MASTER PLAN OF CITY STREETS

SAN LEANDRO, 1988

COMMUNITY DEVELOPMENT DEPARTMENT
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SAN LEANDRO, CALIFORNIA 94577

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INTRODUCTION

The Master Plan of City Streets (MPCS) represents city policy on the future widening requirements of city streets. Contained in the MPCS is a list of all streets in the City of San Leandro that require future widening, together with the eventual curb-to-curb and right-of-way widths and corner rounding requirements. The present Master Plan of City Streets was adopted in 1972. Since that time traffic conditions and development patterns have changed to the extent that a review of the Master Plan was warranted. Last year the City Council directed city staff to evaluate anticipated future traffic conditions in the city and revise the MPCS as appropriate. The study is now complete and the recommendations are contained herein.

This study included three general phases. Phase 1 was an evaluation of existing traffic conditions and the identification of problem locations and circulation system deficiencies. Phase 2 involved making assumptions about future growth and development in San Leandro, and using that as a basis for projecting future traffic volumes expected on city streets. In Phase 3 improvements needed to accommodate projected future traffic were identified and recommendations for future street widenings were made. In some cases, however, additional study was recommended before specific recommendations could be made.

There have been many traffic and transportation studies completed recently that provide valuable information on existing and future traffic conditions in San Leandro and surrounding communities. These past studies were evaluated and pertinent information was utilized in this study.

Travel, in general, is affected by many factors, including: the condition of the economy, employment trends, the number of vehicles, the price and availability of gas, suburban migration, and capacity on the existing transportation system. Traffic conditions are changing rapidly in the Bay Area in general, and the East Bay in particular. Caltrans estimates that freeway travel in Alameda County increased by 13% from 1983 to 1985; the statewide increase during the same period was 9%. Congestion on freeways throughout the area is increasing rapidly, due in part to changing commute patterns from downtown San Francisco and Oakland to widely dispersed suburban areas.

Responding to these rapidly changing travel patterns calls for shorter-range transportation planning. It is becoming too difficult to predict what is going to occur 20-25 years ahead. For the purposes of this study, a 10-15 year planning period was used for forecasting travel demand. The success of this plan, however, is not dependent on predicting what traffic will be like in 10-15 years. It is essential that traffic patterns be monitored on a continuing basis and that the plan be updated in response to changing conditions.

Definitions of some of the common terms used in the report are provided on the next page to assist the reader:

Local street: a street primarily for access to abutting property.

Collector street: a street for traffic movement between arterial and local streets, as well as access to abutting property.

Arterial street: a major street primarily for through traffic usually on a continuous route.

Traffic volume: the number of vehicles passing a given point during a specified period of time.

Average daily traffic (ADT): the volume of traffic during a typical 24-hour period.

Peak hour: the one-hour period of highest traffic volume during a 24-hour period.

PM peak hour: the one-hour period of highest traffic volume during the PM hours.

Capacity: the maximum number of vehicles that can pass over a given section of roadway during a specified time period under prevailing conditions.

Trip generation: The number of one-way vehicular trips generated by a given land use during a specified time period.

CHAPTER 1

Chapter 1

EXISTING CONDITIONS

Phase 1 of the study was an evaluation of existing traffic conditions on city streets. During this phase, existing traffic data was reviewed and additional data taken where needed. Also, new turning movement counts were taken at all major intersections during the PM peak period, which is the time when traffic loads are at their highest level. Traffic conditions were then evaluated at these intersections to determine how well existing traffic was being accommodated on the street system.

The Critical Movement Analysis method was used in this analysis. This method compares the traffic volume entering each leg of an intersection to the existing capacity available on that leg. The ratio of the two gives the volume-to-capacity ratio (V/C) for that movement. The critical movements are then identified for each direction and the sum of the V/C ratios for those critical movements gives the total V/C ratio for the intersection.

The V/C ratio is then used to define the Level of Service, which describes the traffic operating conditions at the intersection. Levels of service range from "A" to "F", and are defined in Table 1. Intersections with a V/C below .80 operate at Level of Service A, B, or C, and experience little congestion and few drivers have to wait through more than one red signal. Volume/Capacity ratios above 0.80 indicate increasing congestion, with a V/C of 1.00 indicating stop-and-go conditions with severe back-ups and congestion during the entire peak hour. Intersections where the current V/C is 0.80 or greater during the PM peak hour are listed in Table 2. Major intersections other than those listed in Table 2 were found to be operating at Level of Service C or better during the PM peak hour.

In summary, the analysis of existing conditions indicated that traffic flows reasonably well during peak periods on most San Leandro streets, however some locations are severely congested.

On-street parking is provided on many arterial streets in San Leandro. On-street parking is desirable when traffic volumes are low. However, when volumes increase, on-street parking must generally be eliminated and the space used for moving traffic. This is particularly important near intersections. Widening an arterial street to add lanes and continue to permit on-street parking is generally very expensive and, because parking is traditionally a property owner's responsibility, such widening would constitute a public expense for a private benefit.

As a part of the evaluation of existing conditions, the efficiency of the circulation system as a whole was evaluated. Several deficiencies were noted.

TABLE 1 - LEVEL OF SERVICE DEFINITIONS

V/C Ratio	Level of Service	General Description of Traffic Conditions
Less than .59	A	Freely flowing traffic. No drivers have to wait longer than one red light.
.60 - .69	B	Rarely do drivers have to wait through more than one red light. Delay is slight, but minor back-ups may develop for very short periods.
.70 - .79	C	Drivers sometimes have to wait through more than one red light, back-ups may develop for short periods, driver maneuverability is somewhat restricted.
.80 - .89	D	Delays may be substantial for short periods, but excessive back-ups do not occur. Maneuverability is severely limited during short periods.
.90 - .99	E	Delay may be great - up to several signal cycles. Back-ups are extensive and may affect neighboring intersections.
1.00	F	Excessive delays. Intersection jammed for the entire period. More vehicles arrive than can be accommodated through the intersection.

TABLE 2 - EXISTING (1987) VOLUME/CAPACITY RATIOS OF 0.80 OR GREATER

Intersection	V/C Ratios
Lewelling/Washington	0.97
E. 14th/Hesperian/Bancroft	0.96
Hesperian/Lewelling	0.95
Davis/San Leandro Blvd.	0.92
Beatrice/Washington	0.90
Halcyon/Washington	0.89
Estudillo/MacArthur	0.85
Bancroft/Estudillo	0.84
Farnsworth/Manor	0.83
Washington/NB I-880 off-ramp	0.83
Marina/Merced	0.81
Alvarado/Marina	0.80

A. Primary Existing Deficiencies

-- The I-880 freeway has inadequate capacity for even existing traffic during peak periods. The main capacity constraint in the southbound direction occurs at Washington Avenue, where the four lane section is reduced to three lanes. Each weekday, traffic in the southbound direction begins to experience stop-and-go conditions as early as 3:00 p.m. The resulting congestion causes drivers to search for alternate routes on surface streets to bypass the freeway, thus increasing congestion on city streets. The bottleneck on I-880 at Washington Avenue also causes a back--up of southbound traffic on Washington Avenue trying to enter the freeway. This back-up frequently extends several blocks.

-- There are no east-west arterial streets that connect directly between I-880 and I-580. This results in somewhat circuitous east-west travel and relatively high volumes of traffic on the residential collector streets leading to the freeway interchanges. In the eastern part of the city, this condition was established when the I-580 on and off ramps were dispersed rather than concentrated at one or two full interchanges.

-- Traffic flow along East 14th Street in the downtown plaza area can become congested during the mid-day period. The lack of separate left turn lanes, heavy pedestrian traffic, and curb parking - particularly near intersections - all contribute to the congestion. This is not unusual for a busy downtown commercial area and the congestion usually disappears rather quickly.

-- Many residential collector streets carry relatively high volumes of through traffic. This is usually because these streets play a dual role in the circulation system; that of both collector streets for local residential traffic and connections between other areas of the city and/or freeway interchanges. Examples are Estudillo Avenue, Manor Boulevard, Dutton Avenue, Sybil Avenue, and Marina Boulevard west of Doolittle Drive, all of which carry more than 7,000 vehicles per day. There will be increasing friction between residential neighborhoods seeking to minimize traffic and the needs of the commercial and industrial community for a reasonably efficient street system.

-- Inadequate access is currently available to both the Warden/Tudor residential area and the industrial area on Davis Street west of Doolittle Drive. A second emergency access would be desirable to each area in case the present access street is blocked for some reason.

Solutions to these deficiencies are explored later in this report.

CHAPTER 2

Chapter 2

FUTURE TRAFFIC PROJECTIONS

The next step in the study was to determine future traffic volumes anticipated on all major streets at the end of the 10-15 year planning period. This involved a three-part process; namely projecting future growth, determining the amount of traffic generated by that growth, and distributing that traffic onto the street system to determine future traffic volumes. A summary of the methodology used is in Appendix A.

A. Future Growth

Growth projections were based on a number of factors, including regional growth forecasts by the Association of Bay Area Governments (ABAG), recent development experience in San Leandro, the amount and location of vacant and underutilized land, and local knowledge of development potential.

The ABAG Projections '85 included population, employment and household forecasts for the San Francisco Bay Area region through the year 2005. This source represents the most recent estimate of development potential in the region, and is based on national economic forecasts, the relative competitiveness of the region's economy, the regional land supply, and current general plans and other local development policies. The ABAG report forecasts population and employment to grow by the year 2005 by 18% and 41% respectively in the region, 19% and 42% respectively in Alameda County, and 14% and 17% respectively in San Leandro. Thus, for San Leandro both population and employment growth rates are expected to be less than those for Alameda County and the region. The ABAG projections for San Leandro (which also includes the Ashland area) are for an increase in employment of 8,800 jobs and 6,700 households. It must be pointed out that while the ABAG projections have considerable validity at the regional level, they become less reliable at the local level. They were used, however, as a guide for future growth assumptions in this study.

The growth projections used in this study are summarized below. A detailed summary of the growth projections is on file.

Residential: Approximately 6,000 dwelling units will be added in the planning period, including 2,400 in the Roberts Landing development, 900 in the downtown/central area, and 1,000 along the East 14th Street corridor between 136th Avenue and Hesperian Blvd. Recently approved residential projects, which total about 1,000 units, were included in the above total.

Commercial: New commercial development would occur primarily in the downtown/central area and the Bayfair area. Additional commercial development was forecast for the Pacific High School site and the "old" Caterpillar

site on Davis street near the BART station. Specific assumptions made for future commercial development included 100,000 square feet each of new office and new retail in the downtown/central area, development of the "old" Caterpillar site with uses generating traffic approximately in accordance with the San Leandro Centre EIR (1982), 170,000 square feet of retail development on vacant land in the Bayfair area, and an additional restaurant and office building at the Marina. Recently approved projects and those already under construction were included in the above assumptions.

Industrial: It was assumed that existing industrial areas would remain essentially as they are, and that remaining vacant industrial land would develop with similar light manufacturing, assembly and warehousing as exists today. There are approximately 130 acres of widely scattered vacant industrial land remaining in the City. An alternative industrial use assumption was also evaluated, that of predominantly warehousing. Warehousing would likely generate more truck traffic but have fewer employees than the light manufacturing, assembly, warehousing assumption above. It was concluded, however, that overall there would not be a major difference in future traffic generation from such a change. Reuse of vacant industrial buildings and redevelopment of old industrial areas with higher intensity uses may increase traffic in industrial areas, however. Future trends should be carefully monitored.

It must be pointed out that current economic conditions and low interest rates have contributed to a real surge in new development activity, particularly retail. If this continues, the growth projections made in this study, which were based primarily on build-out for existing vacant land, could be realized earlier than forecast. The corresponding traffic levels could also be experienced earlier than projected. As noted previously it is imperative that growth rates and traffic volumes be monitored on a continuing basis, and if trends appear that are significantly different from the assumptions contained in this study, the study should be updated.

B. Future Traffic Volumes

Research from the Institute of Transportation Engineers (ITE) and Caltrans was used to project both daily and PM peak period trips generated by the future growth forecast. Approximately 13,500 new PM peak hour trips are expected to be generated from the forecasted growth. Of this total, about 2,500 trips are attributable to development that has already been approved but is not yet occupied. It is important to note, however, that the study assumed a continuation of today's fuel availability and price situation. Future restrictions on availability or dramatic increases in price of fuel would reduce auto travel below the rates forecast above. On the other hand, today's low fuel price is encouraging more auto travel, and this would be expected to continue if the price stays low.

Future traffic projections from anticipated development outside the City were included where data was available. Among the outside studies reviewed, perhaps the most germain were the Caltrans Route Concept reports, which evaluated future traffic demand on freeways; the Port of Oakland Traffic Study, the Draft EIR for a zoning amendment of the Harbor Bay Isle development in Alameda (since dropped), and the Nimitz/Doolittle Corridor Transportation Study (NIMDOTS) Central Area Report, all of which analyzed future development in the Oakland Airport and Bay Farm island areas north of San Leandro; and the Hayward Traffic Study, which evaluted future traffic conditions in Hayward. The NIMDOTS Central Area Report, for example, forecast that an additional 11,900 PM peak hour trips will be generated by proposed development in that study area alone.

Future external through trips on local streets, except those identified in the NIMDOTS Report, were not included in the computations of this study. These external trips will use the freeway system if capacity is available, but if the the freeways are jammed they will divert to local streets in hopes of finding a quicker route. The Hayward Traffic Study predicted this diversion would result in a major increase in traffic on such north-south streets as San Leandro Boulevard, East 14th Street, and Bancroft Avenue. However, the future improvements identified in this study were designed to accommodate San Leandro growth, not external through traffic. The solution to these through diverted trips is the provision of adequate capacity on the regional system, including both freeways and transit.

It must be pointed out that San Leandro has no control over growth outside the City and because San Leandro is located in the center of the East Bay, a great deal of through traffic traverses every day. Cooperative efforts among neighboring cities is needed to address these regional concerns. That concern originally sparked the formation of the NIMDOTS Agency, which is a joint powers agency formed in 1985 to deal with transportation issues in the Nimitz Freeway and Doolittle Drive Transportation Corridor.

The last task in projecting future traffic was to distribute the projected traffic to the street system. This was accomplished by identifying specific zones for future development, determining the amount of traffic generated within each zone, and then distributing that traffic onto the street system by the most logical paths. The traffic distribution was based on existing data on work location of San Leandro residents and residential location of employees working in San Leandro, census data, existing traffic volumes and turning movement counts, as well as predictions made in various project EIRs and traffic reports. Existing and projected daily traffic volumes for selected major streets are listed in Table 3.

Alameda County Public Works has contracted with a consultant to prepare a model to forecast future traffic demand on major streets county-wide. A county-wide model is a more comprehensive approach to forecasting, so it

should provide a good means of verifying the traffic forecasts made in this study. City staff should review carefully the model results and initiate revisions to the Master Plan of Streets as appropriate.

TABLE 3 - TRAFFIC VOLUMES ON SELECTED MAJOR STREETS

Streets	To - From	Daily Traffic Volume 1986	2000
Alvarado St.	Thornton - Marina	6,000	10,000
	Marina - Fremont	16,000	18,000
Bancroft Ave.	North City limits - Dutton	10,000	12,000
	Dutton - Estudillo	13,000	16,000
	Estudillo - 136th Ave.	13,000	14,000
	136th Ave. - East 14th	7,000	8,000
Callan Ave.	East 14th - Bancroft	11,000	15,000
Davis St.	West end - Doolittle	6,000	8,500
	Doolittle - I-880	20,000	35,000
	I-880 - San Leandro Blvd.	25,000	37,000
Doolittle Dr.	North City Limit - Davis	23,000	
	Davis - Marina	21,000	*
	Marina - Fairway	15,000	
	Fairway - Farallon	13,000	
Dutton Ave.	East 14th - MacArthur	8,000	10,000
East 14th St.	North City limit - Davis	21,000	23,000
	Davis - San Leandro Blvd.	18,000	23,000
	San Leandro Blvd. - Hesperian	25,000	35,000
	Hesperian - South City Limit	22,000	27,000
Estudillo Ave.	East 14th - Huff	9,000	10,000
	Huff - Bancroft	11,000	14,000
	Bancroft - MacArthur	13,000	16,000
Fairway Dr.	Doolittle - Merced	9,000	18,000
	Merced - Aladdin	3,000	10,000
Farnsworth St.	Lewelling - Manor	5,000	6,000
	Manor - Corvallis	8,000	10,000
Fairmont Dr.	Hesperian - East 14th	19,000	24,000
Floresta Blvd.	Corvallis - Fremont	11,000	13,000
	Fremont - Washington	20,000	27,000
Halcyon Dr.	Washington - Hesperian	19,000	26,000

*Projections depend on growth and circulation assumptions.

TABLE 3 - TRAFFIC VOLUMES ON SELECTED MAJOR STREETS, pg. 2

Streets	To - From	Daily Traffic Volume 1986	2000
Hesperian Blvd.	East 14th - Halcyon	17,000	24,000
	Halcyon - Bayfair Dr.	22,000	27,000
	Bayfair Dr. - SR-238	25,000	31,000
	SR-238 - Lewelling	35,000	40,000
Lewelling Blvd.	Wicks - Farnsworth	13,000	29,000
	Farnsworth - Washington	19,000	36,000
	Washington - Hesperian	14,000	29,000
Manor Blvd.	Wicks - Hesperian	8,500	11,500
Marina Blvd.	Neptune - Doolittle	9,000	12,000
	Doolitle - Merced	16,000	23,000
	Merced - I-880	40,000	50,000
	I-880 - Alvarado	24,000	32,000
	Alvarado - San Leandro Blvd.	17,000	23,000
San Leandro Blvd.	North City limit - Davis	19,000	26,000
	Davis - Washington	17,000	24,000
	Washington - East 14th	11,000	16,000
Sybil Ave.	East 14th - Bancroft	5,000	5,500
	Bancroft - Grand	7,500	8,500
Washington Ave.	West Juana - San Leandro Blvd.	9,000	11,000
	San Leandro Blvd. - Halcyon	18,000	25,000
	Halcyon - Lewelling	24,000	28,000
	Lewelling - South City Limit	26,000	33,000
Wicks Blvd.	Merced - Farallon	10,000	13,000
	Farallon - Manor	16,000	22,000
	Manor - Lewelling	11,000	15,000
Williams St.	Doolittle - Merced	8,000	10,000
	Merced - San Leandro Blvd.	11,000	13,000
	San Leandro Blvd. - Washington	3,600	4,600
143rd Ave.	Washington - East 14th	5,000	7,500
150th Ave.	East 14th - I-880	15,000	18,000

CHAPTER 3

Chapter 3

IMPROVEMENTS NEEDED

The next step in the study was to evaluate anticipated traffic conditions at the end of the planning period and determine what improvements to the street system would be needed to accommodate the projected traffic volumes. The study focused on the three key elements of the circulation system; namely freeways, major streets, and important intersections. Transit and Transportation System Management (TSM) are also discussed.

