NOISE CONTROL AND LAND USE COMPATIBILITY STUDY

PHASE ONE REPORT

Los Angeles Internationational Airport

Participants:

Los Angeles County AIRPORT LAND USE COMMISSION

City of Los Angeles DEPARTMENT OF AIRPORTS

County of Los Angeles
City of El Segundo
City of Hawthorne

City of Inglewood
City of Los Angeles
Federal Aviation Administration

The preparation of this report was financed in part through an airport master planning grant from the Federal Aviation Administration, under the provisions of the Airport and Airway Development Act of 1970, as amended.

LOS ANGELES INTERNATIONAL AIRPORT

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY

PHASE ONE REPORT

AUGUST 1981

**LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY**

July 24, 1981

TO: LAX ANCLUC Steering Committee

FROM: Norman Murdoch, Planning Director
L.A. County Department of Regional Planning

Clifton Moore, General Manager
L.A. City Department of Airports

SUBJECT: LAX ANCLUC PHASE I PRODUCTS

Attached, for your information and review, are the Phase I products for the Los Angeles International Airport Noise Control and Land Use Compatibility (ANCLUC) Study. The preparation of these reports was the joint responsibility of the Los Angeles City Department of Airports, the Los Angeles County Department of Regional Planning and the cities of El Segundo, Hawthorne, Inglewood and Los Angeles. The products have been discussed with both the Land Use Technical Committee and Airport Operations Technical Committee. The membership of these committees include not only the above mentioned jurisdictions, but representatives of the Air Transport Association, the Airline Pilot's Association, the Federal Aviation Administration, CALTRANS Division of Aeronautics, the Civil Aeronautics Board, and the Southern California Association of Governments.

Phase I was generally an update of existing data and refinement of the study participantion format. The task products included an update of airport plans, physical facilities and land use; a review of air space, air traffic control data and future airport usage; and an update of airport access, traffic circulation and parking. In regards to land use, the task products included the preparation of the preliminary study boundaries for the community planning area and an update of existing community area conditions including land use, infrastructure, population and other socio-economic indicators; local plans, environmental planning documents and land use regulations were assembled and reviewed. Noise regulations and policies pertaining to airport operations were discussed;

similarly, there was also an inventory of noise litigation documents. In addition, an inventory and assessment of community planning area financial data and information describing the availability of funding sources for implementation of study recommendations was prepared. Also included as a Phase I task was the preparation of a study participation format including roles and responsibilities, a community participation format and internal coordination procedures.

In addition to being reviewed by the Steering Committee, these documents will be circulated to all study participants, the Airport Area Advisory Committee and local public libraries. Notices of completion of Phase I products will be sent to all individuals identified on our community participation mailing list. We are in the process of arranging a community information workshop meeting to discuss Phase I products as well as to identify community issues related to airport noise. All comments received during this review process will be summarized and included as part of the Phase I products.

NM:GM:jc

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INTRODUCTION

Purpose and Objectives of the Study

The Airport Noise Control Land Use Compatibility (ANCLUC) Study has been undertaken because aircraft noise continues to be a concern of people residing in communities surrounding the Airport. The Study is structured to provide a forum for both representatives of the surrounding communities and the aviation industry to address the problems of aircraft noise, from each respective point of view. This structure is important because no single jurisdiction, agency, organization or industry can solve the aircraft noise problem alone. The noise problem must be addressed by all involved parties to assure a successful resolution.

Accordingly, the ANCLUC Study is designed to achieve maximum compatibility between the airport and surrounding communities. Alternative scenarios for airport operations will be developed to reduce noise. Simultaneously, the surrounding communities will formulate alternatives for adjusting land use patterns, after first identifying incompatible land uses and opportunities for change. The thrust of the Study then will be to recommend the most effective airport operational alternative, together with a companion recommended land use adjustment, all based on the relative costs and benefits.

Study Organization

All affected jurisdictions, agencies and organizations that have a role in an implementation program to reduce the impact of noise are participating. These entities include the cities of Inglewood, Hawthorne, El Segundo and Los Angeles, the County of Los Angeles, the Federal Aviation Administration (FAA), the Air Transport Association (ATA), the Airline Pilots Association (ALPA), the Civil Aeronautics Board (CAB), CalTrans-Division of Aeronautics, the Los Angeles City Department of Airports (DOA), and the Southern California Association of Governments (SCAG).

These participants have been organized into a Steering Committee and two technical committees, one for Land Use and the other for Airport Operations. The Steering Committee is comprised of elected or appointed officials from each of the affected jurisdictions and representatives from the FAA, ATA and DOA.

The Land Use Technical Committee is comprised of planing representatives from each of the surrounding communities and SCAG. The Airport Operations Technical Committee is composed of members of the airline industry, including DOA, CAB, FAA, ATA, CalTrans, ALPA and SCAG. In addition, citizen advisory groups and individuals will be directly involved through meetings workshops and public hearings.

Phase One Purpose and Objectives

The two year ANCLUC Study is divided into three phases. Phase I was generally an update of existing data and refinement of the study participation format. The task products included an update of airport plans, physical facilities and land use; a review of air space, air traffic control data and future airport usage; and an update of airport access, traffic circulation and parking.

In regards to land use, the task products included the preparation of the preliminary study boundaries for the community planning area and an update of existing community area conditions including land use, infra-structure, population and other socio-economic indicators; local plans, environmental planning documents and land use regulations were assembled and reviewed. Noise regulations and policies pertaining to airport operations were discussed; similarly, there was also an inventory of noise litigation documents. In addition, an inventory and assessment of community planning area financial data and information describing the availability of funding sources for implementation of study recommendations was prepared. Also included as a Phase I task was the preparation of a study participation format including roles and responsibilities, a community participation format and internal coordination procedures.

Completion of the Phase I provides study participants and other interested parties with an understanding of the present status of planning of both the Airport and the surrounding communities and assure that subsequent phases of the study are carried out in an effective manner.

Phase II of the work program, will concentrate on the identification of key issues with regard to future requirements, relevant land, facility and system needs for the Community Planning Area related to the planned improvements at Los Angeles International Airport (LAX). Air traffic forecasts of change over the 20-year planning period (1980-2000) will also be updated as needed as part of Phase II.

Phase III activities concentrate on an extensive evaluation and comparison of the alternative noise mitigation and land use compatibility measures identified at the conclusion of Phase II. The overall purpose of this effort is to insure that all logical options to improve Airport/Community compatibility receive adequate attention, and that all interests are properly reflected in or by the process. This portion of the work will represent agreement and consensus as to what specific actions, plans and programs need to be detailed in the last part of Phase III. The desired objective of this last portion of the phase is to prepare all documents in such a way as to expedite and encourage adoption of the recommended Program by affected local, regional or federal agencies, as well as the DOA.

Phase One Summary

Task 1.17 required summarizing all task work prepared during Phase One. The summaries were prepared in a manner highlighting the contents of each task. Each summary was divided into a description, purpose, features and where applicable a conclusion. The Task 1.17 summaries are included starting on the following page.

TASK 1.17

SUMMARY OF PHASE I TASKWORK

JUNE 1981

Prepared by: Los Angeles County Department of Regional Planning
and the Los Angeles City Department of Airports

For Information Call: Ron Hoffman (213) 974-6474 or,
Mike Feldman - Env. Mgt. (213) 646-7615

Task 1.01 LAX Airspace and Air Traffic Control Data

Description:

Obtain existing data from the Federal Aviation Administration (FAA) relating to Air Traffic Control (ATC) facilities, procedures and operations at Los Angeles International Airport (LAX) and in the terminal area. The data included reflects the past and present efforts taken by the FAA to reduce inflight aircraft noise in the environs of LAX.

Purpose:

To produce a working paper which provides basic information concerning LAX airspace, terminal control facilities, procedures and operations. Included are past and present efforts by the FAA and DOA to reduce aircraft noise. This information will be analyzed during Phase II to identify possible adjustments to present ATC operations with the potential to further reduce noise.

Features:

The working paper includes information regarding the topics listed below:

- Airspace jurisdictions including the LAX - Terminal Control Area (TCA) and Control Tower Area are described and mapped.
- FAA - Air Traffic Control (ATC) procedures and facilities are described including the air traffic controllers authority and responsibilities.
- Operational regulations including runway/taxiway utilization, take off and landing procedures, gateholding and sound abatement procedures are discussed.
- Maintenance restrictions for noise abatement purposes including an engine run-up curfew, use of auxillary power units, and towing procedures are described.

Conclusion:

Safety of operations and noise abatement are not necessarily mutually exclusive. However, safety must remain the overriding concern when effecting changes in operational procedures. Further reduction can be achieved through, total Part 36 compliance, adjustment to flight operations, converting noise sensitive land use to noise compatible land use, and utilization technological advances when they prove to be economically feasible.

Task 1.02 Update Airport Plans, Physical Facilities and Land Use

Description:

An update of existing and planned Airport facilities to include the following items:

Airfield (Runways, Taxiways, Aprons, Lighting)
Terminal Complex (Passenger, Cargo, Maintenance, Auxillary Services)
Support (Utilities, Fire/Rescue, Fueling provisions)
Other (General Aviation, Hangars, etc.)

Purpose:

To prepare a working paper that includes an update of all Airport plans. Airport uses within the boundary of LAX affect and are affected by adjacent land uses. These land use relationships should be understood before suggesting changes.

Features:

The working paper is divided into the four main sections outlined below:

- Zoning - describes the present LAX zoning plan, and uses permitted in each zone.

- General Plan - describes and graphically depicts the LAX - Interim General Plan including goals and objectives of the plan. Permitted land use categories are detailed.

- Project Plans - describes projects included in the LAX Capital Improvement Program. Project categories are divided into airfield related (runways & taxiways), terminal related, and Support/Other related projects. A map is provided indicating the location of each project.

- Special Planning Studies - briefly describes three major planning studies ongoing at LAX. These studies are listed below:

  - Airport Dunes Study
  - West End Development Study
  - North Side Development Study

Conclusion:

The projects and plans discussed will improve overall efficiency of airport operations. While noise abatement was not the principal purpose for many of these projects, reductions in noise levels from various sources could be realized. For example, the reconstruction of the southern runway complex will facilitate a more equal distribution of aircraft activity and the construction of two new terminals will reduce aircraft taxiing distances, etc.

Task 1.03 Update of Airport Ground Access, Circulation and Parking

Description:

Update existing and proposed parking facilities, internal circulation roadways, and access roads, (including traffic volumes) at LAX, and including information on the local origins and destinations of Airport passengers, visitors, employees and tenants. Data from the LAX-Ground Access Study will be used to the maximum extent feasible. Other relevant transportation lans and studies will be reviewed and used as appropriate.

Purpose:

To provide a workng paper that contains applicable access, traffic and parking data to be used in subsequent analysis during Phase II.

Features:

The working paper includes a discussion of existing vehicular access conditions. Access roadways, circulation roadways and parking facilities are described and graphically illustrated. Traffic distribution including pedestrian traffic is detailed. Origins and destinations of airport users including employees are described. The planned program to improve traffic circulation and parking in and adjacent to LAX consists of a number of interrelated projects. These include among others; construction of a second level roadway, various street widenings and improvements, expanded regional shuttle services, etc. An operational description of the improvement program is also provided.

Conclusions:

The planned access and circulation improvements described will have a beneficial effect on traffic flows entering and exiting LAX. However, urban growth along the primary airport access routes will continue to degrade traffic flows. Future plans to regulate access by a capacity control mechanism are being developed and may provide the ultimate solution to this access problem.

Task 1.04 Define Prelininary Boundaries for the Community Planning Area

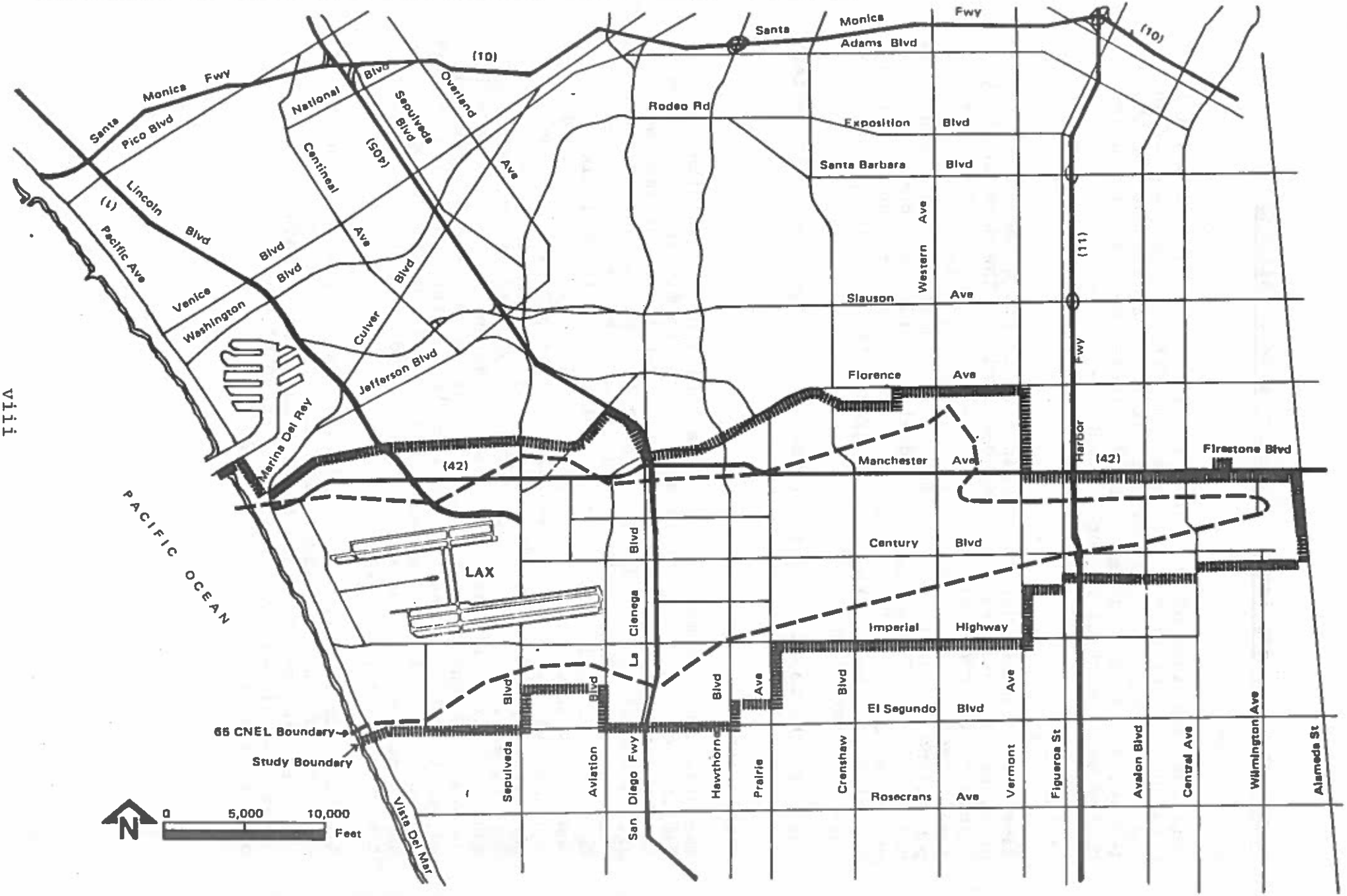
Description:

This task describes the preliminary planning boundary used to define the study's Community Planning Area. The boundary will be re-evaluated and revised if necessary during Phase II. The Los Angeles County Department of Regional Planning coordinated the process of developing the boundary with the cities of El Segundo, Hawthorne, Inglewood and Los Angeles. The cities and the County defined the study boundary within their own jurisdiction. The individual products were then synthesed into a composite boundary that recognized each jurisdictions recommendations.

Features:

The following criteria were used to define the Community Planning Area study boundary: noise, safety, ground access traffic, land use continuity, and expected flight path and aircraft noise. Noise was the most important study boundary determinant. The study boundary definition relies heavily on the Los Angeles City Department of Airports 1st quarter 1976 Community Noise Equivalent Level (CNEL) contour. The 1976 contour encompases an area quite a bit larger than the 1980 contour or expected contours of the future. All areas in the surrounding communities within the 65 CNEL contour are included within the Community Planning Area study boundary. Areas with noise sensitive land uses, i.e. schools, resthomes, hospitals, etc., outside the 65 CNEL contour but in close proximity were also included.

Conclusion: See attached map.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Pacific Ave
Venice Blvd
Washington Blvd
Centinela Ave
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Culver Blvd
Jefferson Blvd
Marina Del Rey
Western Ave
Slauson Ave
Florence Ave
(11)
Harbor Fwy
Manchester Ave
(42)
Firestone Blvd
PACIFIC OCEAN
LAX
Century Blvd
La Cienega Blvd
Imperial Highway
El Segundo Blvd
Sepulveda Blvd
Aviation Blvd
San Diego Fwy
Hawthorne Blvd
Prairie Ave
Crenshaw Blvd
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Task 1.05 Update Existing Community Area Conditions

Description:

This task consists of an update of existing land uses and infrastructure information within the Community Planning area. The task was prepared jointly by the cities of El Segundo, Hawthorne, Inglewood and Los Angeles, and coordinated by the Los Angeles County Department of Regional Planning.

Features:

Maps were prepared depicting existing and projected future land uses, noise sensitive land uses and zoning. The maps identify single family residential areas (including duplex), multiple family residential, commercial, industrial, open space, and public and institutional facilities (including schools, churches, hospitals, and libraries). In addition, principal public utilities and facilities such as water and sewer lines, drainage and flood control works, and key ground transportation routes were inventoried and mapped.

Further, the capacity of the roadway, sewerage, and water systems was determined.

Conclusion:

The area consists mostly of single family dwellings with multi-family dwelling units interspersed among them. There are some larger strips of multi-family dwelling units in the Inglewood area south of Century Boulevard near the Hollywood Park race track north of Century Boulevard and west of Prairie Avenue. Commercial land is clustered in high rise office buildings and hotels around LAX along Century and Sepulveda Boulevards and Imperial Highway. In addition, major arterials in the LAX vicinity are generally bordered by commercial strip development. The majority of industrial land is located south of LAX in El Segundo between Rosecrans Avenue and Imperial Highway. Secondary clusters of industrial acreage are located adjacent to LAX on the east between Manchester Avenue and Imperial Highway and in the eastern-most portion of the study. Open space, mostly local parks, is generally distributed uniformally throughout the study area.

Adequate public utilities and facilities are provided for existing land uses, however, intensification of land uses will require and upgrading of utilities in some areas. The street and highway system in many areas of the study is operating at service level D or F.

Task 1.06 Assemble and Document Local Plans and Land Use Regulations

Description:

This task is the combination of two tasks - Task 1.06, Assemble and Document Local Plans and Land Use Regulations; and Task 1.08, Obtain Existing Community Area Environmental Planning Documents. Because of the obvious overlap between these tasks, a decision was made to combine the products. The purpose of the task was to assemble and document existing technical reports dealing with local planning, land use regulations and environmental conditions in the area, to ensure that the resultant Land Use Compatibility Program will properly reflect local and regional long-range planning goals, objectives and policies.

Features:

This review included key elements and policies of general plans, specific plans, environmental plans, and community plans for the cities of El Segundo, Hawthorne, Inglewood, and Los Angeles (with emphasis on the Playa del Rey, Westchester, South Central, and Southeast communities); Los Angeles County (with emphasis on Lennox, Del Aire, Athens, and Florence/Firestone); the Southern California Association of Governments (SCAG); and any other local or regional governmental entity that has a direct relationship to the development of the airport and surrounding area. Also included was environmental data dealing with the existing natural conditions (plant and animal life, topography, air and water quality, drainage, mineral deposits, etc.), or to the prevailing community conditions (human settlement patterns, noise, traffic, attitudes, governmental jurisdictions, etc.).

Conclusions:

The report is formulated much as a bibliography including title, author, prepared for, date, and pages. The first section of the report identifies pertinent goals, standards, policies and criteria applying to Los Angeles International Airport. The listing is divided by jurisdiction.

The next section lists planning documents, land use ordinances and building codes for the airport and surrounding areas. Many of the reports are summarized. The next section identifies environmental documents for each jurisdiction. The miscellaneous environmental documents section includes a listing of environmental regulations, local ecological conditions, and atmospheric pollution by aircraft engines. Transportation and traffic studies for the area are listed in the next section. The largest section by far is that dealing with noise reports. This section is broken down into subsections dealing with noise regulations, aircraft noise and community impacts, Los Angeles International

Airport (LAX) noise mitigation techniques, miscellaneous noise mitigation techniques, landing and takeoff modifications to mitigate noise, land use control changes to effect noise compatibility, airport noise control and land use compatibility reports and specific aircraft noise measures. The last three sections identify economic considerations, safety issues, and energy reports dealing with airports.

Task 1.08 Obtain Existing Community Area Environmental Planning Documents

See discussion under Task 1.06.

Task 1.07 Update of Noise Regulation Policies

Description:

Update all policies concerning noise regulations at LAX.

Purpose:

To prepare a working paper that describes the updated policies concerning noise regulations at LAX.

Features:

The working paper contains a chronology of Board of Airport Commissioners (BOAC) motions and adopted resolutions which have set policies effecting aircraft operational noise at LAX. Separate listings of State and Federal noise control policies are also synopsized.

Conclusions:

Noise abatement procedures have been continually enhanced and expanded at LAX, since the first motion effecting jet engine procedures was passed by the BOAC on October 7, 1959.

The inventory of noise abatement policies at LAX provides a strong foundation from which additional policies may be developed as a result of the ANCLUC study effort.

Task 1.09 Inventory Noise Litigation Documents

Description:

Assemble and review documents related to noise litigation and judgments previously rendered that pertain, or may pertain to the operation of LAX.

Purpose:

To provide a working paper that describes and discusses recent court views and decisions regarding the responsibility of the Airport Sponsor, the federal government, the airline industry, and others in terms of noise and and land use compatibility.

Features:

The working paper includes discussion of three aircraft noise cases decided by the United States Supreme Court. These cases are listed below:

- Causby v. United States
- Griggs v. County of Allegheny
- City of Burbank v. Lockheed Air Terminal

These court decisions constitute the foundation upon which lower courts have determined that the airport proprietor is responsible (and perhaps, therefore, empowered to impose certain noise abate procedures) for certain consequences of aircraft noise.

Lower court decisions included in this inventory are:

- Air Transport Association v. Grotti
- National Aviation v. City of Hayward
- British Airways Board v. Port Authority of New York and New Jersey
- Greater Westchester Homeowners Association v. City of Los Angeles
- San Diego Unified Port District v. Gianturco et al.
- Santa Monica Airport Association v. City of Santa Monica

Conclusion:

The range of noise abatement procedures that an airport proprietor may implement is limited because of the federal powers of preemption and the authority to regulate commerce. Therefore, while the airport proprietor is held responsible for aircraft noise generation very little authority to regulate and control aircraft noise has been delegated to the airport proprietor.

Task 1.10 Inventory and Assess Community Planning Area Financial Data and Information

Description:

This task contains a compilation of various financial techniques which can be used for capital improvement and land use compatibility programs. Capital improvement projects can be used to foster or facilitate conversion to and construction of noise compatible land uses. Examples of such capital improvement projects are road widenings, water main improvements and increasing sewer system capacity. These types of projects are primarily related to the improvement of the community infrastructure system. Capital improvements could also include the construction or relocation of noise compatible public facilities within the study area. These types of facilities include, but are not limited to, maintenance yards, animal shelters, vehicle storage, warehousing, and open spaces. Land use compatibility programs would be those which emphasize noise compatibility projects. Included would be the purchase of noise or avigation easements, conversion to non-noise sensitive uses, voluntary relocation assistance, soundproofing, land acquisition and assembling land for resale.

Features:

The programs and financial techniques discussed in this task are divided into three classifications - federal, state and local. Each program is discussed according to the following format: the program name, legislative authority, responsible agency, program description, and comments. Programs which appear to have the greatest potential for land use compatibility are emphasized. Other programs which have limited applicability are simply listed rather than fully described. A discussion of new and innovative funding sources is included.

Conclusions:

The programs and financial strategies listed in this report should be viewed in the context of today's governmental and financial milieu. At the federal level there is considerable discussion regarding cutting the federal budget. Many programs are being slated for deletion or consolidation with other programs. The amounts of funding for many programs may be severely curtailed.

State funding is also expected to be reduced for many programs. This is, in part, due to a lack of surplus funds which previously has been used for a variety of programs, including assistance to local governments. The state also appears to be leaning towards a fiscal philosophy which allocates less money to local governments.

Local governments are also faced with the dilema of providing services, which become more expensive each year, and attempting to keep spending and taxes within reason. A decrease in the amount of federal and state spending will undoubtedly make the local financial picture even more bleak.

The federal and state budgets still have to go through their respective legislative bodies and the complex budgetary process. During this period many changes will probably be made. However, given the prevailing mood of governmental leaders there is a good probability that federal and state spending on the local level will decrease. Therefore, locally funded capital improvement programs may have to be relied on in the future. During the evaluation of financial impacts in Phase III, the programs listed in this task will be re-evaluated to determine which of these programs are still viable.

Task 1.11 Update Community Area Socioeconomic Data

Description:

This task involves the gathering of socioeconomic data from the U.S. Census Bureau. Material from the 1960 and 1970 Census was used to show trends within the study area. The data gathered will be compared with the 1980 Census figures when they are released at the end of 1981.

Features:

The socioeconomic characteristics which were documented for 1960 and 1970 include: population, residence status, employment, income, housing units, and value. These characteristics will also be collected for the 1980 census for trend analysis purposes. In addition, the following characteristics will be collected for the 1980 census: age of population, number of units in structures, age of structures, and year moved into dwelling.

This data will be used to help determine the character of the study area and assist in the understanding of the magnitude of numbers of people and dwelling units affected, and their special needs or charcteristics. Any programs planned for the area will have to take into account these special features of the community.

Conclusions:

During the period from 1960 to 1970 the study area population grew by almost 9% to over 270,000. At the same time the area changed from being primarily white to one which is 58% white. All areas except El Segundo and Hawthorne showed major increases in non-white residents. The proportion of people living in the same house as 5 years prior to the census increased to almost 50% by 1970 thus indicating a relatively stable community. Unemployment rose to 7% areawide and did not decrease in any of the five communities. Income (based on 1980 dollars) rose only 7.5% on an average but there were wide variations by community, with El Segundo and Hawthorne showing the biggest increases.

The total number of housing units increased over 13 1/2% between the 1960 and 1970 census surveys; as of 1970 there were approximately 100,000 dwelling units in the study area. Home values rose almost 20% during this period with the greatest increases in El Segundo and Hawthorne. Rents rose less dramatically, with an increase slightly under 6%.

Task 1.12 Review and Update Air Traffic Forecast

Description:

Review and update forecasts concerning scheduled air carrier, commutter, air taxi, general aviation, and military aviation activity at LAX and in the region. Information available as a result of regional aviation system planning efforts by the Southern California Association of Governments (SCAG), as well as data from the FAA, ATA, and the Department of Airports, will be utilized to the maximum extent possible.

Purpose:

To provide a working paper that updates air traffic demand forecasts including available information regarding:

- Airline traffic growth, including volumes of passengers, cargo and mail
- Volume and type of aircraft operations (airline, general aviation, military)
- Type, frequency, and composition of airline service
- Number of based aircraft by type and use (e.g. business recreation training, etc.)
- Volume of air traffic (annual, peak period, etc.)

This data will provide a basis for subsequent analysis during Phase II.

Features:

The working paper is divided into six sections to provide information listed above. Forecasting methodology and assumptions utilized by the various forecasting groups are detailed. Discussion of the effect of forecasts on future air passenger travel is provided. Aircraft operations by type are detailed providing fleet mix information.

Conclusion:

The forecasts reviewed are divergent in many areas. However, all indicate that air travel demand will continue to grow requiring more capacity than is presently projected for the regions air carrier airports. The development of a reliever airport and/or some type of regional capacity allocation authority, will be required to continue existing levels of air travel service, currently available in the region.

Task 1.14 Establish Internal Coordination Procedures

Description:

Initiate coordination procedures between the Department of Airports and the Community Area Study participants. These procedures will include the presentation and submission of periodic progress reports; identification of key contact personnel in the various organizations; and the preliminary scheduling of regular progress meetings of all technical participants.

Purpose:

Provide a mechanism to facilitate communication of information between study participants as well as an avenue for the exchange of ideas and review of work products.

Features:

The white paper includes the membership of the Steering Committee and both technical committees. In addition, Phase One Coordination efforts are detailed.

Task 1.15 Establish Study Participation Format and Responsibilities

Description:

A white paper describing the roles and responsibilities of the various study participants.

Purpose:

The white paper details the roles and responsibilities of all study participants including the general public.

Conclusion:

The preparation of this task developed a study structure designed to facilitate review of the study tasks and includes procedures to encourage public input during the study.

Task 1.16 Project Coordination

Description:

Maintain continuous project coordination throughout the project as established under Tasks 1.14 and 1.15.

Purpose:

Continuous coordination will enhance the timely identification of unforeseen problems or possible schedule conflicts and will permit resolution of these problems.

Features:

Coordination activities to assist all study participants in being informed of the progress of the project are discussed. The agendas and minutes of both technical committee meetings held during Phase One are included.

Task 1.18 Prepare Report on Study Participation Format

Description:

Prepare a report that documents the Study coordination and participation format and responsibilities as developed in Tasks 1.14 and 1.15.

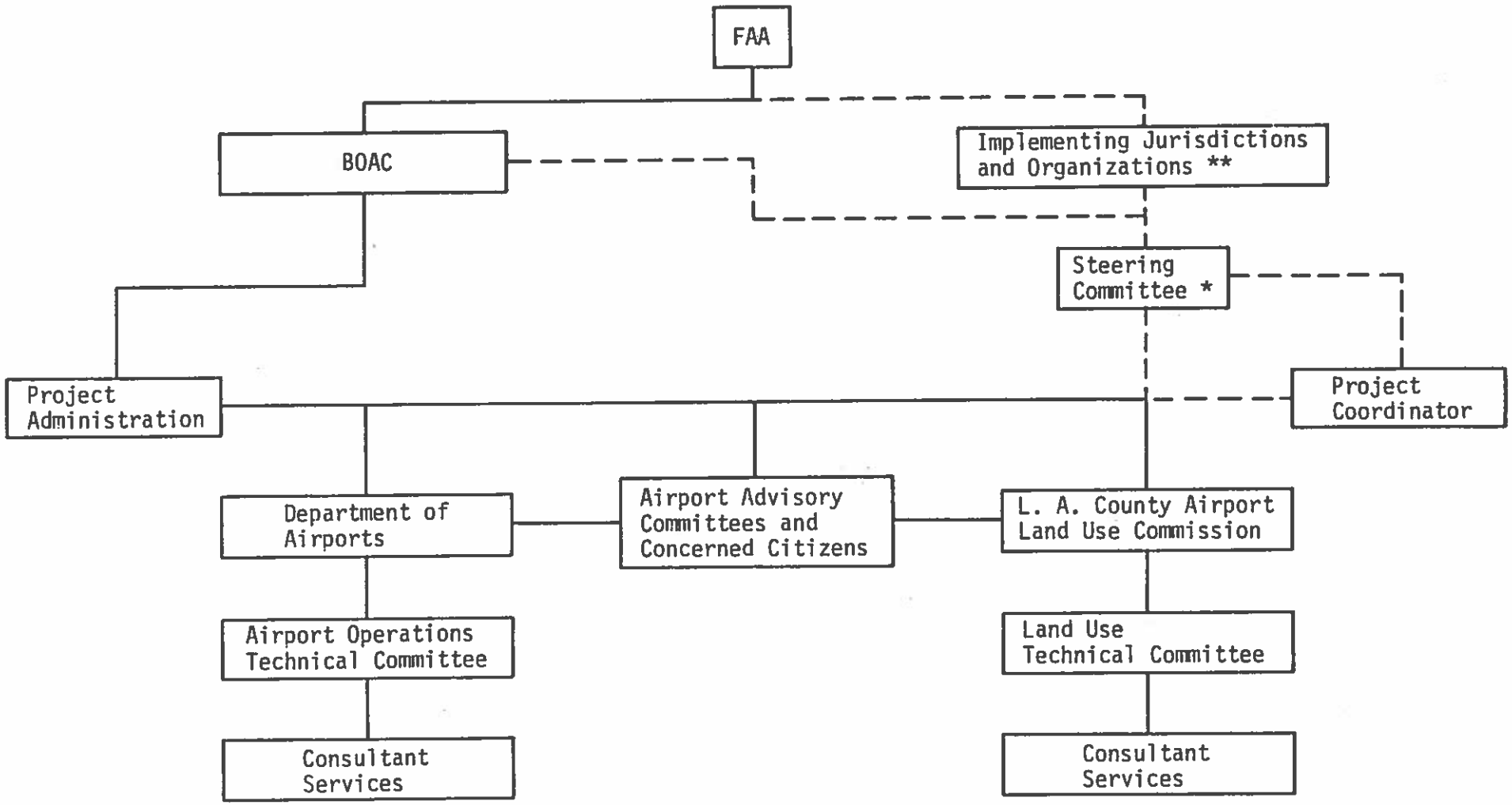
Purpose:

The report describes the interrelationships between the many study participants. These interrelationships are divided into contractual or advisory.

Features:

The report includes an organization chart which graphically depicts the relationships mentioned above.

LAX-ANCLUC ORGANIZATION CHART



Legend

——— Contractual Authority-Responsibility

– – – – Advisory Relationship

* Membership includes: the L.A. County Board of Supervisors, L.A. County Airport Land Use Commission, the cities of Los Angeles, Inglewood, El Segundo, Hawthorne, Board of Airport Commissioners. Ex-officio members include: Department of Airports General Manager, L.A. County Regional Planning Director, Air Transport Association Regional Director, and the Federal Aviation Administration, Airport Programs Chief.

** Includes the decision making bodies represented on the Steering Committee plus The California Department of Transportation, Civil Aeronautics Board and the Southern California Association of Governments.

TASK 1.01

LOS ANGELES INTERNATIONAL AIRPORT
AIRSPACE AND AIR TRAFFIC CONTROL DATA

JANUARY 1981

Prepared by: Los Angeles City Department of Airports

For Information Call: Ernie F. Gonzalez - Env. Mgt. (213) 646-7615

INTRODUCTION

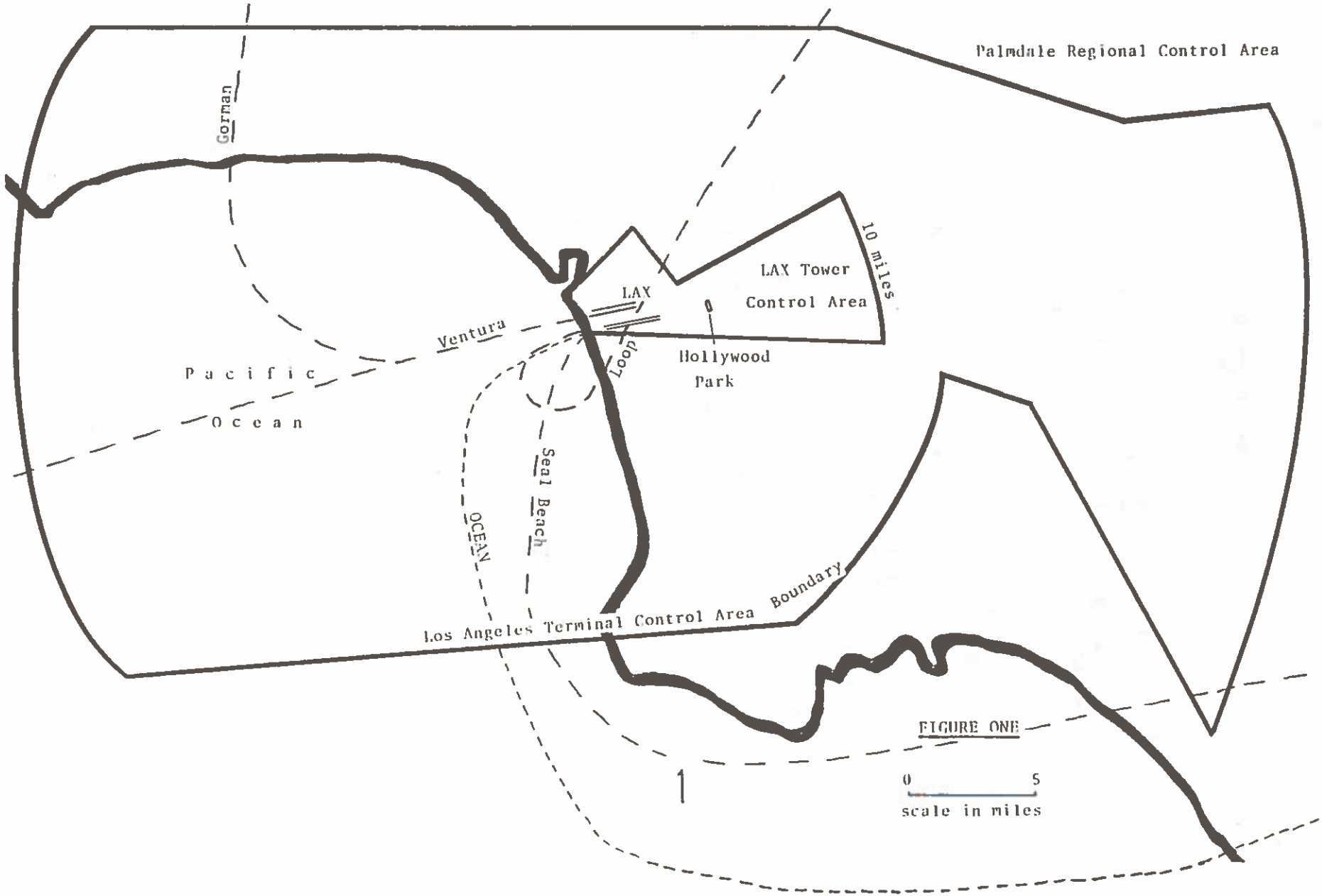
The purpose of this task is to provide basic information concerning Los Angeles International Airport (LAX) airspace, terminal control facilities, procedures and operations. Included are past and present efforts by the Federal Aviation Administration (FAA) and the Los Angeles City Department of Airports (DOA) to reduce aircraft noise.

AIRSPACE and FACILITIES

The FAA has primary responsibility for the safe and efficient management of the air traffic system over American territory. Palmdale Center (PMD) is the regional location of the FAA for the southwest portion of the United States. Within the PMD Control Area are several other airspace jurisdictions, including one of the nation's busiest - the LAX Terminal Control Area (TCA). The LAX TCA is an example of designated airspace designed to provide an extra margin of safety, and only aircraft equipped with the required electronic equipment are allowed to enter it, after obtaining FAA Air Traffic Control permission. Within the TCA is a still smaller jurisdictional airspace centered around the LAX Control Tower. The Tower is staffed by the FAA and controls aircraft flying near, departing from, landing at or taxiing on the airfield.

The airspace included in the LAX TCA, almost half of which is over the ocean, as well as the Tower Control Area contained within the TCA, are shown in Figure One. Figure Two illustrates the vertical configuration of airspace control for an approach over Hollywood Park to Runways (Rwys) 24L and 24R. Shortly after an aircraft takes off, Tower controllers transfer control of the aircraft to Departure controllers, who handle it until it leaves the TCA. At this point, enroute controllers take over responsibility.

FAA air traffic control centers form a comprehensive interconnected network across the country to handle enroute aircraft traffic operating under instrument flight rules (IFR). Airline pilots file IFR flight plans to provide air traffic controllers with route, altitude, airspeed, destination and expected time of arrival information. As an aircraft nears its destination, Terminal Radar Control Centers (TRACON) assume control. TRACON display consoles look much like large, round TV screens and show aircraft as little 'blips'. Accompanying each 'blip' as it moves across the screen is a 'data block' containing aircraft identification, ground speed, altitude and an indication of whether the plane is climbing, descending or remaining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Gorman
10 miles
LAX Tower
Control Area
LAX
Ventura
Loop
Hollywood
Park
Pacific
Ocean
Seal Beach
OCEAN
Los Angeles Terminal Control Area Boundary
1
0
5
scale in miles

FIGURE ONE

PMD TRACON (up to 40,000 ft.)

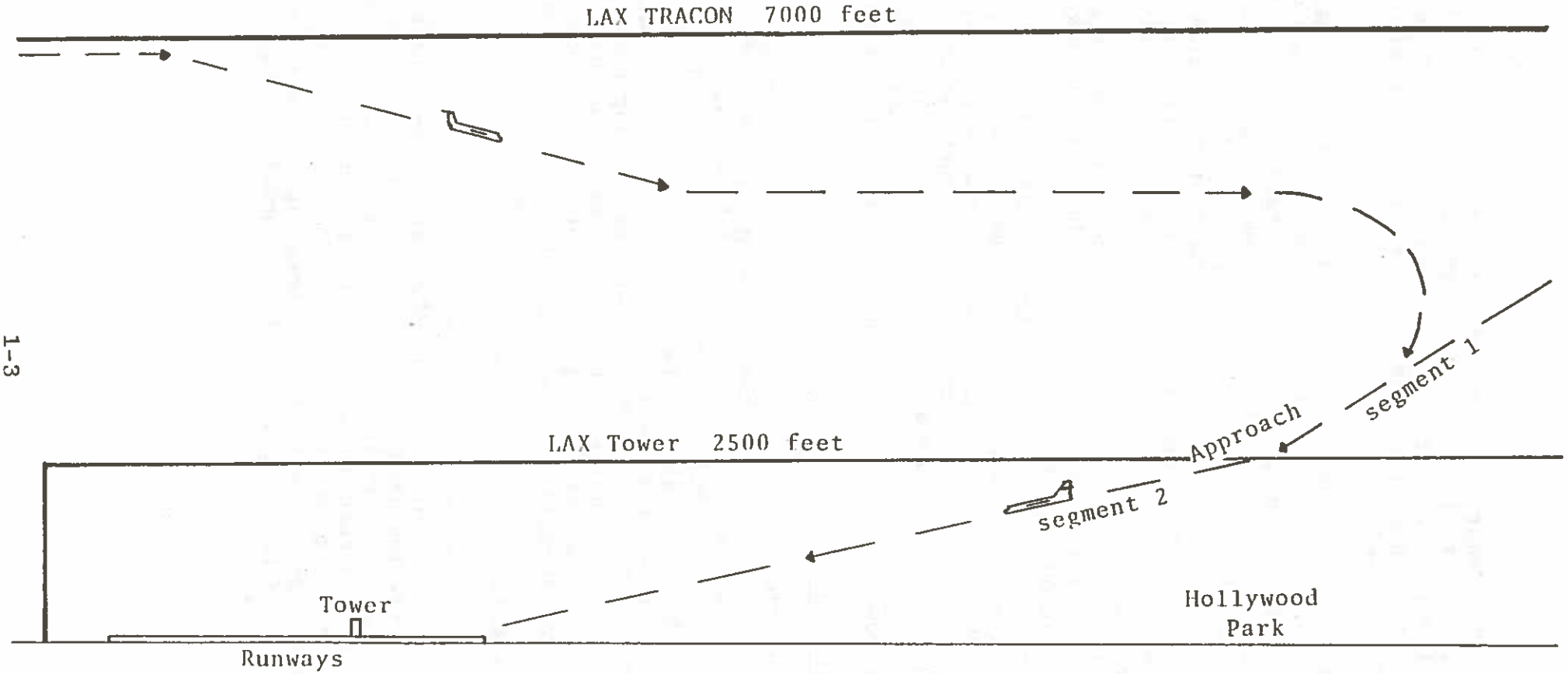


FIGURE TWO

LAX TCA Vertical Airspace Control

level. The Tower also provides radar services to aircraft within its control area. Tower services include Automatic Terminal Information Service (ATIS), which provides pilots with a continuous broadcast of recorded LAX weather and landing information.

Aircraft landing under IFR can use airport instrument landing systems (ILS), which permit precision landings under adverse weather conditions. Tower staff control aircraft on ILS approaches by monitoring their progress along predetermined flight paths. These flight paths are displayed on Tower radar screens as lines, and must be followed in the air by the pilot to make a safe aircraft touchdown. At present, runway lighting/ILS facilities permit aircraft to land on Rwys 25 L/R and 24 L/R with only 2400 and 1800 feet respectfully of clear visibility along the runway. By August 1981, runway facilities will allow this figure to shrink to only 700 feet along Rwy 24R. In the future, the necessary runway equipment will be installed to accommodate safe landings down to zero feet of visibility. At some future time, NAVSTAR global positioning satellites and microwave landing systems may greatly facilitate more precise air navigation, although there are no firm plans for their commercial use as yet. Figure Three locates airfield facilities at LAX, such as the Control Tower, the runways and the aircraft hangar area.

HISTORICAL BACKGROUND

Noise abatement programs at LAX are not a new phenomenon. Only seven months after the onset of jet services in 1959, the Sound Abatement Coordinating Committee (SACC) was formed, comprised of the DOA, the FAA and the airline and pilot associations. In 1970, the DOA published the LAX Sound Abatement Procedures, while at the same time funding Wyle Laboratories to research methods of soundproofing homes against aircraft noise. This work was subsequently used by the FAA as a reference publication for nationwide residential soundproofing. Two years later, the Air Transport Association of America developed special 'quiet' takeoff procedures for its member carriers.

In 1973, SACC was replaced by the establishment of the DOA's own Noise Abatement Division (NAD), and over-ocean night operations were instituted to reduce aircraft noise to communities east of LAX. In 1974, the FAA prescribed specific pilot guidelines for reduced noise takeoffs, and one year later the DOA completed expenditure of $140 million to relocate residents from noise-hazardous areas on the west and north perimeters of LAX. By 1975, NAD had updated noise abatement procedures at LAX.

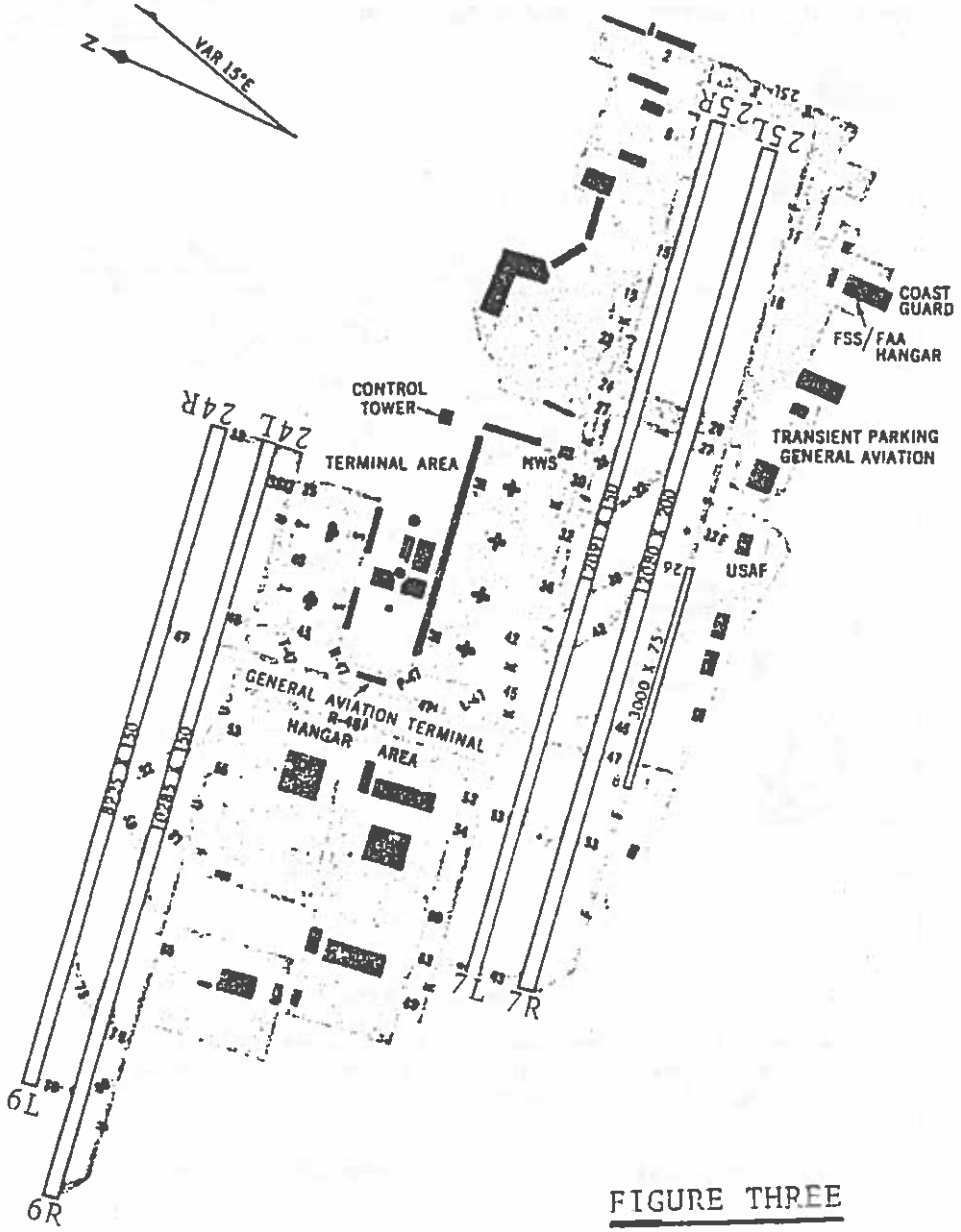


FIGURE THREE

ELEV 126

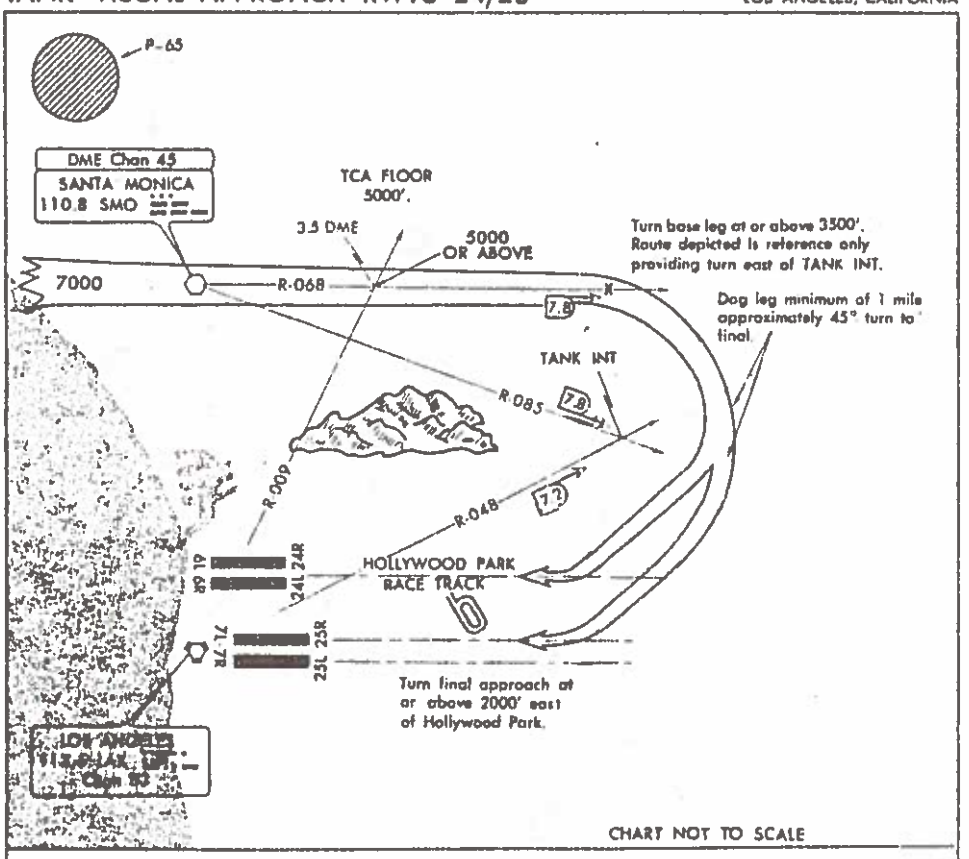
AIRPORT TAXI CHART

LOS ANGELES, CALIFORNIA
LOS ANGELES INTERNATIONAL AIRPORT

167

TANK VISUAL APPROACH RWYS 24/25 AL-237

LOS ANGELES INTERNATIONAL
LOS ANGELES, CALIFORNIA



TANK VISUAL APPROACH

When VFR conditions exist and visual approaches to Runway 25 Right and Runways 24 are in progress, clearances to aircraft inbound from the north and northwest will be given utilizing the following phraseology:

"(IDENT) CLEARED FOR TANK VISUAL APPROACH TO RUNWAY—."

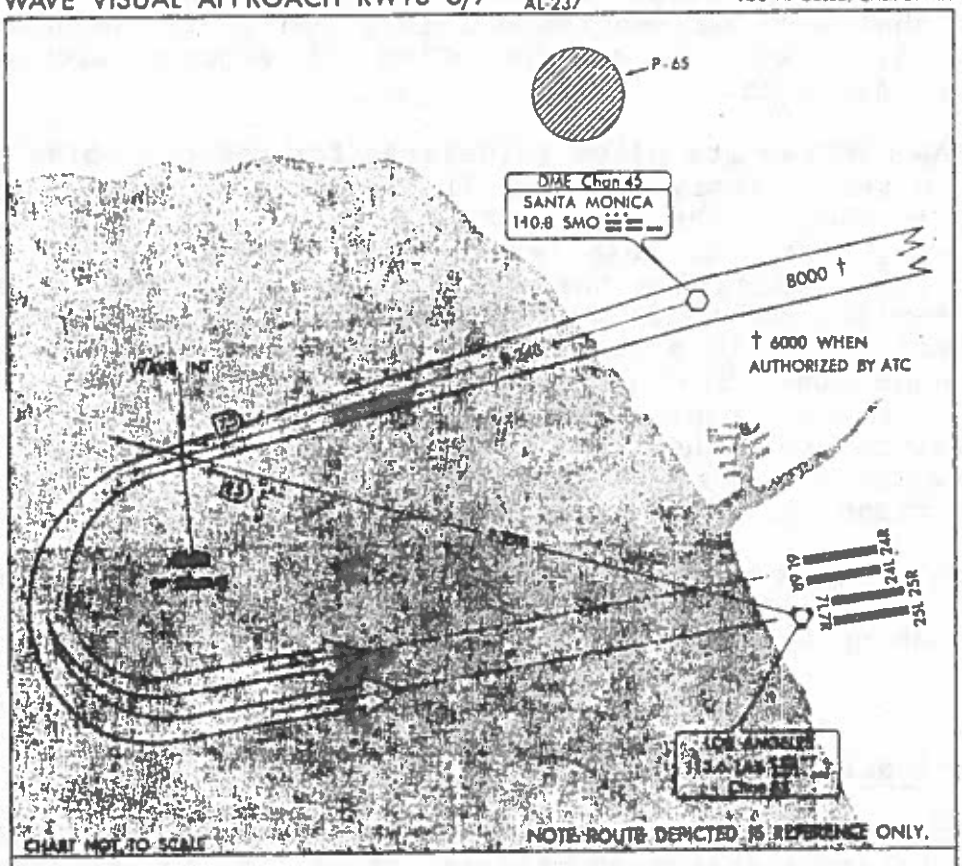
A descent profile of approximately 3° starting at 7000 feet over SMO VOR may be made with reference to the minimum altitudes above.

TANK VISUAL APPROACH RWYS 24/25 33°56'N - 118°24'W LOS ANGELES, CALIFORNIA
LOS ANGELES INTERNATIONAL

FIGURE FOUR

WAVE VISUAL APPROACH RWYS 6/7 AL-237

LOS ANGELES INTERNATIONAL
LOS ANGELES, CALIFORNIA



WAVE VISUAL APPROACH.

When VFR conditions exist and visual approaches to Runways 6 and 7 are in progress, clearances to aircraft inbound from the north and east will be given utilizing the following phraseology:

"(IDENT) CLEARED FOR A WAVE VISUAL APPROACH TO RUNWAY . . ."

A descent profile of approximately 3° starting at 8000 feet over SMO VOR may be made with reference to the minimum altitudes above . . .

WAVE VISUAL APPROACH RWYS 6/7 33°56'N - 118°24'W

LOS ANGELES, CALIFORNIA
LOS ANGELES INTERNATIONAL

FIGURE FIVE

These included prohibition against all training flights, prohibition against relatively noisy (non-Part 36 certified) aircraft making night departures to the east, and other items that will be mentioned later. In 1976, the DOA paid $21 million for the soundproofing of schools within the airport district.

The FAA updated its pilot guidelines for reduced noise take-offs in its Advisory Circular 91-53, dated October 1978, and the City adopted the DOA's LAX Noise Control Ordinance in the following year. To help regulate the ordinance, NAD instigated the utilization the FAA's Integrated Noise Model, a computerized software program aiding in the prediction of aircraft noise impacts. To help enforce the ordinance, NAD began submitting quarterly noise monitoring reports to the State and County. As well, records of monthly noise complaints from the communities were kept by NAD, and follow-ups on noise violations were made, as in the case of American Airlines and United Air Leasing in 1980.

DOA noise abatement policies and procedures will be dealt with more specifically in Task 1.07 (Update Noise Regulation Policies on Airport Operations).

EXISTING CONDITIONS

OPERATIONAL PROCEDURES

LAX operational procedures are intimately related to FAA/DOA aircraft noise abatement efforts, as well as to the safe and efficient flow of air traffic. These procedures are focused in three main areas, as indicated below.

