CUMULATIVE IMPACTS

CUMULATIVE IMPACTS

This section enumerates the quantifiable and non-quantifiable cumulative impacts (significantly beneficial or adverse) of adoption and implementation of the Central City Redevelopment Plan.

The CCRP would, over time, coordinate land and transportation resources, increase economic activity, and strengthen the linkages between major activity centers. The cost of these benefits would be significant long-term adverse impacts, most notably increased vehicular activity and air pollution and increased living costs; the latter impact would be felt most heavily by low and moderate income residents. Short term adverse impacts include decreased mobility during construction phases and disruption of existing business and residential activity due to relocations. A full enumeration of the cumulative impacts is listed on the following pages. Mitigation measures for those significant adverse impacts which can be avoided or reduced are found in the body of the text under their respective subject headings.

BIO-PHYSICAL

Geology/Soils

- Intensification of land use in areas of seismic and compressible soil hazards. The entire planning area is subject to such hazards, most susceptible is the East Beach area.

Hydrology/Flood

- Increase in area covered by impervious surfaces resulting in additional runoff.

- Intensification of land use in an area subject to flood hazard.

Biotic Communities

- Potential comulative loss of significant street and specimen trees.

Air Quality

- Increased vehicle miles traveled resulting in the addition of:

Carbon Monoxide	- 340 to 600 tons	**1980**
Hydrocarbons	- 45 to 80 tons	
Nitric Oxide	- 48 to 85 tons	
Particulate Matter	- 9 to 16 tons	

- Increased vehicle miles traveled resulting in the addition of:

Carbon Monoxide	- 390 to 676 tons	**1990**
Hydrocarbons	- 56 to 96 tons	
Nitric Oxides	- 62 to 106 tons	
Particulate Matter	- 16 to 28 tons	

Noise

- Increased surface street noise on some central city streets.

Archaeological/Historical/Cultural Concerns

- Potential cumulative loss of Victorian and/or other historically/culturally significant structures.

SOCIO-ECONOMIC CONCERNS

- Cumulatively, the changes in land use and zoning would adjust the land use resource to better serve community needs.

- Reductions of C-M and M-1 zoned area could result in increased land use intensity and higher space and consumer goods costs:

  - C-M and M-1 area rezoned to R-4: approximately 130 acres.

  - C-2 area rezoned to R-3: approximately 30 acres.

  - C-M area rezoned to C-2: approximately 37 acres.

  - C-P area rezoned to C-2: approximately 1 acre.

  - Occupied commercial space subject to relocation 2,217,488 sq. ft.

Housing

- Total housing supply increased and supply of private low and moderate income housing decreased. Increase in housing costs could result.

  - New moderate high income private housing added: 507 units.

  - New public housing added: 500 units.

  - Existing private low and moderate income housing lost: 451 units.

  - Rehabilitation of existing private housing: 500 units.

Economic and Fiscal Concerns

- Generation of approximately $1.8 million in net tax increment flow (1975 level) shifted temporarily from other taxing entities.

- Generation of an additional $320,000 of sales tax (1975 figures) on an annual basis.

- Generation of approximately $312,000 in additional bed taxes annually.

Transportation

- Increased daily vehicle trips and vehicle miles traveled would result in additional noise, congestion, and air pollutants:

  - Total trips generated: 31,000.

  - New trips generated: 18,000.

- Transportation-related projects such as the People Mover and Transportation Center combined with a more efficient land use pattern should result in presently unquantifiable reduction in overall vehicular activity locally and regionally.

Employment

- Cumulatively, local employment opportunities would be substantially increased over both the short and long term:

  - Generation of approximately 585 to 865 total construction-related employment opportunities over time.

  - Generation of approximately 1,066 to 1,549 full time employment opportunities (90% low and moderate paying jobs).

  - Loss of an undetermined number of jobs due to business failure/ discontinuation resulting from dislocation of existing uses.

Social Impacts

- Reinforcement of existing trend of population/age distribution, general rental structure, and disparity between high and low income levels.

Population Growth

- Potential population increase of approximately 430 to 800 persons.

- Potential tourist-population increase of approximately 3% to 4%.

Public Services

- Increased intensity of land uses resulting from CCRP implementation would increase demand for public services listed below:

  - Water - Demand for water of approximately 186 af/yr to 279 af/yr of the City's existing unused supply of approximately 2,650 af/yr.

  - Sewage Disposal - Demand for a portion of the capacity of treatment facilities under construction which would be within that facility's unused capacity; increase the amount of effluent to be discharged.

ALTERNATIVES

ALTERNATIVES TO THE PROPOSED REDEVELOPMENT PLAN

INTRODUCTION

As stated in the introduction to this document, this Environmental Impact Report is primarily concerned with the identification of potentially significant adverse environmental impacts associated with the total implementation of the proposed Redevelopment Plan. In this section, alternative methods of dealing with such significant adverse impacts are outlined, to help insure that implementation and/or adoption of a final Redevelopment scheme will take into account the fact that certain problem areas presently exist, are likely to exist in the future, and, therefore, should be effectively dealt with if redevelopment is to benefit the long range health and stability of the Santa Barbara environment. These alternatives[1] are policies geared to the Redevelopment Plan/General Plan level, to be taken into consideration when site-specific project elements are decided upon in the future, to help assure that potential redevelopment proposals will minimize any adverse impacts that the currently proposed plan will sustain or generate.

Additionally, this section will address alternative methods of implementing the CCRP, including Alternative Methods of Financing, and the No Project Alternative.

Any future alternatives to the proposed Redevelopment Plan should take into account the following significant adverse environmental effects that could be sustained or generated if the proposed plan were implemented in its entirety:

- Increased land use activity in the East Beach area, an area with potential seismic and flood hazards;
- Increased retail and commercial land use intensity in the downtown portion of the City, an area subject to daily and periodic traffic congestion and resultant air pollution;
- Increased daily automobile use and vehicle miles traveled in a region with potentially severe air quality problems;
- Increased demand for visible and accessible commercial and manufacturing sites resulting from business dislocations;
- Increased demand for private low and moderate income housing resulting from residential dislocations;
- Increased demand for short-term (customer) and long-term (employee) parking supply in and adjacent to the CBD core;

1 Site-specific alternatives are defined as Mitigation Measures and follow each Impact Section of this report, completing the treatment of each subject area.

- Increased demands for all public services, primarily water supply; sewage treatment, and solid waste disposal;

- Potential in-migration of newcomers to fill new job opportunities and resultant public service,transportation and housing demands.

To minimize these adverse effects, certain general alternatives should be seriously considered and made part of any future Redevelopment Plan.

- Identification of seismic safety constraints in the East Beach area and specification of design and engineering specifics related to the implementation of Mission Creek Linear Park concept;

- Implementation of a Transportation Management Plan including strong disincentives to auto use and incentives to the use of alternative modes of travel as well as expansion of public transit service.

- Design and location of project elements in a manner which would minimize dislocations and the need for relocation sites for commercial and manufacturing uses.

- A relocation program should be implemented based on a comprehensive data base representing existing housing conditions. The program should be designed to minimize reductions in private low and moderate income housing and be consistent with the Proposed Housing Element.

- Integration of public transit programs with redevelopment proposals, specification of an implementation program to increase automobile occupancy rates for shoppers and employees, and implementation of the Santa Barbara Bikeways Master Plan.

- Adoption of policies designed to encourage the employment of local persons in jobs generated by specific project elements.

ALTERNATIVE METHODS OF IMPLEMENTING A REDEVELOPMENT SCHEME

Federal Financial Assistance

Santa Barbara could apply for the use of federal funds as provided by the Housing and Community Development Act of 1974. This Act is currently being used to some degree to fund programs including a housing rehabilitation program, storm drain improvement, and specification of architectural plans for reconstruction of the Chapel of the Royal Presidio of Santa Barbara. Other uses of funds which could be applied for include:

Open Space - Urban Beautification - Historic Preservation grants;
Public Facility Loans;
Water and Sewer and Neighborhood Facilities Grants;
Urban Renewal and Neighborhood Development Program Grants;
Model Cities Supplemental Grants; and
Rehabilitation Loans.

Assessment Districts

California Law provides for an area or areas of a city (District) to assess itself for certain improvements. In this method a majority of the property owners in the district may, by written protest, oppose the formation of such an assessment district. Once a district has been formed, that district can assess itself, via the specification of a property tax, for the purpose of raising revenues to be used for improvements to the district area. This method is sometimes known as a Local Improvement District (L.I.D.).

Revenue Bonds

Where considered public improvements have a potential for generating an income--such as a parking facility, swimming pool, etc.--the projected revenue to be generated can be used to retire revenue bonds which are sold in the open market and provide advanced funds with which to implement the proposed improvement.

General Obligation Bonds

A proposed public improvement may be financed by General Obligation Bonds. In this method, a two-thirds majority of people voting in an authorized election is required to approve the sale of such bonds for a given public improvement. By such a two-thirds vote the electorate "obligates," itself, through the property tax, to have taxes increased to an agreed amount and for an agreed time period necessary to retire the bonds.

Other Special State and Federal Legislation

Transportation facilities, including certain operation and maintenance costs, railroad relocation, and other specialized facilities, can be funded from a variety of state and federal sources as they may from time-to-time be available.

Private Financing

Private property owners, within a Redevelopment Project Area, may avail themselves of conventional, private lending sources with which to rehabilitate or redevelop their own property. Section 33380 of the Community Redevelopment Law (California) states: "An agency shall permit owner participation in the redevelopment of property in the project area in conformity with the redevelopment plan adopted by the legislative body for the area."

Combination Funding Sources

It is not uncommon in cities to utilize a combination of two or more of the above described funding sources for programs the size of the Santa Barbara Central City Redevelopment Project.

ALTERNATIVE LOCATION

Given the goals of Redevelopment, as set forth in the "Project Description" there is no viable alternative location for the proposed Redevelopment Plan. Realistically, the only alternative location would be an adjustment of the boundaries of the Project area. However, a change in the boundaries of the area would not substantially mitigate any of the potential adverse impacts associated with implementation or approval of the plan itself.

THE "NO PROJECT ALTERNATIVE

The Central City is subject to continual development and redevelopment. Population increases and economic vitality often result in increased traffic volumes, noise levels and worsening air quality. Under normal conditions housing deteriorates and is either rehabilitated or replaced with higher densities and land use intensity increases.

Many of the adverse impacts resulting from the implementation of the CCRP are aggravations of existing adverse trends and conditions and would likely occur to some lesser or equal degree without CCRP implementation. However, there are identifiable adverse and beneficial impacts which would be foregone if the proposed plan is not adopted and implemented. For example, the "no project" option would not: (1) involve the use of eminent domain procedures to acquire property; (2) result in such large additions to housing demand in relatively short periods of time; (3) have as great an impact on rising housing and living costs; (4) require residential, commercial and manufacturing dislocations; (5) result in such major additions to traffic, noise and air emissions. On the other hand, such benefits as tax increment receipts in sufficient quantities to accomplish needed public and private improvements, improved integration and efficiency of land use, and transportation, planning and redevelopment with assistance to pre-empted uses would not occur.

The comparison between "project" and "no project" is a comparison of trade-offs. In order to best present these trade-offs, the impacts of paramount concern to the proposed project are discussed below as they relate to the "no project" alternative.

Geology-Soils

- Intensification of land use in areas of high seismic hazard and potentially unstable soil conditions would continue to occur, but at a slower rate.

Hydrology and Flooding

- Increased runoff contributed to Mission Creek due to increased areas of impervious surfacing would continue to occur.

- Continued intensification of land uses in an area of known flood hazard would continue to occur, but at a reduced rate.

Water Quality

- Increased runoff of petroleum distillates would occur.

Air Quality

- Continuation of past trends toward increased generation of auto-related pollutants in an area with potentially severe air quality problems. The degree of difference between this impact with and without the CCRP is not known (e.g., although 18,000 additional trips would result from the CCRP, additional trips would continue to occur without CCRP implementation).

Noise

- Increased noise from rising levels of street traffic would occur.

Land Use

- Development and redevelopment under private initiative would not involve the eminent domain procedure: property owners would have greater flexibility in the use of their property.

- It is likely that proposed rezonings identified as influenced by the Redevelopment Plan would occur even if the Plan is not adopted. This is because the rezonings are recommended by the General Plan.

- Businesses relocated under private development would incur increased costs, would not have Agency assistance in acquiring a "comparable" relocation site and would not be compensated for relocation costs. The degree of adverse relocation impacts on individual businesses affected would be greater, however, the number of those affected would likely be fewer.

- Land presently devoted to residential uses in commercially zoned areas would continue to be converted to commercial uses.

- The orderly modification of land use patterns available with the eminent domain procedure could not occur.

Transportation

- Daily auto trips locally and in the South Coast region would continue to increase, but at a lower rate. Historical rates of trip increase have been approximately one percent annually. The CCRP addition represents an increase of .5 percent annually over a fifteen year period. Over the long term the transit support facilities that are part of the CCRP, plus the aggressive implementation of mitigations recommended to reduce the traffic related impacts, could reduce traffic impacts to a level lower than would be the case without the CCRP. It should be pointed out that projects such as the People Mover and Transportation Center, plus aggressive transportation management, are not dependent upon the CCRP. However, they are more likely to occur in a more complete and coordinated manner with it.

Housing

- Existing inflationary housing cost trends would not be aggravated.
- A net reduction in existing low and moderate income private housing supplies would not occur.
- Relocation housing would not be needed. Related adverse impacts would not occur.
- A net surplus of new public housing would not be available to meet existing needs.
- The opportunity to rehabilitate and expand the life span of existing low and moderate income owner-occupied housing would be reduced. Under market pressures these units would be gradually eliminated and replaced with multiple units.

Employment

- Future employment opportunities associated with the CCRP could be foregone.

Public Services

- Water - All the City's current unused supply would be available for future unspecified uses and/or purchase by neighboring water-short communities.
- Sewage Disposal - The entire unused capacity of the new sewage treatment plant would be available for future unspecified uses.
- Police and Fire Protection - Incremental additions of population would necessitate increases in capacity to serve or a diminished quality of service.
- Library - Stress on current facilities would continue and would be intensified as the population increases.
- Solid Waste Disposal - The amount of soild waste to be disposed of would continue to increase at a rate reflective of population growth and consumption characteristics.
- Utilities - Demand for utility service would grow incrementally with increases in population.
- Flood Control - A substantial portion of the Central City will continue to be exposed to flood hazard.

SHORT TERM VERSUS LONG TERM PRODUCTIVITY

SHORT TERM USES OF MAN'S ENVIRONMENT VERSUS LONG TERM PRODUCTIVITY

Introduction

This section addresses those long term effects of the proposed Redevelopment Plan which could adversely affect the state of the environment. It gives primary attention to those impacts which could narrow the range of beneficial uses of the environment, locally and in a regional sense, or could pose long term risks to health and safety.

In this light the Redevelopment Plan may be viewed as an instrument which would authorize the Redevelopment Agency to proceed with precise land use planning of project elements for submissions to decision makers. In that it is a flexible policy guide, the Redevelopment Plan itself would retain future options for subsequent redevelopment activity.

Implications of Increases in Land Use Intensity

Increases in land use intensity such as those which could occur as a result of adoption and implementation of the Central City Redevelopment Plan could use up finite resources at a more rapid rate than may result without such a policy. These effects could preclude the use of those resources at a later date by residents and visitors to the area. In the South Coast region, those resources which are of primary concern in this regard are water supply, air quality, and housing. To a lesser extent disposal sites and processing facilities for solid waste and sewage disposal are also affected by increases in land use intensity.

The CCRP effects on these regional resources are threefold: (1) Housing demand generated by the CCRP could serve to lower the existing low vacancy rates and increase the costs of residing in the South Coast to a point where the range of benefits to local residents is narrowed and new residents (especially within the low and moderate income category) desiring to live in the area could be prevented from doing so; (2) the potential magnitudes of air pollutant emissions generated by the CCRP could incrementally reduce the South Coast area's ability to sustain healthful air quality levels in the future; (3) increased incremental water demand resulting from implementation of the CCRP, while not of major proportions, could reduce the potential for other water distribution entities in the region to purchase and use the City's surplus water in the future.

From a local, or micro perspective, implementation of the CCRP could adversely affect vacancy rates and the resultant cost of purchase and rental housing, the air quality of portions of the Central Business District, and the supply of low cost commercial and manufacturing sites for new or relocated private businesses.

Project Need[1]

There are two primary reasons why the Redevelopment Plan may be justified now rather than at some time in the future: the Redevelopment Plan is a necessary step toward continued planning and implementation of plans within the project area; and the Plan provides a method for implementing the community's goals in the Central City area, goals that represent present needs in response to desires of residents and users of the area.

1 Project need for each of the individual CCRP elements is discussed in the "Project Description" section of the report.

UNAVOIDABLE ADVERSE IMPACTS

UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

Enumerated in this section are residual adverse impacts, including those which can be reduced but not eliminated and which could result from implementation of the Central City Redevelopment Plan. These effects, which cannot be avoided, are viewed from the perspective that major mitigations recommended in this report are fully implemented. The unavoidable adverse impacts are of two types: those resulting from existing environmental conditions and those impacts which would be generated by implementation of the Plan itself.

Geology-Soils

- Intensification of land uses in an area of high seismic hazard and potentially unstable soil conditions.

Hydrology-Flooding

- Increased runoff contributed to Mission Creek due to increased areas of impervious surfacing.
- Intensification of land uses in an area of known flood hazard.

Water Quality

- Increased runoff of petroleum distillates.

Biotic Communities

- Potential for removal of significant street and specimen trees.

Air Quality

- Increased generation of auto-related pollutants in an area with potentially severe air quality problems.

Noise

- Increased noise in downtown surface street areas due to increased traffic.
- Short term construction-related noise and vibration.

Land Use

- The eminent domain procedure utilized to assemble land for specific project elements could reduce land-owners' options relative to the use of their property.
- The rezoning of land in some areas could result in reduced property values.

- Some relocated businesses could incur increases in business costs.

- The removal of land presently devoted to residential uses.

Transportation

- Increased daily auto trips generated and resultant vehicle emissions.

Housing

- The removal of an undetermined number of private low and moderate income housing units.

- Potential increases in long term housing costs.

Employment

- Loss of an undetermined number of existing jobs due to business discontinuation or failure resulting from dislocations of commercial and manufacturing uses.

Public Services

- Water - commitment of a significant portion of the City's unused water supply, precluding use for other uses or purchase by neighboring water-short communities.

- Sewage Treatment and Disposal - incremental increase in wastewater burden.

- Police and Fire Protection - increased demand for protection services resulting in diminished quality of service or necessity to increase service capacity.

- Library - incremental increased demand for service on currently stressed facilities.

- Solid Waste Disposal - incremental increase in amount of solid waste which could, in the long term, contribute to the need to expand disposal facilities.

- Utilities - increased demand for utility service, adding to the cumulative demand for non-renewable fossil fuel resources.

- Flood Control - lacking improvements to Mission Creek, flood hazard and building modification requirements could adversely affect CCRP elements located within the existing flood plain.

- Public Assistance - potential increase in caseload.