A. Freeways

-- Interstate-880 (Nimitz Freeway): The present daily volume of nearly 180,000 vehicles through San Leandro is expected to increase to approximately 205,000 vehicles by 1995 and to 230,000 by 2005. Widening to a total of 12-14 lanes would be needed to accommodate the projected demand. Additional freeway capacity is needed in the Nimitz corridor to accommodate this excess demand. Caltrans is planning to widen I-880 to 8 lanes from Washington Avenue south to complete a full 8 lanes through San Leandro and Hayward. The project will also include auxiliary lanes between interchanges. Beyond that, the long range plan for the portion in San Leandro calls for interchange improvements where right-of-way is available. The three interchanges in San Leandro are of substandard design and their improvement must be included in Caltrans' long range plan. The passage of Measure B should permit earlier implementation of these improvements. Only the Washington Avenue interchange has a serious congestion problem at this time, however. Full widening to 10 lanes necessitates reconstruction of most interchanges and this is not contemplated at this time. Widening beyond 10 lanes, however, to the 12-14 lanes needed, may be economically infeasible. Unless additional capacity is provided, traffic will divert from the freeway to parallel local routes and this will severely impact many San Leandro streets. A transportation facility in the Route 61 corridor, if a feasible route can be determined, could relieve anticipated congestion on I-880. However, using present procedures it takes about 15 years to complete a new-alignment freeway. Route 61 should, therefore, not be considered to be an element of the circulation system during the planning period of this report.

-- Interstate-580 (MacArthur Freeway): Caltrans' long range traffic projection of 180,000 vehicles per day in San Leandro is within the capacity of the existing 8 lane freeway and there are no plans for widening. On the Oakland portion of I-580, however, demand is expected to exceed the 8 lane capacity by some margin.

-- State Route 238: Caltrans' long range plan is to widen SR-238 between I-580 and I-880 from the existing 4 lanes to 6 lanes. Traffic is expected to increase to the extent that stop-and-go conditions on the 6 lane facility will exist by the year 2005. The extension of SR238 south of I-580 as an expressway or freeway through the City of Hayward is funded by Measure B, and planning studies are now underway.

-- State Route 61: Route 61 is in the California Freeway and Expressway System with the following legislative description:

> "Route 61 is from Route 84 near Newark to Route 580 near Albany via the vicinity of San Leandro and Oakland International Airport and via Alameda. No portion of Route 61 shall be constructed as a freeway north of Hegenberger Road."

A portion of the route is constructed -- Doolittle Drive from Davis Street (Route 112) north to Island Drive and on to Webster Street (Route 260) in Alameda. The remainder is unconstructed with the alignment as yet undetermined. Preliminary travel demand studies by Caltrans indicate that there would be sufficient demand to warrant a six lane freeway facility through San Leandro. Further study of Route 61 is needed to determine whether or not there is a Route 61 alternative that is feasible.

The Route 61 Corridor Study has been funded and is underway. The study will be conducted by Caltrans and will take two to three years to complete. The Grass Roots Action Board - Traffic Advisory Committee, a citizen committee appointed by the City Council, studied alternate alignments for a future transportation facility through western San Leandro. Their report cited the need for a transportation facility parallel to the Nimitz Freeway and recommended a specific alignment and type of facility (an expressway elevated over the Southern Pacific Railroad tracks to the Flood Control channel, then at grade south of the channel). Caltrans will ultimately be responsible for the decision on the alignment and type of facility, however, the City will be heavily involved in the planning process. The outcome will have potential circulation impacts on streets on the west side of San Leandro.

B. Major Streets

The existing (1986) and anticipated future average daily traffic volumes (ADT's) for major selected streets are listed in Table 3 in the previous section. Comparing the anticipated ADT to capacity standards gives an indication of the number of lanes generally needed to accommodate the future traffic. Capacity standards representing average traffic conditions for arterial streets with signalized intersections in urban areas are shown below:

Type of Street	Maximum Capacity (vehicles per day)
2 lane	10,000
4 lane	37,000
6 lane	55,000

San Leandro is a built-up community with few large parcels of vacant land remaining. The existing street system has been in place for many years and abutting property is generally fully developed. As a result, major changes in the circulation system, such as new arterial streets or new freeway interchanges, are probably impractical because of cost and environmental impact. The improvements recommended in this study are aimed instead at maximizing the efficiency of the existing street system by completing unfinished segments and improving intersections for maximum capacity.

Three new street extensions are recommended in this plan. These are the extension of Fairway Drive over I-880 to connect to Aladdin Avenue, the extension of Teagarden Street southerly between Montague and Aladdin, and the extension of Neptune Drive northerly to Davis Street. These extensions have been included in previous plans, and a Plan Line has already been adopted for the Teagarden extension.

Many residential streets have and will have traffic well below their capacity but above what residents feel is desirable. Those streets that function as collectors and arterials should not be constrained without recognition that constraints may adversely affect the functioning of the street network in the area and may divert traffic onto other streets.

It would be desirable to have at least one arterial street that provides a direct east-west connection between I-580, I-880, and Doolittle Drive. Such a street would greatly facilitate east-west travel, enhance access to downtown, and reduce the through traffic on existing parallel residential streets east of East 14th Street. Unfortunately, there is no easy solution to this problem. Existing streets that might serve this purpose are Davis Street, Williams Street or Marina Boulevard, however, they all terminate in residential areas east of East 14th Street and Bancroft Avenue. Widening and realigning any of these streets would be very expensive and disruptive to existing businesses and residents. Also, a new full interchange would have to be constructed at I-580 to provide good freeway access. Despite these apparent obstacles, the City should continue to study the feasibility of an east/west corridor. One potential route that merits further consideration would be via Marina Blvd., San Leandro Blvd., and the PG&E right-of-way east of Bancroft Avenue.

San Leandro has an adopted Bikeway Plan. The main north-south routes in the plan are Bancroft Avenue, San Leandro Boulevard, and Doolittle Drive; the main east-west routes in the plan are Davis Street-Estudillo Avenue, Williams Street, and Farnsworth-Floresta-Halcyon-Fairmont. It is assumed that in most cases bikes will use the curb lane. The additional cost of widening for bike lanes on major arterial streets can be prohibitive. San Leandro should continue to pursue the incremental installation of the bikeway system proposed in the Plan.

Chapter 4 contains a discussion of anticipated traffic conditions and recommended curb-to-curb and right-of-way widths for all streets currently listed in the Master Plan of City Streets as well as those that should be added to the Master Plan.

C. Major Intersections:

The capacity of an urban arterial street is determined by the amount of traffic that can move through the intersections along the route, and this is mostly a function of the number of lanes and the amount of green time available to the street at signalized intersections. Widening at intersections to provide additional capacity is the most practical and cost effective way to increase street system capacity.

A major effort was made in this study to estimate future traffic volumes though key intersections and use that data as a basis for determining the improvements needed in the future to provide sufficient intersection capacity. Admittedly projecting intersection turning movements ahead 10-15 years cannot be done with great validity. As with all forecasts of future events, the accuracy decreases as the target year is extended. However, the estimates of future traffic conditions at the major intersections provide an adequate basis for evaluating future conditions and determining what improvements will be needed.

Using future traffic volume projections, the future traffic impact at major intersections was evaluated during the P.M. peak hour. The Critical Movement Analysis method was used. The target level in this analysis was the threshold between Levels of Service C and D, or a volume/capacity ratio (V/C) of 0.80. Intersections with a projected V/C greater than 0.80 were evaluated further and specific improvements needed to achieve a V/C of near 0.80 were identified. In some instances, however, the target level of service could not be achieved, usually because of right-of-way constraints. This means that a higher level of congestion will have to be tolerated at that location.

The results of the intersection analysis, including a description of the future improvements needed, appear in Chapter 4.

D. Transit:

Transit will be counted on to play an increasing role in the future. It is clear from the transportation studies reviewed that highway improvements alone cannot meet the anticipated area-wide travel demand. San Leandro should encourage and support transit use.

-- BART: A total of about 7,000 passengers enter and exit the BART system each weekday at the two stations in San Leandro. BART has a plan to increase system capacity by 50% over the next five years. Additional parking will be needed at both stations. Ridership at the Bayfair Station could grow significantly in the future with the planned extension from that station to Pleasanton/Livermore. This extension is partially funded by Measure B.

-- AC Transit: AC Transit provides both express bus service to Oakland and San Francisco and the area-wide fixed route bus service. Approximately two percent (2%) of daily passenger trips in San Leandro are made on the bus, according to AC Transit. AC Transit has just completed the first phase of a long range study of major corridors in their service area. The Nimitz corridor has been identified as an important corridor for further study of potential capacity and service improvements. AC Transit is also undertaking an analysis of all existing routes. Hopefully, AC Transit will be able to at least maintain and possibly increase their present market share in the future. AC Transit is now facing serious financial problems, however, and that may be an unreasonable expectation.

One way to increase bus transit use is to provide Park-and-Ride lots. These lots should be constructed where vacant property is available near express bus routes. Park-and-Ride lots would also reduce the on-street parking around express bus stops.

E. Transportation System Management (TSM):

Another way to increase capacity is to make the existing transportation system work more effectively through Transportation System Management (TSM) techniques. Transportation System Management (or demand management) is the name given to a whole host of techniques designed to increase the passenger carrying capacity of our transportation system. Examples of TSM strategies include reducing peak period travel through flexible work hours, increasing automobile occupancy through carpooling and parking controls, reducing auto use by encouraging transit and bike use, etc. This approach is becoming increasingly important in the private as well as the public sector as a cost-effective way of increasing transportation system capacity. Several Bay Area cities have adopted ordinances requiring employers to implement TSM strategies.

F. Private Sector Involvement:

The private sector in many cities is becoming increasingly concerned about congestion and its impact on business, and is beginning to take a more active role in improving transportation conditions. Businesses are already involved in promoting ridesharing programs, providing in-house transportation coordinators, operating shuttle services to transit stations and shopping centers (at noon), and providing low interest loans for employee vans. Also, businesses in some areas are forming private transportation management associations to provide comprehensive TSM programs. No longer is the business community looking to government to solve all of the transportation problems.

CHAPTER 4

Chapter 4

STREET IMPROVEMENT RECOMMENDATIONS

A. Assumptions and Alternatives:

San Leandro is a built-up community. Providing all of the capacity that could be needed by future traffic demand through major street widenings and new street alignments is just not practical, either environmentally or financially. The basic circulation system in place today will have to serve the community in the future. This study recommends completing the unfinished portions of the street system, plus improvements to increase capacity at major intersections. Even with all of the improvements recommended in this plan, some locations will remain congested. If area-wide traffic growth projections become a reality, diverted freeway traffic could cause severe congestion along certain streets. Widening beyond that recommended in this plan, however, does not seem to be an effective use of limited transportation resources. Instead, the needed capacity will have to be provided by transit, TSM, an improved regional system, and every other means available.

When considering whether or not to widen and improve a street to increase capacity, the consequences of that action also have to be weighed. A decision to widen and improve can result in many benefits, including reduced congestion and back-ups, smoother traffic flow, improved access, improved safety, reduced traffic on parallel routes, and so on. That decision can also result in some undesirable effects, however, due mainly to the increased traffic that can result from the improved condition. Conversely, a decision not to widen and improve can also have some beneficial aspects, including limiting traffic growth on certain streets and preserving neighborhood character. The decision not to improve can also result in numerous undesirable effects, including increased congestion, drivers having to wait through more than one signal, reduced access, and the possible diversion of traffic to other parallel routes. These factors must be weighed in deciding whether or not to widen and improve streets for additional capacity.

In the past, it was normal to recommend street widening wherever increased traffic warranted it. However, financial constraints and the damage to developed properties that widening causes suggest caution in proposing such improvements in San Leandro at this time. Further, traffic flows much like water. The larger the pipe is, the more water flows through it. On the other hand, increased congestion will not limit traffic demand - the traffic will simply seek other routes. This plan seeks to balance recommendations for street improvements with the danger of diverting traffic to even less desirable streets or creating intolerable congestion if those improvements are not made. In each case, the cost and the impact on developed property that result from needed street improvements have

been compared with the cost and impact on community mobility of not doing them. In the final analysis, however, the choice of which impacts are worse is necessarily a judgment call.

B. Improvement Recommendations by Street

This section is divided into two subsections. The first subsection contains specific improvement recommendations for all streets to be included in the revised Master Plan of City Streets. In some cases, further study is needed before a precise recommendation can be made and this is noted. The recommendations are summarized in Appendix D, the Revised Master Plan of City Streets. The second subsection lists those streets recommended to be deleted from the Master Plan of City Street.

The specific street widening recommendations contained in this section are based on common width standards for travel lanes, bike lanes, medians, on-street parking, and sidewalks. Typical street sections are shown graphically in Appendix D.

In some cases the widening recommended is minor. It may seem too minor to be worth doing. This is not the case, however. Minor widenings - even as little as 2 ft. - can affect travel speeds, safety and intersection capacity. For example, minor widening at an intersection approach can improve traffic flow by allowing through traffic to bypass a driver in the same lane waiting to turn left. Also, minor widening can provide more separation between traveling and parked vehicles, thus increasing safety along the street and visibility at driveways. The widenings recommended in this study have significant circulation benefits.

1. Streets to be Included in the Master Plan of City Streets (MPCS).

ADAMS AVENUE:

-- East End to McCormick: Fully improved 48/60[1] section in accordance with the present MPCS.

-- McCormick to Hester: Fully improved 48/64 section in accordance with the present MPCS.

-- ~~Hester to Doolittle~~: The present street is 48/64. The present MPCS requires 64/84, which would provide four lanes plus parking. The existing average daily traffic volume (ADT) is 4,200 vehicles, and future traffic increases will be minor because little vacant land is available in the area. A 52/64 section was required for a previous widening in this area. The 52/64 section would provide for one lane plus parking in the eastbound

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1 - A 48/60 section refers to a street with 48 ft. between curbs within 60 ft. of right-of-way.

direction and two lanes approaching Doolittle Drive in the westbound direction. **A reduction from the present 64/84 MPCS requirement to 52/64 is recommended.** Additional widening of four feet along one large parcel on the north side of Adams Avenue is needed to complete the 52/64 section.

ALADDIN AVENUE:

-- Teagarden to Alvarado: Widening to the present MPCS requirement of 44/60 was recently completed. The existing ADT is 2,500 vehicles. The recent widening should be adequate for this local industrial street. However, when Fairway Drive is extended easterly over I-880 to connect to Aladdin Avenue (a project funded by Measue B), traffic on this portion of Aladdin Avenue will increase markedly. A future ADT in the range of 7,000 to 10,000 vehicles is possible. In that event curb parking would have to be removed and additional minor widening and signalization would be required at both Teagarden and at Alvarado. **Future planning/design studies of the Fairway Drive Overcrossing will include an analysis of this portion of Aladdin Avenue to determine where additional widening, if any, is needed.**

-- Alvarado to East End: Fully improved 44/60 section in accordance with the present MPCS. The easterly extension of Aladdin to Washington Avenue should be pursued as one way of achieving a future Fairway Drive to Washington Avenue connection.

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ALVARADO STREET:

-- Peralta to Davis: The existing street is 46/60 north of Davis Street. **A future northerly extension across San Leandro Creek to Peralta Avenue should be pursued.**

-- Davis to Williams: The existing street is 36/60 between Thornton and Williams. The present MPCS requirement is 44/60, and a Plan Line has been adopted for this one block segment. A new street is proposed to connect existing Alvarado Street to Davis Street. It will provide improved circulation in the area as well as access to abutting property. A future daily traffic volume of approximately 4,000-5,000 vehicles is anticipated on this segment. **A 52/68 section is recommended.** This will provide two through lanes and a separate left turn lane, which should be sufficient for the traffic volumes forecast. Additional widening near Davis Street is needed to provide capacity at the intersection.

-- Williams to Marina: The existing street is 36/60, with two lanes and parking. The present MPCS requires widening to 64/80 which would provide four lanes and parking or a median turn lane. A Plan Line for that widening has been adopted. Widening to the present MPCS requirement has already been accomplished at one location (Jack-in-the-Box). Full widening of Alvarado Street near Marina Blvd. is planned as part of the Marina Blvd. improvements funded by Measure B. The existing ADT on this

segment of Alvarado Street is 6,000 vehicles. The future ADT is projected to exceed 10,000 vehicles. Four lanes and a median turn lane could be needed. The ultimate width could be achieved incrementally. The eventual land use pattern along this segment of Alvarado would include off-street parking provided by property owners in accordance with the Zoning Code. Property owners should plan for the ultimate loss of on-street parking on one or both sides of the street.

Future traffic projections along this segment of Alvarado should be reevaluated when planned development projects and street improvements in the area are complete. **Until then, retaining the present MPCS requirement of 64/80 is recommended.**

-- Marina to Fremont: The present street is 48/60 between Marina and Aladdin, and 64/76 between Aladdin and Fremont. The present MPCS requires 64/80 for this segment, and a Plan Line has been adopted. The existing ADT on this industrial arterial street is 16,000 vehicles, and the future ADT is expected to increase to approximately 18,000 vehicles. Four through lanes and a separate left turn lane are needed. Parking should be prohibited, as it is today. Traffic signals may be warranted in the future at Teagarden, at Aladdin, and at Montague. **Retaining the present MPCS requirement of 64/80 is recommended for this segment.**

-- Fremont to Portola: Fully improved 40/60 section in accordance with the present MPCS.

AURORA DRIVE:

-- Polvorosa to Williams: Fully improved 48/60 section in accordance with the present MPCS.

-- Williams to Fairway: The existing street is 32/50. The present MPCS requires the residential collector street standards of 40/60. The existing ADT is slightly less than 2,000 vehicles, and no significant future traffic increase is anticipated. Build-out of the Seagate development and future conversion of some single family lots to condominiums will add some traffic to this segment. Widening was not required for two recent condominium projects because the spot widenings would not have improved traffic flow or safety. **No widening is recommended.** If the intensity of development along Aurora Drive increases in the future, however, widening to the residential collector standard may be needed.

-- Fairway to Bermuda: - Fully improved 40/60 section in accordance with the present MPCS.