Direction of Operations/Flight Path Restrictions

Operations generally take place from east to west in order for arriving/departing aircraft to gain extra aerodynamic lift from the prevailing westerly winds that blow in from the ocean. During operations from 6:30 a.m. to midnight, both aircraft approaches and departures take place from east to west. As takeoffs are noisier than landings, due to the much higher aircraft engine power settings involved, east-west operations are effective in reducing the noise in residential communities east of LAX. All approaching jet aircraft must observe minimum altitude restrictions within five miles of LAX, for noise abatement purposes, and fly at or above 2000 feet east of Hollywood Park, while on final approach. Figures Four and Five illustrate typical noise abatement arrival flight paths. Note that the TCA is entered at a minimum of 7000 feet. Departing aircraft are requested by the Tower to maintain runway heading (west) and reach 4000 feet of altitude before making a right turn, and 3000 feet before turning left. This ensures that all

aircraft (propeller aircraft under 12,500 pounds are exempt) effectively clear the coast and gain sufficient altitude before flying back over land areas. Figure One depicts the courses of typical departure flight paths. The Loop Departure, for instance, folds around to cross back over LAX within a few air-miles of leaving the ground; however, an aircraft using this route would cross the shoreline east-bound at 10,000 feet.

Between midnight and 6:30 a.m., Over-Ocean approach/departure procedures are used to reduce noise in communities east of LAX. Arriving aircraft approach from over the Pacific and maintain a distance of at least one mile from the shoreline, until they begin final approach. The use of departure flight paths is greatly restricted. Jet aircraft may not use the Loop Departure between 9 p.m. and 7 a.m. The Ocean Departure, shown on Figure One, is used from midnight to 6:30 a.m. and takes aircraft further away from the coast (particularly from the Palos Verdes Peninsula) than the Seal Beach route.

If a weather ceiling of 400 feet or less above ground level occurs at the west end of the airport during night operations, or if the visibility along the runways drops below prescribed minimums, then arrivals must switch to the east-west pattern. Also, safety dictates that easterly winds in excess of ten knots makes it mandatory for aircraft to switch to departures to the east (into the wind). It should be further understood that none of the flight procedures mentioned so far abrogate the authority and responsibility of the command pilot to assure the safe operation of his aircraft.

Takeoff and Landing Procedures

'Gateholding' - delaying departing aircraft at the terminals is initiated by the Tower whenever traffic or weather imposes departure delays. This avoids the propagation of unnecessary noise from queuing aircraft and, more markedly, reduces excess fuel consumption and the associated air pollution. Gate hold restrictions are broadcast on ATIS, advising jet aircraft captains to call the Tower prior to starting engines. During takeoffs and landings, the Tower employs a preferential runway use sequence, designed to restrict operations to those runways located furthest away from adjoining residential areas. That is, Rwys 25-7 L/R (averaging 2000 feet from El Segundo) are utilized in preference to Rwys 24-6 L/R (averaging 1250 feet from Westchester). For example, the desired runway sequence for incoming east-west aircraft would be: Rwy 25R, 25L, 24L and 24R (Figure Three). It may be necessary to prescribe deviations, however, due to aircraft emergencies, adverse weather, field construction and maintenance work.

Additionally, pilots utilize procedures designed to make takeoff climbouts and final approaches as steep as safety will allow, to minimize the impact of noise. The range of potential takeoff profiles available for noise abatement purposes is limited by the necessity to meet the constraints of terrain clearance, Air Traffic Control and aircraft per formance safety margins. Also, conflicting requirements must be met. Reducing aircraft noise requires that the power of the noise energy source (aircraft engines) be kept as low as possible, and that as much distance as possible be kept between the noise source and the listener. That is, the steepest possible climbout must be made with the least amount of power. This is difficult, since steep climbouts require considerable power.

A number of airlines sometimes use minimum-thrust takeoff techniques when all operational criteria (such as sufficient headwind) are met. Reduced-thrust takeoffs are less noisy, as well as better for engine life and more fuel-conserving, but do result in lower rates of ascent. Aircraft are requested by the Tower to climb at a rate of 1000 to 1500 feet per minute. For safety reasons, low-thrust takeoffs to the east are discouraged. Safety considerations also prevent the airlines from utilizing the sort of steep approaches that would be optimal for strictly noise abatement purposes. However, high altitude, low drag/minimum-thrust approaches are used, to varying degrees, when weather conditions permit.

Maintenance Restrictions

To keep aircraft noise emitted from maintenance areas at low levels, engine and auxiliary power unit check time is kept to a minimum. Additionally, maintenance runups of engines are prohibited between the hours of 11 p.m. and 6:00 a.m. However, this prohibition may be waived by the DOA General Manager if:

1) engines are run in a sound suppression unit capable of reducing sound levels at the airport perimeter to eight PNdb or less above the ambient residential background level;
2) aircraft auxiliary (APU) and diesel engine ground power units (GPU) are only operated for maintenance and preflight checks;
3) engines are idled during compass checks and tractors are used to orient aircraft headings.

The LAX Operations Superintendent will stop waivered maintenance checks when they are identified with community complaints, as a result of unusual (sound-carrying) climatic conditions.

Provisions will be made in Task 2.03 (Analyze Airspace and Air Traffic Control) for a discussion of operational deficiencies at LAX, in terms of flight noise abatement procedures.

PLANNED CONDITIONS

The future bodes well for noise abatement, mostly because of two factors.

NEW AVIATION TECHNOLOGY

New airliners, such as the 757, the 767 and the DC-9-80, represent the state-of-the-art in transport design and are, or soon will be, operational. Late model executive jets, such as the Citation 500 and the Learjet 56, are also much quieter than their predecessors. The same can be said for late model helicopters, such as the Sikorski S-76 and the Agusta Bell 222. At the same time, the possibility of re-engining older airliners, such as the McDonald Douglas DC-8 and the Boeing 707, with quiet, fuel efficient, low-pollution engines, such as the General Electric/ Snecma CMF 56, is technically feasible. In practice, though, a high percentage of these aircraft will be retired or sold abroad, rather than retrofitted to comply with federal noise regulations. Some DC-8-60s and 727-100s will be re-engined.

ADDITIONAL AIRPORT CAPABILITIES

Modifications are nearly complete to enable NAD to obtain aircraft identification data on noise violators, from the new FAA ARTS III computor. Additionally, six new noise monitors have just been installed to detect unauthorized engine runups at various LAX maintenance areas. It is also planned that existing maintenance noise levels will be reduced by replacing APUs and GPUs with a centralized underground power system.

PRELIMINARY AIRSPACE ISSUES

There are several apparent issues arising from this task which will have to be addressed in Phase II of ANCLUC.

1. The central issue is that of Noise Abatement versus S afety. There are difficulties in steepening departure climbouts and approach glidepaths without increasing noise levels, although this applies more to older aircraft with earlier technology engines. The newly operating DC-9-80, for instance is not only equipped with 'quiet' engines, but is capable of much steeper departures.

2. A more specific 'Noise versus Safety' item is the unpopularity of nightime over-ocean operations with the pilot and airline associations. Many pilots feel that the lack of surface references over the ocean makes final approaches into LAX unsafe, at night.

3. Another item is the fact that DOA must comply with all State and Federal noise requirements at LAX. The final FAA date by which all commercial jet airliners must comply with FAR Part 36 is December 31, 1985. DOA, however, is adhering to its own deadline of January 1, 1985.

4. While making LAX more 'noise-compatible' with adjacent communities, the DOA must also accommodate continued access to all airlines qualified to operate at LAX.

5. One further issue could be the question of whether to allow the introduction of largescale helicopter operations at LAX. Again, a distinction should be made between older models and more recent (quieter and safer) helicopters.

REFERENCES

Air Transport Association of America:

ATA Operations Policy Manual, "Noise Abatement Approach and Landing Procedures", 15 June 1974.

ATA Operations Policy manual, "Noise Abatement Takeoff Procedures", 16 November 1976.

George Carver, Deputy Director, Western Regional Office, "Air Carrier Operational Comments" (addressed to M. Z. Laham, DOA Environmental Bureau).

Aviation Week and Space Technology, New Jersey, 12 May 1980, p. 28.

Federal Aviation Administration:

Advisory Circular 91-39, 18 January 1974.

Advisory Circular 91-53, 17 October 1978.

FAR, Parts 91 and 36.

LAX Control Tower:

Ivan Hunt/John Ross
1 World Way, 12th Floor, LAX
Los Angeles, California 90009

TASK 1.02

UPDATE AIRPORT PLANS, PHYSICAL FACILITIES AND LAND USE

FEBRUARY 1981

Prepared by: Los Angeles City Department of Airports

For Information Call: Ernie F. Gonzalez - Env. Mgt. (213) 646-7615

INTRODUCTION

This task contains three main sections. The first deals with Los Angeles International Airport (LAX) zoning and planned land use. The Zoning Map indicates the uses allowed within LAX, according to the existing zoning. The General Plan Map, adopted by the Los Angeles City Council in January 1981, shows the proposed land use. The second section deals with specific airport projects and facilities, as well as special planning studies currently in progress. The Project Map reveals existing, as well as planned, airport facilities. The third section briefly identifies readily apparent issues that will need attention in Phase II.

EXISTING CONDITIONS

ZONING

The present zoning plan for LAX is summarized on the Zoning Plan Map. These zones allow the following activities:

1. R1-1 Single Family Dwellings.

2. M2-1 Light Industrial:
   Airport Uses, Retail/Commercial, Parking Structures, most Industrial Uses.

3. M3-1 Heavy Industrial:
   All uses allowed in M2-1 zone; Airports, Water Treatment Plants.

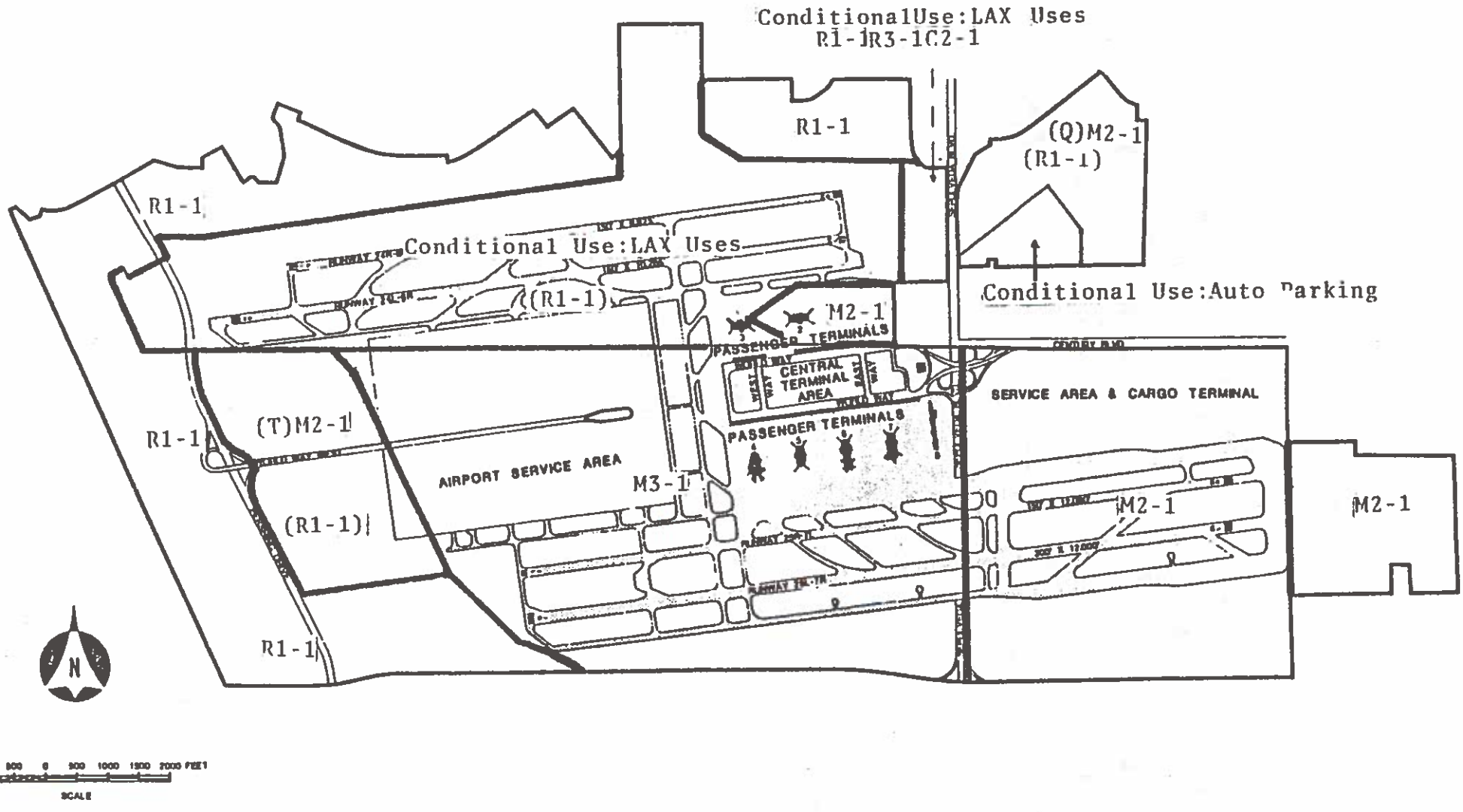
The DOA is now (1981) seeking appropriate zoning classifications to conform with the Airport Interim General Plan.

PLANNED CONDITIONS

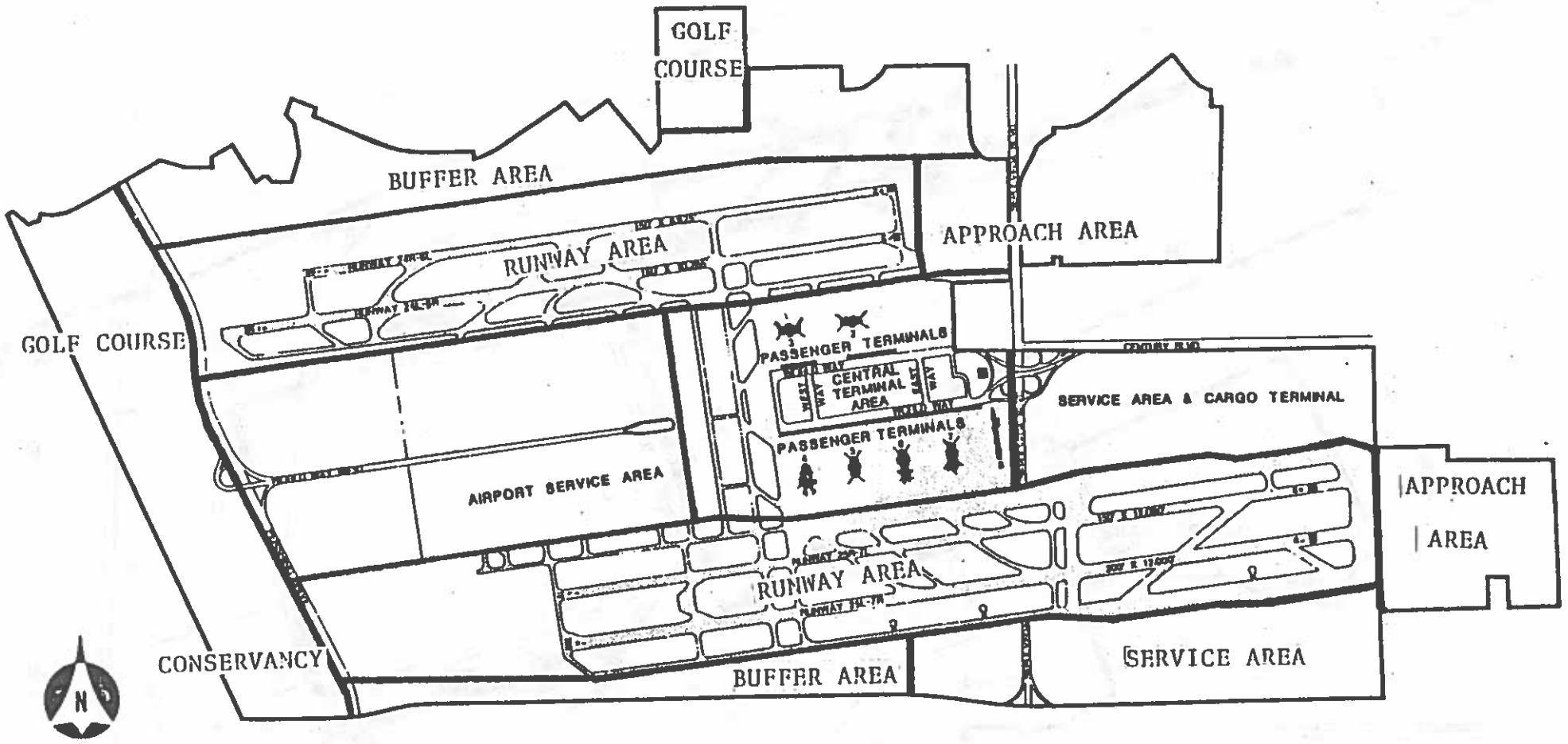
GENERAL PLAN

Goals

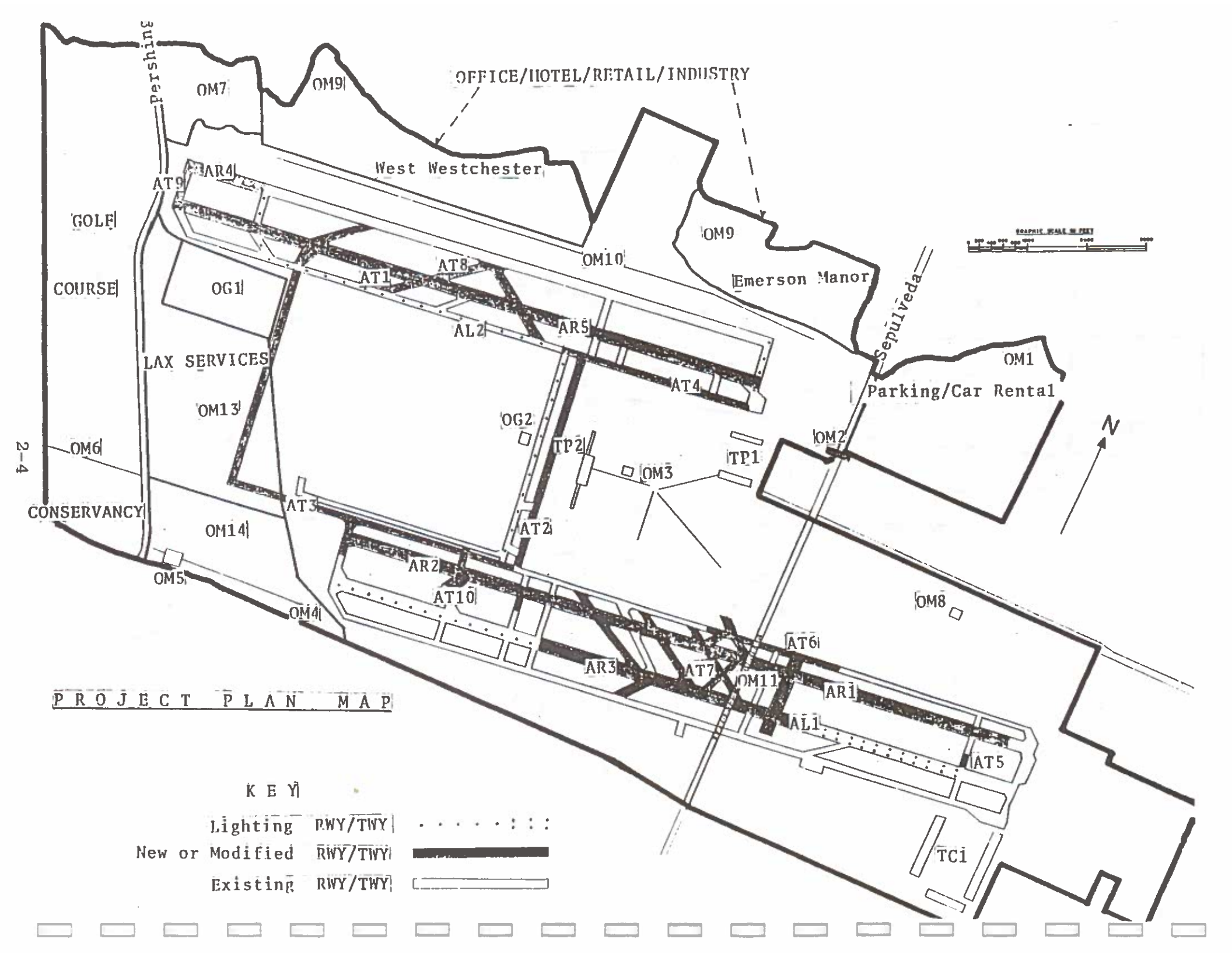
The LAX Interim General Plan overall goal is to promote proper growth of LAX as the City's present principal air terminal and as part of the United States air transportation system. The objectives through which this goal will be attained are as follows.



EXISTING ZONING PLAN MAP



GENERAL PLAN MAP


Pershing
OM7
OM9
OFFICE/HOTEL/RETAIL/INDUSTRY
West Westchester
AR4
AT9
GOLF
COURSE
OG1
AT1
AT8
OM10
OM9
Emerson Manor
Sepulveda
AL2
AR5
LAX SERVICES
AT4
OM1
Parking/Car Rental
OM13
OG2
TP2
TP1
OM2
OM6
OM3
N
AT3
CONSERVANCY
OM14
AT2
AR2
OM5
AT10
OM4
OM8
AT6
AR3
AT7
OM11
AR1
AL1
AT5
TC1
PROJECT PLAN MAP
KEY
Lighting RWY/TWY
New or Modified RWY/TWY
Existing RWY/TWY

1. Maximization of the safe and useful efficiency of existing and future airport facilities.
2. Functional integration of LAX into the City's balanced transportation system.
3. Reduction of the noise, air pollution, glare, odor, vibration and other adverse consequences of airport operations.
4. Provision for sufficient parking and adequate ground access to airport facilities.
5. Provision for the coordinated and compatible development of LAX, in conjunction with that of the surrounding communities.

General Plan Categories

1. Runway Area: Two major runway systems will continue to exist: 24/6 Left and Right to the north and 25/7 Left and Right to the south of the passenger terminal area. Aircraft maneuvering, landings and takeoffs will continue to take place in these areas.

2. Approach Area: These zones are located at the east ends of the northern and southern runways. They will be used for surface parking, rental car agencies, cargo handling or storage and aviation commercial activities.

3. Service Area: Three separate areas, located in the central and southern portions of LAX, will be used for aircraft maintenance shops, fueling facilities, navigation aids, cargo/passenger terminals, storage, manufacturing and parking. Aircraft under power are permitted.

4. Passenger Area: Located in the airport's center, this area is utilized by the control tower, passenger accommodations (ticketing, baggage and restaurants) and parking. Aircraft under power are permitted.

5. Rapid Transit: Any future mass transit line which connects LAX with downtown Los Angeles, Ontario and Palmdale, will also be aligned to serve the intensive development along Century Boulevard.

6. Buffer Area: The northern and southern Buffer Areas are located along the LAX boundaries, and exist to shield adjoining residential areas from the physical consequences of airport operations. Aircraft under power and engine runups are not permitted in these areas. Parking, storage cargo offices, commercial, industrial and hotel uses are envisioned. Greenbelts of trees, shrubs and grass will be maintained between airport and residential uses.

7. Golf Courses/Conservancy: The two areas concerned with golf courses are the existing one in the north-central part of LAX, and the proposed championship course west of Pershing Drive. A habitat area for the El Segundo Blue butterfly is proposed on the southerly 80 acres, where the existing FAA/VOR site will remain.

PROJECT PLANS

Projects planned for completion after February 1981 are represented on the Project Plan Map. General project locations are denoted by alphanumeric identifiers (i.e. 'AL2'). A work schedule of the more prominent projects is shown on Figure One. Chief project categories consist of Airfield (A), Terminals (T) and Support/ Other (O).

Airfield

Runways

AR1 - Runway 25R Reconstruction.
- Completion date is October 1982.
- Reconstruction of pavement and strengthening of runway to allow use by wide-body aircraft.

AR2 - Runway 25R Resurfacing.
- Completion May 1982.
- From Taxiway 45 to west end of runway.

AR3 - Runway 25L Reconstruction.
- Completion February 1984.
- Reconstruction of deteriorated pavement and strengthening to allow use by wide-body aircraft.

AR4 - Runway 24R Extension.
- Completion September 1984.
- Extension to planned length of 10285 feet, to equal takeoff capability of 24L.

AR5 - Runway 24L Reconstruction.
- Completion August 1985.
- Strengthening of runway to serve wide-bodies.

Taxiways

AT1 - Taxiway 61U Fillet.
- Completion April 1981.
- Enlargement of turnoff surface area.

AT2 - Taxiway 47 Relocation.
- Completion January 1982.
- Taxiway replacement; to be located 200 feet westerly, to allow adequate space for proposed West Terminal.

Master Schedule of Selected Capital Projects

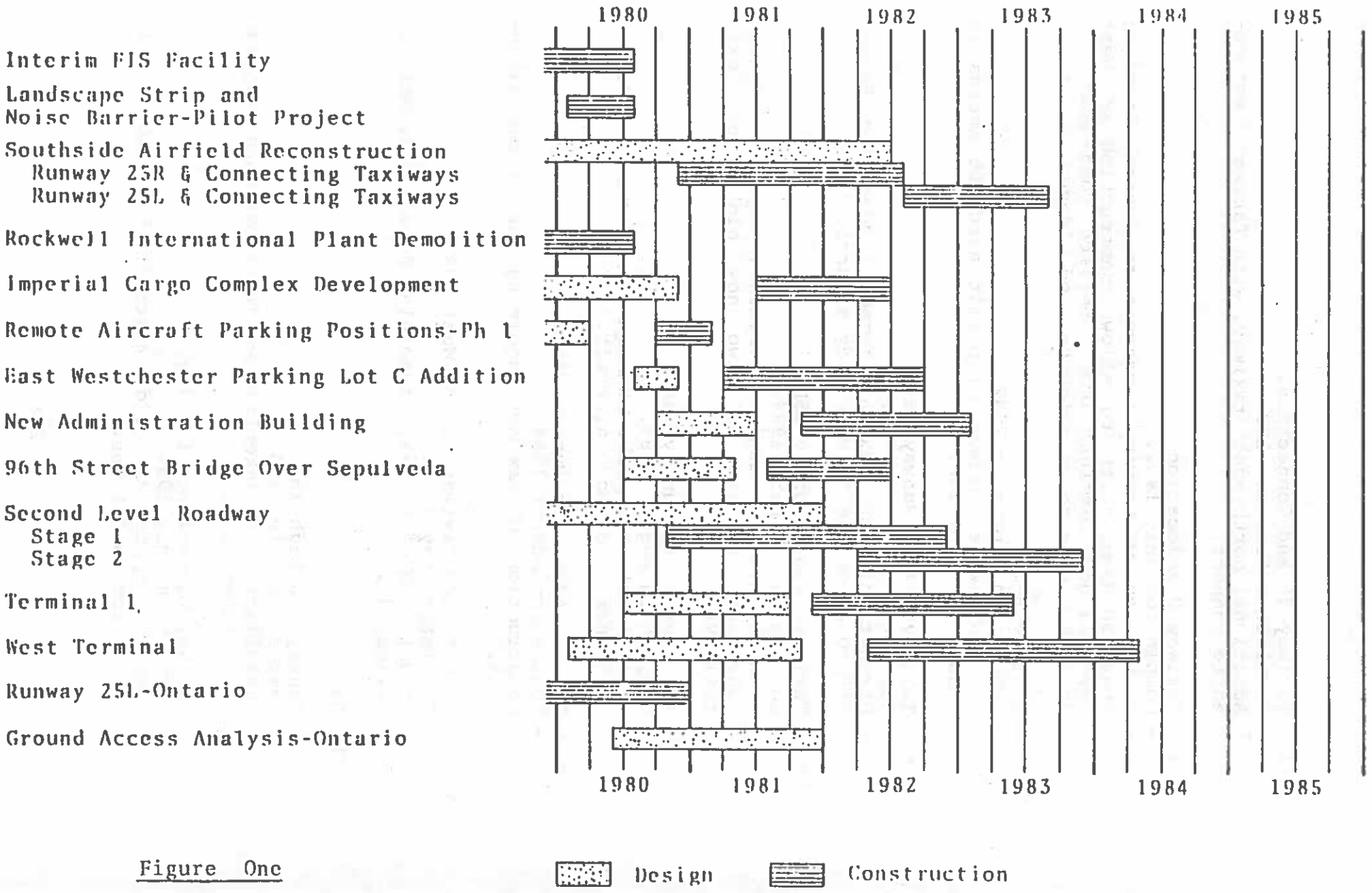


Figure One

AT3 - Taxiway 75 and Connectors.
- Completion February 1983.
- Additional north-south taxiway, with Taxiway J extended to connect.

AT4 - Taxiway U Relocation.
- Completion July 1982.
- Relocation of taxiway (adjacent to Central Terminal Area) 50 feet north to allow construction of West Terminal and Terminal One. Service road south of Taxiway U also to be relocated and widened.

AT5 - Taxiway 8H.
- Completion September 1982.
- 100 foot wide taxiway to permit aircraft access to Runway 25L from 25R.

AT6 - Taxiways Along Runway 25R.
- Completion October 1982.
- Strengthening of taxiway segments adjoining Runway 25R to allow use by wide-body aircraft.

AT7 - Taxiways Along Runway 25L.
- Completion February 1984.
- Strengthening of taxiway segments adjoining Runway 25L, plus provision of two new high speed exit taxiways.

AT8 - Taxiways Along Runway 24L.
- Completion August 1985.
- Replacement of asphalt taxiways with concrete pavement to support wide-body aircraft.

AT9 - Taxiway Adjoining Runway 24R.
- Completion August 1984.
- Construction of taxiway adjoining Runway 24R extension.

AT10 - Resurfacing Taxiways along West 25R.
Completion May 1982.
- Resurfacing of taxiways adjoining Runway 25R, west of Taxiway 45.

Lighting

AL1 - Runway 25L Lighting.
- Completion July 1984.
- Installation of Centerline and Touchdown Zone Lighting along Runway 25L.

AL2 - Taxiway Centerline Lighting.
- Completion July 1984.
- Lighting system to guide aircraft form Runway 24R during fog conditions.

Terminal

Passenger

TP1 - Passenger Terminal One.
- Completion May 1983.
- To help satisfy forecast passenger demand, new terminal will accommodate six million annual passengers (MAP) and about 14 aircraft gate positions.

TP2 - West Passenger Terminal.
- Completion April 1984.
- To help meet forecast passenger demand, new terminal will accommodate eleven aircraft gates, contain 858,000 sq. ft. and have Federal Inspection Service facilities capable of processing 1850 pax/hour.

Cargo

TC1 - Imperial Cargo Complex.
- Completion June 1982.
- Demolition of existing unusable pavement; construction of 500,000 square feet of warehouse space, 10 aircraft parking positions, employee/public auto parking area, and a joint-use taxiway connecting the complex to Taxiway F.

Other

Aviation Support

OG1 - Remote Aircraft Parking.
- Completion April 1984.
- 18 remote parking pads for wide-body aircraft, to meet projected international carrier peaking/overnight demands; 14 buses will transport passengers between the pads and the West Terminal.

OG2 - Crash and Fire Rescue Station.
- Completion approximately January 1983.
- Construction of new station to serve as Command Center; present Center to become satellite rescue station.

Miscellaneous

OM1 - East Westchester Improvements.
- Completion June 1982.
- Includes various street improvements, possible utility relocations, fire hydrants and mains, storm drain system, landscaping and transportation center. Will be used for public parking, rent-a-car facilities and recreational purposes.

OM2 - Sepulveda/96th Street Bridge.
- Completion August 1982.
- Construction of four-lane vehicular bridge over Sepulveda, including connections to Parking Lot C and Sky Way.

OM3 - Utility Center Expansion.
- Completion November 1983.
- Enlargement of Central Utility Plant, direct burial of AC piping to Terminal One and West Terminal, replacement of piping to Terminals 5 & 7, and construction of a new cooling tower.

OM4 - Imperial Storm Drain.
- Completion March 1983.
- Construction of 2940 foot, 87 inch storm drain to convey dry weather/first flush storm flow from terminals to proposed wastewater treatment plant, before discharge into county drain system.

OM5 - Wastewater Treatment Plant.
- Completion May 1983.
- New plant to eliminate possibility of airport industrial wastes polluting the beach/ocean; 20 gallons per minute capacity, with 540,000 gallon retention basin; will handle flow from airport west of Sepulveda

OM6 - Playa Del Rey Improvements.
- Completion December 1982.
- To be used for golf course/associated parking and as Dune Habitat area; includes widening of Imperial Highway and Vista Del Mar.

OM7 - Nike Site Land Developments.
- Completion August 1983.
- Internal improvements to allow development of 43-acre site for use by Los Angeles Community College, Jet Pets and Dobbs House.

OM8 - Administration Building.
- Completion October 1983.
- Construction of new multi-story Administration Building to provide adequate office/parking space for DOA administrative personnel.

OM9 - Northside Properties.
- Completion July 1985.
- Improvements (grading, utilities, roads, landscaped sound barrier zone, etc.) to allow industrial, commercial, office, hotel and airport-related uses in West Westchester/Emerson Manor acquisition areas.

OM10 - North Perimeter Storm Drain.
- Completion February 1984.
- Construction of new drain to alleviate mosquito/bird problems in present open ditch and to eliminate possible aircraft safety hazard.

OM11 - Sepulveda Tunnel.
- Completion August 1983.
- New reinforced section for Sepulveda Tunnel.

OM12 - WLA/LAX Bus Terminal (See Below).

OM13 - Improvements East of Pershing Drive.
- Completion April 1982.
- DOA will file tract map to utilize area for various aviation-support uses.

OM14 - Imperial/Pershing Tract.
- Completion October 1982.
- Improvements related to vacation of old Pershing Drive; project includes widening Imperial and use of tract for wastewater treatment plant and associated sump area.

Additionally, OM12 (See Above) will provide Express Bus Service to LAX from West Los Angeles (Figure Two); includes grading the two-acre site, paving the southerly 300 feet, constructing new building with canopy over bus loading area, parking, utilities and landscaping.

SPECIAL PLANNING STUDIES

Studies are presently underway to determine the most appropriate uses for three largescale project areas around the periphery of LAX.

Airport Dunes Study

The Study area (Project Map: OM6) is part of the City's Local Coastal Program (LCP), which sets forth coastal policy for environmentally sensitive habitats, such as the Dunes. The The Study considers several feasible land use alternatives for the 302 acre site and makes the following recommendations.

1. Aircraft safety and navigational aids should be given priority over other uses.
2. The southerly 80 acres, the boundaries of which were established by the State Department of Fish and Game, should be set aside for the preservation of the El Segundo Blue butterfly.
3. The undisturbed southern portion of the Dunes should retain its 'natural' condition.

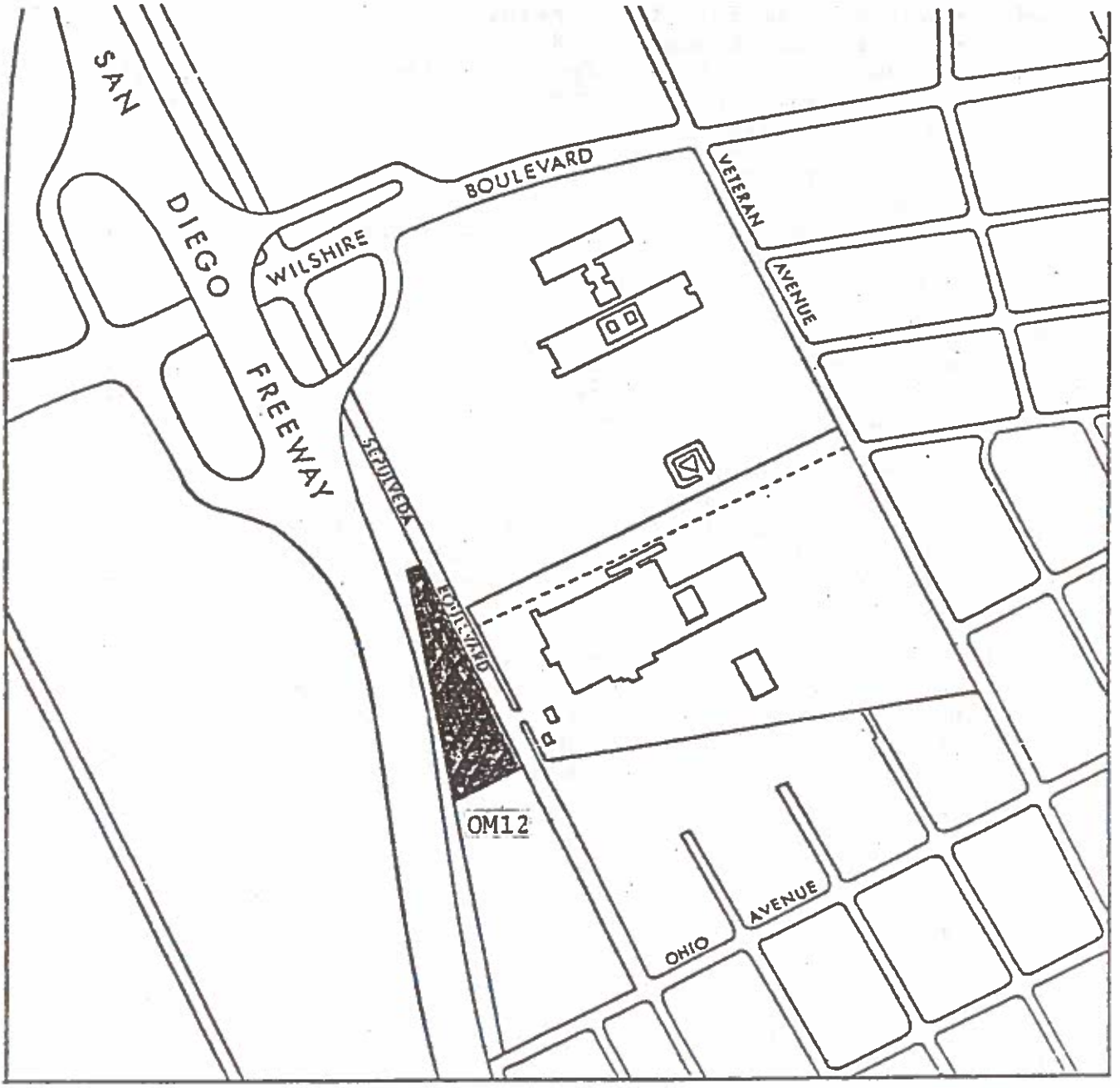

SAN
DIEGO
FREEWAY
WILSHIRE
BOULEVARD
VETERAN
AVENUE
SEPULVEDA
BOULEVARD
OM12
OHIO
AVENUE

Figure Two

4. Any recreational facilities should take advantage of the unique setting, be financially self-supporting, be compatible with the butterfly habitat area and with the area's unique noise conditions.

5. The LCP to develop a specific plan for the area should be carried out.

West End Development Study

This 457 acre area (Project Plan Map: OM7, 13, 14, OG1) is essentially vacant and the Study seeks uses compatible with Airport, Local, Regional and State goals for the site. The Central area, between the runways, is proposed for aircraft service/maintenance, passenger/cargo terminals, aircraft parking, a fire station and airline office/training facilities. The areas at the west ends of the runways are planned for runway/taxiway improvements. The northern section is proposed for airport-related industrial, office, commercial and hotel uses, the continuation of an animal air-transfer holding facility, an airport museum, educational and recreational uses. The area adjoining the southern airport boundary is proposed for a runoff wastewater treatment plant. Also recommended in the Study is the westerly extension of Arbor Vitae Boulevard to provide new, direct access to Pershing from the San Diego Freeway, through the site.

North Side Development Study

The Study concerns itself with the 280 acres of LAX land north of Runways 24-6 L/R (Project Plan Map: OM9, plus Golf Course north of Lincoln). The area has been cleared of single family houses as part of recent LAX noise compatibility programs and is being considered for uses appropriate to its strategic location near the airport (retail, hotels, offices, industrial and cultural/recreational). The Study recommends that the property be used to allow new or expanding firms requiring direct airport access to stay in the local market. The new highway mentioned above will also traverse through the area.

PRELIMINARY ISSUES

The more obvious issues for further discussion, arising out of this task, are the following points.

1. Making the airport more compatible with the surrounding communities, while maintaining airport revenues at a level sufficient to accomplish all planned capital improvements.

2. Determination of the ultimate air passenger capacity of the airport.

3. The nature of airport-related improvements to be located in the old Nike Site (OM7), immediately adjacent to residential property.

4. The use of the Dunes area solely as a sanctuary for the El Segundo Blue Butterfly.

5. The possible use of the proposed Northside office buildings as a sound shield for residential areas to the north of LAX.

6. The maintenance of acceptable levels of various airport services during the 1981-84 construction/modification period.

REFERENCES

Los Angeles City Department of Airports:

Facilities Planning Bureau
Jack Graham
1 World Way, 8th Floor, LAX
Los Angeles, CA 90009 Phone: 646-7116

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Los Angeles International Airport Zoning, L. A., January 1976.

LAX Master Schedule of Selected Capital Projects, L. A., July 1980 (Updated to May 1981).

TASK 1.03

UPDATE AIRPORT GROUND ACCESS CIRCULATION AND PARKING

FEBRUARY 1981

Prepared by: Los Angeles City Department of Airports

For Information Call: Ernie F. Gonzalez - Env. Mgt. (213) 646-7615

INTRODUCTION

The purpose of this Task is to describe the existing and planned airport access, internal roadways, and parking facilities, together with local origins / destinations.

Los Angeles International Airport (LAX) is the third largest and second busiest commercial airport in the country and, as such, comprises a vital element in the international airlines network. Designed in the 1950's to handle about 20 million annual passengers (MAP), LAX traffic in 1980 had reached 33 MAP, and forecasts indicate that 40 MAP could be realized by 1986. Ground access congestion and the ensuing deleterious effects on air passengers, LAX employees and adjacent residents have also increased at an correspondingly high rate.

EXISTING CONDITIONS

ACCESS ROADWAYS

External roads are illustrated in Figure One, which shows approach capacities by vehicles per hour and locations of left/right-turn lanes at important intersections. Capacities shown represent relative averages and indicate relative levels of traffic service.

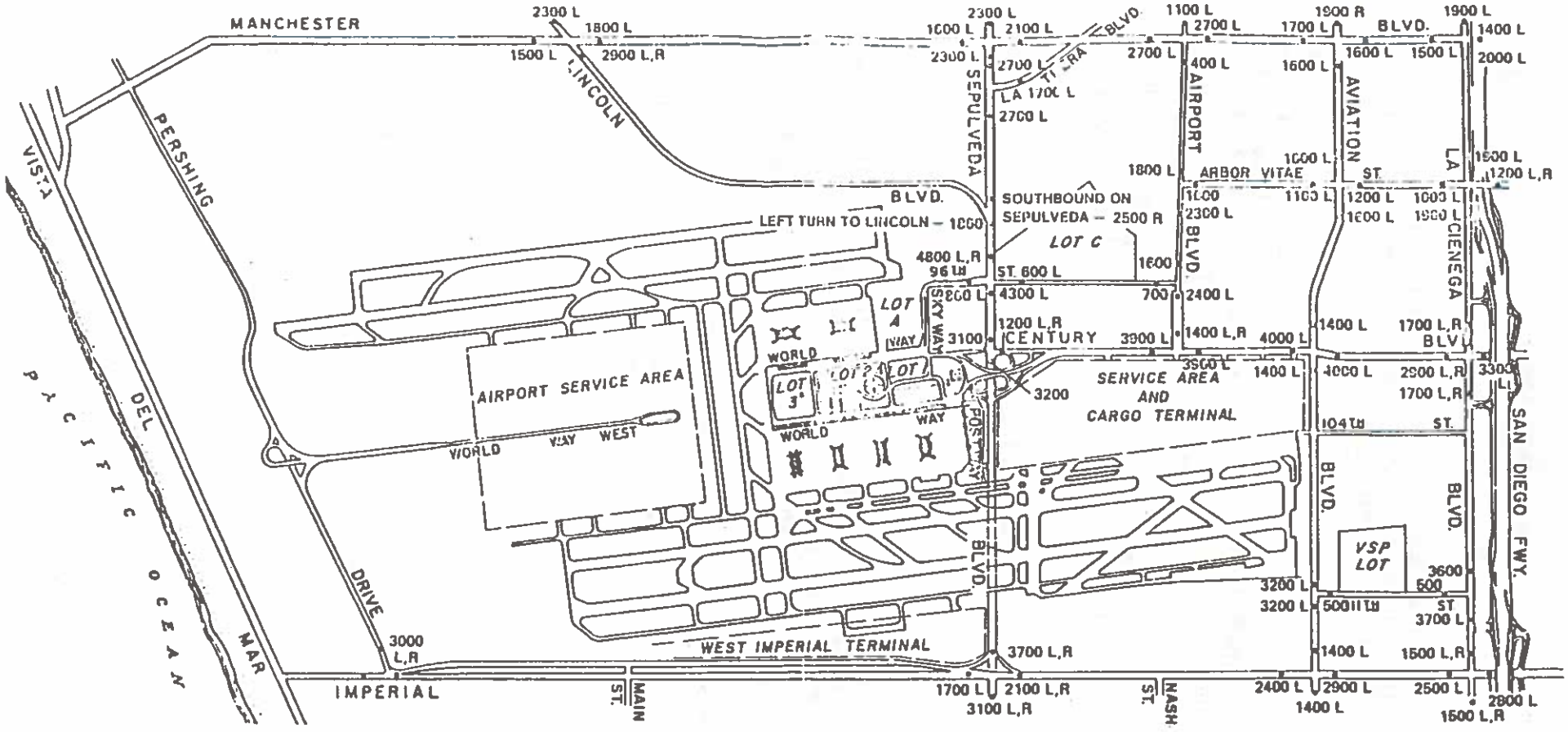
Major access ways are as follows.

1. San Diego Freeway: Eight lanes and 190,000 vehicles per day, within LAX zone of influence, as indicated in Figure One.

2. Century Boulevard: Eight lanes, east-west arterial and primary access street to LAX.

3. Sepulveda Boulevard: Six to eight lanes, north-south arterial with LAX access through interchange at Century.

The 1980 volume/capacity ratios at various locations around LAX are shown in Table A. The screenline locations of traffic figures used are shown on Figure Two. Note that approximately one-quarter (23.1%) of the outbound traffic volume is generated by the airport.



N

GRAPHIC SCALE IN FEET

0 1000 2000 3000

1600 – VEHICLES/HOUR CAPACITY LEVEL OF SERVICE D

L – APPROACH HAS EXCLUSIVE LEFT-TURN LANE

R – APPROACH HAS EXCLUSIVE RIGHT TURN LANE

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

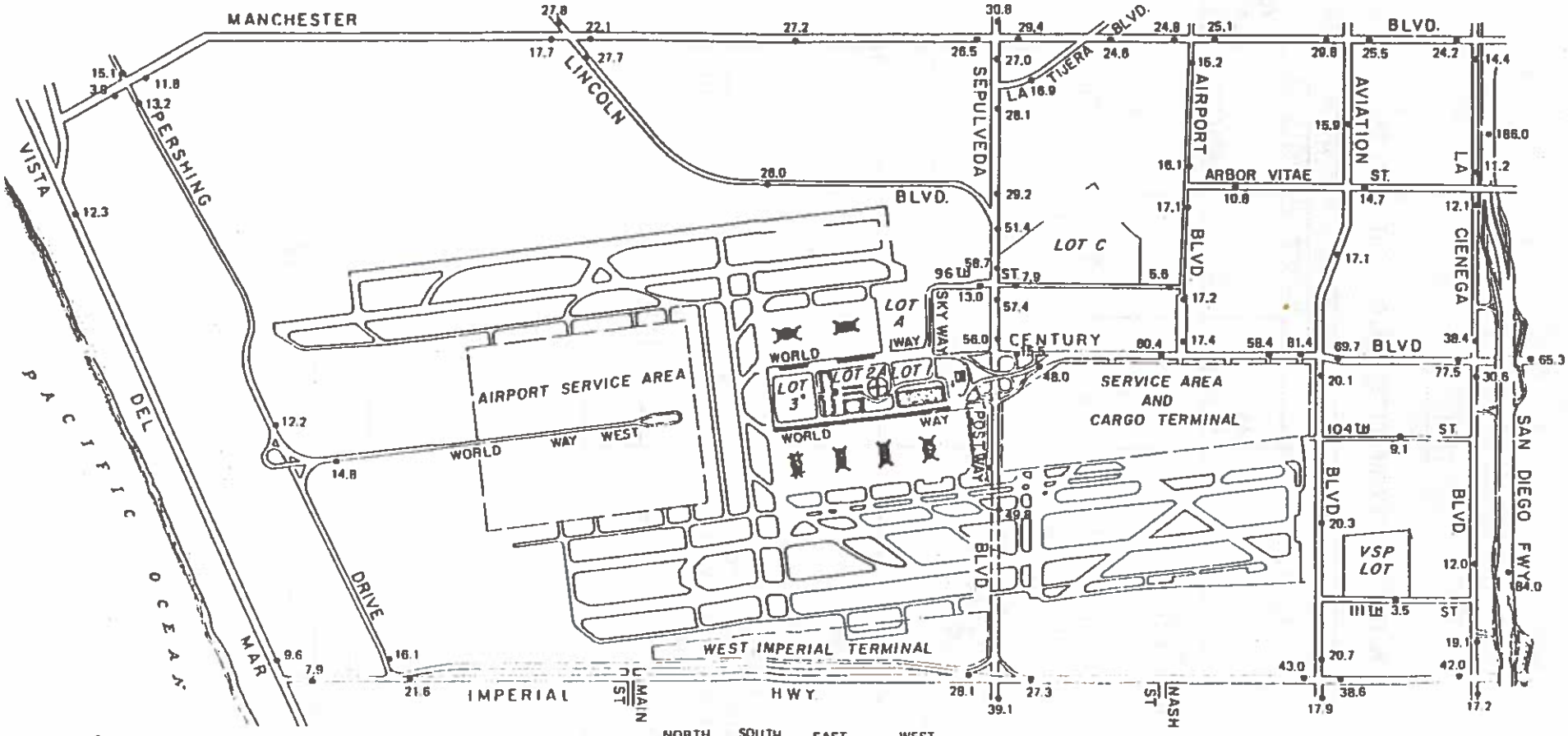
Figure ONE ESTIMATED INTERSECTION ROADWAY CAPACITIES, 1977

Table A

SCREENLINE VOLUME/CAPACITY RATIOS, OUTBOUND TRAFFIC ONLY

LOCATION	1980 AVERAGE P.M. PEAK HOUR			
	Number of Vehicles			1972 Volume/ Capacity Ratio
	Airport Related	Total	Capacity	
Crossing Screeline A at:				
Vista Del Mar	35	325	1,200	0.27
Pershing Drive	230	535	600	0.89
Lincoln Boulevard	585	1830	1,200	1.52
Sepulveda Boulevard	500	1510	1,200	1.25
La Tijera Boulevard	650	1620	1,200	1.35
La Ciengo Boulevard	220	1030	1,200	0.85
Route 170 Expressway	---	----	-----	---
San Diego Freeway	2000	7900	6,000	1.31
Subtotal:	4220	14750	12,600	1.17
Crossing Screenline B at:				
Florence Avenue	35	860	1,200	0.71
Manchester Avenue	95	1280	1,200	1.06
Arbor Vitae Street	70	865	600	1.44
Century Boulevard	1255	2560	2,400	1.06
Imperial Highway	620	3240	1,800	1.8
I-105 Freeway	----	----	-----	---
El Segundo Boulevard	160	2620	1,800	1.45
Subtotal:	2235	11425	9,000	1.26
Crossing Screenline C at:				
Vista Del Mar	105	1280	1,200	1.06
Main Street	95	430	1,200	0.35
Sepulveda Boulevard	550	2620	1,800	1.45
Aviation Boulevard	190	1280	1,800	0.71
La Cienga Boulevard	65	1075	1,200	0.89
San Diego Freeway	2000	8100	6,000	1.35
Subtotal:	3005	14785	13,200	1.12
TOTAL	9460	40950	34,800	1.17

LOS ANGELES INTERNATIONAL AIRPORT



GRAPHIC SCALE IN FEET

0 1000 2000 3000

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
AM PEAK % OF ADT *	7.3 (6.6-8.5)**	8.8 (8.7-10.4)	7.5 (5.5-11.1)	7.1 (6.3-8.0)
AM PEAK	6:45-8:30 11:15-12:15	7:00-8:45	7:15-8:45 11:15-12:15	6:15-8:45 10:45-12:15
PM PEAK % OF ADT *	10.1 (8.2-11.4)	7.7 (6.4-9.5)	7.8 (6.5-9.1)	8.5 (5.8-11.8)
PM PEAK	3:00-5:45	2:30-6:00	2:30-5:30	2:30-5:45 11:30-12:45

* AVERAGE DAILY TRAFFIC

** RANGE

FIGURES REPRESENT TWO-WAY AVERAGE WEEKLY TRAFFIC VOLUME

SOURCE: DEPARTMENT OF TRAFFIC, LOS ANGELES

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

Figure 5 AVERAGE WEEKDAY TRAFFIC VOLUMES, 1975

CIRCULATION ROADWAYS

Roads inside the Central Terminal Area (CTA) are depicted on Figure Three. Presently there are a number of discontinuous lanes that cause weaving movements, which in turn reduce vehicle carrying capacities. Pedestrian traffic signals operate as an interconnected system, but reduce the available 'green time' for CTA auto traffic by some 30 percent. 'Green time' is only given to the Post Way approach when traffic is detected. The intersection of East and Center Ways is not part of this system and allocates 'green time' according to detected demand. Figure Four indicates capacities at critical locations within the CTA, based on the assumption of uniform traffic flow.

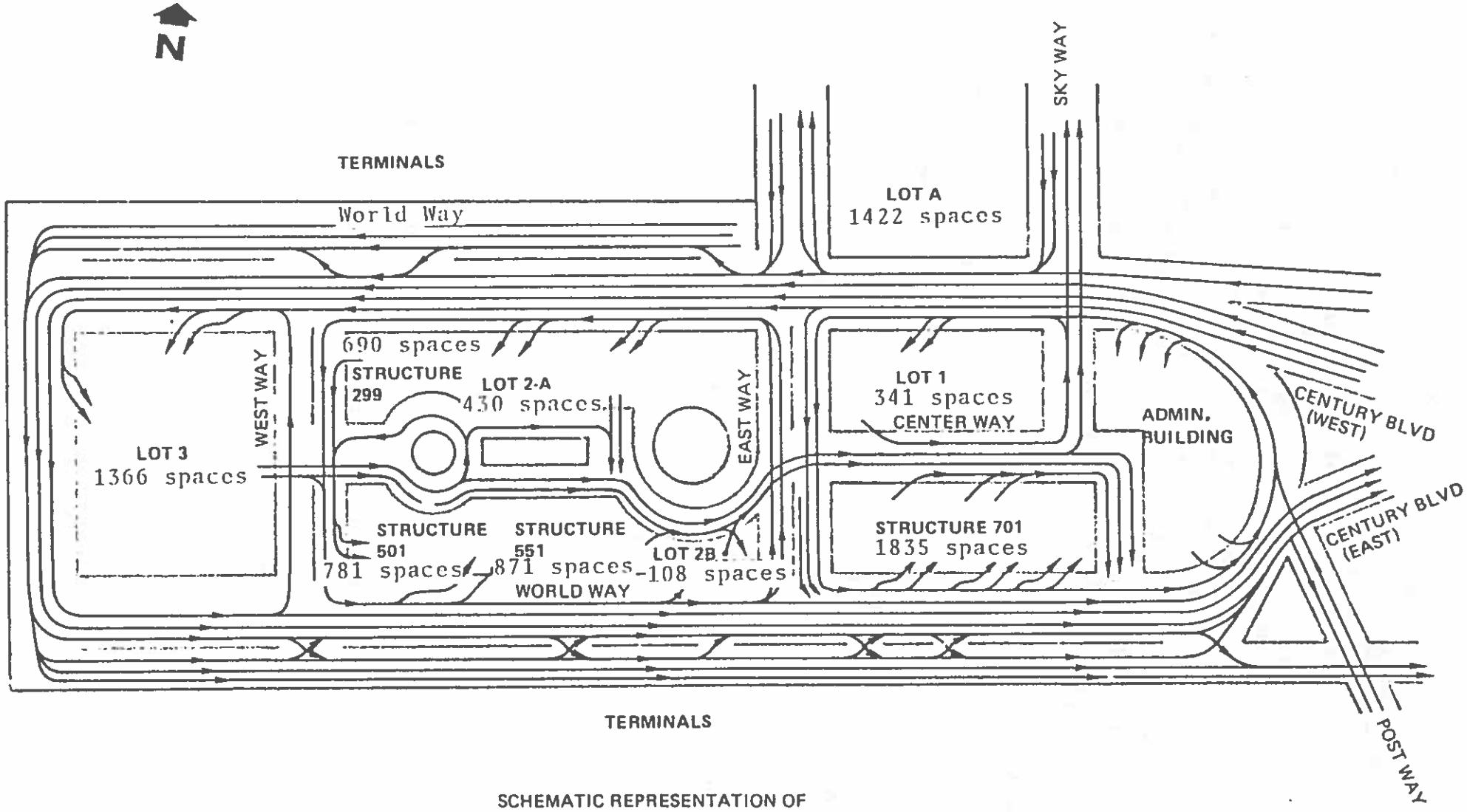
PARKING FACILITIES

Parking areas within the CTA consist of four parking structures and four parking lots, and the total 7800 spaces for air passengers are shown in Figure Three. A tabulation of other parking utilized for rental car storage, is shown on Table B. DOA pricing policy encourages long term parkers to use peripheral facilities, which total 8950 spaces, plus approximately 5000 spaces in off-airport independent lots.