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APPENDICES

APPENDIX A

ADDITIONAL DESCRIPTIVE INFORMATION

Zoning and Land Use Changes Resulting from the CCRP

Traffic Diverters

State and Federal Park, Recreation, and Historic Financial Assistance Programs to Local Jurisdictions

Method of Implementing Rehabilitation

Summary Description of the Crosstown Transportation Corridor

Summary Description of Minor/Spin Off Elements

SANTA BARBARA

CENTRAL CITY REDEVELOPMENT PROJECT

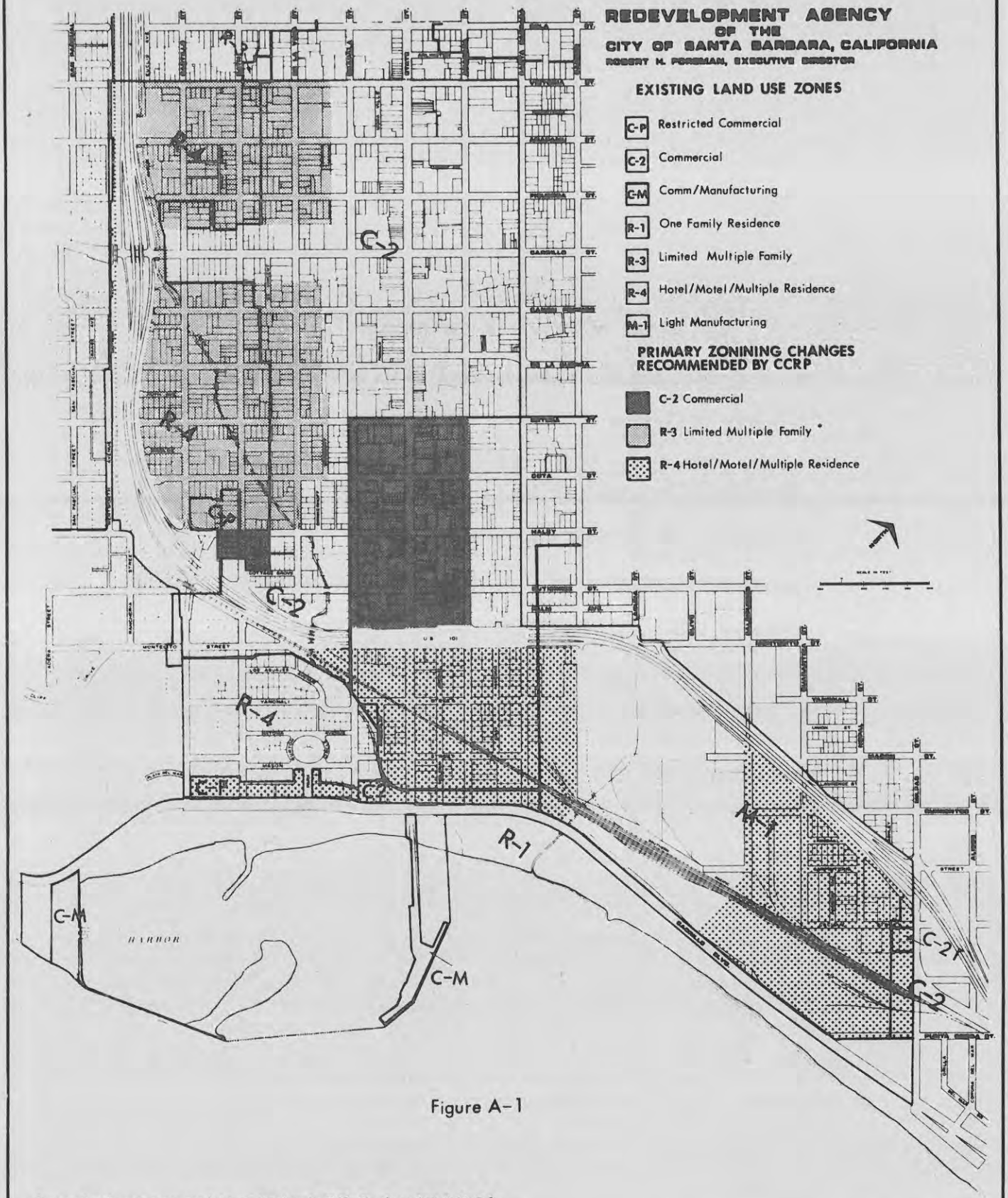

Figure A-1

*The boundary change is a recommendation resulting from the CCRP. The change from R-4 to R-3 is a proposal based on request by City Council that zoning be brought under General Plan consistency.

ZONING AND LAND USE CHANGES RESULTING FROM THE CCRP

The relationship of the General Plan and the Redevelopment Plan has been a symbiotic one. Each is a reflection of the other. Since the General Plan is the primary policy guide to land use, state law requires that the proposed Redevelopment Plan must be consistent with it, and following that, zoning must be consistent with both. Therefore, the Redevelopment Plan is a reflection and refinement of the land use goals and policies of the General Plan within the project area specifically, and for the community overall. However, because the Redevelopment Plan is a refinement of General Plan expressions regarding land use within the project area, and because it represents the most recent planning activity within the area, its determinations have required that in some instances the General Plan be amended. An example of this is in Proposed Land Use Designator 1, where because the Redevelopment Plan recommended the maintenance and strengthening of the residential community west of downtown (Land Use Designator 3), the General Plan was amended to require that the boundary of R-4 zoning there be moved one block eastward.[1] This would prohibit the ultimate transition of De la Vina Street from residential uses to commercial uses.

In summary, the zoning changes that would result from the adoption of the Redevelopment Plan are a result of three basic influences.

1. The dependence upon the General Plan as a basic policy guide to influence and determine the ultimate land use characteristics of the Redevelopment Plan.

2. The identification of existing land use patterns or needs that, although inconsistent with previous General Plan land use recommendations, are consistent with the overall land use goals of the City as reflected in the Redevelopment Plan. (The result of the identification of such patterns and needs has been the amendment of the General Plan.)

3. Once the Redevelopment Plan is adopted it essentially becomes a part of the General Plan, different only in that it is a refinement. State law mandates that zoning then be brought into consistency with the Plans.[2]

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1. G.P.A. 2-75 adopted 1-20-76.
2. Changes in zoning within the Project Area are part of a larger land use and zoning adjustment program the City is presently pursuing in order to comply with State law. Zoning in the entire City is being studied so that it may be adjusted to the recently adopted 85,000 holding capacity (G.P.A. 1-75). The City will contract an E.I.R. on the zoning adjustments. The Council will not act on rezonings until the E.I.R. is completed and reviewed. When they do act, changes in zoning within the project area will be considered.

Upon City Council action to bring the General Plan and zoning into consistency, the following zoning changes resulting from the CCRP could be implemented within the Project Area.

Land Use Designator 1

Within this boundary 8 blocks (37 acres) of commercial manufacturing (C-M) zoning located south of Ortega Street, north of U.S. 101, between Chapala and Santa Barbara Streets would be rezoned to commercial (C-2). With the elimination of the C-M zoning in this area, the additional establishment of uses specifically permitted in C-M zoning would be prohibited, and such as presently exist would become non-conforming uses, subject to Agency review and determination. (See Fig.A-1 for zoning changes).[3] At present, uses specifically permitted by the C-M classification are a minor percentage of the total uses within the area. Approximately one acre of C-P zoning south of Haley Street in the proposed auto center would be rezoned to C-2.

Land Use Designator 1 and 3

The Western boundary of C-2 zoning between Canon Perdido and Haley Streets, and Figueroa and Victoria Streets, would be moved one block eastward from its present location west of De la Vina Street, to one-half block east (approximate) of De la Vina Street. This would expand the residentially zoned area of Land Use Designator 3. Its result would be the long-term protection of residences in this area from the gradual transition to commercial uses that would occur under the existing C-2 zoning. The entire residential area of west downtown would be rezoned from R-4 to R-3. This latter action however, is not a result of the CCRP. The area rezoned from C-2 would be 30 acres.

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3. According to Redevelopment Plan provisions regarding non-conforming uses of land and buildings: "The Agency, with the approval of appropriate City advisory or regulatory bodies having jurisdiction, is authorized to permit an existing use to remain on land or in an existing building in good condition, which does not conform to the provisions of this Plan, provided that such use is generally compatible with the development and uses in the project area. The owner of such property must be willing to enter into a participation agreement and agree to the imposition of such reasonable restrictions as are necessary to protect the development and use of the Project Area.

   The Agency, with the approval of appropriate City advisory or regulatory bodies having jurisdiction may authorize additions, alterations, repairs or other improvements in the Project Area for uses which do not conform to the provisions of this Plan where such improvements are within a portion of the Project Area where, in the determination of the Agency, such improvements would be compatible as interim uses with surrounding uses and development." Redevelopment Plan (Sec. 505) LAND USE STANDARDS, REGULATIONS AND RESTRICTIONS.

Land Use Designators 2, 4, 5 and 6 B (East Beach)

Within the combined boundaries of these designators approximately 130 acres of commercial manufacturing (C-M), and light manufacturing (M-1), zoned land would be rezoned from C-M & M-1 to R-4. Only land use designator 5 would retain its present M-1 zoning. It would be comprised of approximately 30 acres of land available for marine related industrial uses.

Land Use Designator 6B is for public parks, recreation facilities, open spaces and harbor. It would not involve a zoning change. The City zoning map and ordinance does not include a zoning classification for public recreational facilities. Park areas are generally given a residential zoning category. Designator 6B would continue to have an R-1 zoning. Its boundaries would be expanded northward encompassing an additional 8 to 12 acres of land presently zoned M-1.[4]

Land Use Designators 2, 4 and 6C West of State Street

Designators 6C and 4 west of State Street would not be subject to zoning or significant land use changes as a result of the Redevelopment Plan. The uses proposed in the Plan for these areas are largely a reaffirmation of existing zoning and uses.

Land Use Designator 2 along the west side of State Street presently has some C-M zoned areas. This zoning classification would be changed to hotel-motel and multiple residential (R-4). Some existing uses not consistent with the tourist related commercial activities suggested in the Redevelopment Plan for Designator 2 would become non-conforming.

Other Changes

The CCRP could also result in large scale changes in land use without zoning changes. The auto-center, for example, is proposed for an area presently occupied by residential and mixed commercial uses. The present zoning is C-2. Project implementation would not require rezoning, but it would change the land use to one commercial activity type: Auto sales and service.

Major retail expansion could have similar results. It may replace parking lots, residential structures, or commercial service activities all within the existing zoning classification.

The low and moderate income housing element could replace single family structures with relatively high density units.

4. Cabrillo Boulevard may be aligned northward to accommodate the Park expansion.

TRAFFIC DIVERTERS

Prepared for

Community Land Use Associates

by

Carter W. Ray

November, 1976

TRAFFIC DIVERTERS DESCRIBED

TRAFFIC DIVERTERS ARE ESSENTIALLY STREET ALTERATIONS, REPLACING SPACE FORMERLY USED BY THE AUTOMOBILE WITH GREENERY, BENCHES, WALKWAYS AND/OR BIKEWAY CORRIDORS.

IN ANY OF THESE POSSIBLE DESIGN CONFIGURATIONS, A TRAFFIC DIVERTER IS REGARDED AS HAVING VALUE IN SLOWING VEHICULAR TRAFFIC, WHILE IN ITS MORE SIGNIFICANT FORMS IT ALSO SERVES TO RE-ROUTE AUTO MOVEMENTS OFF MINOR STREETS ONTO ARTERIAL ROUTES.

MINOR TRAFFIC DIVERTERS, AS DESCRIBED HERE, DO NOT INVOLVE RE-ROUTING OF OF AUTO MOVEMENTS BUT THEY DO ALTER THE LINEARITY OF A STREET THEREBY ACTING TO SLOW TRAFFIC. THESE DIVERTERS CAN TAKE THE FORM OF CURB BULBS, STREET MEANDERS AND TRAFFIC CIRCLES AS PRESENTLY EMPLOYED IN WEST COAST CITIES.

CURB BULBS CONSIST OF EXTENDING OR BULBING-OUT THE STREET CURB TO THE OUTER EDGE OF THE PARKING LANE. LANDSCAPING AND BENCHES TAKE THE PLACE OF ASPHALT IN THE ENCLOSED AREA COMPRISING ONE OR TWO FORMER PARKING SPACES. IN THE PAST SEVERAL YEARS CURB BULBS HAVE BEEN INSTALLED AT STREET CORNER LOCATIONS IN SAN FRANCISCO AND ISLA VISTA.

A STREET MEANDER INVOLVES BULBING-OUT THE CURB ALTERNATELY ON EACH SIDE OF A STREET TO CREATE A MEANDERING CORRIDOR FOR VEHICULAR MOVEMENTS. SANTA CRUZ HAS USED THIS DESIGN IN THE DOWNTOWN BUSINESS AREA.

TRAFFIC CIRCLES ARE CIRCULAR SHAPED LANDSCAPED AREAS LOCATED IN THE CENTER OF A STREET INTERSECTION. AS EMPLOYED IN BERKELEY, THE TRAFFIC CIRCLE ACTS IN PLACE OF STOP SIGNS, REQUIRING DRIVERS TO SLOW AND STEER AROUND THE CIRCLE WHILE ELIMINATING NOISY AND GAS CONSUMPTIVE STOPS AND STARTS.

MAJOR TRAFFIC DIVERTERS, WHICH RE-ROUTE VEHICULAR TRAFFIC, INCLUDE DIAGONAL DIVERTERS, SIDEWALK EXTENSIONS, MINI-PARKS, CUL-DE-SACS AND PEDESTRIAN MALLS. (SEE ATTACHED "SUNSET" MAGAZINE ARTICLE.) THESE DIVERTERS IDEALLY RE-ROUTE AUTO TRAFFIC FROM A MINOR STREET ONTO AN ARTERIAL ROUTE. WHILE OPPONENTS TO MAJOR TRAFFIC DIVERTERS OFTEN ARGUE THAT THE DIVERTERS SIMPLY PUSH THE TRAFFIC PROBLEM FROM ONE STREET TO ANOTHER, THIS IS NOT A FAIR ASSESSMENT OF A CAREFULLY LOCATED DIVERTER. IN A WELL-PLANNED SYSTEM A DIVERTER WILL RE-ROUTE AUTO TRAFFIC ONTO A STREET WHICH CAN ABSORB THE ADDITIONAL TRAFFIC FLOW WITH MINIMAL IMPACT BECAUSE OF STREET WIDTH, RED-CURBING, TRAFFIC SIGNALS AND/OR LAND-USE CONSIDERATIONS. ANOTHER FACTOR, WHILE SOMETIMES DIFFICULT TO ASSESS PRIOR TO IMPLEMENTATION OF A DIVERTER, IS THE EFFECT IT MAY HAVE IN DISCOURAGING UNNECESSARY SHORT DESTINATION AUTO TRIPS AND CRUISING.

AN INTERESTING ANECDOTE TO THIS LATTER CONSIDERATION WAS EXPERIENCED IN ISLA VISTA.

DEL PLAYA DRIVE, ADJACENT TO THE BEACH BLUFF, HAS FOR YEARS BEEN A POPULAR STREET FOR CAR CRUISING BY PARTYGOERS ON WEEKEND EVENINGS. BEING A NARROW STREET (32 FEET WIDTH) THAT LACKED SIDEWALKS, DEL PLAYA DRIVE CONTINUALLY POSED A TRAFFIC HAZARD FOR BICYCLISTS, PEDESTRIANS AND AUTOS. A MINI-PARK TRAFFIC DIVERTER WAS INSTALLED AT ONE OF THE STREET INTERSECTIONS ALONG DEL PLAYA WITH GREAT SUCCESS AS EVIDENCED BY THE RESIDENTS' RESPONSE RECEIVED BY THE ISLA VISTA PLANNING COMMISSION OFFICE. THE SANTA BARBARA COUNTY TRANSPORTATION DEPARTMENT RECORDED AUTO TRAFFIC ON DEL PLAYA AND ON A STREET RUNNING PARALLEL TO IT IMMEDIATELY TO THE NORTH BEFORE AND AFTER INSTALLATION OF THE DIVERTER. THE TRAFFIC COUNTS SHOWED A SIGNIFICANT DECREASE IN AUTO MOVEMENTS ON DEL PLAYA AFTER INSTALLATION OF THE DIVERTER AND A SMALLER REDUCTION IN AUTO MOVEMENTS ON THE STREET TO THE NORTH IN COMPARISON WITH THE MOVEMENTS ON THAT STREET BEFORE THE DIVERTER. THE RESULTS CLEARLY INDICATE THAT THE AUTO TRAFFIC PROBLEM WHICH WAS AMELIORATED ON DEL PLAYA, DID NOT RESULT IN PUSHING THE THRU-TRAFFIC PROBLEM ONTO THE CLOSEST PARALLEL STREET AS OPPONENTS OFTEN CLAIM WILL HAPPEN.

BENEFITS ASSOCIATED WITH TRAFFIC DIVERTERS

THE FOLLOWING BENEFITS CAN BE ATTRIBUTED TO THE ESTABLISHMENT OF TRAFFIC DIVERTERS WITH THE MAGNITUDE OF THESE BENEFITS DEPENDING ON LOCATION AND DESIGN DETAILS:

1. IMPROVED SAFETY OF PEDESTRIAN AND/OR BICYCLE MOVEMENTS

MAJOR TRAFFIC DIVERTERS IN SLOWING THE OVERALL SPEED OF AUTOS AND REDUCING THE VOLUME OF AUTO MOVEMENTS ON THE EFFECTED STREET CAN GREATLY IMPROVE THE SAFETY OF PEDESTRIAN AND/OR BICYCLE MOVEMENTS ALONG THAT STREET. INTEGRATION OF BIKEWAYS AND TRAFFIC DIVERTERS ON THE SAME STREET CORRIDOR IS SOUND PLANNING IN GRID-PATTERN CITIES LACKING SEPARATED BIKEWAYS. THE SAME CAN BE SAID FOR INTEGRATION OF INNER CITY STREETS LACKING SIDEWALKS WITH TRAFFIC DIVERTERS FOR PEDISTRIAN SAFETY. THE LATTER INSTANCE OF NO SIDEWALKS ON PARTICULAR STREETS IN AN URBAN AREA APPEARS TO BE UNIQUE TO ISLA VISTA.

2. NOISE REDUCTION

THE ADDITION OF GREENERY IN TRAFFIC DIVERTERS SERVES TO ABSORB AND BUFFER STREET NOISE. OF COURSE, THE REDUCTION IN AUTO TRAFFIC MOVEMENTS ALONG THE EFFECTED STREET WOULD FURTHER SERVE TO REDUCE STREET NOISE.

3. AESTHETIC ENHANCEMENT

LANDSCAPED TRAFFIC DIVERTERS CAN PROVIDE MUCH NEEDED GREENERY TO AN

URBAN TOWNSCAPE. EMPLOYMENT OF A NUMBER OF TRAFFIC DIVERTERS CAN SPUR FURTHER PRIVATE BUSINESS OR RESIDENTIAL IMPROVEMENTS IN A DETERIORATING LOW-INCOME UNBAN CORE AREA. IN ISLA VISTA, FOR EXAMPLE, THE ESTABLISHMENT OF FOUR CURB BULBS AND A MINI-PARK TRAFFIC DIVERTER IN THE BUSINESS SECTION OF TOWN ENCOURAGED SUBSEQUENT BUSINESS PROPERTY IMPROVEMENTS. THESE IMPROVEMENTS TOOK THE FORM OF PLANTERS, WOOD EXTERIOR FACINGS PLACED OVER WHITE STUCCO STORE FRONTS, LANDSCAPED OUTDOOR EATING AREAS INSTALLED IN FRONT OF TWO RESTAURANTS AND THE PAINTING OF BUILDING EXTERIORS IN WARM EARTHY COLORS.