BANCROFT AVENUE:

-- North City Limits to 136th: The existing street is 56/80, providing four lanes and parking. Parking is prohibited near some intersections to

provide left turn lanes. The MPCS requires widening within the existing right-of-way to a 64/80 section. Widening has already been accomplished at five locations along this segment. The existing ADT on this residential arterial street varies from 8,000 vehicles north of Dutton to 14,000 vehicles near Estudillo. Bikes and pedestrians are numerous because of the schools in the area. The future ADT is forecast to vary from 12,000 to 16,000 vehicles along this segment. Future traffic increases will be generated by development along E. 14th Street, and in the Bayfair area, plus diversion from other north-south routes if congestion becomes intolerable. A four lane facility will be adequate for the projected traffic. Bancroft Avenue is on the City's adopted bikeway plan and widening beyond the MPCS requirement would be needed to provide on-street bike lanes. The frontage of Bancroft is largely developed with single family homes, and prospects of any long stretch of widening in conjunction with new development seems very small. Widening should be done at major intersections when the opportunity arises, and in conjunction with major land use changes. Where no changes are anticipated -- between San Leandro Creek and Oakes Blvd., for example -- no widening would be anticipated. The gradual replacement of on-street parking by separate left turn lanes will become necessary. **Retaining the present MPCS requirement of 64/80 is recommended for the entire segment.** This will protect the City's ability to require the spot widenings described above.

-- 136th to E. 14th: The existing street width varies from 36/60 to 48/60. The present MPCS requires 64/80. The existing ADT is 7,000 vehicles, and a future increase of 1,000 to 2,000 vehicles is forecast. Two lanes should be adequate to accommodate the forecast traffic. Recent widening to 48/60 was required in conjunction with a development near 136th Avenue. The abutting property along Bancroft is almost totally developed, and it is unlikely that much new development will occur. However, it is important to have a consistent street width along this segment of Bancroft Avenue. **Therefore, it is recommended that the 48/60 section be adopted.** Widening would only occur with new development. The 48 foot pavement provides sufficient width for two through lanes, plus parking and bicycles.

BEATRICE STREET:

-- Kesterson to Washington: The existing street is 32/50. The present MPCS requires 40/60. Widening of the existing street is needed to provide a total of five lanes between the freeway off-ramp and Washington Avenue: one westbound and four eastbound. Two of the eastbound lanes will be left turn lanes and two will be right turn lanes. Access to six residences along Beatrice is extremely limited during peak periods; consideration should be given to their future purchase and relocation. This area will continue to be severely congested during peak periods, with the only long range solution being a major interchange reconstruction. The existing 32/50 section is adequate between the freeway off-ramp and Kesterson with

parking removed. **A Plan Line is needed between the freeway off-ramp and Washington Avenue to define the required right-of-way.** Since this is part of the interchange and a portion of the right-of-way is State property, Caltrans has a responsibility to contribute toward these improvements.

CALLAN AVENUE:

-- East 14th to Harrison: The existing street varies between 56/76 and 62/80. The present MPCS requires 64/80. The existing ADT of 11,000 vehicles is expected to increase to about 15,000 vehicles in the future. The existing street width should be adequate to accommodate this **anticipated traffic. No further widening is recommended.**

-- ~~Harrison to Huff~~: The existing street is 50/66, although widening has been accomplished at a few locations. The present MPCS requires 64/80. **It is recommended that the present MPCS requirement of 64/80 be retained.** This will provide four through lanes plus parking on the south side. There is an adopted Plan Line for this widening.

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-- Huff to Bancroft: The existing street varies from 36/56 to 40/56. The present MPCS requires 40/60. The existing ADT of 8,000 vehicles is projected to increase to 10,000 vehicles in the future. The existing two lane width should be sufficient to accommodate this traffic. **No widening is recommended.**

CASTRO STREET:

-- Orchard to Alvarado: The existing street is 46/60, which is consistent with the present MPCS requirement. The abutting land use is partially residential and partially industrial. Existing traffic volumes are low. **No widening is recommended.**

-- Alvarado to San Leandro Blvd: The existing street is generally 44/60, which is in accordance with the present MPCS. **Retaining the 44/60 MPCS requirement is recommended to complete the widening of this segment.**

-- ~~San Leandro Blvd to East 14 Street~~: The existing street is 36/60. The present MPCS requires 40/60, the residential collector street standard. The existing ADT is 3,500 vehicles, and an increase of about 1,000 vehicles per day is forecast in the future. The street functions as a residential collector street. There are traffic signals on Washington and at E. 14th Street. East of E. 14th Street, Castro aligns with Sybil, which connects to Grand Avenue. Traffic on Sybil will increase in the future as abutting and nearby property converts from single family to multi-family residential. **Widening to the residential collector street standard of 40/60 as required in the present MPCS is recommended.** Also recommended is an improved alignment of Castro and Sybil at E. 14th Street to improve traffic flow and safety at the intersection.

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CLARKE STREET:

-- Davis to Estudillo: The existing street is 36/60. The present MPCS requires 44/60. **No further widening is recommended.**

-- ~~West Estudillo to West Juana~~: The existing street is 36/60. The present MPCS requires 44/60. The abutting land use is multi-family residential and office. Widening has already been accomplished at some locations. **Widening to the 44/60 MPCS requirement is recommended.**

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-- West Juana to Marina: The existing street is 36/60. The present MPCS requires 44/60. Abutting land use is zoned for multi-family residential. Future higher traffic volumes plus curb parking necessitate collector street standards. **Widening to the residential collector street standard of 40/60 is recommended.**

DAVIS STREET:

-- West End to Neptune (extended): Fully improved 60/85 section.

-- Neptune to Doolittle: The existing curb to curb and right-of-way widths vary. The present MPCS requires 48/60, which provides two lanes plus either parking or a separate left turn lane. Much of the right-of-way has already been dedicated. The existing ADT is 6,000 vehicles. The 48/60 section is adequate for the projected daily traffic volume of approximately 8,500 vehicles. A second access to the area is needed. It can be provided by either a connection to Eden Road or the extension of Neptune Drive. A third alternative to explore would be to reduce the likelihood of a blockage of lower Davis Street by substantially widening Davis Street, such as to a 64/80 section. All of these alternatives should be evaluated further. Also, Route 61 potentially will affect access to lower Davis Street. **Until further study of the area is complete, it is recommended that the present MPCS requirement of 48/60 be retained.**

-- Doolittle to I-880: This portion of Davis Street is a State highway (SR112). The existing four lane roadway is adequate for today's traffic, however, major improvements will be needed to accommodate projected future traffic from development along Davis Street and build-out of the Oakland Airport area and the Harbor Bay development. Several alternatives for handling future traffic in the area have been explored in past studies and a summary of them can be found in the NIMDOTS Central Area Report (June, 1986). However, it appears that no improvement of this street section will be adequate to handle forecast demand, and that development of an alternate route will be necessary if major congestion is to be avoided. No specific long range improvement is recommended at this time . Instead, future long range improvements for this segment of Davis Street should be evaluated in conjunction with future studies of Route 61 and the proposed Airport Roadway to 98th Avenue, which is partially funded by Measure B.

-- I-880 to Carpentier: This State highway (SR112) serves as the main entrance to the Downtown Plaza area from the Nimitz Freeway. The City is planning to widen this segment to provide four through lanes, a landscaped median with left turn lanes, and bike lanes. The existing traffic volume of 26,000 vehicles per day is forecast to increase to 37,000 vehicles during the study planning period. Davis Street will be operating at capacity with this forecast traffic load. Future traffic demand may actually exceed the forecast volume because of traffic from a jammed I-880 diverting onto Davis Street. **However, further widening beyond the City's current project is not recommended.** This is because of cost and the congestion and impact that would result from additional through traffic on City streets.

-- Carpentier to East 14th: This portion of Davis Street is a State highway (SR112), and the abutting properties are fully developed. The existing street is 64/80, and the existing ADT is 18,000 vehicles. This section should be adequate to accommodate the projected traffic volume of 26,000 vehicles per day, although parking will have to be removed in favor of left turn lanes at some intersections. **No widening is recommended.**

DOLORES AVENUE:

-- East 14th Street to Grand Ave: The existing street is 40/60 between E. 14th and Bancroft, and 36/60 between Bancroft and Grand. The present MPCS requires 44/60 between East 14th Street and Bancroft, and 40/60 between Bancroft and Grand. The existing ADT varies between 5,000 and 5,500 vehicles per day. Dolores Avenue functions as a collector street through a predominantly single family residential area. It connects to I-580 at Grand Avenue to the east and to San Leandro Blvd. (via Parrott Street) to the west. Abutting property is zoned for multi-family residential between E. 14th and Bancroft and single family residential along the Bancroft to Grand segment. A future daily traffic volume increase of approximately 1,000 vehicles is forecast. **Retaining the MPCS requirement of 44/60 for commercial areas between E. 14th and Bancroft is recommended.** The existing 40/60 section is adequate for the remainder of that segment. The segment between Bancroft and Grand functions as a collector street and carries a relatively high volume of traffic, however, widening to collector street standards is not recommended. This recommendation is based on the assumption that the abutting single family residences will remain unchanged for the forseeable future, thus making future widening impractical.

DOOLITTLE DRIVE:

Future travel demand on Doolittle Drive is dependent to a large extent on the amount of growth that takes place to the north (Harbor Bay, Oakland Airport area) and to the south (Roberts Landing) and on the extent to

which transportation improvements are made to accommodate traffic from that growth. The NIMDOTS Central Area Report cites that future travel demand will exceed available capacity to the extent that major transportation improvements will be needed to accommodate future traffic. In the north-south direction, both widening the I-880 freeway (where feasible) and construction of a transportation facility in the Route 61 corridor will be needed. Several scenarios appear possible:

1. The growth occurs but little additional transportation capacity is provided. In this case Doolittle would be inundated with all of the traffic that can reach it. Recent license plate studies indicate that 30% to 40% of southbound traffic on Doolittle at Davis Street travels through San Leandro and ends up on Kesterson (via Manor) or at the Washington/Lewelling intersection (via Lewelling). Future traffic would probably follow the same pattern. Doolittle would operate at capacity throughout its length during the p.m. peak period with a lengthy back-up north of Davis Street. This level of congestion would have the effect of eliminating Doolittle from the local street system and of causing major hardships on local traffic that depends on it. Because no economical improvement would be adequate to handle such a traffic volume, it is recommended that Doolittle not be widened to provide additional capacity south of Davis Street. The metering effect of the Davis/Doolittle intersection, while extremely inconvenient at the intersection itself, should protect the remainder of Doolittle from gridlock. However, improvements would still be needed at Williams, Marina, and Fairway to even achieve Level of Service E during the evening peak period. Widening Doolittle south of Fairway will be extremely expensive and disruptive, since residential buildings are within 10 to 12 feet of the curb on the west side.

2. The growth occurs and additional major transportation facilities are provided, including Route 61. In this case, Doolittle would serve as an industrial arterial street without much of the through traffic it now carries. Congestion would be reduced and the 84/104 required in the present MPCS would probably be sufficient for the anticipated traffic volumes.

3. Some growth occurs, but build-out is constrained by the lack of adequate traffic capacity. Even with this unlikely scenario, Doolittle would operate at capacity because of diversion of through traffic from the jammed I-880 to parallel north-south surface streets. "Zoning by Gridlock" has not proven to be a successful growth limitation strategy in other areas.

Recommendation: A comprehensive traffic study is needed to determine whether or not there is a Route 61 that is feasible. Caltrans has begun that study. Future traffic impacts on Doolittle and alternative improvement strategies will be addressed in the study. **Until such a**

study is complete, it is recommended that the existing MPCS requirement of 84/104 be retained, that the capacity of the southbound through movement on Doolittle not be increased and that traffic impact studies be required on major developments in the area, both within and outside of San Leandro, to identify specific impacts and facilitate mitigation measures.

-- North City Limits to Davis: This portion of Doolittle Dr. is a State highway (SR61). It was recently widened to provide four lanes with a median turn lane and wide bikeways. The existing ADT is 23,000 vehicles. **No widening is recommended pending further study.**

-- Davis to Fairway: This segment, which varies from 64/80 to 68/80, is four lanes with medium turn lanes at signalized intersections. Existing traffic volumes vary from 14,000 to 18,000. The present MPCS requires widening to 84/104, which provides four through lanes, a separate left turn lane, and truck parking. A few locations have been widened already as a condition of new development. **Retaining the present MPCS requirement of 84/104 is recommended until long range planning studies are complete.**

-- Fairway to South End: The existing 70/84 section provides two through lanes, a narrow landscaped median, parking, and a bike lane. The existing ADT is 13,000 vehicles. The present MPCS requires a 84/104 section. **Retaining the present MPCS requirement of 84/104 is recommended until long range planning studies are complete.**

DOUGLAS DRIVE

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-- ~~Virginia to Davis~~: The existing width of this residential collector street is 40/60. The present MPCS requires 44/60. Future traffic will increase slightly, due to development of the former Cleveland School site. The street should be widened to 44/60 and parking should be prohibited to provide sufficient width for two southbound approach lanes to Davis Street. **Retaining the present MPCS requirement of 44/60 is recommended.**

DUTTON AVENUE:

-- East 14th to MacArthur: The existing street is 40/60. The present MPCS requires 44/60 in commercial and multi-family areas. The existing ADT is 8,000 vehicles. A future ADT of 10,000 vehicles is forecast. The abutting property is fully developed along the entire segment. The existing two lane width is adequate for anticipated traffic volumes, however, minor widening within the existing right-of-way is desirable in commercial areas at Bancroft, at East 14th, and at MacArthur to improve intersection operations. This widening should be accomplished if new development occurs. **It is recommended, therefore, that widening to the present MPCS requirement of 44/60 occur in commercial areas.** Incremental removal of parking at these intersections is a first step.

EAST 14TH STREET: East 14th Street is a State Highway (SR185). It is not included in the present MPCS.

-- North City Limits to Estudillo: This segment is a fully improved street, with existing commercial buildings on the property line. **No further widening is recommended.**

-- Estudillo to Juana: The existing section is generally 48/66 and is striped for four narrow lanes and parking on one side only. The existing ADT is 18,000 vehicles and future development is expected to add about 5,000 vehicles per day. Widening to provide additional width for parking or turn lanes is impractical since no right-of-way is available. Peak period left turn prohibitions may have to be instituted at certain intersections if warranted by future traffic increases. Also, Hays Street provides a relatively convenient bypass around East 14th Street in the downtown area. **No widening is recommended.**

-- Juana to ~~Blossom Way~~ Dolores: The existing section is 48/66 and generally is striped for three lanes (one northbound and two southbound) with parking on both sides. The existing ADT is 18,000 vehicles and future development is expected to add about 5,000 vehicles per day. Traffic in the single northbound lane frequently backs up behind left turning vehicles. Four lanes are needed through this segment of East 14th Street and can be provided in two ways:

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1. In the short run, remove parking on one side and restripe for four lanes as now exists between Joaquin and Dolores.

2. In the longer term, widen along the west side to provide adequate width for four through lanes plus parking on both sides. A 70/90 section would be required. (This is consistent with Caltrans' Route Concept for East 14th Street.) Between Blossom Way and Williams Street the abutting businesses on the west side of East 14th Street are primarily new and used auto dealers, professional offices in renovated single family homes, or older small commercial buildings. It may be possible to achieve this widening over time as the area redevelops. **Widening to 70/90 is recommended.** A Plan Line will be required.

-- Blossom to San Leandro Blvd.: This segment is a fully improved street.

-- San Leandro Blvd. to 136th Avenue: The existing street is 80/100. The existing ADT of 24,000 vehicles is forecast to increase to 33,000 vehicles in the future, primarily due to future development along East 14th between San Leandro Blvd. and Bayfair. **Six feet of widening is needed through this extended intersection to provide three southbound lanes. An 86/106 section is recommended.** This should be accomplished in conjunction with adjacent private developments. A Plan Line will be required.

-- 136th to Hesperian: The existing street is 80/100. The existing ADT is 24,000 vehicles and is forecast to increase to 35,000 vehicles near Hesperian. **Channelization changes within the existing right-of-way to provide three lanes southbound at ~~143rd and~~ at Hesperian will be needed. A detailed study of alternative improvements is needed in the Hesperian/150th/East 14th area.** OMIT Reso 2000-042

-- Hesperian to 150th: A detailed study of this portion of East 14th Street is needed to address the problems caused by three major streets intersecting in close proximity.

-- 150th to Fairmont: The existing street is 80/100. The existing ADT is 22,000 vehicles, and the projected ADT is 24,000 vehicles. Planned channelization changes to provide three lanes southbound should be sufficient for future traffic. **No widening is recommended.**

-- Fairmont Drive to 155th Avenue: Four feet of widening is needed on the east side approaching Fairmont Drive to provide a northbound right turn only lane. However, the property is outside City Limits, so cooperation with the County will be required.

EDEN ROAD: Eden Road is an unimproved 50 foot wide private easement extending westerly approximately 1,200 feet from Davis Street. The easement provides access to several parcels along its southern border. Eden Road has the potential to provide public street access to these properties and to provide a secondary access to lower Davis Street. The precise alignment and right-of-way width have not been determined. A Route 61 connection to existing Doolittle Drive and Davis Street will affect all streets in the area. The existing 50 foot width is adequate for a two lane industrial street with access only on the south side. (The north side borders the City of Oakland Galbraith Golf Course and North Airport and no access is needed.) A 5 foot public utility easement will be needed on the south side for utilities. **Adding Eden Road to the Master Plan of City Streets as a local industrial street extending from Doolittle Drive to lower Davis Street is recommended. A 41/50 section is recommended for the segment within the existing easement.**

ESTABROOK STREET:

-- ~~East 14th Street to Washington~~: The existing street is 36/60. It is not included in the existing MPCS. It is a residential collector street with an ADT of about 4,000 vehicles. While no new development has occurred recently, abutting land is zoned for multi-family residential. Because of overall growth in the area and the higher intensity residential development permitted under the R-5 zoning, future **widening within the existing right-of-way to the residential collector standard of 40/60 is recommended.**

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ESTUDILLO AVENUE

Santa Rosa

-- East 14th to ~~Huff~~: The existing street is 46/66, which is consistent with the present MPCS requirement. The existing ADT is 9,500 vehicles with a forecast future ADT of 10,500 vehicles. The existing two lanes should be adequate during most of the day, although there will continue to be back-ups westbound at E. 14th Street during the mid-day period. Further widening is impractical because of right-of-way constraints. **No widening is recommended.** At such time as the pressure on this street gets too intense, some relief can be obtained by diversion of traffic to Callan/Huff.

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-- ~~Huff to Bancroft~~: The existing street is 46/66. The present MPCS requires 64/80, which will provide four lanes and parking. The existing ADT is 11,000 vehicles, and is expected to increase to 15,000 vehicles. The four lane section will be needed. There is an adopted Plan Line for future widening, and widening has already been accomplished at some locations. **Widening consistent with the existing Plan Line requirement of 64/80 is recommended.** Until this can be achieved, removal of some on-street parking will probably be necessary.