TRAFFIC DISTRIBUTIONS

Traffic adjacent to and within LAX is shown on Figures Five and Six. Average weekday traffic volumes, together with morning and evening peak hour traffic levels, are shown on Figure Four. Figure Five shows average weekday volumes on the CTA roadway/ primary access streets. Monthly airline passenger and entering traffic volumes, and ratios of entering vehicles per air passenger are shown on Table C. The fairly constant ratio of 0.552 emphasizes the point that shifts in air travel volumes within the year can significantly influence ground access system requirements. Daily variations are present to the extent that entering traffic peaks are larger in the morning, while exiting peaks are larger in the mid-afternoon and evening. World Way/Century Boulevard serves a greater proportion of exiting than entering traffic, and Sky Way/ 96th Street and Sepulveda Boulevard serve a greater proportion of exiting traffic, as indicated in Figure Seven. A breakdown of inbound vehicular trips by travel mode is shown on Table D.

NOTE: While hotel car-rentals/shuttle-buses account for 11.4 percent of the total person-travel in the CTA (7,048,000 people in 1976), they comprise only 6.4 percent of the total vehicle trips.

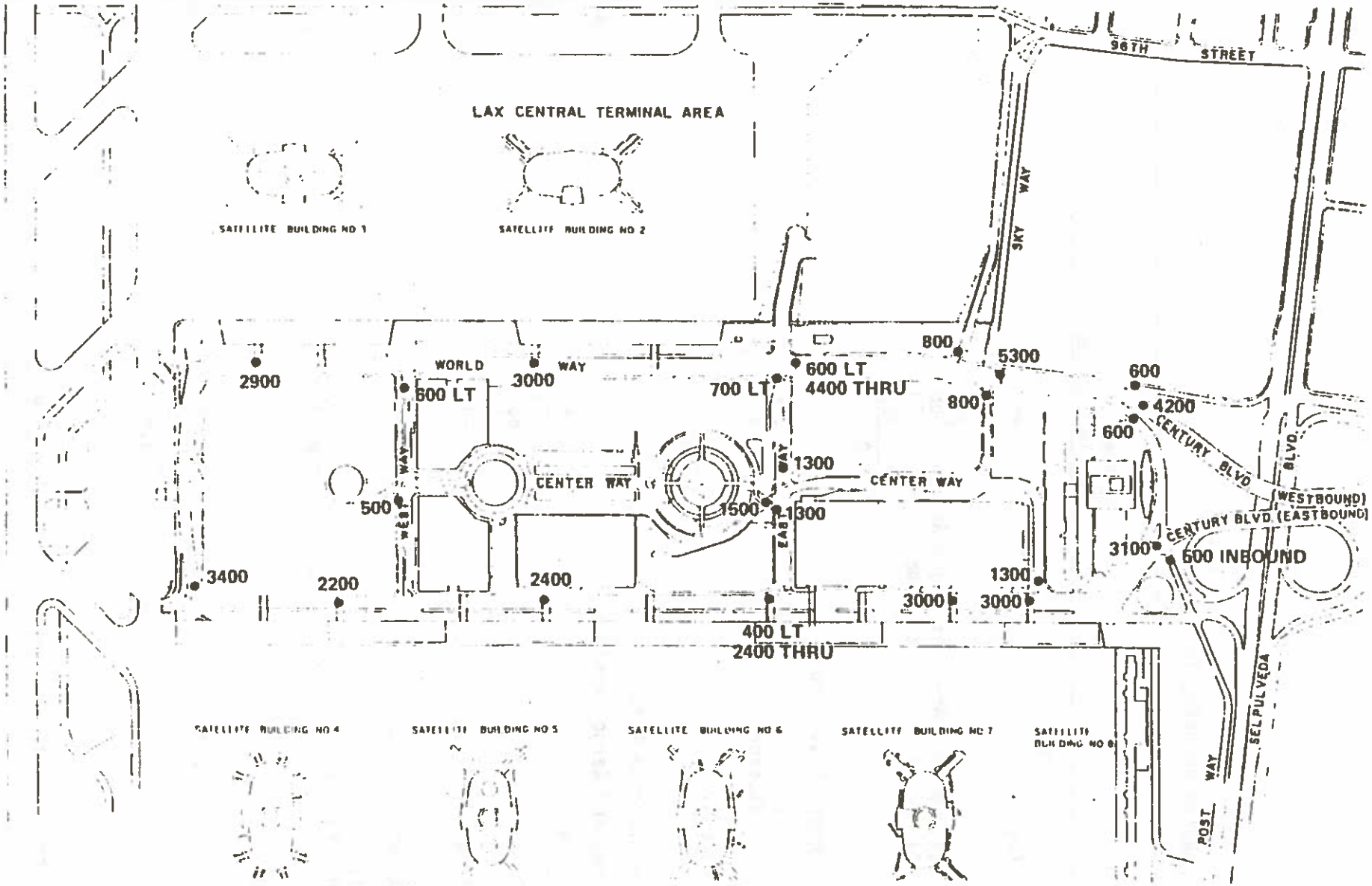


SCHEMATIC REPRESENTATION OF
WEAVING AND TURNING MOVEMENTS
IN THE CTA (NOT TO SCALE)

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

Figure 3 CTA ROADWAYS, 1977



1400 – CAPACITY IN VEHICLES/HOUR
LT – LEFT-TURN CAPACITY WHERE EXCLUSIVE LEFT-TURN LANES ARE PROVIDED

GRAPHIC SCALE IN FEET
0 100 200 300 400 500

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

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Figure FOUR CTA ROADWAY CAPACITIES, 1977

TABLE B

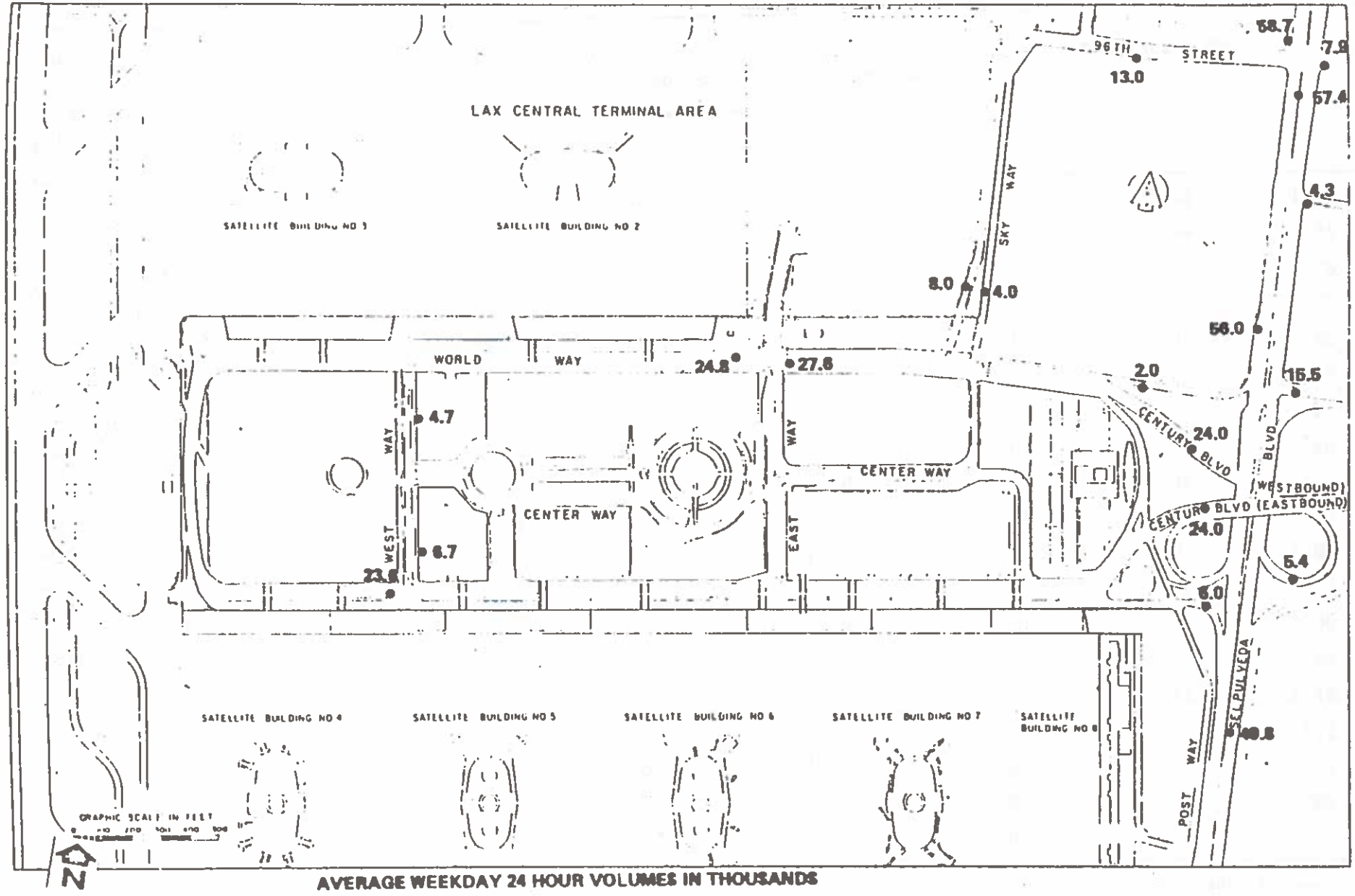
LAX AREA PARKING SUMMARY, 1977

Location	Number of Parking Spaces
Central Terminal Area	
Public (Pay)	7,834
DOA	374
Tenants	358
Satellite and Ramp Areas (Includes Apron Equipment Spaces)	868
Car Rental Areas	610
Other	193
	10,237
North of Century Boulevard	
Lot C (Public)	5,350
Car Rental Storage	3,327
Golf Course	181
Miscellaneous	1,056
	9,914
Airline Maintenance Area	7,328
Service Area and Cargo Terminal	
Airline Maintenance	4,184
Cargo City	1,523
Post Office	657
DOA	710
Air Freight	442
	7,516
East of Aviation Boulevard	
Tenants	938
VSP Lot (Public)	3,600
	4,538
South Side	
Tenants	7,562
West Imperial Terminal	683
FAA	258
	8,503
Other	
DOA	273
Other Governmental Agencies	116
	398
GRAND TOTAL	48,425

TABLE I
CALCULATED ICU VALUES[1]

Intersection	Null[2]	CTA[3] Impvmts.	PPL[4] w/I-105 & Arbor Vitae Interchange	PPL[4] w/o I-105 or Arbor Vitae Interchange	SLR[5] w/I-105 & Arbor Vitae Interchange	Selected Program w/I-105 & Arbor Vitae Interchange	Selected Program w/o I-105 or Arbor Vitae Interchange
Manchester/Sepulveda	.99	.78	.84	1.10	.64	.70	.93
Manchester/Airport	.52	.61	.81	.61	.67	.77	.60
Manchester/Aviation	.96	.99	.92	1.06	.80	.87	1.02
Manchester/La Cienega	1.13	1.12	.90	1.19	.82	.86	1.14
Lincoln/Sepulveda	.96	1.14	1.12	1.17	1.23	1.17	1.14
Arbor Vitae/Airport	.59	.59	.89	.69	.77	.82	.64
Arbor Vitae/Aviation	.98	.95	1.04	1.06	1.00	.98	1.00
La Cienega/Arbor Vitae	1.14	1.14	1.11	1.10	1.12	1.11	1.13
96th/Sepulveda	1.24	1.01	.91	1.08	.80	.84	1.05
96th/Airport	1.27	1.18	.90	1.27	.68	.78	1.22
Century/Sepulveda	.96	1.00	.84	1.18	.72	.76	1.10
Century/Airport	1.23	1.28	1.20	1.24	1.11	1.05	1.18
Century/Aviation	1.32	1.34	.99	1.10	1.16	1.09	1.22
Century/La Cienega	1.47	1.43	1.12	1.49	1.04	1.08	1.44
111th/Aviation	.44	.56	.45	.58	.37	.44	.57
111th/La Cienega	1.06	1.04	.59	1.18	.49	.52	1.07
Imperial Hwy/Sepulveda	1.17	1.12	.87	1.11	.85	.84	1.12
Imperial Hwy/Aviation	1.00	.92	.60	1.02	.52	.56	.97
Imperial Hwy/La Cienega	1.55	1.55	.60	1.56	.58	.59	1.55

[1] eak hour of 15th highest LAX demand day at 40 MAP
[2] Also approximates TSM and Regional Bus Alternatives
[3] Approximates Second Level Roadway without I-105 and Arbor Vitae Interchange
[4] Approximates Preferential Bus, Elevated Busway, or People Mover Alternative
[5] Second Level Roadway approximates CTA Improvements Alternative with I-105 and Arbor Vitae Interchange.



AVERAGE WEEKDAY 24 HOUR VOLUMES IN THOUSANDS

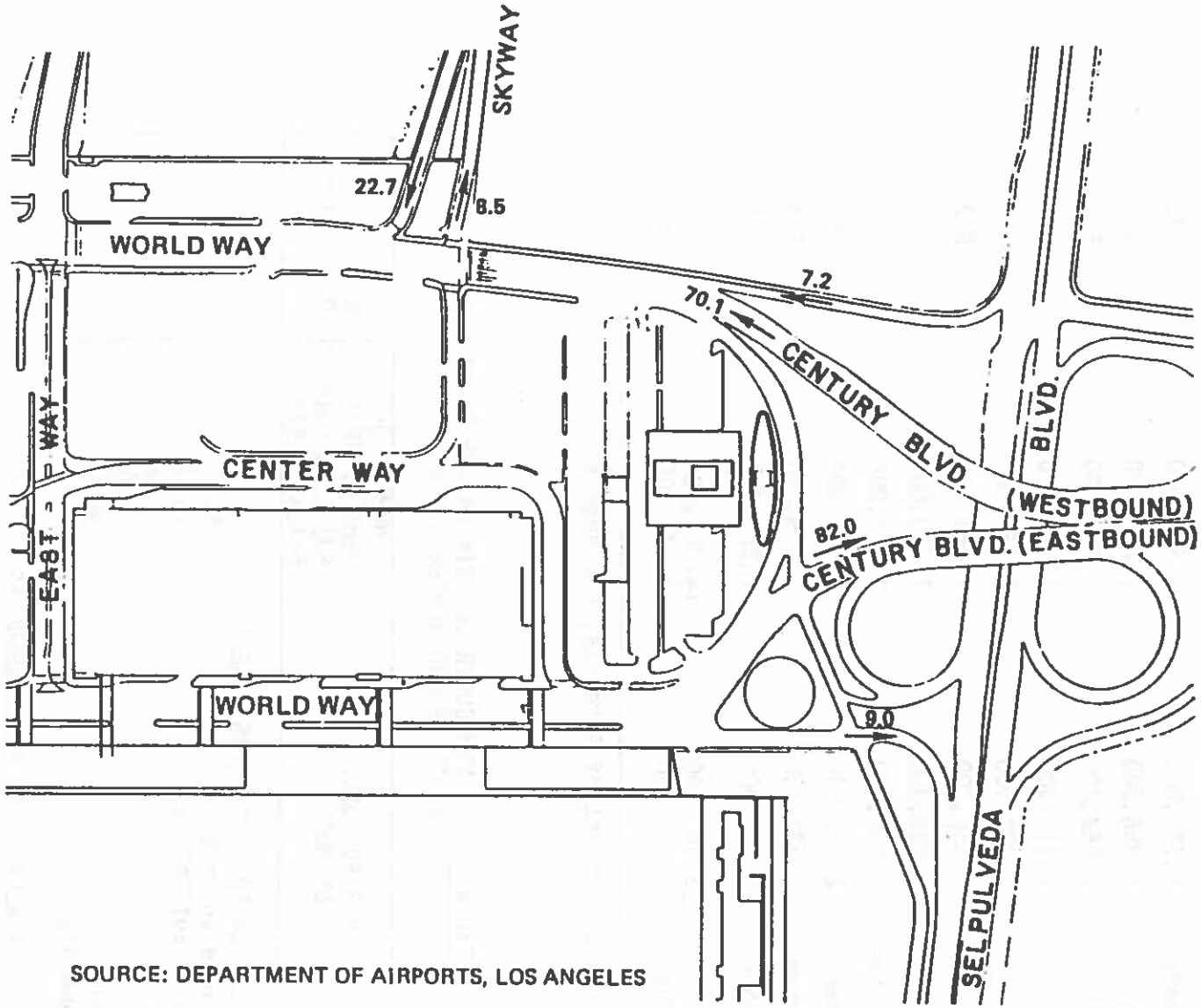
GRAPHIC SCALE IN FEET

SOURCE: DEPARTMENT OF TRAFFIC, LOS ANGELES

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

Figure SIX | CTA AVERAGE WEEKDAY TRAFFIC VOLUMES, 1975



SOURCE: DEPARTMENT OF AIRPORTS, LOS ANGELES

GRAPHIC SCALE IN FEET
0 100 200 300 400 500

TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

Figure 7 PERCENT CTA ENTERING AND EXITING TRAFFIC 3-29-77 – 4-4-77

TABLE C

PASSENGER AND VEHICULAR TRAFFIC INTO CTA, 1976

MONTH	MONTHLY AIRLINE PASSENGERS	MONTHLY VEHICLE TRAFFIC INTO CTA	VEHICLES PER AIRLINE PASSENGER
January	1,975,000	1,103,000	.558
February	1,771,000	960,000	.542
March	1,866,000	1,038,000	.556
April	2,063,000	1,096,000	.531
May	2,112,000	1,102,000	.522
June	2,373,000	1,259,000	.531
July	2,656,000	1,361,000	.512
August	2,832,000	1,570,000	.554
September	2,158,000	1,272,000	.589
October	2,076,000	1,175,000	.566
November	1,927,000	1,125,000	.584
December	2,172,000	1,261,000	.581
TOTAL	25,981,000	14,322,000	-
AVERAGE	2,165,000	1,194,000	.552

SOURCE: Department of Airports, Los Angeles

Table D VEHICULAR CLASSIFICATION OF INBOUND VEHICLES ANO NUMBER OF TRIPS

TRIP PURPOSE, BY MODE	NUMBER OF VEHICLE TRIPS (Adjusted Peak Friday, 1972)	PERCENT OF TOTAL TRIPS
TRIPS RELATED TO AIR PASSENGERS		
Private automobiles	25,100	54.6
Rental automobiles	2,100	4.5
Taxis	2,200	4.8
Buses	900	1.9
Limousines	1,400	3.1
Subtotal	31,700	68.9
TRIPS NOT RELATED TO AIR PASSENGERS		
Private automobiles	13,000	28.3
Trucks	1,300	2.8
Subtotal	14,300	31.1
Total	46,000	100.0
VEHICLE CLASSIFICATION		
Automobiles	40,200	87.4
Taxis and limousines	3,600	7.9
Trucks and buses	2,200	4.7
Total	46,000	100.0

Major travel patterns of residents within the LAX study area revolve around local shopping areas, schools, parks, churches and libraries. In Westchester and Playa Del Rey, most community facilities are reached along Sepulveda/ Manchester and Lincoln/ Manchester Boulevards. In Inglewood and Lennox, most shopping areas are concentrated along La Brea, Florence, Manchester, Century and La Cienega, although other facilities are scattered throughout these communities. Major access routes in Hawthorne and Del Aire are Hawthorne, El Segundo, Rosecrans and Imperial. In El Segundo, primary travel patterns include Sepulveda, Main Grand and El Segundo Boulevard.

PEDESTRIAN TRAFFIC

Pedestrians at LAX are channeled by fenced sidewalks, designated crossings, stairways, elevators and one overcrossing. Greatest volumes generally appear along World Way and on crosswalks between parking areas and terminals; relatively light pedestrian traffic occurs in the CTA's west end. Access for the elderly and the handicapped is provided by the use of special parking spaces, special vans equipped with lifts, ramps and elevators.

ORIGINS AND DESTINATIONS

As indicated in Table D, some 30 percent of vehicles entering the CTA are not air passenger-related. (These trips include employee-related runs, social recreational trips and other business). However, the large number of vehicle trips resulting from the remaining 70 percent is due to the fact that more than half of Southern Californians traveling by air prefer to leave from LAX, as shown on in Table E. Although most LAX passengers live in houses which they own themselves, most live well outside the noise impacted areas surrounding the airport. Figure Eight shows the residential origins of passengers by area, in percentages.

About 91 percent of Southern Californian LAX passengers arrive at the airport in some form of ground transportation. Approximately 20 percent of all passenger trips originate from the areas of large hotels, such as Downtown, the Wilshire District and the Century Boulevard complex. Some rental car and shuttle operators have exclusive use along the service road west of Aviation Boulevard and northwest of Lot A. Express buses pick up and drop off passengers at CTA islands, while rental car and shuttle operators generally use the curbs.

TABLE E

When you travel, which Southern California airport do you prefer leaving from?

	Residence of LAX Passengers			
	Total	Southern California	Outside Southern California	Unknown
Prefer an airport	**69.4%**	**91.4%**	**57.0%**	**69.4%**
LAX	48.1	56.9	43.3	47.5
Hollywood-Burbank	7.2	14.0	3.3	7.5
Orange County	6.9	13.5	3.3	6.8
Ontario	3.3	4.9	2.4	3.4
Other	3.9	2.1	4.7	4.2
Have no opinion	26.7	5.6	38.8	26.0
No answer	3.9	3.0	4.2	4.6
Total	100.0%	100.0%	100.0%	100.0%
(Base)	(4,270)	(1,361)	(2,406)	(503)

TABLE F

How did you arrive at the airport TODAY?

	Residence of LAX Passengers			
	Total	Southern California	Outside Southern California	Unknown
Arrived via ground	**71.3%**	**91.2%**	**60.5%**	**67.9%**
Car, which will not remain parked at airport while I'm away	28.6	50.6	21.9	25.2
Car, which will remain parked at airport while I'm away	14.1	35.7	2.4	11.9
Rental car	11.7	1.1	18.1	9.5
Bus	8.0	9.0	7.2	5.7
Hotel/motel limousine	5.8	2.0	8.1	5.6
Taxicab	3.1	2.8	3.1	4.0
Arrived by air	**27.2**	**7.5**	**37.9**	**29.3**
Other aircraft transfer	19.5	3.6	28.3	20.5
Same aircraft as I'm on now	4.8	0.7	7.0	5.0
Commuter (Golden West)	2.7	3.0	2.4	3.4
Helicopter/air taxi	0.2	0.2	0.2	0.4
No answer	1.5	1.3	1.3	2.8
Total	100.0%	100.0%	100.0%	100.0%
(Base)	(4,270)	(1,361)	(2,406)	(503)

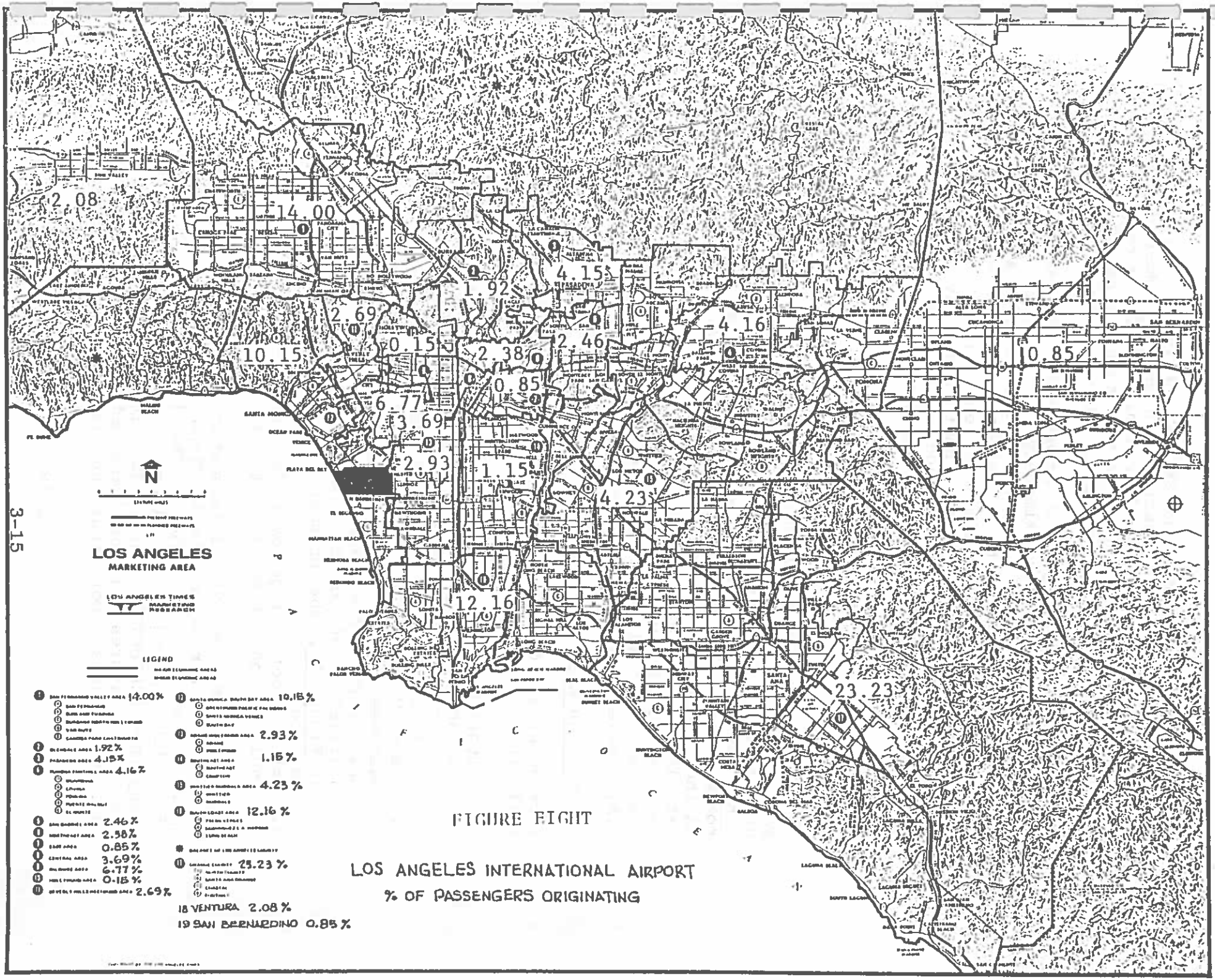


FIGURE EIGHT

LOS ANGELES INTERNATIONAL AIRPORT

% OF PASSENGERS ORIGINATING

The largest proportion of passengers arrive at LAX in cars which do not remain, as illustrated in Table F. Most of those who park their cars use a public/terminal lot or a rental car lot, and Table G reveals that most of these either walk from the parking lot to the terminal or ride a rental car or bus.

Information on the origins of nonpassenger LAX users is less readily available. Approximately 21 percent of airport employees live within five miles of the airport, and another 21 percent within five to ten miles. Of the 47000 airport industry employees, 8700 (18.5 percent) live in the airport area: Inglewood, Westchester, Hawthorne, Playa Del Rey, Marina Del Rey, Venice, El Segundo and other nearby communities. Table H shows the estimated employee origins by county.

PLANNED CONDITIONS

The planned program to improve traffic circulation and parking in and adjacent to LAX actually consists of a number of interrelated projects, as indicated in Figure Nine. Essentially, the program includes an increase in roadway and curbside capacity within the CTA. Also included is the incorporation of facilities for high occupancy vehicles (HOV, e.g. buses) in conjunction with future regional HOV freeway facilities. Certain street improvements are also planned to stabilize congestion within the CTA. These items are detailed below.

ACCESS ROADWAYS

Improvements to roadways exterior to the CTA include the following.

1. Airport Boulevard widening - 17 feet to the west, between 96th and Interceptor Streets.
2. 96th Street widening - 15 feet to the north, between Sepulveda and Airport Boulevards.
3. Arbor Vitae improvements - facilitation of continuous east-west access between Airport Boulevard and Pershing Drive across the north edge of LAX, to enhance the utilization of Lot C. (As indicated by broken lines in Figure 14, the proposed route has not been finalized).
4. 96th Street Bridge over Sepulveda - four lanes, and includes connections to Lot C and Sky Way.

Table I shows the 1985 intersection capacity utilization (ICU) levels for major intersections in the area surrounding LAX. (Refer to Figure Two). The figures are the result of an ICU analysis summarized in the LAX Ground Access Study (see REFERENCES page). ICUs for various alternatives are shown, figures for the 'Selected Program' being in the last two columns. Note that the biggest influence on study

TABLE G

How did you get from the parking facility to the terminal?

	Residence of LAX Passengers			
	Total	Southern California	Outside Southern California	Unknown
Dropped off at curb	34.9%	35.6%	34.1%	35.9%
Walked from parking area	27.2	31.9	22.3	26.7
Rental car/bus	15.8	2.7	29.8	13.9
VSP tram—LA International	5.8	10.0	1.4	6.4
Lot C tram—LA International	5.3	9.1	1.4	4.8
Intraterminal tram	0.9	1.4	0.6	0.4
No answer	10.1	9.3	10.4	11.9
Total	100.0%	100.0%	100.0%	100.0%
(Base)*	(2,323)	(1,052)	(1,020)	(251)

*Based on the number of respondents who arrived at LAX "today" by way of a rented or privately owned automobile

TABLE H

County	Percent
Los Angeles	75.4%
Orange	19.7
Ventura	2.4
San Bernardino	1.3
Riverside	1.2
	100.0%

FIGURE NINE

ELEMENTS OF THE SELECTED PROGRAM

PRINCIPAL ELEMENT

- ELEVATED CTA ROADWAYS
- PREFERENTIAL BUSWAY/HOV LANES
- IMPROVEMENTS TO TERMINAL BUILDINGS
- PROVISIONS FOR PEOPLE MOVER

CTA ROADWAYS

- IMPROVE CENTER WAY TO SKY WAY
- EXTEND CENTER WAY TO CENTURY BOULEVARD
- MODIFY CTA WEST END
- MODIFY SKY WAY

PARKING

- NEW CTA PARKING STRUCTURES
- EXPAND LOTS "C" AND VSP

STREET IMPROVEMENTS

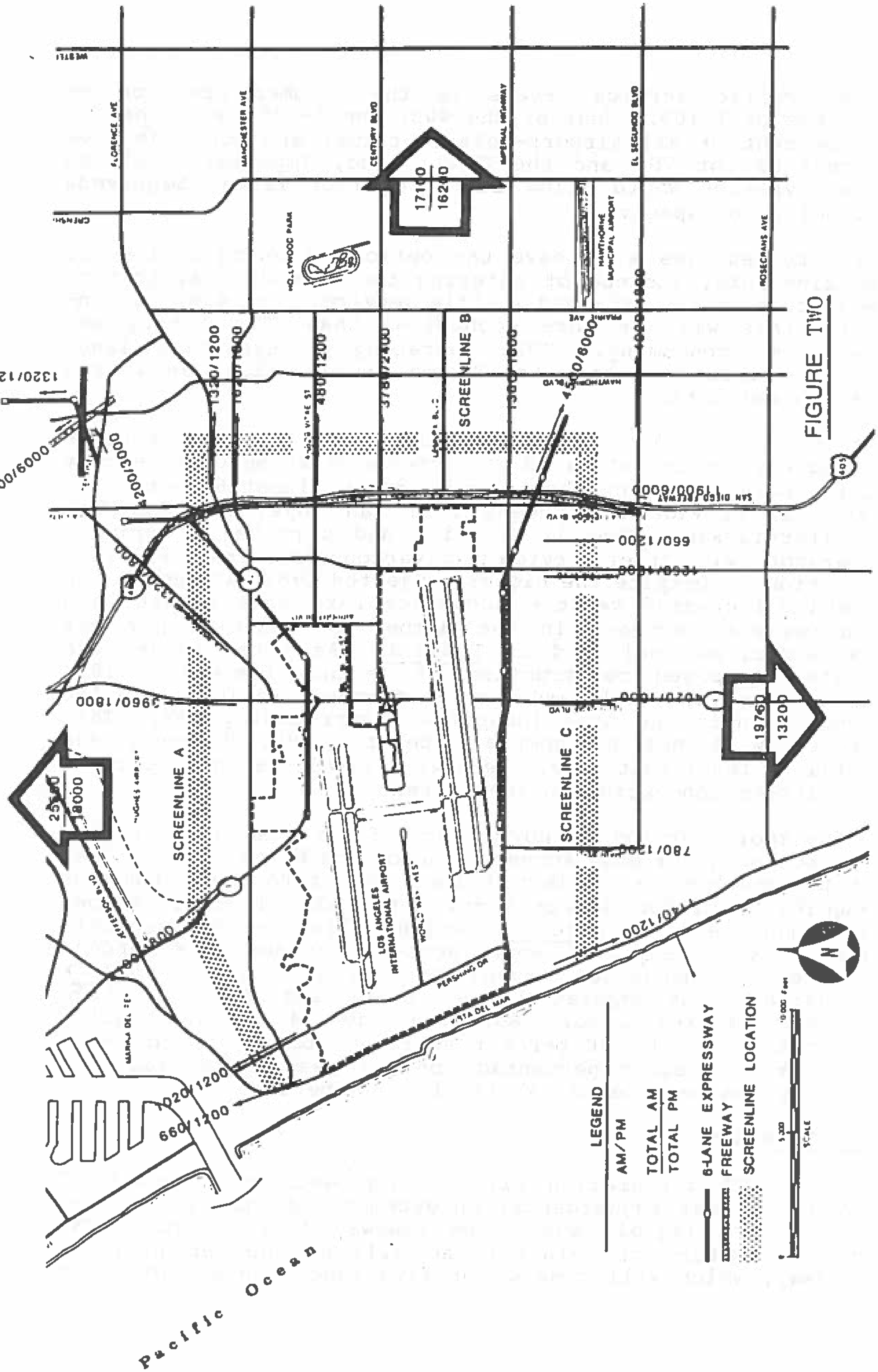
- 96th STREET WIDENING
- AIRPORT BOULEVARD WIDENING
- ARBOR VITAE (AIRPORT TO SEPULVEDA)
- ARBOR VITAE/SEPULVEDA INTERSECTION
- ARBOR VITAE (LINCOLN TO PERSHING DRIVE)

SHORT RANGE IMPROVEMENTS

- ROADWAYS, PARKING, SIGNALIZATION AND OTHER ELEMENTS DESCRIBED AS TRANSPORTATION SYSTEMS MANAGEMENT

TRANSIT IMPROVEMENTS

- TWENTY NEW MEDIUM CAPACITY BUSES FOR LOT "C" AND VSP SERVICE
- THREE NEW FLYAWAY TYPE BUSES FOR EXPANDED REGIONAL SERVICE


SCREENLINE A
SCREENLINE B
SCREENLINE C
LOS ANGELES INTERNATIONAL AIRPORT
HAWTHORNE MUNICIPAL AIRPORT
HOLLYWOOD PARK
FLORENCE AVE
MANCHESTER AVE
CENTURY BLVD
IMPERIAL HIGHWAY
EL SEGUNDO BLVD
ROSECRANS AVE
PRAIRIE AVE
HAWTHORNE BLVD
SAN DIEGO FREEWAY
PERSHING DR
VISTA DEL MAR
Pacific Ocean
17100
16200
25500
18000
19760
13200
1320/1200
5900/6000
4200/3000
1320/1200
1020/1800
480/1200
3780/2400
1300/1800
4400/8000
1020/1800
11900/6000
660/1200
1260/1400
3960/1800
1020/1000
780/1200
1140/1200
1020/1200
660/1200
LEGEND
AM/PM
TOTAL AM
TOTAL PM
6-LANE EXPRESSWAY
FREEWAY
SCREENLINE LOCATION
SCALE
FIGURE TWO

area traffic service levels is the assumed presence or absence of I-105. West of the 405, the I-105, would handle 31 percent of all airport-related trips, and would improve access to Lot VSP and the CTA. Also, Imperial/Sepulveda ramp bypasses would allow utilization of latent Sepulveda Tunnel auto capacity.

Private vehicles will have the option of using peripheral parking lots, instead of entering the crowded CTA, to take advantage of the expanded shuttle service. For many passengers, this will be more economical than CTA parking and less time consuming. HOVs operating on exclusive lanes will be able to enter the CTA on preferential lanes from peripheral lots.

At the 40 MAP level, the growth of transit and shuttle vehicle trips is estimated to increase by 20 percent (except Lot C service, which should increase by almost 60 percent). DOA will provide bus access from Van Nuys, and Southern California Rapid Transit District and a number of private operators will offer service from various Southern California locations. Despite the higher projected 1985 MAP level, the ensuing increased vehicle occupancy rate will result in a one percent decrease in the number of vehicles per air passenger, as indicated in Table J. As noted above, the State's proposed construction of Century Freeway (I-105) along Imperial Boulevard would further relieve traffic congestion in the area immediately surrounding LAX. This project will not be complete before 1990, however, and until at least that time, there will likely be daily periods of extreme congestion in these areas.

Off-airport parking and HOV terminal facilities, near freeway interchanges for easy access by autos and buses, are planned to be provided at selected locations throughout the Los Angeles Basin for direct service to LAX. These locations are suggested on Figure Ten, which delineates six generalized market areas that would account for about 74 percent of the air passenger travel to and from LAX. Table K illustrates the population, LAX usage and LAX usage rate for each market area. Applying the 74 percent factor against the 15 to 20 percent patronage potential for each area, the forecast percentage of air passengers utilizing the express service to LAX is 11 to 15 percent.

CTA ROADWAYS

Overall CTA circulation will be improved as a result of traffic signal adjustments, enforcement of traffic regulations, more legible signs and roadway improvements. The central feature of this program will be the second level roadway, which will consist of five lanes and a continuous

TABLE J

AIR PASSENGER RELATED VEHICLE TRIPS PER
AIR PASSENGER AT 40 MAP FOR THE NULL ALTERNATIVE

Mode	Air Passenger Trips (Percent)	Air Passenger-Related Vehicle Trips per 100 Air Passengers
Private Auto to CTA	55.9	82.0
Private Auto to PPL	8.3	1.3[a]
Rental Car to CTA	11.7	8.0
Rental Car Shuttle	4.5	1.8
Taxi	4.1	4.1
Airport Limo/Bus	7.6	1.5
Hotel/Motel Bus	3.9	1.5
Public Bus	1.2	0.4
Other	2.8	4.7
	100.0	105.3

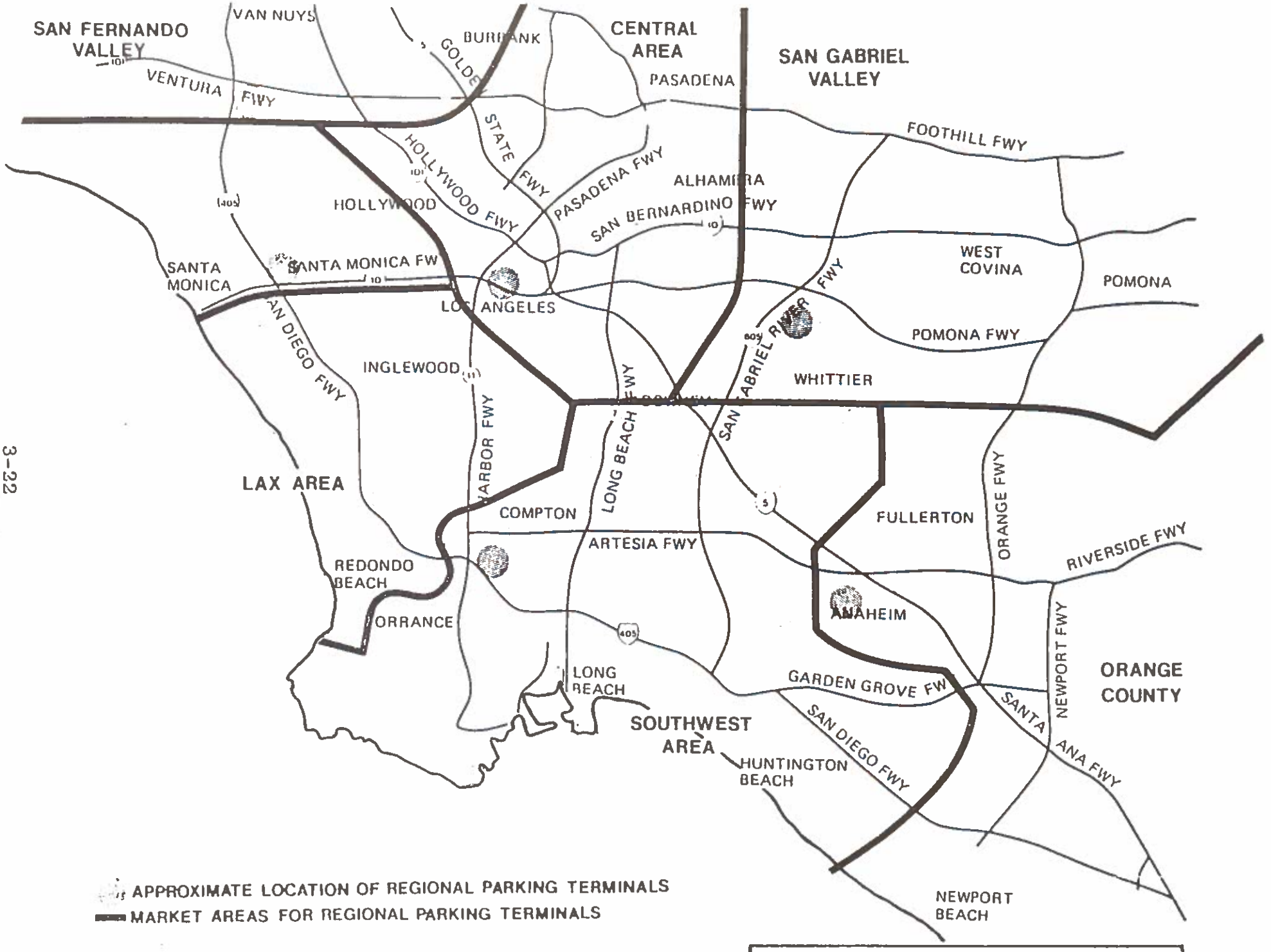


Figure 10 POTENTIAL LOCATIONS FOR

TABLE K
MARKET CHARACTERISTICS FOR THE
REGIONAL PARKING MARKET AREAS

	REGIONAL PARKING MARKET AREAS							
	San Fernando Valley	Central Area	San Gabriel Valley	Orange County	Southwest Area	Santa Monica/ Wilshire	LAX[a] Area	Total
1970 Population (000)	1,072	1,441	1,388	1,003	1,952	508	1,226	8,590
1980 Population Forecast (000)	1,118	1,401	1,487	1,369	2,096	509	1,208	9,118
1990 Population Forecast (000)	1,186	1,457	1,583	1,710	2,227	533	1,254	9,950
LAX Travelers	9.2	14.1	8.5	8.9	15.0	18.4	22.6	96.7[b]
Annual Trips Per Person (1977	1.7	2.1	1.2	1.4	1.5	7.6	3.9	2.2

[a]Area close to LAX - No regional parking facilities proposed.

[b]3.3 percent of LAX air travelers come from external areas.

sidewalk to handle all departing passengers (incoming traffic). The roadway will be constructed adjacent to the second floor of the existing and future terminals, the inner lane being used for auto drop-offs and an island for bus (and future HOV) drop-offs. Private auto curb space on the lower level will be moved to the island curb to create a preferential HOV lane. Figure Eleven illustrates the cross sectional form that the second level roadway will entail.

Direct access to CTA parking structures will be provided, via bridges over World Way, and ramps will supply access from Century and Sepulveda. Sky Way will also be modified with ramps to and from the second level loop, and with exclusive HOV lanes. CTA access for Lot C buses will be by an exclusive lane crossing Sepulveda at 96th Street and for VSP buses by crossing the Century Boulevard intersection. Lot C buses will exit the CTA on the preferential Sky Way lane, while VSP buses exit in mixed traffic to Century.

The addition of the ground level roadway section directly connecting Center Way to the intersection of World Way South and Post Way will have three advantages:

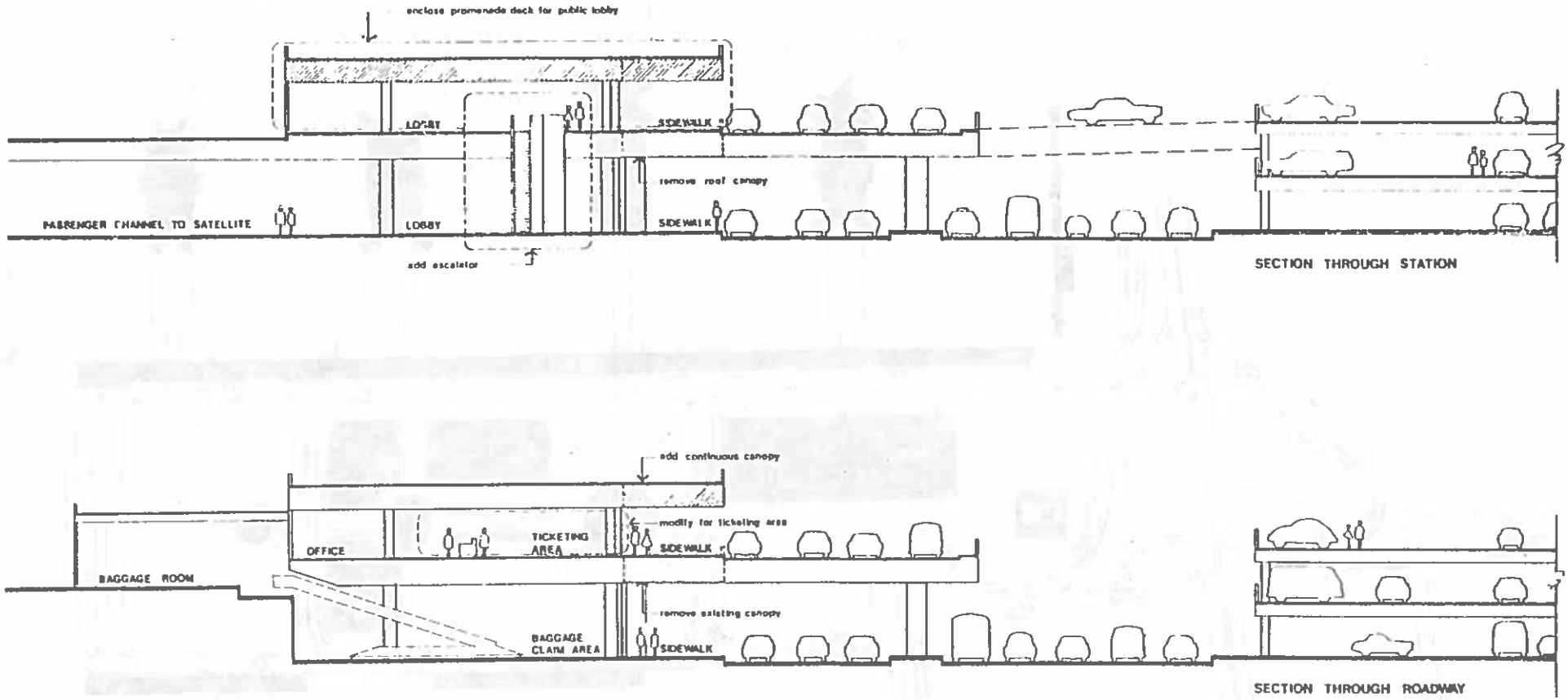
1. the reduction of auto delays there;
2. the provision for vehicles exiting the CTA from Center Way to reach Century by passing through only one intersection;
3. the reduction of the number of vehicles which must make a triple left turn onto World Way South.

Rental car uses currently within the CTA will be relocated to the area east of Lot C to facilitate the construction of the elevated roadway, Center Way improvements and the reduction of traffic in the CTA. Figure Twelve shows the proposed final CTA plan.

PARKING

As shown in Figure 13, parking spaces within the CTA are planned to increase by about 17 percent, with the construction of four new structures. Note that DOA will provide 2726 new spaces, but 1422 existing spaces will be lost with the construction of Terminal One, so that the actual increase will be 1304 spaces, for a total of 9148. Private vehicles will have access to more and better balanced short-term metered spaces within existing and proposed structures. Taxi waiting spaces will be provided at each terminal.

Large-scale expansion of the peripheral parking lots will take much of the demand away from CTA facilities. The expanded Lot C (10500 spaces) will be bordered on the north by Will Rodgers Street, by 96th Street on the south, Sepulveda on the west and a private street on the east (Figure 14). Lot VSP will be expanded to 6360 spaces, and both lots will utilize designated passenger pick-up points to facilitate efficient operation



TRANSPORTATION PLANNING AND FEASIBILITY STUDY TO IMPROVE GROUND ACCESS AT LAX

DeLeuw, Cather & Co./The Ralph M. Parsons Co./Gin Wong Associates

Figure 11 SECOND LEVEL ROADWAY SECTION VIEW CTA

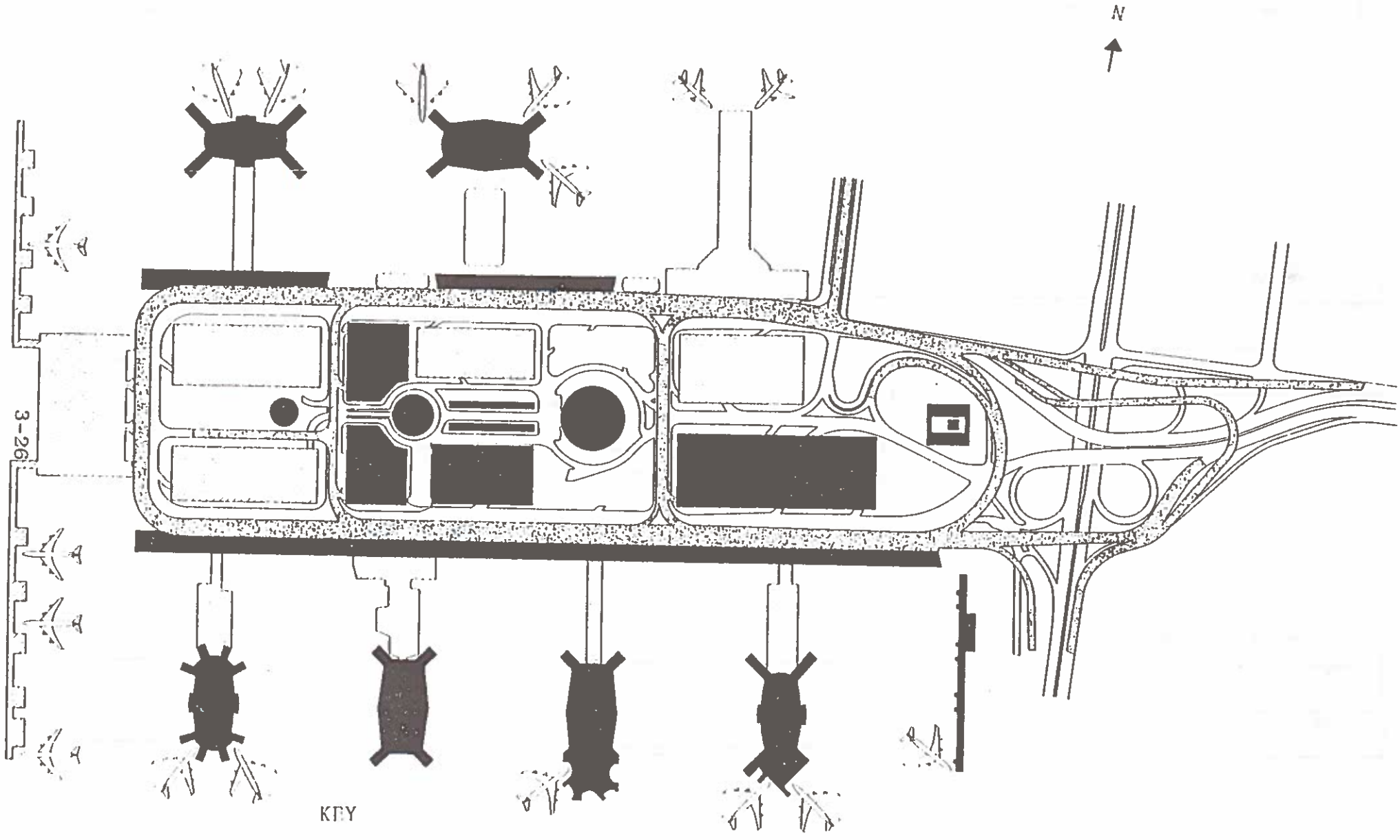


FIGURE TWELVE

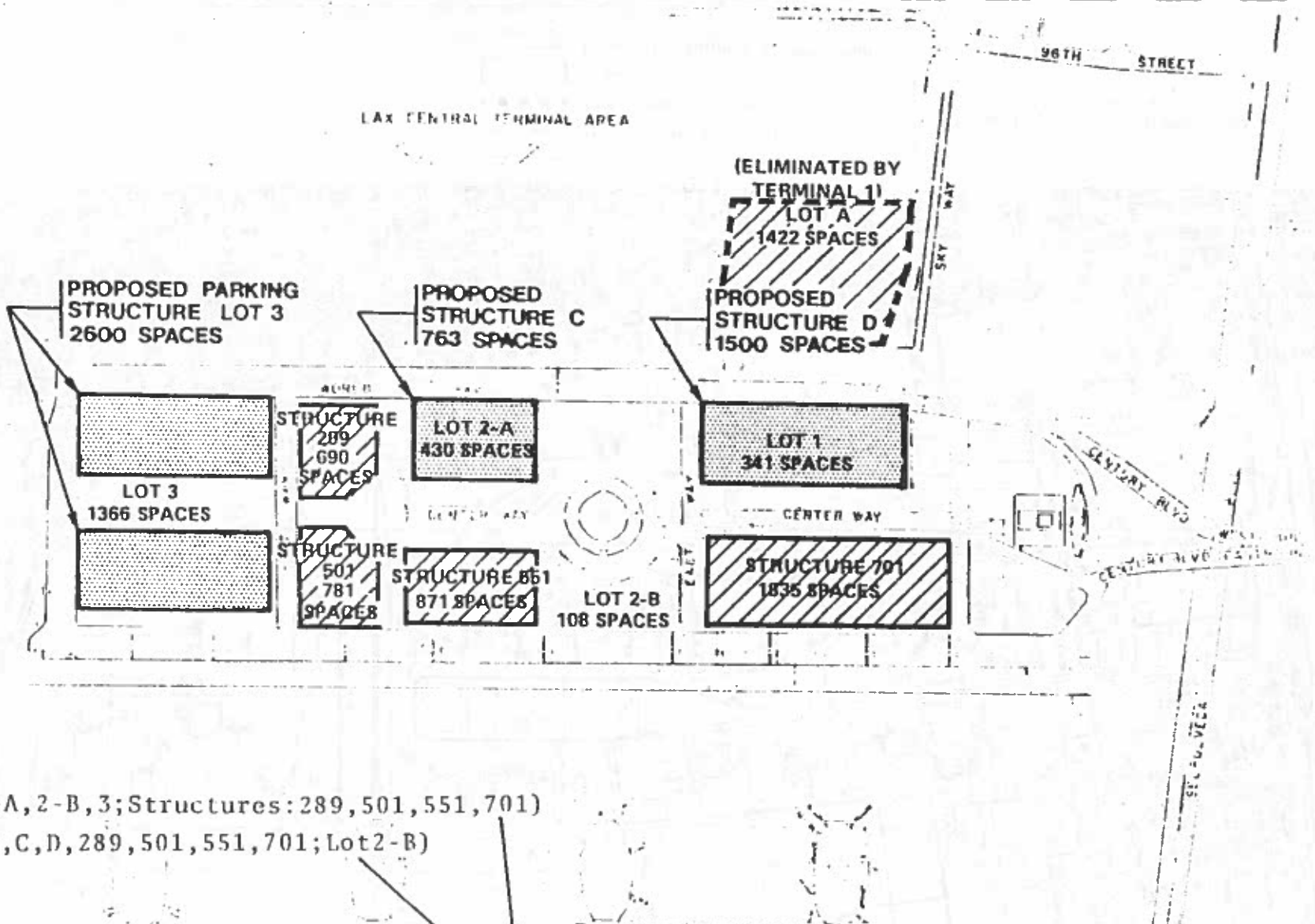


Figure 13 SELECTED PROGRAM EXISTING AND PROPOSED PARKING STRUCTURES

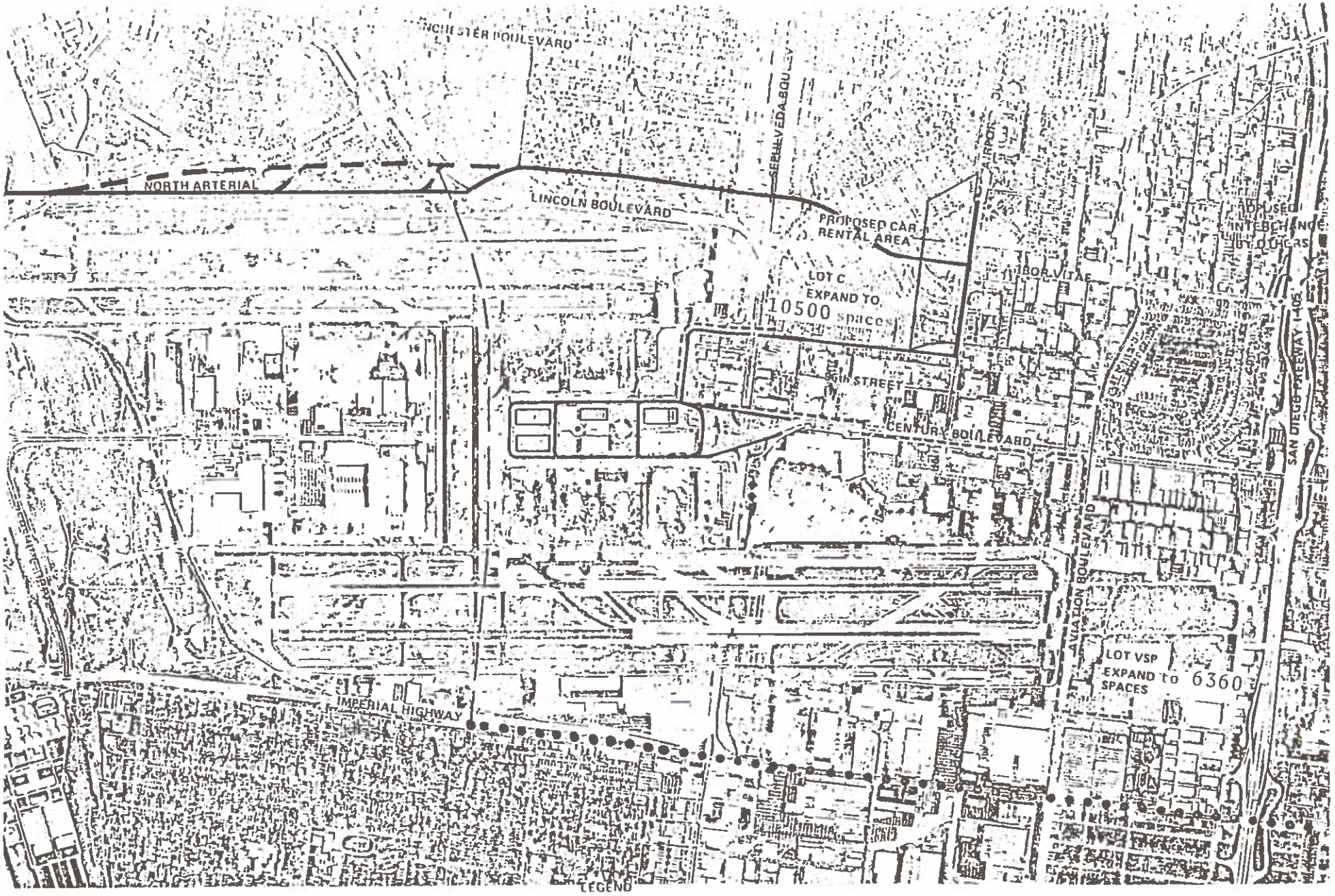


Figure 14 SELECTED PROGRAM – AREAWIDE

of the preferential bus-lane system. The expansion of Lots C and VSP will add about 16500 and 2000 trips per day, respectively, to the vicinity of the parking lots. This breaks down to about 2000 additional peak period trips near Lot C on Lincoln, and 1500 on Sepulveda and Airport/ Century. About 400 peak period trips would be added to La Cienega near VSP and about 350 to Aviation. (Refer to Table I for related ICUs).