4. ENCOURAGEMENT OF ALTERNATIVES TO AUTO USAGE

WHILE MAJOR TRAFFIC DIVERTERS ARE GENERALLY EMPLOYED TO RE-ROUTE AUTO TRAFFIC FROM MINOR STREETS ONTO ARTERIAL ROUTES, THESE DIVERTERS ALSO CAN ACT TO DETER UNNECESSARY SHORT DESTINATION INNER-CITY AUTO MOVEMENTS BY ELIMINATING SHORT-CUT ROUTES. COMPLEMENTARY TO THIS, PROPERLY DESIGNED AND LOCATED DIVERTERS CAN SIGNIFICANTLY IMPROVE THE SAFETY AND ENJOYMENT OF FOOT AND BICYCLE ALTERNATIVES FOR SHORT DESTINATION TRAVEL.

USE OF MASS TRANSPORTATION CAN BE ENCOURAGED THROUGH EMPLOYMENT OF CURB BULBS, LANDSCAPED WITH GREENERY AND BENCHES AT BUS TOP LOCATIONS, AS HAS BEEN DONE IN ISLA VISTA. HAVING A PLEASANT BUS STOP CAN MAKE WAITING FOR A BUS MORE OF A PLEASURE THAN A FRUSTRATION.

FUEL COST SAVINGS, ENERGY CONSERVATION AND AIR QUALITY IMPROVEMENTS ASSOCIATED WITH A SUCCESSFUL AUTO REDUCTION PROGRAM WILL INEVITABLY BECOME MORE IMPORTANT CONSIDERATIONS IN YEARS TO COME.

DESIGN CONSIDERATIONS

IN DESIGNING TRAFFIC DIVERTERS, ESPECIALLY THE MAJOR TYPES DESCRIBED EARLIER, THE MOST IMPORTANT CONSIDERATIONS ARE PRIVATE DRIVEWAY ACCESS, EMERGENCY VEHICLE ACCESS, STREET DRAINAGE AND BIKEWAYS.

EXISTING DRIVEWAY ACCESS TO BUSINESS OR RESIDENTIAL PROPERTIES MUST BE PRESERVED UNDER ANY TYPE OF DIVERTER DESIGN WHICH WOULD OTHERWISE BLOCK SUCH ACCESS. ZONING AND PROPERTY OWNER EASEMENT RIGHTS OVER A PUBLIC STREET POSE LEGAL CONSTRAINTS TO THE BLOCKAGE OF EXISTING DRIVEWAYS AND IN THE CASE OF A MALL, TO THE BLOCKAGE OF ANY OF THE STREET FRONTAGE OF A PRIVATE PROPERTY (SEE ATTACHED LEGAL OPINION ON CAMINO PESCADERO MALL).

EMERGENCY VEHICLE ACCESS FOR FIRE, POLICE AND AMBULANCE VEHICLES CAN POSE A DESIGN CONSTRAINT WHICH IF NOT ACCEPTABLY ADDRESSED TO COULD PREVENT THE IMPLEMENTATION

OF A DIVERTER BECAUSE OF EMERGENCY AGENCY OPPOSITION. A RECENT CASE IN POINT EXISTED IN ISLA VISTA WHERE PLANS WERE ANNOUNCED FOR FOUR NEW MINI-PARK TRAFFIC DIVERTERS. THESE DIVERTERS WERE TO BE IN ADDITION TO THREE SIMILIAR DIVERTERS PREVIOUSLY ESTABLISHED WHICH DID NOT PROVIDE EMERGENCY VEHICLE ACCESS. THE COUNTY FIRE DEPARTMENT (SERVING ISLA VISTA), UPON HEARING ABOUT THE PLANS FOR MORE DIVERTERS, SUBMITTED A LETTER TO THE COUNTY SUPERVISORS CALLING FOR A MORATORIUM ON ANY NEW DIVERTERS UNTIL ADEQUATE PROVISION WAS MADE FOR EMERGENCY VEHICLE ACCESS.

THE ISLA VISTA PLANNING COMMISSION, IN CONSULATION WITH THE COUNTY TRANSPORTATION DEPARTMENT'S ENGINEERS, CONSIDERED THE FOLLOWING ALTERNATIVES IN RESPONSE TO THE FIRE DEPARTMENT'S POSITION ON EMERGENCY VEHICLE ACCESS:

1. PROVISION OF AN EMERGENCY VEHICLE CORRIDOR BY USE OF AN "ACCESS TURF." ACCESS TURF IS ENVISIONED TO BE A HARDY TURF GRASS SURFACE UNDERLAID WITH A SUPPORTIVE GRAVEL BED.

2. INTEGRATION OF A TWO-WAY BICYCLE PATH WITH AN EMERGENCY ACCESS CORRIDOR. SHEAR POSTS WOULD BE PLACED AT EACH END OF THE CORRIDOR TO PREVENT AUTOS FROM PASSING THROUGH DIVERTERS UNDER THIS OPTION. SHEAR POSTS ARE DESIGNED TO BE FLATTENED BY IMPACT OF AN EMERGENCY VEHICLE OR THEY CAN BE UNLOCKED AND REMOVED FROM THEIR BELOW GRADE SLEEVES.

3. SAME AS OPTION #2, EXCEPT A SMALL ISLAND APPROXIMATELY FIVE FEET WIDE WITH A SIX INCH HIGH ROUNDED CURB BORDER WOULD BE EMPLOYED AT THE CENTER OF THE BIKEWAY- EMERGENCY ACCESS OPENINGS AT EACH END OF THE DIVERTERS. THESE CENTER ISLANDS WOULD HAVE ACCESS TURF WITHIN THE AREA BOUNDED BY THE CURBING. THEY WOULD BE EMPLOYED INSTEAD OF SHEAR POSTS UNDER THIS OPTION. (SEE ATTACHED DRAWINGS FOR DETAILS.)

UNDER ALL OF THE ABOVE OPTIONS THE EMERGENCY ACCESS CORRIDOR WOULD BE APPROXIMATELY 13 FEET IN WIDTH AS REQUIRED BY THE COUNTY FIRE DEPARTMENT.

FINAL NEGOTIATIONS WITH THE FIRE DEPARTMENT RESULTED IN THEIR ACCEPTANCE OF OPTION #3. IT SHOULD BE NOTED THAT THE COUNTY SHERRIF'S DEPARTMENT (THE LOCAL POLICE AGENCY) WAS REPRESENTED AT THE NEGOTIATION TABLE. THEY MORE OR LESS AGREED TO GO ALONG WITH THIS SOLUTION ALTHOUGH THEY EXPRESSED SOME RESERVATIONS ON THE ENTIRE QUESTION OF MORE TRAFFIC DIVERTERS.

THE PROJECT NOW APPEARS LIKELY TO RECEIVE A FINAL APPROVAL FROM THE COUNTY BOARD OF SUPERVISORS AS A RESULT OF THE EMERGENCY ACCESS QUESTION BEING RESOLVED. THE COUNTY'S RECEIPT OF LETTERS ON THE PROPOSED PROJECT INDICATES A WIDE COMMUNITY BASE OF SUPPORT SUFFICIENT TO GAIN THE BOARD'S VOTE OF APPROVAL.

POTENTIAL STREET DRAINAGE PROBLEMS RELATING TO THE DESIGN OF A TRAFFIC DIVERTER CAN BEST BE RESOLVED BY INPUT FROM LOCAL TRANSPORTATION DEPARTMENT HAVING RESPONSIBILITY

FOR THE ROADWAY. THAT DEPARTMENT'S TRAFFIC ENGINEERS SHOULD BE INVOLVED IN THE DESIGN PROCESS DURING THE PRELIMINARY DESIGN PHASE OR IMMEDIATELY THEREAFTER TO RESOLVE ANY POTENTIAL DRAINAGE PROBLEMS AND TO ASSESS THE COSTS OF PROVIDING FOR PROPER STREET DRAINAGE.

BIKEWAYS PLANNED FOR INTEGRATION WITH A TRAFFIC DIVERTER PLAN SHOULD INVOLVE THE FOLLOWING CONSIDERATIONS:

1. WHETHER OR NOT A BIKEWAY SHOULD BE COMBINED WITH AN EMERGENCY VEHICLE ACCESS CORRIDOR.
2. HOW TO PREVENT AUTOS FROM USING BIKEWAY CORRIDOR. (SEE OPTIONS DISCUSSED EARLIER FOR EMERGENCY VEHICLE ACCESS).
3. HOW TO PREVENT BICYCLISTS FROM GOING OPPOSITE DIRECTIONS IF ONE WAY BIKE LANES ARE PLACED ON EACH SIDE OF THE DIVERTER.

UNDER THE THIRD CONSIDERATION OF SEPARATED ONE-WAY BIKE LANES, THERE ARE SEVERAL WAYS TO HELP PREVENT WRONG-WAY MOVEMENTS. REFLECTIVE DIRECTIONAL ARROWS CAN BE PAINTED AT THE BIKE LANE OPENINGS AND/OR SIGN POSTING CAN BE EMPLOYED. IT IS INTERESTING TO NOTE THAT NEITHER OF THE TWO SUGGESTED PREVENTIVE MEASURES WERE USED IN THE FIRST TWO MINI-PARK DIVERTERS BUILT IN ISLA VISTA WHICH HAVE SEPARATED ONE-WAY BIKE LANES. A MINOR ACCIDENT DID OCCUR AT ONE OF THESE DIVERTERS WHEN BICYCLISTS RIDING IN OPPOSITE DIRECTIONS COLLIDED. THE ISLA VISTA PLANNING COMMISSION IS NOW CONSIDERING THE USE OF PAINTED REFLECTIVE ARROWS.

LOCATION CONSIDERATIONS

WHILE TRAFFIC DIVERTER LOCATIONS ARE PRIMARILY DETERMINED BY TRAFFIC CIRCULATION PATTERNS AND COMMUNITY CONSENSUS THE FOLLOWING FACTORS SHOULD ALSO BE CONSIDERED:

1. LOCATION OF EXISTING AND PLANNED FIRE HYDRANTS
2. LOCATION OF DRAINAGE GUTTER OPENINGS
3. LOCATION OF MAJOR BIKEWAY ROUTES
4. LOCATION OF EXISTING DRIVEWAYS

IF A FIRE HYDRANT IS IN THE IMMEDIATE VICINITY OF A PROPOSED DIVERTER LOCATION, THE LOCAL FIRE DEPARTMENT WILL PROBABLY REQUIRE EMERGENCY ACCESS THROUGH THE DIVERTER. FIRE DEPARTMENTS LIKE TO PRESERVE ALL EXISTING STREET ACCESS WITHIN THE IMMEDIATE AREA OF A HYDRANT SINCE THEIR TRUCKS MUST BE ABLE TO PULL-UP BESIDE THEM IN AN EMERGENCY.

DIVERTER BUILDING COSTS ARE DEPENDENT ON WHAT PROVISIONS WILL HAVE TO BE MADE TO PRESERVE EXISTING STREET DRAINAGE FLOWS. IF A TRAFFIC DIVERTER IS LOCATED AT A STREET GUTTER OPENING, A BIKEWAY AND/OR EMERGENCY ACCESS CORRIDOR COULD BE LOCATED ON THE SAME

SIDE OF THE STREET AS THE GUTTER OPENING. THIS WOULD ELIMINATE THE NEED FOR A CHANNEL TO THE GUTTER THROUGH THE DIVERTER. THE LOCAL TRANSPORTATION-ROAD AGENCY SHOULD BE CONSULTED ON THIS QUESTION IN ANY CASE.

AS DISCUSSED EARLIER, INTEGRATION OF BIKEWAY ROUTES WITH TRAFFIC DIVERTER LOCATIONS IS A GOOD WAY OF IMPROVING THE SAFETY OF A BIKEWAY IN RELATION TO THE SPEED AND VOLUME OF AUTO TRAFFIC.

PROVISION MUST ALWAYS BE MADE FOR PRESERVING EXISTING DRIVEWAY ACCESS FROM THE STREET AS NOTED UNDER DESIGN CONSIDERATIONS. IT IS BEST TO LOCATE AND DESIGN A DIVERTER SO THAT IT DOES NOT REQUIRE AN ACCESS CORRIDOR TO A DRIVEWAY SINCE ADDITIONAL CURBING WOULD HAVE TO BE INSTALLED AT THE DIVERTER AND POTENTIALLY THE DRIVEWAY OPENING AT THE DIVERTER MIGHT CONFUSE DRIVERS WHO SEE IT AS A THROUGH CORRIDOR FOR AUTOS AT NIGHT.

FINANCING CONSTRUCTION OF TRAFFIC DIVERTERS

THE FOLLOWING STATE AND FEDERAL GRANT PROGRAMS ARE POSSIBLE FUNDING SOURCES FOR TRAFFIC DIVERTER DEVELOPMENT. THE ABILITY TO SECURE FUNDS FROM MOST OF THESE POSSIBLE GRANT SOURCES WILL BE DEPENDENT ON THE DEGREE TO WHICH THE TRAFFIC DIVERTER DESIGN ADDRESSES TO BIKEWAY AND PARK FACILITY NEEDS IN THE COMMUNITY.

STATE GRANT PROGRAMS

1. SB 174 (ROBERTI, 1976) URBAN OPEN SPACE AND RECREATION
2. SB 36 BICYCLE LANE FUND
3. SB 325, 821 GAS TAX FUND FOR PEDESTRIAN AND BICYCLE ROUTES
4. PROPOSITION 2 (1976) STATE PARK BOARD

FEDERAL GRANT PROGRAMS

1. LAND AND WATER CONSERVATION FUND-PARK PURPOSES; NO LONGER EXCLUSIVE REGIONAL NEED CRITERION
2. HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1974

NOTE: SEE ATTACHED LIST FOR DETAILS ON THESE GRANT PROGRAMS, SAVE FOR PROPOSITION 2.

COMMUNITY CONSENSUS

FINAL APPROVAL FOR A TRAFFIC DIVERTER PLAN RESTS IN THE HANDS OF THE LOCAL CITY COUNCIL OR COUNTY BOARD OF SUPERVISORS. CONSEQUESTLY, IT IS ESSENTIAL THAT SOME DEGREE OF COMMUNITY CONSENSUS IN FAVOR OF THE DIVERTER PLAN BE EXPRESSED TO THE DECISION MAKING BODY.

PRIOR TO FINAL CONSIDERATION BY THE DECISION MAKING BODY USUALLY A MAILER IS SENT OUT BY THE TRANSPORTATION AGENCY TO INFORM LOCAL RESIDENTS AND PROPERTY OWNERS OF THE PLAN AND TO SOLICIT THEIR RESPONSE. (SEE ATTACHED LETTERS FROM THE SANTA BARBARA COUNTY TRANSPORTATION DEPARTMENT DATED JULY 13 AND AUGUST 11, 1976, RELATIVE TO ISLA VISTA TRAFFIC DIVERTER PLAN).

IMPLEMENTATION PROCESS

THE FIRST STEP IN PLANNING FOR THE USE OF TRAFFIC DIVERTERS SHOULD BE A DETERMINATION OF WHY AND WHERE THEY WOULD BE MOST USEFUL. THE LOCAL PLANNING AGENCY MUST BE INVOLVED AT AN EARLY STAGE IN THE PLANNING AND DESIGN PROCESS. PRELIMINARY ARCHITECTURAL RENDERINGS GENERATED UNDER THE AUSPICES OF THE LOCAL TOWN OR MUNICIPAL COUNCIL WILL INITIATE THE TRAFFIC DIVERTER IMPLEMENTATION PROCESS. AT THIS POINT, THE LOCAL TRANSPORTATION-ROAD DEPARTMENT SHOULD BE CONSULTED ON THE QUESTIONS OF TRAFFIC CIRCULATION PATTERNS, STREET DRAINAGE AND TRAFFIC SAFETY. THE PRELIMINARY SKETCHES SHOULD BE REVISED TO REFLECT THE INITIAL INPUT OF THE TRAFFIC ENGINEERS. IT IS THEN A GOOD IDEA TO HAVE THE PLANNER AND THE TRANSPORTATION PEOPLE MEET WITH REPRESENTATIVES OF THE LOCAL FIRE AND POLICE AGENCIES. ASSUMING THE NEGOTIATIONS RESULT IN A PLAN ACCEPTABLE TO THE EMERGENCY VEHICLE AGENCIES; THE PROJECT PLAN SHOULD THEN BE FINALIZED AS TO LOCATION, DESIGN, MEANS OF FINANCING, CONSTRUCTION AND MAINTENANCE. THE FINALIZED PROJECT PLAN SHOULD THEN BE SUBMITTED TO PROPERTY OWNERS IN THE PROJECT AREA FOR THEIR INPUT AS DESCRIBED IN THE "COMMUNITY CONSENSUS" SECTION. IF THERE ARE A LOT OF RENTERS IN THE PROJECT AREA, THEIR OPINIONS ARE USUALLY SOLICITED BY A DOOR TO DOOR SURVEY OR THROUGH THE PUBLIC MEDIA AT THIS TIME.

UPON RECEIPT OF A GENERALLY FAVORABLE RESPONSE, THE DECISION MAKING BODY WILL THEN DETERMINE WHETHER OR NOT TO DO AN EIR REVIEW, AND IF SO, TO DIRECT THAT IT BE DONE. FINAL PROJECT APPROVAL CAN THEN BE MADE AT THIS TIME OR UPON COMPLETION OF AN ACCEPTABLE EIR IF DETERMINED NECESSARY.

STATE AND FEDERAL PARK, RECREATION, AND HISTORIC FINANCIAL ASSISTANCE PROGRAMS TO LOCAL JURISDICTIONS

State Programs

Bicycle Lane Fund (S.B. 36)

Purpose: Acquisition and development of bicycle lanes.
Emphasis: Bicycle lanes for transportation or recreation.
Planning Requirements: Project report.
Project Requirements: Exclusively for bicycle lanes on City streets and county roads.
Basis for Funding: 2/3 grants.
Administrative Agency: State Department of Transportation, Office of Planning and Design, 1120 N Street, Sacramento, California 95814.

Sales Tax on Gasoline Fund (S.B. 325.821)

Purpose: Provision of routes for pedestrians and bicycles.
Emphasis: Recreational bikeways and walkways.
Planning Requirements: Determined by regional transportation planning agency.
Project Requirements: N/A
Basis for Funding: 2% of gasoline tax fund is available for such projects on a permissive basis.
Administrative Agency: Regional transportation planning agencies.

Federal Programs

Land and Water Conservation Fund

Purpose: Acquisition and/or development.
Emphasis: Meeting regionwide needs.
Planning Requirements: Master plan of park and recreation areas or recreation element of general plan.
Project Requirements: Projects must appear on applicant's master plan; must be regional in scope; must conform to State Outdoor Recreation Plan.
Basis for Funding: 50% grant; on a reimbursement basis.

Administrative Agency: Bureau of Outdoor Recreation through Department of Parks and Recreation, 1416 Ninth Street, Sacramento, California 95814.

Housing and Community Development Act of 1974

Purpose: Physical community development activities.
Emphasis: Provide funds not available through other programs to meet community needs.
Planning Requirements: Long range community development plan.

/cont...

Federal Programs cont...

Housing and Community Development Act of 1974

Project Requirements: Only available to general purpose units of government.

Basis for Funding: 100% grants (discretionary funding is available in excess of predetermined block grant amounts).

Administrative Agency: San Francisco Area Director of Community Planning and Development, One Embarcadero Center, San Francisco, California 93111. Los Angeles Area: Director of Community Planning and Development, 2500 Wilshire Boulevard, Los Angeles, California 90057.