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-- Bancroft to MacArthur: The existing ADT of 13,000 vehicles is forecast to increase to about 16,000 vehicles, with potentially higher demand resulting from through traffic using the Davis/Callan/Estudillo east-west connection to I-580 and Castro Valley. The present MPCS calls for accommodating the future traffic demand by widening the existing two lane street (46/60) to provide four lanes (64/80). No widening has yet been accomplished on this segment of Estudillo Ave. There appear to be three alternative courses of action.

1. Widen to the existing Plan Line. This would complete a four lane arterial street east-west connection between I-580 and I-880 via Callan and Davis. Through traffic would be accommodated, thus reducing through traffic on narrower parallel streets such as Joaquin and Juana. Future traffic volumes would be higher than if the street were not widened. This alternative would be extremely costly, both financially and environmentally. Required right-of-way would extend into existing commercial buildings, residential properties, and school property. This alternative would also encourage more traffic to use Lake Chabot Road where there already are traffic concerns.

2. Do not widen Estudillo east of Bancroft. While Estudillo would remain as it is, traffic volumes would increase to capacity levels. Both the Estudillo/Bancroft and Estudillo/Mac Arthur intersections would be severely congested with long back-ups during the evening peak period. Increasing traffic would tend to divert to parallel routes like Joaquin, Juana and Dutton. Overall traffic flow through the area

would be less, however, because drivers would become frustrated and seek other routes.

3. Widen Estudillo a minimum amount to increase capacity only at the Bancroft and the MacArthur intersections. This approach lies somewhere in between the two alternatives described above. It would provide some increased capacity at intersections, but at minimum cost. Minimum widening of Estudillo on the south side east of Bancroft would permit two eastbound lanes through the intersection and help relieve the peak period back-up on Estudillo. Minimum widening on the north side at Bancroft Jr. High would provide wider lanes and safer conditions for pedestrians. It might be possible to provide an eastbound right turn lane at MacArthur with minimum loss of access and parking to the shopping center.

The pursuit of the third alternative is recommended.

-- MacArthur to Lake Chabot Road: The frontage is fully developed and no widening is recommended.

FAIRWAY DRIVE:

-- Neptune to S.P.R.R.: Fully improved 66/80 in accordance with the present MPCS.

-- S.P.R.R. to I-880: The existing street is a two lane industrial collector street with a 48/60 section. The present Master Plan requirement is 48/60. The extension of Fairway Drive over I-880 to connect to Aladdin Avenue is funded by Measure B. The existing daily traffic volume on Fairway Drive between Merced Street and the Southern Pacific Railroad tracks is 9,000 vehicles. Traffic is expected to increase substantially along Fairway Drive in the future due to development of vacant industrial property, occupancy of vacant industrial buildings, and the diversion of traffic to the Fairway Drive overcrossing. The preliminary traffic study for the Measure B project indicates that a four lane road would be needed from the Southern Pacific tracks to just easterly of Merced Street. The recommended 64/80 section would provide four through lanes plus a median turn lane.

FARALLON DRIVE: Fully improved 64/84 in accordance with the present MPCS. The existing traffic volume is 10,000 vehicles per day. Future traffic volumes will depend to a great extent on the circulation system determined for the Roberts Landing development. Future traffic signals at Doolittle and at Wicks may be warranted by future traffic increases. **No widening is recommended.**

FARGO AVENUE: The existing curb-to-curb width varies from 53 ft. near Washington Avenue to 32 ft. through the residential area. The present MPCS requires 40/60 in the residential portion. The existing daily traffic volume is approximately 6,700 vehicles near Washington. Future traffic increases can be expected from the possible sale and development of the Lewelling School site. The street is fully improved except possibly for the Lewelling School site. **Therefore, it is recommended that the present MPCS requirement of 40/60 be retained only from Washington to Norton.**

FARNSWORTH STREET: The existing street is fully improved at 42/60. The present MPCS requires 64/80, which would provide four lanes plus parking. The existing ADT is 8,000 vehicles between Manor and Corvallis, and this is expected to increase to about 10,000 vehicles in the future. This will cause increased congestion at some locations. Although widening and improving Farnsworth would increase capacity and ease congestion, it would also encourage more traffic through the area. This should be avoided. **No further widening is recommended.** A traffic signal may be desirable at the Farnsworth/Manor intersection at some future time.

FLORESTA BLVD.:

-- Monterey to Fremont: The existing four lane street is 60/80, and is slightly substandard for a four lane arterial street. The present MPCS requires 64/80 on this segment. The existing ADT is 11,000 vehicles. Because traffic volumes are not expected to increase substantially in the future and the abutting property is fully developed, future widening to the 64/80 width required in the present MPCS is not recommended. The existing street width should be adequate for the projected traffic volumes. **No widening is recommended.**

-- Fremont to Washington: The existing street is 76/94. The present MPCS requires 84/104. The existing daily traffic volume is 20,000 vehicles and this is projected to increase to approximately 27,000 vehicles in the future. The existing street section should be adequate for the projected traffic volume. **No further widening is recommended except possibly at Washington where major intersection improvements will be needed.**

~~**FREMONT AVENUE:**~~ The existing street is a two lane industrial street with a 48/60 section. The present Master Plan requirement is 64/80, which would provide a standard four lane arterial street. Some right-of-way has been dedicated along the north side near Alvarado Street. Traffic is expected to increase in the future from development of vacant industrial property in the vicinity plus traffic diverted by the Fairway Drive Overcrossing to such an extent that four lanes and a median will be needed. Fremont Avenue is bordered on one side by a residential area with no access to Fremont Avenue. A sidewalk is not needed on that side. **Reducing the present MPCS requirement to 64/76 is recommended.** This section would be

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sufficient to provide four lanes, a median turn lane, and a sidewalk on one side. Also, it is recommended that all future widening take place on the industrial side. A Plan Line will be required for this off-center widening.

HAAS AVENUE: The existing street is 36/52. The MPCS requires 44/60 in commercial and multi-family areas, and 40/60 in single family residential areas. The existing ADT on this minor residential collector street is about 2,000 vehicles. Future development near East 14th Street will increase traffic although the existing width should be generally adequate. Widening near East 14th Street in the commercial area is recommended to facilitate traffic flow at the intersection of East 14th and Haas and at commercial driveways. No other widening should be needed. A traffic signal at East 14th Street may be warranted in the future. **Retaining the present MPCS requirement of 44/60 in the commercial area near East 14th Street is recommended.**

HALCYON DRIVE: The recent widening project completed this divided arterial street. **However, future traffic increases anticipated at the Halcyon/Hesperian/Fairmont intersection will warrant the addition of a separate right turn lane for eastbound traffic approaching Hesperian. Additional widening will also be needed at the Halcyon Drive approach to Washington Avenue.** Plan Lines will be needed for both of these widenings.

HAYS STREET:

-- East 14th Street to West Juana: This segment is fully improved, except for possible minor widening on the northeast corner of Hays and Davis to permit northbound through traffic to proceed straight from the existing right turn only lane. **No other widening is recommended.**

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-- ~~West Juana to Castro~~: The existing street is 36/60. The present MPCS requires 68/84, which provides for a four lane arterial street. The present daily traffic volume is about 2,500 vehicles and future traffic volumes should be well within the capacity of a two lane street. The street functions as both a residential collector street and as a bypass around the downtown area. Hays Street should be widened in multi-family areas to 40/60 and in commercial areas to 44/60. The extra width is needed in commercial areas to better accommodate the heavier turning movements, delivery traffic, and the generally higher trip generation than found in residential areas. This widening can be accomplished within the existing right-of-way. Redevelopment studies should include an evaluation of Hays Street. **It is recommended that the present MPSC requirement be reduced to 40/60 in residential areas and 44/60 in commercial areas.**

HESPERIAN BLVD.:

-- East 14th Street to Louise: Existing daily traffic volume is 9,000 vehicles on this four lane segment. Stacking room for northbound traffic

between Louise and at East 14th Street is regularly exceeded during the peak hour, causing congestion at Louise. **This segment of Hesperian Blvd. should be studied along with East 14th Street and 150th Avenue to find the best long-range traffic solution.** One alternative to consider is closing this portion of Hesperian to through traffic.

-- Louise to Lewelling: Existing daily traffic varies from 16,000 vehicles near Louise to over 30,000 vehicles near Lewelling. **The four to six lane roadway is fully improved except for widening for an additional southbound through lane approaching Lewelling.** Future daily traffic volumes of from 24,000 vehicles north of Halcyon to 36,000 vehicles near Lewelling are projected. These volumes can be accommodated by the existing street, except near Lewelling where continued congestion and back-ups are expected until the I-880 overcrossing is lengthened to permit Hesperian to be widened to six lanes south of Lewelling. This project is included as part of the current I-880 widening project. The programmed construction of the westbound SR238 to southbound I-880 ramp should relieve conditions on Hesperian between SR238 and Grant Avenue in the short term.

JUANA AVENUE:

-- ~~East 14th Street to Bancroft~~: The existing street is 36/60. It is not included in the present MPCS. The existing ADT is 4,000 vehicles. The street functions as a commercial/residential collector, connecting BART and San Leandro Blvd. to the west and Bancroft and Grand Avenues to the east. The abutting property is mostly single family residential although zoned for professional offices and multi-family residential. A new traffic signal is planned for the Bancroft/Juana intersection. **Future widening to the commercial collector standard of 44/60 is recommended between East 14th Street and Santa Rosa, plus additional widening at East 14th Street to provide two westbound approach lanes. Widening to the residential collector standard of 40/60 is recommended between Santa Rosa and Bancroft.**

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-- Bancroft to Grand: The existing street is 36/60. Although the future ADT is expected to increase from today's 4,000 vehicles to 5,000 vehicles, no change in the present single family residential frontage is expected. Therefore, **future widening is impractical and not recommended.**

KESTERSON STREET: The existing street is 32/50. The present MPCS requires 40/60. Kesterson connects Manor Blvd. to the freeway interchange at Beatrice. The existing daily traffic volume is 7,000 vehicles. This is a high traffic volume for a street of this width. If traffic patterns remain as they are today, some of the traffic generated from continued development in the industrial areas to the northwest will use Manor Blvd. and Kesterson Street to reach I-880 or SR238. The future daily traffic volume is forecast to increase by about 1,000 vehicles on Kesterson. The recently added stop signs on Manor Blvd. make this route a little less convenient, and some drivers may remain on Wicks and use Lewelling Blvd.

instead. **No further widening is recommended.** Efforts to divert traffic to other routes is preferable. Future reconstruction of the Washington Avenue interchange, which is Caltrans' responsibility, may require the purchase of some of the homes on Kesterson.

LAKE CHABOT ROAD: The existing daily traffic volume is 5,000 vehicles. Traffic will increase slightly in the future due to residential development in Castro Valley, conversion of the quarry site to residential, and new employment opportunities in San Leandro. Because of the steep, curving nature of the existing roadway, through traffic should be discouraged from using Lake Chabot Road. **Widening is not recommended because it would encourage additional traffic and would be very costly .** Instead the diversion of Lake Chabot Road traffic to Fairmont Drive should be encouraged, including a possible signal at the Chabot/Fairmont intersection (not in San Leandro).

LEWELLING BLVD.:

-- West End to Wicks: Existing traffic volume is very low on this two lane street. The existing right-of-way, however, is 104 ft. **Future street width will depend on development of the Citation Builders' property,** although it appears that at least two lanes westbound and three lanes eastbound (84/104) will be necessary to provide adequate stacking distance west of the Wicks intersection and clear of the railroad crossing.

-- Wicks to Washington: The existing street is generally 74/92 in accordance with the present MPCS. Existing daily traffic volumes vary from 13,000 vehicles near Wicks to 19,000 vehicles near Washington. Future traffic volumes will depend on development of Roberts Landing, the amount of traffic diverted from the Nimitz Freeway, and whether a transportation facility is constructed in the Route 61 corridor. The future traffic projections in this study were based on the following assumptions: 1) Roberts Landing would develop with 2,400 residential units; 2) The Davis/Doolittle intersection would not be improved to increase the southbound capacity, therefore, the amount of traffic from the Oakland Airport area and Harbor Bay using the Doolittle/Lewelling connection to reach I-880 or SR238 would be constrained by the existing capacity at the Davis/Doolittle intersection; and 3) No transportation facility would be constructed in the Route 61 corridor. Based on these assumptions, future daily traffic volumes on Lewelling Blvd. are projected to vary from 29,000 vehicles east of Wicks to 36,000 vehicles near Washington. **The existing four lane roadway with left turn lanes should be adequate for these traffic volumes, although major widening will be needed approaching Washington Avenue. Improvements may also be needed at the Farnsworth and the Wicks intersections.** The high traffic volume anticipated on Lewelling Blvd. may necessitate new traffic signal installations at presently unsignalized intersections.

-- Washington to I-880 off-ramp/Embers Way: This segment was recently widened to four lanes plus a median left turn lane. The existing street is generally 64/80. The present MPCS requires 64/84. The existing ADT is 15,000 vehicles, and the future ADT is forecast to be about 23,000. The existing improvements should be sufficient for the forecast traffic load, however, additional widening will be needed at Washington. Widening for a separate right turn lane for eastbound traffic at Embers Way will also be needed. **Retaining the MPCS requirement of 64/84 is recommended for the remaining widening.**

-- I-880 Off-ramp/Embers Way to Hesperian: The street segment is mostly outside City limits. The existing daily traffic volume of 20,000 vehicles is projected to increase to 24,000 vehicles. Widening will be needed to increase the eastbound capacity approaching Hesperian Blvd. Dual left turn lanes for eastbound trafffic will be needed, however, right-of-way will be very expensive. Also, widening of the I-880 overcrossing will be required. **Additional study and consultation with Alameda County is needed to determine final right-of-way requirements in this area.**

MAC ARTHUR BLVD.:

-- North City Limits to Estudillo: The existing daily traffic volume is 12,000 vehicles, with an increase to 14,000 vehicles projected for the future. The present four lane roadway generally should be sufficient to accommodate the future traffic load. Near Estudillo, however, additional right-of-way would be desirable in order to provide four through lanes, a median turn lane, and parking on the west side. Unfortunately no right-of-way is available, with I-580 on the east side and commercial buildings on the west side. **Therefore, no additional widening is recommended.** Congestion will increase for southbound traffic near Estudillo.

-- Estudillo to Joaquin: Major traffic increases are not anticipated in the future. It would be desirable to widen slightly to provide four through lanes and a median turn lane near Estudillo, however, this would only make sense if MacArthur were widened north of Estudillo. **Since that widening does not seem practical, widening south of Estudillo is not recommended.**

MANOR BLVD.:

-- Wicks to Kesterson: Manor Blvd. plays a dual role in the circulation system. First, it acts as a residential collector street serving the Washington Manor residential area; and second, it acts as a connection between industrial areas to the northwest and the freeways. The existing two-lane section varies from 32/50 near Kesterson to 42/60 west of Farnsworth and 64/80 at Wicks. The present MPCS requires 40/60 between Kesterson and Juniper, and 64/80 between Juniper and Wicks. The existing daily traffic volume is about 8,500 vehicles. Future traffic increases are anticipated mainly from build-out of vacant land to the northwest, possible through

traffic bypassing the freeway, and possibly from development of Roberts Landing (depending on the circulation configuration ultimately determined). If future traffic follows the same pattern as today's, future daily traffic volumes of 10,000-12,000 vehicles are possible for Manor Blvd. This is a very high traffic load for a two lane street with residential frontage. Although there are no easy ways to divert the through traffic to parallel arterial streets, this appears preferable to major widening. More study of through traffic in the Washington Manor area and alternative means of diverting that through traffic to arterial streets is needed. **No further widening of Manor Blvd. is recommended, however.**

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-- ~~Neptune to Doolittle:~~ The existing street is generally 48/60, with spot widening completed at four locations in conjunction with new development. The present MPCS requirement is 64/80 and a Plan Line has been adopted. The existing daily traffic volume is 7,300vehicles at Aurora and 10,000 vehicles near Doolittle. Additional traffic will be generated primarily by Marina area development. An additional daily traffic volume of approximately 2,000 vehicles is expected. **The existing two-lane street is adequate to accommodate the projected future traffic, although improvements at the Doolittle/Marina intersection will be needed.** At Doolittle, Marina Blvd. should be widened to provide 8 ft. sidewalks and four lanes -- one westbound lane, one eastbound left turn lane, and two eastbound through lanes. A width of 57/73 is recommended at the intersection, with a transition to the existing 48/60 section westerly of the intersection. A Plan Line will be needed. This widening will improve operations at the Doolittle/Marina intersection and reduce eastbound back-ups on Marina. Several alternative circulation patterns -- including making Marina one-way -- were evaluated in a recent report, and it was found that none offered benefits that significantly outweighed potential problems. A traffic signal may be warranted by future traffic at the Marina/Aurora intersection.

-- Doolittle to Merced: The existing street varies from 48/60 near Doolittle to a fully widened section in accordance with the adopted Plan Line near Merced. The present MPCS requires 64/80. The existing daily traffic volume is expected to rise from today's 16,000 vehicles to 23,000 vehicles in the future. A four-lane street with a median turn lane is needed to accommodate the future traffic load. Widening to the present MPCS requirement (64/80) has already been accomplished at several locations. It is recommended that the existing Plan Line and MPCS requirement (64/80) be retained. Three eastbound lanes approaching Merced Street may be needed in the future, but this can be accomplished within the existing right-of-way.

-- Merced to I-880: Traffic volumes are expected to increase throughout the interchange area. **No widening of Marina between Merced and the I-880 interchange should be needed.** The Marina Boulevard/I-880 interchange should be upgraded to current standards, however.

-- I-880 to Alvarado: The existing street is four lanes with a 48/60 section. The existing MPCS calls for a 64/80 section providing four through lanes and a median turn lane. A Plan Line for this widening has been adopted. The existing daily traffic volume west of Alvarado is 24,000 vehicles and is forecast to increase to about 33,000 vehicles in the future. Widening to the MPCS requirement has occurred at several locations. In order to effectively accommodate heavy eastbound evening peak period traffic in combination with heavy side street traffic at the intersections with Teagarden and Alvarado, three lanes are needed for eastbound traffic. Two lanes should be adequate for westbound traffic. A section is needed that provides three eastbound lanes, a solid median and median turn lane, plus two westbound lanes. The widening of this portion of Marina Blvd. is funded by Measure B, and a detailed study of right-of-way requirements is underway. A revised Plan Line will be needed.

-- Alvarado to San Leandro Blvd.: The existing street is generally 48/60. The present MPCS requires 64/80. The existing daily traffic volume is 17,000 vehicles and is expected to increase to 27,000 vehicles. Widening to the 64/80 MPCS requirement has been accomplished at three locations as the result of new development. The widening of this portion of Marina Blvd. is funded by Measure B, and a detailed study of right-of-way requirements is underway. A revised Plan Line will be needed.