TRAFFIC VOLUMES

In 1976, 72000 vehicles gained daily access to the CTA and peripheral parking lots. By 1985, an estimated 123,000 vehicles will use CTA/peripheral facilities during an average day. That is, 21 million vehicles would be accessing these areas each year, at the 40 MAP operational level. About 1.4 million (6.6 percent) will use Lots C and VSP. Private autos carrying passengers only are forecasted at 11.1 million annually, some 12.2 percent of which will be diverted to the peripheral lots. The planned program will, in fact, reduce the number of extreme CTA roadway congestion hours by 95 percent, although congestion on certain external roadways adjacent to the CTA will probably increase.

PEDESTRIAN MOVEMENT

Provision will be made for a future network of 'people-mover' guideways connecting the peripheral lots with CTA terminals. Positioning the guideway on the outer edges of the upper and lower roadways, adjoining the terminals, would be preferable, although costs and aesthetics will be major elements in finallizing this consideration. The interiors of existing ticketing buildings will require substantial modifications to provide passenger facilities at the second level. Existing baggage carousels will remain on the first level, but some ticketing and check-in stations will be moved to the second. Additional escalators will facilitate continuous flow of passengers from second level facilities to ground level channels. Elevators will give supplemental service to the handicapped, as well as for luggage carts. Utilization of signalized crosswalks across roadways will continue, but the use of grade-separated crosswalks will also be explored.

OPERATIONAL DESCRIPTION

Implementation of the above program would result in substantial improvements in vehicluar/pedestrian circulation, compared to the present. The principal operating features of the program, as presented in the LAX Ground Access Study, are highlighted below.

1. Private vehicular traffic entering the CTA will operate on a roadway of expanded capacity due to the addition of lanes on the second level.

2. Private vehicles proceeding directly to the terminals for curbside pick-up and drop-off of passengers will have access to almost twice the curb area available now, thus reducing curbside congestion and inconvenience.

3. Private vehicles proceeding directly to CTA parking will have access to more and better balanced parking facilities from either level.

4. Private vehicles entering for pick-up/drop-off will have access to more and better balanced short-term metered parking facilities, which they could use when they encounter congested curbsides.

5. Private vehicles exiting the CTA parking structures will have less delay because gates will be improved, as will circulation on Center Way.

6. Overall circulation within the CTA will be improved as a result of roadway improvements, traffic signal adjustments and better signing.

7. Pedestrian movements across the CTA roadway will continue at signalized crosswalks. Separation of pedestrian movements on grade-separated crosswalks is also possible.

8. At least during construction, when the preferential lanes will be located on World Way, passengers being picked up or dropped off at that level will cross the preferential lanes on foot at signalized crosswalks. Airlines may provide baggage check-in facilities on the island.

9. Private vehicles will have the alternative of entering the CTA at the peripheral parking lots. Expanded and fast shuttle service from the lots on preferential lanes will cut access delays on crowded streets. For many passengers the peripheral lot service will be both more economical than CTA parking and less time consuming than access via Century or Sepulveda Boulevards.

10. Public transport vehicles including car rental and hotel/jitneys, regional buses and jitneys will operate on preferential lanes almost entirely segragated from congested traffic on surface streets.

11. Buses and HOVs operating on exclusive freeway and surface street lanes will be able to access the CTA by entering the preferential lanes at the peripheral lots or at the CTA entrance ramps.

12. Traffic on certain surface streets near LAX will possibly improve, because of reduced access congestion and the opportunity to implement various street improvements as part of, or concurrently with, this program.

PRELIMINARY ACCESS ISSUES

The central most issue resulting from this task is the amount of roadway traffic congestion generated from airport-related activites. Specific items of concern for Phase II are as follows.

1. While some capacity improvements to the east/west access routes will be made (at least along Arbor Vitae), service level problems will still occur on north/south Sepulveda. Furthermore, the east/west Imperial and Manchester routes will probably experience increasing congestion with or without I-105.

2. The City of Los Angeles continues to allow intense development along Century, which is the major direct access route into LAX. Commercial/office and airport-related traffic is already creating substantial congestion, especially during peak traffic hours on this road, and it will only increase by 1985. This problem might be significantly alleviated if a partial (limited route and/or service area) or a full regional rapid transportation system were inaugurated. Any mass transit line which served LAX would also be designed to serve Century Boulevard; however, such a system would not likely come into existance until well after 1990.

3. Construction of I-105 (by the Federal, State and City governments) would be the principal mitigation measure for some of the local freeway and street traffic congestion. However, its realization seems in doubt. Perhaps more detailed information is needed on what the the ground access impacts might be if I-105 is <u>not</u> built. One likely impact would be that any chance of DOA constructing sub-runway access tunnels after 1990 would disappear, at least between the CTA and Imperial.

4. During 1982-83, external, as well as CTA, roadway congestion will be increased by largescale airport construction, especially the Second Level Roadway, the new parking structures and the new terminal projects. Care must be taken to plan truck haul routes so that surrounding communities suffer minimal disturbance, if any.

5. Some attention may be deemed necessary to see if control of airport-generated traffic, during peak hours, can be attained by regulating LAX operations, during these times. The effects of such measures, and those of other airports across the country, on the national air transport system will also have to be considered, however.

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4. DeLeuw Cather & Co., Final Environmental Impact Assessment Report (EIAR/EIR) LAX Ground Access Study, September 1978.

5. Department of Airports of the City of Los Angeles Revenue Bonds, Issues of 1979 A and 1979 B, $255,000,000.

6. Olson Laboratories, Inc. Draft EIS, Volume IV. July, 1975.

7. Southern California Association of Governments. Ground Access to Airports in the SCAG Region. October 14, 1977.

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9. Wilbur Smith and Associates. Airport System Planning Program - Ground Transportation System Impacts. SCAG. January 21, 1980.

TASK 1.04

DEFINE PRELIMINARY BOUNDARIES FOR THE COMMUNITY PLANNING AREA

APRIL 1981

Prepared by: Los Angeles County Department of Regional Planning

For Information Call: Greg Medeiros (213) 974-6474

Process for Boundary Delineation

This task describes the preliminary planning boundary used to define the study's Community Planning Area. The boundary will be re-evaluated and revised if necessary during Phase II. The Los Angeles County Department of Regional Planning coordinated the process of developing the boundary with the cities of El Segundo, Hawthorne, Inglewood and Los Angeles. The cities and the County defined the study boundary within their own jurisdiction. The individual products were then synthesed into a composite boundary that recognized each jurisdictions recommendations. The following criteria were used to define the Community Planning Area study boundary.

Noise - Noise was the most important study boundary determinant. The study boundary definition relies heavily on the Los Angeles City Department of Airports 1st quarter 1976 Community Noise Equivalent Level (CNEL) contour. The 1976 contour encompasses an area quite a bit larger than the 1980 contour or expected contours of the future. Taking an area larger than is needed will provide a margin of error which will be helpful for planning purposes. The contours are generated from actual noise readings from the airport noise monitoring system. All areas in the surrounding communities within the 65 CNEL contour are included within the Community Planning Area study boundary. The 65 CNEL value is a requirement of the State of California Noise Standards. State Law defines a CNEL sliding scale of values whereby "zero" impact and a development of compatible land use is required within the 65 CNEL contour by January 1, 1986 and thereafter. Areas with noise sensitive land uses, i.e. schools, resthomes, hospitals, etc., outside the 65 CNEL contour but in close proximity were included. Lastly noise exposure patterns identified in the LAX DEIR were considered.

Safety - All significant areas related to FAA safety regulations were included.

Ground Access Traffic - Freeways, interchanges, major arterials, and local streets which are significantly affected by LAX access were included.

Land Use Continuity - Areas adjacent to the 65 CNEL contour which might be affected by airport operational changes or land use changes, i.e., revitalization, recycling or redevelopment activities were included. In addition, existing urban development patterns and jurisdictional limits were considered. Whole neighborhoods were included within the Community Planning Area boundaries whenever possible.

Other Considerations - In addition to the above mentioned criteria, natural terrain features and census tract boundaries were considered when defining the study boundary.

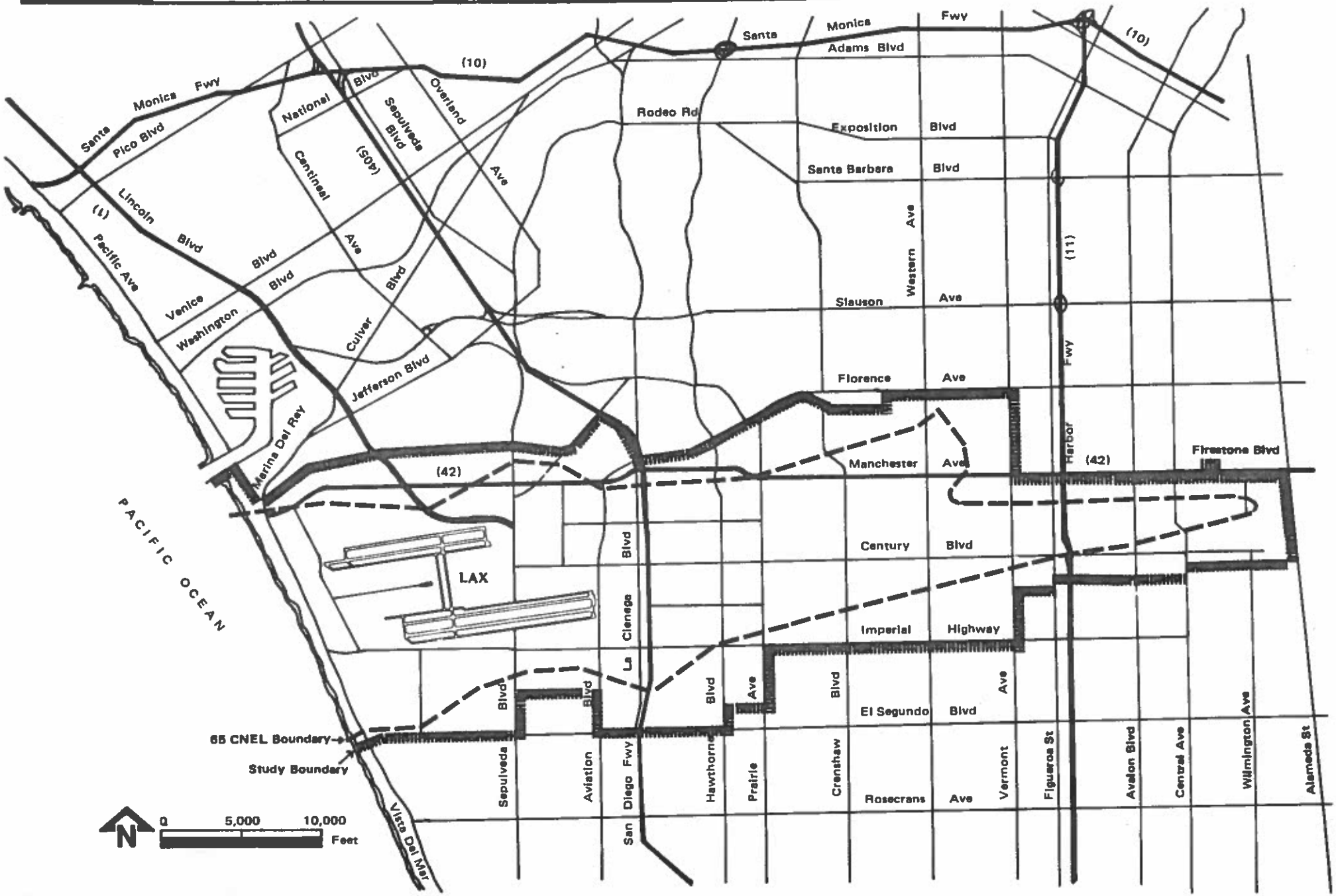
Expected Flight Path and Aircraft Noise - Existing data and regulations from the Federal Aviation Administration (FAA) relating to Air Traffic Control (ATC) facilities, as well as procedures implemented by the Los Angeles City Department of Airports (DOA) to reduce the incompatibilities between the surrounding commmuities and airport operations were considered. The data included past and present efforts taken by the FAA, DOA, airlines and others to reduce inflight aircraft noise in the environs of Los Angeles International Airport. This data was evaluated in regards to its expected impacts on the study boundary.

Boundary Description

The ANCLUC Study boundary begins at the Pacific Ocean at the southerly line of Ballona Creek, thence northeasterly along Ballona Creek to the Los Angeles City boundary, southerly and easterly along the common boundary between Los Angeles City and Los Angeles County to Lincoln Boulevard, southeasterly to Campion Walk, northeast to the western boundary of Tract 9430, northeast to Ansel Walk, east to 78th Street, east to Fordham Road, south to 80th Street, easterly to Sepulveda Boulevard, north along Sepulveda Boulevard to 79th Street, east to La Tijera Boulevard, northeasterly to the San Diego Freeway, southeasterly to the common boundary between the cities of Inglewood and Los Angeles, southerly along the common boundary to the ATSF railroad right-of-way, northeasterly along the railroad right-of-way roughly paralleling with Florence Avenue to Centinela Avenue, east along Florence Avenue to West Boulevard, south to 74th Street, east to Victoria Avenue, south to 79th Street, east to 8th Avenue, north to 76th Street, east to Van Ness Avenue, north to Florence Avenue, east to Vermont Avenue, south to Manchester Avenue, proceeding east on Manchester Avenue (which becomes Firestone Boulevard) to Compton Avenue, north to 84rd Street, east to SPT Co. Railroad right-of-way, south to Firestone Boulevard, east to Alameda Street, southerly to 103rd Street, west to Central Avenue, south to 104th Street, west to Figueroa Street, south to 108th Street, west to Vermont Avenue, south to Imperial Highway, west to Prairie Avenue, south to 120th Street, west to Hawthorne Boulevard, south to Broadway, west to Inglewood Avenue, south to El Segundo Boulevard, west to Aviation Boulevard, north to the easterly prolongation of Mariposa Avenue, west to Sepulveda Boulevard, south to El Segundo Boulevard, west along El Segundo Boulevard to Virginia Street, thence in a southwest direction along a line having an approximate bearing of South 70 degrees West to the Pacific Ocean

Los Angeles International Airport

NOISE CONTROL AND LAND USE COMPATIBILITY STUDY



TASK 1.05

UPDATE EXISTING COMMUNITY AREA CONDITIONS

August 1981

Prepared by: Los Angeles Department of Regional Planning

For Information Call: Greg Medeiros (213) 974-6474

Introduction

Task 1.05, Update Existing Community Area Conditions, was prepared jointly by the cities of El Segundo, Hawthorne, Inglewood and Los Angeles, and coordinated by the Los Angeles County Department of Regional Planning. The purpose of the task was to update existing land uses within the Preliminary Community Planning area, delineated in Task 1.04. In addition to land use information, principle public utilities and facilities such as water and sewer lines, drainage and flood control works and key ground transportation routes were inventoried and mapped. Environmental conditions of relevance to Los Angeles International Airport and the Community Planning area also are discussed.

General Methodology

All maps were prepared using a similar procedure with the exception of the sewer, water and flood control maps. Each jurisdiction prepared the information identified for their own jurisdiction at a scale of 1" = 1000'. Data were generated from a review of existing information in maps and reports. Where existing data were deemed to be insufficient, further data were obtained from aerial photographs and field investigations. Individual products from each jurisdiction were submitted to the Los Angeles County Department of Regional Planning. The products were combined on 1" = 2000' base maps. These maps were reviewed by each jurisdiction and corrected as necessary to create the final maps. A slightly different methodology was used for the sewer, water and flood control maps. The Los Angeles County Engineer 630 maps

for the above mentioned utilities were reviewed by each jurisdiction and revised as necessary. The Department of Regional Planning took this information and prepared a revised map at 1" = 2000'. Detailed maps for existing land use, projected land use, existing zoning, noise sensitive land uses, circulation, traffic capacity, public transportatiion, water service, sewerage service and flood control can be found in the attached map pouch.

Existing Urban Development of Surrounding Area

Existing 1980 land use patterns in the cities and unincorporated areas of Los Angeles County that fall within the Community Planning area are shown on the land use map located in the attached map pouch. The primary land use is residential. The majority of this acreage is low density detached single family residences. High concentrations of single family dwellings are located in the Westchester area north of Manchester Avenue; in the central portion of the city of Inglewood north of Century Boulevard between La Cienega Boulevard and La Brea Boulevard, north of Arbor Vitae Street between La Brea Boulevard and Inglewood Avenue, and south of Century Boulevard between Hawthorne Boulevard and Crenshaw Boulevard; in the northwest portion of the City of El Segundo between Imperial Highway and Grand Avenue; and in the unincorporated Del Aire area. There are also areas of mixed multiple and single family residences in the City of Hawthorne along Inglewood Avenue and 120th Street;

in the City of Los Los Angeles south central and southeast community areas; and in the unincorporated areas of Lennox, Westmont and Florence-Graham.

Heavy concentrations of multiple-family residential dwellings are found in the City of Inglewood north of Century Boulevard between Hawthorne Boulevard and Prairie Avenue, south of Century Boulevard between Inglewood Avenue and Crenshaw Boulevard and in the Westchester area south of Manchester Avenue east of Pershing Drive and south of La Tijera Boulevard.

Commercial land is clustered in high rise office buildings and hotels around Los Angeles International Airport (LAX) along Century and Sepulveda Boulevards and Imperial Highway. In addition, major aerterials in the LAX vicinity are generally bordered by commercial strip development.

The majority of the industrial land is located south of LAX in El Segundo between Rosecrans Avenue and Imperial Highway, secondary clusters of industrial acreage are located adjacent to LAX on the east between Manchester Avenue and Imperial Highway and in the eastern most portion of the study in the incorporated areas of Florence-Graham along Alameda Street.

Open Space, mostly parks, is generally distributed uniformally throughout the study. The majority of public land uses are school sites; also included are public and quasi-public (utilities) facilities, city halls, etc. Institutional land uses include churches and hosptials.

Political Jurisdictions in the Study Area

LAX is surrounded by several political jurisdictions including the cities of El Segundo, Hawthorne, Inglewood and Los Angeles; and the County of Los Angeles (Lennox, Del Aire, Westmont and Florence-Graham). These communities in the LAX environs are located as shown in Figure 1.

City of El Segundo

Directly south of Los Angeles International Airport is the City of El Segundo. El Segundo traditionally has been a single-family residential area with a large industrial base. Over three-quarters of the City's area is devoted to commercial and industrial uses, with approximately one-quarter of the City consisting of a major oil refinery operated by Standard Oil Company of California. The residential area is located in the northwestern section of the City between Imperial Highway and Grand Avenue, west of Sepulveda Boulevard. Adjacent to and south of Imperial Highway, there is a strip of multiple residential units.

Primary commercial areas are found along Imperial Highway, Sepulveda Boulevard, Grand Avenue, and Main Street. Commercial development along the Sepulveda Boulevard area recently has been expanding both with development on vacant land and intensification of existing development. 159 acres of vacant land east of Sepulveda Boulevard remain available for future commercial development. Current development plans and partial development of vacant land could add an additional twenty to

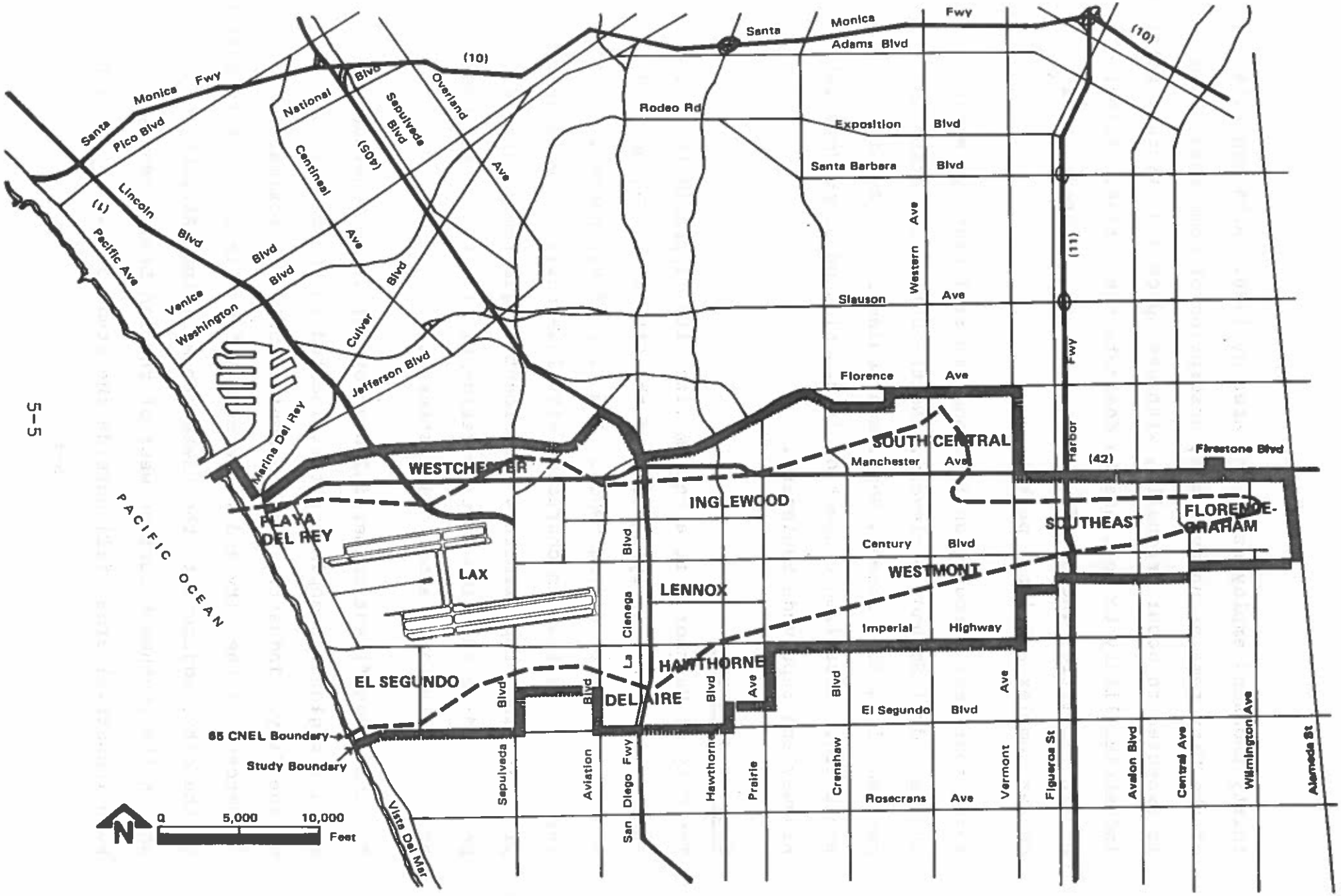


FIGURE 1 – LOCATION OF COMMUNITIES WITHIN LAX ENVIRONS

thirty thousand employees in the area by 1990. Although 4.5% of the City remains undeveloped, absorption of commercial land is expected to occur gradually, with aerospace and aircraft related industries likely to continue to dominate the market. Existing public facilities include five school sites, a library, civic center complex and local park.

Major east-west circulation is along Imperial Highway, Mariposa Avenue and El Segundo Boulevard. North-south circulation is carried along Main Street, Sepulveda Boulevard and Aviation Boulevard. Localized congestion is experienced along Imperial Highway and Sepulveda Boulevard.

City of Hawthorne

The City of Hawthorne is a medium size city, approximately 5.7 square miles in area lying east of the City of El Segundo and south of the City of Inglewood. The City of Hawthorne is largely residential in character with low-density developments predominating (approximately 30 percent single family and 20 percent medium and high density residential). Commercial uses are typically found along major streets.

The most significant commercial development is the Hawthorne Mall, a regional shopping center, located in the center of the City. Industrial development occupies approximately 20 percent of the city and is generally found in the eastern portion of the city, adjacent to the Hawthorne Municipal Airport and in the southwest portion west of the San Diego Freeway. Both industrial areas fall outside the study area. The city has

approximately 56 acres of parks; however, there is no park land (open space) in the project area. Public facilities include five school sites both public and parochial and two hospitals.

Major and secondary highways and local streets follow a grid pattern. There are two major east-west arterials in the portion of the city falling in the study area; Imperial Highway and El Segundo Boulevard. Both highways are near capacity during peak traffic hours. There are two major north-south arterials; Prairie Avenue and Hawthorne Boulevard. During peak hours only Prairie Avenue is near capacity. Another north-south arterial nearing capcity is Inglewood Avenue, a secondary highway. The majority of the internal streets in the area north of Imperial Highway are substandard in right-of-way. In the area south of Imperial Highway less than 25% of the streets are substandard.

City of Inglewood

Inglewood is a balanced community located directly east of the airport. It contains approximately 8.8 square miles. A majority of the city falls in the study area. The city is bordered to the north by the City of Culver City and the Baldwin Hills unincorporated Los Angeles County area; to the south by the City of Hawthorne; to the east by the unincorporated community of Westmont and portions of the City of Los Angeles; and to the west by Los Angeles International Airport. As is the case with other communities surrounding LAX, a majority of the city area is devoted to residential land uses. However, unlike the other communities, Inglewood has a high concentration of multiple

family residential structures. Apartments, as a share of the total number of dwelling units, have risen from 20 percent of total housing in 1960 to 55 percent in 1970. Inglewood's residential character is changing from single- to multiple-family use in several areas.

Inglewood is an older suburban area with great extremes in the cost and quality of housing. It was estimated in 1970 that 33 percent of the residential structures were in need of minor rehabilitation, 5 percent needed major rehabilitation, and 4 percent were substandard. The western/central and northeastern sections of the city contained the highest percentage of units with major structural deficiencies. Units with minor deficiencies were concentrated in the southern, northeastern, and western sections of the city. The Inglewood Housing Element states that 30 percent of the housing inventory is over 40 years old, and 48 percent is between 21 and 40 years old.

Commercial activity is found along the major roads with the most intense concentrations being near the intersection of Manchester Boulevard and La Brea Avenue, and along La Brea and Centinela Avenues, and Manchester and Crenshaw Boulevards.

Industrial uses, which constitute a small percent of total land use, are located between the city's western boundary and the San Diego Freeway, and along Florence Avenue. Most of Inglewood's industrial land was originally developed at low densities and on small parcels.

The City of Inglewood has four active redevelopment projects and a recently adopted commercial-industrial project. Two of the project areas are essentially for industiral redevelopment, the third is to revitalize the downtown area, and the fourth to foster residential and commercial uses west of Hollywood Park. The Century Redevelopment Project, which was recently adopted, concentrates on Hollywood Park and the Lockhaven area south of Century Boulevard.

Public facilities in the City of Inglewood which fall in the study area, include 15 school sites (public and parochial), three fire stations, two libraries, five parks, and a civic center complex. Institutional facilities include six hospitals and rest homes.

East-West circulation through the city is provided on Florence Avenue, Manchester Boulevard, Arbor Vitae Street, Century Boulevard and Imperial Highway. North-south circulation is provided on Aviation Boulevard, La Cienega Boulevard, La Brea Avenue, Prairie Avenue, Crenshaw Boulevard and Van Ness Avenue. All of the east-west arterials experience high levels of traffic particularly Century Boulevard with 1979 average daily traffic close to 70,000 vehicles.

Westchester/Playa del Rey District - City of Los Angeles

The Westchester/Playa del Rey district is located to the north of LAX. The majority of the area is devoted to residential land

uses. Most of this land is zoned for residential uses of which 62 percent is zoned for single family uses. Most of this single family zoning is located north of Manchester Avenue. A small percent of commercially zoned land is located along the major arterial. An area of industrial development is located south of Manchester Avenue and west of Aviation Boulevard. The Department of Airports has purchased a great deal of land in the area south of Manchester Boulevard and is now studying the highest and best use for the rehabilitation of this land.

Public facilities in the area include thirteen school sites (public and parochial), two libraries and a park with community center. The majority of traffic in the Westchester area is carried on Manchester Avenue, Lincoln Boulevard, La Tijera Boulevard, Aviation Boulevard, Sepulveda Boulevard and Pershing Drive.

South Central - City of Los Angeles

The South Central District area is irregularly shaped, bounded by Florence Avenue to the north, Vermont Avenue to the east, 108th Street to the south, and Van Ness Avenue to the west. 69 percent of all housing units in the area are single family dwellings. The remaining 31 percent are multi-family units. Overcrowded conditions occur most frequently in rental units. Approximately 51.5 percent of the total residential acres are zoned for single family use. Approximately 39.2 percent are

zoned for multiple use. An inventory of residential land uses indicates considerable under utilization of residentially zoned lands, primarily in the R-3 and R-4 zones.

Only 53.5 percent of the commercially zoned land has been utiilzed for commercial purposes. 36.5 percent of commercially zoned land is used for residential purposes. 74.2 percent of the industrially zoned land is in industrial use while 12.3 percent is under public use and 12.2 percent in commercial use. The remaining 1 percent is in residential use.

There are approximately 12 public facilities within the study area of which, 1 is a public library, 2 are recreation centers, and 9 are schools.

The north-south major highways are Vermont, and Western Avenues. North-south secondary highways are Normandie and Van Ness Avenues. In the east-west direction, Florence and Manchester Avenues, Century Boulevard and Imperial Highway are the major highways. The east-west secondary highways, are 79th, 92nd and 108th Streets.

Southeast - City of Los Angeles

The Green Meadows community of the Southeast district is bounded by Manchester Avenue on the north, 108th Street on the south, Central Avenue on the east, and Broadway and Figueroa Streets on the west.

Single family residences are the predominant land use in the community. The existing residential development density is far below that permitted by the existing zoning. Substandard housing, most of which is occupied, is dispersed throughout the community.

Public facilities within the study area include 4 elementary schools, 2 public housing developments, 1 neighborhood park, 1 power station, 1 health center, and 1 public library.

Figueroa Boulevard, Broadway, Avalon Boulevard and Central Avenue comprise the north-south major highways. Main and San Pedro Streets are the north-south secondary highways. Florence and Manchester Avenues, Century Boulevard and Imperial Highway comprise the east-west major highways. 79th, 92nd, and 108th Streets are the east-west secondary highways.

The Watts Community of the Southeast district included in the study area is bounded by 92nd Street on the north, Croesus Avenue to the east, 103rd Street to the south, and Success Avenue on the west.

Single family dwelling units are the predominant residential land use within the study area. While some of the housing is well maintained and relatively free of problems, much of the housing shows signs of deterioration, overcrowding and other characteristics of blight.

Public facilities within the study area of the Watts community include 2 elementary schools, a fire station, a library, a neighborhood park and a public housing development.

Century Boulevard and 92nd Street are the east-west major highways within the study area. In the north-south direction, Wilmington and Compton Avenues are the major highways.

Lennox

Lennox is a 1.25 square mile unincorporated area adjacent to the Los Angeles International Airport. The Lennox community is bounded generally by the City of Los Angeles on the west, the City of Inglewood on the north and east and the City of Hawthorne on the south. The entire community falls within the study boundary. The Lennox area consists of four census tracts.

The area is primarily developed as a single-family residential neighborhood. These residential areas are bisected by commercial corridors, along Inglewood, Hawthorne and Prairie Boulevards. The residential area originally subdivided in large parcels have subsequently been divided to allow multiple structures on a parcel. Much of the existing housing stock was constructed prior to World War II and is in need of maintenance and rehabilitation.

Existing public facilities in Lennox include a County Civic Center complex, a fire station, a library, seven schools (public and parochial), and a park. Also, numerous churches are located in the community.

Major circulation in Lennox is along La Cienega, Inglewood, Hawthorne Boulevards and Prairie Avenue. Interior streets are generally set in a grid pattern. Some local streets are narrow, creating traffic flow problems, especially in the southeastern area.

Del Aire

Del Aire is a small unincorporated area along the San Diego Freeway between Imperial Highway and Rosecrans Avenue. The community is located south of the airport, east of El Segundo, west of Hawthorne and north of Hawthorne and Lawndale. Only the northern portion of the community is in the study area. Residential development constitutes the major land use in the area; the vast majority of which is devoted to low-density units. A large vacant area is found south of Imperial Highway parallel to the San Diego Freeway. This property was acquired for the proposed I-105 Freeway. Most of the structures have been removed. The I-105 was realigned in this area resulting in a large amount of surplus vacant property.

There is limited strip commercial development along Aviation Boulevard. Public facilities within the study area are limited to one public elementary school site and a park.

Westmont

Westmont, also known as Athens, is an unincorporated 3.8 square mile area in south central Los Angeles, located south of Manchester Avenue, north of El Segundo Boulevard, between

Vermont and Van Ness Avenues. Westmont is bounded by the cities of Hawthorne and Inglewood on the west, Los Angeles on the north and east, and Gardena on the south. Not all of the Westmont area falls within the study boundary. The area is primarily developed as a single-family residential neighborhood. These residential areas are bisected by commercial corridors along Western Avenue, Normandie Avenue and Century Boulevard.

Residential development falls into three distinct areas. Generally, the newer residential area of Westmont is north of El Segundo Boulevard and west of Normandie Avenue. Residences in this area are sound and well maintained. The older residential area east of Normandie Avenue from Manchester Avenue south to Imperial Highway is a mixture of single and multiple family dwellings, many of which are vacant or boarded up. From Imperial Highway south to El segundo Boulevard, housing is mostly post-1950 single-family residences, set on 5000 square foot lots with 20 foot setbacks.

Existing public facilities in Westmont include a County Health Center, a Department of Public Social Services office, a fire station, a library, three elementary schools, a parochial school, junior and senior high school and a junior college. Local recreational facilities include a public golf course, parks and playgrounds.

Major circulation in Westmont is along Century Boulevard, Vermont, Western and Normandie Avenues and Imperial Highway. Interior streets are generally set in grid patterns which date back to the original subdivision layout for the area. Many interior streets are narrow by today's standards.

Florence-Graham

Florence-Graham is a 3.4 square mile unincorporated area in South Central Los Angeles. The community is bounded generally by the City of Los Angeles on the west, north and south and Huntington Park and South Gate on the east. Not all of the Florence-Graham community is in the study area.

The present land use and circulation patterns were established prior to World War II. The area today is primarily single family residential with corridors of commercial and industrial uses along Alameda Street. Residential lots are typically 2,500 square, with 25 feet of frontage and a depth of 100 feet.

Existing public facilities in Florence-Graham include a Multi-Purpose Building housing the County Department of Building and Safety, Health Department, Senior Citizens Affairs, Veterans Affairs and Crisis and Adoption offices (outside planning area), a neighborhood child care center, a fire station, a library, one elementary school, a junior high school and numerous churches. Local recreational facilities include Will Rogers Memorial Park and Washington Playground.

Major north-south circulation in Florence-Graham is along Compton and Central Avenues and Alameda Street. Major east-west traffic is along Firestone Boulevard and 92nd Street. Numerous intersections and railroad lines impair the flow of vehicular traffic. The existing grid street pattern in Florence-Graham encourages use of local streets for through traffic.

Future Urban Development

The general plan map is a compilation of individual general plan maps from the jurisdictions in the study area. A major limitation in the comparison of the proposed land uses was the existence of major differences in the quality of land use information. Each jurisdiction uses a somewhat different land use classification system that needed to be standardized. One city considers its zoning map to be the general plan. In addition, adoption dates and horizon years differ between jurisdictions.

The study area is a relatively stable neighborhood that has been almost completely developed with the exception of scattered vacant parcels. Massive recyclying of existing land use are not projected. However, there is a trend toward the intensification of residential use from single family to multiple family dwellings as identified in the Westmont area, City of Hawthorne and the South Central area.

Long term projections of land use are by definition speculative. They are based on a knowledge of land use, market forces, and public policies as they currently exist. The further the projection of conditions, the more likely it is that trends will change or that factors not previously considered will enter the urban development process. The area surrounding LAX is a complex area in which a variety of land use demands compete for and influence the available supply of land. The value of a parcel of land, as determined by its particular locational characteristics, has a significant influence on its ultimate use or reuse. The higher the cost of a parcel of land to a buyer, the more intensively it must be used in order to guarantee its owner a sufficient rate of return on his capital.

Similar to land values, tax rates have an important influence on land use. High taxes on a parcel of land induce its development or redevelopment to a more intensive use. Where particular types of land use (such as airports, public utilities, and certain industries) require large amounts of land in order to function, the pattern of land ownership in an area can influence the ultimate location of the facility. For example, where an area such as Lennox has been subdivided into small lots, it would be very difficult to convert the area to a more land-intensive, Airport-compatible land use without recourse to public condemnation.

The fiscal policies of the Federal government and local banking institutions indirectly influence private land use decisions. High interest rates tend to either cause a postponement in the decision to develop a parcel of land or force a more intensive use of the property in order to provide a sufficient return on capital.

The environmental characteristics of a particular location can influence its desirability for particular uses. The presence of certain amenities such as access to parks, quiet streets, and ample open space can increase residential demand in that area.

Finally, an important short-term determination of land use is public policy in the form of regulations and the provision of services. The zoning and land use designation of a particular parcel of land becomes a requirement affecting the development of the parcel. Also, the provision of public services in a given area is an inducement to development, through the provision of an infrastructure to support development.

The most important long-term influence of land use is population growth. Increased levels of population need to be housed, thus creating demand for additional residential land and supporting facilities. The increased population levels create demand for new commercial and industrial land uses that will provide needed products and services.

The long-term decisions which determine the locations of industrial, commercial, and residential land uses are largely the result of tradeoffs between job or market access, transportation costs, and land costs. Location of industrial activities within a metropolitan area is largely influenced by the tradeoffs between market access and production costs. The decision by industries to locate close to a regional transportation facility, such as LAX, is generally a conscious decision to trade increased land costs for improved access to other regional markets via air transportation, particularly among those industries producing low-weight, high-value products.

The general location of retail commercial activity is determined by the distribution of consumers in a market area, while other retail activity locates adjacent to major circulation routes in order to optimize access to potential consumers. Wholesale commercial land uses are subject to less intense pressure to respond to changes in location of population, since they sell to retailers rather than the final consumer.

A major constraint to continued development of land in the study area is the general scarcity of vacant land. The largest area of vacant land is located east of, and adjacent to, Sepulveda Boulevard in El Segundo. The area is generally surrounded by industrial land owned by the Standard Oil Company. The City of El Segundo has designated about two-thirds of this vacant land for commercial use (offices) and the remainder for industrial

use. A second area of vacant land is in the Del Aire area. The result of excess property due to the I-105 freeway realignment.

Zoning

Current zoning of the communities surrounding LAX generally conforms to existing land uses. However, as mentioned under the individual community discussions, some zoned land is under-utilized. This is particularly true of residential developments on commercially zoned parcels.

Noise Sensitive Land Uses

Activities associated with one land use can interfere with or be objectionable to the activities of an adjacent different land use. Airport activities have significant effects on the surrounding land uses. Where no interference between two uses occurs, the land uses are considered to be compatible with each other. A land use can have a beneficial effect by creating higher land values for surrounding areas, job opportunities, and environmental improvement. Conversely, the degree of land use incompatibility is defined as the dedgree of activity interference, direct or indirect, of one land use with another. The incompatibility can be in the form of excessive noise, air pollution, traffic congestion, crime, fear, visual pollution, social disruption, service interference, and the like.

Major regional airports have associated with their operation a wide range of external effects with potential for impinging on land uses in surrounding areas. Problems arise when residential areas are constructed near an existing airport. In the LAX situation, the airport was built and the surrounding area was developed in a reasonably compatible manner until the advent of jet operation and additional growth, traffic, and noise.

Because aircraft noise is the most common impact associated with an airport, most techniques for rating the degree of airport compatibility with various land uses consider only noise. In this reasoning, compatibility is based upon the type of activity associated with various land uses and the level of noise exposure. In addition to noise, techniques for rating land use compatiblity with airports must consider the effects of other airport-associated negative influences such as congestion, air pollution, and social disruption.

The spatial distribution of land uses that are incompatible with LAX is illustrated on the Noise Sensitive Land Use Map located in

the map pouch. A considerable amount of incompatible land is contained within the noise impact area. Most of this is single-family residential land. Also identified are churches, schools, libraries, hosptial, rest homes and trailer parks.

It is evident that certain land uses, such as schools, hospitals, and single-family, and to a lesser extent multiple-family residences, are incompatible with airport activities. Multiple-dwelling units are judged to be slightly less sensitive to airport noise than single-family residences. A residential unit in a multiple-unit structure has fewer exterior wall surfaces through which noise can penetrate. Therefore, when soundproofed, the cost is less for multiple-units than for single-family residences. Also, residents of multiple-dwelling structures tend to use outdoor areas less than residents of single-family houses.

Commercial and industrial activities are generally compatible with airports. Because hotel/motel facilities and high-rise office buildings usually are air conditioned and insulated against noise, they are considered to be compatible. Compatibility of other commercial use is governed by the type of structure, the degree of air conditioning, and the orientation of the use to outdoor activities. Industrial uses are generally the least sensitive to aircraft noise intrusion due to a combination of high background noise level and insulation.

Traffic Circulation

The level of activity at Los Angeles International Airport entails a high level of vehicular usage of the street and freeway system. The highway and freeway network map for the study area is located in the map pouch. Most of the street system serving LAX is improved to planned standards. Few additions to the existing systems are planned. The future of the I-105 currently is being debated.

The San Diego Freeway (I-405) is an eight-lane roadway with high-level service roads in the vicinity of the Airport. This north-south freeway is 1.5 miles east of the Central Terminal Area and has interchanges for Airport-bound traffic and Sepulveda Boulevard, La Tijera Boulevard, Manchester Boulevard, Century Boulevard, Imperial Highway, and El Segundo Boulevard.

Access to the Central Terminal Area of LAX is provided by two major highways. Main access is on the east side via Century and Sepulveda Boulevards. The Century Boulevard entrance is a one-way, three-lane roadway. Traffic from northbound Sepulveda Boulevard gains access to Century Boulevard through the Sepulveda-Century interchange. A single traffic lane from southbound Sepulveda enters the Airport directly, merging with three-lane Century Boulevard within the airport to provide five traffic lanes entering the Central Terminal Area.

Airport egress to Century and Sepulveda Boulevards is via south World Way. World Way is a five-lane, one-way exit. One lane connects directly to southbound Sepulveda Boulevard while the remaining four lanes extend to eastbound Century Boulevard. Access to northbound Sepulveda Boulevard is achieved through the Sepulveda-Century interchange. An internal one-lane return road connects the south World Way exit with the Airport entrance at Century-World Way for traffic returning to the Central Terminal Area.

The secondary entrance into the Central Terminal Area is provided on the north side by way of 96th Street and Sky Way from Sepulveda Boulevard. Ninety-sixth Street, intersecting Sepulveda Boulevard north of the Sepulveda-Century interchange, is an east-west, four-lane, two-way street which turns north-south and becomes Sky Way which connects to World Way just west of the Airport Administration building.

Access to Cargo City (the air freight terminal area) is provided by five roadways which intersect Century Boulevard - Avion Drive, Airport Boulevard, Postal Road, International Road, and a two-way, four-lane roadway from Aviation Boulevard at 104th Street.

The major access to the east side of Cargo City is from Aviation Boulevard at 104th Street. 104th Street is a two-way, two-lane entrance roadway. Additional access to Cargo City is provided

by two driveways, one located on Century Boulevard in front of the Western Airlines Building, and another on Century Boulevard in front of Air Freight Building 1.

Access to the West Imperial Terminal Area is provided by driveways from Imperial Highway at the West Imperial Terminal and opposite California Street near the Pan-American facilities. Circulation within the area is provided by a two-way, two-lane frontage road along Imperial Highway connecting the two driveway entrances.

Access to the west Airlines Area is provided by World Way West via Pershing Drive. World Way West is a two-way, four-lane roadway with a newly constructed grade-separated interchange with the new alignment of Pershing Drive, controlled at its intersection with Pershing Drive.

Some of the highest traffic volumes on surface streets in the greater Los Angeles area occur on the streets near LAX. Average daily traffic volumes exceeding 60,000 or 70,000 vehicles are not uncommon on sections of Century and Sepulveda Boulevards. Many other streets in the study area now carry traffic volumes exceeding 30,000 vehicles per day. A traffic volume map for the street system in the study area is located in the map pouch.

According to the Los Angeles International Airport Final Environmental Impact Report, August 1978, the volume of airport-related traffic on the street system was determined from estimates of traffic generation and distribution for each of five major LAX activity areas. The five areas analyzed were the Central Terminal Area, VSP Lot, Cargo City, West Imperial Terminal Area, and the West Airlines Area. Based on this analysis, direct airport-related traffic accounted for 17 percent of the total vehicle miles traveled on the San Diego Freeway and 34 percent of the surface street travel. This is an average figure; airport-related traffic may account for a significantly higher percent of the total traffic volume in certain locations. Indirect traffic generated from commercial and industrial developments, located in the area due to its proximity to the airport, add additional demand to the local street system.

Public Transportation

Local public transportation services are provided primarily by the Southern California Rapid Transit District. Service is provided on a grid network along major and secondary highways. The public transportation map located in the attached map pouch identifies route numbers, locations and average daily patronage. Some additional service is provided in the area by local bus companies.

Water Service

Water supply and distribution and water quality are the responsibility of the Los Angeles City Department of Water and Power, El Segundo Municipal Water Department, Inglewood Municipal Water Department, Southern California Water Company, Los Angeles County Waterworks District NO. 1. Both well water and imported water are distributed. Due to climatic conditions, rainfall and local groundwater reservoirs in the Los Angeles area are inadequate to meet the fresh water demand in the Los Angeles basin, and the needed additional water is brought in from the Colorado River and from sources in northern California. The California State Water Resources Control Board has indicated that 15 percent is groundwater and 85 percent is imported. The Water System map identifies the water distribution system and service area boundary for each water purveyor.

A general analysis of the availability of water indicates that existing levels of services are adequate for existing services. The expansion of major water transmission and distribution systems, including filtering and pumping plants, reservoirs, etc. may be required given the intensity of the development and site selection.

Sewerage Service

Depending on the location within the study area, sewerage service is provided by either the Los Angeles City Sanitation

Department or the Los Angeles County Sanitation District. The study area is underlain by a maze of house laterals, street mains, collectors, interceptors, trunk lines, etc., ultimately leading to the city Hyperion Treatment Plant or the County Joint Water Pollution Control Plant. The Sewerage System map identifying the interceptor/trunk line system is located in the map pouch.

The Hyperion Treatment Plant is located southwesterly of LAX near the ocean and adjacent to Imperial Highway. The plant's capacity is 420 million gallons per day (mgd), with primary treatment provided for all effluent flow and secondary treatment for approximately 100 mgd before discharge into the ocean. The remainder of the flow receives conventional secondary treatment before ocean disposal. Average dry weather daily flow presently is 350 mgd. Plans are being formulated to upgrade the level of treatment for wastewater currently receiving only primary treatment.

The Joint Water Pollution Control Plant, located in the City of Carson, currently processes about 330 mgd with a design capacity of 385 mgd. Work has begun to upgrade the plant to provide partial secondary treatment and is due to be completed in 1983. Currently, sludge from this facility is being hauled by truck to a sanitary landfill.

Sewage disposal capabilities in the study area are adequate for existing development. Some localized areas exist where flows exceed the design capacity. Since problem lines are programmed for relief, no massive rehabilitation or expansion of the present system is recommended. However, as with the water system, any intensification of existing land uses will require an upgrading of the sewerage system.

Storm Drainage System

The storm drain system primarily handles storm runoff but also collects dry weather flows from irrigation wastes and other flows from permitted industrial waste discharges. LAX and the surrounding area utilizes a conventional closed drainage system with inlets, reinforced concrete pipe, and required outfall structures. The Flood Control Facilities map identifies present flood control facilities in the area. The flood control system appears to be adequate with no areas experiencing flooding under normal conditions.

The extensive development in the community planning area has eliminated natural stream flow. The few natural water courses have long since been channelized; these include Centinela Creek, the Dominguez Channel and Compton Creek. The northern portions of study area drain into Centinela Creek through a series of storm drains. All runoff west of Sepulveda Boulevard flows into Santa Monica Bay through the Imperial and Argo Street

drains. The majority of land east of Sepulveda Boulevard to Rosecrans Hills (Newport-Inglewood Fault Zone) drains into the Dominquez Channel and to the Los Angeles Harbor area. On the east side of the study area, Compton Creek handles the majority of the run-off.

Electricity, Natural Gas, Telephone

Services are available throughout the area around LAX. Gas service is provided by the Southern California Gas Company, telephone service by the Pacific Telephone Company, and electric service by Los Angeles City Department of Water and Power and the Southern California Edison Company.

Description of Environmental Setting

The description of the environmental setting that follows was adapted from various environmental impact reports and documents. A listing and description of these reports and documents is contained in Task 1.06 and 1.08. The majority of the information used in this section was extracted from the August 1978 Los Angeles International Airport Final Environmental Impact Report. When specific implementation actions (ordinances, community plans, redevelopment programs, etc.) are proposed they will have to be evaluated for possible environmental impacts and the appropriate documentation prepared. The environmental setting which follows could form the basis for future environmental documentation.

I. Physical Environment

A. Climate

The community planning area is located within a semi-arid region not characterized by extreme climatic conditions. The average annual rainfall is 15 inches. About 95 percent of the rainfall occurs in the 7 months from October through April, principally from storms originating in the north Pacific area and moving inland from the ocean. The prevailing winds are from the west and northwest and carry moisture over the land from the Pacific Ocean. Temperatures are moderate with an 8 to 12 degree daily variation and an annual average of 62 degrees Fahrenheit.

B. Geologic Conditions

1. Physiography

The Southern California coastal region lies within portions of two geomorphic provinces: The Transverse Range Province and Peninsular Range Province. In the north portion of the Peninsular Range is the Los Angeles Basin, an alluviated lowland underlain by a deep structural depression, parts of which have been the site of discontinuous deposition of sediments throughout a great portion of geologic time.

The Los Angeles Basin is composed of four large subdivisions containing contrasting rock types. Each subdivision is a structural block whose contacts with adjoining blocks are zones of major faulting or flexible in the basement rock. The community planning area generally lies within the southwestern block or subdivision. A small portion of the area lies east of the Newport-Inglewood Fault. At the southwest extremity lie the Palos Verdes Hills, and along the inland boundary are the northwesterly trending elongate hills and mesas within the Newport-Inglewood structural zone. The northern and western boundaries are marked by the Santa Monica Mountains and the Pacific Ocean, respectively.

A coastal belt of recent dunes and sand hills, extending approximately 11 miles southward from the Ballona Escarpment (bluffs adjacent to Hughes Airport) to the Palos Verdes Hills and inland 3 to 6 miles, Airport area. These dunes overlap the Torrance Plain, which forms the eastern one-third of the airport area.

2. Stratigraphy

Rocks of the Los Angeles Basin are separated into two major groups by a pronounced unconformity of middle

Late Cretaceous age. Below the unconformity layer are the basement (subjacent) rocks consisting of crystalline metamorphic and igneous rocks of Precambrian to early Late Cretaceous age. Above lies a thick succession of marine and nonmarine sedimentary and volcanic rock (superjacent) of Late Cretaceous to Holocene (recent) age.

C. Seismicity and Structure

The primary structural elements of southern California and the Los Angeles Basin are two major sets of faults characterized by lateral slip movement and various degrees of earthquake activity (see Figure F-2). Trending northwest, the most prominent set shows right lateral movement. Most noteworthy of this set are the Newport-Inglewood structural zone and the San Andreas Fault zone. Transverse to this system in an east-west direction and exhibiting left lateral and thrust movement is a set of fault systems typified by the Malibu Coast-Santa Monica and the Sierra Madre Fault systems.

The northwest trending San Andreas Fault zone is located some 49 miles from the community planning area at its nearest approach and has the potential for producing great magnitude earthquakes.

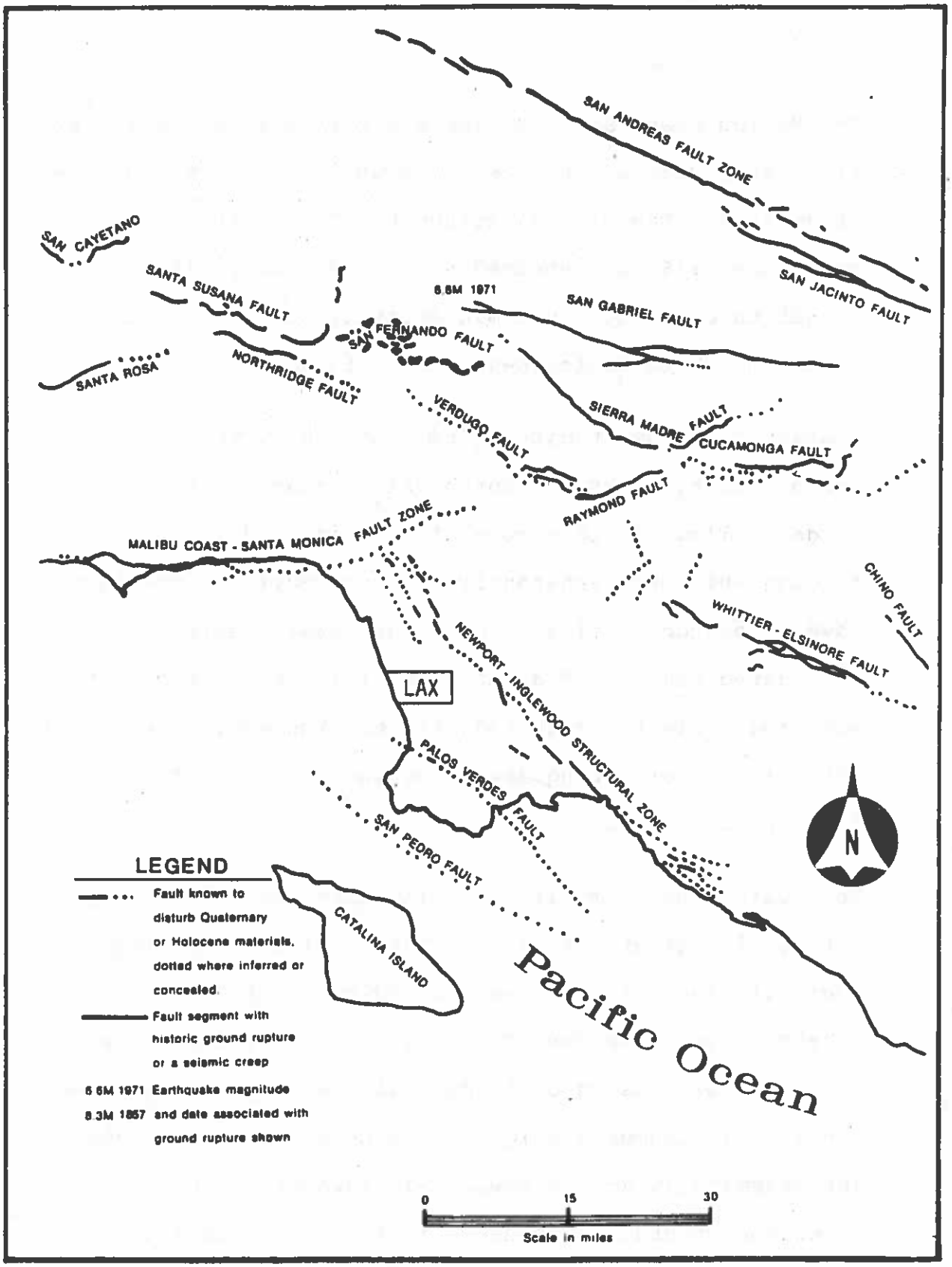


FIGURE F-2. REGIONAL FAULT MAP FOR LOS ANGELES BASIN

The Malibu Coast-Santa Monica Fault zone is an east-west trending system located as close as 7 miles north of the study area. The Oxnard earthquake of 1973 (Richter magnitude 5.75) and unnamed smaller events of 1974 attest to continuing seismic activity along the Malibu Coast and Santa Monica segments of this system.