METHOD OF IMPLEMENTING REHABILITATION

The following briefly describes how the rehabilitation program could be implemented:

As this would not be a code enforcement program the Redevelopment Agency would promulgate information relating to the availability of the program and Qualified owner-occupiers who were interested in participating could contact the Agency. The process that could follow would likely be similar to the federal block grant rehabilitation process: An architect or an individual from the City Building Department would inspect the dwelling and classify it as okay, rehabilitable, or rehabilitation unfeasible. Next, two local appraisers would determine the value of the dwelling and submit a report with recommendations and conclusions as to the condition of the structure. Assuming rehabilitation is feasible and the owner wishes it, he would receive the low interest deferred payment rehabilitation loan. One method of deferred payment is that the loan would be repaid when the home was sold. (The payment need not be deferred if the owner wished to pay in a normal manner).

CROSSTOWN TRANSPORTATION CORRIDOR PROJECT-SUMMARY DESCRIPTION

The proposed project consists of a 4 lane freeway and railroad both at ground level and in a common transportation corridor extending 2.6 miles through the City of Santa Barbara from Salinas Street to Carrillo Street. The Corridor would follow the general alignment of the present Highway 101 with the Southern Pacific Railroad relocated adjacent to the freeway. Underpasses would be located at Salsipuedes, Anacapa, and State Streets. Full interchanges would serve the freeway at Milpas, Garden, and Castillo Streets. Separate bicycle paths would be included in the design of all cross streets. That portion of the corridor outside the transportation area would be landscaped.

The proposed Transportation Corridor would be approximately 400 feet wide. As shown in the figure below, approximately 220 feet would be dedicated to freeway right-of-way, 65 feet for railroad right-of-way with the remainder being retained as a landscaped buffer zone. The possibility exists for expansion of the four lane freeway to 8 lanes if and when the need arises.

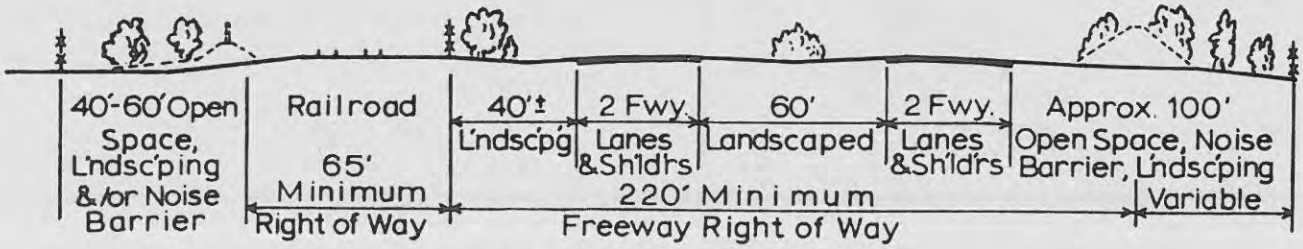
Project Costs

The 1976 cost of the proposed project is $67,800,000 (construction $45,400,000 and right-of-way $22,400,000). The project is proposed to be constructed in six stages. The total cost of relocating the railroad into the transportation corridor is $7,000,000, which is included in the total cost above.

Both the City of Santa Barbara and the Southern Pacific Transportation Company have declared that they will share in cost of the Crosstown Transportation Corridor Project. The Southern Pacific Company has signed a Memorandum of Understanding with Caltrans, agreeing to share in the railroad costs. The amount of participation by both the City and Southern Pacific will be determined by future negotiations.

Major Design Features

The project design features follow in sequence from west to east.



LOOKING WEST

1. Carrillo Interchange

No change is proposed in the Carrillo Interchange. This will maintain existing traffic service to the Mesa area to the west and the downtown area to the east. Also the retention of this interchange will prevent the major traffic penetration of the residential areas near the highway and south of Carrillo Street.

2. Castillo Interchange

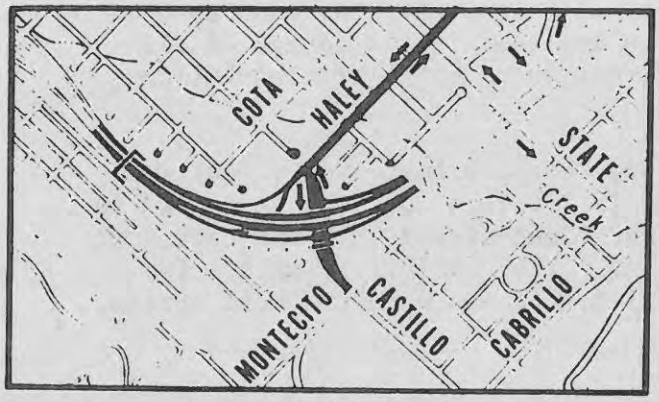


FIGURE 3-5

Figure 3-5 shows the proposed revision of the Castillo Street Interchange with new north and southbound ramps connected to Haley Street. The purpose of the revision is to provide direct access to the central city, reduce conflicts and congestion in the Castillo Street Undercrossing, and to provide a structure for the relocated railroad.

Castillo and Bath Streets are to be closed north of Haley Street to minimize the penetration of major traffic into the residential neighborhoods between the freeway and business area.

3. State and Anacapa-Santa Barbara Street Underpasses

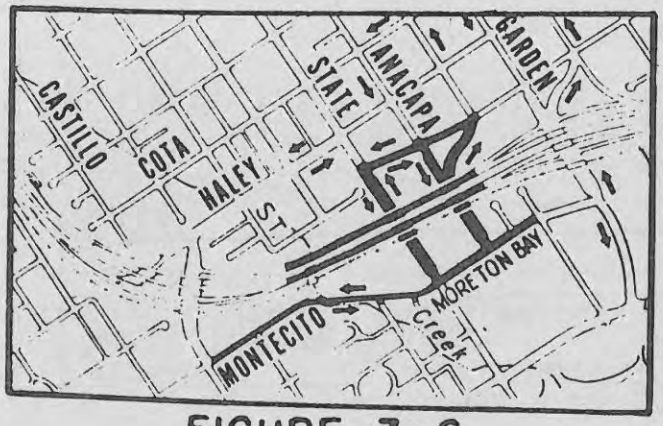


FIGURE 3-6

Figure 3-6 shows the preferred design for these two city streets. A new street, Moreton Bay, is proposed as the easterly extension of Montecito Street. It will replace existing Montecito Street from De La Vina Street to Garden Street.

This new major street would provide needed traffic relief to the Castillo Undercrossing by the provision of access to the State and Anacapa-Santa Barbara Undercrossings from the south. It also would provide for an alternative to the beach front route of Cabrillo Boulevard and access to the proposed Transportation Center.

4. Garden-Laguna Streets Interchange

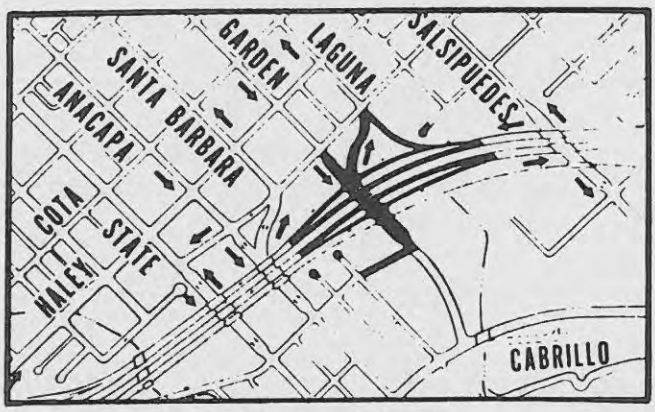


FIGURE 3-7

Figure 3-7 shows the proposed new interchange needed to provide movement between the freeway and the City. This interchange will provide access to the eastern and southern portions of the City to traffic from the South Coast of Santa Barbara County and points beyond. Most of the traffic from the four existing at-grade intersections also will be diverted to the new interchange.

5. Salsipuedes Undercrossing

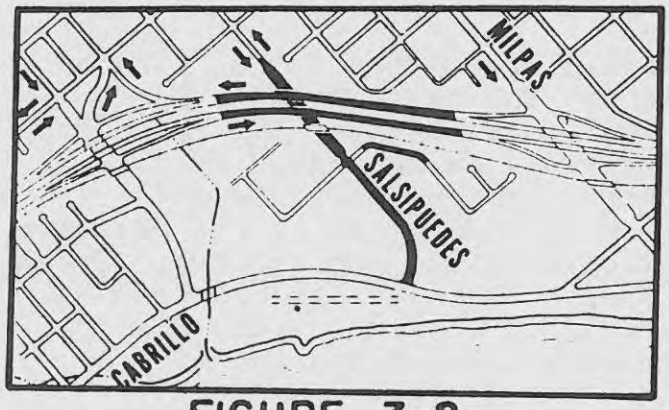


FIGURE 3-8

Figure 3-8 shows the proposed Salsipuedes Undercrossing, with Route 101 reconstructed to ground level, and an extension of Salsipuedes to Cabrillo Blvd. The major purpose of this construction is elimination of the existing Salsipuedes Overhead to improve traffic service and reduce the impact of the highway. This construction cannot take place until the present spur service to the north of the present highway can be discontinued.

6. Milpas Interchange

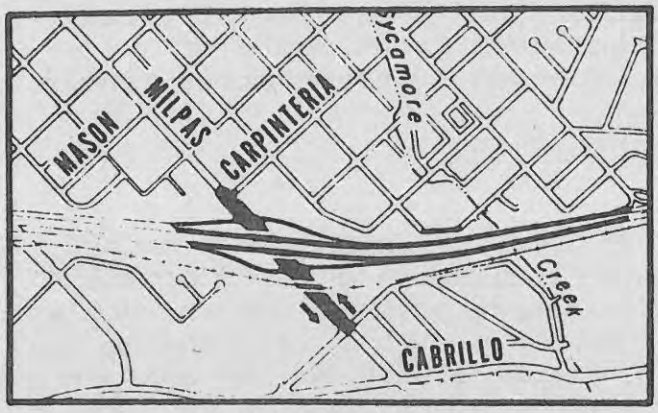


FIGURE 3-9

The new Milpas Interchange is shifted southerly towards the relocated railroad (See Figure 3-9). The relocated Highway 101 lanes are at ground level with Milpas Street crossing under both the freeway and the railroad tracks. The proposed southerly relocation of the Milpas Street Interchange on Route 101 means that this construction cannot take place until after the Salsipuedes reconstruction.

7. Railroad Relocation

Relocation of the mainline railroad tracks and spur track reconnections are planned as part of the third stage of the project. The relocation in Stage 3 is a compromise between the City's desires for relocation at the earliest possible stage, and the most economical scheduling from a construction standpoint at the end of the project.

The prior construction on Stages 1 and 2 will provide for the necessary underpasses where the relocated railroad will cross over the affected city streets.

8. City Street Construction

A number of city streets will be reconstructed or changed in connection with the proposed project. The major reconstruction will be as undercrossings - underpasses of the freeway and relocated railroad, respectively. Some city streets will be closed at the freeway and end in a cul-de-sac. Others will be realigned and widened. It has been mentioned previously that a new street, Moreton Bay, will be constructed between Montecito Street and Yanonali Street, to replace the portion of Montecito Street taken by the proposed construction, and to continue adequate traffic circulation (See Figure 3-1). Haley Street, between Anacapa Street and the highway, is proposed to be improved by the City from its present 42 foot width to carry additional traffic between the downtown area and the freeway.

Phasing and Implementation

The proposed project is too complex to be constructed as a single unit. It will be broken down into about six construction units or stages.

The sequence of this staging and the size of each stage are controlled by the following factors.

1) First stages should correct the most important accident and traffic problems.

2) Railroad grade crossings should be eliminated early.

3) Construction dewatering of soil limits the number of underpasses that can be built concurrently.

4) Availability of funds limits the size and timing of stages.

5) Traffic handling limits the size and timing of stages.

6) Staging must agree with community desires and development.

7) Units to be sized to fit financial capability of average construction contractor, to foster more competitive bidding.

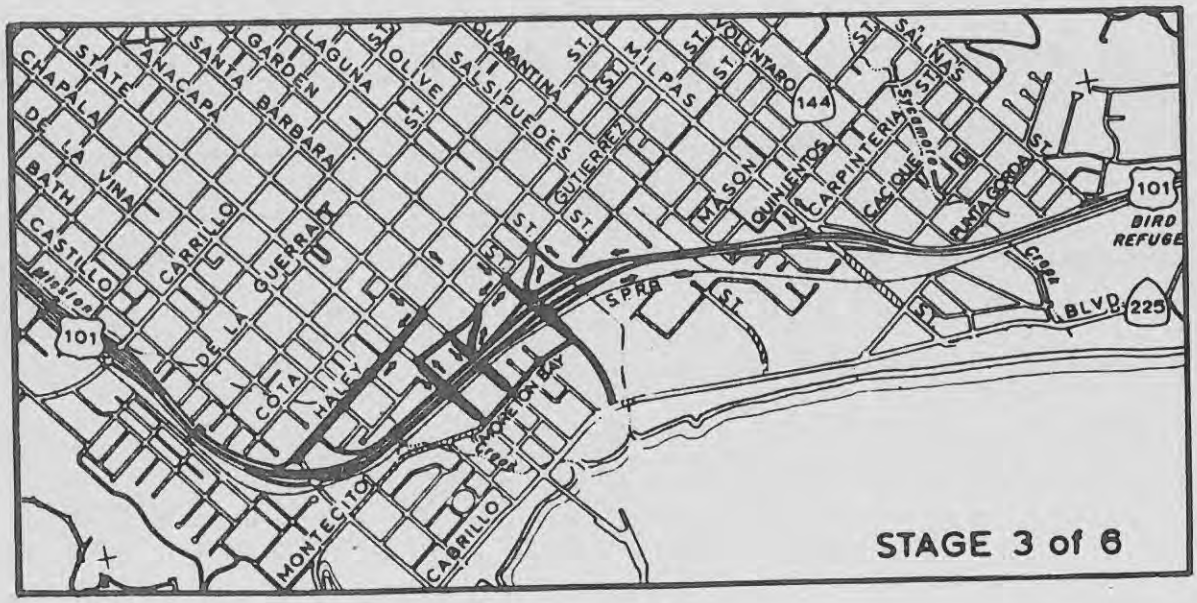
STAGING COSTS (in Millions of Dollars)

STAGE	CONST.	R/W	SUBTOTALS	CUMULATIVE TOTALS
1	$ 7.6	$ 6.1	$13.7	$13.7
2	9.0	7.3	16.3	30.0
3	8.6	4.5	13.1	43.1
4	7.9	1.2	9.1	52.2
5	5.2	1.7	6.9	59.1
6	7.1	1.6	8.7	67.8
Totals	$45.4	$22.4	$67.8	

Pictorial descriptions of the six stages follow.

STATE
ANACAPA
SANTA BARBARA
GARDEN
LAGUNA
OLIVE
QUARANTINA
SALSIPUEDES
MILPAS
VOLUNTARO
SALINAS
CHAPALA
DE LA VINA
BATH
CASTILLO
Mission
CARRILLO
DE LA GUERRA
COTA
HALEY
GUTIERREZ
MONTECITO
CABRILLO
Creek
MASON
QUINIENTOS
CARPINTERIA
CACIQUE
PUNTA GORDA
Sycamore
144
101
BIRD REFUGE
BLVD.
225
STAGE 1 of 6

STATE
ANACAPA
SANTA BARBARA
GARDEN
LAGUNA
OLIVE
QUARANTINA
SALSIPUEDES
MILPAS
VOLUNTARO
SALINAS
CHAPALA
DE LA VINA
BATH
CASTILLO
Mission
CARRILLO
DE LA GUERRA
COTA
HALEY
GUTIERREZ
MONTECITO
CABRILLO
Creek
MASON
QUINIENTOS
CARPINTERIA
CACIQUE
PUNTA GORDA
Sycamore
144
101
BIRD REFUGE
BLVD.
225
STAGE 2 of 6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QUARANTINA
SALSIPUEDES
MILPAS
VOLUNTARO
SALINAS
CHAPALA
DE LA VINA
BATH
CASTILLO
Mission
CARRILLO
DE LA GUERRA
COTA
HALEY
GUTIERREZ
MONTECITO
CABRILLO
Creek
MASON
QUINIENTOS
CARPINTERIA
CACIQUE
PUNTA GORDA
Sycamore
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BIRD REFUGE
BLVD.
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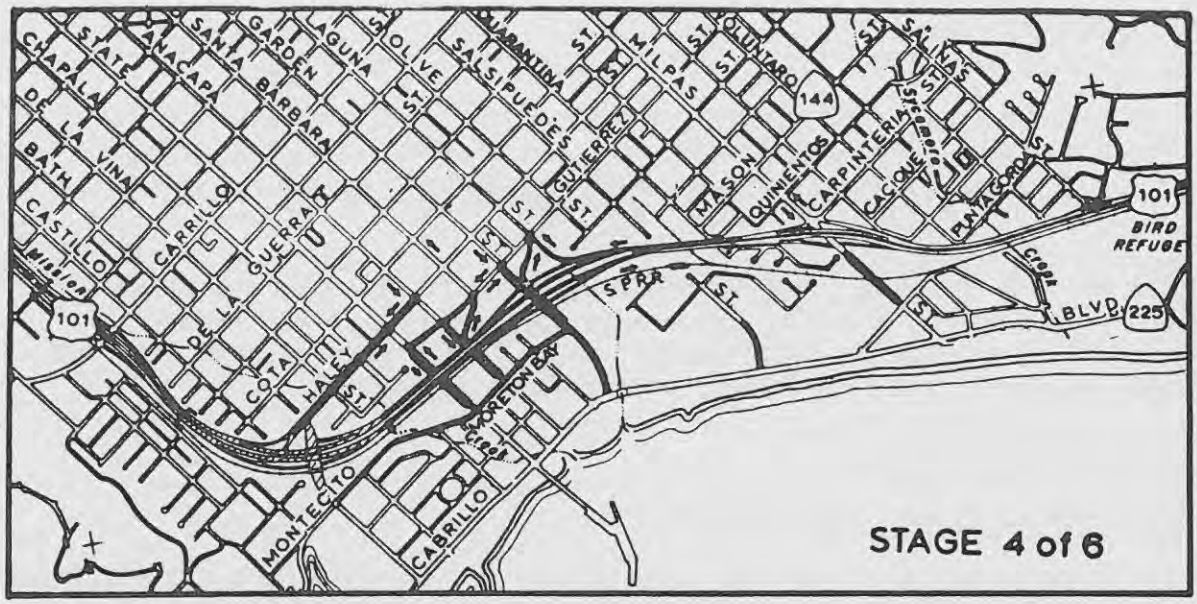
S.P.R.R.
MORETON BAY
STAGE 3 of 6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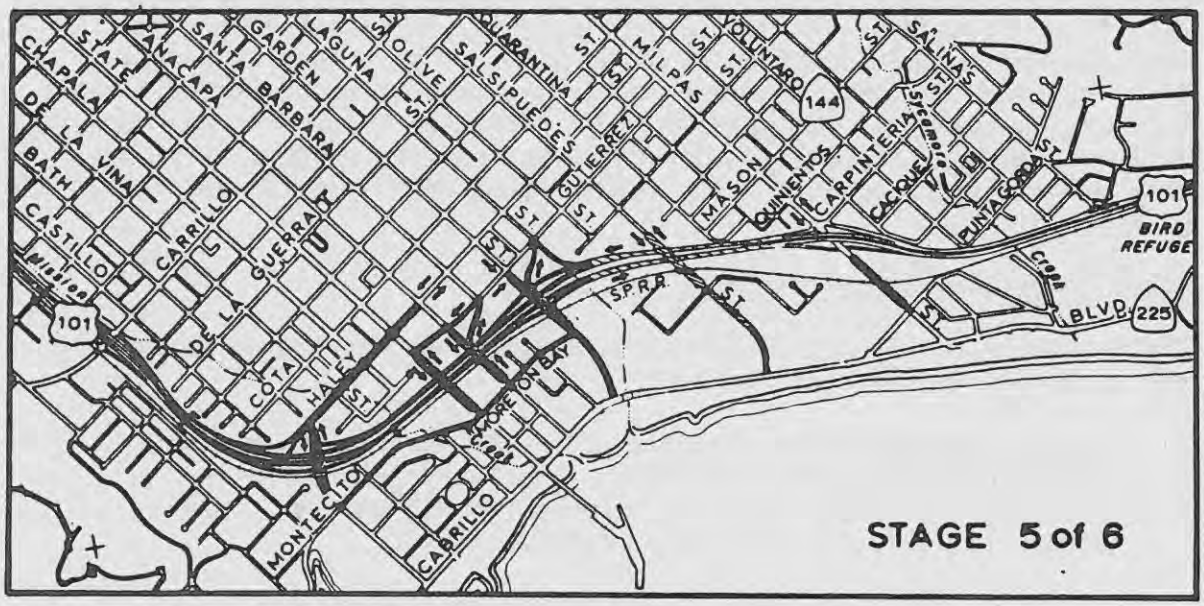
CABRILLO
STAGE 4 of 6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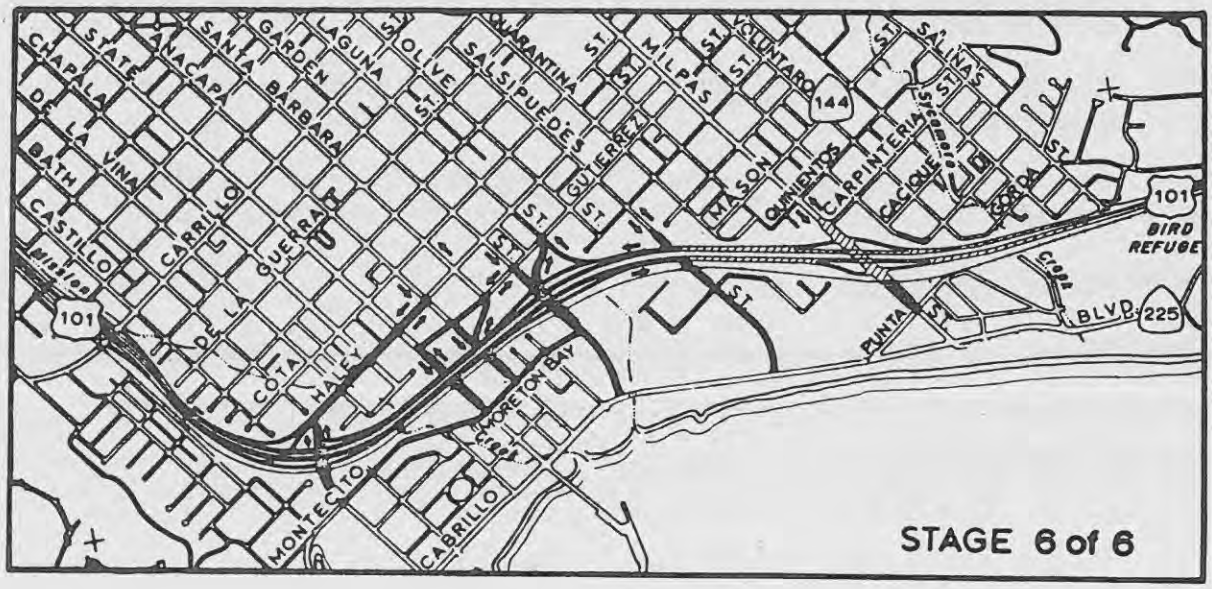
COTA
HALEY
MORETON BAY
MONTECITO
CABRILLO
STAGE 5 of 6