-- San Leandro Blvd. to ~~Washington~~ Clarke: The existing street is 48/60 in conformance with the present MPCS. This width should be sufficient to accommodate the small future traffic increase forecast. However, as traffic builds up at the Marina/San Leandro Blvd. intersection, approximately 8 ft. of widening will be needed on the north side of Marina Blvd. between Clarke Street and San Leandro Blvd. to provide width for two westbound approach lanes. ~~**A 56/68 section is recommended between San Leandro Blvd. and Clarke St.**~~ This should be a part of the Measure B project.

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MERCED STREET: The existing street width varies. The MPCS requires 64/80, which provides for four lanes plus a separate left turn lane. This should be sufficient to accommodate anticipated future daily traffic volumes of from 13,000 vehicles near Williams to 24,000 vehicles south of Marina. **Retaining the present MPCS requirement of 64/80 and the adopted Plan Line is recommended.**

NEPTUNE DRIVE:

-- Davis to Williams: The East Bay Regional Park District recently extended Neptune as a two-lane (48/60) roadway to the Oyster Bay Park entrance. **The proposed extension of Neptune to Davis Street as a two-lane industrial Street (48/60) is recommended.** It will be adequate to handle both park access and industrial development north of Williams. (See Davis Street and Eden Road for further discussion of circulation in the lower Davis Street area.)

-- Williams to Marina: The existing street is 32/50. The MPCS requires 64/80, however, **no widening is recommended.**

-- Marina to Flood Control Canal: The improvements on this segment are nearly complete. No additional right-of-way will be needed, however.

-- Flood Control Canal to Doolittle (Extended): An all-weather surface roadway connecting to Doolittle Drive is planned for emergency access and maintenance of future habitat areas only.

ORCHARD AVENUE:

-- Davis to Williams: The existing street is 36/48-50. The present MPCS requirement is 40/60. The daily traffic volume is 2,300 vehicles. Orchard functions as a local residential street, and a traffic signal is planned at the Orchard/Davis intersection as a part of the Davis Street improvements. The future ADT is not expected to increase significantly and the existing width should be sufficient. The extension of Alvarado between Davis and Williams is intended, in part, to permit diversion of through traffic from Orchard. **No widening is recommended.**

-- Williams to Marina: The existing street is 43/60. The present MPCS requirement is 64/80. **No widening is recommended.**

PARROTT STREET:

-- East 14th to Washington: Fully improved 64/80 in accordance with the MPCS.

-- Washington to San Leandro Blvd.: The existing street is 52/72. The MPCS requires 64/80. One location has been widened to the MPCS requirement. The existing width should be sufficient for future traffic volumes, which will be generated mainly by multi-family residential development in the area and natural diversion of traffic from narrower east-west streets in the area. **No further widening is recommended,** but signalization of the Parrott/San Leandro Blvd. intersection may become necessary.

PERALTA AVENUE:

-- San Leandro Blvd. (westerly): The existing street is 44/60 between San Leandro Blvd. and the W.P.R.R., and unimproved westerly of the W.P.R.R.

The street is not included in the existing MPCS. Existing traffic volumes are light, and future traffic volumes will depend on future development proposals. **A local industrial street section of 44/60 is recommended at this time.** A study of Peralta Avenue and the possible northerly extension of Alvarado Street is needed to develop a specific Plan Line for Peralta Avenue.

PHILLIPS LANE:

-- North of Davis Street: Phillips Lane is not included in the existing MPCS. It should be extended northerly from Davis Street unless assembly of properties served by Phillips Lane makes a street unnecessary. **The local industrial standard of 44/60 is recommended.** Provision for emergency access to either Tudor or Warden should be considered if the street is constructed.

PREDA STREET:

-- North End to Davis: Development of vacant industrial land at the north end will slightly increase traffic flow on Preda. Improvements are complete except in the industrial area, and additional study is needed to define the ultimate street width needed in that area.

SAN LEANDRO BLVD.:

-- North City Limits to Best: The existing street is 66/80 and provides four lanes and parking. **No further widening is recommended.**

-- Best to San Leandro Creek: The existing street is 60/80 and provides four lanes and parking. The present MPCS requires 64/80. The existing daily traffic volume is 13,000 vehicles. Traffic on this industrial arterial street is expected to increase by 50% or more in the future and parking will have to be removed in favor of a median left turn lane. The narrow two-lane underpass in Oakland may serve as a meter in the future to limit southbound through traffic on San Leandro Blvd. **The full 64/80 section would be desirable and it is recommended that the requirement be retained in the MPCS.**

-- San Leandro Creek to Davis: A recently adopted Plan Line provides for three lanes southbound, two lanes northbound and median turn lanes. This Plan Line width should provide sufficient capacity for the traffic volumes forecast unless there is significant diversion of traffic from a jammed I-880 to San Leandro Blvd. during the evening peak period. If that diversion takes place, southbound traffic could back-up some distance north from Davis Street. Further widening to accommodate all of the traffic that might find San Leandro Blvd. an attractive route to bypass I-880 seems like an inefficient use of local funds. **Widening to the existing Plan Line is recommended.**

-- Davis Street to East 14th Street: This segment is fully improved, and the existing four to six lane roadway should be sufficient to accommodate the forecast traffic volumes. Some congestion near Davis Street and near Marina Blvd can be expected, however, during the evening peak period. **No widening is recommended.**

SANTA MARIA:

Estudillo to Dolores: The existing street is 30/50. Although existing traffic volumes are low, Santa Maria is located in an area zoned for higher intensity use. **Widening to the minimum local street standard of 36/50 is recommended.**

SANTA ROSA:

RESO 2000-042 ~~Estudillo~~ Joaquin to Dolores: The existing street 30/50. Although existing traffic volumes are low, Santa Rosa is located in an area zoned for higher intensity use. **Widening to the minimum local street standard of 36/50 is recommended.**

SYBIL AVENUE:

-- East 14th to Bancroft: Fully improved 40/60 in accordance with the present MPCS. If the opportunity arises Sybil should be aligned with Castro at East 14th Street to improve traffic flow and safety at that intersection. **No other widening is recommended.**

-- Bancroft to Grand: The existing street is 36/60. The present MPCS requires 40/60. The existing ADT is 7,500 vehicles, and the forecast future ADT is 8,500 vehicles. The street functions as a residential collector street and widening to that standard would be desirable. However, the single family residential frontage is fully developed and change is unlikely. Therefore, the existing section should remain and **no widening is recommended.** There does not seem to be any way to reduce the heavy through traffic on this portion of Sybil Avenue and there is no better street available to accept a diversion of traffic.

TEAGARDEN STREET:

-- Alvarado to Aladdin: Fully improved 44/60 in accordance with the present MPCS.

-- Aladdin to Montague: **Construct a new 46/60 street as described in the adopted Plan Line.** This project is funded by Measure B.

-- Montague to Marina: The existing street is 46/60 in accordance with the present MPCS. **Teagarden should be realigned with Wayne at Marina, and widened to provide two left turn lanes and one right turn lane northbound at Marina.** This widening is necessitated by the future development of the Pacific High School site and the extension south to Aladdin.

THORNTON STREET:

-- Alvarado
~~Orchard~~ to San Leandro Blvd.: The extension of Alvarado between Davis and Thornton and its widening south of Thornton is intended, in part, to offer a diversion route for industrial traffic that now occasionally uses the westerly residential portion of Thornton and Orchard. The existing street is 36/60. The present MPCS requires the local industrial standard of 44/60. **It is recommended that the 44/60 MPCS requirement be retained for industrial frontage west of Alvarado.** The City is pursuing the closure of the public railroad crossing east of Alvarado in favor of a new crossing of Alvardo north of Thornton.

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-- San Leandro Blvd. to Washington: The existing street is 36/60. There is no existing MPCS requirement. **No widening is recommended.**

-- Washington to E. 14 Street: The existing street is 30/50. There is no existing MPCS requirement. This segment of Thornton is a one-way street carrying a low valume of traffic. Thronton Street's intersections with both Washington and E. 14th Street are offset. This segment of Thornton serves no circulation purpose except local access, and **no widening is recommended.**

TIMOTHY DRIVE: A study addressing future alternatives for Timothy Drive is needed. It should be initiated after full occupancy of the Westgate development in order to assess the effectiveness of the present traffic controls.

TUDOR ROAD: The existing street is 32/50. The present MPCS requires 40/60. The residential area north of Warden Avenue has only one access street. A second access for emergency use would be desirable. See "Warden Avenue", below, for further discussion. **No widening is recommended.**

WARDEN AVENUE: This residential collector street was recently widened to a 35/50 section. **No further widening is recommended except at Davis Street to provide a two-lane approach.** That widening will be constructed in conjunction with other Westgate improvements. Warden Avenue provides the only access to a large residential area. A second access would be desirable for emergencies. There are two ways to provide this emergency access. The first is to utilize the existing paved emergency pathway under I-880 as a connection to the street system of the future development on the former Cleveland School site. The second possibility is to connect a future extension of Phillips Lane to either Tudor Road or Warden Avenue. This would require the purchase of one residence. The first alternative was part of the residential development of the former Cleveland School site.

WASHINGTON AVENUE:

-- ~~West Juana to San Leandro Blvd.~~: The existing section of this two lane arterial street is 40/60. The present MPCS requires 64/80-84, which provides four through lanes plus parking. The existing ADT varies between 8,000-9,000 vehicles. Spot widening has been accomplished at two locations in recent years, and a 56/72 section was required. That section was selected because it provides for two through lanes, a median turn lane, and parking. Four lanes without parking or turn lanes could also be provided if warranted by future traffic. Redevelopment along Washington Avenue has been slow, and future daily traffic projections will probably not exceed 10,000 to 12,000 vehicles. The 56/72 section would be adequate for the forecast traffic volumes. However, it appears that it would be possible to achieve that width only in connection with private redevelopment of adjacent property. At that time off-street parking would be required and the need for on-street parking should be substantially less than at present. **The 56/72 section is recommended throughout this segment, except on the east side between Estabrook and Marina where an additional 2 ft. is needed to provide a northbound right-turn-only lane.** If greater capacity is needed before the widening can occur, the creation of a median left turn lane at the expense of on-street parking may be necessary at major points of congestion.

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-- San Leandro Blvd. to Anza: The existing street is generally 64/80. The present MPCS requires 64/84. The street is almost fully improved, however major widening is needed at the Washington/Halcyon/Floresta intersection. The existing railroad underpass is only two lanes wide but does not represent a capacity constriction. Widening the underpass is recommended only at such time as the existing underpass becomes a point of congestion. **No widening is recommended except near the intersection with Halcyon and Floresta.** However, even with this major widening (see Appendix C for a description) the Washington/Halcyon/Floresta intersection will be a point of congestion during peak periods. Further widening of Washington beyond that recommended should only be considered when capacity constraints downstream at the Washington/I-880 interchange are resolved.

-- Anza to Beatrice: **Widening within the existing right-of-way to provide three lanes southbound is recommended, including widening of the Washington Avenue overpass to provide a third southbound lane for freeway traffic only.** The entire Washington Avenue/I-880/SR238 interchange is inadequate and needs to be upgraded to current standards by Caltrans. A new ramp connecting southbound Washington Avenue to northbound I-880 is planned as part of the upgrading. This will eliminate the need for the existing southbound left turn lane on Washington at that location. Also, the planned ramp connecting westbound SR238 to southbound I-880 will reduce traffic loads in this segment.

-- Beatrice to Fargo: **Completion of the frontage improvements on the west side to provide three through lanes southbound is recommended.** This should be done in conjunction with Beatrice Street improvements.

-- Fargo to Lewelling: The existing street is 100/120. This segment is fully improved, except for the possible long range need for a separate southbound right turn only lane at Lewelling to provide additional capacity at the Washington/Lewelling intersection. Curb parking will have to be eliminated. A Plan Line will be needed. **A 113/133 section is recommended.**

-- Lewelling to South City Limits: The existing daily traffic volume of 26,000 vehicles is forecast to increase to 33,000 vehicles in the future. Widening to six through lanes plus a dual left turn lane is needed at Lewelling, with a transition to the existing street section at the City Limits. **A 104/120 section is recommended.** A Plan Line will be needed. Planned improvements at the Washington/Lewelling intersection will permit additional traffic to travel southerly on Washington Avenue into San Lorenzo. This will increase the pressure for improvements in the vicinity of Washington and Grant. Alameda County has an obligation to provide the improvements in the area, particularly if new development should occur in San Lorenzo.

WEST BROADMOOR BLVD.: The existing street is 36/56. The present Master Plan calls for widening to the residential collector street standard of 40/60. The existing ADT is about 2,000 vehicles, and traffic is not expected to increase significantly on West Broadmoor in the future. Therefore, **no widening is recommended.** The intersection of West Broadmoor and San Leandro Blvd. should be studied to determine if improvements are needed.

~~**WEST JUANA:**~~ OMIT RESO 2000-042

-- ~~San Leandro Blvd. to Washington~~: This is the main link between BART and the Downtown Plaza area. The existing street varies from 52/80 to 62/82. The present MPCS requires 64/84. The existing ADT is 5,500 vehicles on this segment, and future development in the area is anticipated to add approximately 2,000 additional daily trips. Widening to date has been based on providing parking, bike lanes, two through lanes and a separate left turn lane. A 62/82 section, which can be accomplished within the existing right-of-way, is needed. Five locations have already been widened to this requirement. **A 62/82 section is recommended.**

-- ~~Washington to East 14th Street~~: The existing street is 52/80. The present MPCS requires 64/80. The existing ADT is 6,000 vehicles on this segment and future development is anticipated to add approximately 2,000 additional vehicles per day. **Widening 4 ft. along the south side within the existing right-of-way would be sufficient to provide bike lanes, two**

through lanes, a separate left turn lane, and parking on the south side only. The bike lanes and parking would have to be removed near East 14th Street so five traffic lanes can be provided, two westbound and three eastbound. This width is needed to accommodate future side street traffic more efficiently at the West Juana/East 14th Street intersection. **A 56/80 section is recommended.**

WICKS BLVD.:

-- Merced to Farallon: Fully improved 64/84 in accordance with the present MPCS.

-- Farallon to Lewelling: The existing street varies between 56-64/84. The present MPCS requires 64/84. Two through lanes, a separate left turn lane and bike lanes are provided. The existing ADT is 16,000 vehicles north of Manor and 11,000 vehicles south of Manor. Major traffic increases are possible depending on the circulation pattern of the Roberts Landing project and additional development in San Leandro, Oakland and Alameda to the north. Additional widening may be required. **This segment of Wicks Blvd. should be carefully studied in relation to the Roberts Landing development and in conjunction with efforts to reduce through traffic in the Washington Manor area.**

WILLIAMS STREET:

-- Neptune to Doolittle: The existing width varies from 42/60 to 47/60. The present MPCS requires 64/80. Little vacant land remains and traffic volumes are not expected to increase to the point where widening would be needed, except minor widening of the eastbound approach to Doolittle to improve operations at the Doolittle/Williams intersection. A Plan Line will be needed. **No other widening is recommended.**

-- Doolittle to I-880: The existing street is 48/60. The present MPCS requires 64/80. The existing ADT is 8,000 vehicles, and is expected to increase to 10,000-11,000 vehicles in the future. Several large industrial plants are located along the street and access is concentrated at a limited number of driveways. Williams Street is recommended as an east-west bike route connecting the San Leandro Blvd. bike lane with the Shoreline and Oyster Bay parks. Two recent developments were required to widen to a 54/67 section, which provides two through lanes, bike lanes, and a separate left turn lane or parking. **It is recommended that the 54/67 section be adopted throughout this segment.** Additional widening of approximately 8 ft. is needed on the north side between Timothy and Merced in order to provide sufficient width for two westbound left turn lanes at Merced. The two left turn lanes are needed to provide adequate left turn storage in the short distance between Timothy and Merced. Also, the Williams Street overpass over I-880 should be widened to provide sufficient width for pedestrians and bike lanes. This is included in the current I-880 widening project.

A ROW Layout exhibit has been created for this roadway segment

-- I-880 to Orchard: The existing street is 46/60, and the present MPCS requirement is 64/80. The existing ADT is 11,000 vehicles. The future ADT is expected to reach 13,000 vehicles. This segment is primarily residential with an elementary and a junior high school abutting Williams Street. **No widening is recommended,** however, because the result would likely be higher speeds and additional through traffic in front of the schools. If necessary, on-street parking could be removed in favor of a median left turn lane at key intersections.

-- Orchard to Alvarado: The existing street is 46/60. The present MPCS requires 64/84. The existing ADT is 11,000 vehicles and is expected to reach 13,000 in the future. The abutting property is primarily commercial and industrial, with many small businesses and heavy on-street parking. **Widening to a 54/70 section is recommended.** This will provide two through lanes, a left turn lane or parking, bike lanes, and 8 ft. sidewalks. The south side should be widened an additional amount near Alvarado to provide two through lanes for eastbound traffic at Alvarado for increased capacity at the Williams/Alvarado intersection. However, until widening on this segment can be accomplished, the choice must be between congestion and on-street parking.

-- Alvarado to San Leandro Blvd.: The existing street is 46/60. The present MPCS requires 64/84. Williams Street, between Neptune and San Leandro Blvd., is on the City's adopted bikeway plan. The existing ADT is 11,000 vehicles, and the future ADT is expected to be in the 14,000-15,000 range. Widening to four lanes plus a median turn lane will be needed. **A 70/86 section is recommended.** This section will provide four through lanes and a separate left turn lane, plus adequate width for bikes in the curb lanes.

-- San Leandro Blvd. to Washington: Fully improved 46/60 in accordance with the present MPCS. **No widening is recommended.**

-- ~~Washington to East 14th Street~~: The existing 30/50 section is one-way eastbound. The present MPCS requires 44/60. The street should be widened to residential collector street standards (40/60) as new development occurs under the R-7 zoning. Also, the street should be realigned to match Elsie Street at East 14th Street if the opportunity arises. **A 40/60 section is recommended.**

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136th AVENUE:

-- ~~Bancroft to East 14th Street~~: The existing curb-to-curb width is 38 ft. at East 14th Street and 32 ft. at Bancroft. The north side is fully improved. The present MCPS requires 44/60. The existing ADT is 5,000 vehicles and the future ADT is projected to be about 6,000 vehicles. **It is recommended that the south side be widened 4 ft. to provide a 16 ft. curb lane and an 8 ft. sidewalk.** Four feet of additional right-of-way

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will be needed and a Plan Line will be required. The widening should be accomplished if new development takes place at the Palma Plaza Shopping Center.