A steeply southwest dipping reverse fault, the Palos Verdes Fault, marks the northeast boundary of the Palos Verdes Hills. It is a zone of faulting and intense folding which has apparently not been active since Late Lower Pleistocene time. The Palos Verdes Fault could be considered capable of generating at lease moderate magnitude (Richter magnitude ± 6) earthquakes. The likelihood of a major earthquake occurring along the fault, however, is small.

Traversing the community planning area and posing a potentially greater risk than the previously considered regional faults is the Newport-Inglewood structural zone. Located within 3 miles of the Airport site, this zone has a surface expression of folded hills and echelon-related short fault segments aligned in a steplike arrangement. The seismically active Newport-Inglewood zone has generated several earthquakes in the recent past that were strong enough to be felt in the Los Angeles area. The table below lists the more notable of these events.

Major Events Generated on the
Newport-Inglewood Structural Zone

Date	Name	Richter Magnitude	Documentation
1920	Inglewood	4.9 (estimated)	No surface rupture
1933	Long Beach	6.3	
1933	Signal Hill	5.4	

Most recorded earthquake damage has consisted of such secondary effects as liquefaction, ground cracking, lurching, and intense shaking.

Subparallel to the Newport-Inglewood structural zone are two faults of concern because of their proximity to LAX. The Charnock and Overland Avenue faults bound the east and west sides of the structural graben (down-dropped block).

The Overland Avenue Fault lies 2 1/2 miles from the northern boundary of the Airport. It is 6 miles long and trends north 30 degrees west from the west flank of the Baldwin Hills to about Santa Monica Boulevard.

The seismically active Newport-Inglewood structural zone could produce violent ground response at the area site with a large magnitude event. Although not supported by past evidence, present information suggests that a magnitude 7.5 earthquake originating on this zone might produce

associated surface fault rupture. The suggested amount of movement is 2 feet vertically and 6 feet horizontally.

It is conceivable that renewed activity on the Newport-Inglewood structural zone could include movement on the Charnock or Overland Avenue faults, with both possibly serving as sources for small earthquake (Richter magnitude 5) similar in magnitude to those that have occurred previously in the area.

The effects of seismically-induced ground shaking are probably the most critical seismic hazard to the area. Severity of ground shaking at the site depends primarily upon: (1) earthquake magnitude, (2) location of causative fault with respect to site, (3) specific structural characteristics, and (4) duration of shaking.

D. Groundwater

Groundwater basins (in the subsurface) are separated by such geologic features as nonwater-bearing rocks, or faults, and natural or artificial mounds, or divides, in the water table or piezometric surface. Surface drainage basins do not necessarily coincide with groundwater basins. Nonwater-bearing hills and mountains which are included in drainage basins are excluded from groundwater basins.

The community planning area lies within the West Coast Grownwater Basin, the most southwesterly of four groundwater basins within the Los Angeles coastal plain. The eastern boundary of the basin is the Newport-Inglewood uplift (Inglewood Fault), which presents a substantial, discontinuous barrier to the coastward movement of groundwater. An effective groundwater barrier on the southwest is provided by the Palos Verdes Hills bedrock outcropping and the Palos Verdes Fault. Although the northern boundary of the basin is the Ballona Escarpment, this does not represent any discontinuity in the water-bearing sediments between the West Coast Groundwater and Santa Monica basins. This separation is based on the existence of a groundwater mound developed at this location as a result of groundwater extractions. The Pacific Ocean borders the western and southern extremes of the basin.

Freshwater replenishment to the West Coast Basin comes primarily from subsurface flow across the Newport-Inglewood uplift from the Central Basin on the east. This flow is regulated by the difference in water levels between the two basins, by the dewatering of the aquifers along the crest of the uplift, and by the degree to which the folds and faults of the uplift act as barriers to the groundwater flow. Minor replenishment comes by direct

infiltration from the land surface, infiltration of local runoff water from hills bordering the basin, and by seepage within the basin from the channels of the Los Angeles River and Ballona Creek.

Prior to extensive pumping and heavy extractions from the area, groundwater movement was toward the Pacific Ocean. This movement not only has been reduced, but has reversed along the coastal stretches of the basin during recent years by increased demands made on the groundwater supply. The resultant problem of sea water intrusion has been substantially reduced by a series of injection wells (Basin Barrier Projects) placed along the basin margins.

With present and projected demands for groundwater, it is unlikely that water levels will ever reach past historic highs. It is anticipated that groundwater levels in the shallow and deep aquifers beneath the airport area will remain relatively constant with only slight variations, depending on future demands for groundwater and the nature and degree of future water-spreading operations in the area. Although perched water may have existed in the past, artificial drainage systems and extensively surfaced areas that have accompanied the past development of the airport and adjacent areas have

effectively altered natural water drainage patterns. With continued development, it is unlikely that perched water conditions will be created in the future.

D. Natural Drainage

Natural drainage in the area is determined primarily by the topography, and runoff is moderated by the type of soil (principally sand) and vegetative cover. Development has modified these features but the topography has not been appreciably changed. The soils are modified by grading; nevertheless, they have essentially the same charactertistics as existed under natural conditions.

No natural stream flow occurs within the planning area. Nominal rainfalls were once retained in the topographic lows within the series of sand dune ridges. Since the soil is naturally porous, runoff to the ocean has always been limited.

F. Oil and Gas

Subsurface oil and gas are major mineral resources in the Los Angeles Basin. Oil fields in the area which are producing or have produced significant quantities of petroleum products are the Inglewood, Playa del Rey, El Segundo and Hyperion oil fields. These oil fields are associated with some type of subsurface structure which is generally reflected in the topography.

G. Air Quality

The community planning area is located in the South Coast Air Basin (SCAB). The nearest Air Quality Management District (AQMD) monitoring station is located in Lennox. According to the Air Quality Management District, levels experienced throughout the planning area should be similar to those measured at the Lennox monitoring station. The 1974 to 1976 levels of air pollution at the Southwest Coastal Air Quality Monitoring Station located in Lennox are shown in Table G-1. These data indicate the State oxidant, nitrogen dioxide, and carbon monoxide air quality standards were frequently exceeded during 1976. Additionally, the Federal standards for hydrocarbons were exceeded during the morning hours (6:00 a.m. to 9:00 a.m.) more than 80 percent of the days during 1976. The federal standards are not expected to be met at any time in the foreseeable future under any air pollution abatement programs currently in effect.

The estimated total annual emissions from the operation of LAX are shown on Table G-2. These figures include automobile emissions related to the operations and use of the Airport.

Table G-1 AIR QUALITY STANDARDS AND DATA FOR SOUTHWEST COASTAL AIR MONITORING STATION NO. 76 (LENNOX)

POLLUTANT	AIR QUALITY STANDARDS	DATA FORMAT	LENNOX DATA		
			1974	1975	1976
Oxidant (as ozone)	0.10 ppm 1-hr avg	Days[a] / Maximum[b]	7 days / 0.15 ppm	10 days / 0.18 ppm	19 days / 0.22 ppm
Nitrogen Dioxide	0.25 ppm 1-hr avg	Days / Maximum	14 days / 0.43 ppm	10 days / 0.40 ppm	21 days / 0.39 ppm
Carbon Monoxide	10 ppm 12-hr avg	Days / Maximum	101 days / 25.9 ppm	72 days / 30.2 ppm	75 days / -
	40 ppm 1-hr avg		4 days / 46 ppm	1 day / 40 ppm	1 day / 43 ppm
Sulfur Dioxide	0.04 ppm 24-hr avg	Days / Maximum	10 days / 0.046 ppm	9 days / 0.055 ppm	2 days / -
	0.05 ppm 1-hr avg		0 days / 0.17 ppm	0 days / 0.19 ppm	0 days / 0.18 ppm
Suspended Particulate Matter	60 $\mu g/m^3$ AMC[c]	AMC[c]	117 $\mu g/m^3$	106 $\mu g/m^3$	94 $\mu g/m^3$
	100 $\mu g/m^3$ 24-hr avg	% Over[d] / Maximum	82% / 230 $\mu g/m^3$	41% / 240 $\mu g/m^3$	51% / 234 $\mu g/m^3$
Lead (Particulate)	1.5 $\mu g/m^3$ 30-day avg	Months[e] / Maximim	/ 8.30 $\mu g/m^3$	10 Months / 9.30 $\mu g/m^3$	10 Months / 10.04 $\mu g/m^3$
Hydrocarbons (corrected for methane)	0.24[f] 3-hr avg (6-9 am)	Days / Maximum	269 days / 6.0 ppm	124 days / 5.1 ppm	302 days / -

[a] Number of days standard equalled or exceeded

[b] Highest value over averaging time

[c] Annual geometric mean

[d] Percent of samples over criterion

[e] Number of months standard equalled or exceeded

[f] Federal Standard all others are California Standards

Table G-2. 1977 LAX Annual Emissions (Tons/Year)

POLLUTANT TYPE	AIRPORT		NONAIRCRAFT AIRPORT ASSOCIATED		TOTAL EMISSIONS
	Ground Operations	Flight Operations	Auto Emissions	Other Emissions	
CO	12,200	660	25,240	4	38,104
NOx	1,340	3,210	3,650	18	8,218
SO2	290	190	190	--	670
Particulates	325	195	580	3	1,103
Total HC	5,920	130	5,350	235	11,635
TOTAL					59,730

Among the most important sources of air pollutants in the project area are aircraft and motor vehicle operations associated with LAX, motor vehicle traffic on the San Deigo Freeway, and operations at the Steam Station and Standard Oil's El Segundo refinery.

H. Historic Monuments

A survey of historic monuments within the Study Area revealed the existence of one site classified as a national and local historic place, one identified as a State landmark and a local historic place, and five other local historic places. These sites, all of which are shown in Figure H-1, are as follows:

1. Centinele Adobe - National and local
2. Site of Centinela Springs - State and local
3. Santa Fe Railroad Depot - Local
4. Hangar Number One - Local
5. Site of Hyde Park Congretational Church - Local
6. Site of Inglewood's First Public School - Local
7. Daniel Freeman Mansion and Grounds - Local
8. First Brick Chimney in California - Local

1. National Historic Places

To be approved as a National Historic Place, a historic site must meet certain criteria established by the National Historic Preservation Act as follows:

> "The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

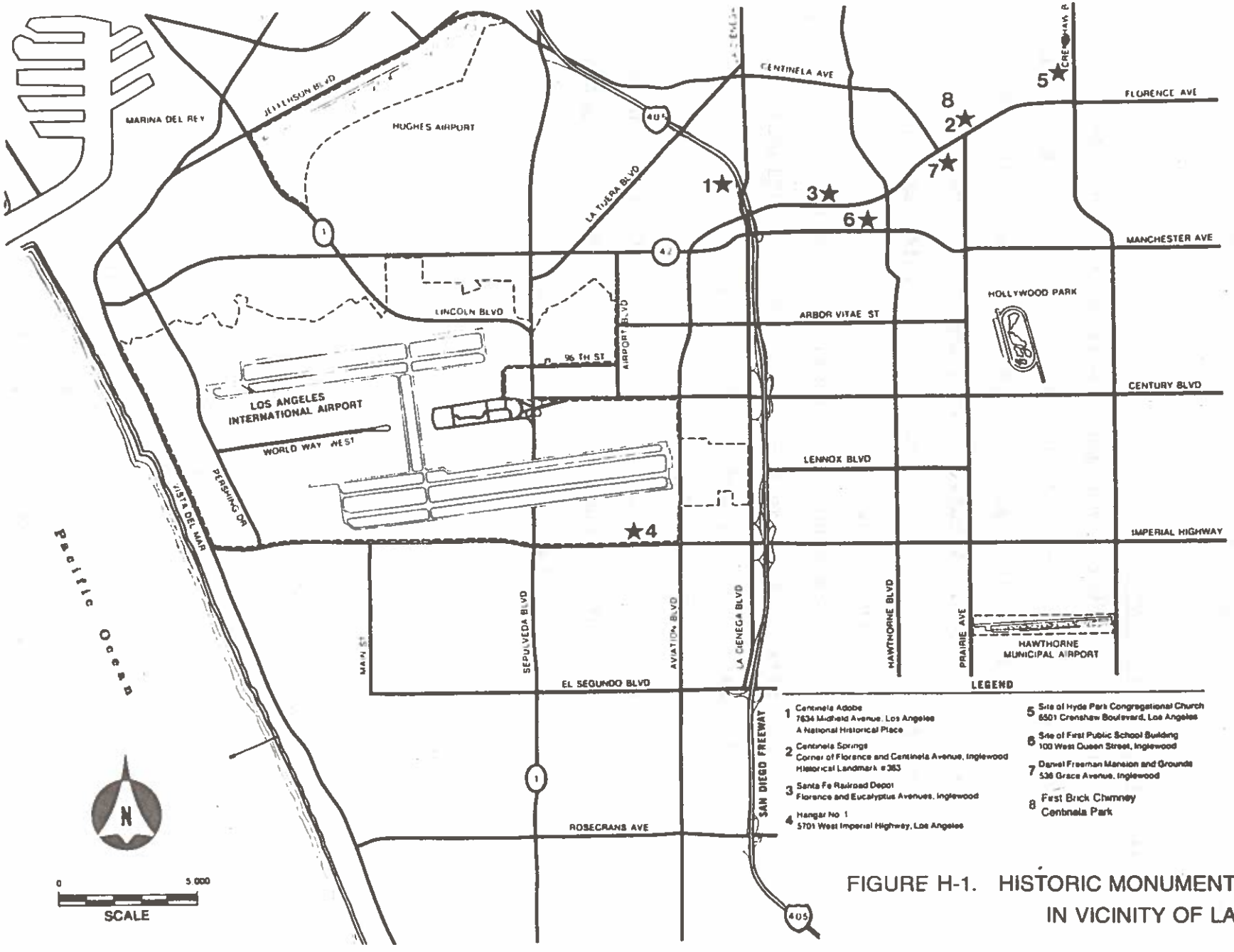


FIGURE H-1. HISTORIC MONUMENTS IN VICINITY OF LAX

1. That are associated with events that have made a significant contribution to the broad pattern of our history; or
2. That are associated with the lives of persons significant in our past; or
3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
4. That have yielded, or may be likely to yield, information important in pre-history or history."

A complete listing of National Historic Places was published in the Federal Register of Tuesday, February 4, 1975, and subsequent monthly revisions, under the title of "National Register of Historic Places." A comprehensive review of the Federal Register shows that only one location in the area surrounding LAX has been approved as a National Historic Place. This is the Centinela Adobe at 7634 Midfield Avenue in Los Angeles, 1 1/2 miles from LAX.

(2) California State Landmarks

The State of California has established certain criteria which must be met before a location can be classified as a California Historical Landmark. Specifically:

> "To be eligible as an official state historical landmark, a site must be of statewide historical significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value."

One location meets the requirements for official designation as a California Historical Landmark in the vicinity of LAX:

> "Centinela Springs (State Landmark Number 363) - On this site, bubbling springs once flowed from their sources in a deep water basin which has existed continuously since the Pleistocene Era. Prehistoric animals, Indians, and early Inglewood settlers were attracted here by the the pure artesian water. The springs and valley were named after sentinels guarding cattle in the area. This landmark is located in Centinela Park in Inglewood."

(3) Local Historic Places

Local historic places are designated by various local agencies seeking to preserve historic surroundings. Those historic places and the local agencies that designated them are listed below:

- Historical Society of Centinela Valley/City of Inglewood
  - Centinela Adobe, 7634 Midfield Avenue, Los Angeles (included as a National Historic Place).
  - Santa Fe Railroad Depot, Florence and Eucalyptus Avenues (partially burned during fire).
  - Site of Centinela Springs, corner of Florence and Centinela Avenues (State Historical Landmark Number 363).
- Cultural Heritage Board, City of Los Angeles
  - Site of Hyde Park Congregational Church, 6501 Crenshaw Boulevard, Inglewood
  - Hangar Number 1, 5701 West Imperial Highway. This is the original hangar, constructed in the 1920s, when the Airport was just a landing strip.

II. Natural Environment

A. Flora and Fauna

There are two rare or endangered species of fauna living in the El segundo Sand Dunes area. These are the pocket mouse (Perognathus longimimbris polificas) and the El Segundo Blue Butterfly (Shijimiaeiodes battoides allyni). The marine habitat of the coastline contains a large number of fish and invertebrate species typical of sandy beaches.

B. Economic Characteristics

The Airport has been a vital factor in the region's economic development. Through the developing years, many hotels and other commercial and industrial establishments have evolved. In 1977, airport-generated employment totaled 134,000 persons, with a payroll of $2.2 billion. However, there were also significant economic costs attributed to noise, air pollution, traffic congestion, and resident relocation.

C. Social Characteristics

The area surrounding LAX has been significantly affected. Airport employment has tended to raise the social and economic standard of living in some areas. The beneficial characteristics of Airport growth, however, are also accompanied by a general downgrading of the social and physical environment in several nearby areas. Noise and air pollution are annoying to the community.

TASK 1.06 AND 1.08

ASSEMBLE AND DOCUMENT LOCAL PLANS, LAND USE REGULATIONS AND ENVIRONMENTAL PLANNING REPORTS

MARCH 1981

Prepared by: Los Angeles County Department of Regional Planning

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TABLE OF CONTENTS

INTRODUCTION

This task is the combination of two tasks originally identified separately in the Los Angeles International Airport Noise Control and Land Use Compatibility Study work program, Task 1.06 - Assemble and Document Local Plans and Land Use Regulations, and Task 1.08 - Obtain Existing Community Area Environmental Planning Documents. Because of the obvious overlap between these tasks, a decision was made to combine the products.

The purpose of the task was to assemble and document existing technical reports dealing with local planning and environmental conditions in the area. This review included key elements and policies of general plans, specific plans, environmental plans, and community plans for the cities of El Segundo, Hawthorne, Inglewood, and Los Angeles (with emphasis on the Playa del Rey, Westchester, and Hyde Park communities); Los Angeles County (with emphasis on Lennox, Del Aire, Athens, and Florence/Firestone); the Southern California Association of Governments (SCAG); and any other local or regional governmental entity that has a direct relationship to the development of the airport and surrounding area. Also included was environmental data dealing with the existing natural conditions (plant and animal life, topography, air and water quality, drainage, mineral deposits, etc.), or to the prevailing community conditions (human settlement patterns, noise, traffic, attitudes, governmental jurisdictions, etc.).

The report is formulated much as a bibliography including title, author, prepared for, date, and pages. The first section of the report identifies pertinent goals, standards, policies and criteria applying to Los Angeles International Airport. The listing is divided by jurisdiction. The review will ensure that the resultant Land Use Compatibility Program will properly reflect local and regional long-range planning goals, objectives and policies.

The next section lists planning documents, land use ordinances and building codes for the airport and surrounding areas. Many of the reports are summarized. The next section identifies environmental documents for each jurisdiction. The miscellaneous environmental documents section includes a listing of environmental regulations, local ecological conditions, and atmospheric pollution by aircraft engines. Transportation and traffic studies for the area are listed in the next section. The largest section by far is that dealing with noise reports. This section is broken down into subsections dealing with noise regulations, aircraft noise and community impacts, Los Angeles International Airport (LAX) noise mitigation techniques, miscellaneous noise mitigation techniques, landing and takeoff modifications to mitigate noise, land use control changes to effect noise

Introduction (Cont'd)

compatibility, airport noise control and land use compatibility reports and specific aircraft noise measures. The last three sections identify economic considerations, safety issues, and energy reports dealing with airports.

OALS, STANDARDS, POLICIES, AND CRITERIA

ity of El Segundo

El Segundo Municipal Code, Noise and Vibration Regulations, Chapter 9.06, 1978, Pages 237-238-10b.

- To prohibit unnecessary excessive and annoying noises and vibrations.

- Exterior Noise Standards: The following noise levels are the maximum permitted to be created on any property as measured on any other property, except as permitted to be adjusted as further described as follows:

Zone Classification of Receptor Property	Time Interval	Allowable Noise Level dBA
Residential	10 p.m. to 7 a.m.	45
R1, R2, R3, PRD, or OS	7 p.m. to 10 p.m.	50
	7 a.m. to 7 p.m.	55
Commercial	10 p.m. to 7 a.m.	55
C-RS, C2 C3, P or PF	7 a.m. to 10 p.m.	60
Manufacturing, M1 or C-M	anytime	65
Manufacturing, M2	anytime	70

Increases to the above described noise standards are permitted as follows:

Permitted Increase (dBA)	Duration of Increase (minutes)*
0	30
5	15
10	5
15	1
20	less than 1

*Cumulative minutes during any one hour.

- Interior Noise Standards: Noise levels within any receptor dwelling unit should not exceed 45 dBA. May be adjusted +5 dBA for one minute periods and +10 dBA for less than one minute.

Noise Element, City of El Segundo General Plan

Contains community goals and objectives pertaining to the control of environmental noise, including guidelines to minimize to noise conflicts. Classification of various land uses as sensitive, conditionally sensitive or non-sensitive and standards for these uses as follows:

Definitions:

- Sensitive - uses where a quiet outdoor environment is important.
- Conditionally sensitive - uses which are noise sensitive, but which can be made compatible with noise insulation. Uses where outdoor lifestyles are not important.
- Non-sensitive - uses where quiet outdoor environment is not critical to indoor or outdoor activities.

USE	S	CS	NS
Residential, single family	X	X	
Residential, two family	X		
Residential, multiple		X	
Community clubs		X	
Schools		X	
Parks, sports oriented			X
Parks, relaxation oriented	X		
Libraries		X	
Churches		X	
Museums		X	
Hospitals, general		X	
Hospitals, convalescent	X		
Sanitariums	X		
Homes for the aged	X		
Commercial activities			X
Industrial activities			X

Land Use Sensitivity Classification	Exterior Noise Standard	Interior Noise Standard
SENSITIVE	L dn 65	L dn 55
CONDITIONALLY SENSITIVE	L dn 75	L dn 55
NON-SENSITIVE	L dn 75	L dn 75

NOTE: For reasons of social and economic feasibility, City Standards permit levels 10 dBA higher than EPA criteria.

Land Use Zoning Criteria: New construction and future planning should be guided by the following criteria:

- Sensitive land uses should not be placed in noise impacted zones unless there are overriding social or economic considerations.
- Conditionally sensitive land uses may be permitted in noise impacted zones providing that noise abatement measures are incorporated to meet standards.
- Non-sensitive land uses are not restricted by noise impacted zones.

The noise element also states the following goals and policies:

- New residential developments, and other uses where noise affects quality of life, planned in conformance to adopted noise standards and criteria.
- Allocation of noise impact mitigation costs to the agency or party responsible for the noise incompatibility.
- Application of technical, procedural, and funding assistance available at the State and Federal level for noise ameliorating measures.
- Identify the sensitivity of the various land uses to noise, and to establish acceptable noise standards and criteria consistent with health and quality of life goals.
- Employ effective techniques of noise mitigation through appropriate provisions in the building code, in the subdivision procedures, and in the zoning and noise ordinances.
- Make use of recently adopted State regulations on noise insulation requirements for dwellings.
- Urge continued Federal and State research into noise problems and recommend additional research programs as problems are identified.
- Maintain updated determinations and evaluations of the present and future noise levels associated with all significant transportation facilities in the City.
- Work with the City of Los Angeles, Department of Airports, to reduce the noise impacted area around Los Angeles International Airport to zero.

Land Use Element, El Segundo General Plan

- Part V, Area of Concern, cites Los Angeles International Airport as an area of concern. States the need to minimize undesirable side effects to as great a degree as possible.

Housing Element, El Segundo General Plan

- Identifies need to buffer single family homes from the airport. Suggests multiple family use as buffer within City.

Open Space Element, El Segundo General Plan

- Maintain and expand the working relationship with the LAX adminstration, and control noise sources within the City to an acceptable level for the betterment of the community environment.

- Develop minimum performance standards for the control of noise, and smoke and odor emissions.

Goals, City of El Segundo

- Includes reference to the relationship between the airport and the City, the following goals:

  General:

  - Maintain and expand the working relationship with the Los Angeles International Airport administration and control noise sources within our City to an acceptable level for the betterment of the community environment.

  Residential:

  - Establish zone changes on Imperial Avenue to provide for construction of medium-rise, multiple family dwellings of high-quality, soundproofed construction, with interior parking.

City of Hawthorne

Hawthorne Municipal Code, Title 17 "Zoning"

The Zoning Code establishes applicable noise standards for all zones as follows:

1) The ambient noise level shall not be less than the following levels at the respective times and zones, irrespective of the ambient noise level actually measured.

ZONE	TIME	DECIBELS
Residential: R-1,R-2, R-3,R-4,H,P	10:00 P.M. to 7:00 P.M.	50 dba
	7:00 P.M. to 10:00 P.m.	60 dba
Commercial: C-C,C-2, C-M	10:00 P.M. to 7:00 A.M.	50 dba
	7:00 A.M. to 10:00 P.M.	60 dba
	Anytime (not to exceed)	65 dba

Any decibel measurement made pursuant to Code shall be based on a reference sound pressure of 0.0002 microbars as measure in any octave band with center frequency in cycles per second, as follows:
63, 125, 250, 500, 1,000, 2,000, 4,000, and 8,000, or as measured with a sound level meter using the "A" weighting network, using the slow meter response.

Manufacturing:

In the Manufacturing zones sound levels are regulated so as not to become objectionable due to shrillness; the measurement of sound shall be measured at the exterior property lines and shall be measured to decibels with a sound level meter and associated octave band filter manufactured according to standards prescribed by the American Standards Association. Maximum permissible sound pressure levels shall comply with the following standards:

Octave Band in Cycles per Second	Decibels at Lot Line of Use in the M-2 Zone	Decibels at Adjacent Residential District Boundaries
0-75	79	72
75-150	74	59
150-300	66	52
300-600	59	46
600-1200	53	42
1200-2400	47	39
2400-4800	41	34
4800-above	39	32

Noise Element, City of Hawthorne General Plan

This document provides noise level standards and other information related to the compatibility of land uses:

Noise Element Goal:

"To prohibit or effectively reduce all unnecessary excessive and offensive noises throughout the City of Hawthorne which are detrimental to the public health and welfare and contrary to the puolic interest."

Policies:

1. Ordinances

   Based on acceptable noise standards, employ effective techniques of noise abatement through such vehicles as the 1973 Edition of the Uniform Building Code, and Noise, Subdivision, and Zoning Ordinances.

2. Noise Source

   Whenever possible and appropriate, control, at the source, all sounds which exceed community acceptable noise levels.

3. Transportation Noise - Regulatory Measures

   Provide for the reduction of the present and future impact of excessive noise from transportation sources through judicious use of technology, planning and appropriate regulatory measures.

4. Local Assistance

   Provide governmental assistance, as appropriate, to persons, groups, or organizations engaged in developing and implementing noise abatement procedures including home improvement.

5. Federal and State Legislation

   Support Federal and State Legislation which will provide for noise abatement and the distribution of the costs of noise abatement programs along the producers of the noise.

6. Compatible Land Uses

   Explore possibilities for and require land use adjustments and urban design techniques that will provide for compatible uses adjacent to major transportation facilities while protecting residential and other characteristically "quiet" land uses from future noise impact.

7. Funding

Be aware of, and seek out, any available funds from appropriate levels of County, State and the Federal government that could be used to underwrite the costs of noise abatement programs, including enforcement of the existing noise regulations of the Hawthorne Zoning Ordinance.

Housing Element, City of Hawthorne General Plan

Housing Goals:

To update or revise present City ordinances and codes in order that all segments of the population, including low, medium and high income groups, and the elderly have the opportunity for decent housing and a suitable quiet living environment.

To preserve the integrity of residential areas by developing policies and programs aimed at eliminating incompatible land useage and mitigating incompatible noise sources.

To continue to assure the fairness and adequacy of compensation and relocation assistance to persons and families displaced by public improvements.

Continue to assure the adequate delivery of municipal services to all residents especially to those whose needs are the greatest.

Encourage housing concepts which preserve land and provide significant open space in a quiet living environment.

Insure that the housing efforts of public and private agencies are coordinated to assure excessive and offensive noise-free neighborhoods.

Master Plan, Hawthorne Municipal Airport, City of Hawthorne
R. Dixon Speas Associates, Inc., February, 1978.

This plan provides for the long term expansion of the Hawthorne Municipal Airport to the year 1998 with standards and policies to maintain compatibility with existing and projected aircraft noise contours in conformance with State Noise Regulations. Existing and future plans are designed to maintain compatibility with 60 CNEL contours.

ity of Inglewood

Noise Element, City of Inglewood General Plan

- Forty-four percent of Inglewood's residents live in a noise environment that is unacceptable for new residential development. Most of these people live in areas impacted by noise from aircraft operations at LAX.

- The following programs are proposed in the Noise Element of the General Plan with regard to LAX:

  - Actively advocate changes to aircraft operations that will reduce aircraft noise to a manageable level. Cooperate with other cities to develop a joint plan for LAX noise abatement.

  - Actively advocate a cooperative program with the airport to provide financial assistance for sound insulation of existing residences where such insulation is capable of reducing interior noise to levels consistent with protection of the public health and welfare.

  - Actively advocate a cooperative program with the airport to provide financial assistance for land conversion where insulation is not capable of reducing interior noise to levels consistent with protection of public health and welfare.

  - Actively advocate federal regulations for the control of aircraft noise.

  - Take all legal means to recover noise damages from the airport for Inglewood residents.

- Identifies and analyses 22 noise abatement strategies which could be applied at LAX to reduce aircraft noise.

Public Safety Element, City of Inglewood General Plan

- Technical Report No. 3, "Airplane Crash Hazard," included in Safety Element points out the results of a simulated major aircraft crash in Inglewood:

  - Air crash casualties would have to be sent to nine area hospitals, creating a critical coordination problem for authorities directing ambulances at the site.

  - On-site authority was complicated by multiple jurisdictions and agencies;

  - Hospital site treatment of incoming casualties required better coordination.

- A combination of firefighters from Inglewood and Los Angeles County would be necessary in order to successfully suppress a fire resulting from aircraft fuel.

City of Los Angeles

Citywide Plan, City of Los Angeles

- Major policy statements with regard to LAX include:
  - LAX passenger traffic volume shall be limited to not more than 40 million passengers per year;
  - An efficient network of freeways, highways and streets shall be developed to serve LAX, including a freeway and/or major highway loop;
  - Adequate peripheral parking facilities and multi-level interior parking shall be provided at LAX;
  - A method of passenger ticketing and baggage handling at locations in major centers should be developed and implemented as a means of reducing vehicular congestion at LAX;
  - Drastic reduction of aircraft noise and emission is essential to the quality of the city's environment.
- Height zoning in conformance with FAA FAR Part 77 in areas adjacent to airports is included in L.A. City Ordinance.

County of Los Angeles

- Los Angeles County General Plan identifies the need to retain Los Angeles International Airport.

Land Use Element, Los Angeles County General Plan

- Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation, such as excessive noise.
- Develop a coordinated process for the preparation, adoption, and implementation of local land use and revitalization plans for communities within the noise impact area of Los Angeles International Airport.

Housing Element, Los Angeles County General Plan

- Prevent or minimize environmental hazards, such as noise, noxious fumes, and heavy traffic in residential neighborhoods.

Transportation Element, Los Angeles County General Plan

- Stress environmental compatibility including air quality, noise, ecology aesthetics, health and safety in developing transportation systems.
- Improve the compatibility between aviation facilities and their surroundings through improved land use control mechanisms and technological improvements.
- Improve ground access to and from air terminals.
- Support development of the Palmdale Airport.
- Decentralize passenger terminals to reduce congestion at existing air terminals.
- Encourage air transport industry to eliminate unnecessary duplication of services to increase airline loading factors.
- Develop airport land use compatibility standards and administrative procedures and coordinate with the cities to assure conformance.

Noise Element, Los Angeles County General Plan

- Encourage use of noise abatement measures adjacent to all major sources of noise pollution such as airports, freeways, and rail lines.

PLANNING DOCUMENTS, LAND USE ORDINANCES AND BUILDING CODES

Regional

Southern California Association of Governments, Southern California Aviation System Study: Technical Study, July 1980

Summary: This document, with appendices, summarizes the technical material reviewed by the Airport Work Program Committee (AWPC) and documents the AWPC's decision process. Report includes site selection and evaluation criteria, site descriptions and evaluation, airspace capacity, facility capacity, ground access capacity, forecasts of demand, served and unserved passengers, description of the recommended system, financial feasibility, implementation tools and issues for further study. The report also includes discussion papers on noise, airspace management issues, energy, air-carrier service allocation, institutional and financial considerations and remote terminals.

Southern California Association of Governments, Draft Regional Transportation Plan Amendment: Aviation Element, 1979

Summary: This document presents changes to the Regional Transportation Plan proposed as a result of the aviation study.

SCAG Regional Airport System Plan Implementation and Environs Land Use Plan, June 1979

Summary: This report includes the results of the SCAG staff survey study of regionally significant airports for the purpose of determining, the level of agreement of the airport operators with the regional airport system plan, constraints on airport master planning implementation, and compatibility of cities' and counties' policies and land use planning with the airports. The report also identifies problems of ingress and egress at the airports and gathers airport data including owner, operator, location, facilities, activities and restrictions.

Southern California Association of Governments, SCAG Progress Report, Growth Forecast Revision, Los Angeles, California, September 1973

Southern California Association of Governments, Appendix to SCAG Development Guide: Growth Forecast Selection, Los Angeles, California (Draft, January 1, 1974)

Southern California Edison Company, Southern Division Land Use Study-Inglewood District, 1979

Summary: The Inglewood District is comprised of all or part of five subregions including El Segundo, Inglewood, Hawthorne and portions of the unincorporated areas. The report includes information dealing with population, income, housing units and acreage of various land uses including single family residential, multiple family residential, commercial, industrial, public, vacant and agricultural.

Los Angeles International Airport (LAX)

National Airport System Plan, data sheet for LAX, Ontario, Long Beach, Hollywood-Burbank, and Orange County Airports, supplied by FAA Airport Districts Office, Los Angeles, California, April 1977

Department of Airports, Air Cargo Master Plan LAX, Office of Facility Planning, Los Angeles, California, June 1975

Department of Airports, Department of Airports Program of Major Capital Projects, Los Angeles, California, revised May 1975

Department of Airports, Program of Major Capital Projects, Los Angeles, California, March 29, 1974

City of Los Angeles, L.A.I.A. Development Plan, City Plan Case No. 21232, Department of City Planning, Community Planning and Development Division, Los Angeles, California, May 1973

City of Los Angeles, Appendix-Los Angeles International Airport Plan, GPC Case No. 21232, Department of City Planning, May 1973

Air Transport Association (ATA), LAX Capacity Study, 1971, with 1973 update

Department of Airports, LAX Plans, Storm Drain, Drainage Areas, Drawing No. 74019-211, Los Angeles, California

Department of Water and Power, Los Angeles International Airport Maintenance and Passenger Terminal Water System, Flow and Pressure Survey

Department of Airports, Water Pollution Control Facilities: Liquid and Solid Wastes, Collection, Treatment, and Disposal, Los Angeles, California

Olson Laboratories, Inc., Los Angeles International Area, Future Street Improvements. Memo. Anaheim, California, March 12, 1974

City of El Segundo

City of El Segundo, Goals, 1972, 10 pp.

Summary: Formulation of goals for the city in preparation for work on the General Plan. Includes sections on transportation, residential, commercial, industrial, beautification, and public facilities.

Planning Department, Land Use Element, 1975, 31 pp.

Summary: Summarizes existing land use patterns, characteristics of various zones, economic factors, natural physical characteristics, goals and policies of Land Use Plan.

Planning Department, Housing Element, 1975, 30 pp.

Summary: Describes existing housing and population characteristics (data base: 1970 Census and 1974 Building Department Records).

Envicom Corporation, Conservation Element, 1975, 31 pp.

Summary: Contains an inventory of the physical environment in terms of land, hydrology, climate, air, vegetation and wildlife. The general level of environmental quality is summarized as well as planning considerations, goals and policies necessary to achieve and maintain environmental conservation.

City of El Segundo, Open Space Element, 1973, 12 pp.

Summary: Summarizes physical and demographic characteristics, description of existing open space (public and private), analysis of possible open space land, implementation of recommendation and goals.

Envicom Corporation, Public Safety and Seismic Safety Element, 1975, 75 pp.

Summary: Summarizes geologic and other natural hazards, goal and policy recommendations for the General Plan, technical research, analysis and findings regarding hazard reduction.

Urban Futures, Inc., Urbanscape Scenic Highways Element, 1975, 52 pp.

Summary: Describes concepts, goals, recommendations and policies regarding urbanscape scenic highways and corridors, specific plans, feasibility and economic considerations for implementation.

El Segundo Planning Department, Local Coastal Program, 1980 53 pp.

Summary: Describes coastal area, contains issue identification and specific plan for the coastal zone.

Alderman, Swift and Lewis, Review of the Master Plan of Sanitary Sewer Facilities Phases I and II, 1977

Summary: Review of master plan on sewer facilities written in 1967, evaluation of service area and technical appendix.

Alderman, Swift and Lewis, Water Facilities Improvements for the City of El Segundo, 1975

Summary: Contains a project description of proposed water storage reservoir, description of existing conditions, and impact analysis of project.

Development Research Associates, Economic Analysis of the City of El Segundo, 1970

Summary: Contains a city profile in terms of population, employment, land use, traffic, environmental conditions and municipal finances, as well as a projection of economic growth to 1990. Describes economic profile of city and a market demand analysis.

El Segundo Municipal Code, Chapter 19: Plats and Subdivisions, 1975, pp. 475-493

Summary: Supplementation to and implementation of the Subdivision Map Act.

El Segundo Municipal Code, Chapter 20: Zoning, pp. 515-639

Summary: Contains zoning regulations for all uses, including description of permitted uses and restrictions in residential and commercial zones.

El Segundo Municipal Code Buildings and Structures, Chapter 16, pp. 343-459

Summary: Identifies applicable building, electrical, housing, plumbing and mechnical codes and procedures.

Uniform Building Code, I.C.B.O., 1976 edition

Summary: Minimum building standards for residential uses. (1979 edition of the Uniform Building Code is anticipated to be adopted in 1981.)

Uniform Building Code, I.C.B.O., 1973 edition

Summary: Minimum building standards for commercial uses.

City of Hawthorne

R. Dixon Speas Assoc. Inc., Master Plan Hawthorne Municipal Airport, H.H.R., February, 1978

City of Hawthorne, Noise Element and Environmental Impact Report, October 1975

f Hawthorne, Seismic Safety Element and Environmental Report, October 1975

f Hawthorne, Public Safety Element and Environmental Report, September 1975

f Hawthorne, Housing Element, October 1973

rne Municipal Code, Subdivision Ordinance Title 16

rne Municipal Code, Zoning Ordinance Title 17

nglewood

f Inglewood, Land Use Element, January 1980

f Inglewood, Housing Element, July 1979

f Inglewood, Highways and Design Element, 1974

f Inglewood, Public Safety Element, 1974

Inglewood, Seismic Safety Element, 1973

Inglewood, Conservation Element, 1973

Inglewood, Open Space and Parks Element, 1973

ent of Planning and Development, Community Review Program, a Quality City, Inglewood, California, May 1972

al Landmarks and Heritage Milestones of Inglewood, nia, sponsored by Historical Society of Centinela Valley / of Inglewood, Department of Parks and Recreation

Inglewood Zoning Code

This code also includes all of the City's subdivision ions.

Building Code

nd Development Standards and Guidelines

City of Los Angeles

Department of City Planning, Citywide Plan, Los Angeles, 1974
Summary: Identifies purpose of the general and citywide plan, the land use, circulation, service systems, and environmental elements.

Department of City Planning, Housing Plan - An Element of the General Plan, Los Angeles, 1979

Summary: The principal purpose of the city's housing plan is to encourage the production of needed housing. The plan focuses on state guidelines for housing and the race of government in addressing housing needs; housing stock in Los Angeles, including a breakdown of the city's housing stock; current and future housing programs.

Department of City Planning, Fire Protection and Prevention Plan, Los Angeles, 1979

Summary: The objective of the Fire Protection and Prevention Plan is to promote fire prevention by maximizing fire safety education, minimizing loss of life and property from fire through fire prevention programs. The plan will also assist in the formulation and revision of other General Plan elements through a system of policies and programs.

Department of City Planning, Public Recreation Plan, Background Implementation Report, Los Angeles, 1979

Summary: A primary goal of the city's recreation planning process is the maintenance of a comprehensive, long-range public recreation plan. The background report evaluates tennis courts, community buildings and swimming pool facilities as Part I of a continuing recreation study.

Department of City Planning, Seismic Safety Plan, Los Angeles, 1975

Summary: The Seismic Safety Plan consists of an identification and appraisal of the seismic hazards such as susceptibility to surface ruptures from faulting, ground shaking, ground failures, or effects of seismically-induced waves such as tsunami and seickes. The plan also includes an appraisal of mudslides, landslides, and slope stability as necessary geologic hazards that must be considered simultaneously with other hazards such as possible surface ruptures from faulting, ground shaking, ground failure and seismically-induced waves.

Department of City Planning, Conservation Plan, Los Angeles, 1973

Summary: The Conservation Plan, an element of the Master Plan, objectives, policies and programs are generally aimed toward the protection of the city's natural resources. The plan outlines the objectives, policies, standards and programs, of water and forest conservation, soils, fisheries, harbors, wildlife and botanic communities, mineral resources, archaeological sites and paleontological findings, coast line erosion and air quality.

Department of City Planning, Open Space Plan, Los Angeles, June 1973

Department of Recreation and Parks, Recreation and Parks Facilities Map, Los Angeles, July 1970

Department of City Planning, Water System Plan, Los Angeles, 1969

Summary: The Water System Plan is intended to serve as a general guide for the future development of the water system facilities, and sets forth basic objectives and standards and designates general locations for the various facilities necessary to the provision of water supplies adequate to serve future demands, based on projected population and economic growth.

Department of City Planning, Public Libraries Plan, Los Angeles, 1968

Summary: A part of the Master Plan, the Public Libraries Plan is intended to serve as a general guide to concerned governmental agencies and interested citizens in the construction, maintenance and operation of public library facilities in the city. It will assist in the formulation and/or revision of other Master Plan elements which are affected by these facilities. The plan provides information to the general public concerning the extent and location of needed and proposed public library facilities and their relation to and effect upon privately owned properties.

Cultural and Historical Monuments Plan prepared by the Department of City Planning and the Cultural Heritage Board, City of Los Angeles, adopted 1969

Department of Recreation and Parks, City-Owned Power Transmission Rights-of-Way Development Plan, Los Angeles, 1968

City of Los Angeles, Bureau of Right of Way and Land, Relocation Office, Relocation Services for Homeowners and Tenants, Los Angeles, California, n.d.

Department of City Planning, Southeast Los Angeles District Plan, Los Angeles, 1980

Summary: The Southeast Los Angeles District Plan outlines the plan objective, use of the plan and the policies of the city for the Southeast Los Angeles District. The elements addressed in the plan include land use, housing, commerce, industry, safety, recreation, municipal facilities and utilities, circulation and railroads, and air quality.

Department of City Planning, West Adams-Baldwin Hills-Leimert District Plan, January 1980

The West Adams-Baldwin Hills-Leimert District Plan outlines the plan objective, use of the plan and city policies for the district. The elements addressed in the plan include land uses, circulation, service systems, public improvements, planning legislation, zoning actions, community welfare and safety and future studies.

Department of City Planning, South Central Los Angeles District Plan, Los Angeles 1979

Summary: The South Central Los Angeles District Plan outlines the plan objective, use of the plan and the policies of the city for the South Central Los Angeles District. The elements addressed in the plan include land use, housing, commerce, industry, safety, recreation, municipal facilities and utilities, circulation, physical environment, and programs.

Department of City Planning, Background Report, South Central Los Angeles District, Los Angeles, 1979

Summary: The report provides information and data on the district, the human elements and subcommittees which comprise the South Central Los Angeles District. These elements provide background on the physical setting, people, prior planning, current land use and zoning economics, housing, safety, transportation and recreation.

Gruen Associates, Inc., Crenshaw Comprehensive Community and Economic Development Program, prepared for Community Development Department-City of Los Angeles, January 1979

Summary: This study examines the greater Crenshaw District from a commercial viewpoint and outlines methods for revitalization.

Department of City Planning, Background Report, Southeast Los Angeles District, Los Angeles, 1976

Summary: The report provides information and data on the district, human elements and subcommunities which comprise the Southeast Los Angeles District. These elements provide background on the physical setting, prior planning, current land use and zoning, economics, housing safety, transportation and recreation.

Department of City Planning, Westchester-Playa del Rey District Plan, Los Angeles, 1974

Summary: The Westchester-Playa del Rey District Plan outlines the plan objective, use of the plan and city policies for the Westchester-Playa del Rey District. The elements addressed in the plan include: land use-housing, commerce, and industry; circulation-highways, freeways and streets; airport-noise abatement, airport buffers, fixed barriers, soundproofing, technological innovations, and legal restitution of responsibility.

City of Los Angeles, Community Analysis Bureau, State of the Ninth Councilmanic District, Los Angeles, California, 1973 -

City of Los Angeles, Community Analysis Bureau, State of the Sixth Councilmanic District, Los Angeles, California, 1971

City of Los Angeles Planning and Zoning Code 1978, Building News Services, Los Angeles

Summary: The Planning and Zoning Code is a comprehensive guide, encompassing general provisions, zoning, divisions of land, and other aspects of planning.

County of Los Angeles, Land Use Element, November 1980

County of Los Angeles, Housing Element, November 1980

County of Los Angeles, Transportation Element, November 1980

Los Angeles County Department of Community Development, Three Year Community Development Plan (July 1979-June 1982): Athens, Florence and Lennox, July 1979

Summary: Includes information regarding population, characteristics, income, economy, housing, public facilities, housing needs, and public facilities improvements.

Florence-Firestone Community Study, 1975-1976, 19 pp.

Summary: Describes the setting natural features, land use, circulation and public facilities. Zoning ordinances and various land use maps are provided. A neighborhood evaluation discloses information on income, housing, public facilities and services. It discusses the model neighborhood program and its impact on the community. Relates planned improvements for future development.

Westmont Community Study, 1975-1976, 21 pp.

Summary: Describes the Westmont area setting, topography, land use, circulation and public facilities. Zoning ordinances and various land use maps are provided. Evaluations of the neighborhood dealing with income employment and housing were presented. The study discusses the Westmont infrastructure of streets, public facilities and services - and education. Upcoming improvement programs were discussed for future development.

Los Angeles County Department of Community Development, Community Analysis: Westmont, March 26, 1976

Summary: This report discusses economic development, housing, social services and physical development. The report includes specific information on location, land use patterns, ethnic composition, age and sex composition, income data, housing conditions community problems, social services, vital statistics, public facilities, parks, streets, traffic storm drains, sewage disposal, water supply, natural resources, geology, seismic, and air quality.

Los Angeles County Department of Community Development, Community Analysis: Florence-Firestone, January 7, 1976

Summary: The report discusses economic development, housing, social services and physical development. The report includes specific information on location, land use patterns, ethnic composition, age and sex composition, income data, housing conditions, community problems, social services, vital statistics, transportation statistics, education statistics, public facilities, parks, streets, traffic, storm drains, sewage disposal, water supply, natural resources, geology, seismic and air quality.

County of Los Angeles, Subdivision Ordinance No. 4478

County of Los Angeles, Zoning Ordinance No. 1494

County of Los Angeles, Building Laws, Ordinances No. 2225, 2252, 2269, and 9544.

ENVIRONMENTAL DOCUMENTS

Regional

Southern California Association of Governments, Draft Regional Transportation Plan Amendment Aviation Element: Draft Environmental Impact Report, July 1980

Summary: This document contains a description of the environmental impacts of the recommended changes to the Regional Transportation Plan, as well as the impacts of other alternatives considered. The EIR includes a discussion of noise, air quality, energy, airspace, safety, natural environment, economic, urban growth and development, public services and utilities, social impacts, mobility, and ground access impacts.

Boettger, Wolfgard A., Environmental Impact Statement, Interstate Route 105, Environmental Standards Division, Inglewood, 1973

Gruen Associates, Route 105 Freeway Impact Study, 1970, 34 pp.

Summary: Contains a review of current conditions, future traffic generation and circulation system requirements and proposals.

U.S. Department of Transportation - Federal Highway Administration, Final Environmental Impact, Century Freeway-Transitway, Volumes I and II, California Business and Transportation Agency, Department of Transportation

Summary: Gives background information on study corridor, environmental setting, historical perspective and citizen participation. Alternatives were discussed for the I-105 freeway-transitway. Transportation service studies evaluate traffic problems. Evaluation of the air quality, noise, vibration, water quality, geology and energy impacts were discussed. Parks and recreation, historical and aesthetic impacts were assessed for their bearing on the study. The study also evaluates social, economic, land use, cost and implementation aspects of the area. Discusses general environmental concerns.

Los Angeles International Airport (LAX)

Department of Transportation/Federal Aviation Administration, Final Environmental Impact Statement, Volume I for Los Angeles International Airport Improvement Program, 1980

Olson Laboratories, Inc., Los Angeles International Airport - Final Environmental Impact Report, August 1978

Volume 1 - Executive Summary
Volume 2 - Description/Need for Proposed Project
Volume 3 - Physical Environmental Impacts
Volume 4 - Noise, Land Use, and Transportation Impacts
Volume 5 - Human Environmental Impacts
Volume 6 - CEQA Responses and Appendices

Northrop Corporation, Environmental Impact Study of Los Angeles International Airport, Phase I Report, prepared for Los Angeles Department of Airports, February 5, 1973

Department of City Planning, Draft Environmental Impact Report Los Angeles International Airport Plan, City of Los Angeles, September 1973

Socio-Economic Systems, Inc., Final Environmental Impact Report for the Acquisition of Property North of Los Angeles International Airport, prepared for the Los Angeles Department of Airports, 1974

City of El Segundo

Environmental Assessment Services, Draft Environmental Impact Report for Condominium Project at Imperial Elementary School Site, 1980, 70 pp

Summary: Contains a project description and environmental impact analysis. Of note, because of proximity to LAX, is the recent noise and traffic analysis.

Planning Consultants Research, Draft Environmental Impact Report for Solid Waste Transfer Station, 1980, 80 pp.

Summary: Contains a project description, environmental impact analysis and project alternatives. Includes analysis of noise and traffic.

Planning Consultants Research, Environmental Impact Report for Relocation of the Hughes Aircraft Company Corporate/EDSG Complex, 1978, 160 pp.

Summary: Details project description and impact analysis of environmental factors, traffic and circulation analysis of most significance.

City of Inglewood

Carlton Square EIR, prepared by Robert Bein, William Frost & Associates for the City of Inglewood, March 1980

Summary: This EIR analyzes a proposed project known as Carlton Square, which would combine residential, recreational, community, commercial, and management uses on the former 44.6 acre Inglewood Golf Course.

Inglewood Community Development and Housing Department, Centinela Valley Community Hospital Master Plan EIR, 1978

Summary: This EIR analyzes a two-phased expansion of the hospital.

Inglewood Community Development and Housing Department, La Cienega Redevelopment Project Expansion EIR, October 1976

Summary: This EIR anlyzes an 11.6 acre redevelopment project which will include commercial, office, and light industrial uses.

Inglewood Community Development and Housing Department, Sale of Simmons Park EIR, June 1975

Summary: This EIR examines the proposed sale of Simmons Park for the purposes of improving and expanding other parks within the city.

Inglewood Community Development and Housing Department, Daniel Freeman Hospital EIR, May 1975

Summary: This EIR focuses on the expansion of the hospital.

Inglewood Community Development and Housing Department, Morningside Park Business Action EIR, July 1974

Summary: This EIR analyzes the combined program of providing parking along with landscaping and other public improvements to upgrade and revitalize an existing business district.

Inglewood Community Development and Housing Department, In-town Redevelopment Expansion Project EIR, March 1973

Summary: This EIR analyzes the redevelopment of the 71 acre Inglewood Central Business District.

Inglewood Community Development and Housing Department, Water Quality Enhancement Project EIR, February 1973

Summary: This EIR analyzes a proposed water quality enhancement facility.

The following EIR's have been prepared by the Inglewood Community Development and Housing Department relative to the Community Development Black Grant Application:

1980-1981 - Community Development Block Grant EIR
1979-1980 - Community Development Block Grant EIR
1978-1979 - Community Development Block Grant EIR
1977-1978 - Community Development Block Grant EIR
1976-1977 - Community Development Block Grant EIR

City of Los Angeles

Department of City Planning, Air Quality Management Plan, Los Angeles, 1979

Summary: The "Air Quality Management Plan." an element of the Master Plan, addresses pollution abatement at the fundamental level of the impact of urban form on air quality. The objective of the plan is aimed at correcting the basic causes and systems of air pollution.

Department of City Planning, Environmental Data Index, Los Angeles, 1978

Summary: The "Environmental Data Index" is a citywide tabular report and map describing the geographical distribution of 30 environmental characteristics on a census tract basis. These environmental elements include: seismicity, drainage, archeological sites, ecologically significant areas, airport noise, urban density and traffic congestion.

Department of City Planning, Environmental Impact Report for the Southeast District Plan, Los Angeles, 1978

Summary: The EIR examines conditions in the Southeast Los Angeles District and the probable impacts of alternative projects. The conditions explored include: physical land-geology, seismic activity; biotic community, water quality - supply, cost, water consumption; air quality - stationary and mobile emissions, ambient quality; noise; human resources - population size and density; safety; community resources - housing characteristics, industrial profile, commercial profile, historical sites; land resources - zoning and land use; utilities; waste water; storm drains; transportation and circulation; school facilities; recreation and park facilities.

Maps include: air monitoring network; 1975, 24 hour traffic volume; public facilities.

Tables include: Total annual water sales; complete analysis of major Los Angeles water sources; air quality summaries; noise study locations; calculated quantities of pollutants entering water; Southeast Los Angeles schools; environmental health services.

Department of City Planning, State of the Environment, Los Angeles, 1977

Summary: The "State of the Environment" is a summary of the actions between 1970 and 1977, of the operating departments of the City of Los Angeles and related agencies to improve the environment most affecting the citizens of Los Angeles.

Department of City Planning, Environmental Impact Report for the South Central Los Angeles District Plan, Los Angeles, 1977

Summary: The EIR examines conditions in the South Central Los Angeles District and the probable impacts of alternative projects. The conditions examined include: physical land; biotic community; water supply and quality; air quality; land resources including land uses, utilities including water supply, electrical power, gas, wastewater, storm drains; transportation and circulation patterns; health facilities - including environmental health services; human resources - including housing characteristics.

Tables include: water - including annual sales, price per foot, analysis of sources; air quality summary; calculated number of pollutants entering receiving waters; estimated solid waste generation; traffic screenlines; physical characteristics of area schools; existing projects for capital improvement; population size and police costs; required fire flow by type of land development; number of first alarm companies; environmental health services by program; ambient noise level locations.

Department of City Planning, Draft Environmental Impact Report--West Adams-Baldwin Hills-Leimert District Plan, Los Angeles, 1975

Summary: The EIR examines the possible impacts of plan proposals on residential areas, circulation systems, commercial, industrial, land service systems uses.

Department of City Planning, Environmental Impact Report for the Westchester-Playa del Rey District Plan, Los Angeles, 1974

Summary: The EIR examines the Westchester-Playa del Rey District, it's community plans, physical setting including climate and air quality, flora and fauna; the zoning and land use. The EIR also examines in depth the problem of noise in the district and proposals for alleviating noise.

County of Los Angeles

Los Angeles County Department of Community Development, Local, State, National Historical Places by Supervisorial Districts in the Unincorporated County Community Development Areas and Participating Cities, August 25, 1980

Summary: The report is a complete compilation of all historical sites and monuments in the City and County of Los Angeles. The volume is divided into two main sections. The first section, arranged by supervisorial districts, comprises all of the historical places in both the unincorporated community development areas and participating cities of Los Angeles County. Section two, consisting of a complete list of the official landmarks in the City of Los Angeles, is designed to present a comparative view of the overall historical places in both the city and county levels of governmental jurisdiction.