STATE
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CHAPALA
DE LA VINA
BATH
CASTILLO
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DE LA GUERRA
GUTIERREZ
MASON
QUINIENTOS
CARPINTERIA
CACIQUE
PUNTA
101
BIRD REFUGE
Mission
Creek
BLVD
225
COTA
HALEY
MORETON BAY
MONTECITO
CABRILLO
STAGE 6 of 6

SUMMARY DESCRIPTION OF MINOR/SPIN-OFF ELEMENTS

This section describes various minor or spin-off elements which have been considered by the CCRP for the various Land Use Designator areas. Those which are public improvements[1] could be financed by tax increment funds depending upon the extent of the funds available.

LAND USE DESIGNATOR 1

State Street Plaza Extension (public)

The State Street mall with its wide sidewalks, street furniture, plantings, etc., now extends from Victoria Street to Ortega Street. This pedestrian oriented plaza could be extended further south to the northern edge of the Proposed Transportation Corridor (approximately Gutierrez Street). This three block extension would provide a more pleasant street environment for the southern portion of State Street. With such improvements it is anticipated that foot traffic along this portion of State Street would be increased as the area would be made more attractive for both visitors and City residents. The on-street parking which exists on this portion of State Street would be eliminated to provide for the improvements.

Other Commercial Street Closures (public)

The following street modifications have also been considered to improve the street environment of the central city.

> Anapamu Street between Chapala and Santa Barbara Streets could be closed to automobile traffic. A mall would replace the roadway, with pedestrian and bicycle traffic allowed. State Street would remain open to automobile traffic.
>
> Figueroa Street could be closed to automobile traffic between Anacapa and Chapala Streets, where a pedestrian and bicycle mall could be developed. Again, State Street would remain open to automobile traffic.
>
> The loop around De La Guerra Plaza could be closed to automobile traffic.
>
> That section of Canon Perdido Street passing through the old Presidio site could be closed for the Presidio reconstruction.

LAND USE DESIGNATOR 2

Mercado

A Mercado is a mixture of small shops run by craftsmen-merchants and

---

1. Public improvements are indicated in parentheses.

eating and drinking places, placed in a setting of auto-free walks and plazas. Such a concept has been considered for that general area on the east side of State Street from Yanonali Street to Cabrillo Boulevard. The size of a possible Mercado development is not defined and would be greatly dependent upon the scope and intensity of the commercial complex on Stearn's Wharf. It is probable that future development on Stearn's Wharf would totally preempt consideration of a Mercado. If tourist-shopper oriented Mercado were developed some existing structures and most, or all, existing uses (primarily commercial-manufacturing), would be dislocated.

Stearn's Wharf

(Due to its relationship with the Mercado concept, Stearn's Wharf is discussed here rather than under Land Use Designator 6 of which it is a part).

Although not an element per se of redevelopment, the rehabilitation and redevelopement of Stearn's Wharf is considered here as the Wharf is within the redevelopment area. Development of the Wharf complex also has a relationship with the Mercado. Generally, development on Stearn's Wharf would greatly reduce or eliminate the viability of a Mercado-type development in this area.

The purpose of modifications is to revitalize the existing Wharf through development of commercial, tourist-oriented, and recreational facilities. Environmental impact assessment of the proposed Stearn's Wharf rehabilitation and redevelopment has been made and the ultimate design for this project is still being debated. Plans for this project have considered the addition of several restaurants, an educational facility, improved recreational facilities, and provision for additional parking as well as structural improvements to the pier.

LAND USE DESIGNATOR 3

Street Closures (public)

The considered street closures in Land Use Designator 3 are designed to prevent automobile traffic not related to residential activities of the area from using the west downtown streets as central core bypass routes. Streets would be closed at various points by the use of cul-de-sacs. By preventing through traffic the residential character of the area could be restored and the disruptive influence of auto-related noise, fumes, and accident hazards would be greatly reduced. The following locations have been considered for street closures:

On Bath and Castillo Streets

1. At present both Bath and Castillo Streets intersect with Haley Street. These intersections could be eliminated by the construction of cul-de-sacs on Bath and Castillo Streets just north of Haley Street. No turns on to these streets would be possible from Haley.

2. At present Castillo and Bath Streets provide uninterrupted travel from Carrillo Street to Micheltorena Street. Cul-de-sacs could be placed on Bath and Castillo Streets just south of their intersections with Figueroa Street.

Several east-west cross streets south of Victoria Street, north of Haley Street and west of De La Vina Street could also be modified with cul-de-sacs.

1. Anapamu Street presently has a cul-de-sac at its western end east of U.S. 101. Another could be constructed just west of De La Vina Street.

2. De La Guerra Street has a cul-de-sac at its western end east of U.S. 101. Three more could be constructed--one west of De La Vina Street and one on each side of Mission Creek. Automobile travel over the creek would be eliminated. Pedestrian and bicycle traffic would be accommodated by a bridge.

3. Ortega Street presently has a cul-de-sac at its western end east of U.S. 101. Another could be placed west of Mission Creek. Foot and bicycle traffic over the creek would be accommodated by a bridge.

Neighborhood Social Facility (public)

A "Franklin Neighborhood Center" type facility has been considered to serve the west Downtown area. This would be a general purpose, interagency service and resource facility staffed by representatives from various public and private agencies to serve the social-welfare needs of neighborhood residents. The facility could contain offices, recreation, meeting, and craft rooms. A location at the southwest corner of Bath and Ortega Streets has been considered but site location within Land Use Designator 3 has not been firmly established.

Mission Creek Linear Park (public)

The design concept for the Mission Creek Linear Park envisions the restoration and enhancement of the natural creek-side flora and fauna and the inclusion of various recreational facilities along the creek. Mission Creek Linear Park would extend along the creek's length through other parts of the City as well as redevelopment area. (See "Major Creeks Open Spaces, Design Standards and Regulations", (unadopted), for a detailed description).

Accomplishment of the Linear Park concept would require the acquisition of lands along the creek. It has been considered that acquisition of the necessary land be done passively through set-back restrictions on development,

renovation, and reconstruction of buildings and site improvements along the creek.

Although not included in the design concept as it has been considered, the provision for a floodway (i.e. a route for destructive flood waters), would provide sorely needed flood protection. To create a floodway, the creek and surrounding park would have to be developed in a manner that incorporated improvements in the creek's channel and adjacent area that would accommodate the passage of dangerous floodwaters. (See "Public Works-Flood Control" and "Hydrology" Sections). Channel widening at certain points and other necessary engineering techniques would be required to achieve a floodway. Close coordination between planning and engineering entities would be necessary to provide the floodway and maintain the natural qualities of the creekside.

LAND USE DESIGNATOR 5

Ocean Oriented Industry

In differing configurations, a portion of the East Beach area has been considered as an area reserved for marine-related businesses and industries. (For more information regarding potential location for the Ocean Oriented Industry area the reader is referred to "Choices for the Future", pp. 8 and 9, and plates 4,5,6,7, 9). The location referred to in the General Plan (p.33) is that area flanking the Wastewater Treatment Plant.

Ocean Oriented Industries which require a close-to-the-water location (e.g. boat building and repair, seafood processing, etc.) would be included in this area. Marine-oriented educational facilities could also locate there. A lagoon could be developed in conjunction with the Central Drainage Channel which runs through the western portion of Land Use Designator 5 (many years ago this area was an estuary).

LAND USE DESIGNATOR 6A

Morton Bay Fig Tree Park (public)

The impressive Morton Bay Fig tree stands at the corner of the present alignment of U.S. 101/Montecito Street and Chapala Street. The open-space adjacent to the tree and additional land provided by development of the Transportation Center and Crosstown Transportation Corridor, could be developed as a park to ensure the preservation and enjoyment of this significant tree. (For location see map which accompanies description of the Transportation Center in the body of this report).

Carpool Lots (public)

As a part of a complete Transportation Center (Phase 1 and Phase 2), carpool lots have been considered. Several acres of the Transportation Center

could be dedicated for carpool parking (and/or transit connection parking). The carpool lot provision could be an incentive for higher passenger-auto utilization in travel to and from work. The precise location of carpool lots within the Transportation Center complex is not known.

LAND USE DESIGNATOR 6B

Palm Park Expansion (public)

It has been proposed that Palm Park be expanded northward (see Figure 3). The size of the expansion could range from about 8.5 acres to 21 acres. The conceptual design for Palm Park which is included in the draft of the "Shoreline Master Plan", indicates an expanded park with Cabrillo Boulevard realigned northward (to the approximate location of the existing railroad tracks which would be rerouted as part of phase 3 of the Crosstown Transportation Corridor project). With realignment of Cabrillo Boulevard the park expansion would be joined with the existing park to form a large, unified recreation area. Expansion of the park northward could occur without realignment of Cabrillo, but under that circumstance the design and function of the park could be inhibited by the street which would bisect it.

Elements which have been considered for in the expanded park facility include:

- picnic and barbeque facilities for large groups;
- gardens with benches and pathways;
- lawn area (unstructure field sport area);
- prominade;
- lagoon (redevelopment of a portion of the old estero);
- circulation and parking facilities;
- transit facilities connecting to other waterfront activity areas;
- cafe;
- bikeway (as part of the Coastal Trails system).

GENERAL

Bikeways (public)

Portions of the bikeways indicated in the "Bikeways Master Plan" within the redevelopment area could be developed. The City has a Master Plan for the development of safe and efficient bikeways to encourage this non-polluting and increasingly popular mode of transportation. One of the major stumbling blocks for implementation of the plan is financing. Some tax increment funds generated by the major elements considered by the CCRP could be used for bikeway development.