143rd AVENUE: The existing street is 36/50 east of the S.P.R.R. and 48/60 west of the S.P.R.R. The present MPCS requires 40/60, and a Plan Line has been adopted. This street provides an important connection between Washington and East 14th. The existing ADT of 5,000 vehicles is forecast to increase to 7,500 vehicles in the future. Widening to collector street standards would be desirable between the S.P.R.R. and East 14th, however, the abutting property is fully developed and it is unlikely that funding would ever be available. **Therefore, no widening is recommended.**

150th AVENUE:

-- ~~East City Limits~~ East 14th Street to Hesperian: The existing street is 56/76. The present MPCS requires 64/84. The existing ADT is 12,000 vehicles, and is forecast to increase to 15,000 in the future. Residential development of County property on Fairmont Drive east of I-580 will add additional traffic. Four lanes plus a separate left turn lane at intersections and 8 ft. sidewalks are needed. A 70/86 section accomplishes that and provides the flexibility to add a narrow solid median to eliminate mid-block left turns if needed. **Widening to the 70/86 section is recommended.** Unfortunately, achieving this widening in the forseeable future seems doubtful. More likely, left turn problems and substandard lane widths will force the elimination of on-street parking and minor widening within the existing right-of-way. A 60/76 section could be achieved in this way. Cooperation from Alameda County is needed since the south side of the street is

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2. **Streets to be deleted from the Master Plan of City Street.**

The following streets are fully improved and no further widening is recommended. It is recommended that these streets be deleted from the Master Plan of City Streets.

Acapulco Road
Astor Drive
Aurora Drive
Belvedere Avenue
Benedict Drive
Bermuda Avenue
Best Avenue
Bigge Street
Broadmoor Boulevard
Burkhart Avenue
Corvallis Street
Dowling Boulevard
Edgehill Road
Evergreen Avenue
Farallon Drive
Farnsworth Street
Grand Avenue
Hemlock Street
Huff Avenue
Inverness Street
Juniper Street
Kesterson Street
Lafayette Street
Lake Chabot Road
Marineview Drive
Monterey Boulevard
Norton Street
Orchard Avenue
Ottawa Street
Portola Drive
Purdue Street
Russ Avenue
Scenicview Drive
School Street
Skyview Drive
Springlake Drive
Spruce Street
View Drive
Virginia Street
Vistagrand Drive
Wake Avenue
West Estudillo Avenue
Willow Street
Zelma Avenue
148th Avenue

C. Improvement Recommendations at Key Intersections

Appendix B contains a summary of the analysis of traffic operations at key intersections during the P.M. peak hour. The Volume/Capacity (V/C) and Level of Service (LOS) are shown for existing conditions in Column A and with future traffic volumes with the existing street improvements in Column B. Improvements needed to achieve an acceptable level of service for projected traffic conditions are listed in Column C. For some intersections alternative improvements are listed and their effects noted. As pointed out earlier in this report, the V/C ratios for future traffic conditions should be looked upon as general estimates of anticipated traffic conditions at the intersections rather than precise forecasts.

Certain intersections listed in Appendix B were evaluated for existing traffic conditions only. This was because either future turning movements had not been estimated or there was an abundance of capacity remaining and further analysis was unnecessary.

CHAPTER 5

Chapter 5

COSTS AND REVENUES

In the previous chapter, the street improvements were recommended that will be needed to accommodate future traffic. The cost of those improvements and the financial resources available to fund their construction is the subject of this chapter.

A. Estimated Improvement Costs

Appendix C contains a summary of the recommended street improvements and their respective construction costs. The construction cost was estimated based on current construction prices. There are no standardized costs for right-of-way, however. The City's recent experience on major federally funded projects is that right-of-way costs equal approximately 50% of construction costs. In some cases, right-of-way will be dedicated to the City as a condition of project approval, and in other cases improvements will be accomplished within existing City right-of-way, so the 50% figure is probably high for the improvements identified in this study. Therefore, for planning purposes, right-of-way costs were estimated to be 40% of construction costs and this amount was added to the construction cost summation in Appendix C.

The total cost, in 1986 dollars, to complete all of the unfunded improvements listed in Appendix C is $29 million ($21 million construction, $8 million right-of-way). However, this figure represents only the cost of projects for which improvements have been identified. The total cost will be well in excess of $30 million when improvements are included at locations requiring further study.

B. Highway Funding Overview

For many years gas tax revenue kept pace with highway construction and maintenance needs. In the past 15 years, however, the purchasing powerof gas tax revenues has dropped dramatically. The major causes of this are high inflation of road construction costs and reduced fuel use per vehicle. During the past 15 years, the annual fuel use per car has dropped 25%. During the same period, annual miles traveled per vehicle has increased. The California Automobile Association estimated in a recent article in MOTORLAND magazine (September-October, 1986) that the annual gas tax revenue generated per car has dropped from $53.00 in 1973 to $21.00 in 1984 (in equivalent 1973 dollars).

The other factor affecting highway financing is the increasing maintenance and reconstruction needs of our aging highway system. An ever increasing amount of highway funds is going for maintenance and reconstruction. And, correspondingly, a decreasing amount is going for constructing additional capacity.

This is true of local streets, too. Currently, San Leandro spends approximately $1 million annually for street maintenance, including work by City forces plus the annual slurry seal and asphalt overlay programs. An ongoing study by the Metropolitan Transportation Commission (MTC) found that the same rate of maintenance spending ($1 million/year) can keep the City's streets at about the same condition as today; but that an additional $1 million per year is needed to bring the City's streets up to an improved condition.

The combination of these factors, plus the extremely high cost of constructing street improvements in a built-up community like San Leandro, has created a highway financial crisis.

C. Current Funding Sources

In this section current funding sources for major projects are identified, forecasts of the amount of funds available from each source are made and the potential of each source for funding in this study are examined.

1. Federal Aid-Interstate Program (FAI): The FAI Program is funded from the Federal Highway Trust Fund and its use is restricted to interstate highways. Both I-880 and I-580 are eligible routes. With the passage of Measure B, it is estimated that the combination of interstate funds and Measure B funds will be sufficient to complete all improvements planned for I-880 in the next 15 year period.

2. Federal Aid-Urban Program (FAU): The FAU Program is also funded by the Federal Highway Trust Fund. The FAU Program provides funding for arterial streets that are designated on the Federal Aid-Urban system. All major arterial streets in San Leandro are on the FAU system. The FAU process is administered by Alameda County. Each year candidate projects are submitted by the cities, transit agencies, and the County. These projects are rated according to established criteria and priorities are established. A 14% local funding match is required. In the past there have been sufficient funds to finance only one or two major projects per year. (San Leandro has been fortunate in recent years to receive FAU funds for improvements on several major streets, including Davis Street, Halcyon Drive, Fairmont Drive and San Leandro Blvd.) The future amount of FAU funding is uncertain at this time and it is possible that funding could be reduced in the next Federal Surface Transportation Act. It is a viable potential funding source for future major projects in San Leandro.

3. State Gas Tax: San Leandro currently receives about $1,000,000 annually in gas tax revenue from the State. All of this revenue is used for street maintenance. Current revenues can maintain City

streets in generally the present condition; a doubling in annual revenue (an additional $1,000,000/year) is needed to provide a level of maintenance that can improve the pavement condition of the City's streets. This revenue source will probably remain at current levels until the Governor or the legislature enacts an increase. There appears to be no immediate prospect of that occurring.

4. Assessment District: An assessment district can be used to finance street improvements. With an assessment district, property that acrues benefit from an improvement is assessed to pay for the improvement in proportion to the benefit. An assessment district was recently established to help finance a portion of the Davis Street improvements.

5. Redevelopment: State law enables cities to establish a Redevelopment Agency, which is empowered to undertake redevelopment activities within the boundaries of a redevelopment project area. Improvements within the redevelopment project area can be financed by tax increment monies. These monies result from an increase in property valuation, which is realized because of the improvements made within the project area.

6. Development Fees: Many cities in Califoria are imposing fees on new development to finance street improvements needed to accommodate traffic from the developments. These fees are based on the proposition that growth must pay its own way. The legal basis for such fees is found in the police power of cities (Article XI, Section 7 of the California Constitution). Most of these fee programs use the fee revenue to finance specific improvements. The fee itself is related to the development's contribution to the traffic problem and is usually calculated in terms of square feet of building or peak hour trips. A benefit of these fee programs is that all development -- not just the large projects causing major impacts -- contributes toward traffic solutions.

   San Leandro has been imposing such fees as deposits against future Council action on projects requiring discretionary approval and where a traffic impact has been identified in the environmental review of the project.

7. Measure B: Alameda County voters recently approved a 1/2 cent sales tax increase for a 15 year period to finance a series of specific transportation projects and to provide funds for improving local transportation facilities. San Leandro's share of Measure B includes $13,500,000 to fund the widening of Marina Boulevard (from I-880 to San Leandro Blvd.), the extension of Teagarden Street (from Montague to Aladdin), and the extension of Fairway Drive over I-880 to connect

to Aladdin Avenue. In addition, for the next 15 years San Leandro will receive an annual allocation of approximately $1,000,000 for local street maintenance and construction.

It is clear that the currently available funding sources are sufficient to finance only a portion of future street construction and maintenance needs. Additional funding must be found to upgrade street maintenance (an additional $15 million over 15 years) and to construct future street improvements (over $30 million). Measure B provides the only uncommitted funds ($15 million over 15 years) to meet this need, leaving a shortfall of over $30,000,000.

CHAPTER 6

Chapter 6

IMPLEMENTATION

The actions required to implement the recommendations contained in this study are summarized in this chapter. They include adopting the Master Plan of City Streets (Revised) right-of-way recommendations, adopting new Plan Lines where needed, establishing a Street Improvement Fee to raise needed revenue, initiating additional special studies, and working closely with other agencies to address common transportation concerns.

A. Master Plan of City Streets (Revised)

Chapter 17 of Title VII of the San Leandro Municipal Code provides for the grant and improvement of right-of-way of City streets by property owners and land developers in accordance with a Master Plan of City Streets designed to accommodate increases of traffic generation brought about by land development and use. The Master Plan of City Streets recommendations are adopted by City Council resolution. The widening is to take place equally on both sides of the street. If the future right-of-way requirement is not equal on both sides, then a Plan Line is required. Larger corner radii are also called for on many Master Plan streets to handle commercial vehicles more conveniently. Appendix D contains the revised Master Plan of City Streets recommendations.

B. Plan Lines

A Plan Line describes the precise right-of-way requirements for future street widening. The establishment of Plan Lines is necessary when the future required right-of-way is offset from the existing street centerline. This may be for reasons of economy or traffic operations. The process for Plan Line adoption includes the preparation of a Plan Line report, which describes the Plan Line and the reasons for it, a public hearing before the Planning Commission, and a public hearing before the City Council. New or revised Plan Lines will be required on the following streets:

1. Adams Avenue - Doolittle to Hester.
2. Alvarado Street - Thornton to Marina.
3. Beatrice Street - Kesterson to Washington.
4. Castro Street - realignment with Sybil at East 14th Street.
5. East 14th Street - Juana to Blossom.
6. Estudillo Avenue - just easterly of Bancroft.

7. Fremont Avenue - Alvarado to Floresta.

8. Halcyon - at Washington and at Hesperian

9. Hesperian Blvd. - at Lewelling.

10. Juana Avenue - East 14th to Santa Rosa.

11. Lewelling Blvd. - Sedgeman to Hesperian.

12. Marina Blvd. - Aurora to Doolittle and I-880 to Clarke.

13. Preda Street - Minerva to North End.

14. Teagarden Street - Marina to Montague.

15. Washington Avenue - 143rd to Monterey and Fargo to City Limits.

16. West Juana Avenue - Hays to East 14th Street.

17. Willaims Street - at Doolittle, at Merced, and from Orchard to San Leandro Blvd.

C. Development Fee for Street Improvements

There are insufficient funds available from current sources to pay for the improvements needed to accommodate traffic generated by new development. Additional revenue is needed. The best source of additional revenue appears to be a development fee. It is recommended that a development fee be adopted with the specific purpose of raising revenue to pay for street improvements needed to accommodate new development. This is a reasonable and fair means of raising revenue, provided the fee applies to all new development and is in proportion to each development's contribution to the problem.

D. Special Studies

A number of special studies are recommended in this report to identify potential solutions to current or anticipated traffic problems. These include the following:

1. A study to evaluate through traffic in residential areas and identify ways to reduce its impact.

2. A study to evaluate future traffic conditions in the East 14th Street-Hesperian Blvd.-Bancroft Avenue-150th Avenue area and recommend alternate solutions.

3. A study to determine whether there is a feasible alignment for a Route 61 facility. Caltrans is now preparing a Project Study Report that addresses the transportation issues in the Route 61 Corridor.

4. An on-going study to update the Master Plan of Streets as development trends and traffic conditions change. City staff should monitor major development proposals and new transportation studies, and initiate an evaluation of Master Plan requirements as appropriate.

5. A study of the feasibility of an east/west corridor.

6. A study of alternate ways to achieve a link between Fairway Drive and Washington Avenue.

E. Cooperation with other Agencies

San Leandro is greatly affected by development and transportation decisions made by neighboring as well as regional agencies. Cooperation with these agencies is imperative. Other agencies must understand the objectives and concerns of San Leandro and vice-versa. In this regard, the following actions are recommended:

1. Continue as an active member of the Nimitz-Doolittle Corridor Transportation Study (NIMDOTS) Agency.

2. Work with Caltrans to assure rapid completion of I-880 improvements in San Leandro.

3. Participate in studies of the Route 61 corridor.

4. Participate with BART to improve parking and access at San Leandro's two BART stations. Also participate in planning at the Bayfair Station to accommodate the future extension to Dublin (now funded by Measure B).

5. Work closely with neighboring cities and Alameda County to assure that the impacts in San Leandro of development proposals in other jurisdictions are identified and appropriate mitigations proposed.

6. Continue working with AC Transit on route and stop changes and also to assure that the community's transit needs are met.

7. Work with all agencies to implement an area-wide park-and-ride lot plan.

8. Work with neighboring communities and the private sector to establish an area-wide TSM, or demand management, program.

APPENDICES

APPENDICES

Appendix A: Travel Forecasting Methodology

Appendix B: Summary of Analysis of Major Intersections

Appendix C: Summary of Improvements

Appendix D: The Revised Master Plan of City Streets

APPENDIX A

Travel Forecasting Methodology

APPENDIX A
Travel Forecasting Methodology

Future traffic projections were determined from future growth forecasts by a process involving identifying zones of growth, calculating the trips generated (both daily and PM peak hour) by the land uses in each zone, distributing the trips to the street system based on the most logical routes, and then summing the trips at key locations to determine the anticipated additional traffic. A total of 26 zones were used in this study. Four land use categories were used, namely industrial, office, retail, and residential. The general trip generation rates for these land uses were:

Industrial: 60 trips/acre of land, 18% during PM peak hour.

Office: 20 trips/1,000 sq. ft. of building, 16% during PM peak hour.

Retail: 50 trips/1,000 sq. ft. of building, 10% during PM peak hour.

Residential: 6-8 trips/unit, 10% during PM peak hour.

Using these rates the additional daily and PM peak hour trips were calculated for each zone. These projected trips were then distributed to the street system by the most logical path according to their origins and destinations, and based on data on existing work locations of San Leandro residents and residential locations of employees working in San Leandro, census data, travel data from Caltrans and the Metropolitan Transportation Commission (MTC), predictions made in previous EIRs and traffic reports, and existing traffic volumes and turning movement counts. The additional trips anticipated from each zone were then summed at key locations. The existing traffic volumes plus the sum of the additional trips generated by the forecast growth in each zone gave the anticipated future traffic volume at each key location. Detailed data is on file in the Community Development Department.

APPENDIX B

Summary of Analysis of Major Intersections

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS[1]/	FUTURE (2000) V/C	LOS[1]/	Improvements Needed
Adams-Doolittle	.69	C	.87	D	Widen 4 ft. on north side of Adams to complete recommended widening. Reevaluate as part of Route 61 study.
Alvarado-Davis	-----		.97	E	Reevaluate when Davis Street widened and Alvarado extended south across SPRR tracks.
Alvarado-Fremont	.44	A	.66	B	NONE.
Alvarado-Marina	.83	D	1.17	F	Recommended widening of Alvarado and Marina plus a northbound right turn only lane on Alvarado can achieve a LOS D.
Alvarado-Williams	.65	B	1.04	F	Recommended widening of Alvarado and Williams will achieve a LOS C.
Bancroft-Callan	.58	A	.69	B	Recommended widening of Bancroft.
Bancroft-Dolores	.62	B	.59	A	Recommended widening of Bancroft.
Bancroft-Dutton	.71	C	.84	D	Recommended widening on Bancroft and Dutton with new development. Also, removal of parking on Dutton near the intersection can achieve a LOS C.
Bancroft-Estudillo	.84	D	1.04	F	Alternate A - Widen Bancroft and Estudillo to existing Plan Lines can achieve LOS D. Alternate B - Recommended widening of Bancroft plus minimum widening to provide five lanes on Estudillo approaches can achieve LOS D.

1/ V/C= Volume-to-Capacity ratio. LOS = Level of Service.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
					Alternate C - No widening on Estudillo east of Bancroft; LOS remains F.
Bancroft-Juana	.51	A	.65	B	Recommended widening of Bancroft and Juana.
Bancroft-Sybil	.56	A	.63	B	Recommended widening of Bancroft.
Bancroft-136th	.56	A	.61	B	Recommended widening of Bancroft and 136th.
Bancroft-148th	.48	A	.55	A	Recommended widening of Bancroft.
Bayfair Dr.-East 14th	.68	B	.80	D	NONE.
Bayfair Dr.-Fairmont	.47	A	.67	B	NONE.
Bayfair Dr.-Hesperian	.56	A	.71	C	NONE.
Beatrice-Washington	.90	E	1.18	F	Recommended widening of the Washington overcrossing and Beatrice, plus the planned SR238 to I-880 connecting ramp can achieve a LOS E. Heavy turning movements plus the close proximity of the adjacent intersection on Beatrice will contribute to severe congestion in the future.
Broadmoor-East 14th	.59	A			Restripe to provide separate left turn lanes on East 14th Street.
Castro-East 14th-Sybil	.65	B			Realign Castro and Sybil.
Castro-Washington	.60	B	.69	B	Recommended widening of Washington and Castro.
Davis-Doolittle	.63	D	1.33	F	Long term improvements should be studied in conjunction with the Route 61 study.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
Davis-Douglas	.52	A	.81	D	Planned widening on Davis, and minor widening on Douglas.
Davis-East 14th-Callan	.64	B	.81	D	NONE.
Davis-Hays	.49	A	.66	B	Minor widening of the northeast corner is needed to provide separate left turn lane for northbound traffic.
Davis-San Leandro Blvd.	.92	E	1.23	F	Plan Line widening of Davis and San Leandro Blvd. can achieve LOS E. Additional widening would be needed to achieve LOS D.
Davis-Timothy-Warden	.68	B	.93	E	Major improvements will be added with the Westgate development. The need for additional improvements should be studied with the Route 61 study.
Dolores-East 14th	.74	C			Minor widening (2 ft.) within existing right-of-way on the westbound Dolores approach.
Dolores-Grand	.66	B			NONE.
Doolittle-Fairway	.52	A	1.02[2]/F		Short-term improvements include lengthening the southbound median left turn lane on Doolittle and providing an eastbound median left turn lane on Fairway. Long term improvements may be needed and additional study is required.
Doolittle-Marina	.66	B	1.23 [2]/F		Recommended widening of Marina. Improvements to Doolittle require additional study.
Doolittle-Williams	.64	B	1.00 [2]/F		Recommended widening of Williams plus additional widening (7 ft.) on the eastbound approach. Improvements to Doolittle require additional study.