Guide for Preparing Environmental Impact Assessment Reports, U.S. Department of Transportation, Federal Aviation Administration, Airport AWE-600, Western Region, July 1974

CML Systems, Inc., Airports and Their Environment: A Guide to Environmental Planning, Washington, D.C.: U.S. Department of Commerce, National Technical Information Service, September 1972

National Environmental Policy Act of 1970, Public Law 91-190

California Environmental Quality Act of 1970

City of Los Angeles, Guidelines for Implementation of the California Environmental Quality Act of 1970

Pierce, W.L. and D. Pool, "General Ecology of the Dunes." In "The Fauna and Flora of the El Segundo Sand Dunes." Bulletin of the Southern California Academy of Sciences, Volume XXXVIII, Part 3, 93-97 pp., September-December 1938

von Bloeker, J.C. Jr., "Amphibians and Reptiles of the Dunes." In "The Fauna and Flora of the El Segundo Sand Dunes." Bulletin of the Southern California Academy of Sciences, Vol. XLI, Part 1: 2938, January- April, 1942

von Bloeker, J.C. Jr., "Birds of El Segundo and Playa del Rey." In "The Fauna and Flora of the El Segundo Sand Dunes." Bulletin of the Southern California Academy of Sciences, Volume XLII, Part 1: 1-30; January-April 1943 and Part 2: 90-103, May-August 1943

Comstock, J.A., "Two New Phaloniid Moths." In "The Fauna and Flora of the El Seungdo Sand Dunes." Bulletin of the Southern California Academy of Sciences, Volume XXXVIII, Part 2: 112-118, May-August 1939

Pierce, W. Dwight, El Segundo Sand Dunes Biological Survey Summary of Data by Species. Circe 1938-1940 (looseleaf notes held by the L.A. County Museum of Natural History)

Rozaire, Charles E. and Russell E. Belous, Preliminary Report on the Archaeology of the La Ballona Creek Area, Los Angeles, California, manuscripts on file at the UCLA Archaeological Survey, 1950

Yerkes, R.F., T. H. McCulloh, J. E. Schoelhamer and J. G. Vedder. Geology of the Los Angeles Basin - An Introduction, U.S. Geological Survey Professional Paper 420-A, 1965

Ziony, J. I., et al. Preliminary Geologic Environmental Map of the Greater Los Angeles Area, California, U.S.G.S. Reactor Technology, T.D. - 25363, 41 pp., 1970

South Coast Regional Commission, Coastal Land Environment, April 1974

Bird Hazards to Aircraft, AC No. 150/5200-3A, March 2, 1972

Northern Research and Engineering Corporation, Computer Program for the Air Quality Analysis of Airports, Cambridge, Massachusetts, Report No. 11672, 1971

Rote, D. M., I. T. Wang, L. Wangen, J. Pratapas, L. Leffler, and G. Cato, "Monitoring and Modeling of Airport Air Pollution," paper presented at the International Congress of Transportation Conference, Washington, D.C., June 1972

U.S. Environmental Protection Agency, An Air Pollution and Impact Methodology for Airports, APTD-1470, January 1973

Environmental Protection Agency, Aircraft Emissions: Impact on Air Quality and Feasibility of Control, 1973

Los Angeles County Air Pollution Control District, Study of Jet Aircraft Emissions and Air Quality in the Vicinity of the Los Angeles International Airport, April 1971

Environmental Protection Agency, Aircraft Emissions: Impact on Air Quality and Feasibility of Control, Washington, D.C., 1973

Northern Research and Engineering Corporation, The Potential Impact of Aircraft Emissions upon Air Quality, Cambridge, Massachusetts, Report No. 1167-1, December 29, 1972

Advisory Group For Aerospace Research and Development, Atmospheric Pollution by Aircraft Engines, Conference Proceedings No. 125, London

Bogden, Leonard and H. T. McAdams, Analysis of Aircraft Exhaust Emissions Measurements, Cornell Aeronautical Laboratory, Inc., Col. No. NA-5007-K-1, Content No. 68-04-0040, October 15, 1971

McAdams, H.T., Analysis of Aircraft Exhaust Emission Measurements: Statistics, Cornell Aeronautical Laboratory, Inc., Col. No. NA-5007-K-2, Content No. 68-04-0040, November 19, 1971

Northern Research and Engineering Corporation, Nature and Control of Aircraft Engine Exhaust Emissions, Report Number 1134-1, 1968

ional

Southern California Association of Governments, "Airport Access, An Issue Paper," undated

Angeles International Airport (LAX)

Department of Airports, Los Angeles International Airport - Ground Access Study, Final Environmental Impact Assessment Report (EIAR/EIR), Los Angeles, September 1978

Summary: This is part of an environmental impact statement for major airport improvements. The study provides a good background on how local governments can approach access problems, and reviews many potential solutions.

Department of Airports, Los Angeles International Airport Traffic Comparison, January 1974 to June 1977, Los Angeles

Wilbur Smith & Associates, Central Terminal Complex Traffic Study, Los Angeles International Airport, Los Angeles, May 1973

Wilbur Smith and Associates, LAX Ground Transportation Characteristics, May 1973

Trans World Airlines, Los Angeles International Airport Auto Traffic Congestion, April 1973

Hulburt, R. L., A Study of Los Angeles International Airport Capacity under a Procedure of Opposing Traffic Flow, Inglewood, October 1, 1970

Department of Traffic, Westchester-Los Angeles International Airport Traffic Study 1967-1985, Los Angeles, October 15, 1969

Tillman, D.C., "Problems of Ground Transportation to Airports." Paper presented at the 26th Annual California Transportation and Public Works Conference, Oakland, California, March 29, 1974

Senate Select Committee on Airport Access, Feasibility Study of Improved Access to Los Angeles International Airport, May 21, 1973

Department of Airports, High Speed Ground Access Study, Los Angeles International Airport, Los Angeles, April 1972

Ross, Howard R., Access to Airports and Aircraft: Interfaces with Urban Transportation, prepared for Stanford Research Institute Research and Redevelopment Program

City of El Segundo

Urban Futures, Inc., Circulation and Transportation Element, 1975, 106 pp.

Summary: Describes the city's circulation networks and transportation volumes. Reviews transportation and related problems. Contains recommendations, goals and policies, a circulation and transportation plan, and background information. Projects traffic to 1995.

City of Inglewood

Voorhees, Alan M., Traffic Study for the In-Town Redevelopment Project, May 1980

Summary: This study examines the traffic and parking requirements for the seven in-town possible redevelopment projects.

Barton-Ashman, Southeast Inglewood Neighborhood Traffic Management Study, March 1980

Summary: This study details existing neighborhood traffic patterns and problems.

J. H. K. and Associates, Arbor Village Traffic Study, 1979
Summary: This study was prepared to examine neighborhood traffic problems and patterns.

E. F. S., Centinela Hospital Traffic Study, 1975

Summary: The purpose of the study was to examine traffic and parking impacts created by the expansion of Centinela Hospital.

Voorhees, Alan, City of Inglewood, Areawide Topics Planning Study, June 1973

Summary: This study was prepared to examine traffic operation improvements made on a systematic basis in accordance with the areawide plan.

Cromlin, Bob and Associates, Civic Center Traffic Study, 1970

Summary: The purpose of the study was to examine the traffic and parking requirements of the Civic Center Development.

City of Los Angeles

Department of City Planning Highways and Freeways Plan, August 1979

Summary: The Highways and Freeways Plan consists of a map outlining the parkways and highways within the City of Los Angeles.

City Department of Transportation, Western Area Transportation Study 1977-1995, Los Angeles, 1980

Summary: The "Western Area Transportation Study 1977-1995" is a subregional transportation planning analysis of the western portion of the City of Los Angeles.

Transportation Planning Division, Westchester-Playa del Rey District Plan, Department of Traffic, Los Angeles, April 27, 1972

County of Los Angeles

Los Angeles County Road Department, East Central Area Traffic Study 1969-1985, Volumes I, II, and III, June 1974

Summary: This report consists of three volumes. The first volume provides a comprehensive non-technical description of the study and includes the conclusions and recommendations resulting from the study analysis. Volume II contains the technical analysis and details utilized in arriving at the study results. The land-use data is presented in Volume III. The study determines the highway traffic demands of the East Central area by 1985, the adequacy of the existing highway network to handle those demands, and the adequacy of a fully developed study network to handle those demands.

Miscellaneous

Federal Aviation Administration, Airport Ground Access, Washington, D.C.: U.S. Department of Transportation, 1978.

This is a report to the U.S. Senate discussing the nature of the ground access problem. The report summarizes the findings of studies listed in this bibliography. A telephone survey of airport managers was conducted to estimate the extent of the access problem. Brief reviews of access problems at 14 airports are included.

Gorstein, Mark, Airport Access Case Studies Boston - Los Angeles - Philadelphia: U.S. Department of Transportation, 1977. (DOT-TSC-FA632-WP-76-4).

This report emphasizes an analysis of the role of airport access in the metropolitan transportation planning process. The analysis was based on discussion with officials and on prior reports, no new data collection was undertaken. The report reached the following conclusions:

- The existing airport planning process can arrive at compromises to conflicting interests if the differences are not too great; however, the process cannot work unless planning is desired at the regional and local level. It is participatory, not mandatory.
- Airport access improvements face increasing competition from other public and community requirements.
- Forecasts on which to base planning are especially difficult to make because they involve both vehicular traffic and air travel predictions.

deNeufville, Richard, Airport Systems Planning: A Critical Look at Methods and Experience, MIT Press: Cambridge, Mass., 1976.

This study reviews the nature of access travel and the more commonly proposed solutions. It concludes that, although it is difficult in the abstract to establish in advance what the details of an access program for any specific airport should be, experience suggests that the best overall policy is to rely on automobile transport, private or collective, as the least expensive means to provide access to the airport for most people.

Paullin, Robert L., The Airport/Urban Interface, Washington, D.C.: U.S. Department of Transportation, 1974 (DOT-TST-75-12)

Ground access was analyzed by an ad hoc working group, with the objective of recommending appropriate Departmental actions to improve ground transportation to airports where deemed necessary. The group reviewed prior studies, current Departmental authority and responsibilities, and ongoing planning and capital funding programs. The report used prior studies as technical input; no new technical work was performed; however, institutional constraints were addressed.

Wilbur Smith & Associates, Airport Access/Egress Systems Study. Washington, D.C.: U.S. Department of Transportation, 1978. (DOT-TSC-OST-73-32)

In this study, 34 of the United States' airports, each of which is projected to serve more than 2 million annual enplaned passengers annually by 1980, were studied to ascertain the types and status of their access and agress problems. The study included both on-and-off airport systems.

Data collection techniques included literature review, personal interviews with appropriate airport representatives and a questionnaire sent to each airport. Supplementing these data sources were interviews with airline personnel, airport representatives, and Federal officials.

Ground access sufficiency was measured by a formula relating traffic demand to enplaned passengers and employees. Capacity was measured by examination of highway access at airport access roads. No specific counts of non-airport traffic and public transportation modes were made.

The report concluded that:

- Origins of air travelers presently oriented to the airports are too dispersed to justify economically rapid transit corridor investments;
- Limited availability or use of primary or secondary access/egress routes to most airports places substantial demand upon a single road system;
- Too much off-street parking is being provided in the central terminal area in relation to the capacity of the roads systems to serve same; and
- Too much vehicular activity is concentrated at or near the curbs in the terminal areas.

L. Brown, et al, A Survey of Airport Access Analysis Techniques - Models, Data and a Research Program, Washington, D.C.: U.S. Department of Transportation, 1972. (DOT-TSC-OST-72-17)

This study reviewed current techniques for analyzing airport access. It concluded that:

- Solutions to the airport access problem should be developed within the framework of the general urban transportation problem.
- The airport access problem deserves special consideration not only because of its relative importance to the urban economy, but also because of the travel features that distinguish it from other urban trips.
- The uniqueness of these features pose special problems in the areas of analysis, design, and operation.

Comsis Corporation, Airport Access Study. Washington, D.C.: FHWA, U.S. Department of Transportation, 1972

This study was initiated by the FHWA Urban Planning Division to develop a method for assessing the impact of airport-oriented vehicular trips on highway facilities. This was accomplished using existing urban transportation study data files and computer programs available from the Federal Highway Administration. Four urbanized areas were selected: Birmingham, Boston, Louisville, and Minneapolis-St. Paul.

The study concluded that data files and computer programs common to every urban transportation study can be used to generate information to measure the impact of airport-oriented travel accounts for only 0.55 percent of total vehicles trips and 0.80 percent of total vehicle-miles of travel (average of four study areas).

The study was limited in that it did not consider public transportation or peaking characteristics, and used old data (1958-1965).

NOISE REPORTS

Regional

Northrop Corporation, Los Angeles County Airports Noise Study Part I - Problem Definition, November 15, 1972

City of El Segundo

"Noise and Vibration Regulations," El Segundo Municipal Code, Chapter 9.06, 1978, 13 pp.

Summary: Details city noise and vibration regulations, including noise level standards for interior space (45 dba) and exterior environs based upon zone classification (45-70 dba). Includes scale to adjust standards based on duration of noise level.

McDonnell Douglas Astronautics Company, Noise Element, City of El Segundo General Plan, 1976, 33 pp.

Summary: Contains community goals and objectives pertaining to the control of environmental noise, including guidelines to minimize noise conflicts. Classification of various land uses as sensitive, conditionally sensitive or non-sensitive and standards for these uses (interior residential noise standard of 55 ldn and exterior standard of 65 ldn).

Contains noise contour map (July 1975) and maps of present and future noise impacted zones. Analysis points out that the airport, identified as the most significant noise source of concern, is required by the California Administrative Code to reduce the area of impact around the airport to zero and that between 1972 (adoption of Resolution 7467 by the Los Angeles Board of Airport Commissioners re: FAR Part 36 requirements) and 1975, the area of impact has increased rather than decreased. Included as city goals and policies are:

- Allocation of noise impact mitigation costs to the agency responsible for the noise incompatibility.

- Work with the City of Los Angeles, Department of Airports to reduce the noise impacted area around LAX to zero.

McDonnell Douglas, Noise Element Background Report, 1976, 121 pp.

Summary: Augmentation and clarification of the methodology, rationale, and approach for conclusions reached in the Noise Element.

- Includes analysis of various measurement terms used to describe noise. Assessment of El Segundo's noise environment, including a table (p. 39) describing the duration of exposure of 90 dba and greater for various locations within the community.

Donley-Bundy & Associates, Aircraft Noise Abatement Program: A Feasibility Study for the El Segundo Unified School District, 1976, 42 pp.

Summary: Details the severity of aircraft noise impact upon school facilities, methods of reducing interior noise levels, and costs for achieving the recommended noise goals.

Included is an acoustical analysis prepared by Paul S. Veneklasen and Associates recommending 50 dba as the goal for interior sound levels.

City of El Segundo, Community Noise, A Public Concern, 10 pp.

Summary: General background statements regarding noise facts, noise policies, general plan, community involvement.

City of Inglewood

Inglewood Community Development and Housing Department, A Demonstration Project to Solve a Critical Urban Noise Problem in Inglewood, California, February 1980

Summary: This project identifies a comprehensive program to recycle a major residential neighborhood which is heavily impacted by jet noise.

City of Inglewood, Noise Element, 1972

Inglewood Community Development and Housing Department, Community Noise Study, August 1972

Summary: This report correlates the noise data gathered at 35 locations within the city during a 24-hour chart recording period.

City of Los Angeles

Department of City Planning, Noise Element, Los Angeles, 1975

Summary: The Noise Element Plan includes definitions, objectives, policies, standards, criteria, programs and maps which are to be used when decisions are made affecting the noise environment within the City of Los Angeles.

County of Los Angeles

Los Angeles County Department of Regional Planning, Noise Element, October 1974

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Federal Aviation Administration, FAR Part 36 Compliance Regulation - Final Environmental Impact Statement, November 10, 1976

U.S. Environmental Protection Agency, Noise Standards for Aircraft Type Certification (Modifications to FAR Part 36), August 2, 1976

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Research Services Division, Center for Political Research, Federal Policy on Noise Pollution, September 1971

Hydrospace Research Corporation, Aircraft Noise Type Certification Orientation Session, October 1970

U.S. Environmental Protection Agency, Noise Technology Research Needs and the Relative Roles of the Federal Government and the Private Sector, Office of Noise Abatement and Control, Washington, D.C., May 1979

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U.S. Environmental Protection Agency, Federal Research, Technology & Demonstration Programs, Federal Interagency Aviation Noise Research Panel, Office of Noise Abatement and Control, Washington, D.C.

Federal Aviation Administration/Department of Transporation, FAA Aviation Noise Symposium - May 10-11, 1978, Airport

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Hurdle, P., et al., "Jet Aircraft Noise in Metropolitan Los Angeles Under Air Route Corridors," The Journal of the Acoustical Society of America, 50(1):32-39, 1971

Brankch, M. D., R. D. Beland, et al., Outdoor Noise and the Metropolitan Environment (case study of Los Angeles with special reference to aircraft), Los Angeles Department of City Planning, 1970

The George Washington University, Laws and Regulations Schemes for Noise Abatement, prepared for U.S. Abatement and Control, Washington, December 31, 1971, NT1D300.4

Lane, S. R., Measured Jet Noise Compared to California Noise Codes and Health Criteria, 1973

Summary: Contains calculations of CNEL from peak dba noise levels at LAX and compares California airport noise limits to noise levels measured at LAX.

U. S. Environmental Protection Agency, Public Health and Welfare Criteria for Noise, July 1973

The National Bureau of Standards, Fundamentals of Noise: Measurement Rating Schemes and Standards, prepared for U.S. Environmental Protection Agency, Office of Noise Abatement and Control, Washington, December 31, 1971, NT10300.15

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Department of Planning, LAX Airport/Land Use Planning Study Phase I Report: Short Term Noise Abatement Options, City of Inglewood, March 1978, 23 pp.

Summary: Analyzes specific operational modifications and the resultant changes to noise impacted areas for entire airport area. Correlates the amount of residential land exposed to 65-75 and 75+db CNEL with 19 operational strategies. Graphs, maps, and written descriptions.

Mann, P. Patrick, LAX Airport/Land Use Planning Study Phase 2 Interim Report: Long Term Noise Abatement Options, October 1978, 50 pp.

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TASK 1.07

UPDATE OF NOISE REGULATION POLICIES

APRIL 1981

Prepared by: Los Angeles City Department of Airports

For Information Call: Jeff Pappas - Noise Abatement (213) 646-9410

FORM GEN 160 (REV. 2-75)

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: April 20, 1981 File No. 6207

To: LAX ANCLUC Airport Operations Technical Committee

From: W. V. Collins

Subject: Task 1.07 Update

As promised during an earlier meeting, what follows is a more comprehensive listing of the policies still in effect that concern aircraft noise at LAX.

I. City of Los Angeles (Copies Attached)

1) BOAC Motion in Minutes (October 7, 1959).

This Motion represents one of the earliest BOAC actions dealing with noise at LAX. It consists of three provisions pertaining to jet engine maintenance procedures as follows:

a) "There will be no wet or dry trim of jet engines . . . . between the hours of 2200-0700 unless adequate sound suppression devices are used."

b) "Filter change tests will be allowed during these hours provided the engine run-up does not exceed three minutes."

c) "The term 'adequate sound suppression devices' means any facility which will reduce the noise from jet engine run-ups to approximately 60 perceived noise decibels at the perimeter of the airport."

2) BOAC Motion in Minutes (October 15, 1959).

Provides that "no easterly takeoffs shall be made by jet aircraft between the hours of 2200-0700 unless the wind component parallel to the centerline of the runway is 10 knots or greater."

3) BOAC Resolution #1637 (July 27, 1960).

Expresses BOAC support of a request made by the City of Inglewood to the FAA. This request asks that certain restrictions (similar to the BOAC Motion in Minutes of 10/15/59) be imposed on jet aircraft take-offs to the east.

4) BOAC Resolution #1856 (December 20, 1961).

This Resolution "earnestly petitions the FAA to implement the recommendations made by President Kennedy's Task Force" on National Aviation Goals. This task force specifies objectives to be reached in order to deal with the problem of jet noise.

5) BOAC Resolution #4294 (August 2, 1967).

Authorizes expenditure of $10,000 in support of a joint study on aircraft noise being done by the ATA and the Aerospace Industries Association.

6) BOAC Resolution #4411 (October 18, 1967).

Authorized award of a contract to Norman L. Pedersen, architect, and Wyle Laboratories of El Segundo "for the development and implementation of a pilot program to acoustically treat residential properties in selected locations adjacent to LAX."

7) BOAC Resolution #4557 (February 21, 1968).

Provided the go-ahead to install the acoustical materials specified in the contract mentioned in item #6 above.

8) BOAC Resolution #5120 (February 26, 1969).

Authorizes the General Manager to execute agreements with 21 homeowners whose properties are to be acoustically treated by Wyle Laboratories.

9) BOAC Resolution #5227 (May 21, 1969).

This Resolution expressed BOAC approval to help finance an experimental program to determine the feasibility of acoustically-treating school rooms within various school districts around LAX.

10) BOAC Resolution #5456 (October 22, 1969).

Expresses the BOAC desire that supersonic transports be developed in "a manner to enable it to operate from existing civil airports."

11) BOAC Resolution #5619 (March 18, 1970).

Established procedures to be followed concerning gate holds and engine run-ups for maintenance purposes.

12) BOAC Resolution #5669 (April 8, 1970).

Authorized the "preparation of plans and specifications for an aircraft noise monitoring system for LAX."

13) BOAC Resolution #5974 (October 21, 1970).

Authorized the expenditure of $8,800 to do a feasibility study pertaining to soundproofing classrooms at St. Bernard's School in Playa Del Rey.

14) BOAC Resolution #6448 (June 30, 1971).

Advises that no additional airline service is presently desired at LAX.

15) BOAC Resolution #6579 (September 1, 1971).

Revised certain portions of Resolution #6448 (no. 14 above) by stating that new international carriers already certificated into LAX shall be permitted to operate in and out of that airport providing they make cooperative agreements with existing carriers for the joint use of terminals and other facilities (in order to not place excessive stress on those facilities).

16) BOAC Resolution #6946 (March 15, 1972).

Official BOAC statement that LAX has a noise problem.

17) BOAC Resolution #7356 (October 18, 1972).

Recommended a contract be awarded to Cambridge Collaborative to determine the effectiveness of a sound barrier along the north side of LAX.

18) BOAC Resolution #7483 (December 20, 1972).

Expressed BOAC support of the proposed FAA aircraft sound description system (ASDS).

19) BOAC Resolution #7484 (December 20, 1972).

Affirms BOAC approval of Sections 4, 5, 6, 8 and 9 of a Joint Policy Statement on airport noise at LAX issued December 1, 1972 by various elected officials from El Segundo, Inglewood, Lennox, Playa Del Rey and Westchester.

20) BOAC Resolution #7484-A (December 20, 1972).

Recommends development of appropriate legislation to achieve stronger methods for development of compatible land use surrounding LAX.

21) BOAC Resolution #8262 (April 4 1974).

Requests the City of Los Angeles to join the BOAC in urging Congress to amend the Noise Control Act of 1972 to specify July 1, 1974 as the deadline by which the EPA must submit proposed regulations for the control of aircraft and airport noise to the FAA, and to further specify December 1, 1974 as the date by which the FAA must adopt these regulations.

22) BOAC Resolution #8372 (June 7, 1974).

Originally adopted as Resolution #7467 (December 20, 1972), this Resolution revises and clarifies the five-point program to reduce noise. Among other things, it includes the over-ocean operations procedures to be used from midnight to 6:30 a.m.

23) BOAC Resolution #8661 (October 30, 1974).

Reaffirms the BOAC desire that supersonic aircraft be required to meet FAR Part 36 noise criteria before conducting any further flights within the United States.

24) BOAC Resolution #8854 (February 24, 1975).

Awarded a $237,617 contract to EG&G Analytical Services Center, Inc. for the fabrication and installation of a fixed aircraft noise monitoring system at LAX. This system subsequently commenced operation effective January, 1976.

25) BOAC Resolution #8884 (February 24, 1975).

Directs DOA management to prepare a report that encompasses the following:

a) The feasibility of the Los Angeles County Regional Planning Commission acting as the Airport Land Use Commission for LAX.

b) Possible legislative and administrative solutions to the problem of airport area-wide land use.

c) The feasibility of establishing an area-wide supervisory council so as to encourage and promote compatible land use within the areas.

26) BOAC Resolution #9022 (April 28, 1975).

Opposes the use of LAX for any regularly scheduled service or future flights of supersonic transports unless and until it can be established that said aircraft can meet the requirements of FAR Part 36.

27) LAX Aircraft Noise Abatement Procedures (May 13, 1975).

This document explains the informal noise abatement procedures to be followed by aircraft in flight, as well as the airport's maintenance restrictions. Many of the procedures contained in this document were established earlier by Resolutions #5619 and #8372.

28) BOAC Resolution #9156 (June 23, 1975).

Authorized payment of $19,213,117 to five different school districts adjacent to LAX. The purpose of this payment was to settle the litigation that arose regarding the cost of soundproofing classrooms against aircraft noise resulting from operations at LAX.

29) BOAC Resolution #9216 (July 21, 1975).

Memorializes the FAA to implement the terms of Assembly Joint Resolution No. 38. This Joint Resolution seeks to require "at the earliest possible date

the installation of sound-absorbing material retrofit on transport category aircraft in order to reduce the noise levels of such aircraft." It also seeks to require two-segment procedures in order to reduce jet noise impact.

30) BOAC Resolution #9470 (November 5, 1975).

The "LAX Noise Abatement Policy Statement". This Resolution specifies all of the various programs (FAR Part 36, in-flight controls, land acquisition, etc.) supported by the BOAC in order to achieve a zero noise impact. It also specifies (among other things) proposed future actions to reduce noise.

31) BOAC Resolution #9709 (March 1, 1976).

Specifies a six-point program to "assist in the development of airport compatibility with the areas surrounding the airport." The six points are as follows:

a) Development of a Federal goal for removing from the fleet non-noise certificated aircraft by, hopefully, 1985 at the latest.

b) Development of a single Federal standard for determining noise impact.

c) Development of a Federal legislative program requiring development by an airport proprietor of an operating plan for an airport that has been determined to by impacted by the Federal Noise Standard.

d) Airlines using an airport would be required to advise the FAA how they intend to meet the requirements of the operating plan.

e) State legislation will establish a regional agency to help meet land-use goals.

f) A Federally financed program shall be established to assist the State Regional Agency in achieving land-use capability goals.

32) BOAC Resolution #10281 (November 29, 1976).

Expresses BOAC support that the U.S. Department of Transportation consider using federal funds to assist the airlines retrofit or replacement programs in order to produce quieter aircraft.

33) BOAC Resolution #10467 (March 14, 1977).

Requested DOA management to "coordinate the activities of the State Government, the County Government, the Regional Planning Authority acting as the Airport Land Use Commission, the City of El Segundo and the City of Inglewood in terms of trying to develop a constructive program of legislation and producing a coordinated effort with regard to the State Noise Law."

34) BOAC Resolution #10469 (March 14, 1977).

Adopts the position that Title I of House Rule 4539 be amended so that the airport noise compatibility program be prepared by the local community (working in conjunction with state and regional planning authorities) instead of the airport operator.

35) BOAC Resolution #10904 (December 5, 1977).

Established BOAC support of proposed Federal level noise and sonic boom restrictions pertaining to supersonic aircraft.

36) BOAC Resolution #10909 (December 12, 1977).

Authorized payment of $70,900 for the soundproofing of the Westchester Public Library.

37) BOAC Resolution #11172 (June 5, 1978).

Transferred from the Department of Library to the Department of Airports an airspace easement pertaining to the Westchester Public Library.

38) BOAC Resolution #11203 (June 19, 1978).

Expressed BOAC support that the deadline for retrofitting or replacement of commercial jet engines remains January 1, 1985, instead of being extended to 1990 as proposed by Senator Cannon.

39) BOAC Resolution #11280 (July 24, 1978).

Established BOAC support of proposed amendments to the State of California CNEL regulations.

40) BOAC Resolution #11324 (September 11, 1978).

Negative Declaration for the proposed LAX Noise Control Regulation.

41) BOAC Resolution #11650 (May 7, 1979).

The LAX Noise Control Regulation (subsequently made law as City of Los Angeles Ordinance No. 152,455).

42) BOAC Resolution #11781 (August 6, 1979).

Authorization to negotiate a contract with the County of Los Angeles to provide the necessary coordinating and planning services to conduct an ANCLUC study.

43) BOAC Resolution #11953 (January 14, 1980).

BOAC supported the Conference Report identified with the Aviation Safety and Noise Abatement Act of 1979.

II. State of California

California Administrative Code - Title 21, Chapter 2.5, Subchapter 6 (effective in its original form December 1, 1971).

This law specifies the allowable CNEL limits for all California airports.

III. Federal Policies

1) Federal Aviation Regulation Part 36 (effective December 1, 1969).

This FAR established procedures to be followed in order to certify aircraft as being in compliance with either Stage 1, Stage 2 or Stage 3 noise limits.

2) U.S. Department of Transportation, FAA Aviation Noise Abatement Policy (November 18, 1976).

This statement clarified and updated the FAA's position regarding the nature of aircraft noise, its extent, and responsibilities of all parties concerned to reduce the aviation noise impact in the United States.

3) Federal Aviation Regulation Part 91, Subpart E (effective January 24, 1977).

This Subpart specifies the time phased compliance schedule to be followed by turbojet aircraft (weighing more than 75,000 lbs.) in order to achieve compliance with the Federal Policy (2) above.

4) Aviation Safety and Noise Abatement Act of 1979.

Among other things, this Act extended the provisions of FAR Parts 36 and 91 to include foreign air carriers and provided exemptions for two-engine aircraft with 100 seats or less until January 1, 1988.

5) Proposed Federal Aviation Regulation Part 150 (January 26, 1981).

This proposed FAR (not yet adopted as of this date) hopes to govern the development and submission of an airport operator's ANCLUC program. It attempts to implement portions of Title I of the aforementioned Aviation Safety and Noise Abatement Act of 1979.

Jeff Pappas
for W.V.C.

WVC:JP:mw

TASK 1.09

INVENTORY NOISE LITIGATION DOCUMENTS

MARCH 1981

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TASK 1.09 INVENTORY NOISE LITIGATION DOCUMENTS

In the past thirty-five years, three aircraft noise cases have been decided by the United States Supreme Court which constitute the foundation upon which the lower courts have determined that the airport proprietor is responsible (and perhaps, therefore, empowered to impose certain noise abatement procedures) for certain consequences of aircraft noise. They are Causby v. United States,[1] Griggs v. County of Allegheny,[2] and City of Burbank v. Lockheed Air Terminal[3]. All three opinions were written by Justice William O. Douglas.

In United States v. Causby, decided in 1946, military aircraft repeatedly passed over a chicken farmer's land at altitudes of 83 feet. The noise from these aircraft was sufficient to destroy the residential and commercial value of his land. The Supreme Court agreed with Mr. Causby's contention that his property had been taken by the Federal Government without compensation in violation of the Fifth Amendment[4]:

> The airspace, apart from the immediate reaches of the land, is part of the public domain. We need not determine at this time what these precise limits are. Flights over private land are not a taking, unless they are so low and so frequent as to be a direct and immediate interference with the enjoyment and use of land.[5]

While Causby was not the last word on the parameters of federal liability for aircraft noise 6/, the general concept enunciated in Causby was extended in Griggs to include local airport proprietors under the Fourteenth Amendment, not the FAA. The Griggs Court reasoned that the airport proprietor was responsible for acquiring sufficient land adjacent to the airport, and if he failed to perform that function, the proprietor was liable for the resulting aircraft noise damage which amounted to a "constitutional taking." 7/ Justice Douglas set the tone for airport operator liability by stating that "[R]espondent in designing it [the airport] had to acquire some private property. Our conclusion is that by constitutional standards it did not acquire enough." 8/

Eleven years after Griggs, the Supreme Court, decided City of Burbank v. Lockheed Air Terminal case. 9/ In 1973, after reviewing the provisions of the Federal Aviation Act of 1958, the Noise Control Act of 1972, and the regulations enacted pursuant to it, the Supreme Court speaking through Justice Douglas stated in City of Burbank v. Lockheed Air Terminal, Inc.:

> "That act [The Noise Control Act of 1972] reaffirms and reinforces the conclusion that FAA, now in conjunction with EPA, has full control over aircraft noise, preempting state and local control." (emphasis added).

Justice Douglas continued by stating that while the:

> "[C]ontrol of noise is of course deep seated in the police powers of the state. . . . The pervasive control vested in the EPA and in the FAA under the 1972 Act seems to us to leave no room for local curfews or other local controls." (emphasis added).

The Court did not set forth "the ultimate remedy for the aircraft noise which plagues many communities and tens of thousands of people . . . ." 10/ However, the Court hinted that the remedy might be found in the procedures adopted in accordance with the Noise Control Act of 1972, the procedures involved in the implementation of various rules and regulations relating to the control of aircraft noise. The Court noted that the Administrator of the FAA had already imposed regulations relating to takeoff and landing procedures, runway preferences, and noise standards which aircraft must meet as a condition to type certification. Finally, the Court emphasized that "[a]ny regulations adopted by the Administrator [of the FAA] to control noise pollution must be consistent with the 'highest degree of safety'." The interdependence of these factors the Burbank Court concluded "requires a uniform and exclusive system of federal regulation if the congressional objectives underlying the Federal Aviation Act are to be fulfilled." 11/

The rationale of the Burbank decision is that the delicate balance between aircraft safety and efficiency mandated by the Federal Aviation Act requires a uniform and exclusive

system of federal regulation. The Burbank decision suggests that the ultimate remedy for noise impacted communities, while not known, lies with the procedures to be adopted under the Noise Control Act of 1972.

In short, the Burbank decision held that the Federal Aviation Act of 1958 preempts, and thus prevents a non-airport proprietor (the City of Burbank) from regulating or controlling aircraft in flight. 12/

Notwithstanding the lack of specific Supreme Court support, there has been federal, executive and judicial reliance on what has become known as the "proprietor exemption" to Burbank's preemption decision as a result of Footnote 14, contained in Burbank. 13/ Unfortunately, though the Supreme Court clearly decided the specific preemption issue in Burbank, it did not resolve all issues, particularly the controversy regarding proprietor-municipality powers.

An early attempt to resolve some of the issues came in Air Transport Ass'n v. Crotti in which a 3-judge District Court opined that since Griggs establishes that an airport proprietor is responsible for "the consequences which attend his operation of a public airport" his "right to control the use of the airport is a necessary concomitant, whether it be directly by state police power or his own initiative." 14/

In addition, Footnote 14 was utilized to declare that such proprietor action is an exception to the preemption rule. 15/ Thus, the Griggs-supported rationale enabled the court to sustain California statutory community noise equivalent levels (CNEL's) and a public airport's right to select the type of air service it desires. 16/ However, the same court also cited Burbank to strike down California's single event noise exposure levels (SENEL's) because they "attempt(s) to regulate noise levels occurring when an aircraft is in direct flight" which is an "unlawful exercise of police power into the exclusive federal domain of control over aircraft flights and operations, air space management and utilization in interstate and foreign commerce." 17/

Under what circumstances an airport proprietor might intrude into the federal domain was determined to be a thorny question as aptly expressed by Judge Peckham in National Aviation v. City of Hayward:

> Thus, this court finds itself caught on the horns of a particularly sharp dilemma: If on one hand, we follow the dicta in footnote 14 of the Burbank opinion, which is intended to comport with the court's holding in Griggs, we will severely undercut the rationale of Burbank's finding of preemption. If on the other hand, we disregard the proprietor exception as dicta in order to fully effectuate the Burbank rationale, we impose upon airport proprietors the responsibility under Griggs for obtaining the requisite noise easements, yet deny them the authority to control the level of noise produced at their airports. 18/

Hayward involved an action brought by four airplane operators at the Hayward Municipal Airport to declare unconstitutional an ordinance enacted in the City's capacity as Airport Proprietor that prohibited aircraft exceeding certain noise levels from taking off between 11 p.m. and 7 a.m. In harmonizing Burbank and Crotti, the Court held that preemption did not foreclose the enforcement of the Hayward ordinance in view of the fact that Congressional purpose and intent was only to preclude a a municipal authority from enacting police power regulations regarding airport noise at an airport and did not preclude an airport from acting as a proprietor from taking steps to exclude aircraft on the basis of noise considerations. Regarding preemption, Judge Peckham said:

> If Justice Douglas' comments regarding the need for a[n] uniform and exclusive system of federal regulation' prove correct. [,] Congress and the FAA can take the appropriate steps to provide such a regulatory system. However, at the present time, Congress and the FAA do not appear to have preempted the area, and therefore, the City of Hayward, as proprietor of Hayward Air Terminal, cannot be enjoined. . . . 19/

The Court also found no problem in holding that the Hayward ordinance did nothing more than "incidentally" burden interstate commerce because:

> . . . on the record before us there is insufficient evidence from which to conclude that the Hayward ordinance is presently imposing anything but an 'incidental' burden on interstate commerce. The possibility that other municipalities will sometime in the future enact similar ordinances, which will together then create an impermissible burden on interstate commerce is mere speculation. Accordingly, this court cannot enjoin enforcement of Hayward ordinance. . . . 20/

The decision implies that Congress and the FAA could preempt most local noise abatement efforts while at the same time curtailing expensive litigation. Secondly, the FAA could establish more clearly the unacceptable limits of locally-imposed use restrictions.

Judge Peckam was not the only judge that suggested the potential for federal preemption. Dissenting Justice Rehnquist in Burbank did the same:

> Clearly Congress could preempt the field to local regulation if it chose, and very likely the authority conferred on the Administrator of FAA by 49 U.S.C. 1431 is sufficient to authorize him to promulgate regulations effectively preempting local action. But neither Congress nor the Administrator has chosen to go that route. 21/

Since neither the Crotti nor the Hayward courts found sufficient evidence of preemption, it was left for another day as to what Congress could do to better express its clear and manifest purpose in this area.

This opportunity arrived when the Second Circuit Court of Appeals dealt with the Concorde landing rights issue in British Airways Board v. Port Authority of N.Y. and N.J. 22/ In two separate opinions, the court acknowledged that both airport proprietors and the FAA have a stake in airport noise abatement but that there are significant limitations to proprietary actions as well as to the degree of federal preemption. 23/

Thus, the court recognized and accepted an implied sharing of responsibility. Moreover, the court found solid support for that "sharing approach" by noting that "Congress had repeatedly declined to alter this cooperative scheme . . . and the legislative history clearly states that the statute [The Federal Aviation Act] was merely intended to strengthen the FAA's regulatory role within the area already totally preempted--control of flights through navigable airspace." 24/ While recognizing that the FAA had broad executive powers, the court in Concorde I observed that "the Supreme Court [in Burbank] has refrained from holding that Congress has occupied the field of noise regulation to the exclusion of airport proprietors." 25/

In Greater Westchester Homeowners Association v. City of Los Angeles, 25A/ the California Supreme Court rejected the City's claim of federal preemption and concluded that no federal shield existed to protect the proprietor from tort damages. The court's majority went through an exhaustive study of congressional intent, federal and state case law and FAA regulatory actions. They found that neither Congress nor the FAA expressly precluded either local noise abatement actions or concomitant state remedies for personal or property damage awards arising out of an inverse condemnation suit. Moreover, the court found that Congress wanted to preserve proprietary control over airport design, planning and use which would enable the airport owners to limit their liability under Griggs.

Federal preemption was also involved in another California case, San Diego Unified Port District v. Gianturco, et al., which is on appeal to the Ninth Circuit. 26/ The California Department of Transportation (CalTrans) contitioned the granting of a noise variance on the Port of San Diego (in its operation of San Diego Airport) by extending its six-hour voluntary curfew to eight hours. After obtaining the variance from CalTrans and a Temporary Restraining Order from the court, the Port sued for injunctive relief and a declaratory judgment urging that the "curfew condition" was unconstitutional.

The Court, rejecting the argument that CalTrans was a "constructive proprietor" of the airport because the airport was on state land, held that its attempt to extend San Diego's curfew was a non-proprietor regulation of an airport, prohibited by Burbank.

In Santa Monica Airport Ass'n v. City of Santa Monica, a federal district court inter alia, a proprietor-imposed night departure curfew and single event noise exposure level (SENEL) while striking down the airport's total ban on jet aircraft. 27/ Judge Hill upheld the night departure curfew and the 100 dBA SENEL despite Commerce Clause, Equal Protection and Supremacy Clause arguments from the plaintiffs (Santa Monica Airport Association) and plaintiffs intervenors (National Business Aircraft Association (NBAA) and General Aviation Manufacturers Association (GAMA)). 28/

There is an interesting aspect to the Santa Monica case, which deals with federal preemption and implied liability. The FAA, in their amicus brief, argued that the SENEL was unconstitutional because of federal preemption, in that Congress intended for the FAA to control aircraft in flight. 29/ They argued that because pilots try to "beat the meter" that measures the single noise event, the SENEL "affects aircraft in flight" and is preempted. Moreover, in the Crotti case (decided in the northern district of California), the district court held (just three years earlier) an identical type of SENEL unconstitutional. Thus, despite the FAA's explicit advancement of federal preemption and what should have been a persuasive judicial precedent, Judge Hill upheld the Santa Monica SENEL.

Finally, the FAA, interpreting the federal role, has acknowledged that "although many aspects of the aircraft noise problem are appropriate for local control, the range of remedial measures available to the airport proprietor has been somewhat limited by the exercise of the paramount authority of the United States to regulate commerce." 30/ In addition, the FAA has postulated its own legal framework in its Noise Policy, issued in 1976, that is best stated in its own words:

> 1. The federal government has preempted the areas of airspace use and management, air traffic control, safety and the regulation of aircraft noise at its source. The federal government also has substantial power to influence airport development through its administration of the Airport and Airway Development Program.

2. Other powers and authorities to control airport noise rest with the airport proprietor--including the power to select an airport site, acquire land, assure compatible land use, and control airport design, scheduling and operations--subject only to Constitutional prohibitions against creation of an undue burden on interstate and foreign commerce, unjust discrimination, and interference with exclusive federal regulatory responsibilities over safety and airspace management.

3. State and local governments may protect their citizens through land use controls and other police power measures not affecting aircraft operations. In addition, to the extent they are airport proprietors, they have the powers described in paragraph 2. 31/

FOOTNOTES

1/ 328 U.S. 256 (1946).

2/ 369 U.S. 84 (1962).

3/ 411 U.S. 624 (1972).

4/ The U.S. CONST. amend. 5 provides in part: "[N]or shall private property be taken for public use, without just compensation."

5/ 328 U.S. 256, 258.

6/ Lower federal courts have applied Cauby narrowly. One example is Batten v. United States, 306 F.2d 580 (10th Cir. 1962), cert. denied, 371 U.S. 955 (1963). In Batten, which also involved military aircraft, property owners were denied the right to recover damages as a result of noise and vibrations caused by aircraft that did not invade the plaintiff's airspace and render the property uninhabitable. Thus, when the federal government is the airport proprietor, recovery is permitted for a "taking" only after aircraft physically invade the property's airspace.

State courts, however, in interpreting their own just compensation clauses of their own constituting have allowed recovery when there is less than a physical invasion of airspace. Such an example is Aaron v. City of Los Angeles, 40 Cal.App.3d

471, 115 Cal.Rptr. 162 (1974), cert. denied, 419 U.S. 1122 (1975). The court was of the view that physical invasion was not necessary since aircraft noise is capable of accurate measurement. The court ruled at page 484 that in California their was a taking if a:

> "measurable reduction in market value resulting from the operation of the airport in such a manner that the noise from aircraft using the airport causes a substantial interference with the use and enjoyment of the property, and the interference is sufficiently direct and sufficiently peculiar that the owner, if uncompensated, would pay more than his proper share to the public undertaking." (40 Cal.App.3d 471, 484)

7/ 369 U.S. 84 (1962).

8/ Id. at 90.

9/ 411 U.S. 624 (1973). This case involved the City of Burbank's attempt to impose a curfew on Lockheed Air Terminal, a privately owned airport.

10/ Id. at 638.

11/ Id. at 638, 639.

12/ Id at 624, 638. Justice Douglas wrote that a municipality cannot control through its police powers, the hours of operation of an airport (in other words, impose a curfew).

13/ Id. at 635-636, where footnote 14 provides:

> The letter from the Secretary of Transportation also expressed the view that 'the proposed legislation will not affect the rights of a State or local public agency, as the proprietor of an airport, from issuing regulations or establishing requirements as to the permissible level of noise which can be created by aircraft using the airport. Airport owners acting as proprietors can presently deny the use of their airports to aircraft on the basis of noise considerations so long as such exclusion is nondiscriminatory.' [Emphasis added.] This portion as well was quoted with approval in the Senate Report. Ibid.

Appellants and the Solicitor General submit that this indicates that a municipality with jurisdiction over an airport has the power to impose a curfew on the airport, notwithstanding federal responsibility in the area. But, we are concerned here not with an ordinance imposed by the City of Burbank as 'proprietor' of the airport, but with the exercise of police power. While the Hollywood-Burbank Airport may be the only major airport which is privately owned, many airports are owned by one municipality yet

physically located in another. For example, the principal airport serving Cincinnati is located in Kentucky. Thus, authority that a municipality may have as a landlord is not necessarily congruent with its police power. We do not consider here what limits, if any, apply to a municipality as a proprietor.

14/ 389 F. Supp. 58, at 63-64.

15/ Id. at 63, where the court states:

> We believe that the Airlines' total reliance upon Burbank is misplaced. The factual picture supporting Burbank is of narrow focus, a single police power ordinance of a municipality--not an airport proprietor--intending to abate aircraft noise by forbidding aircraft flight at certain night hours. The holding in Burbank is limited to that proscription as constituting an unlawful exercise of police power in a field pre-empted by the federal government, and we take as gospel the words in footnote 14 in Burbank: '[A]uthority that a municipality may have as a landlord is not necessarily congruent with its police power. We do not consider here what limits, if any, apply to a municipality as a proprietor.' [Emphasis supplied.]

16/ Id. at 58-59; also see: San Diego Unified Port District v. Gianturco 457 F. Supp. 283 (S.D. Cal. 1978) at 285 where, in General Background, the court relates the California history of CNEL's:

> In 1969 the California Legislature enacted legislation directing the Department of Aeronautics (now the Department of Transportation) to adopt noise standards, for airports operating under a state permit. Cal. Pub.Util.Code § 21669 et seq. (West Supp. 1978). Pursuant to this statutory authorization, the Department subsequently adopted 'noise standards' which now appear at 21 Cal.Admin. Code §§ 5000-5080.5.
>
> The regulations adopted by the Department seek to achieve a gradual reduction in the amount of noise generated by aircraft take-offs and landings at California airports. The regulations establish what is known as a Community Noise Equivalent Level (CNEL). CNEL regulations provide a method for computing on a 24-hour basis an average noise exposure level. A cumulative analysis takes into account the total noise generated by aircraft 'events' over a given period of time. The regulations require that, in graduated steps, no airport is to have a 'noise impact boundary' containing 'incompatible land use' in excess of 65 dB on the CNEL scale by 1985.

The CNEL regulations require an airport operator to operate its airport so as not to exceed the applicable CNEL noise level. Cal.Admin.Code § 5062. An operator unable to comply with the Noise Standards may apply to the Department for a variance. Cal.Admin.Code § 5975. As a practical matter, the Noise Standards are so stringent that each of the major airports in California, including Lindbergh Field, apparently must apply for a variance as a matter of routine.

17/ Crotti at 59.

18/ 418 F. Supp. 417, 424 (N.D. Cal. 1976).

19/ Id. at 424-425.

20/ Id. at 428.

21/ Burbank at 653.

22/ British Airways Board v. Port Authority of New York and New Jersey, 558 F. 2d 75 (2d Cir. 1977) (Concorde I); British Airways Board v. Port Authority of New York and New Jersey, 564 F. 2d 1002 (2d Cir. 1977) (Concorde II).

23/ See: Concorde I at 83, wherein the court stated in part:

The regulation of excessive aircraft noise has traditionally been a cooperative enterprise, in which both federal authorities and local airport proprietors play an important part. Of course, legitimate concern for safe and efficient air transportation requires that exclusive control of airspace management be concentrated at the national level. The repeated efforts of local communities to control the noise of overflying jets have been consistently frustrated by application of the doctrine of federal preemption of regulations concerning planes in flight.

It is understandable that the numerous localities in the vicinity of major airports cannot be permitted an independent role in controlling the noise of passing aircraft. The likelihood of multiple, inconsistent rules would be a dagger pointed at the heart of commerce--and the rule applied might come literally to depend on which way the wind was blowing.

and see: Concorde II at 1010-1011:

Our initial opinion in this case delineated the extremely limited role Congress had reserved for airport proprietors in our system of aviation management. Common sense, of course, required that exclusive control of airspace allocation be concentrated at the national level, and communities were therefore preempted from

attempting to regulate planes in flight. [Citations omitted] The task of protecting the local population from airport noise, however, has fallen to the agency, usually of local government, that owns and operates the airfield. [Citations omitted] It seemed fair to assume that the proprietor's intimate knowledge of local conditions, as well as his ability to acquire property and air easements and assure compatible land use, [Citations omitted] would result in a rational weighing of the costs and benefits of a proposed service. Congress has consistently reaffirmed its commitment to this two-tiered scheme, and both the Supreme Court and executive branch have recognized the important role of the airport proprietor in developing noise abatement programs consonant with local conditions.

The maintenance of a fair and efficient system of air commerce, of course, mandates that each airport operator be circumscribed to the issuance of reasonable, nonarbitrary and nondiscriminatory rules defining the permissible level of noise which can be created by aircraft using the airport. Concorde I, supra at 84. We must carefully scrutinize all exercises of local power under this rubric to insure that impermissible parochial considerations do not unconstitutionally burden interstate commerce or inhibit the accomplishment of legitimate national goals. [Citations omitted]

24/ See: Concorde I at 83-84 where the court further states:

> Under the Commerce Clause, Congress has the power, in order to promote a nationwide transportation system and to control interstate and foreign air traffic flow, to dictate what aircraft should be permitted to land and takeoff from airports. See City of Burbank v. Lockheed Air Terminal, supra. But it is manifest from our scheme of aviation management that Congress has consciously committed to airport owners the responsibility of determining permissible levels of noise for the facility and its environs. This delegation of authority, in a field otherwise entirely occupied by the federal government, implies no general restriction on federal power. Instead, it is plain that State and local bodies have been made partners with the federal government and the aeronautics industry in a nationwide effort to control airport noise.

25/ Id. at 84.

25A/ 160 Cal. Rptr. 733 (1979)

26/ 457 F. Supp. 283 (S.D. Cal. 1978).

27/ See: Santa Monica Airport Association v. City of Santa Monica, 481 F.Supp. 927 (C.D. Cal. 1979).

28/ Id. at 935.

29/ See: Brief of the United States of America, Amicus Curiae, at 10-20, Santa Monica Airport Ass'n v. City of Santa Monica, Civ. No. 77-2852-H.

30/ See: Brief of the United States of America, Amicus Curiae, in Santa Monica at 5; and at p. 16 where the Government mentions one of the limits on proprietary action:

> We cannot assume, as Santa Monica does, that the Burbank Court's refusal to consider limitations on proprietor's rights means that there are no limitations at all. The City of Santa Monica's proprietor status is not a distinguisning feature as far as the preemption of regulation of flight is concerned. Although the proprietor's responsibility for airport noise and his concomitant right to control his airport have been acknowledged by Congress, the Department of Transportation and the Federal judiciary, no where is it even implied that the proprietor's authority extends to the control of aircraft in flight.

31/ U. S. Department of Transportation/FAA, Aviation Noise Abatement Policy (1976).

TASK 1.10

INVENTORY AND ASSESS COMMUNITY PLANNING AREA FINANCIAL DATA AND INFORMATION

MAY 1981

Prepared by: Los Angeles County Department of Regional Planning

For Information Call: Ron Hoffman (213) 974-6474

INTRODUCTION

This task contains a compilation of various financial techniques which can be used for capital improvement and land use compatibility programs. Capital improvement projects can be used to foster or facilitate conversion to and construction of noise compatible land uses. Examples of such capital improvement projects are road widenings, water main improvements and increasing sewer system capacity. These types of projects are primarily related to the improvement of the community infrastructure system. Capital improvements could also include the construction or relocation of noise compatible public facilities within the study area. These types of facilities include, but are not limited to maintenance yards, animal shelters, vehicle storage, warehousing, and open spaces. Land use compatibility programs would be those which emphasize noise compatibility projects. Included would be the purchase of noise or avigation easements, conversion to non-noise sensitive uses, voluntary relocation assistance, soundproofing, land acquisition and assembling land for resale.

The programs and financial techniques discussed in this task are divided into three classifications - federal, state and local. Each program will be discussed according to the following format: the program name, legislative authority, responsible agency, program description, and comments. Programs which appear to have the greatest potential for land use compatibility are emphasized. Other programs which have limited applicability are simply listed rather than fully described.

The programs and financial strategies listed in this report should be viewed in the context of today's governmental and financial milieu. At the federal level there is considerable discussion regarding cutting the federal budget. Many programs are being slated for deletion or consolidation with other program. The amounts of funding for many programs may be severely curtailed.

State funding is also expected to be reduced for many programs. This is, in part, due to a lack of surplus which previously has been used for a variety of programs, including assistance to local governments. The state also appears to be leaning towards a fiscal philosophy which allocates less money to local governments.

Local governments are also faced with the dilema of providing services, which become more expensive each year, and attempting to keep spending and taxes within reason. A decrease in the amount of federal and state spending will undoubtedly make the local financial picture even more bleak.

The federal and state budgets still have to go through their respective legislative bodies and the complex budgetary process. During this period many changes will probably be made. However,

given the prevailing mood of governmental leaders there is a good probability that federal and state spending on the local level will decrease. Therefore, locally funded capital improvement programs may have to be relied on in the future. During the evaluation of financial impacts in Phase III, the programs listed in this task should be re-evaluated to determine which of these programs are still viable.

The following sections contain descriptions of various programs organized by funding source (i.e, federal, state, and local). The final section contains an initial list of potential programs which propose new financial concepts that can be used for noise mitigation projects.

Federal Programs

Program Name:	Revenue Sharing
Legislative Authority:	Title 1, USCS, Sec. 1221
Responsible Agency:	Office of Revenue Sharing
Program Description:	Provides federal money for use for any program that does not violate the laws and procedures applicable to the expenditure of state funds. Dial-a-Ride and Juvenile Diversion Programs are two examples of revenue sharing programs used by the City of El Segundo.
Comments:	These funds seem to be flexible enough for use in a variety of compatibility projects.

Program Name:	Planning Grant Programs (PGP)
Legislative Authority:	Airport and Airway Development Act of 1970 (P.L. 94-54) Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-193)
Responsible Agency:	Federal Aviation Administration
Program Description:	Grants can be issued to state, regional and metropolitan planning agencies, councils of government, and other public agencies which have the authority to implement the recommendations of a completed plan. Eligible projects include aviation system plans, airport master plans, airport land use plans including ANCLUC's, and certain other planning studies.
Comments:	Funds for this program have not been appropriated for this fiscal year. Congressd is considering legislation to reauthorize expenditures for PGP.

Program Name:	Airport Development Aid Program (ADAP)
Legislative Authority:	Airport and Airway Development Act of 1970 (P. L. 94-54) Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-193)
Responsible Agency:	Federal Aviation Administration
Program Description:	Funds are provided to initiate specific projects in a plan or other airport improvements determined to be eligible. Included in this are land use compatibility actions such as zoning, development controls and land acquisition to improve noise compatibility.
Comments:	Funds for this program have not been appropriated for this fiscal year. Congress is considering legislation to reauthorize expenditures for ADAP.

Program Name:	State and Local Economic Development Planning (Section 302a Planning)
Legislative Authority:	Public Works and Economic Development Act of 1965, (PL 89-186), as amended.
Responsible Agency:	Department of Commerce
Program Description:	Grants are used for planning, staff salaries and related administrative expenses related to economic development projects.
Comments:	The program could be used to do preliminary planning prior to actual construction of industrial or commercial projects.

Program Name:	Public Works Grants and Loans (Title I)
Legislative Authority:	Public Works and Economic Development Act of 1965 (P.L. 89-136) as amended
Responsible Agency:	Economic Development Administration - Department of Commerce
Program Description:	This program funds projects which contribute to overcoming problems affecting local economic growth. The program's intent is to restore economic health to areas burdened with high unemployment and low family incomes by funding the construction of public facilities which are needed to attract new industry and encourage business expansion. Projects must be located in a redevelopment area or economic development district. The program is flexible and can fund projects to make land suitable for industrial and commercial use by providing utilities, access, and site preparation; can also be used to renovate buildings.
Comments:	This program could be used to provide the necessary infrastructure to support commercial or industrial development in recycle areas.

Program Name:	Technical Assistance Grants (Title III)
Legislative Authority:	Public Works and Economic Development Act of 1965, (P.L. 89-136), as amended; 42 USC 3151, 3152.
Responsible Agency:	Economic Development Administration-Department of Commerce

Technical Assistance Grants (Cont'd)

Program Description: This program provides grants for projects in several categories to tackle problems of local growth and to create jobs.

Comments: This program has the potential to assist in the construction or establishment of commercial and industrial uses.

Program Name: Community Development Corporation (CDC)

Legislative Authority: Economic Opportunity Act of 1964, (PL 88-945), as amended by Title VII., Community Services Act of 1974, (PL 93-644) and Economic Opportunity and Community Services, (PL 93-644) and Economic Opportunity and Community Services amendment of 1978, (PL 95-568).

Responsible Agency: Office of Economic Development

Program Description: Community Development Corporations are formed by residents and businesses in low-income communities. CDC conducts special impact programs which are grouped into three categories - (1) business development programs which enable CDC to own or invest in profit-making enterprises which offers employment and training opportunities for low-income residents. (2) community development programs aimed at improving a community's physical environment or infrastructure in order to foster business development; and (3) manpower health and social service programs related to community and/or business development.

Comments: There are two major agencies in Los Angeles which have received funding - Watts Labor Community Action Committee (WLCAC) and The East Los Angeles Community Union (TELACU).

Program Name:	"502" Loans to Local Development Companies and Minority Businesses
Legislative Authority:	Small Business Investment Act of 1958, as amended, Title V (P.L. 85-669)
Responsible Agency:	Small Business Administration Minority Business Development Agency
Program Description:	Loans are provided to Local Development Companies (LDCo.). It was established to assist small businesses and to promote specific areas of economic development and SBA loan guarantees.
Comments:	This has been replaced by Senate Bill 503 (local development company issues loans). No direct federal appropriations are involved. 50% bank 40% debenture (low interest rate) - Federal 10% small business The local agency expedites loans for businesses, does credit analysis to banks and follows through closing.

Program Name:	Business Development Assistance (Title II)
Legislative Authority:	Public Works and Economic Development Act of 1965 (P.L. 89-136) as amended.
Responsible Agency:	Economic Development Administration - Department of Commerce

Program Description: Direct fixed asset loans can be provided to help private industry to expand or locate new facilities in needy areas. Financial assistance in the form of loans is provided to those businesses which create or retain permanent jobs and are unable to obtain financial assistance elsewhere. Projects can include land acquisition site preparation, and building construction.

Comments: This program could be used to promote compatible development in the noise impacted area.

Program Name: Public Works Impact Projects (PWIP)

Legislative Authority: Public Works and Economic Development Act of 1965, (P.L. 89-136), as amended; 42 USC 3131, 3132.

Responsible Agency: Department of Commerce

Program Description: PWIP offers direct short-term aid to severely distressed communities for the construction of public facilities. The primary objective is putting people to work before a distressed situation becomes critical.

Comments: This program has limited use unless the airport area experiences very high unemployment rates because of the closure of major employment centers.