APPENDIX B

GEOLOGIC INFORMATION

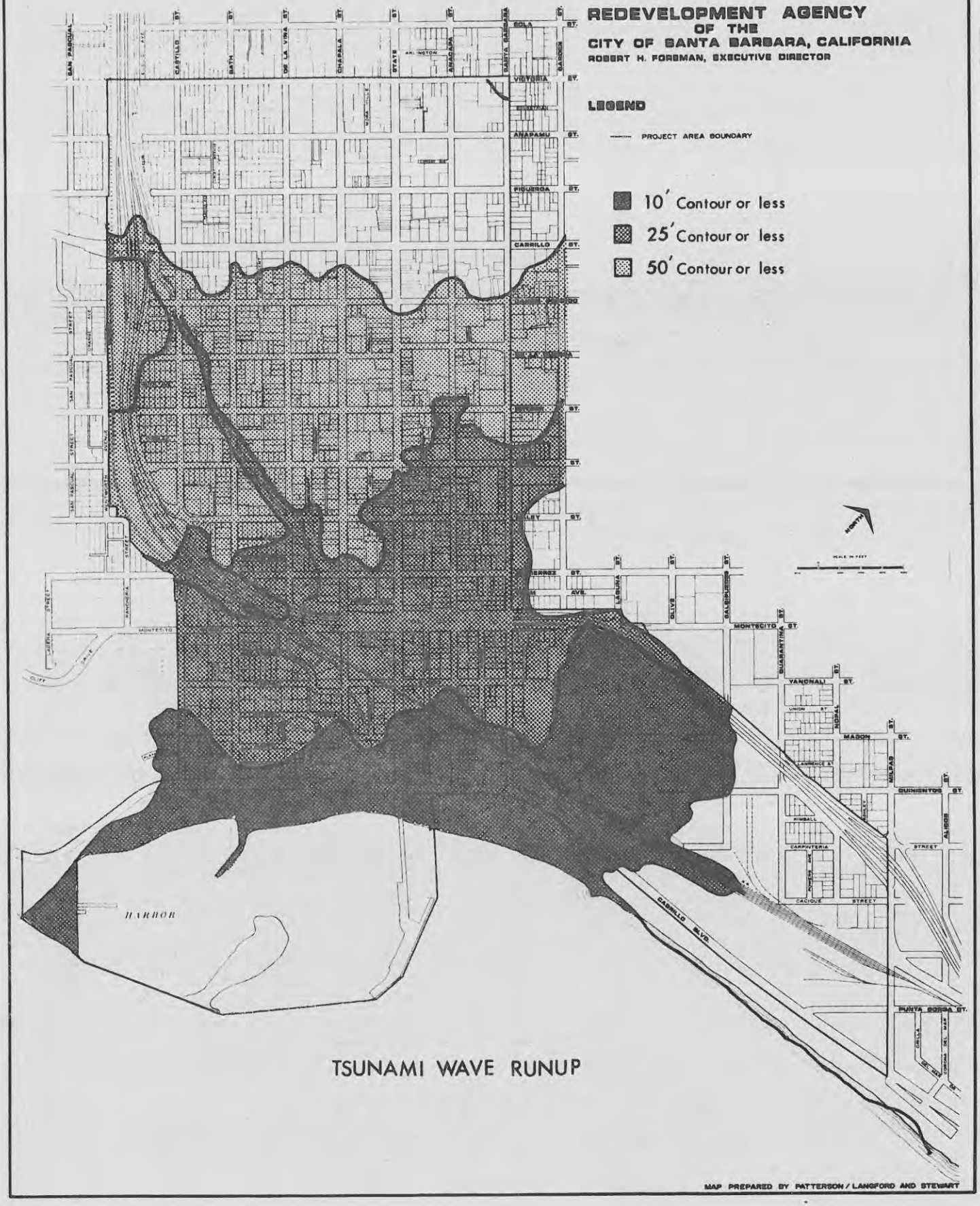
Tsunami Run-up Map

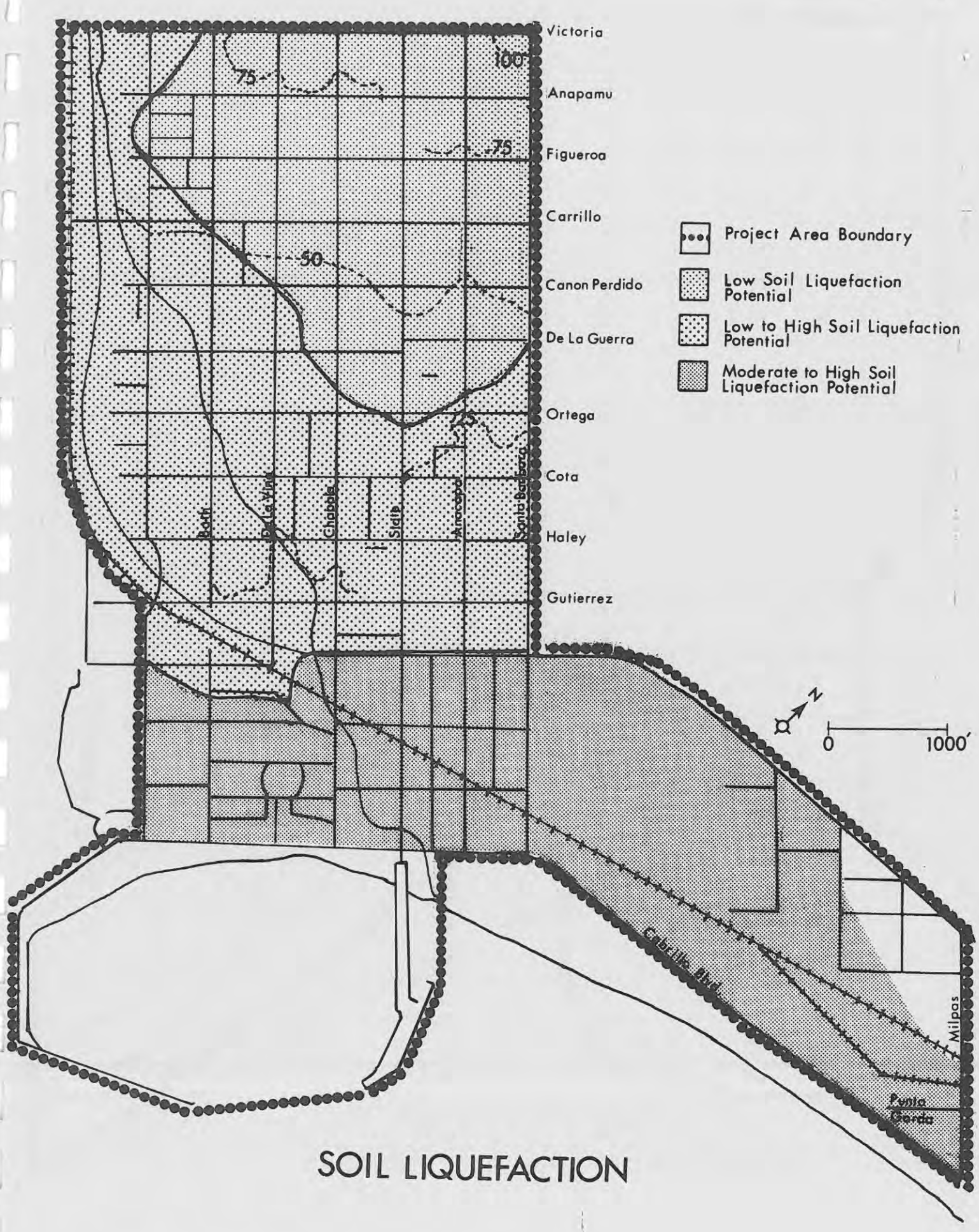
Soil Liquification Map

Suspected Compressible Soils Map

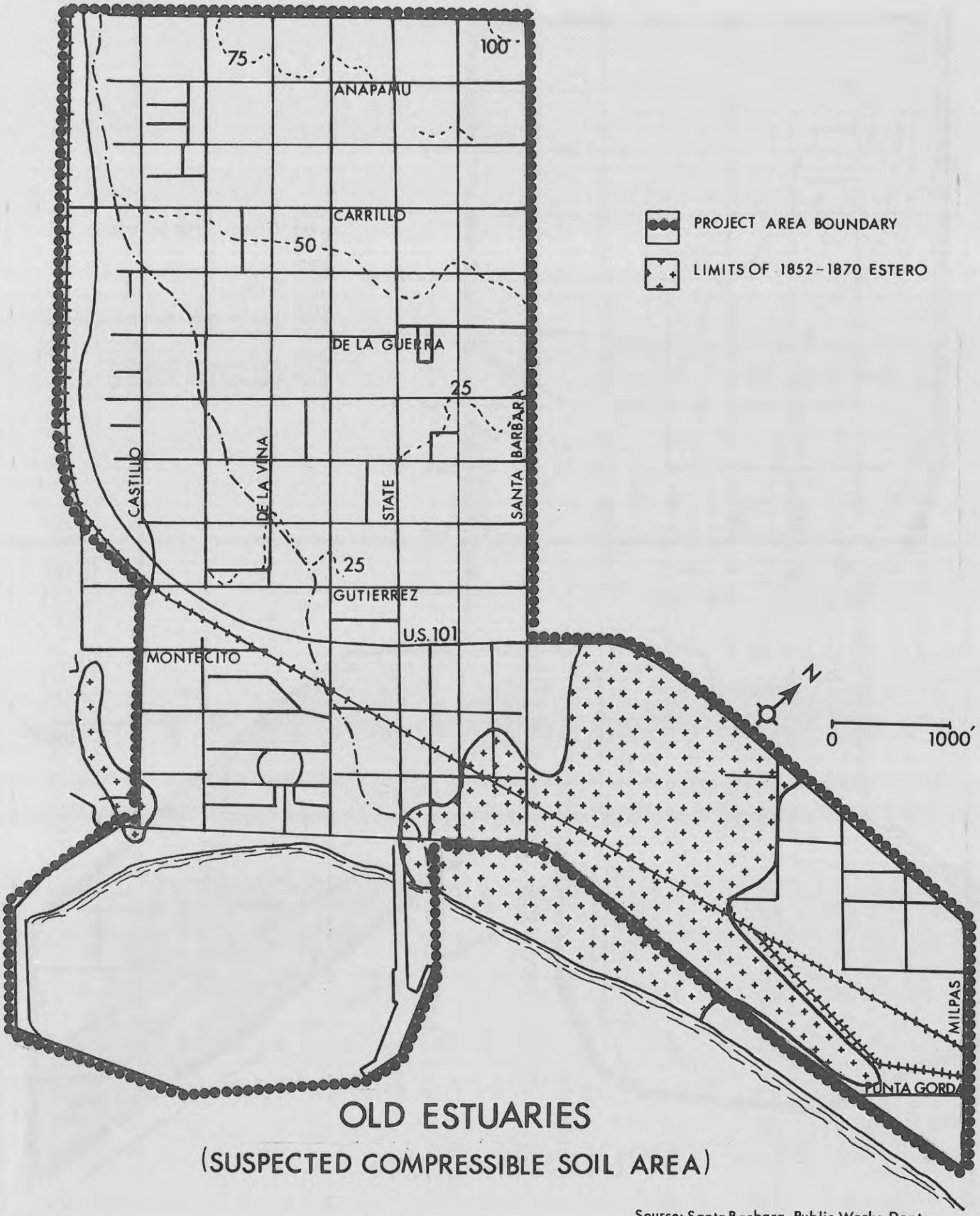
SANTA BARBARA

CENTRAL CITY REDEVELOPMENT PROJECT





SOIL LIQUEFACTION



OLD ESTUARIES

(SUSPECTED COMPRESSIBLE SOIL AREA)

Source: Santa Barbara Public Works Dept
July 1976

APPENDIX C

BIOTIC COMMUNITIES

Tree Inventory and Map

TREE INVENTORY

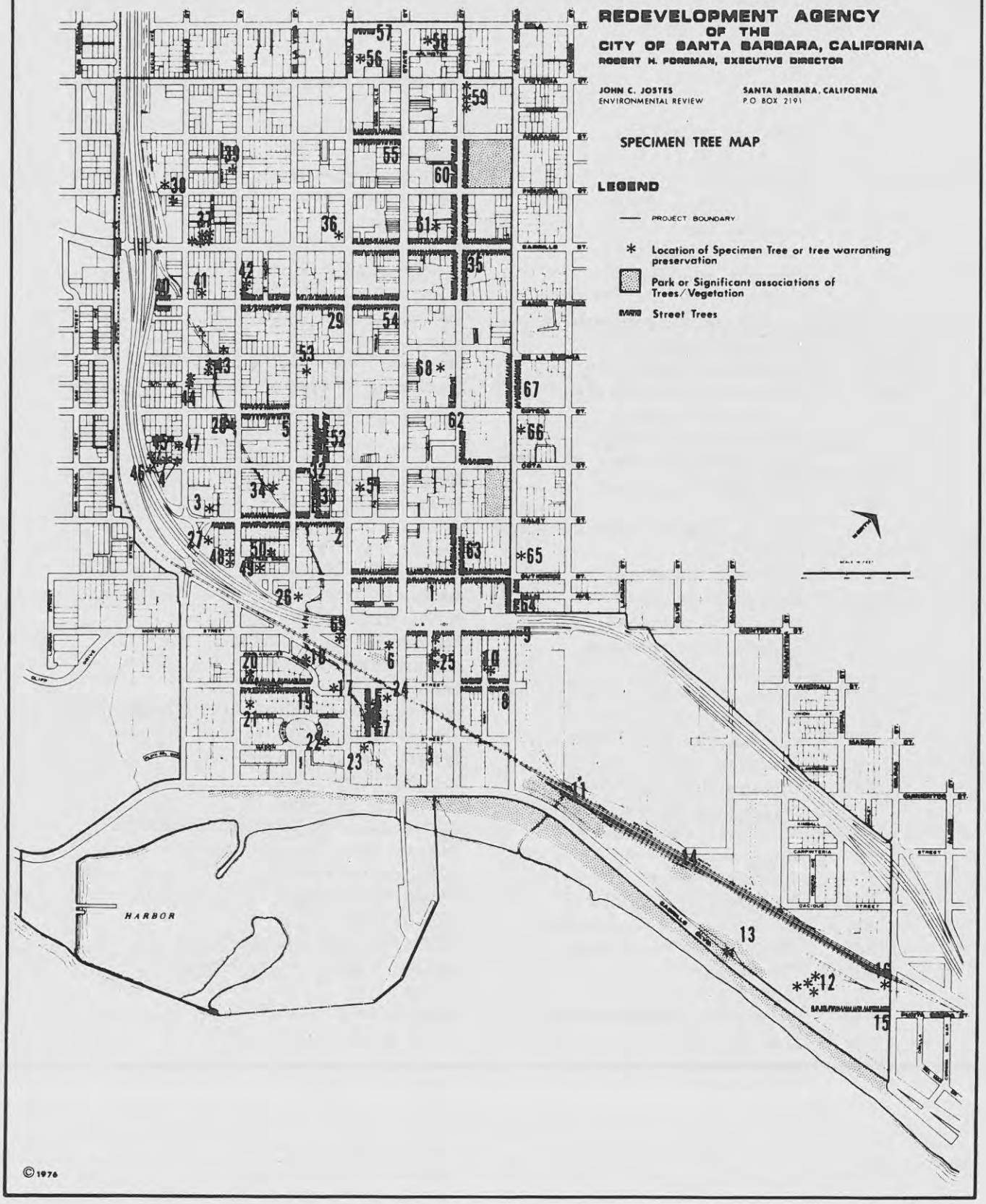
(numbers correspond to numbers on Specimen Tree Map)

No.	Type Tree	Location
Land Use Designator 1		
#1	Brazilian Cedarwood	Street trees located along Gutierrez St.
#2	Red Flowering Eucalyptus	Street trees along Haley St.
#26	Camphor Tree (2)	Specimen located on 300 block of De La Vina*
#27	Monterey Cypress	Specimen east of Castillo St. undercrossing*
#36	Star Pine	Specimen on northwest corner of Carrillo St. and Chapala St.
#48	Black Walnut (2)	Specimens along 400 block of Bath St.
#49	Incense Cedar and Lemon Scented Eucalyptus	Located on Cottage Grove
#50	Specimen Avocado	Located along Cottage Grove
	Sycamore	Haley St. next to Mission Creek
#52	California Fan Palms	Street trees on east side of Bradbury St.
Land Use Designator 3		
#38	Mexican Fan Palms (2)	400 Block of W. Figueroa
#40	Queen Palms	400 block of W. Canon Perdido
#43	Blue Gum Eucalyptus Sycamores (2) Canary Island Date Palm	Adjacent to Mission Creek along 300 block of W. De La Guerra
#44	Western Catalpa (2)	Locally rare trees located along 700 block of Castillo St.
#45	Canary Island Date Palm	Specimen in 400 block of W. Cota St.
#46	King Palm	Specimen in 400 block of W. Cota St.
#47	California Fan Palm	Specimen in 400 block of W. Cota St.
#3	Monterey Cypress	Specimen north of 300 block of W. Haley St.
#4	Pink Flame Trees	Street trees along 400 block of W. Cota St.
Land Use Designator 4		
#9	Camphor Tree Jacuranda	Street trees along 0-200 blocks of Montecito St.*
#8	Laurel Fig	Street trees along 100 block of E. Yanonali Street
#10	Canary Island Pine	100 Block of Gray Avenue
#11	Assorted Specimens	Along Cabrillo between central drainage channel and Santa Barbara St.
#12	Assorted Specimens	Directly north of Roundhouse
#13	Blue Gum Eucalyptus	Numerous specimens north of Cabrillo Blvd.
#14	Palm Family	Directly south of existing Southern Pacific right-of-way
#15		Street trees located along Punta Gorda St.
#16	Eucalyptus	Along 300 block of S. Milpas St.
Land Use Designator 6A		
#6	Date Palm	Specimen at southwest corner of Montecito St. and State St.
	Canary Island Date Palm	Specimen at southwest corner of Montecito St. and State St.
#25	Canary Island Date Palms (3)	Street trees located along 200 block of Helena Avenue
#9	See above.	

*Also threatened by Crosstown Transportation Corridor

SANTA BARBARA

CENTRAL CITY REDEVELOPMENT PROJECT



List of Trees Indicated on Specimen Tree Map

No.		Common Name
1	Cederela fissilis	Brazilian Cedarwood
2	Eucalyptus ficifolia	Red Flowering Gum
3	Cupressus	Monterey Cypress
4	Brachychiton discolor	Pink Flame Tree
5	Tipuana Tipu	Tipu Tree
6	Phoenix dactylifera	Date Palm (edible)
	Phoenix canariensis	Canary Island Date Palm
7	Koelreuteria bipinnata	Chinese Lantern Tree
	Koelreuteria paniculata	Golden Rain Tree
8	Ficus microcarpa	Laurel Fig
9	Cinnamomum camphora	Camphor Tree (street trees)
9a	Jacaranda acutifolia	Jacuranda (street trees)
10	Pinus canariensis	Canary Island Pine
11	Assorted Specimens	
12	Assorted Specimens of trees	
13	Eucalyptus	Myrtle Family
14	Palmae	Palm Family
15	Street trees to be retained	
16	Eucalyptus	Myrtle Family
17	Platanus racemosa	California Sycamore
18	Auraucauiaceae	Aurauria Family
19	Chorisia speciosa	Floss Slik Tree
20	Taxodium mucronatum	Montezuma Bald Cypress
21	Auraucariaceae	Auraucaria Family
22	Phoenix canariensis	Canary Island Date Palm
23	Platanus racemosa	Western or California Sycamore Tree
24	Cupressus macrocarpa	Monterey Cypress
25	Phoenix Canariensis	Canary Island Date Palm
26	Cinnamomum camphora	Camphor Tree
27	Cupressus macrocarpa	Monterey Cypress
28	Platanus racemosa	California or Western Sycamore
29	Acacia baileyana	Bailey Acacia, Cootamundra Wattle
30	Podocarpaceae	Podocarpus Family
31	Eucalyptus robusta	Swamp Mahogany
32	Cauarina cunninghamiana	Australian River Oak
33	Washingtonia robusta	Washingtonia Filifera
34	Myrtaceae	Myrtle Family - Eucalyptus
35	Ficus microcarpa	Laurel Fig
36	Araucaria heterophylla	Star Pine (Tree of Lights)
37	Washingtonia filifera	California Fan Palm
37a	Washingtonia gracilis, W. Sonorae	Mexican Fan Palm

No.		Common Name
38	Washingtonia gracilis, W. Sonorae	Mexican Fan Palm
39	" "	" " "
40	Syagrus romansoffiano	Queen Palm
41	Grevillea robusta	Silk Oak
42	Cedrus deodara	Deodar Cedar
43	Eucalyptus globulus	Blue Gum
	Platanus racemoca	Sycamores
	Phoenix caneriensis	Canary Island Date Palm
44	Catalpa speciosa	Western Catalpa
45	Phoenix caneriensis	Canary Island Date Palm
46	Archontophoenix cunning-hamiana	King Palm
47	Washingtonia filifera	California Fan Palm
48	Juglans nigra	Black Walnut
49	Calocedrus decurrens	Incense Cedar
	Eucalyptus citriodora	Lemon Gum
50	Persea americana	Sp. Avocado
51	Cinnamomum camphora	Camphor Tree
52	Washingtonia filifera	California Fan Palm
53	Araucaria heterophylla	Star Pine
54	Ficus microcarpa	Indian Laurel Fig
55	" "	" " "
56	Eucalyptus ciriodora	Lemon Gum
57	Grevillia robusta	Silk Oak
58	Pinus caneriensis	Canary Island Pine
59	Grevillia robusta	Silk Oak
60	Archontophoenix cunninghamiana	King Palm
	Syagrus romanzoffiana	Queen Palm
61	Cupressus macrocarpa	Monterey Cypress
62	Washingtonia robusta	Mexican Fan Palm
63	Magnoliaceae	Magnolia Family
64	Washingtonia filifera	California Fan Palm
65	Eucalyptus citriodora	Lemon Scented Gum
66	Leucaena esculenta	Popinak Tree
67	Schinus molle	California Pepper Tree
68	" "	" " "
69	Ficus macrophylla	Moreton Bay Fig

APPENDIX D

AIR QUALITY

Table D-1	Ambient Air Quality Standards
Table D-2	Pollutant Emission Inventory
Table D-3	Percent Contribution to Pollution Load by Source
Table D-4	Santa Barbara Downtown Carbon Monoxide Concentrations
Table D-5	831 State Street - Oxidants, CO, NOx
Table D-6	Oxidants, Frequency of Values Equalling or Exceeding 0.09 ppm.
Table D-7	Santa Barbara Downtown Oxidant Concentrations
Table D-8	Nitrogen Dioxide
Table D-9	Particulates, South Coast Portion of Santa Barbara County, Days Exceeding the Standard

CCRP Emissions Calculations and Methodology

Table D-10 1990 Projected Emissions Estimates

TABLE 1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards (Primary)	Objective
Photochemical Oxidants (corrected for NO_2)	1 hour	0.10 ppm	0.08 ppm	To prevent eye irritation and possible impairment of lung function in persons with chronic pulmonary disease, and to prevent damage to vegetation.
Carbon Monoxide	12 hours 8 hours 1 hour	10 ppm -- 40 ppm	-- 9 ppm 35 ppm	To prevent interference with the capacity to transport oxygen of the blood.
Nitrogen Dioxide	Annual Avg. 1 hour	-- 0.25 ppm	0.05 ppm --	To prevent possible risk to public health and atmospheric discoloration.
Sulfur Dioxide	Annual Avg. 24 hours 1 hour	-- 0.04 ppm 0.5 ppm	0.03 ppm 0.14 ppm --	To prevent pulmonary irritation. To prevent odor.
Suspended Particulate Matter	Annual Geometric Mean 24 hours	60 g/m^3 100 g/m^3	75 g/m^3 260 g/m^3	To prevent health effects attributable to long continued exposures.

Cont'd. . ./

Ambient Air Quality Standards:

ppm = parts per million.
g/m^3 = micrograms per cubic meter.
mg/m^3 = milligrams per cubic meter.
Federal Standards are more stringent than California Standards.
ARB Annual Summary of Air Quality, 1974, and ARB Bulletin, 1971.

Source: "A Survey of Air Pollution Damage to Santa Ynez Crops in 1974," C.A. Terry, Office of Environmental Quality, December 1975.

Table 1 (Continued)
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards (Primary)	Objective
Lead (Particulate)	30 Day Avg.	1.5 g/m^3	--	Increased storage of lead will produce detectable metabolic effects.
Hydrogen Sulfide	1 hour	0.03 ppm	--	To prevent odor.
Hydrocarbons (Corrected for Methane)	3 hours	--	0.24 ppm	
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to 10 miles when the relative humidity is less than 70%.	--	To prevent visibility reduction.

Ambient Air Quality Standards:

ppm = parts per million.
g/m^3 = micrograms per cubic meter.
mg/m^3 = milligrams per cubic meter.
Federal Standards are more stringent than California Standards.
ARB Annual Summary of Air Quality, 1974, and ARB Bulletin, 1971.

Source: "A Survey of Air Pollution Damage to Santa Ynez Crops in 1974," C.A. Terry, Office of Environmental Quality, December 1975.