[2]/ Assumes full development of the Harbor Bay/Oakland Airport areas, but no capacity increases on Doolittle at the Davis/Doolittle intersection.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
Drew-Hesperian	.40	A	.45	A	NONE.
Dutton-MacArthur	.56	A	.77	C	Restripe for left turn lanes on MacArthur, and widen Dutton eastbound approach 4 ft. within the existing right-of-way. Remove parking on MacArthur.
Dutton-East 14th	.77	C	.93	E	Minor widening (2 ft.) within the existing right-of-way on Dutton with new development. Also, incremental removal of parking on Dutton can achieve a LOS D.
East 14th-Estudillo	.70	C			NONE.
East 14th-Estabrook	.54	A			Recommended widening of East 14th and Estabrook.
East 14th-Fairmont	.73	C	.93	E	Minor widening (4 ft.) of East 14th to provide a northbound right turn only lane and restriping the westbound Fairmont approach to provide a dual left turn lane can achieve a LOS D. Widening for dual left turn lanes on East 14th Street can achieve LOS C.
East 14th-Hesperian	.95	E	1.19	F	Revise channelization to provide three lanes southbound in the short term. Study in conjunction with East 14th/150th and Hesperian/Louise for a long-term solution.
East 14th-Hays	.47	A			Widen East 14th if bridge is ever rebuilt.
East 14th-Joaquin	.51	A			Remove three parking spaces on the westbound Joaquin approach.
East 14th-Juana	.53	A			Recommended widening of Juana, plus additional widening (additional 4 ft.) to provide a two-lane westbound approach. Remove five parking spaces on Juana.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
East 14th-San Leandro Blvd.	.68	B	.88	D	Widening of East 14th 6 ft. to provide three southbound lanes through the San Leandro Blvd. and 136th Ave. intersections can achieve a LOS C.
East 14th-136th Ave.	.63	B	.91	E	Recommended widening of 136th. See "East 14th-San Leandro Blvd." for recommendation on San Leandro Blvd.
East 14th-143rd Ave.	.67	B	.93	E	Revising channelization within existing right-of-way to provide three lanes southbound on East 14th can achieve a LOS D.
East 14th-148th Ave.	.67	B			NONE.
East 14th-150th Ave.	.67	B	.89	D	See "East 14th-Hesperian".
Estudillo-MacArthur	.85	D	1.07	F	Eliminating parking on west side of MacArthur to provide left turn lanes can achieve LOS E. Improvements relate to decisions at Bancroft/Estudillo.
Estabrook-Washington	.52	A	.61	B	Recommended widening of Washington and Estabrook.
Fargo-Washington	.73	C	.98	E	Three lanes southbound plus either dual left turn lanes southbound or an additional lane westbound are needed to achieve LOS C.
Farnsworth-Lewelling	.57	A	.91	D	Revise signal operation.
Farnsworth-Manor	.83	D	.97	E	Possible future signal.
Fairway-Merced	.78	C	1.00[3]/	F	Plan line widening on Merced and recommended widening on Fairway needed to achieve LOS C/D.

[3]/ Without Fairway overcrossing.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
Floresta-Fremont	.59	A	.81	D	Recommended widening of Fremont.
Floresta-Monterey	.49	A			Possible future traffic signal.
Grand-Sybil	.53	A			NONE.
Hays-West Juana	.40	A			NONE.
Hays-Williams					Evaluate traffic signal removal.
Halcyon-Washington	.89	D	1.20	F	Widen for dual left turn lanes on each approach and separate northbound and southbound right turn only lanes to approach LOS E/F. Additional widening of Washington or Floresta needed to achieve LOS E or better.
Halcyon-Hesperian	.75	C	.99	E	Provide separate eastbound right turn only lane to approach LOS D/E.
Hesperian-Lewelling	.95	E	1.16	F	Major improvements needed to achieve LOS D. Widen southbound approach to provide three through lanes and a right turn only lane. The remainder of the intersection is outside City limits. Widening of Lewelling will be needed, also.
Hesperian-Louise	.53	A	.65	B	Evaluate in conjunction with East 14th/Hesperian and East 14th/150th Ave.
Hesperian-Springlake	.78	C	.67	B	Improved conditions due to planned westbound SR238 to southbound I-880 connector.
Hesperian-Thornally	.57	A	.63	B	Evaluate further for impact of BART extension to Pleasanton.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
Lewelling-Washington	.97	E	1.24	F	Major improvements including six through lanes on Washington, four on Lewelling, dual left turn lanes on all approaches, and a separate southbound right turn only lane on Washington needed to achieve LOS E. Roberts Landing will have a major impact.
Lewelling-Wicks	.52	A			Future improvements depend on Roberts Landing development.
Lewelling-I-880 SB Off Ramp	.81	D	1.01	F	Widening Lewelling for separate eastbound right turn only lane can achieve LOS C.
Manor-Wicks	.64	B	.96	E	Circulation decisions made for the Roberts Landing project will affect this intersection.
Marina-Merced	.81	D	1.02	F	Providing four lanes on southbound approach and three through lanes on eastbound approach can achieve LOS D/E. The Fairway extension to Aladdin will relieve this intersection to some extent.
Marina-San Leandro Blvd.	.68	B	1.04	F	Widening Marina westbound approach for two lanes, restriping San Leandro Blvd. for a free eastbound right turn lane and providing a dual left turn lane northbound can achieve LOS C/D.
Marina-Teagarden	.65	B	1.42	F	Recommended widening of Marina plus realignment and widening of Teagarden to provide two northbound left turn lanes can achieve LOS D.
Marina-Washington	.55	A	.66	B	Recommended widening of Washington.
Merced-Wicks	.53	A	.67	C	Revise signal operations.

APPENDIX B - SUMMARY OF ANALYSIS OF MAJOR INTERSECTIONS

	A		B		C
Intersection	EXISTING (1987) V/C	LOS	FUTURE (2000) V/C	LOS	Improvements Needed
Merced-Williams	.57	A	.75	C	Widen Williams 8 ft. on north side to provide dual westbound left turn lanes needed for increased storage.
Monterey-Washington	.71	C	.88	D	Add separate left turn signal phases.
Orchard-Williams	.63	B	.74	C	Possible future traffic signal.
Parrott-Washington	.47	A			Recommended widening of Washington.
San Leandro Blvd.-Washington	.47	A	.66	B	NONE.
San Leandro Blvd.-Williams	.54	A	.91	E	Recommended widening of Williams will achieve LOS C/D.
San Leandro Blvd.-West Juana	.37	A	.46	A	NONE.
Springlake-Washington	.53	A	.69	B	Reserve right-of-way on north side of Washington for possible northbound on-ramp and bridge widening.
Washington-West Juana	.48	A			Planned widening of West Juana and Washington.
Washington-Williams	.46	A			Planned widening of Washington.
Washington-143rd Ave.	.42	A	.58	A	NONE.
Washington-I-880 NB Off-Ramp	.83	D	.87	D	With planned westbound SR238 to southbound I-880 connector.

APPENDIX C

Summary of Improvements

APPENDIX C: SUMMARY OF IMPROVEMENTS

	Street	From - To	Future Improvement	Est. Construction Cost (in $1,000)
1.	Adams Ave.	Hester to Doolittle	Widen N side 4 ft.	120
2.	Aladdin Ave.	At Alvarado	Widen S side 3 ft.	15
3.	Alvarado Ave.	Thornton to Marina Marina to Aladdin	Widen to 48 ft. curb-to-curb (c/c) Widen 64 ft. c/c	1,310 790
4.	Bancroft Ave.	N city limits to East 14th St.	Widen with land use changes	Unknown
5.	Beatrice St.	I-880 ramp to Washington	Widen for 3 lanes eastbound	210 (Caltrans)
6.	Callan Ave.	Harrison to Huff	Widen to 4 lanes	150
7.	Castro St.	San Leandro Blvd./East 14th St.	Widen to 40 ft. c/c and realign Castro/Sybil at East 14th St.	165
8.	Clarke St.	W. Estudillo to W. Juana W. Juana to Marina	Widen to 44 ft. c/c Widen to residenital collector street standard	105 450
9.	Davis St.	Neptune to Doolittle Doolittle to I-880 I-880 to Carpentier St.	Widen to 48 ft. c/c Major improvements Major improvements	370 Unknown FAU, Assmt. Dist.
10.	Dolores St.	At East 14th St.	Minor widening N side	60
11.	Doolittle Dr.	Davis to Fairway Fairway to End.	Widen to 84 ft. c/c Undetermined	1,600 Unknown
12.	Douglas Dr.	Virginia to Davis	Minor widening	45
13.	Dutton Ave.	At East 14th/Bancroft/Dutton	Minor widening at intersections	300

APPENDIX C: SUMMARY OF IMPROVEMENTS

	Street	From - To	Future Improvement	Est. Construction Cost (in $1,000)
14.	East 14th St.	Dolores to Blossom	Widen for 4 lanes plus median turn lane	1,200
		Bancroft to 150th Ave.	Major improvements	Unknown
		At 143rd Ave.	Channelize for 3 southbound lanes	65
15.	Estudillo Ave.	Santa Rosa - Bancroft Ave.	Widen for 4 lanes plus median turn lane	800
		East of Bancroft Ave.	Widen for 2 lanes eastbound through intersection	110
16.	Estabrook St.	Washington - East 14th St.	Widen to residential collector street standard	400
17.	Fairway Dr.	I-880 Overpass		Funded
18.	Fargo Ave.	At Lewelling School	Widen to residential collector street standard	50
19.	Fremont Avenue	Alvarado-Floresta	Widen on industrial side	Unknown
20.	Haas Ave.	At East 14th St.	Minor widening	50
21.	Halcyon Dr.	At Washington	Major improvements	750
		At Hesperian	Eastbound right turn lane	75
22.	Hays St.	W. Juana - Castro	Widen to residential collector street standard	325
23.	Hesperian Blvd.	At Lewelling	Southbound right turn lane	210
24.	Juana Ave.	East 14th Street - Santa Rosa	Widen to 44 ft. c/c	90
		Santa Rosa - Bancroft	Widen to residential collector street standard	270
25.	Lewelling Blvd.	At Washington	Major widening	506
		At Embers Way	Eastbound right turn lane	40
		Embers to Hesperian	Major improvements	Unknown

APPENDIX C: SUMMARY OF IMPROVEMENTS

	Street	From - To	Future Improvement	Est. Construction Cost (in $1,000)
25.	Marina Blvd.	West of Doolittle	Widening for 2 lanes eastbound	155
		Doolittle to Merced	Widening to 64 ft. c/c	1,310
		I-880 - San Leandro Blvd.	Major widening	Funded
		San Leandro Blvd. - Clarke	Widen north side 8 ft.	55
26.	Merced St.	Williams to Wicks	Four lanes plus median turn lane	765
27.	Neptune Dr.	Williams to Davis	New 48/60 street	Developer Funded
28.	Preda Street	At north end	Undetermined	Unknown
29.	San Leandro Blvd.	San Leandro Creek to Best	Widen to 64 ft. c/c	190
		At Marina	Free right turn from Marina	35
		Davis to San Leandro Creek	Major widening	FAU
30.	Santa Rosa St.	Estudillo - Juana	Widen to residential local standard	90
31.	Teagarden St.	Montague to Aladdin	New 46/60 street	Funded
		At Marina	Realign with Wayne	Unknown
32.	Thornton	Near Alvarado	Widen to industrial local standard	35
33.	Washington Ave.	W. Juana to San Leandro Blvd.	Widen to 56 ft. c/c	2,095
		Springlake to Fargo	Add 3rd lane southbound	1,670
		Fargo to Lewelling	Southbound right turn lane	150
34.	W. Juana	San Leandro Blvd. to E. 14th St.	Widen to 62 ft. c/c	400

APPENDIX C: SUMMARY OF IMPROVEMENTS

Street	From - To	Future Improvement	Est. Construction Cost (in $1,000)
35. Williams	West of Doolittle	Minor widening, south side	65
	Doolittle to I-880		1,145
	At I-880	Improve interchange	Caltrans/FAI
	Orchard-Alvarado	Widening	180
	Alvarado to San Leandro Blvd.	Four lanes, median turn lane; bike lanes	435
	Washington to E. 14th St.	Widen to residential collector standard.	Unknown
36. 136th St.	E. 14th to Bancroft	Widen south side 3 ft.	80
37. 150th Ave.	E. 14th to City Limits	Widen to 64 ft. c/c	385 (1/2 of street
38. Misc.	Various locations	10 new traffic signals	1,000
	TOTAL CONSTRUCTION COST:		20,871,000
	ESTIMATED RIGHT OF WAY COST (at 40% of construction cost):		8,350,000
	TOTAL COST *		29,200,000

*This represents the estimated total cost of projects with identified improvements. The total cost will increase well beyond $30 million when projects requiring futher study are included.

APPENDIX D

The Revised Master Plan of City Streets

APPENDIX D
The Revised Master Plan of City Streets

The Revised Master Plan of City Streets is the document that the City Council will finally adopt. Each street or street segment on which additional widening is recommended is listed. If a street is not listed, no further widening is recommended.

The Revised MPCS lists the street name, the boundaries of the segment, the classification of the street, and the existing and designated curb-to-curb and right-of-way widths. The designated widths are those recommended for adoption. A chart of Typical Street Sections is included.

The classification of streets indicates the function of the street and the type of traffic anticipated to use it. The classification also identifies the appropriate property line radius in the table in Appendix D. The classification letters stand for the following:

LR - Local street, residential area

LC - Local street, commercial area

LI - Local street, industrial area

CR - Collector street, residential area

CC - Collector street, commercial area

CI - Collector street, industrial area

A - Arterial street, all areas

An asterick (*) after a street name indicates that the future widening recommended may not be even on both sides of the street, and therefore a Plan line will be needed.

APPENDIX D
Revised Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Curb to Curb/ Right of Way Widths Existing	Curb to Curb/ Right of Way Widths Designation
Adams Ave.	*	Doolittle	Hester	CI	48/64	52/64
Alvarado St.	*	Davis	Williams	A	36/60-52/68	52/68
	*	Williams	Fremont	A	36/60-64/76	64/80
Bancroft Ave.		North C/L	136th	A	40/60-56/80	64/80
		136th	East 14th	CR	36/60-48/60	48/60
Beatrice St.	*	Washington	I-880 Ramp	CC	30/50	54/74
Callan Ave.	*	Harrison	Huff	A	50/66	64/80
Castro St.	*	San Leandro Blvd.	East 14th	CR	36/60	40/60
Clarke St.		W. Estudillo	West Juana	CC	36/60-44/60	44/60
		West Juana	Marina	CR	36/60	40/60
Davis St.		Doolittle	Neptune	CI	36/50-48/60	48/60
Dolores Ave.		East 14th	Santa Rosa	CC	40/60	44/60(C)[1]
Doolittle Dr.		Davis	South End	A	64/80-68/84	84/104
Douglas Dr.		Virginia	Davis	CR	40/60	44/60
Dutton Ave.		Best	MacArthur	CC	40/60	44/60(C)[1]
East 14th St.		Juana	Blossom	A	48/66	70/90
	*	San Leandro Blvd.	136th	A	80/100	86/106
		Hesperian	150th	A	80/100	Study
Eden Road		Doolittle	West End	LI	0/0	41/50
Estabrook St.		Washington	East 14th	CR	36/60	40/60
Estudillo Ave.	*	Huff	Bancroft	A	46/60	64/80
	*	Bancroft	San Jose	A	46/60	57/73
Fairway Dr.	*	S.P.R.R.	I-880	A	48/60	64/80
Fargo Ave.		Washington	Norton	CR	32/50-53/70	40/60

[1] (C) = in commercial zones
* Plan Line Street

APPENDIX D
Revised Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Curb to Curb/ Right of Way Widths Existing	Curb to Curb/ Right of Way Widths Designation
Fremont Ave.		Alvarado	Floresta	A	48/60	64/76
Haas Ave.		East 14th	Karol	CR	36/52	44/60(C)[1]
Halcyon Dr.	*	Washington	S.P.R.R.	A	72/88	92/108
	*	Addison	Hesperian	A	72/88	84/104
Hays St.		West Juana	Castro	CC	37/60	44/60(C)[1] 40/60(R)[2]
Hesperian Blvd.	*	East 14th	Grace	A	48/56	Study
	*	Sycamore	Lewelling	A	104/124	118/138
Juana Ave.		East 14th	Santa Rosa	CC	36/60	44/60
		Santa Rosa	Bancroft	CR	36/60	40/60
Lewelling Blvd.		West End	Wicks	A	0/104	Study
	*	Wicks	Washington	A	74/92	74/92
	*	Washington	Hesperian	A	64/80	64/84
Manor Blvd.		Farnsworth	Kesterson	CR	32/50-42/60	42/60
Marina Blvd.	*	Neptune	Doolittle	A	48/60	48/60
	*	Doolittle	Merced	A	48/60-64/80	64/80
	*	I-880	San Leandro Blvd.	A	48/60	Study
	*	San Leandro Blvd.	Clarke	CC	48/60	56/68
Merced St.	*	Williams	Wicks	A	48/60	64/80
Neptune Dr.		Davis	Williams	CI	0-48/60	48/60
Peralta Ave.		San Leandro Blvd.	West End	LI	0-40/48	44/60
Phillips Ln.		Davis	North End	LI	0	44/60
San Leandro Blvd.		Best	San Leandro Creek	A	60/80	64/80
	*	San Leandro Creek	Davis	A	60/80	Varies

[1] (C) = in commercial zones

[2] (R) = in residential zones.

