit services (rail and bus) in the eastern portion of the City to the industrial and commercial areas to the west. In addition, midday shuttling of workers east of Sepulveda Boulevard to the Downtown retail area should also be maintained.

**Policy C2-3.4**

Pursue potential Proposition A and Proposition C funds for bus transit shelters, signing, advertising, and bus turnouts to encourage bus ridership.

**Policy C2-3.5**

Continue the Dial-a-Ride operation and City subsidy to serve all residents of El Segundo, especially the elderly and handicapped.

**Policy C2-3.6**

Continue to support the Downtown Lunchtime shuttle operation.

**Policy C2-3.7**

Explore the feasibility of using excess government right-of-way, purchased property, or land use arrangements for multiple use of existing facilities, in order to establish or construct park-and-ride services of benefit to El Segundo residents and employees.

**Policy C2-3.8**

Encourage the implementation of park-and-ride facilities proximate to the I-405 and I-105 Freeways for shuttle service into El Segundo.

**Policy C2-3.9**

Investigate all MTA programs which may be beneficial to the City.

**Policy C2-3.10**

Encourage the MTA to provide bike storage facilities at the Metro Green Line rail stations.

**Objective C2-4**

Ensure the use of Transportation System Management (TSM) measures throughout the City, to ensure that the City's circulation system is as efficient and cost effective as possible.

**Policy C2-4.1**

Establish and maintain a citywide traffic count program to ensure the availability of data needed to identify necessary operational improvements to the roadway system.

**Policy C2-4.2**

Continue to increase operational efficiencies of the transportation system by implementing all appropriate Transportation System Management (TSM) measures, including but not limited to improving design standards, upgrading and coordination of traffic control devices, controlling on-street parking, and using sophisticated electronic control methods to supervise the flow of traffic.

**Objective C2-5**

Ensure the use of Transportation Demand Management (TDM) measures throughout the City, where appropriate, to discourage the

single-occupant vehicle, particularly during the peak hours. In addition, ensure that any developments that are approved based on TDM plans incorporate monitoring and enforcement of TDM targets as part of those plans.

**Policy C2-5.1**

Ensure that Transportation Demand Management (TDM) measures are considered during the evaluation of new developments within the City, including but not limited to ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

**Policy C2-5.2**

Coordinate activities with neighboring jurisdictions and the El Segundo Employers Association (ESEA) to optimize the effectiveness of Transportation Demand Management (TDM) activities.

**Policy C2-5.3**

Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

**Goal C3: Development of Circulation Policies that are Consistent with other City Policies**

**Develop a balanced General Plan, coordinating the Circulation Element with all other Elements, ensuring that the City's decision making and planning activities are consistent among all City departments.**

**Objective C3-1** Ensure that potential circulation system impacts are considered when the City's decision makers and staff are evaluating land use changes.

**Policy C3-1.1**

Require all new development to mitigate project-related impacts on the existing and future circulation system such that all Master Plan roadways and intersections are upgraded and maintained at acceptable levels of service through implementation of all applicable Circulation Element policies. Mitigation measures shall be provided by or paid for by the project developer.

**Policy C3-1.2**

The minimum acceptable level of service (LOS) at an intersection is LOS D. Intersections operating at LOS E or F shall be considered deficient. If traffic caused by a development project is forecast to result in an intersection level of service change from LOS D or better to LOS E or F, then the development impact shall be considered

significant. If a development project is forecast to result in the increase of intersection volume/capacity ratio (V/C) of 0.02 or greater at any intersection that is forecast to operate at LOS E or F, the impact shall be considered significant.

**Policy C3-1.3**

Limit intersection improvements to feasible improvements that do not affect buildings, freeway supports, or railroad rights-of-way. Such improvements should not include more than three left-turn lanes, four through lanes, and two right-turn lanes on any approach to an intersection

**Policy C3-1.4**

Encourage development projects that effectively integrate major transportation facilities with land use planning and the surrounding environment. These joint uses will obtain economic and aesthetic benefits of coordinated design, achieve land conservation in space-short urban areas of El Segundo, and maintain neighborhood continuity in built-up areas affected by future major transportation routes.

**Policy C3-1.5**

Ensure that transit planning is considered and integrated into all related elements of City planning.

**Policy C3-1.6**

Apply planning principles and Circulation Element goals, objectives, and policies should apply consistently to all land uses in the City.

**Policy C3-1.7**

Require submittal and implementation of a Transportation Management Plan (TMP) for all projects within the Urban Mixed-Use area, and encourage a TMP for all projects within the northeast quadrant.

**Policy C3-1.8**

Require the provision of adequate pedestrian and bicycle access for new development projects through the development review process.

**Policy C3-1.9**

Ensure that the driveway stacking distance for multi-family housing is evaluated during the development review process.

**Objective C3-2** Ensure the consideration of the impacts of land use decisions on the City's parking situation.

**Policy C3-2.1**

Ensure the provision of sufficient on-site parking in all new development.

**Policy C3-2.2**

Ensure that the City's parking codes and zoning ordinances are kept up-to-date.

**Goal C4: Compliance with all Federal, State, and Regional Regulations**

**Ensure that the City remains in compliance with all Federal, State, and Regional regulations, remains consistent with the plans of neighboring jurisdictions and thus remains eligible for all potential transportation improvement programs.**

**Objective C4-1** Cooperate to the fullest extent possible with State, County, and regional planning agencies responsible for maintaining and implementing the Circulation Element to ensure an orderly and consistent development of the entire South Bay region.

**Policy C4-1.1**

Actively participate in various committees and other planning forums associated with County, Regional, and State Congestion Management Programs.

**Policy C4-1.2**

Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes of Sepulveda Boulevard, the I-105 Freeway, and the I-405 Freeway.

**Policy C4-1.3**

Investigate and evaluate the feasibility and merits of adding more routes that are impacted by external traffic sources, to the County CMP highway system.

**Objective C4-2** Ensure that the City's circulation system is consistent with those of neighboring jurisdictions.

**Policy C4-2.1**

Ensure that new roadway links are constructed as designated in the Circulation Element and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

**Policy C4-2.2**

Carefully assess adjacent local agencies' plans to ensure compatibility across political boundaries. This does not imply that such compatibility is a requirement for adoption of the Circulation Element.

**Policy C4-2.3**

Continuously monitor and evaluate Los Angeles International Airport (LAX) master planning and evaluate the impacts of LAX on the City's Circulation Element.

**Policy C4-2.4**

Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

**Objective C4-3**

Establish the City's short-term (5-year) Capital Improvement Program (CIP) consistent with the Circulation Element and the entire General Plan, and ensure that the CIP incorporates adequate funding for the City's circulation needs.

**Policy C4-3.1**

Identify and evaluate potential revenue sources for financing circulation system development and improvement projects.

**Policy C4-3.2**

Update the City's 1996 Traffic Congestion Mitigation Fee Program, to reflect changes in planned improvements requiring funding changing needs and changes in the construction cost index.