TABLE 2

Pollutant Emission Inventory
South Coast Santa Barbara County
(First line in tons/day; second line in tons/year)

Source	Total Hydrocarbons	Nitrogen Oxides	Carbon Monoxide	Sulfur Dioxides	Particulates
Gasoline Transfers	1.943	-	-	-	-
	709.10	-	-	-	-
Dry Cleaning	0.280	-	-	-	-
	102.17	-	-	-	-
Degreasing	0.047	-	-	-	-
	17.14	-	-	-	-
Paint Spray Booths	0.024	-	-	-	-
	8.88	-	-	-	-
Natural Gas Combustion	0.001	0.072	0.007	0.0	0.004
	0.45	26.18	2.54	0.0	1.49
Incinerators (paper)	0.001	0.001	0.002	0.001	0.002
	0.26	0.26	0.87	0.22	0.61
Concrete Batch Fac.	-	-	-	-	0.032
	-	-	-	-	11.80
Asphalt Batch Fac.	-	-	-	-	0.000
	-	-	-	-	0.09
Freeway Traffic	6.339	7.014	43.417	0.151	0.63
	2313.72	2560.20	15847.19	55.24	229.47
Surface Street Traffic	7.825	6.118	55.666	0.165	0.685
	2856.07	2233.16	20318.25	60.11	250.09
General Nat. Gas Usage	0.009	0.110	0.022	0.001	0.011
	3.22	40.10	8.02	0.24	4.01
Pesticides	0.300	-	-	-	-
	109.50	-	-	-	-
Waste Burning	0.200	-	0.400	-	0.100
	73.00	-	146.00	-	36.50
Structure Fires	0.400	-	1.400	-	0.300
	146.00	-	511.00	-	109.50

Cont'd.../

Table 2 (Continued)
Pollutant Emission Inventory
South Coast Santa Barbara County
(First line in tons/day; second line in tons/year)

Source	Total Hydrocarbons	Nitrogen Oxides	Carbon Monoxide	Sulfur Dioxides	Particulates
Fuel Oil Combustion	0.000	0.002	0.000	0.001	0.000
	0.02	0.56	0.03	0.50	0.11
Incinerators (Path.)	-	0.000	-	-	0.001
	-	0.08	-	-	0.22
Sand & Gravel	-	-	-	-	0.041
Handling	-	-	-	-	15.00
Utility Equipment	0.300	-	2.200	-	-
	100.50	-	803.00	-	-
Power Turbine	0.001	0.003	0.001	0.001	0.000
	0.19	1.13	0.44	0.40	0.06
Oil & Gas Prod. Fac.	1.120	0.951	0.001	0.073	0.006
	408.84	347.03	0.42	26.50	2.10
Tankship Terminal	0.129	0.011	0.001	0.047	0.003
	47.20	4.11	0.20	17.00	1.20
Aircraft Operations	0.141	0.119	1.728	0.015	0.018
	51.61	43.58	630.81	5.37	6.70
	19.06	14.401	104.84	.455	1.833
TOTALS	6956.9	5256.366	38266.6	166.075	669.045

Source: Appendix C of Draft report entitled: "Methodology Development for Coordinated Air Quality/Land-Use Planning", Office of Environmental Quality, Santa Barbara County, 1976.

TABLE 3

Percent Contribution to Pollution Load by Source

	NOx	CO	SO_2	Particulate	Total HC
Gasoline Transfers	0	0	0	0	10.2
Dry Cleaning	0	0	0	0	1.47
Degreasing	0	0	0	0	.25
Paint Spray Booths	0	0	0	0	.13
Nat. Gas Combus.	.50	.01	0	.22	.01
Incinerators	.01	.002	.22	.11	.005
Concrete Batch Fac.	0	0	0	1.76	0
Asphalt Batch Fac.	0	0	0	.01	0
Surface Street Traffic	42.48	53.10	36.26	37.37	41.05
Freeway Traffic	48.71	41.41	33.20	34.38	33.26
Nat. Gas Usage	.76	.02	.22	.60	.05
Pesticides	0	0	0	0	1.57
Waste Burning	0	.38	0	5.46	1.05
Structure Fires	0	1.34	0	16.37	2.10
Fuel Oil Combus.	.01	.0001	.30	.02	.0003
Incinerators (Path.)	.002	0	0	.05	0

Cont'd.../

Table 3 (Continued)
Percent Contribution to Pollution Load by Source

	NOx	CO	SO_2	Particulate	Total HC
Sand/Gravel Handling	0	0	0	2.24	0
Utility Equipment	0	2.10	0	0	1.57
Power Turbine	.02	.001	.24	.01	.003
Gas & Oil Prod. Fac.	6.60	.001	16.04	.32	5.88
Tankship Term.	.08	.001	10.33	.16	.68
Aircraft Operations	.83	1.65	3.30	.98	.74
TOTALS	100.002	100.0151	100.11	100.06	100.0183
Mobile Combined	91.19	94.51	69.46	71.75	74.31

TABLE 4

Santa Barbara Downtown Carbon Monoxide Concentrations

(8 hour standard=9ppm; 12 hour standard-10ppm)

	Maximum Hourly Average		Days Exceeding Standard		
Year	Month	Value	8 Hr. Moving Average	12 Hr. Moving Average	Comment
1965	Nov.	44 ppm	N/A	N/A	117 E. Carrillo. Only full year of data in 1960's.
1972	Dec.	21 ppm	10	0	831 State St. Began operation in February 1972.
1973	Dec.	23 ppm	13	1	831 State St.
1974	Jan.	29 ppm	3	2	831 State St.
1975	Dec.	22 ppm	12	1	831 State St.
1976	Jan.	20 ppm	4	0	831 State St. All monthly data available for 1976 has been included.
	Feb.	10 ppm	0	0	
	Mar.	8 ppm	0	0	
	April	5 ppm	0	0	
	May	4 ppm	0	0	
	June	4 ppm	0	0	
	July	3 ppm	0	0	
	Aug.	6 ppm	0	0	

N/A = data not available

Source: APCD Quarterly Reports and personal communication with APCD and ARB personnel.

TABLE 5

831 State Street - Oxidants, CO, NO_x
Comparison of Data by Year

	HIGHEST HOURLY AVERAGE CONCENTRATION IN PPM														
	Oxidants					Carbon Monoxide					Nitrogen Dioxide				
Month	1976	1975	1974	1973	1972	1976	1975	1974	1973	1972	1976	1975	1974	1973	1972
January	0.07	0.05	0.05	0.04	-	20	21	29	15	-	0.18	0.13	0.11	0.10	-
February	0.05	0.06	0.09	0.09	0.05	10	16	27	10	13	0.09	0.11	0.12	0.13	0.21
March	0.12	0.10	0.14	0.10	0.07	8	13	14	8	7	0.19	0.09	0.07	0.07	0.07
April	0.14	0.06	0.13	0.11	0.10	5	6	9	6	7	0.08	0.07	0.10	0.10	0.10
May	0.11	0.10	0.13	0.24	0.09	4	4	6	4	4	0.08	0.06	0.07	0.09	0.07
June*	0.16	0.08	0.10	0.19	0.07	4	3	3	5	4	0.14	0.06	0.07	0.13	0.05
July	0.10	0.11	0.21	0.22	0.08	3	3	4	6	3	0.05	0.07	0.08	0.08	0.09
August	0.09	0.09	0.11	0.12	0.09	6	7	4	5	4	0.07	0.08	0.07	0.06	0.08
September		0.19	0.11	0.16	0.11		14	7	11	11		0.14	0.08	0.15	0.11
October		0.08	0.10	0.13	0.06		11	17	14	15		0.08	0.24	0.10	0.12
November		0.04	0.11	0.10	0.08		14	18	19	16		0.21	0.11	0.15	0.10
December		0.04	0.08	0.08	0.04		22	17	23	21		0.17	0.16	0.12	0.12
Highest		0.19	0.21	0.24	0.11		22	29	23	21		0.21	0.24	0.15	0.21
Average**		0.08	0.11	0.13	0.08		11.2	12.9	10.5	9.5		0.11	0.11	0.11	0.10

* Effective June 1, 1975, new calibration techniques for oxidants was adopted by the Air Resources Board.

**Average of highest hourly average concentrations indicated.

Source: Quarterly Report (Oct. - Nov. - Dec. 1975), Air Pollution Control District, Santa Barbara; personal communication with APCD and ARB; averages calculated by Community Land Use Associates.

TABLE 6

Oxidants, Frequency of Values Equalling or Exceeding 0.09 ppm

	STATION										
Address:	4400 Cathedral Oaks Rd.				831 State St.					380 No. Fairview Ave.	
City:	Santa Barbara				Santa Barbara					Goleta	
Station:	#42-358				#42-355					#42-363	
Month	73	74	75	76	72	73	74	75	76	75	76
Jan	NO	2/5	2/4	4/11	NO	0/0	0/0	0/0	0/0		2/3
Feb	0/0	2/7	3/11	0/0	0/0	1/2	1/2	0/0	0/0		0/0
Mar	1/5	3/12	2/6	3/6	0/0	1/4	2/6	1/3	2/5		2/5
Apr	10/37	11/47	6/21	3/11	1/2	8/27	4/19	0/0	3/9	0/0	3/11
May	22/107	18/74	14/61	3/9	1/1	15/46	5/16	3/12	1/3	2/3	4/12
Jun*	18/85	12/63	3/5	7/49	0/0	12/65	4/7	0/0	7/41	4/9	6/43
Jul	16/83	21/82	6/16	6/16	0/0	12/45	14/45	1/4	1/4	6/10	6/10
Aug	17/59	15/45	4/10	2/3	2/3	14/29	4/10	1/2	1/2	4/13	NA
Sep	17/80	12/52	6/25		1/1	12/60	8/32	3/13		6/18	
Oct	11/41	11/38	2/2		0/0	8/27	1/2	0/0		2/5	
Nov	0/0	10/45	2/5		0/0	1/1	2/4	0/0		0/0	
Dec	0/0	4/2	0/0		0/0	0/0	0/0	0/0		0/0	
TOTAL DAYS	112	122	50	** 28	5	84	45	9	** 15	24	** 23
TOTAL HOURS	497	517	166	** 105	7	306	143	19	** 64	46	** 84

**Not a full year of continuous sampling

*June 1, 1975 - New Oxidant Calibration Standard (UV Photometry)

Source: Adapted from "A Survey of Air Pollution Damage to Santa Ynez Crops in 1974." p.20; and 1976 data from Santa Barbara APCD, personal communication.

TABLE 7

Santa Barbara Downtown Oxidant Concentrations
State standards for one hour = 0.10 ppm;
Federal Standards = 0.08 ppm

Year	Highest Hourly Average Concentration Month	Concentration	Exceeding 0.09 ppm Number of Days (Total)	Number of Hrs. (Total)	Comment
1965	Jan	0.28 ppm	89	382	At 117 E. Carrillo. Only continuous sampling for downtown location during 1960's.
1972	Sept.	0.11 ppm	5	7	Station at 831 State St. began operating in Feb. 1972.
1973	May	0.24 ppm	84	304	At 831 State St.
1974	July	0.21	45	143	At 831 State St.
1975	Sept.	0.19	9	19	At 831 State St. As of June '75 new calibration technique went into use.
1976	Jan.	0.07	0	0	At 831 State St. All monthly data available for 1976 included. Totals through August = 18 days, 68 hrs.
	Feb.	0.05	0	0	
	Mar.	0.12	2	5	
	April	0.14	3	9	
	May	0.11	1	3	
	June	0.16	7	41	
	July	0.10	4	8	
	Aug.	0.09	1	2	

Source: APCD Quarterly Reports and personal communication with APCD and ARB personnel.

TABLE 8

Nitrogen Dioxide
State Standard = 0.25 ppm (1 hour)

Year	Maximum Hourly Concentration (ppm)		No. of Times Standard Exceeded		Comment
	Month	Value	One Hour Standard	24 Hour Standard	
1965	-	0.31	None	None	117 E. Carrillo. Does not include January 1965.
1972	Feb.	0.21	None	None	831 State St.
1973	Nov.	0.15	None	None	831 State St.
1974	Oct.	0.24	None	None	831 State St.
1975	Nov.	0.21	None	None	831 State St.
1976	Jan.	0.18	None	None	831 State St.
	Feb.	0.09			
	March	0.11			
	April	0.08			
	May	0.08			
	June	0.14			
	July	0.05			
	Aug.	0.07			

Source: APCD Quarterly Reports and personal communication with APCD and ARB personnel.

TABLE 9

Particulates
South Coast Portion of Santa Barbara County
Days Exceeding Standard
(California 24 hour Standard = 100 ug/m^3)

Year	Month	No. of Exceedances	Days Sampled	Reading (ug/m^3)	Location
1974	Jan	1	5	114.8	State St., S.B.
	May	1	5	135.3	Carpinteria
	Sept.	1	5	116.0	Carpinteria
	Oct.	1	5	112.4	Carpinteria
	Total	4 days of 20 sampled = 20%			
1975	Mar.	1	5	106.0	State St., S.B.
	Jul.	1	5	124.3	State St., S.B.
	Dec.	1	5	123.3	State St., S.B.
	Total	3 days of 15 sampled = 20%			
1976	Jan.	2	5	122.1	
				110.2	State St., S.B.
		1	6	102.4	Goleta
	Mar.	3	5	125.0	State St., S.B.
				172.3	
				108.6	
	May	1	5	120.4	State St., S.B.
	June	1	5	117.5	State St., S.B.
		1	5	118.2	Carpinteria
	Total	9 days of 31 sampled = 29%			

Source: A. Terry, OEQ, personal communication.

CCRP EMISSION CALCULATIONS AND METHODOLOGY

Assumptions

Assumptions regarding the number of trips per day are addressed in Appendix I. The average number of miles assumed per trip is listed in the second column of Table D-10 of this Appendix.

Calculations

The basic formula used to calculate carbon monoxide, hydrocarbon, nitric oxide and particulate emissions is as follows:

Tons/Day = Daily Vehicle Miles x Emission Factor x Conversion Constant

where: Tons/Day = total tons per day of pollutant of concern

Daily Vehicle Miles = the total number of miles traveled (i.e. number of trips/day x miles per trip).

Emission factor = grams per mile emitted (for the year 1990). From Table 3.1.1-1 of EPA's document AP-42.
CO = 14 g/mi.
HC = 1.98 g/mi.
NOx = 2.2 g/mi.
Particulates = 0.58 g/mi.

Conversion constant = .0000011 tons/gram (converts grams to tons)

As the average speed was assumed to be 19.6 mph which requires that no speed correction factor be entered into the equation.

The basic formula is derived from EPA document AP-42, and emission factors are from Table 3.1.1-1 of that publication. Emission factor data in Table 3.1.1-1 is based upon a generalized test cycle, involving a typical every-day driving pattern. Emission factors for all highway vehicles[1] indicated in EPA's recent Supplement 5 to document AP-42 was preferred for this analysis, however, those values are not applicable to vehicles in California. Also composite emission factors based on Federal Test Procedures would produce more specific projections but require elaborate calculations involving parameters which are not known and impractical to assume. Modal emissions analysis could produce more precise projections but it requires computerization.

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1. Table D.1-1, Appendix D, with the following parameters: average speed = 19.6 mph; ambient temperature = 75 degrees F; cold start = 20%; vehicle split - light duty vehicles = 80.4%, light duty trucks = 11.8%, heavy trucks = 7.8%.

Sample Calculation

The following example demonstrates the calculations used to derive projected emissions:

Basic information used to calculate carbon monoxide emissions due to vehicle use related to the Auto Center as of 1990.

a.	Trip Generator	=	Auto Center
b.	Number of trips per day	=	500 trips/day
c.	Average miles per trip	=	6.6 miles/trip
d.	Daily vehicle miles (bxc)	=	3,300 miles/day
e.	Emission factor (as per Table 3.1.1-1 in EPA publication AP-42)	=	14 grams/mile
f.	Constant (converts grams to tons)	=	.0000011 tons/gram

Basic formula: Daily Vehicle Miles x Emission factor x Constant

3,300 mi/day x 14 g/mi x .0000011 tons/g
3,300 x 14 x .0000011 = 0.051 tons/day

Estimated carbon monoxide emissions from this source (using 1990 emission factor) is multiplied by 312 days per year (assuming 6 business days per week, 52 weeks a year), and the yearly total would be 15.912 tons per year.

In all calculations it was assumed that 312 days would approximate a year of emissions.

Table D-10

1990 Projected Emissions Estimates

	No. of Trips Per Day	Average No. of Miles Per Trip	Total Miles	CARBON MONOXIDE (CO)		HYDROCARBONS (HC)		NITROGEN OXIDES (NO_x - NO_2)		PARTICULATES	
				tons/day	tons/year	tons/day	tons/year	tons/day	tons/year	tons/day	tons/year
HOTEL CONFERENCE CENTER	4,770	4-8	19,080-38,160	.294- .588	91.728- 183.455	.072- .083	13.104- 25.896	.046- .092	14.352- 28.704	.012 .024	3.744- 7.488
TRANSPORTATION CENTER	2,560	3-6	7,680-15,360	.118- .237	36.816- 73.944	.017- .033	5.304- 10.296	.019- .037	5.928- 11.544	.005- .010	1.56- 3.12
RETAIL EXPANSION	6,200	5-8	31,000-49,600	.477- .764	148.824- 238.314	.068- .108	21.216- 33.696	.075- .120	23.4- 37.44	.020- .032	6.24- 9.984
LOW & MODERATE INCOME HOUSING	810	2-4	1,620- 3,240	.025- .050	7.8- 15.6	.004- .007	1.248- 2.184	.004- .008	1.248- 2.496	.001- .002	.312- .624
MARKET HOUSING	1,800	6-10	10,800-18,000	.166- .277	51.792- 86.424	.024- .039	7.488- 12.168	.026- .044	8.112- 13.728	.007- .011	2.184- 3.432
AUTO CENTER	500	6.6	3,300	.051	15.912	.007	2.184	.008	2.496	.002	.624
NEWCOMERS											
Management	1,014	6-10	6,084-10,140	.094- .156	29.328- 48.672	.013- .022	4.056- 6.864	0.015- .025	4.68- 7.8	.004- .006	1.248- 1.872
Low											
Low & Moderate Income	405	5-7	2,025- 2,835	.031- .044	9.672- 24.024	.004- .006	1.248- 1.872	.005- .007	1.56- 2.184	.001- .002	.312- .624
TOTALS	18,059		81,584-140,635	1.256- 2.166	391.872- 675.792	.178- .306	55.536- 95.472	.197- .340	61.464- 106.08	.052- .090	16.224- 28.08

APPENDIX E

NOISE

Definition of Terms

Crosstown Transportation Corridor: Predicted and Measured Noise Levels

Southern Pacific Railroad CNEL Contour Location

Noise Monitoring

Design Noise Level/Land Use Relationships

Definitions of Terms

Decibel, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

L_{10}: The A-weighted sound level exceeded 10 percent of the sample time. Similarly, L_{50}, L_{90}, L_{99}, etc.

Equivalent Energy Level, L_{eq}: The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8, and 24 hour sample periods.

CNEL: Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 pm to 10 pm and after addition of 10 decibels to sound levels in the night before 7 am and after 10 pm.

L_{dn}:	Day-Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels in the night before 7 am and after 10 pm. Note: CNEL and L_{dn} represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the equivalent energy noise exposure for a shorter time period, typically one hour.
Noise Exposure Contours:	Lines drawn about a noise source indicating constant energy levels of noise exposure. CNEL and L_{dn} are the metrics utilized herein to describe community exposure to noise.
Ambient Noise Level:	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
Intrusive Noise:	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency and time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.
Equal Noisiness Zones:	Defined areas or regions of a community wherein the ambient noise levels are generally similar (within a range of 5 dB). Typically, all sites within any given noise source will be of comparable proximity to major noise sources.