Program Name: Neighborhood Self-Help Development

Legislative Authority: Housing and Community Development Act Amendments of 1978 (P.L. 95-557); Title VI, Neighborhood Self-Help Development Act

Neighborhood Self-Help Development (Cont'd)

Responsible Agency: Department of Housing and Urban Development (HUD)

Program Description: HUD grants are made to qualified neighborhood organizations to prepare and implement specific housing, economic and community development and other appropriate neighborhood conservation and revitalization projects in low- and middle-income neighborhoods.

Comments: This program could possibly be used to provide noise insulation for residences in impacted areas.

Program Name: Community Investment Fund

Legislative Authority: Federal Home Loan Grant Act, (P.L. 304 and P.L. 725); 12 USC, 1421 and following.

Responsible Agency: Federal Home Loan Bank Board

Program Description: These loans provide incentives to savings and loans and mutual savings associations to invest in older neighborhoods and develop innovative programs to assist low- and middle-income home buyers. Incentives are provided by the allocation of funds to the various financial associations.

Comments: This program could be used to assist homebuyers outside of the noise impact area who may be displaced or relocated by other programs.

Program Name:	Public Facility Loans
Legislative Authority:	Title II, Housing Amendments of 1955, (P.L. 84-345).
Responsible Agency:	HUD/Federal Housing Administration
Program Description:	Loans are provided 10 year periods and can cover up to 100 percent of project cost; it finances a variety of public works.
Comments:	Noise compatible uses could be financed through this program.

Program Name:	Community Development Block Grants (CDBG)
Legislative Authority:	Title I, Housing and Community Development Act of 1974 (P.L. 93-383) as amended.
Responsible Agency:	HUD
Program Description:	100% funding is provided for a wide range of community development activities in a single flexible purpose program. The general objectives include adequate housing, a suitable living environment and expanded economic opportunities for low and moderate income groups, the elderly and handicapped. Grants are based on population, poverty, overcrowded housing, age of housing, etc. Examples of projects that can be accomplished with this program include: acquiring deteriorated and inappropriately developed real property, constructing publicly owned facilities, housing rehabilitation for low and moderate income people, and economic development activities. Block grant funds enable local jurisdictions to meet specific needs of the community with construction, rehabilitation and conservation programs. The funds are also used to stimulate private investment, construct physical improvements for public purposes and provide matching funds for coordinated involvement with other

governmental agency programs. The activities are aimed at achieving the prevention and elimination of slums and blight and to meet the essential housing and community development priorities. The Inglewood Block Grant Program, for example, emphasizes neighborhood preservation and includes such projects as residential and commercial rehabilitation financial assistance, parks and public improvements, and land acquisition for construction of new Section 8 family units.

Comments: The ANCLUC Study area should be surveyed to see if it meets the criteria established for the program. The program is flexible enough to be applied to many compatibility projects.

Program Name: Urban Development Action Grants (UDAG)

Legislative Authority: Section 119, Housing and Community Development Act of 1964 (P.L. 95-128) as amended.

Responsible Agency: HUD

Program Description: Public and private investments are made for economic development projects. The program is intended to revitalize cities and urban counties by strengthening their economic, employment and tax bases. Jurisdictions experiencing certain physical and economic distress (i.e. declining population and jobs, high percentages of poverty, high unemployment, etc.) are eligible for this program. The program is aimed at two kinds of target areas - metropolitan and small cities.

Urban Development Action Grants (Cont'd)

Comments: The program is fairly flexible as to what types of projects would be eligible. Some of the communities in the study area may not qualify. This program involves a highly political grantsmanship process. The chances of California cities receiving such grants have been further diminished by expected reductions in levels of funding, as well as commitments made to the metropolitan cities in the Northeast.

Program Name: Section 108 - Loan Guarantees to CDBG recipients

Legislative Authority: Section 108, Housing and Community Development Act of 1964 (P.L. 95-128) as amended.

Responsible Agency: HUD

Program Description: Guarantees can be made for loans to be used for the acquisition or rehabilitation of property to stimulate industrial, commercial or residential development. Rehabilitation, relocation, clearance, and site improvements are also allowable activities.

Comments: This could be used for a variety of noise compatibility projects.

Program Name: Rehabilitation Loans - Section 312

Legislative Authority: Section 312 of Housing Act of 1964 (P.L. 88-560)

Responsible Agnecy: HUD

Rehabilitation Loans (Cont'd)

Program Description: These are direct Federal loans to finance rehabilitation of residential, mixed use and non-residential properties. The loans may provide for insulation and installing weatherization items. Loans are limited to $27,000/dwelling unit or $100,000 for non-residential properties.

Comments: The use of these funds for insulation could accomplish both noise and energy insulation.

Program Name: Urban Homesteading

Legislative Authority: Sec. 810, Housing and Community Development Act of 1974 (P.L. 93-383), as amended.

Responsible Agency: HUD

Program Description: Vacant single family homes are transferred to new homeowners for rehabilitation. The homeowner must agree to live in the home for three years and bring the property up to code. This can also be used for multi-family dwellings.

Comments: This may be used in areas impacted only slightly from noise. The rehabilitation could be used for noise insulation purposes.

Program Name: Mortgage Insurance Assistance

Legislative Authority: Section 203(K), National Housing Act (1934), as amended

Sec. 207 -

Mortgage Insurance for Multi-family Housing $19,500-$54,000/dwelling unit - min. 8 units - rehabilitation

Urban Development Action Grants (Cont'd)

Sec. 213 -

Federal Mortgage Insurance to Finance Cooporative Housing 5+ units - rehabilitation

Sec. 220(h) -

Urban Renewal and Code Enforcement Area Loans - $19,500 to $45,000/unit - rehabilitation

Sec. 221(d)(2) -

Homeownership for Low- and Moderate-Income Families - rehabilitation

Sec. 221(d)(3)&(4) -

Multi-Family Rental Housing for Low- and Moderate-Income Families - rehabilitation

Sec. 223(e) -

High Risk Mortgage Insurance - rehabilitation

Sec. 223(f) -

Mortgage Insurance for Existing Multi-Family Rental Housing - rehabilitation

Sec. 231 -

Mortgage Insurance for Housing for the Elderly or Handicapped - rehabilitation

Sec. 232 -
Nursing Homes and Intermediate Care Facilities

Sec. 234(c)&(d) -

Mortgage Insurance for Purchase & Development of Condominiums

Program Description: Insures rehabilitation loans to finance rehabilitation of an existing property. Rehabilitation could include noise insulation measures.

Comments: These appear to be of some use in study area; rehabilitation could include noise insulation measures.

Program Name:	Home Improvement Loan Insurance (Title 1)
Legislative Authority:	Sec. 2, Title 1, National Housing Act (1934), (P.L. 73-479) as amended by Housing Act of 1950 (P.L. 84-1020)
Responsible Agency:	HUD
Program Description:	This program provides insurance for loans by private financial institutions which will finance major and minor improvements, alternations and repairs of individual homes and non-residential structures. Loans of $15,000 are allowed for residences. Apartment buildings may have up to $7,500 per unit with a maximum total of $37,500 is allowed for each building.
Comments:	This may be used to help finance improvments or encourage people to make improvements to their homes. These improvements could include sound insulation.

Program Name:	Section 8 Housing (Rental Assistance)
Legislative Authority:	Housing and Community Development Act of 1974 (Title II) as amended
Responsible Agency:	HUD
Program Description:	Subsidies are provided for existing rental units, new housing construction and rehabilitation of existing housing. Households must meet certain income criteria in order to qualify for this program. Renter payments range between 15% to 25% of their income.

Section 8 Housing (Cont'd)

Comments:	This program could be used to provide noise insulation for existing dwellings and replacement housing outside of the noise impact area. However, there is a lengthy processing time involved and low rent limits may discourage some developers and landlords from participating.

Program Name:	Urban Park and Recreation
Legislative Authority:	Urban Park and Recreation Recovery Act of 1978, Title X, (P.L. 95-625), 16 USC, 2501-2514.
Responsible Agency:	Department of the Interior
Program Description:	Grants in aid are made to economically hard-pressed cities and counties in rehabilitating their existing park and recreation systems.
Comments:	This program could facilitate construction or enlargement of noise compatible parks and recreation areas.

Program Name:	Land and Water Conservation Fund (Outdoor Recreation)
Legislative Authority:	Land and Water Conservation Act of 1965, PL 88-578, as amended.
Responsible Agency:	Department of Interior
Program Description:	Grants to local governments are provided through states for acquisition and development of public outdoor recreation areas and facilities.
Comments:	Outdoor recreation areas are usually considered noise compatible land uses.

Program Name:	Federal Highway Assistance
Legislative Authority:	Federal Highway Act of 1973 as amended
Responsible Agency:	Department of Transportation/CALTRANS
Program Description:	A variety of well established highway and transportation programs are available which can be used by public agencies for a variety of road improvement and construction projects.
Comments:	These programs can be used to improve the road network which in turn would facilitate recycling land to commercial and industrial areas.

Program Name:	Urban Noise Program
Legislative Authority:	N/A
Responsible Agency:	An interagency program including the following agencies: Environmental Protection Agency (EPA), Department of Transportation (DOT), and Federal Aviation Administration (FAA)
Program Description:	This program funds a variety of demonstration projects. For example, Technical Assistance funds for planning which were received by Inglewood through President Carter's 1979 Urban Noise Program and the Federal Interagency Committee on Urban Noise Program. This demonstration project will help to demonstrate that the Federal government, in conjunction with state and local agencies, can effectively eliminate critical urban airport problems and produce a more livable urban environment.
Comments:	The demonstration projects funded by this program could lead to additional funding for noise compatibility projects.

Program Name:	Relocation
Legislative Authority:	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) California Government Code 7260
Responsible Agency:	Federal and State - depends on which type of program is causing the dislocation.
Program Description:	Relocation programs are designed to protect the rights of persons forced to move from their homes or businesses. Federal law requires persons displaced by a federal program will be reimbursed for moving costs and other relocation expenses. Relocation assistance is also provided. State law is similar to federal law and is applicable when federal laws don't apply or when only state funds were used.
Comments:	These provisions would have to be used if people or businesses are purchased, removed or recycled as a result of land use compatibility programs.

State Programs

Program Name:	California Housing Finance Agency (CHFA) Programs
Legislative Authority:	Zenovich-Moscone-Chacon Housing and Home Finance Act of 1975 SB 4x (1975) SB 1810 - Ch. 1342 (1976)
Responsible Agency:	CHFA
Program Description:	This agency has a broad range of powers and programs to finance housing development and rehabilitation. Financial assistance ranging from direct loans to mortgage insurance are available within designated Neighborhood Preservation Areas. Financing is provided for the development and rehabilitation of low and moderate income housing through the sale of tax-exempt revenue bonds and by using the proceeds to provide direct loans for development of new rental and cooperative multi-family housing for low and moderate income families. It can also be used to purchase mortgages from private lenders which would enable eligible low and moderate income families to buy single family homes. Financing neighborhood preservation programs is also possible. The agency provides loans and insurance for rehabilitation programs in designated areas. Programs are also available to guarantee bonds and to insure loans for rehabilitating existing housing. Examples of CHFA programs are: Concentrated Rehabilitation Areas Neighborhood Preservation Home Ownership/Home Improvement
Comments:	This program would be applicable in any designated "Neighborhood Preservation Areas" within the study boundaries. This program could be used to build housing removed from the 65 CNEL area.

Program Name:	State Park Bond Funds
Legislative Authority:	California Constitution, Article XVI
Responsible Agency:	Local cities
Program Description:	This provides money for park development and improvement projects.
Comments:	It could be used to expand existing parks or establish new parks. Open space areas are generally considered noise-compatible land uses.

Program Name:	Urban Open Space and Recreation Program
Legislative Authority:	Roberti-Z'Berg Open Space and Recreation Program Act
Responsible Agency:	California State Department of Parks & Recreation
Program Description:	Funds are provided to cities, counties, and parks and recreation districts for acquisition of land, park development and improvements. Emphasis is on meeting inner-city recreation needs at urban residents.
Comments:	Open space areas are often noise compatible uses.

Program Name:	Veterans Home and Farm Purchase Loans (Cal-Vet)
Legislative Authority:	California Constitution, Article XVI, Section 6
Responsible Agency:	Department of Veterans Affairs
Program Description:	This provides loans which can be used to purchase and rehabilitate homes in need of refurbishment. It would be used to bring a structure up to acceptable health and safety standards.
Comments:	This could possibly be used to provide sound insulation for homes.

Program Name:	Weatherization Assistance
Legislative Authority:	N/A
Responsible Agency:	Office of Economic Opportunity, Energy Conservation Division
Program Description:	This program assists low-income elderly and others in improving the thermal efficiency of their homes. Eligible expenses may be made for insulation, storm windows and doors, weatherstripping, caulking, etc.
Comments:	Energy insulation would also accomplish sound insulation.

Program Name:	Municipal Bonds
Legislative Authority:	Government Code Sections 43600-43900 and 54300-54700
Responsible Agency:	Local Governments
Program Description:	Various types of bonding programs are available and include: General obligation bonds -secured by taxes and must be approved by the voters. Revenue bonds - payable from the revenues of a specific project. Traditionally used to finance parking garages, sports stadiums, and other public facilities. Special obligation bonds - payable from a special fund and limited source of taxation. Assessment ment bonds can be used when there is a special and direct benefit to properties. Industrial development bonds - used to acquire land and construct industrial facilities which are then leased out; the proceeds from the leases are used to pay off the bonds. The security for the bonds is the land, buildings, and/or capital improvements themselves. By using bonding techniques, the public agency essentially acts as a passthrough, enabling a lower rate of interest to be charged, due to the tax-exempt status of the bonds.
Comments:	These bonds have been used for such projects as the Hawthorne Plaza parking structure. Bonds could be a source of funds for a variety of development programs to encourage noise compatible land uses. However, tax exempt bonds have come under increased scruntiny by Congress and the intent of most recent legislation is to severely restrict and/or eliminate such financing instruments.

Local Programs

Program Name:	Marx-Foran Residential Rehabilitation
Legislative Authority:	Marx-Foran Residential Rehabilitation Act of 1973 as amended Health & Safety Code Sec. 37910
Responsible Agency:	Local governments
Program Description:	Local governments are given the power to issue tax-exempt revenue bonds for the purpose of making long term below market interest loans for residential rehabilitation. The program is focused for areas with a high proportion of deteriorating housing. Some geographical flexibility is provided in that loans outside the target area are permitted under certain circumstances.
Comments:	Rehabilitation work could include sound insulation. This program has been only slightly used at this time.

Program Name:	Redevelopment (Tax Increment Financing)
Legislative Authority:	Health and Safety Code Sec. 33000, 33332, 33670 California Community Redevelopment Law
Responsible Agency:	Local Redevelopment Agencies
Program Description:	In California the most common approach to urban redevelopment is through the mechanism of Community Redevelopment Agencies. By selling tax exempt redevelopment bonds, thus incurring long term indebtedness, the agency can secure sizeable capital needed to support the costs of land acquisition, site preparation, and relocation.

These costs would be repaid over the life of the bonds through the capture of property taxes (tax increment) from the increase in assessed valuation of the new development. Tax allocation bonds, lease revenue bonds, and SB 99 (Revenue Bonds) can be used for construction and rehabilitation. For example, the City of Hawthorne established a redevelopment agency for downtown revitalization for construction of a regional mall and parking structure.

Comments: Due to recent changes in traditional taxing authority, primarily Proposition 13 (reducing taxable valuation to 1/3 pre 1978 levels) and Assembly Bill 66 (Business Inventory Tax Relief), revenues to local government and redevelopment agencies have been significantly reduced. The sizeable costs of land assemblage, in some cases, may no longer be supported through the bonding capacity of a project's future increment. Also, low and moderate income housing units removed as part of redevelopment projects must be replaced within that jurisdiction.

Program Name: "Up-Front" Developer Money

Legislative Authority: None necessary

Responsible Agency: Local governments

Program Description: "Up-front" developer payments are sometimes utilized when a public agency lacks sufficient funds to make public improvements and/or to assemble and purchase land. The agency uses its power of eminent domain to facilitate development and the developer funds (up front) the cost of infrastructure, land assemblage, and/or relocation.

"Up-Front" Developer Money (Cont'd)

Comments: Most agencies nowadays have limited financial wherewithal due to a reduction in many traditional funding resources. Federal and state grant funds have been reduced or are non-existent; the tax increment resource has been limited due to the effects of Proposition 13. Therefore, pressures for developers' "up-front" payments are increasing. However, as land and building costs rise, the prospect of developers being able to come up with these expenses is decreasing since such projects become less feasible. By "upfronting" site preparation costs on intensely developed urban land, developers can not always be assured of an economic return on their money.

Program Name: Capital Improvement Projects - General Fund

Legislative Authority: Local Ordinances and Budgets

Responsible Agency: Local governments

Program Description: These funds can be used for the replacement, repair and expansion of such things as street improvements, storm drains, sewer and water systems, etc. Noise compatible public facilities such as maintenance yards, animal shelters, parks, etc.

Comments: Projects completed through this program could provide the infrastructure improvements which would facilitate establishment of commercial or industrial uses. Capital improvements can also include construction of noise compatible uses.

Program Name:	Land-Banking
Legislative Authority:	California Constitution, Article XI
Responsible Agency:	Local governments
Program Description:	This is the acquisition of land by public agencies in contemplation of subsequent development. Hopefully, higher and better uses can be made of the acquired land if development is postponed for a period of time. It can include the acquisition of both developed and undeveloped properties. Local revenues, revenue sharing funds, and Community Development Block Grant funds can be used for this purpose.
Comments:	Owing to dwindling resources, it is highly doubtful that any public agency will be able to embark on a significant land banking program.

Program Name:	Tax Delinquent Land
Legislative Authority:	Revenue and Taxation Code, Division I, Part 6
Responsible Agency:	Local agencies
Program Description:	Tax delinquent properties can be leased to persons agreeing to rehabilitate the units. Dilapidated units acquired through tax delinquencies could also be demolished and held for future compatible uses.
Comments:	This program offers the means to acquire land without expenditure of public funds.

Program Name:	Economic Development Corporation (EDC)
Legislative Authority:	Board of Supervisors approved recommendations by the CAO and Economic Council, February 24, 1981
Responsible Agency:	Los Angeles County
Program Description:	The EDC is a non-profit corporation with broad development powers, including lease revenue bond financing and full or partial tax exemption on property it owns or leases. The EDC would have a revolving fund of capital for project financing. It would operate in incorporated areas (only at invitation of cities) and unincorporated areas to promote industrial development or revitalization.
Comments:	This is a newly formed corporation which is in the process of undertaking its first projects. It is conceivable that the EDC could undertake some industrial or commercial (noise compatible) projects within the LAX ANCLUC Study area.

An analysis of financing proposals beyond current existing levels is important for the following three reasons:

1) There is uncertainty that existing or past programs will be available or funded in the future. If funded, there is also concern as to the amount of money that would be available for any given program.

2) Many of the programs do not address the unique problems of airports and their environs.

3) Specifically missing in past funding programs is a way of linking the costs of noise exposure to those that make the noise.

Although potential programs are only briefly discussed in this task, they will be more thoroughly reviewed in Task 3.12 which is an evaluation of the financial impacts of the community land use alternatives. An important economic concept to consider when discussing the mitigation of noise impacts, is that of linking the cost of correcting noise problems to those that make the noise. If this is done properly, costs increase if noise exposure increases and they decrease if noise exposure is reduced.

Property Tax Relief

Tax relief would be given for residential or other noise sensitive properties within noise impacted areas; the tax savings would be applied to noise insulation improvements. Tax increases would be waived for improvements which are made because of noise problems which normally would increase the value of the structure.

Sound Insulation

Funding would be provided by LAX to insulate homes and other noise sensitive uses within 65 CNEL contour in adjacent communities.

Assessment District

This could be formed to include the airport, as well as a redevelopment area, so that revenues, indebtedness and costs could be shared.

Non-Profit Corporation

This would be established with initial capital contributions from the community, airport and, possibly, private sector funds. It could be used to develop land or assemble land

Potential Programs

for recycling to noise-compatible uses. The corporation could be self-sustaining from revenues from land/development sales or from annual contributions if necessary.

Joint Powers Agreement

An arrangement between the communities and the airport that establishes shared authority and responsibility could be made. This would also provide a means of sharing revenues, costs, liabilities and indebtedness.

Memoranda of Understanding

This technique can be used to establish a uniform basis for acoustical treatment or avigational easement programs between the communities and the airport.

Profit/Cost Sharing Agreements

Funds to be used as collateral or more conventional financing arrangements could be generated by agreements between the communities and the airport.

Revenue Bonds

In addition to funding airport improvements, this technique could be used to cover redevelopment costs in the surrounding communities; these costs would be included in the regular airport financing programs.

Freight and Passenger/Head Tax

This potential source of funds is currently prohibited by Federal regulations; however, changes in these regulations could be made which would allow fees to be assessed on those commuters and shippers who use LAX. The money generated by this device would then be used to mitigate noise impacts.

Increased Landing Fees

By increasing landing fees, LAX could generate additional revenue which could be used for a variety of land use compatibility programs. The amount of the fee would be directly proportional to the amount of noise generated by the aircraft. Thus, the quieter planes would pay smaller fees than the noiser planes.

Entrance Fees

Vehicles entering the central terminal area (World Way) would be required to pay a toll. The money could be used for traffic related improvements in the greater LAX area.

TASK 1.11

UPDATE COMMUNITY AREA SOCIOECONOMIC DATA

JULY 1981

Prepared by: Los Angeles County Department of Regional Planning
(With the assistance of the cities of El Segundo, Hawthorne, Inglewood and Los Angeles)

For Information Call: Ron Hoffman (213) 974-6474

INTRODUCTION

This task is an update of socio-economic information for the study area. The U.S. Census was used as the primary data source. Material from the 1960 and 1970 Censuses were used to show trends within the study area. The data gathered in this working paper will be compared with the 1980 Census figures when they are released at the end of 1981.

The following socio-economic characteristics were documented for 1960 and 1970: population, residence status, employment, income, housing units and value. These characteristics will also be documented for the 1980 Census later in the study for trend analysis purposes. 1960 was chosen as the beginning date because that corresponds to the beginning of jet service to LAX. Some additional characteristics will be collected for the 1980 Census, they include: age of population, number of units in structures, age of structures, and year moved into dwelling.

This working paper will be used in the study as background information. It is hoped that this compilation and analysis of statistical data will help those involved with the study to better understand the character of the affected communities and to bring about an awareness of the magnitude of the number of people and housing units impacted by the airport. This information will also identify special needs or characteristics of the community. Any programs or proposals planned for the area will have to take these unique features into account.

METHODOLOGY

Data from the 1960 and 1970 Censuses were collected by the cities of El Segundo, Hawthorne, Inglewood and Los Angeles and Los Angeles County. The material was collated and assembled by the County who also established the format for the working paper.

The census tracts were generally used as the smallest geographical unit. In those cases where the census tracts were split by the study boundary, block data or block-group data were used and estimates were made for the partial tracts. Figures were aggregated from census tracts to neighborhoods (in the larger jurisdictions). Neighborhoods were combined to form distinct communities or jurisdictions. The cities and unincorporated areas were then grouped into a composite study area. Census tracts which were divided by city boundaries have been listed in the jurisdiction within which most of the tract lies. Those tracts that were in unincorporated areas in 1960 but are now within a city have been listed under their present jurisdiction. All figures which involve percentages have been rounded-off, thus, many will not add up to 100%. To calculate the 1980 dollar value for the 1960 and 1970 figures a factor of 2.93 and 2.27 was used. These factors are based on the relationship between the Consumers Price Index for each census year.

Following this introduction is a summary of the information for the entire study area. There is then a brief description of each jurisdiction followed by detailed statistical tables containing the census data.

STUDY AREA SUMMARY

During the period from 1960 to 1970 the study area population grew by almost 9% to over 270,000. At the same time the area changed from being primarily white to one which is 58% white. All areas except El Segundo and Hawthorne showed major increases in non-white residents. The proportion of people living in the same house as 5 years prior to the census increased to almost 50% by 1970, thus, indicating a relatively stable community. Unemployment rose to 7% area-wide and did not decrease in any of the five communities. Income (based on 1980 dollars) rose only 8% on an average but there were wide variations by community; El Segundo and Hawthorne showing the biggest increases with Inglewood and Los Angeles County showing decreases.

The total number of housing units increased over 12% between the 1960 and 1970 census surveys; as of 1970 there were approximately 100,000 dwelling units in the study area. Home values rose almost 20% during this period with the greatest increases in El Segundo and Hawthorne. Rents rose less dramatically, with an increase slightly under 6%.

Summary of Socio-Economic Data For Study Area

Jurisdiction	El Seg.	Haw.	Ing.	L.A. City.	L.A. County	Total Study Area
			1960			
Total Population	14173	7435	54142	112738	61871	250359
Total White	14147	7346	52166	80417	52708	206784
% White	99	99	96	71	85	83
			1970			
Total Pop.	15620	9871	62796	119303	65725	272315
Total White	15468	9586	50601	49622	32792	158069
% White	99	97	81	42	50	58
			1960			
Persons over 5 yrs. old	12764	6722	46079	101288	53469	220322
No. in same house	4955	2541	19175	45448	21543	93662
% in same house	39	38	42	45	40	43
			1970			
Persons over 5 yrs. old	14466	9110	39686	107496	57791	228549
No. same house	6289	2898	21649	53345	22615	106796
% same house	44	32	55	50	39	47
			1960			
Total Civilian Work Force	6255	3574	29447	47195	26677	113148
Total Unemployed	307	264	1683	2970	1843	7067
% Unemployed	5	7	6	6	7	6
			1970			
Total Civilian Work Force	7953	4982	31315	48323	25898	118471
Total Unemployed	440	355	1835	4088	2088	8806
% Unemployed	6	7	6	8	8	7
			1960			
Med. Family Income	7834 (22954)	6981 (20454)	7750 (22708)	7105 (20818)	6062 (17762)	7146 (20939)
			1970			
Med. Family Income	12478 (28325)	10639 (24150)	8689 (19724)	10061 (22838)	7733 (17554)	9920 (22518)

Figures in parentheses represent values adjusted to 1980 dollars.

Summary of Socio-Economic Data for Study Area
(Cont'd)

Jurisdiction	El Seg.		Haw.		Ing.		L.A. City		L.A. County		Total Study Area	
					1960							
All Units	5018	(%)	2790	(%)	21613	(%)	37331	(%)	21961	(%)	88713	(%)
Owner Occupied	2591	52	1116	40	9653	45	22933	61	9888	45	46181	52
Renter Occupied	2119	42	1479	53	10619	49	12619	34	10629	48	37465	42
Vacant	308	6	195	7	1341	6	1779	5	1444	7	5067	6
					1970							
All Units	5994	(%)	4194	(%)	26126	(%)	40448	(%)	22955	(%)	99717	(%)
Owner Occupied	2509	42	1131	27	9521	36	20395	51	8173	36	41729	42
Renter Occupied	3252	54	2912	69	15510	59	17815	44	13454	59	52943	53
Vacant	233	4	151	4	1095	4	2238	6	1328	6	5045	5
					1960							
Med. Home Val.	18450		15200		17760		15965		12197		15914	
	(54059)		(44536)		(52037)		(46777)		(35737)		(46628)	
Med. Rent	94		88		90		82		69		85	
	(275)		(258)		(264)		(240)		(202)		(249)	
					1970							
Med. Home Val.	30150		24650		25721		23277		18219		24403	
	(68441)		(55956)		(58387)		(52839)		(41357)		(55396)	
Med. Rent	132		125		116		114		96		117	
	(300)		(284)		(263)		(259)		(218)		(266)	

Figures in parentheses represent values adjusted to 1980 dollars.

City of El Segundo

The population increased 10% in the ten years between 1960 and 1970. The 1970 population of 15620 was 99% white. Residential stability increased during this period with approximately 44% of the residents living in the same house for the past 5 years. Unemployment went up from 5 to 6%. The median family income went up over 23% to $28325 (as measured in 1980 dollars).

The number of housing units increased almost twice as fast as the population. By 1970 there were almost 6000 dwelling units. The proportion of owner and renter occupied units changed dramatically during this period. In 1960 52% of the units were owner occupied and 42% were renter occupied; by 1970 this had reversed and 54% were renter versus 42% owner occupied. The number of vacant units declined to 4% of the housing stock. Home values rose over 25% and were the highest in the study area. Home values adjusted to 1980 dollars were approximately $54,000 in 1960 and $68,000 in 1970. Rents increased by almost 10%, rising to $300 per month; this was also the highest in the study area.

Population
City of El Segundo
1960

Census Tracts	6200	*6201	Total
Total Population	6927	7246	14173
Total White	6905	7242	14147
% White	99	99	99

1970

Census Tracts	6200	*6201	Total
Total Population	7561	8059	15620
Total White	7499	7969	15468
% White	99	99	99

Residence 5 Yrs. Prior to Census
City of El Segundo
1960

Census Tracts	6200	*6201	Total
Persons over 5 yrs. old	6208	6556	12764
No. in same house	2270	2685	4955
% in same house	37	41	39

1970

Census Tracts	6200	*6201	Total
Persons over 5 yrs. old	6997	7469	14466
No. in same house	3039	3250	6289
% in same house	43	44	44

* Split Tract

Employment
City of El Segundo
1960

Census Tracts	6200	*6201	Total
Total Civilian Work Force	3058	3197	6255
Total Unemployed	127	180	307
% Unemployed	4	6	5

1970

Census Tracts	6200	*6201	Total
Total Civilian Work Force	3923	4030	7953
Total Unemployed	177	263	440
% Unemployed	5	7	6

Median Family Income (in dollars)
City of El Segundo
1960

Census Tracts	6200	*6201	Average
Med. Family Income	8156	7511	7834 (22954)

1970
City of El Segundo

Census Tracts	6200	*6201	Average
Med. Family Income	12987	11969	12478 (28325)

*Split Tract

Housing Units
City of El Segundo
1960

Census Tracts	6200		*6201		Total	
All Units	2334	(%)	2684	(%)	5018	(%)
Owner Occupied	1225	52	1366	51	2591	52
Renter Occupied	946	41	1173	43	2119	42
Vacant	163	7	145	5	308	6

1970

Census Tracts	6200		*6201		Total	
All Units	2836	(%)	3158	(%)	5994	(%)
Owner Occupied	1193	42	1316	42	2509	42
Renter Occupied	1552	55	1700	54	3252	54
Vacant	91	3	142	5	233	4

Median Single-Family Home Value/
Median Contract Rent (in dollars)
City of El Segundo
1960

Census Tracts	6200	*6201	Average
Med. Home Value	19400	17500	18450 (54059)
Med. Rent	101	87	94 (275)

1960

Census Tracts	6200	*6201	Total
Med. Home Value	31700	28600	30150 (6844)
Med. Rent	136	128	132 (300)

*Split Tract

Almost 10,000 people resided in the portion of Hawthorne within the study area. This represents an increase of 32% since 1960. The ethnic composition changed from 99% to 97% white. The residential mobility increased during this decade with less than 1/3 of the population residing in the same house for the 5 year period before the census. Unemployment remained fairly constant at 7%. The median family income rose about 18% to approximately $25,000.

The housing pattern for this part of Hawthorne showed a substantial increase in renter occupied units; over two-thirds of the units were occupied by renters. The total number of units increased to about 4200 which is a 50% increase over 1960. The vacancy rate was 4%. Home values and rents increased 25% and 10% respectively. Home values went up to $56,000 and rents were $284.

Population
City of Hawthorne
1960

Census Tract	*6021
Total Population	7435
Total White	7346
% White	99

1970

Census Tracts	6021.01	*6021.02	Total
Total Population	7315	2556	9871
Total White	7109	2477	9586
% White	97	97	97

Residence 5 Yrs. Prior to Census
City of Hawthorne
1960

Census Tract	*6021
Persons over 5 yrs. old	6722
No. in same house	2541
% in same house	38

1970

Census Tracts	6021.01	*6021.02	Total
Persons over 5 yrs. old	6730	2380	9110
No. in same house	2020	878	2898
% in same house	30	37	32

* Split Tract

Employment
City of Hawthorne
1960

Census Tract	*6021
Total Civilian Work Force	3574
Total Unemployed	264
% Unemployed	7

1970

Census Tracts	6021.01	*6021.02	Total
Total Civilian	3639	1343	4982
Total Unemployed	260	905	355
% Unemployed	7	7	7

Median Family Income (in dollars)
City of Hawthorne
1960

Census Tract	*6021
Med. Family Income	6981 (20454)

1970

Census Tracts	6021.01	*6021.02	Average
Med. Family Income	10423	10855	10639 (24150)

*Split Tract

Figures in parentheses represent values adjusted to 1980 dollars.

Housing Units
City of Hawthorne
1960

Census Tract	*6021	
All Units	2790	(%)
Owner Occupied	1116	40
Renter Occupied	1479	53
Vacant	195	7

1970

Census Tracts	6021.01		*6021.02		Total	
All Units	3008	(%)	1186	(%)	4194	(%)
Owner Occupied	763	25	368	31	1131	27
Renter Occupied	2141	71	771	65	2912	69
Vacant	104	3	47	4	151	4

Median Single-Family Home Value/
Median Contract Rent (in dollars)
City of El Segundo
1960

Census Tract	*6021
Med. Home Value	15200
	(44536)
Med. Rent	88
	(258)

1970

Census Tracts	6021.01	*6021.02	Total
Med. Home Value	22900	26400	24650
			(55956)
Med. Rent	129	121	125
			(284)

*Split Tract

Figures in parentheses represent values adjusted to 1980 dollars.

According to 1960 and 1970 census data, the population within the ANCLUC Study area increased by 16% or 8,654 persons during that period. Though the total population had increased within the study area, the number of whites decreased by 1,565 persons and accounted for 81% of the total population in 1970 as to 96% in 1960. The non-white population had experienced a significant increase in proportion to the numbers in the 1960 census data. During the 1960 to 1970 period, the non-white population increased by 10,219 persons and accounted for 19% of the total population in 1970 as compared to 4% in 1960. Thus, the net increase for the non-white population was a substantial 517% increase while the white population decreased by 3%.

The employment status within the ANCLUC Study area has experienced an increase in the size of the labor force as well as those numbers employed and unemployed from 1960 to 1970. The labor force grew by 1,868 persons or 6% between 1960 and 1970. Unemployment increased from 1,683 persons in 1960 to 1,835 persons in 1970. In 1960, the unemployment rate for the study area was 5.7%, but by 1970 the figure was 5.9%.

The income level within the study area had shifted from the low end of the income range to the middle to high end of the scale. As the population experienced an income shift upward from 1960 to 1970, an increase of 12% or $939 occurred in the median income range within the study area. When converted to 1980 dollars there was a decrease of 13% or $2984.

Between 1960 and 1970, the housing stock increased by 20.9% (4,513 units). As the nature of the housing changed from single family to multiple family units, the numbers of owner occupied and renter occupied units changed accordingly. There was a marked growth in renter occupied units totaling 4,891 additional units and equaled a 46% increase over 1960's 10,619 units. While renter occupied units increased in numbers, owner occupied units experienced a decline of 132 units or 1% between 1960 and 1970.

On an average, the Inglewood housing stock in the ANCLUC study area was valued at $25,721 ($58,387 in 1980 dollars) which meant an increase in value by 45% (12% in 1980 valuation) between 1960 and 1970. The housing rental rates rose at a similar rate as housing values. By 1970, rent averaged $116 a month, which meant a 29% increase over the ten year period. In 1980 dollars the 1970 median rent was $263 which was $1 less than 1960.

Population
City of Inglewood

1960

Census Tracts	6005	6006	6007	6008	6010
Total Population	2688	5628	6540	6119	4572
Total White	2623	5466	6447	5959	4472
% White	98%	97%	99%	97%	98%

Census Tracts	6011	6012	6014	6019	6020	Total
Total Population	2962	7043	9171	3644	5775	54142
Total White	2912	6741	8823	3612	5111	52166
% White	98%	96%	96%	99%	89%	96%

1970

Census Tracts	6005.01	6006	6007.01	6007.02	6008.01
Total Population	2709	6191	4534	3160	3699
Total White	1389	3774	2867	1944	1266
% White	51%	61%	63%	62%	34%

Census Tracts	6008.02	6010	6011	6012.01	6012.02
Total Population	2685	6136	4133	5136	2540
Total White	1957	5991	3957	4961	2473
% White	73%	98%	96%	97%	97%

Census Tracts	6014.01	6014.02	6019	6020.01	Total
Total Population	5643	3107	5411	7712	62796
Total White	5194	3018	5128	7365	50601
% White	92%	97%	95%	95%	81%

Residence 5 yrs. Prior to Census
City of Inglewood

1960

Census Tracts	6005	6006	6007	6008	6010	6011	6012	6014	6019	6020	Total
Persons over 5 yrs. old	2428	5110	6227	5859	4271	2720	6642	8193	3189	1440	46079
No. in same house	1282	1528	3294	3398	1166	767	2431	2761	995	553	19175
% in same hse.	53	30	53	58	27	28	37	34	32	38	42

1970

Census Tracts	6005.01	6006	6007.01	6007.02	6008.01	6008.02	6010	6011	6012.01	6012.02	6014.01	6014.02	6019	6020.01	Total
Persons over 5 yrs. old	2512	5573	4359	2960	3425	2548	5871	3827	4888	2353	5385	2919	4954	6941	39686
No. in same house	982	1722	1578	1489	1860	1320	2002	1125	1398	1327	1664	1194	1288	2700	21649
% in same hse.	39	31	36	50	54	52	34	29	29	56	31	41	26	39	55

Employment
City of Inglewood

1960

Census Tracts	6005	6006	6007	6008	6010	
Total Civilian Work Force	1330	2705	3242	2864	2519	
Total Unemployed	60	103	93	55	149	
% Unemployed	5	4	3	2	6	

Cenus Tracts	6011	6012	6014	6019	6020	Total
Total Civilian Work Force	1574	3769	4360	1728	3057	29447
Total Unemployed	76	316	275	121	245	1683
% Unemployed	5	8	6	7	8	6

1970

Census Tracts	6005.01	6006	6007.01	6007.02	6008.01
Total Civilian Work Force	1207	3079	2222	1671	1683
Total Unemployed	74	200	74	53	82
% Unemployed	6	7	3	3	5

Census Tracts	6008.02	6010	6011	6012.01	6012.02
Total Civilian Work Force	1300	3290	2285	2881	1164
Total Unemployed	97	177	150	133	73
% Unemployed	8	5	7	5	6

Census Tracts	6014.01	6014.02	6019	6012.01	Total
Total Civilian Work Force	2879	1424	2695	3535	31315
Total Unemployed	193	67	237	225	1835
% Unemployed	7	5	9	6	6

Median Family Income (in dollars)
City of Inglewood

1960

Census Tracts	6005	6006	6007	6008	60010	
Med. Family Income	9088	9136	9876	8654	7082	
Census Tracts	**6001**	**6012**	**6014**	**6019**	**6020**	**Average**
Med. Family Income	6814	6852	6849	6393	6754	7750 (22708)

1970

Census Tracts	6005.01	6006	6007.01	6007.02	6008.01
Med. Family Income	11512	9130	11051	7875	10205
Census Tracts	**6008.02**	**6010**	**6011**	**6012.01**	**6012.02**
Med. Family Income	9213	7929	7497	7609	8456
Census Tracts	**6014.01**	**6014.02**	**6019**	**6020.01**	**Average**
Med. Family Income	6908	8322	7454	8491	8689 (19724)

Note: Figures in parentheses represent values adjusted to 1980 dollars.

Housing Units
City of Inglewood

1960

Census Tracts	6005		6006		6007		6008		6010	
All Units	848	(%)	1996	(%)	2330	(%)	2429	(%)	2211	(%)
Owner Occupied	618	73	79	39	1442	62	1611	66	618	28
Renter Occupied	210	25	1063	53	820	35	756	31	1385	63
Vacant	20	2	141	8	68	3	62	3	208	9

Census Tracts	6011		6012		6014		6019		6020		Total	
All Units	1395	(%)	3190	(%)	3572	(%)	1458	(%)	2184	(%)	21613	(%)
Owner Occupied	340	24	1197	38	1343	38	639	44	1053	48	9653	45
Renter Occupied	950	68	1779	56	1971	56	711	49	974	45	10619	49
Vacant	105	8	214	7	258	7	108	7	157	7	1341	6

1970

Census Tracts	6005.01		6006		6007.01		6007.02		6008.01	
All Units	882	(%)	2122	(%)	1834	(%)	1079	(%)	1296	(%)
Owner Occupied	611	69	746	35	1198	65	710	66	1029	79
Renter Occupied	248	28	1302	61	595	33	326	30	245	19
Vacant	25	3	74	3	41	2	43	4	22	2

Census Tracts	6008.02		6010		6011		6012.01		6012.02	
All Units	1222	(%)	3072	(%)	2121	(%)	2717	(%)	1089	(%)
Owner Occupied	581	48	650	21	253	12	465	17	589	54
Renter Occupied	615	50	2304	75	1712	81	2126	78	461	42
Vacant	26	2	118	4	156	7	126	5	39	4

Census Tracts	6014.01		6014.02		6019		6020.01		Total	
All Units	3202	(%)	1270	(%)	2252	(%)	2868	(%)	26126	(%)
Owner Occupied	515	22	662	52	385	17	1127	39	9521	36
Renter Occupied	694	74	561	44	1680	75	1641	57	15510	59
Vacant Occupied	93	4	47	8	187	8	100	4	1095	4

Median Single-Family Home Value
Median Contract Rent (in dollars)
City of Inglewood

1960

Census Tracts	6005	6006	6007	6008	6010
Med. Home Val.	20300	23000	22400	20300	19400
Med. Rent	99	104	98	84	85

Census Tracts	6011	6012	6014	6019	6020	Average
Med. Home Val.	13600	14900	14500	13300	13900	17760 (52037)
Med. Rent	92	79	85	87	84	90 (264)

1970

Census Tracts	6005.01	6006	6007.01	6007.02	6008.01
Med. Home Val.	18700	30300	28500	28200	24400
Med. Rent	118	119	102	133	103

Census Tracts	6008.02	6010	6011	6012.01	6012.02
Med. Home Val.	29500	32200	21300	24200	22300
Med. Rent	88	127	128	121	110

Census Tracts	6014.01	6014.02	6019	6020.01	Average
Med. Home Val.	23400	22600	21900	22600	25721 (58387)
Med. Rent	118	104	137	117	116 (263)

Note: Figures in parentheses represent values adjusted to 1980 dollars.

City of Los Angeles

Total population of the South Central area increased by 5,053, a 20% increase. The white population decreased by 17,154 persons, a 78% decrease. The number of persons living in the same residence at least 5 years increased by 26%. Unemployment increased by 463 persons, a 92% increase. The median income increased by 34%.

An increase of 414 (4%) housing units occurred in the South Central area during the 10 year period. Owner occupancy decreased by 4%, renter occupancy increased by 29%. The vacancy rate decreased by 4%.

The 1970 population of the Southeast area increased by 3057, a 7% increase over the 1960 figures. The white population decreased by 11,583 persons, a 72% decrease. The number of persons living in the same residence at least 5 years increased by 23%. Unemployment increased by 339 persons, a 18% increase. The median income decreased by 20%.

An increase of 1,305 housing (9%) units occurred during the 10 year period in the Southeast area. Owner occupancy decreased by 15% and the renter occupancy increased by 29%. The vacancy rate increased by 44%.

The 1970 population in Westchester decreased by 1,545 persons, a 4% decrease. The white population decreased by 2,058 persons, a 5% decrease. Unemployment increased by 316 persons, a 53% increase. The median income increased by 59% or 24% when converted to 1980 dollars. The number of persons living in the same residence at least 5 years increased by 6%.

An increase of 1,398 housing (10%) units occurred in Westchester during the 10 year period. Owner occupancy decreased by 13% and renter occupancy increased by 75%. The vacancy rate increased by 17%.

Population
City of Los Angeles

1960
South Central

Census Tracts	2378	2379	2381	2382
Total Pop.	3832	3464	3852	4195
Total White	3161	2844	3403	3349
% White	82	82	88	81

Census Tracts	2384	2385	2386	Total
Total Pop.	4226	4624	1076	25269
Total White	3829	4424	1069	22079
% White	91	96	99	87

Southeast

Census Tracts	2399	2401	2402	2403	2404	240
Total Pop.	4184	2103	4093	4116	4108	498
Total White	476	707	2377	3196	3483	2341
% White	11	34	58	78	85	4

Census Tracts	2406	2407	*2412	2421	2422	2423	Total
Total Pop.	3433	5046	1629	3720	4388	3277	4508
Total White	290	531	1385	61	832	499	16128
% White	8	11	85	2	19	14	36

1970
South Central

Census Tracts	2378	2379	2381	2382
Total Pop.	4205	4043	4842	5231
Total White	926	426	619	1035
% White	22	11	13	20

Census Tracts	2384	2385	2386	Total
Total Pop.	4889	5853	1259	30322
Total White	835	880	204	4925
% White	17	15	16	16

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Total Pop.	5290	2689	4204	5248	5109	5266
Total White	309	324	568	575	885	57
% White	6	13	16	11	17	12

Census Tracts	2406	2407	*2412	2421	2422	2423	Tota
Total Pop.	3433	5134	1827	2948	4232	2757	48137
Total White	290	173	303	28	341	179	454
% White	8	3	17	1	10	7	

* Split Census Tract

Population
City of Los Angeles

1960
Westchester

Census Tracts	*2764	*2765	2766	2767	2768	2769
Total Population	3155	2365	6644	3587	2734	4329
Total White	3123	2341	6624	3567	2726	4328
% White	99	99	99	99	99	99

Census Tracts	2771	2772	2773	2774	2781	Total
Total Population	3854	3006	4238	3638	4839	42389
Total White	3852	2982	4238	3604	4825	42210
% White	99	99	100	99	99	99

Los Angeles

Area	South Central	Southeast	Westchester	Total
Total Population	25269	45080	42389	112738
Total White	22079	16128	42210	80417
% White	87	36	99	71

1970
Westchester

Census Tracts	*2764	*2765	2766.01	2766.02	2767	2768
Total Population	2945	2271	3387	5818	3298	2763
Total White	2916	2203	3322	5779	3246	2713
% White	99	97	99	99	98	98

Census Tracts	2769	2771	2772	2773	2774	2781	Total
Total Pop.	3759	3737	3207	2346	3053	4260	40844
White	3707	3673	3106	2320	2943	4224	40152
% White	99	98	97	99	96	99	98

Los Angeles

Area	South Central	Southeast	Westchester	Total
Total Population	30322	48137	40844	119303
Total White	4925	4545	40152	49622
% White	16	9	98	42

* Split Tract

Residence 5 Yrs. Prior to Census
City of Los Angeles

1960
South Central

Census Tracts	2378	2379	2381	2382
Persons over 5 yrs. old	3543	3253	3609	3940
No. in same house	1466	1544	1546	1808
% in same house	41	47	43	46

Census Tracts	2384	2385	2386	Total
Persons over 5 yrs. old	4064	4355	1027	23791
No. in same house	2346	2417	566	11693
% in same house	58	55	55	49

Southeast

Census Tr.	2399	2401	2402	2403	2404	2405
Persons over 5 yrs.	3548	1799	3566	4653	4713	4253
No. same	1781	888	1429	749	524	1547
% same	50	49	40	16	11	36

Census Tr.	2406	2407	*2412	2421	2422	2433	Total
Persons over 5 yrs.	2878	4439	474	2753	3703	2771	39550
No. same	2400	2615	693	357	1747	1331	16061
% same	83	59	47	13	47	48	41

1970
South Central

Census Tracts	2378	2379	2381	2382
Persons over 5 yrs. old	3966	3578	4460	4766
No. in same house	1864	2290	2319	1897
% in same house	47	64	52	40

Census Tracts	2384	2385	2386	Total
Persons over 5 yrs. old	4318	5903	505	27496
No. in same house	2365	3719	322	14776
% in same house	55	63	64	54

Southeast

Census Tr.	2399	2401	2402	2403	2404	2405
Persons over 5 yrs.	4625	2364	3734	4386	4614	4550
No. same	2729	1085	1378	1390	1859	1911
% same	59	46	37	32	40	42

Census Tr.	2406	2407	*2412	2421	2422	2423	Total
Persons over 5 yrs.	2975	4678	1623	2326	3716	2343	41934
No. same	1737	3041	875	900	1821	1101	19827
% same	58	65	54	39	49	47	47

* Split Tract

Residence 5 Yrs. Prior to Census
City of Los Angeles

1960
Westchester

Census Tracts	*2764	*2765	2766	2767	2768	2769
Persons over 5 yrs. old	2859	2161	5924	3194	2512	3964
No. in same house	1687	994	2228	1669	1468	2345
% in same house	59	46	38	52	58	59

Census Tracts	2771	2772	2773	2774	2781	Total
Persons over 5 yrs. old	3380	2637	3850	3109	4357	37947
No. in same house	1952	305	2110	1350	1586	17694
% in same house	58	12	55	43	36	47

Los Angeles

Area	South Central	Southeast	Westchester	Total
Persons over 5 yrs. old	23791	39550	37947	101288
No. in same house	11693	16061	17694	45448
% in same house	49	41	47	45

1970
Westchester

Census Tracts	*2764	*2765	2766.01	2766.02	2767	2768
Persons over 5 yrs. old	2779	2209	3273	5559	2992	2649
No. in same house	1751	1127	1473	2557	1795	1881
% in same house	63	51	45	46	60	71

Census Tracts	2769	2771	2772	2773	2774	2781	Total
Pers. over 5 yrs.	3546	3353	2825	2000	2779	4102	38066
No. in same house	1915	1777	452	960	1167	1887	18742
% in same house	54	53	16	48	42	46	49

Los Angeles

Area	South Central	Southeast	Westchester	Total
Persons over 5 yrs. old	27496	41934	38066	107496
No. in same house	14776	19827	18742	53345
% in same house	54	47	49	50

* Split Tract

Employment
City of Los Angeles

1960

South Central

Census Tracts	2378	2379	2381	2382
Total Civilian Work Force	1760	1606	1912	2095
Total Unemployed	110	53	65	132
% Unemployed	6	3	3	6

Census Tracts	2384	2385	2386	Total
Total Civilian Work Force	2030	2231	541	12175
Total Unemployed	67	58	20	505
% Unemployed	3	3	8	4

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Total Civilian Work Force	1654	838	1688	1750	1863	2016
Total Unemployed	177	95	190	164	122	254
% Unemployed	11	11	11	9	7	13

Census Tr.	2406	2407	*2412	2421	2422	2423	Total
Total Civ. WF	1328	2005	747	563	1368	1009	16829
Tot. Unemp.	154	224	45	103	191	153	1872
% Unemp.	12	11	6	18	14	15	11

1970

South Central

Census Tracts	2378	2379	2381	2382
Total Civilian Work Force	1667	1939	2273	2280
Total Unemployed	100	128	175	171
% Unemployed	6	7	8	8

Census Tracts	2384	2385	2386	Total
Total Civilian Work Force	2149	2563	561	13432
Total Unemployed	184	164	46	968
% Unemployed	9	6	8	7

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Total Civilian Work Force	1791	881	1207	1872	1910	1724
Total Unemployed	231	148	175	257	219	269
% Unemployed	13	17	15	14	11	16

Census Tr.	2406	2407	*2412	2421	2422	2423	Total
Total Civ. WF	1272	1264	752	285	917	730	14578
Tot. Unemp.	159	230	83	105	189	146	2211
% Unemp.	13	18	11	37	21	20	15

*Split Tract

Employment
City of Los Angeles

1960
Westchester

Census Tracts	*2764	*2765	2766	2767	2768	2769
Total Civilian Work Force	1238	991	2620	1374	1172	1865
Total Unemployed	33	66	82	43	34	80
% Unemployed	3	7	3	3	3	4

Census Tracts	2771	2772	2773	2774	2781	Total
Total Civilian Work Force	1594	1667	1871	1513	2286	18191
Total Unemployed	44	46	55	46	64	593
% Unemployed	3	3	3	3	3	3

Los Angeles

Area	South Central	Southeast	Westchester	Total
Total Civilian Work Force	12175	16829	18191	47195
Total Unemployed	505	1872	593	2970
% Unemployed	4	11	3	6

1970
Westchester

Census Tracts	*2764	*2765	2766.01	2766.02	2767	2768
Total Civilian Work Force	1313	1053	1680	3144	1399	1258
Total Unemployed	49	79	105	94	40	56
% Unemployed	4	7	6	3	3	4

Census Tracts	2769	2771	2772	2773	2774	2781	Total
Tot. Civ. Work Force	1737	1724	2039	1087	1452	2427	20313
Total Unemp.	33	70	52	100	139	92	909
% Unemp.	2	4	3	9	10	4	4

Los Angeles

Area	South Central	Southeast	Westchester	Total
Total Civilian Work Force	13432	14578	20313	48323
Total Unemployed	968	2211	909	4088
% Unemployed	7	15	4	8

Median Family Income (in dollars)
City of Los Angeles

1960

South Central

Census Tracts	2378	2379	2381	2382
Median Family Income	5976	7146	6835	6946

Census Tracts	2384	2385	2386	Average
Median Family Income	8089	7831	7953	7254

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Median Family Income	4695	5190	5475	4971	5648	5191

Census Tracts	2406	2407	*2412	2421	2422	2423	Total
Med. Fam. Income	4922	5380	6823	2613	4206	4620	4978

1970

South Central

Census Tracts	2378	2379	2381	2382
Median Family Income	8682	10154	9542	8543

Census Tracts	2384	2385	2386	Total
Median Family Income	10120	10946	10076	9723

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Median Family Income	6661	5707	6785	6986	7407	6525

Census Tracts	2406	2407	*2412	2421	2422	2423	Total
Med. Fam. Income	7816	7404	9072	2846	4952	4135	5987

* Split Tract Estimate

Median Family Income (in dollars)
City of Los Angeles

1960

Westchester

Census Tracts	*2764	*2765	2766	2767	2768	2769
Med. Family Income	9938	9511	11150	8680	9102	9453

Census Tracts	2771	2772	2773	2774	2781	Average
Med. Family Income	8175	7082	8652	7511	10663	9083

Los Angeles

Area	South Central	Southeast	Westchester	Average
Med. Family Income	7254 (21254)	4978 (14586)	9083 (26437)	7105 (20818)

1970

Westchester

Census Tracts	*2764	*2765	2766.01	2766.02	2767	2768
Med. Family Income	16761	14179	18524	17960	12809	14700

Census Tracts	2769	2771	2772	2773	2774	2781	Average
Med. Fam. Income	14217	14042	10006	12708	10843	16941	14474

Los Angeles

Area	South Central	Southeast	Westchester	Average
Med. Fam. Income	9723 (28488)	5987 (17542)	14474 (32855)	10061 (29479)

* Split Tract

Figures in parentheses represent values adjusted to 1980 dollars.