* Plan Line Street

APPENDIX D
Revised Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Curb to Curb/ Right of Way Widths Existing	Designation
Santa Maria		Estudillo	Dolores	LR	30/50	36/50
Santa Rosa		Estudillo	Dolores	LR	30/50	36/50
Teagarden St.	*	Marina	Aladdin	CI	0-46/60	46/60
Thornton St.		Orchard	Alvarado	LI	36/60	44/60(I)[3]
Timothy Dr.		Davis	William	CR	Varies	Study
Washington Ave.		West Juana	Estabrook	A	40/60	56/72
	*	Estabrook	Marina	A	40/60	58/74
		Marina	San Leandro Blvd.	A	40/60	56/72
	*	San Leandro Blvd.	Monterey	A	Varies	Study
	*	Monterey	South C/L	A	Varies	Varies
West Juana Ave.		San Leandro Blvd.	Washington	A	56/80	62/82
		Washington	East 14th St.	A	52/80	56/80
Wicks Blvd.		Farallon	Lewelling	A	56/84-64/84	64
Williams St.	*	Nome	Doolittle	CI	42/60	42/60
		Doolittle	Merced	A	48/60	54/67
	*	Merced	Timothy	A	48/60	56/68
		Timothy	I-880	A	48/60	54/67
	*	Orchard	Alvarado	A	46/60	54/70
		Alvarado	San Leandro Blvd.	A	46/60	70/86
		Washington	East 14th	CR	30/50	40/60
136th Ave.	*	East 14th	Bancroft	CC	32/50-38/56	42/60
150th Ave.		Hesperian	East C/L	A	56/76	70/86

[3] (I) - in industrial zones.
* Plan Line Street

APPENDIX D

Intersecting Right-of-Way Line Radii

Intersecting right of way lines shall be joined with a circular curve having minimum corner radii, measured in feet, according to the following table. The lowest functional classification of street involved shall apply.

Street Classification		Radius	Land Use Zone
Local Streets:	LR	10	Residential
	LC	20	Commercial
	LI	30	Industrial
Collector Streets:	CR	20	Residential
	CC	30	Commercial
	CI	40	Industrial
Arterial Streets:	A	40	All zones.

Minimum Corner Radii

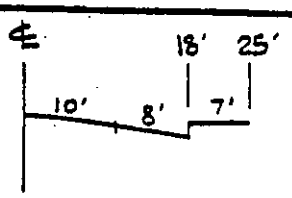
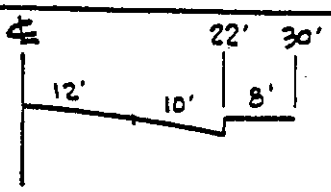
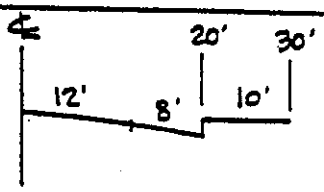
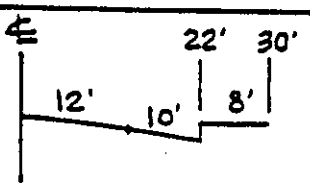
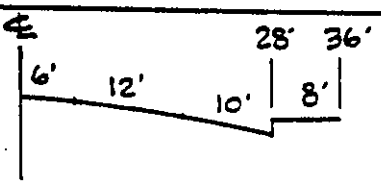
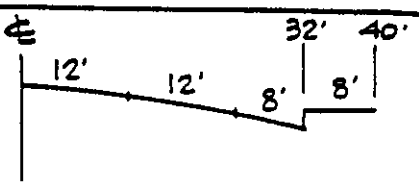
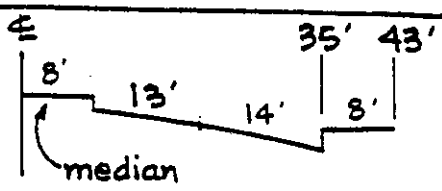
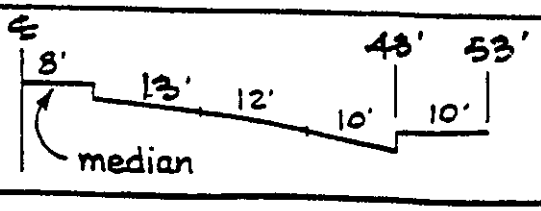
All streets shall conform to the above radii.

Minimum Street Width

The minimum street width shall be 36/50.

APPENDIX D

TYPICAL STREET SECTIONS

CLASSIFICATION	DESCRIPTION	STREET SECTION (1/2 WIDTH SHOWN)
LR	LOCAL RESIDENTIAL STREET 36/50	
LC LI	LOCAL COMMERCIAL OR INDUSTRIAL STREET 44/60	
CR	RESIDENTIAL COLLECTOR STREET 40/60	
CC CI	COMMERCIAL OR INDUSTRIAL COLLECTOR STREET 44/60	
A	2-LANE ARTERIAL STREET 56/72	
	4-LANE ARTERIAL STREET 64/80	
	4-LANE ARTERIAL STREET 70/86	
	4-LANE ARTERIAL STREET 86/106	

IN THE CITY COUNCIL OF THE CITY OF SAN LEANDRO

RESOLUTION NO. 88 - 26 (1176)

RESOLUTION APPROVING AND ADOPTING LISTING OF MINIMUM RIGHT-OF-WAY DESIGNATIONS FOR THE MASTER PLAN OF CITY STREETS

Recitals

There has been submitted to the City Council a report entitled "Master Plan of City Streets - San Leandro 1988". This report analyzes existing traffic conditions, makes future traffic projections and describes right-of-way and intersection improvements sufficient to accommodate future traffic. Appendix D to the report as modified and attached hereto as Exhibit "A", constitutes a listing of "Minimum Right-of-Way Designations for the Master Plan". When adopted by this Council, it will constitute the current resolution establishing the Master Plan of City Streets pursuant to Chapter 8, Title VII of the San Leandro Municipal Code.

The Council has further received and reviewed the negative declaration prepared for this matter.

The Council finds and declares that the "Listing of Minimum Right-of-Way Designations for the Master Plan of City Streets" is a planning document. Approval thereof does not in any way constitute approval or disapproval of any specific street widening, extension, realignment, right-of-way acquisition or abandonment. Any public or private project which contemplates or requires the construction of specific street projects will necessitate future discretionary approvals of the Council and all appropriate reviews, environmental clearances, notice and hearings required by law.

NOW, THEREFORE, the City Council of the City of San Leandro does RESOLVE as follows:

The City Council of the City of San Leandro does hereby approve and adopt the negative declaration and directs the City Clerk to forthwith file a Notice of Determination as required by law, and

FURTHER RESOLVES that Appendix "D", as modified, of the report "Master Plan of City Streets" is hereby approved and adopted for purposes of Chapter 8, Title VII of the San Leandro Municipal Code.

Introduced by Council Member Glaze and passed and adopted this 7th day of March, 1988, by the Following vote:

Members of the Council:

Ayes:	Council Members Faria, Glaze, Jardin, McGue, Suchman; Vice Mayor Santos	(6)
Noes:	None	(0)
Absent:	Mayor Karp	(1)

ATTEST: _____
G. L. DENNEHEY, City Clerk

Listing of Minimum Right-of-Way Width Designations for Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Right-of-Way Width Designation
Adams Ave.	*	Doolittle	Hester	CI	64
Alvarado St.	*	Davis	Williams	A	68
	*	Williams	Fremont	A	80
Bancroft Ave.		North C/L	136th	A	80
		136th	East 14th	CR	60
Beatrice St.	*	Washington	I-880 Ramp	CC	74
Callan Ave.	*	Harrison	Huff	A	80
Castro St.		Alvarado	San Leandro Blvd.	CI	60
	*	San Leandro Blvd.	East 14th	CR	60
Clarke St.		W. Estudillo	West Juana	CC	60
		West Juana	Marina	CR	60
Davis St.		Doolittle	Neptune	CI	60
Dolores Ave.		East 14th	Santa Rosa	CC	60(C)[1]
Doolittle Dr.		Davis	South End	A	104
Douglas Dr.		Virginia	Davis	CR	60
Dutton Ave.		Best	MacArthur	CC	60(C)[1]
East 14th St.		Juana	Blossom	A	90
	*	San Leandro Blvd.	136th	A	106
		Hesperian	150th	A	100
Eden Road		Doolittle	West End	LI	50
Estabrook St.		Washington	East 14th	CR	60
Estudillo Ave.	*	Huff	Bancroft	A	80
	*	Bancroft	San Jose	A	73
Fairway Dr.		S.P.R.R.	I-880	A	80
Fargo Ave.		Washington	Norton	CR	60

[1] (C) = in commercial zones

* Plan Line Street

Listing of Minimum Right-of-Way Width Designations for Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Right-of-Way Width Designation
Fremont Avenue		Alvarado	Floresta	A	76
Haas Ave.		East 14th	Karol	CR	60(C)[1]
Halcyon Dr.	*	Washington	S.P.R.R.	A	108
	*	Dillo	Hesperian	A	104
Hays St.		West Juana	Castro	CC/CR	60(C)[1] 60(R)[2]
Hesperian Blvd.	*	East 14th	Grace	A	84
	*	Sycamore	Lewelling	A	138
Juana Ave.		East 14th	Santa Rosa	CC	60
		Santa Rosa	Bancroft	CR	60
Lewelling Blvd.		West End	Wicks	A	104
	*	Wicks	Washington	A	92
	*	Washington	Hesperian	A	84
Marina Blvd.	*	Neptune	Doolittle	A	60
	*	Doolittle	Merced	A	80
	*	I-880	Teagarden	A	129
	*	Teagarden	Alvarado	A	106
	*	Alvarado	San Leandro	A	92
	*	San Leandro Blvd.	Clarke	CC	68
Merced St.	*	Williams	Wicks	A	80
Peralta Ave.		San Leandro Blvd.	West End	LI	60
Phillips Ln.		Davis	North End	LI	60
San Leandro Blvd.		Best	San Leandro Creek	A	80
	*	San Leandro Creek	Davis	A	112

[1] (C) = in commercial zones

[2] (R) = in residential zones.

* Plan Line Street

Listing of Minimum Right-of-Way Width Designations for Master Plan of City Streets

Street Name		Termini From	Termini To	Class.	Right-of-Way Width Designation
Santa Maria		Estudillo	Dolores	LR	50
Santa Rosa		Callan	Dolores	LR	50
Teagarden St.	*	Marina	Aladdin	CI	60
Thornton St.		Orchard	Alvarado	LI	60(I)[3]
Timothy Dr.		Davis	William	CR	60
Washington Ave.		West Juana	Estabrook	A	72
	*	Estabrook	Marina	A	74
		Marina	San Leandro Blvd.	A	72
	*	San Leandro Blvd.	Anza	A	84
	*	Anza	Fargo	A	106
	*	Beatrice	Fargo	A	120
	*	Fargo	Lewelling	A	133
	*	Lewelling	South C/L	A	120
West Juana Ave.		San Leandro Blvd.	Washington	A	82
		Washington	East 14th St.	A	80
Wicks Blvd.		Farallon	Lewelling	A	84
Williams St.	*	Nome	Doolittle	CI	60
		Doolittle	Merced	A	67
	*	Merced	Timothy	A	68
		Timothy	I-880	A	67
	*	Orchard	Alvarado	A	70
		Alvarado	San Leandro Blvd.	A	86
		Washington	East 14th	CR	60
136th Ave.	*	East 14th	Bancroft	CC	60
150th Ave.		Hesperian	East C/L	A	86

[3] (I) - in industrial zones.

* Plan Line Street

Intersecting Right-of-Way Line Radii

Intersecting right of way lines shall be joined with a circular curve having minimum corner radii, measured in feet, according to the following table. The lowest functional classification of street involved shall apply.

Street Classification		Radius	Land Use Zone
Local Streets:	LR	10	Residential
	LC	20	Commercial
	LI	30	Industrial
Collector Streets:	CR	20	Residential
	CC	30	Commercial
	CI	40	Industrial
Arterial Streets:	A	40	All zones.

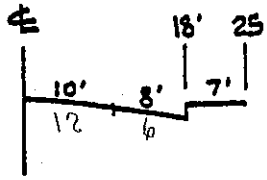
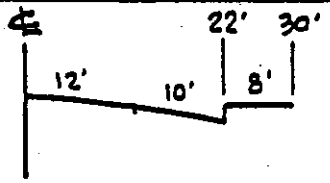
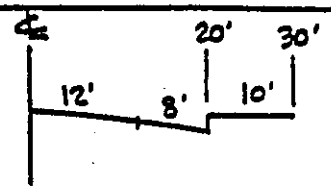
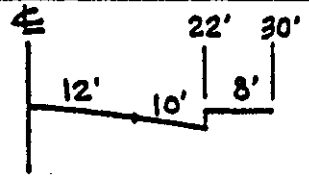
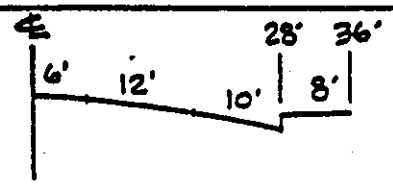
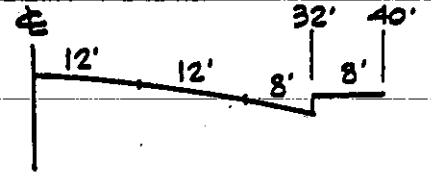
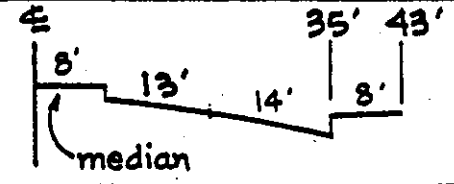
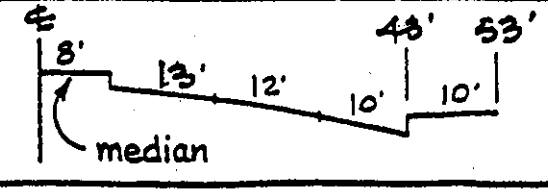
Minimum Corner Radii

All streets shall conform to the above radii.

Minimum Street Width

The minimum street width shall be 36/50.

TYPICAL STREET SECTIONS

CLASSIFICATION	DESCRIPTION	STREET SECTION (1/2 WIDTH SHOWN)
LR	LOCAL RESIDENTIAL STREET 36/50	
LC LI	LOCAL COMMERCIAL OR INDUSTRIAL STREET 44/60	
CR	RESIDENTIAL COLLECTOR STREET 40/60	
CC CI	COMMERCIAL OR INDUSTRIAL COLLECTOR STREET 44/60	
A	2-LANE ARTERIAL STREET 56/72	
	4-LANE ARTERIAL STREET 64/80	
	4-LANE ARTERIAL STREET 70/86	
	4-LANE ARTERIAL STREET 86/106	

IN THE CITY COUNCIL OF THE CITY OF SAN LEANDRO

RESOLUTION NO. 2000- 42 (1428/1176)

RESOLUTION REMOVING VARIOUS STREETS
IDENTIFIED TO BE WIDENED CITY-WIDE AND
AMENDING THE 1988 MASTER PLAN OF CITY STREETS

Recitals

The City Council approved the "Master Plan of City Streets" by Resolution No. 88-26 on March 7, 1988 and subsequently identified the Master Plan of City Streets as specific plan "necessary and convenient for the implementation of the General Plan of the City" in Ordinance No. 88-023, Section 7-11-155, passed October 6, 1988.

The Master Plan of City Streets provided a list of streets with specific improvements recommended to facilitate the planned development and growth in the City. Since the adoption of the Master Plan, the City's demographics, rate of development, and community concerns regarding the quality of life have changed.

Based upon the changes that have occurred within the City, staff has reviewed all of the streets that were identified for improvements and has concluded that a number of streets no longer require the improvements that were identified in the 1988 Master Plan.

NOW, THEREFORE, the City Council of the City of San Leandro does RESOLVE as follows:

That the Master Plan of City Streets is amended to eliminate the streets identified on the attached exhibit from the 1988 Master Plan.

Introduced by Council Member Glaze and passed and adopted this 3rd day of April 2000, by the following called vote:

Members of the Council:

AYES: Council Members Galvan, Glaze, Grant, Loeffler, Lothrop; Mayor Young (6)

NOES: None (0)

ABSENT: Council Member Nardine (1)

Attest: Gayle Petersen
Gayle Petersen, City Clerk

RECOMMENDED STREETS TO BE REMOVED FROM 1988 MPCS

STREET	FROM	TO	EXISTING WIDTH	1988 MPCS	PROPOSED WIDENING
Adams Avenue	Hester Street	Doolittle Drive	48/64	52/64	N/S 4feet
Aladdin Avenue	Alvarado St	Alvarado St.	41/60	44/60	S/S 3 feet Complete
Callan Avenue	Harrison Street	Huff Avenue	50/66	64/80	Widen to 4 lanes
Castro Street	S. L. Boulevard	East 14th St.	36/60	40/60	Widen to 40 feet
Clarke Street	W.Estudillo Ave	W. Juana Ave	36/60	44/60	Widen to 44 feet
Douglas Drive	Virginia Street	Davis Street	40/60	44/60	Widen 4 feet
East 14th Street	Dolores Ave	Blossom Way	48/66	70/90	4 lanes plus median
East 14th Street	At 143rd Ave		80/100	86/106	3 southbound lanes
Estudillo Avenue	Santa Rosa St.	Bancroft Ave	46/60	64/80	4 lanes plus median
Estabrook Street	Washington Ave	East 14th St.	36/60	40/60	Widen to 40 feet
Fremont Avenue	Alvarado St.	Floresta Blvd.	48/60	64/76	Widen industrial side
Hays Street	Juana Ave.	Castro St.	37/60	44/60	Widen to 40 feet
Juana Avenue	East 14th St.	Santa Rosa St.	36/60	44/60	Widen to 44 feet
Juana Avenue	Santa Rosa St.	Bancroft Ave	36/60	40/60	Widen to 40 feet
Marina Blvd	W/O Doolittle Dr.		48/60	48/60	2 lanes eastbound
Marina Blvd	S.L. Boulevard	Clarke St.	48/60	56/68	Widen to 8 feet N/S
Santa Rosa St	Estudillo Ave	Juana Ave	30/50	36/50	Widen to 36 feet

Thornton Street	Orchard Ave	Alvarado St.	36/60	40/60	Widen to 40 feet
Washington Ave	W Juana Ave	S.L. Boulevard	40/60	56/72	Widen to 56 feet
West Juana Ave	S.L. Boulevard	East 14th St	56/80	62/80	Widen to 62 feet
Williams Street	W/O Doolittle Dr		42/60		Minor widening S/S
Williams Street	Washington Ave	East 14th St	30/50	40/60	Widen to 40 feet
136th Avenue	East 14th St.	Bancroft Ave	38/56	41/56	Widen 3 feet S/S
	East 14th St.	Bancroft Ave	32/50	35/50	Widen 3 feet S/S
150th Ave	East 14th St.	City Limits	56/76	64/76	Widen to 64 feet