Source: "Motor Vehicle Noise", A Report to the Assembly Committee on Transportation, Technical Advisory Panel on Motor Vehicle Noise, February, 1973, pp. 3 and 4.

Crosstown Transportation Corridor

PREDICTED AND MEASURED NOISE LEVELS
1974 to 1995

Site[d]	Impact Area[a]	Location from Highway		Distance from Edge of Pavement[b] Construction		Hour of Meas.	Meas. L_{10}	Predicted Exterior L_{10} Levels		Attenuated[c] L_{10} Levels			Present Land Use Category & Remarks[d]
		South	North	Before	After		1974 dBA	1980 dBA	1995 dBA	Barrier Height[f]	1980 dBA	1995 dBA	
1	2		x	240'	150'	0745	63	72	74	6'	67	69	B-Residential
2	2		x	220'	180'	0820	67	71	73	6'	66	68	B- "
3	-		x	385'	385'	0850	65	66	69		--	--	B- "
4	3		x	210'	210'	0920	64	71	74	4'	66	69	B- "
5	3		x	135'	135'	0950	69	73	76	11'	67	70	B- "
5	3		x	135'	135'	2020	65	--	--	11'	--	--	B- "
5A	3		x	60'	60'	--	--	79	81	11'	68	70	B- "
6	5	x		180'	180'	1030	64	70	73	6'	65	68	B- "
7	-	x		260'	355'	1120	63	66	68		--	--	B-Apartments (two story)
7A	4	x		80'	170'	--	--	71	73	4'	65	67	B-Park area
8[e]	-		x	255'	300'	1250	69	66	69		--	--	B-Churches
9	1		x	100'	140'	0915	74	73	75	5'	68	70	B-Residential
9	1		x	100'	140'	1335	74	--	--	5'	--	--	B- "
10	1		x	155'	95'	1000	66	77	78	11'	70	71	B-Apartment (two story)
10	1		x	155'	95'	1545	68	--	--	11'	--	--	B- "
11	-		x	50'	50'	0830	76	79	80		--	--	Existing r/w
12[e]	-		x	520'	500'	0940	69	64	66		--	--	B-School

a- Shown on Exhibit D. b- Edge of pavement - 6' from center of outside highway lane. c- After noise reduction measures. d- Land use category - from FHPM 7-7-3. e- 8 and 12 - Measured L_{10} levels reflect local street traffic. f- 30' from edge of pavement.

Source: "EIS for the Proposed Transportation Project on Highway 101...", Caltrans, page IV-20, Fig. 4-15.

Impact areas within the Redevelopment area.

Area 2 - Residences north of an adjacent to the right-of-way between De la Vina and Castillo Streets.

Area 3 - Residences north of and adjacent to the right-of-way between Dibblee Avenue and Canon Perdido Street.

Area 4 - Park area southerly and adjacent to the right-of-way between State Street and De la Vina.

Source: "Final EIS for the Proposed Transportation Project on Highway 101 through the City of Santa Barbara", (Draft), Caltrans, p. IV-20.

SOUTHERN PACIFIC RAILROAD

CNEL CONTOUR LOCATION

TRACK SECTION	DISTANCE TO CONTOUR (FT.) CNEL 75	70	65	60	55
Main Line					
County Line - Military Access Rd.	68	132	261	519	1025
Military Access Rd. - Santa Maria Rd.	65	144	320	720	1620
Santa Maria Rd. - Surf	64	128	250	502	1010
Surf - Glen Annie Rd.	68	138	269	535	1040
Glen Annie Rd. - West Santa Barbara (M.P. 368.2)	70	138	280	550	1100
West Santa Barbara - Santa Barbara Station	75	158	330	705	1490
Santa Barbara Station - M.P. 372.0	75	166	362	825	1820
M.P. 372.0 - County Line	68	131	260	515	1030
Lompoc Branch					
Surf - Lompoc (M.P. 312.4)	--	---	98	195	380
Lompoc - White Hills (M.P. 316.7)	--	---	112	230	460

Source: Harlan Damron, Department of Planning, County of Santa Barbara.

Noise Monitoring

CENTRAL CITY REDEVELOPMENT EIR

Noise level measurements were taken on October 28 and 29, 1976, at the following locations:

Site 1: Bath Street between Ortega and De La Guerra.

Site 2: De La Vina between De La Guerra and Canon Perdido.

Site 3: De La Vina between Victoria and Sola.

Site 4: Chapala between Carrillo and Figueroa.

Site 5: Chapala between Canon Perdido and Carrillo.

All measurements were made with a General Radio 1565B type 2 sound level meter meeting ANSI S 1.4-1971 standards and calibrated before and after the sample. At each location a 15 minute sample was taken, measurements made at 5 second intervals, and all measurements were at 50 feet from the center of the nearest travel lane. Vehicle counts were taken during each sample period, and the results extrapolated to equivalent hourly traffic volume.

Site	Equivalent Hourly Traffic Volume	% Trucks & Buses	Estimated Speed (MPH)	Sound Level db(A) *			
				L_{90}	L_{50}	L_{10}	L_{eq}
1	276	1	25-30	50	54	62	56
2	420	0	25-30	58**	60	65	62
3	570	1	25	55	60	66	63
4	788	6	25	56	62	68	65
5	821	2	25	57	63	69	66

*L_{90}: Level exceeded 90% of the sample period; characterizes the background noise level when vehicles not present.

L_{50}: Level exceeded 50% of the sample period; the "average" noise level.

L_{10}: Level exceeded 10% of the sample period; characterizes "peak" noise levels when vehicles present.

L_{eq}: Energy-equivalent sound level; represents the average sound energy experienced during the sample period.

**Amplified music was audible in background when no vehicles were present.

Source: Harlon Damron, Department of Planning, County of Santa Barbara.

Noise Monitoring - Interpretive Report

At the five locations sampled the levels which were characteristic of the background noise when vehicles were not present ranged from 50dBA to 58dBA. The peak noise levels when vehicles were present ranged from 62dBA to 69dBA. A noise reduction from 15dB to 20dB[1] can be achieved by closing the windows facing the source of noise - in this case, the street. Consequently, street noise levels of 60 to 65dBA could be attentuated to an acceptable interior noise level of 45dBA. At the locations sampled, the noise levels representative of all but the peak levels fell within an acceptable range (i.e. attentuated to a maximum interior level of 45dB with windows closed).

During peak noise levels (i.e. while traffic was present), exterior levels were generally 65dBA or greater and attentuation to the maximum acceptable interior level (45dBA) is probably not being achieved during the peak traffic times.

Generally, those locations experiencing twice as much traffic as other locations had noise levels 3 to 4 dB higher. An increase in noise level of 3 to 4dB, although perceptable is not necessarily significant. However, those primarily residential streets which now experience levels of approximately 60dBA during peak traffic times[2] and which would be subject to a doubling or greater increase in traffic as a result of CCRP implementation, could undergo significant adverse impact in that noise levels could increase to a noticeable and disturbing extent. Streets that would fall into this category include the following:

Figueroa between Garden and Olive
Haley between Castillo and Chapala (with Crosstown Corridor)
De La Vina between Carrillo and Haley

Other streets anticipated to have significant traffic volume and noise level increases but which are not primarily residential streets:

Victoria between De La Vina and Garden
De La Guerra between De La Vina and Anacapa
De La Guerra between Santa Barbara and Garden
Cota between De La Vina and Chapala (without Crosstown Corridor)
Garden between Cota and Haley (with Crosstown Corridor)
Laguna between Ortega and Haley (with Crosstown Corridor)

1. J.W. Swing, "Estimation of Community Noise Exposure in Terms of Day-Night Average Level Noise Contours", p. 2. Other sources extend this range from as low as 12dB up to a high of 25dB.
2. As noise level measurements have not been made for all the affected streets, assumption was made that streets with similar traffic flows as the ones monitored for this report would also have noise levels similar to those measured.

Reductions of noise levels due to significant decreases in traffic would occur given implementation of the street closures considered by the CCRP for the West Downtown area. Noise level reductions on primarily residential streets would have beneficial impact on those residents by providing a more quiet and healthful, less hectic street environment. It should be noted that the closure of a street to through traffic would essentially move that traffic and its attendant noise from that street to another street (or streets). Consequently no reduction in overall community noise is achieved. However, by relieving residential streets of the burden of commuter traffic and noise, substantial and beneficial reductions of noise levels in these neighborhoods can be accomplished.

DESIGN NOISE LEVEL/LAND USE RELATIONSHIPS

Land Use Category	Design Noise Level - L_{10}	Description of Land Use Category
A	60 dBA (Exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheatres, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sport areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in categorieds A and B above.
D	--	For requirements on undeveloped lands see paragraphs 5. e.(5) and (6) of PPM 90-2.
E	55 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

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APPENDIX F

AESTHETIC/ARCHAEOLOGICAL AND CULTURAL CONCERNS

Location of Adobe Structures

Location of Victorian and Other Architecturally Significant Buildings

General Appearance of Land Uses in the Project Area

Location of Adobe Structures

Figure F-1 shows those areas where adobe structures may be found within the CCRP area. Listed below is an annotated description of each of the known adobes and historic buildings.[A]

1. Carrillo Adobe, 11 E. Carrillo Street, Daniel Hill, Builder:

   "Originally the residence of Daniel Hill and Dona Rafaela Ortega, this adobe is said to have had the first wood floor in town. It became the property of the Carrillo family in 1854, was restored in 1929 and given to the Santa Barbara Foundation, its present occupants."

2. El Cuartel, 122 E. Canon Perdido Street:

   "Built in the 1790's as soldiers quarters and used in the Mexican era as a guard house, it was given to Jose Jesus Velenzuela, the gate soldier, in 1846. It is a massive building with enormous, thick walls, and a pleasant front court."

3. Caneda Adobe (Casa del Presidio) 123 E. Canon Perdido Street:

   "Built inside the Spanish Presidio Quadrangle, this structure became the property of Jose Maria Caneda, a Presidio soldier. His descendants remained in the house through the 19th Century. It was restored in 1920 by Elmer Whitaker."

4. Buenaventuro Pico Adobe, 916 Anacapa St., Buenaventuro Pico, Builder.

5. Rochin/Birabent Adobe, 820 Santa Barbara Street, Ordez de Rochin, Builder:

   "This adobe with clapboard siding was built within the confines of the old Spanish Presidio from bricks and tiles of its ruined buildings (1856)."

6. Covarrubias Adobe, 715 Santa Barbara Street, Don Domingo Carrillo, Builder (1817):

   "This L-shaped adobe in a Spanish style demonstrates a harmony in the flow of tile roofs and juxtaposition of the one-story section and patio roof with the story-and-a-half section. It became the home of Don Jose Maria Covarrubias when he married into the Carrillo family."

A. Adapted from Henry Andree and Noel Youngs, Santa Barbara Architecture, Capra Press (1976).

LOCATION OF ADOBE STRUCTURES

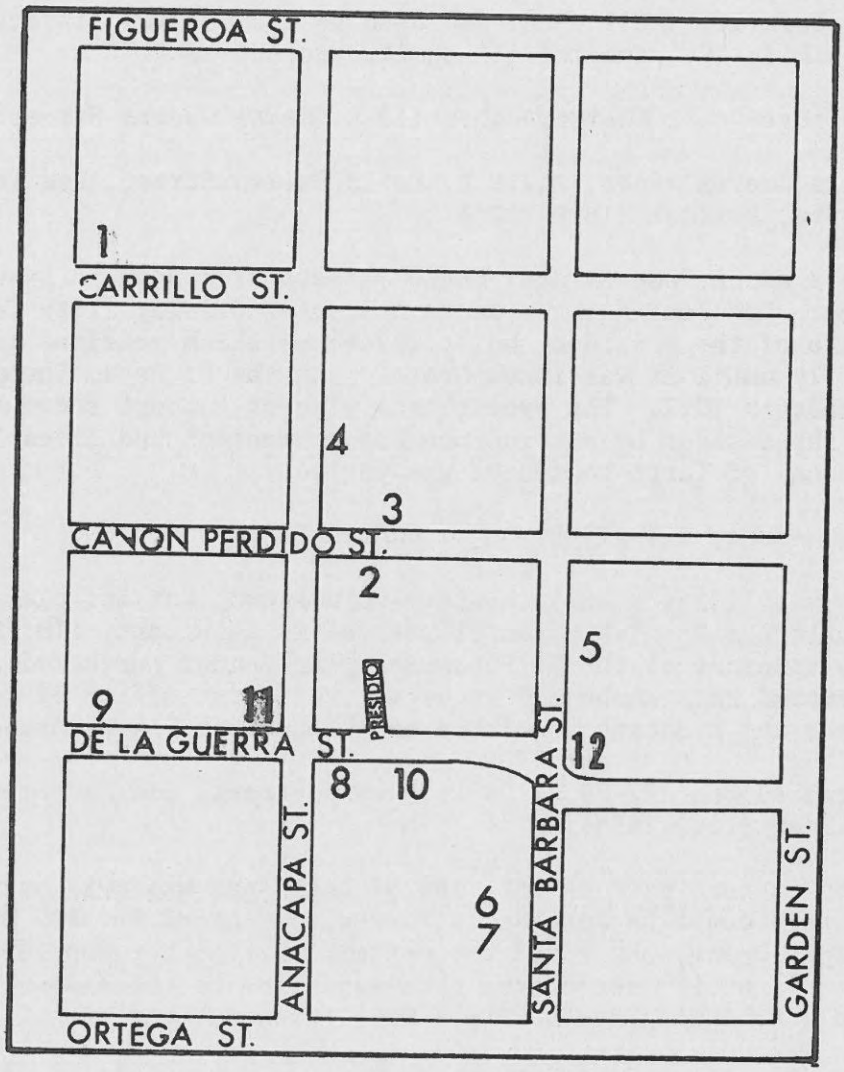

Figure F-1

7. "Historic" adobe (Robinson-De La Guerra Adobe), 715 Santa Barbara Street (1825):

   "A Mexican style adobe house (as compared to the Spanish style Covarrubias adobe). It stood at the corner of State and Carrillo until 1903, was used as the Natural History Museum in 1922 and rebuilt on its present site."

8. Santiage De La Guerra Adobe, 110 E. De La Guerra Street:

9. De La Guerra Adobe, 11-19 E. De La Guerra Street, Don Jose de la guerra, Builder (1819-1826).

   "This adobe demonstrates Santa Barbara as a Spanish garrison town. Don Jose Antonio de la Guerra y Noriega, fifth Commandante of the Presidio, built the house which remained in the family until it was incorporated into the El Paseo Shopping Arcade in 1922. The traditional plan of a court surrounded on three sides by a structure was convenient and liveable, typical of large houses of the period.

10. Lugo Adobe, 114-1/2 E. De La Guerra Street (c. 1850):

    "This building's early history is unknown, but its place within the Spanish Colonial revival is important. In 1922 the sponsors of the El Paseo Shopping Center purchased and restored this adobe and it became the first office of the Plans and Planting Committee of the Community Arts Association."

11. Orena Adobes, 27-29 E. De La Guerra Street, Don Gaspar Orena, Builder (1849-1858):

    "The eastern part of this set of buildings was originally a store owned by Jose de la Guerra, purchased in 1849 by Don Gaspar Orena, who added the western portion between 1853-58. These are city structures standing close to the sidewalk. The overhanging roofs were a Mediterranean tradition."

12. Casa Arrellances, 800 Santa Barbara Street (Replica, with Aguirre columns).

13. Knox House, 914 Anacapa Street, Jose Lobero, Builder (1875):

    "This is one of Santa Barbara's only remaining exposed brick buildings of the 19th Century. It is a late example of frontier brick architecture. Nondescript from a style viewpoint, this simple centrally planned house (formerly with a wood porch) was an important segment of the frontier community."

14. Old Courtroom of Justice Haverly, 25 E. De La Guerra Street.

Also: Miranda Adobe, incorporated into the El Presidio office building at De la Guerra and Anacapa Streets, and the Botiller/Grand Adobe at 1023 Bath Street.

LOCATION OF VICTORIAN AND OTHER ARCHITECTURALLY SIGNIFICANT BUILDINGS

The redevelopment area was given a cursory survey to identify potentially architecturally significant structures in the area.[1] To be conclusive a more detailed inventory, conducted by professional(s) in the field (i.e. architectural historian) would be essential. An expert - particularly one familiar with Santa Barbara - could more readily and precisely determine the age and styles of structures in the area. Also, a building inspector, or other expert on the movability of residential structures, should accompany the architectural expert on the field survey. In this way a list of potentially moveable structures could also be compiled. The following listing is only illustrative of the magnitude of the architectural and cultural-historical resources existent in the area (numbers correspond with those on Figure F-2).

No. on Map	Land Use Designator 1
2.	Talk of the Town Restaurant. This remodeled house (probably Victorian) is not architecturally significant since it has been extensively remodeled. It is probably too large and difficult to move.
3.	335 De la Vina. An interesting two-story Victorian structure that is in very poor condition.
4.	209, 210, 213, 217 Cottage Grove. One-story cottages of the Victorian period. All are in good shape. Because all have the same architectural style, they were probably built at the same time and perhaps by the same person.
5.	415 Bath. A two-story, salt box house of the Victorian era. Appears to be in good condition.
6.	427 Bath. A one-story cottage with nice detail and spool decoration on the front porch. Could have been built by the same builder who built the cottages on Cottage Grove (#4).
41.	420 Chapala. A two-story Victorian farm house located next to the restaurant Casa de Sevilla. The house has simple lines, pleasant details, needs restoration.
	Savoy Hotel, 409 State Street. Victorian (circa 1889), architect Peter Barber. Architecturally and probably historically significant. All the decorative veneer is applied, stamped metal.

1. This survey was conducted by interested and knowledgeable non-professionals.

Land Use Designator 1 con't.

324 State Street. Russell Ray, architect, circa 1926. The Seaside Building. Its tower and oval arches were later alterations.

73. 14 W. Gutierrez. St Paul Cleaners, impressive front.

435 Bath. Currently "Discount Photo".

44. 609 Chapala. Used as an antique store. Not architecturally significant.

45. 625 Chapala. The "Sherman House", a fine example of restoration, is in good condition.

61. 519-1/2 Fig St. Located in rear, this curious house is decorated with painted carvings. Very interesting building, further research into its history is needed.

62. 525 Anacapa. An old salt-box Victorian house in poor condition.

63. 416 Anacapa. Salt-box Victorian.

64. 425 Anacapa. This cottage needs restoration but has appealing design.

65. 330 Anacapa. A two-story Victorian house.

66. 111 E. Gutierrez. Small cottage of the Victorian period called "Gutierrez Gables" is in good condition with good detail.

67. 133 E. Haley. This Visiting Nurse office appears to be in good condition.

74. 226 E. Haley. (Circa 1880). Has a prominent front room, well proportioned gable with sunburst motif, fish-scales, and carved eave braces. Appears to be in good shape.

74a. 118 E. Haley.

75. 27 E. Cota. Lyons Moving Co. building. Large, well designed, with simple lines.

76. 114. E. Cota. (Circa 1920). California cottage, appears to be in good shape.

625-635 State. Park Theater.

618 State. Mission Theater. Culturally significant because it is the only Spanish speaking movie house in the City.