Housing
City of Los Angeles

1960
South Central

Census Tracts	2378		2379		2381		2382	
All Units	1346	(%)	1293	(%)	1530	(%)	1858	(%)
Owner Occupied	869	56	989	76	981	64	1044	56
Renter Occupied	417	31	265	20	473	31	734	40
Vacant	60	4	39	3	76	5	80	4

Census Tracts	2384		2385		2386		Total	
All Units	1570	(%)	1672	(%)	358	(%)	9627	(%)
Owner Occupied	1309	83	1269	76	317	89	6778	70
Renter Occupied	232	15	327	20	39	11	2487	26
Vacant	29	2	76	5	2	1	362	4

Southeast

Census Tracts	2399		2401		2402		2403		2404		2405	
All Units	1306	(%)	677	(%)	1458	(%)	1546	(%)	1619	(%)	1647	(%)
Owner Occupied	640	49	333	49	683	47	523	34	813	50	774	47
Renter Occupied	614	47	307	45	670	46	910	58	716	44	774	47
Vacant	52	4	37	5	105	7	113	7	90	6	99	6

Census Tracts	2406		2407		*2412		2421		2422		2423		Total	
All Units	1084	(%)	1391	(%)	630	(%)	690	(%)	1231	(%)	962	(%)	14241	(%)
Owner Occ.	559	52	997	72	422	67	11	2	556	45	352	37	6663	47
Renter Occ.	426	39	353	25	170	27	670	97	568	46	542	56	6720	47
Vacant	99	9	41	3	38	6	9	1	107	7	68	7	858	6

1970
South Central

Census Tracts	2378		2379		2381		2382	
All Units	1213	(%)	1310	(%)	1662	(%)	2023	(%)
Owner Occupied	796	66	967	74	952	57	972	48
Renter Occupied	369	30	295	23	658	40	969	49
Vacant	48	4	48	4	52	3	82	4

Census Tracts	2384		2385		2386		Total	
All Units	1607	(%)	1860	(%)	366	(%)	10041	(%)
Owner Occupied	1227	76	1267	68	308	84	6489	65
Renter Occupied	325	20	538	29	50	14	3204	32
Vacant	55	3	55	3	8	2	348	3

Southeast

Census Tracts	2399		2401		2402		2403		2404		2405	
All Units	1767	(%)	826	(%)	1358	(%)	1822	(%)	1839	(%)	1780	(%)
Owner Occupied	655	37	345	42	454	33	488	27	673	37	657	37
Renter Occupied	1011	57	447	54	772	57	1171	64	1015	55	949	53
Vacant	101	6	34	4	132	10	163	9	151	8	174	10

Census Tracts	2406		2407		*2412		2421		2422		2423		Total	
All Units	1090	(%)	1558	(%)	617	(%)	625	(%)	1309	(%)	955	(%)	15546	(%)
Owner Occ.	439	40	894	57	370	60	11	2	431	33	250	26	5667	38
Renter Occ.	573	53	575	37	210	34	576	92	752	57	593	62	8644	54
Vacant	78	7	89	6	37	6	38	6	126	10	112	12	1235	8

Split Tract

Housing Units
City of Los Angeles

1960
Westchester

Census Tracts	*2764		*2765		2766		2767		2768		2769	
All Units	849	(%)	701	(%)	2004	(%)	986	(%)	787	(%)	1431	(%)
Owner Occupied	790	93	564	80	1465	73	752	76	736	94	1083	76
Renter Occupied	51	6	122	17	376	19	218	22	39	5	324	23
Vacant	8	1	15	2	163	8	16	2	12	1	24	2

Census Tracts	2771		2772		2773		2774		2781		Total	
All Units	1441	(%)	317	(%)	1313	(%)	1195	(%)	1739	(%)	13463	(%)
Owner Occupied	989	87	111	8	1175	89	645	54	1182	68	9492	71
Renter Occupied	129	11	1096	83	119	9	493	41	445	26	3412	25
Vacant	23	2	110	8	19	1	57	5	112	6	559	4

Los Angeles

Area	South Central		Southeast		Westchester		Total	
All Units	9627	(%)	14241	(%)	13463	(%)	37331	(%)
Owner Occupied	6778	70	6663	47	9492	71	22933	61
Renter Occupied	2487	26	6720	47	3412	25	12619	34
Vacant	362	4	858	6	559	4	1779	5

1970
Westchester

Census Tracts	*2764		*2765		2766.01		2766.02		2767		2768	
All Units	873	(%)	734	(%)	1161	(%)	2246	(%)	982	(%)	901	(%)
Owner Occupied	794	91	543	74	695	60	912	41	677	69	725	80
Renter Occupied	70	8	184	25	423	36	1185	53	296	30	142	16
Vacant	9	1	7	1	43	4	149	7	9	1	34	4

Census Tracts	2769		2771		2772		2773		2774		2781		Total	
All Units	1422	(%)	1170	(%)	1564	(%)	929	(%)	1095	(%)	1784	(%)	14861	(%)
Owner	993	70	927	79	107	7	491	53	478	44	897	50	8230	55
Renter	399	28	228	19	1376	88	336	36	574	52	754	42	5967	40
Vacant	30	2	15	1	81	5	102	11	43	4	133	7	655	4

Los Angeles

Area	South Central		Southeast		Westchester		Total	
All Units	10041	(%)	15546	(%)	14861	(%)	40448	(%)
Owner Occupied	6489	65	5667	38	8239	55	20395	51
Renter Occupied	3204	32	8644	54	5967	40	17815	44
Vacant	348	3	1235	8	655	4	2238	6

* Split Tract

Median Single Family Home Value/ Median Contract Rent (in dollars) City of Los Angeles

1960

South Central

Census Tracts	2378	2379	2381	2382
Med. Home Value	13300	16500	16900	16400
Med. Home Rent	61	75	79	67

Census Tracts	2384	2385	2386	Average
Med. Home Value	17000	17500	17400	16429
Med. Home Rent	72	70	N/A	71

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Med. Home Value	11100	10400	9900	11500	12300	10200
Med. Home Rent	69	71	70	74	80	75

Census Tracts	2406	2407	2412	*2421	2422	2423	Average
Med. Home Value	10300	11600	13800	N/A	10300	9100	1095
Med. Rent	71	76	82	54	71	71	7

1970

South Central

Census Tracts	2378	2379	2381	2382
Med. Home Value	18600	22000	22300	21500
Med. Home Rent	85	91	99	88

Census Tracts	2384	2385	2386	Average
Med. Home Value	22100	22600	23100	21748
Med. Home Rent	97	91	112	95

Southeast

Census Tracts	2399	2401	2402	2403	2404	2405
Med. Home Value	15600	14700	14400	16800	17200	14900
Med. Home Rent	77	81	81	90	96	82

Census Tracts	2406	2407	2412	*2421	2422	2423	Average
Med. Home Value	14800	15900	18500	N/A	14100	13200	15464
Med. Rent	82	80	88	66	70	69	81

N/A - Not available in census

*Split Tract

Median Single-Family Home Value/ Median Contract Rent (in dollars) City of Los Angeles

1960

Westchester

Census Tracts	2764	2765	2766	2767	2768	2769
Med. Home Value	21800	20500	25000	18800	20500	21200
Med. Rent	N/A	N/A	118	95	N/A	88

Census Tracts	2771	2772	2773	2774	2781	Average
Med. Home Value	17500	N/A	18100	16700	25000	20510
Med. Rent	N/A	92	N/A	90	127	102

Los Angeles

Area	South Central	Southeast	Westchester	Average
Med. Home Value	16429 (48137)	10955 (32098)	20510 (60094)	15965 (46777)
Med. Rent	71 (208)	72 (211)	102 (299)	82 (240)

1970

Westchester

Census Tracts	2764	2765	2766.01	2766.02	2767	2768
Med. Home Value	31700	31300	46700	35600	28900	30900
Med. Rent	184	143	178	198	148	216

Census Tracts	2769	2771	2772	2773	2774	2781	Average
Value	31000	27300	30000	29400	23400	45300	32625
Rent	123	183	138	145	136	211	167

Los Angeles

Area	South Central	Southeast	Westchester	Average
Med. Home Value	21743 (49357)	15464 (35103)	32625 (74059)	23277 (52839)
Med. Rent	95 (216)	81 (184)	167 (379)	114 (259)

Figures in parentheses represent values adjusted to 1980 dollars.

N/A - Not available in census.

The population of the Florence-Graham area decreased 19% between 1960 and 1970. The percentage of white population went down from 30% to 20%. The residential stability (persons living at the same residence for the past 5 years) was high and increased to 56% of the residents. The unemployment rate remained stationary at 10%. Median family income went up $1025 in 1970 to $5650; however, when adjusted to compensate for inflation there was a 5% decrease. The housing picture for the Florence-Graham area was characterized by a 13% decrease in total housing units. The percentage of homeowners decreased slightly and the vacancy rate remained constant at 8%. Adjusted home values increased significantly (20%) but rents actually decreased slightly.

The Westmont area experienced a 22% population increase over the 1960 figure. The racial composition changed from 99% to 18% white; this represents the largest shift in the unincorporated study area. Residential stability decreased from 42% to 31%; in other words, less than a third of the population lived in the same house for the past 5 years. Unemployment increased from 6% to 9% while the adjusted family income decreased by 11%. On the housing front, Westmont experienced some growth (8%) in total housing units. During this period the percentage of renters increased to 60% and the homeowners dropped to 33%; the vacancy rate increased slightly to 7%. The adjusted value of single family homes increased slightly (7%) with rents increasing only 3%.

Only 1024 persons were added to the Lennox area between the 1960 and the 1970 census estimates. The white population experienced a slight decrease (tp 97%). Residential stability went up 6% to a figure of 42%. Unemployment decreased to 6%. Median family income, when adjusted to inflation rates, increased 11%; this was the only unincorporated area in the study to experience an income increase. In Lennox the housing stock grew by 761 units or an 8% increase. As in the other areas the percent of home-owners decreased and the renters increased (to 59%). The vacancy rate decreased to a low figure of 4%. The adjusted home values and rents increased more in this area than any other unincorporated portion of the study; home values went up 22% and rents increased 16%.

Population
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351	5352	*5353	5354	Total
Total Population	3064	4374	2111	2716	12265
Total White	980	377	1456	898	3711
% White	32	9	69	33	30

Westmont

Census Tracts	6001	6002	6003	6004	Total
Total Population	4282	6902	7701	5212	24097
Total White	4184	6819	7626	5195	23824
% White	98	99	99	99	99

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Total Population	4031	4263	4720	4800	7695	25509
Total White	3950	4137	4670	4744	7672	25173
% White	98	97	99	99	99	99

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Total Population	12265	24097	25509	61871
Total White	3711	23824	25173	52708
% White	30	99	99	85

1970

Florence-Graham

Census Tracts	5351.02	5352	*5353	5354	Total
Total Population	2759	3055	1864	2204	9882
Total White	392	112	1081	347	1932
% White	14	4	58	16	20

Westmont

Census Tracts	6001	6002.01	6002.02	6003.01	6003.02	6004	Total
Total Pop.	5259	1652	7310	5687	4710	4692	29310
Total White	876	267	1097	1153	746	1013	5152
% White	17	16	15	20	16	22	18

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Total Population	4988	3818	5969	5063	6695	26533
Total White	4810	3692	5747	4865	6594	25708
% White	96	97	96	96	98	97

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Total Population	9882	29310	26533	65725
Total White	1932	5152	25708	32792
% White	20	18	97	50

*Split Tract

Residence 5 yrs. Prior to Census
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351	5352	*5353	5354	Total
Persons over 5 yrs. old	1705	3710	1720	2223	9358
No. in same house	779	1960	636	1014	4389
% in same house	46	53	37	46	47

Westmont

Census Tracts	6001	6002	6003	6004	Total
Persons over 5 yrs. old	3857	6191	6932	4726	21706
No. in same house	1248	2423	2860	2482	9013
% in same house	32	39	41	53	42

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Persons over 5 yrs. old	3533	3686	4132	4276	6778	22405
No. in same house	1166	1031	1280	1282	3382	8141
% in same house	33	28	31	30	50	36

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Persons over 5 yrs. old	9358	21706	22405	53469
No. in same house	4389	9013	8141	21543
% in same house	47	42	36	40

1970

Florence-Graham

Census Tracts	5351.02	5352	*5353	5354	Total
Persons over 5 yrs. old	2463	2778	1523	2101	8865
No. in same house	1637	1577	701	1086	5001
% in same house	66	57	46	52	56

Westmont

Census Tracts	6001	6002.01	6002.02	6003.01	6003.02	6004	Total
Persons over 5	4471	1332	6384	4794	4182	4211	25374
Same hse	1081	383	1776	1176	1593	1772	7781
%	24	29	28	25	38	42	31

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Persons over 5 yrs. old	4410	3605	5008	4299	6230	23552
No. in same house	1213	1517	1748	1493	3862	9833
% in same house	28	42	35	35	62	42

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Persons over 5	8865	25374	23552	57791
No. in same hse.	5001	7781	9833	22615
% in same house	56	31	42	39

*Split Tract

Employment
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351	5352	*5353	5354	Total
Total Civilian Work Force	1140	1366	684	814	4004
Total unemployed	91	110	116	70	387
% unemployed	8	8	17	9	10

Westmont

Census Tracts	6001	6002	6003	6004	Total
Total Civilian Work Force	1897	3207	3425	2307	10836
Total unemployed	122	202	191	81	596
% unemployed	6	6	6	4	6

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Total Civilian Work Force	1961	1938	2299	2368	3271	11837
Total unemployed	157	174	190	191	148	860
% unemployed	8	9	8	8	5	7

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Total Civilian Work Force	4004	10836	11837	26677
Total unemployed	387	596	860	1843
% unemployed	10	6	7	7

1970

Florence-Graham

Census Tracts	5351.02	5352	*5353	5354	Total
Total Civilian Work Force	982	731	479	548	2740
Total unemployed	70	100	57	58	285
% unemployed	7	14	12	11	10

Westmont

Census Tracts	6001	6002.01	6002.02	6003.01	6003.02	6004	Total
Total Civ. WF	1886	532	3060	2047	1604	1951	11080
Unemp.	228	60	401	160	153	45	1047
%	12	11	13	8	10	2	9

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Total
Total Civilian Work Force	2456	1726	2560	2041	3295	12078
Total unemployed	141	98	191	161	165	756
% unemployed	6	6	7	8	5	6

Unincorporated Area

Area	Florence	Westmont	Lennox	Total
Total Civilian Work Force	2740	11080	12078	25898
Total unemployed	285	1047	756	2088
% unemployed	10	9	6	8

*Split Tract

Median Family Income (in dollars)
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351	5352	*5353	5354	Average
Median Family Income	4824	4473	4678	4524	4625

Westmont

Census Tracts	6001	6002	6003	6004	Average
Median Family Income	5904	6210	7002	8196	6828

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Average
Median Family Income	6340	6365	6584	6549	7832	6734

Unincorporated Area

Area	Florence	Westmont	Lennox	Average
Median Family Income	4625 (13551)	6828 (20006)	6734 (19731)	6062 (17762)

1970

Florence-Graham

Census Tracts	5351.02	5352	*5353	5354	Average
Median Family Income	6687	4589	6547	4775	5650

Westmont

Census Tracts	6001	6002.01	6002.02	6003.01	6003.02	6004	Average
Med. Fam. Income	6477	7056	7257	6980	8819	10327	7819

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Average
Median Family Income	8590	9943	9045	8836	12233	9729

Unincorporated Area

Area	Florence	Westmont	Lennox	Average
Median Family Income	5650 (12826)	7819 (17749)	9729 (22085)	7733 (17554)

Figures in parentheses represent values adjusted to 1980 dollars.

*Split Tract

Housing Units
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351		5352		*5353		5354		Total	
All Units	939	(%)	1209	(%)	616	(%)	782	(%)	3546	(%)
Owner Occupied	451	48	594	49	228	37	249	32	1522	43
Renter Occupied	432	46	534	44	339	55	432	55	1737	49
Vacant	56	6	81	7	49	8	101	13	287	8

Westmont

Census Tracts	6001		6002		6003		6004		Total	
All Units	1780	(%)	2763	(%)	2853	(%)	1597	(%)	8993	(%)
Owner Occupied	528	30	1166	42	1350	47	1053	66	4097	46
Renter Occupied	1167	66	1443	52	1308	46	516	32	4434	49
Vacant	85	5	154	6	195	7	28	2	462	5

Lennox-Del Aire

Census Tracts	6015		6016		6017		6018		6022		Total	
All Units	1554	(%)	1624	(%)	1924	(%)	2013	(%)	2307	(%)	9422	(%
Owner Occupied	528	34	638	39	684	36	775	38	1644	71	4269	5
Renter Occupied	866	57	877	54	1066	55	1071	53	558	24	4458	7
Vacant	140	9	109	7	174	9	167	8	105	5	695	7

Unincorporated Area

Area	Florence		Westmont		Lennox		Total	
All Units	3546	(%)	8993	(%)	9422	(%)	21961	(%)
Owner Occupied	1522	43	4097	46	4269	45	9888	45
Renter Occupied	1737	49	4434	49	4458	47	10629	48
Vacant	287	8	462	5	695	7	1444	7

1970

Florence-Graham

Census Tracts	5351.02		5352		*5353		5354		Total	
All Units	873	(%)	980	(%)	601	(%)	648	(%)	3102	(%)
Owner Occupied	401	46	432	44	204	34	204	31	1241	40
Renter Occupied	433	50	462	47	361	60	372	57	1628	52
Vacant	39	4	86	9	36	6	72	11	233	8

Westmont

Census Tracts	6001		6002.01		6002.02		6003.01		6003.02		6004		Total	
All Units	1859	(%)	564	(%)	2604	(%)	2035	(%)	1230	(%)	1378	(%)	9670	%
Owner	370	20	134	24	685	26	431	21	736	60	880	64	3236	33
Renter	1357	73	372	66	1706	66	1418	70	466	38	458	33	5777	60
Vacant	132	7	58	10	213	8	186	9	28	2	40	3	657	7

Lennox-Del Aire

Census Tracts	6015		6016		6017		6018		6022		Total	
All Units	2074	(%)	1413	(%)	2387	(%)	2048	(%)	2261	(%)	10183	%
Owner Occupied	444	21	491	35	646	27	615	30	1500	66	3696	6
Renter Occupied	1503	72	877	62	1642	69	1312	64	715	32	6049	59
Vacant	127	6	45	3	99	4	121	6	46	2	438	4

Unincorporated Area

Area	Florence		Westmont		Lennox		Total	
All Units	3102	(%)	9670	(%)	10183	(%)	22955	(%)
Owner Occupied	1241	40	3236	33	3696	36	8173	36
Renter Occupied	1628	52	5777	60	6049	59	13454	59
Vacant	233	8	657	7	438	4	1328	6

*Split Tract

Median Single-Family Home Value/
Median Contract Rent (in dollars)
County of Los Angeles

1960

Florence-Graham

Census Tracts	5351	5352	*5353	5354	Average
Med. Home Value	10400	9400	8500	7400	8925
Med. Rent	61	60	54	54	57

Westmont

Census Tracts	6001	6002	6003	6004	Average
Med. Home Value	10800	12800	14700	18200	14125
Med. Rent	66	68	70	84	72

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Average
Med. Home Value	13800	13300	13000	12900	14700	13540
Med. Rent	81	73	77	75	90	79

Unincorporated Area

Area	Florence	Westmont	Lennox	Average
Med. Home Value	8925	14125	13540	12197
	(26150)	(41386)	(39672)	(35737)
Med. Rent	57	72	79	69
	(167)	(211)	(231)	(202)

1970

Florence-Graham

Census Tracts	5351.02	5352	*5353	5354	Average
Med. Home Value	14500	14400	12400	13800	13775
Med. Rent	75	76	72	68	73

Westmont

Census Tracts	6001	6002.01	6002.02	6003.01	6003.02	6004	Average
Med. Home Value	17600	17900	18400	18800	21800	23000	19583
Med. Rent	93	91	95	95	90	111	96

Lennox-Del Aire

Census Tracts	6015	6016	6017	6018	6022	Average
Med. Home Value	20800	21100	21200	19700	23700	21300
Med. Rent	118	109	115	112	136	118

Unincorporated Area

Area	Florence	Westmont	Lennox	Average
Med. Home Val.	13775	19583	21300	18219
	(31269)	(44453)	(48351)	(41357)
Med. Rent	73	96	118	96
	(166)	(218)	(268)	(218)

Figures in parentheses represent values adjusted to 1980 dollars.

*Split Tract

TASK 1.12

REVIEW AND UPDATE AIR TRAFFIC FORECASTS

MAY 1981

Prepared by: Los Angeles City Department of Airports

For Information Call: Vi Moyer - Facilities Planning (213) 646-9109

TASK 1.12

REVIEW & UPDATE AIR TRAFFIC FORECASTS

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I. AIRLINE TRAFFIC GROWTH

This section describes forecasts of passengers and aircraft movements at the Los Angeles International Airport (LAX), Ontario Airport (ONT), Palmdale Airport (PMD), and Van Nuys Airport (VNY) by four separate agencies. The forecast methodologies are described and available data is summarized.

FORECASTS:

SOUTHERN CALIFORNIA ASSOCIATION OF GEVERNMENTS (SCAG)

Completed June, 1980.

Forecasts LAX, ONT, PMD to 1995.

AIR TRANSPORTATION ASSOCIATION OF AMERICA (ATA)

Completed April, 1974.

Forecasts LAX and ONT, 1983 - 1991.

FEDERAL AVIATION ADMINISTRATION (FAA)

Completed February, 1981.

Terminal Area forecasts for LAX, ONT, PMD, & VNY, 1981 - 1992.

LOS ANGELES DEPARTMENT OF AIRPORTS (DOA)

Completed January, 1981.

Forecasts LAX, 1981 - 1990.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG)

Forecast of Demand

This section explains the general assumptions underlying the forecasts, the categories of passenger forecast, and the forecasting techniques and their results.

General Assumptions Used:

There will be no significant changes in the social or political system.

The reasons people travel and the modes they use (auto, air, train, etc.) will remain much the same, although the percentages in each category may change.

Over the past decade, the price of air travel has dropped relative to real income. This trend may not last, but many factors--possible gasoline shortages, the downsizing of cars, etc.--should keep air travel growing faster than other modes.

The cities served by air from Los Angeles in 1995 are expected to be basically those served now. Their ranking may change, but the top markets will continue to be:

1. San Francisco - Oakland - San Jose
2. Hawaii
3. San Diego
4. Chicago
5. Las Vegas
6. New York

Airlines will probably have no feasible alternative to hydrocarbon fuel by 1995, but it is thought that scheduled flights will continue, with only occasional spot shortages.

No new technology is expected to replace or greatly alter today's air-carrier aircraft, nor are other modes expected to develop technologies that will reduce air-carrier travel.

Categories of Passengers Forecast:

People who fly are classified as: origin and destination (O & D) passengers, connecting passengers, or through passengers.

O & D passengers are those -- whether visitors or residents -- whose trips begin or end in the region. O and D passengers make up the largest category, some 80% regionwide.

Connecting passengers (or transfers) only change planes at the airport: their origins or destinations are outside the region. They are assumed to be 15% of passengers regionwide.

Through passengers (assumed to be 5%) -- most of whom have origins and destinations outside the region -- continue on the same aircraft after a brief stop to let other passengers on or off.

This study considered only O & D and connecting passengers. Through passengers are important when considering certain factors, such as number of passengers per plane, but the percentage of through passengers at an airport fluctuates with its growth and is not counted as a basic statistic.

Forecast Technique

The study used a two-part forecasting technique:

1. a regionwide forecast of passenger demand by the Caltrans Air Passenger Forecast Model;

2. allocation of the passengers predicted by the Caltrans model to the various airports in the system. Five forecasts were made: each considered the capacity limitations of each airport (some forecasts used the actual capacity, some the constrained capacity), and the ground-travel time needed to reach the airports from zones in the study area. This second part was performed by the consultant, R. Dixon Speas Associates, Ine.

To be an effective tool for aviation system planning, a demand model must be able to:

Forecast the number of people who would choose air travel if close, convenient service were available. (Assumes that airports are free of the present service structures and capacity constraints.)

Forecast how much of this demand would occur at each of the system's air-carrier airports, and show what areas of the region the demand at each airport would come from.

Forecast how much demand would go unserved because of constraints or lack of capacity, and show where this demand would be located.

Compose "scenarios" showing how different locations, or different policy constraints, would increase or decrease the number of passengers served.

The Caltrans Air Passenger Forecast Model meets these criteria. This demand model uses three basic data components:

The socio-economic component, i.e., population and new employment, for each study zone.

The aviation facility and service component, i.e., the geographic location of the airports and the number of flights at each airport.

The aviation network component, i.e., the distance and category of haul between origin and destination points.

The Caltrans model forecasts for, and allocates passengers to and from, 91 state-wide aviation zones and 25 out-of-state and out-of country zones; 13 of these zones are located within the SCAG region.

Multiple runs of the Caltrans model showed how air travel demand in Southern California responded to the geographic location of airports if political boundaries were ignored.

Four trip categories were used: short haul (0-600 miles), medium haul (600-1800 miles), long haul (over 1800 miles), and international (outside U.S.A., regardless of distance). It is postulated that many passengers decide whether to fly or use a ground mode by comparing the distance they must travel to the airport with the length of the flight and the frequency of service.

The trips forecast for each aviation zone were then assigned by the Speas model to the system's airports. The Speas model requires a fixed total of regional air passenger demand (called the control total) for the system for each of the alternatives. Since the Caltrans alternative system forecasts varied from 77.5 O&D MAP to 81.8 O&D MAP (4.6%) the control total was fixed near the median at 78 MAP.

At this point in the forecasting process, the Speas model observes policy constraints in the form of limits on an airport's capacity and applies ground accessibility limits.*

* The Caltrans model uses service levels to simulate policy constraints on an airport, but they do not demonstrate the impact on demand explicitly. The Speas model is more likely to result in rigid application of constraints and the resulting restriction of travel.

Policy constraints at airports can cause demand that would be served if there were no constraints to be assigned to the next closest airport. The region's large area also causes accessibility problems which are felt to be significant influences on demand. Therefore limitations on the maximum duration of ground travel for each haul length were assumed:

Passengers within one hour ground travel-time of an airport could be assigned without travel restriction;

Ground travel-time over one hour results in a pro-rated reduction of passenger assignment to that airport;

Shorthaul flights are assigned the most sensitive ground travel limitations, with a 100% reduction in assigned demand when ground travel-time reaches two hours; and

Longer travel times are assumed for longer haul flights--ground travel-time beyond eleven hours for international flights would not be assigned.

Forecast Analysis

This section describes the various forecasts and discusses the results produced. Unlike other approaches, this study has more than one total forecast of avaiation demand because the forecast technique used allows for results to fluctuate with each set of assumptions. Demand for aviation travel is not fixed, but varies with such factors as the cost, the number of flights and destinations available, and the alternative choices for travel.

a. Baseline Case. In the Baseline case, each existing airport was permitted to expand to meet the market demand generated in its service area without regard to the political and social realities of acquiring the needed acreage and airspace.

TABLE I.A.

1995 BASELINE FORECAST OF DEMAND

AIRPORT	ORIGIN & DESTINATION PASSENGERS
Los Angeles International	14.9
Ontario International	16.2
Long Beach	22.2
John Wayne/Orange Co.	21.9
Burbank-Glendale-Pasadena	13.0
Palmdale	2.1
Palm Springs	1.9
Oxnard (Ventura County)	3.7
TOTAL Origin and Destination	95.9
Plus connecting passengers (12.7%)	13.9
TOTAL PASSENGERS	109.8

Thus the Baseline case represents a forecast of air passenger demand for 1995 that is unconstrained in all aspects. It was identified as a "Baseline" so that the opportunities offered by the various new airport sites and the effects of policy or physical constraints on existing airports could be tested against a common base.

The basic assumptions of the 1995 Baseline Demand forecast are:

Airline service will be provided in response to the demand.

Any political or environmental constraints on airport activity are not considered.

Air carrier operations will be limited only by the calculated runway capacity (FAA/PMM methodology).

Air carrier aircraft operations will be given priority in determining the fleet mix for an airport if significant amounts of capacity are required to accommodate the facility's passenger demand.

Fleet mix capacity (i.e., average passenger seats per operation) will be the limiting factor in accomodating passenger demand.

The individual airports in the baseline mode receive, in all but one case,* allocations of air passenger demand well above the constrained passenger volume presently indicated by the airport owners. The substantial air-passenger generating characteristics of the Harbor area, South Bay and Western Orange County are reflected in the large allocations to Long Beach.

For Burbank-Glendale-Pasadena Airport, its allocated passenger traffic comes from the San Fernando Valley and portions of Downtown Los Angeles. John Wayne/Orange County Airport draws from Orange County and Ontario Airport from East Los Angeles, Riverside and Western San Bernardino counties. These allocations clearly do not reflect the current pattern of service, and consequently usage. However they are useful in indicating the sizeable demand in some parts of the region that is presently served at more distant airports.

b. New Site Forecasts. Forecasts were developed for the existing system of airports with alternative new sites. The existing airports were generally evaluated with current policy constraints in place. The alternative site forecasts produced were: Chino Hills, Chino Municipal, March AFB, LA Harbor, Los Alamitos, El Taro, Bell Canyon, and Camp Pendleton.

*Los Angeles International would receive 14.9 O&D MAP under the Baseline forecast; the policy constraint at LAX is 40.0 million total passengers.

TABLE I.B.

NEW SITE SYSTEMS — 1995 FORECAST PASSENGER DEMAND

Millions of Annual Origin and Destination Passengers

ALTERNATIVE STRATEGY	LAX	ONT	LGB	SNA	BUR	PMS	PMD	CHINO HILLS	CHINO MUNI.	MARCH AFB	LA HARBOR	LOS ALAMITOS	EL TORO	BELL CANYON	CAMP PENDLETON
Existing System	32.5	18.4	.5	1.8	2.5	2.2	10.3								
Chino Hills	29.6	12.6	.5	1.8	2.5	1.6	2.9	20.6							
Chino Municipal	29.9	11.7	.5	1.8	2.5	1.6	2.8		22.3						
March AFB	31.1	16.9	.5	1.8	2.5	1.5	5.1			11.4					
LA Harbor	28.4	14.2	.5	1.8	2.5	1.6	2.5				21.4				
Los Alamitos	29.8	13.1	.5	1.8	2.5	1.6	3.0					20.8			
El Toro	30.1	14.8	.5	1.8	2.5	1.6	3.4						19.1		
Bell Canyon	30.7	17.2	.5	1.8	2.5	1.7	4.5							12.1	
Camp Pendleton	31.4	17.3	.5	1.8	2.5	1.8	5.6								9.7
Constraint Evaluated	40.0	20.0	0.5	2.0	2.5	None	None	None	None	None	None	None	None	None	None

c. No Project Forecast. The No Project System assumed strict application of policy constraints on existing air carrier airports and the development of a 12 MAP facility at Palmdale. No new site was assumed.

TABLE I.C.

1995 FORECAST DEMAND — NO PROJECT AIR-CARRIER AIRPORT SYSTEM

AIRPORT	TOTAL PASSENGERS
Los Angeles International	40.0
Ontario International	12.0
Long Beach	.5
John Wayne/Orange Co.	3.5
Burbank-Glendale-Pasadena	2.5
Palmdale	12.0
Palm Springs	2.5
TOTAL	73.0

The No Project System forecast was not produced solely by computer modeling techniques. The computer models were used to evaluate the reaction of demand to the constraints assumed in the No Project System.

The computer evaluation runs were used to locate the areas where demand was particularly impacted by the strong application of constraints -- areas where demand would not be well served.

The results of the computer runs showed that the constraints were maintained at all airports except Ontario through the reduction of service volumes. At Ontario, high levels of demand which continued through several iterations pushed load factors above the norm, resulting in a forecast of

13.7 O & D MAP and 16.1 Total MAP. The policy constraint at Ontario would limit passengers served to 12 MAP. This indicates a high level of unsatisfied demand.

The most significant feature of the No Project-model forecasting attempt is the high level of passenger demand attracted to Palmdale. This is due to the lack of capacity in the Los Angeles and Orange counties caused by policy contraints.

d. Recommended System Forecast. The recommended system includes the existing system of air-carrier airports with policy constraints in effect plus a new airport in the Los Angeles/Long Beach Harbor.

Policy constraints and service levels compatible with the system recommended were assumed in the Caltrans forecasting model and Speas allocation model runs. The resulting allocation shows the demand that would be attracted for such a system if no attempt is made to attract passengers to airports with available capacities or to otherwise manage demand.

TABLE I.D.

1995 FORECAST DEMAND — RECOMMENDED AIR-CARRIER AIRPORT SYSTEM

AIRPORT	ORIGIN & DESTINATION PASSENGERS	TOTAL PASSENGERS
Los Angeles International	28.6	37.3
Ontario International	10.9	12.0
Long Beach	.5	.5
John Wayne/Orange Co.	3.5	3.5
Burbank-Glendale-Pasadena	2.5	2.5
Palmdale	2.6	2.7
Palm Springs	1.9	1.9
New Site at Los Angeles/ Long Beach Harbor	22.2	24.5
TOTAL	72.7	84.9

The Recommended System allocation shows demand shifting from the No Project System allocation southward from Palmdale and LAX to the Harbor site. BUR is not affected by the shift as demand in the immediate area is strong enough to fill the airport to its constrained level. South Coast/Orange County area passengers are also attracted to the Harbor site since Joh Wayne/Orange County Airport is constrained.

e. Unconstrained Forecast. The unconstrained system forecast assumed that any capacity available at airports in the region above and beyond the present day use was available for air carrier operations only. TABLE I.E.

UNCONSTRAINED SYSTEM 1995 FORECAST DEMAND
(Millions of Annual Passengers)

Airport	Origin & Desination Passengers	Total Passengers*
Los Angeles International	35.0	45.5
Ontario International	18.8	20.5
Long Beach	3.2	3.2
John Wayne/Orange County	3.3	3.3
Burbank-Glendale-Pasadena	5.3	5.3
Palmdale	4.7	4.7
Palm Springs	2.1	2.1
Total	72.4	84.6

* Total passengers are O & D plus connecting; no connecting was assumed for BUR, LGB, PMD, or PSP.

The Unconstrained system was assumed to be the existing system of air carrier airports plus Palmdale, with general aviation and military aircraft operations limited to their 1978 levels.

TABLE I.F. Summary of 1995 Forecasts - SCAG

Million Annual Passengers (MAP)	LAX	ONT	PMD	L.A. Harbor
Baseline Forecast	14.9	16.2	2.1	-
No Project Forecast	40.0	12.0	12.0	-
Unconstrained Forecast	45.5	20.5	4.7	
Recommended System:	37.3	12.0	2.7	24.5
International	2.3	1.0	0.6	1.8
Short Haul	15.5	3.8	0.4	12.2
Medium Haul	6.2	3.3	0.2	4.5
Long Haul	4.6	2.8	1.4	3.7
Load Factors:				
Average Seats Per Operation	179.7	182.7	178.2	155.0
Boarding Factor	59%	58%	62%	66%
Passengers Per Operation*	106	106	110	103

* O & D and Connecting Passengers, but not through passengers.

TABLE I.G. SCAG RECOMMENDED SYSTEM, AIRCRAFT OPERATIONS, 1995

Aircraft Operations	LAX	ONT	PMD	L.A. Harbor
Air Carrier:				
Narrow Body, 2 Engine	104,384	31,668	8,153	80,839
3 Engine	138,827	40,976	9,764	94,193
4 Engine	3,867	1,816	608	2,147
Wide Body, 3-4 Engine	104,384	39,047	6,408	61,285
Total	351,462	113,507	24,933	238,464
Air Taxi:				
2-Engine Piston	35,146	11,351	10,686	23,846
2-Engine Turboprop	82,008	26,485	24,933	55,642
Total	117,154	37,836	35,619	79,488
General Aviation:				
Local	8,284	28,885	0	0
Itinerant	34,419	127,250	0	0
Total	42,703	156,135	0	0
General Aviation By Fleet Mix:				
Piston S.E.	4,270	118,818	0	0
Piston M.E.	8,541	11,398	0	0
Turbo-Prop	9,822	9,836	0	0
Turbo-Jet	20,070	16,083	0	0

AIR TRANSPORT ASSOCIATION OF AMERICA (ATA)

Los Angeles International & Ontario Airports 1983-1993

Forecast Methodology:

ATA's general approach to the facility forecasts is "top-down." National level forecasts are disaggregated into hub shares and adjusted for projections on population and economic activity. This forecast does not reflect any impact that the current fuel shortage may have on scheduled airline operations or changes in travel habits by passengers.

Passenger Enplanements:

To eliminate the interaction of hub airports, total hub domestic scheduled enplanements of air carriers were first forecast as a whole and then distributed to each hub airport based on recent experience and projected trends. Annual hub enplanements were forecast by analyzing the historical relationship of hub enplanements to U.S. enplanements and then projecting this percentage for the future. The total hub enplanements were then distributed to each airport on an unconstrained basis without regard to maximum airport enplanement capability. LAX enplanements were the residual after all other hub airports had been forecast and subtracted from the total hub enplanements. Ontario enplanements were based on above average growth based on the second highest population growth in the Los Angeles area. Next, the maximum enplanement levels were established for each airport and compared to the unconstrained forecast. When enplanements exceeded maximum capability, the overflow was distributed among other hub airports, taking into consideration distance between airports and type of overflow (commuter or domestic).

Aircraft Movements

Aircraft movements were forecast for only the constrained passenger enplanement forecast, since all Los Angeles hub airports were constrained by passenger enplanements, not aircraft movements. The general methodology for developing aircraft movements is shown below:

1. Forecast city pair enplanement volumes
2. Forecast aircraft retirements by type and new type aircraft
3. Evaluate each city pair enplanement to determine if new or added nonstop service was justified. This evaluation was based on market size, length of haul, minimum and maximum allowable load factors, maximum desired frequencies, number of airlines authorized to serve the city pair, and type and size of equipment capable of serving the city pair. This step established new non-stop markets, rounded out service patterns in existing markets, and established frequency of service by equipment type.

Assumptions

1. Reflecting their need for improved profitability, air carriers will schedule to reach at least a 55% peak month boarding load factor at the earliest opportunity. In the case of the California commuter segments, a 65% to 70%

load factor will be required due to the low yield on these segments. In scheduling to reach these goals, the air carriers will continue to recognize their obligation to maintain adequate service and will not remove minimum service schedules in order to improve load factors.

2. High density seating in wide body aircraft will be implemented between 1976 and 1980. This increased capacity somewhat reduces the need for new or larger aircraft in 1980 and beyond.

3. All coach lounges will be removed by 1975.

4. Many current narrow body jets (B-707, DC-8, etc.) will remain in service after 1980. If required, they will be modified to meet environmental standards.

5. The addition of wide body aircraft in the major intra-California markets (commuter) will not appreciably change the distribution of passengers among the Los Angeles hub airports. This assumes the convenience of neighbor airports offsets the draw of wide body equipment.

6. International traffic has been routed exclusively throughout Los Angeles International Airport. International flights need to connect to the greatest number of destinations and the broad service at Los Angelees International best fills this need. The only other hub airport capable of handling international flights is Ontario and it has far less potential for building a connection complex. Also, local originating international passenger volumes in the area surrounding Ontario would probably be too small to support much frequency.

7. The maximum airport capacity assumed for LAX and Ontario are shown following. Maximum enplanement levels were taken from the SCAG Southern California Regional Aviation Study and then reviewed and modified where necessary to reflect current thinking. 1978 is not shown since all airports have more than adequate capacity to handle anticipated volumes in that year.

Million Annual Passenger

	1983	1988	1993
LAX	43.0	52.0	56.0
ONT	12.1	12.1	12.1

8. Los Angeles will continue to be a major connecting point for international and small city traffic. However, connections will decrease slightly throughout the forecast period, as passenger traffic growth allows more passengers to overfly Los Angeles directly to their destination. Los Angeles International will continue to be the major connecting complex with other hub airports having insignificant connecting volumes.

9. The role of the present hub airports will remain unchanged during the forecast period. Ontario and Los Angeles International airports will have the capability of serving all domestic destinations. International flight will be limited to Los Angeles International.

Table I.H. ATA Terminal Area Forecasts, 1978-93

Million Annual Passengers (MAP)		
Calendar Year	LAX	ONT
1978	33.3	1.5
1983	45.1	2.0
1988	52.0	7.5
1993	56.0	12.1

Table I.J. ATA Terminal Area Forecasts, 1978-93

Thousands of Aircraft Operations		
Calendar Year	LAX	ONT
1978	382	31
1983	437	34
1988	467	102
1993	491	123

FEDERAL AVIATION ADMINISTRATION (FAA)

Los Angeles International, Ontario, Palmdale, and Van Nuys Airports, 1981-1992

Forecast Methodology:

FAA's general approach to the facility forecasts is "top-down". National level forecasts are disaggregated into hub shares, adjusted for projections on state population and income, plus tower and market characteristics. National growth factors for each aviation activity were applied to the base year,(FY 1979) data at individual airports to project annual activity levels through FY 1992.* These preliminary projections were modified using several activity models as well as the facility specific information provided by the eleven FAA regions.

Data Sources:

Passenger counts are based on data submitted to the Civil Aeronautics Board (CAB) by the U.S. certificated route air carriers and by the U.S. air commuter carriers. These data are supplemented by an FAA survey of air taxi operators, by reports of foreign flag traffic from the Immigration and Naturalization Service, and by state aviation commission and airport manager reports. Historical operations at FAA towered airports are from FAA Air Traffic Activity reports.

Total Annual Passengers:

Air carrier passengers--include originating, stopover, and transfer passengers of U.S. certificated route; and intrastate, supplemental, and foreign flag air carriers. International passengers who disembark at airports to go through customs and then reenplane are included in an airport's count of passengers. (The historical count of supplemental air carrier passengers received from CAB was based on seats rather than passengers and when added to other air carrier passenger counts, these data might be overestimated.)

Air taxi passengers--include survey estimates of nonscheduled air taxi passengers. Where data is unavailable, passenger counts are estimated from the number of operations multiplied by a load-factor ranging from 1 to 3.

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*National growth rates obtained from FAA Aviation Forecasts: Fiscal Years 1981-1992, FAA-AVG-80-8 (September 1980) were utilized as control factors and initial rates of growth for individual airports.

Air carrier passenger counts at the large air traffic hubs were also adjusted. A model was developed for forecasting enplanements disaggregated into hub originating, connecting, and returning passengers. Moreover, separate equations were developed for hubs characterized as industrial cities, trade centers, or recreation areas, and as connecting cities, terminating points, or intermediate cities. The results of the analysis showed that passengers originating at hubs are primarily dependent on income generated in the hub, while the number of connecting and returning passengers depends on income levels at associated destinations. Growth rates for enplanements at each of the hubs were developed based largely on Department of Commerce forecasts of income generated at these various hubs. These growth rates, which for the most part deviated from the national average, were used to adjust the enplanement forecasts at these hubs. Accordingly, the general top-down approach was augmented for airports within the larger hubs by specific forecasts of aviation activity at these airports.

Table I.K.: FAA Terminal Area Forecasts, LAX, 1981-1992

Million Annual Passengers (MAP)

Calendar Year*	Air Carrier	Air Taxi	Commuter	Total
Actual:				
1977	26.6	0.004	0.5	27.1
1978	28.5	0.005	0.6	29.1
1979	33.4	0.004	0.5	33.9
1980	36.7	0.004	0.4	37.5
Forecast:				
1981	37.9	0.004	0.4	38.2
1982	38.9	0.004	0.4	39.3
1983	39.8	0.004	0.4	40.2
1984	40.8	0.004	0.4	41.2
1985	41.8	0.004	0.5	42.2
1986	42.3	0.004	0.5	42.8
1987	42.6	0.004	0.5	43.1
1988	42.8	0.004	0.5	43.3
1989	43.0	0.004	0.6	43.6
1990	43.2	0.004	0.6	43.8
1991	43.5	0.005	0.6	44.1
1992	43.6	0.006	0.6	44.3

*Calendar years converted from fiscal years--example:
½ FY'76 MAP+½FY '77 MAP/2=Calendar Year '77 MAP.

Table I.L.: FAA Terminal Area Forecasts, ONT, 1981-1992

Million Annual Passengers (MAP)

Calendar Year*	Air Carrier	Air Taxi	Commuter	Total
Actual:				
1976	1.2	0	0.1	1.3
1977	1.4	0	0.2	1.6
1978	1.7	0	0.2	1.9
1979	2.7	0	0.04	2.8
Forecast:				
1981	5.2	0	0.1	5.3
1982	6.7	0	0.1	6.8
1983	9.0	0	0.1	9.1
1984	9.7	0	0.1	9.8
1985	10.4	0	0.1	10.5
1986	11.2	0	0.1	11.3
1987	12.1	0	0.1	12.2
1988	13.1	0	0.1	13.2
1989	14.1	0	0.1	14.2
1990	15.2	0	0.1	15.3
1991	16.3	0	0.1	16.4
1992	17.6	0	0.1	17.7

*Calendar years converted from fiscal years--example:
½ FY'76 MAP+½FY '77 MAP/2=Calendar Year '77 MAP.

Table I.M.: FAA Terminal Area Forecasts, PMD, 1981-1992

Million Annual Passengers (MAP)

Calendar Year*	Air Carrier	Air Taxi	Commuter	Total
Actual:				
1976	0	0	0.008	0.008
1977	0	0	0.008	0.008
1978	0	0	0.004	0.004
1979	0.004	0	0.010	0.014
Forecast:				
1981	0	0	0.02	0.02
1982	0	0	0.024	0.024
1983	0	0	0.028	0.028
1984	0	0	0.034	0.034
1985	0	0	0.040	0.040
1986	1.67	0	0.22	1.89
1987	2.38	0	0.30	2.69
1988	3.41	0	0.42	3.83
1989	4.88	0	0.58	5.47
1990	7.0	0	0.81	7.79
1991	10.0	0	1.12	11.12
1992	10.1	0	1.14	11.24

*Calendar years converted from fiscal years--example:
½ FY '76 MAP+½FY'77 MAP/2=Calendar Year '77 MAP.

Table I.N.: FAA Terminal Area Forecasts, VNY, 1981-1992

Million Annual Passengers (MAP)

Calendar Year*	Air Carrier	Air Taxi	Commuter	Total
Actual:				
1976	0	0	0	0
1977	0	0	0	0
1978	0	0	0	0
1979	0	0	0	0
Forecast:				
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	0	0	0	0
1989	0	0	0	0
1990	0	0.004	0	0.004
1991	0	0.004	0	0.004
1992	0	0.004	0	0.004

*Calendar years converted from fiscal years--example:
½ FY '76 MAP+½ FY '77 MAP/2=Calendar Year '77 MAP.

Total Aircraft Operations:

Total aircraft operations--every takeoff and every landing is counted as an aircraft operation.

General aviation operations--all civil aviation operations except air carrier, air taxi, and commuter operations. Forecasts of general aviation aircraft operations were based on state parameters such as population, disposable personal income, and state area. Historical trends were modified in response to changes in availability of airport facilities and services, presence of reliever airports, and the attitudes toward general aviation activity at the subject airport. Additional sources of data included supplementary forecasts of general aviation acitvity at specific airports and regional forecasts of commuter and air taxi operations. The FAA regional offices provided updates of based general aviation aircraft. In addition, other information was received, including the status of plans for new runways and the possibility of new commuter service. These comments were incorporated in this series of forecasts subject only to the constraints imposed by the national forecasts.

Military operations--were held constant at the level of operations reported in 1971.

Table I.O.: FAA Terminal Area Forecasts, LAX, 1981-1992

Thousands of Aircraft Operations

Calendar Year*	Air Carrier	Commuter/ Air Taxi	General	Military	Total Operations
Actual:					
1977	353	64	59	4	480
1978	367	72	69	4	512
1979	378	77	78	4	537
1980	381	81	82	4	548
Forecast:					
1981	383	85	76	4	548
1982	383	91	69	4	547
1983	384	96	64	4	548
1984	385	101	60	4	550
1985	386	106	56	4	552
1986	386	111	52	4	553
1987	387	115	48	4	554
1988	388	119	44	4	555
1989	388	123	41	4	556
1990	389	127	39	4	559
1991	390	131	36	4	561
1992	390	135	35	4	564

*Calendar years converted from fiscal years--example:
½ FY '76 MAP + ½ FY '77 MAP/2 = Calendar Year '77 MAP.

Table I.P.: FAA Terminal Area Forecasts, ONT, 1981-1992

Thousands of Aircraft Operations

Calendar Year*	Air Carrier	Commuter/ Air Taxi	General	Military	Total Operations
Actual:					
1976	32	16	98	15	161
1977	31	16	101	13	162
1978	31	16	109	12	168
1979	34	16	116	10	177
Forecast:					
1981	40	17	120	9	185
1982	45	17	123	9	195
1983	49	18	127	9	203
1984	53	19	130	9	211
1985	57	19	134	9	215
1986	62	20	136	9	228
1987	68	22	138	9	236
1988	73	23	140	9	245
1989	79	24	142	9	254
1990	86	25	143	9	264
1991	94	26	145	9	274
1992	102	30	151	9	293

Comments: New AC runway will be open in 1980.

*Calendar years converted from fiscal years--example:
½ FY '76 MAP + ½ FY '77 MAP/2 = Calendar Year '77 MAP.

Table I.Q.: FAA Terminal Area Forecasts, PMD, 1981-1992

Thousands of Aircraft Operations

Calendar Year*	Air Carrier	Commuter/ Air Taxi	General	Military	Total Operations
Actual:					
1976	0	3	28	61	92
1977	0	3	27	55	84
1978	0	3	27	51	82
1979	0	3	35	54	94
Forecast:					
1981	0	4	41	55	101
1982	0	4	42	55	102
1983	0	4	45	55	105
1984	0	5	47	55	108
1985	0	5	50	55	110
1986	14	8	53	55	124
1987	21	10	56	55	148
1988	36	22	59	55	173
1989	50	28	63	55	197
1990	64	34	67	55	222
1991	79	41	72	55	247
1992	86	49	78	55	270

*Calendar years converted from fiscal years--example:
½ FY '76 MAP + ½ FY '77 MAP/2 = Calendar Year '77 MAP.

Table I.R.: FAA Terminal Area Forecatst, VNY, 1981-1992

Thousands of Aircraft Operations

Calendar Year*	Air Carrier	Commuter/ Air Taxi	General	Military	Total Operations
Actual:					
1976	0	0	610	4	614
1977	0	0	608	4	612
1978	0	0	601	3	605
1979	0	0	589	3	593
Forecast:					
1981	0	0	580	4	585
1982	0	0	579	4	584
1983	0	0	579	4	583
1984	0	0	578	4	582
1985	0	0	577	4	581
1986	0	0	576	4	580
1987	0	0	575	4	579
1988	0	0	573	4	578
1989	0	0	573	4	577
1990	0	0	572	4	576
1991	0	0	570	4	576
1992	0	0	579	4	584

*Calendar years converted from fiscal years--example:
' FY '76 MAP + ½ FY '77 MAP/2 = Calendar Year '77 MAP.

LOS ANGELES DEPARTMENT OF AIRPORTS (DOA)
Terminal Area Forecasts, January 1981
Los Angeles International Airport, 1981-1990

Forecast Methodology:

LADOA's preliminary forecasts were done in conjunction with Data Resources, Inc. Two forecast models were used--one to forecast domestic passengers at LAX, the other to forecast international passengers at LAX. A brief description of these two experimental models follows:

> The domestic model utilizes four variables: gasoline, unemployment rate of all civilian workers, prime rate on short-term business loans/average yield on Moody's AAA corporate bonds, and personal consumption expenditures for transportation services-1972 dollars. The international model utilizes three variables: percentages of Mexican, Canadian, and Japanese GNP's, the price deflator for petroleum refined products; and the U.S. trade-weighted exchange rate.

The reliability of both experimental models has been verified by checking how well they forecast known historical data. Other models are being experimented with which will forecast the growth of cargo and mail at LAX. Additional models will need to be developed to forecast airline traffic growth at Ontario Airport.

Table I.S. Air Traffic Growth, LAX, 1976-1990

Million Annual Passengers

Calendar Year	Scheduled Air Carrier	Scheduled Commuter	Supplemental	Totals
Actual: *				
1976	25.28	0.45	0.25	25.98
1977	27.32	0.58	0.46	28.36
1978	31.81	0.69	0.39	32.90
1979	33.93	0.79	0.19	34.92
1980	31.38	0.74	0.91	33.04
Forecasts: **				
1981	NA	NA	NA	32.53
1982	NA	NA	NA	33.16
1983	NA	NA	NA	34.23
1984	NA	NA	NA	36.06
1985	NA	NA	NA	38.99
1986	NA	NA	NA	40.00
1990	NA	NA	NA	40.00

* LADOA Accounting
** Preliminary Forecasts by LADOA Facilities Planning

Table I.T. Air Traffic Growth, Ontario, 1976-1980

Million Annual Passengers(MAP)

Calendar Year	Scheduled Air Carrier	Scheduled Commuter	Non-Scheduled	Alternates	Totals
Actual: *					
1976	1.29	0.13	0.002	0.006	1.43
1977	1.51	0.15	0.003	0.011	1.68
1978	1.82	0.17	0.0007	0.015	2.00
1979	2.17	0.17	0.0010	0.016	2.36
1980	1.83	0.14	0.009	0.024	2.00
Forecasts: Not Available.....					

*LADOA Accounting

Table I.U. Air Traffic Growth, PMD, 1976-1980

Million Annual Passengers(MAP)

Calendar Year	Scheduled Air Carrier	Scheduled Commuter	Non-Scheduled	Alternates	Totals
Actual: *					
1976	NA	NA	NA	NA	0.007
1977	NA	NA	NA	NA	0.006
1978	NA	NA	NA	NA	0.005
1979	NA	NA	NA	NA	0.010
1980	NA	NA	NA	NA	0.008
Forecasts: Not Available.....					

*LADOA Accounting

Table I.V. Aircraft Movements

	1975	1976	1977	1978	1979	1980	1990*
All Aircraft-Totals:							
LAX	453,596	482,587	500,976	538,987	542,976	523,961	-
ONT	153,958	155,942	162,530	180,292	179,373	160,413	-
VNY	588,088	618,694	592,863	601,230	605,203	540,560	-
PMD	2,732	3,028	3,028	3,238	4,420	3,976	-
Scheduled Air Carriers:							
LAX	340,090	356,536	360,516	380,489	387,580	410,720	351,000
ONT	32,024	30,676	31,136	32,628	37,377	31,981	113,000
VNY	15	10	-	-	-	-	-
PMD	-	-	-	-	-	-	25,000
General Aviation:							
LAX	51,828	58,688	65,615	76,269	84,230	73,430	-
ONT	89,275	95,092	102,935	120,622	115,914	101,808	-
VNY	583,855	614,880	589,135	597,453	600,218	536,078	-
PMD	-	-	-	-	-	-	-
Military Aircraft:							
LAX	3,393	3,813	3,550	3,760	3,657	2,994	-
ONT	16,769	13,952	12,177	10,482	8,939	9,076	-
VNY	4,048	3,748	3,571	3,538	4,718	3,985	-
PMD	-	-	-	-	-	-	-
Air Taxi:							
LAX	58,285	63,550	71,469	78,469	67,509	36,817	-
ONT	15,568	16,103	16,056	16,336	16,858	17,095	-
VNY	170	56	157	239	267	497	-
PMD	-	-	-	-	-	-	-

Source: LADOA Accounting

*Source: SCAG, "Demand Allocation Model"

II. AIR CARGO GROWTH

Air Cargo is defined in two categories as follows: revenue freight and express, and mail (excluding passenger baggage, household effects, and merchandise in transit from one foreign country to another) put on board certificated air carriers flying in domestic and international service.

FAA FORECAST:

The FAA forecasts air cargo growth for airport hubs. With the exception of some freight and express, almost all cargo and mail moving through the Los Angeles hub arrives and departs through Los Angeles International. The Ontario and Hollywood-Burbank airports handle some air cargo, but the volume at each airport is less than 1 percent of the hub total. While there is reason to expect a significant growth in cargo paralleling that of passenger growth at Ontario and Palmdale, plans regarding expansion of cargo facilities at these two airports have not yet been developed. Hence, all of the projected cargo and mail tonnage is forecast to be enplaned at Los Angeles International.

The method used to forecast cargo and mail tonnage is a top-down approach. A log-linear form of an econometric model is used to translate the latest Wharton model annual GNP forecast (1975-85 extrapolated to 1990) into a ton-mile forecast of U.S. domestic air cargo. A 1975-90 projection of the 1962-74 trend of average haul distances is used to convert the ton-mile forecast into a tonnage forecast.

For international freight and express, a linear form of a similar model is used to translate linear projections of 1965-74 regional GNP trends directly into U.S. tonnage forecasts for each of six world regions. For domestic mail, forecasts by the FAA of U.S. domestic mail tonnage moving by air are adjusted to reflect re-enplanement at interchange points. A ton-mile forecast of outgoing international civilian mail, developed by the FAA, is combined with a projection of 1 percent annual growth in international military mail, and converted to tonnage by using a weighted average haul distance computed for U.S. international service.

Using the national forecasts, cargo and mail forecasts are developed for each hub by a hub-share allocation procedure. Specifically, the tonnage of cargo in each hub is calculated as a percentage of the total tonnage in all U.S. airports.

A study of CAB Airport Activity Statistics over the recent historical record indicates no significant instabilities. The hub shares are projected to be essentially constant for the forecast years.

To test the validity of the projections, it was necessary to examine the relationship of outbound to inbound cargo traffic. The ratio of export tons to import tons was selected for this purpose. The values of the ratios were computed using 1975 data. The results are provided below.

RATIO OF ENPLANED TO DEPLANED CARGO TONNAGE

The Los Angeles Hub: First Quarter 1975

Service	Ratio
Domestic	
Freight and Express	1.112
Mail	1.037
International	1.339

Basing projections of cargo aircraft operations solely on projections of enplaned cargo appears justified, since none of the ratio values are less than 1.0.

Table II.A.: FAA Forecast of Air Cargo Growth, LAX, 1975-1990

	Actual		Forecast		
Tons of Cargo	1975	1976	1980	1985	1990
Domestic:					
Freight, Express	599,400	624,00	848,000	1,093,600	1,444,400
Mail	91,600	99,800	102,000	103,200	116,000
TOTAL	691,000	723,800	950,000	1,196,800	1,560,400
International:					
Freight, Express	34,800	30,800	165,600	249,800	371,000
Mail	2,200	2,600	17,200	18,400	20,600
TOTAL	37,000	33,400	182,800	268,200	391,600
TOTAL AIR CARGO	728,000	757,200	1,132,800	1,465,000	1,952,000

Forecasts from SCAG, ATA, and DOA are not available. A forecast model is being developed by LADOA Facilities Planning. Below are historical data on air cargo growth for LAX, ONT, and PMD for the ten-year period, 1970-1980.

Table II.B.: Air Cargo Growth (tons), LAX, ONT, PMD, 1970-1980

	ONT	PMD	LAX		
YEAR	Air Freight & Express		Air Freight Express	Mail	Total Cargo
1970	1,222	N.A.	466,968	107,358	574,326
1971	1,596	55	410,573	104,835	515,408
1972	2,220	74	550,273	105,506	655,779
1973	2,722	126	627,678	93,411	721,089
1974	3,168	126	643,092	99,182	742,274
1975	2,917	17	620,865	94,953	715,818
1976	3,134	19	653,818	104,622	758,440
1977	3,411	24	708,509	104,040	812,549
1978	4,479	18	775,075	123,965	899,040
1979	4,014	13	775,095	121,976	897,071
1980	2,926	13	750,707	131,181	881,888

Source: LADOA Accounting

III. TYPE, FREQUENCY AND COMPOSITION OF AIRLINE SERVICE

Tables III. A. , III.B, and III.C show the numbers of monthly revenue aircraft landings, not including general aviation and military aircraft, at LAX, ONT, and VNY by aircraft type from July 1980 thru February 1981. (LADOA Accounting began to record this data in July of 1980.)

The peak month at LAX was July with approximately 20,000 landing. B-727's made the most landings-- approximately 7,500, followed by air taxis with close to 3,000 landing and DC-10's with close to 2,000 landings. B-737's, B-747's, L-1011's and commuter aircraft made between 1,000 and 1,500 landings each. B-707's and DC-9's made about 700 landings each, and the DC-8's about 500 landings. CV-580's and F-27's made between 100 and 250 landings each, and A-300's about 90 landings. All other aircraft types made less than 10 landings each.

January was the peak month at ONT with approximately 2,500 landings. Air taxis made about 1,400 landings. B-727's and B-737's each made between 400 and 500 landings. DC-9's were next with close to 130 landings and the commuter aircraft with about 40 landing.s All other aircraft types landed less than 10 times.

The peak month at VNY was also January with approximately 270 landings. The air taxis landed close to 260 times and commuter aircraft about 10 times.

Table III. A. Number of Aircraft Landings, LAX, July 1980 through February 1981

Aircraft type	7/80	8/80	9/80	10/80	11/80	12/80	1/81	2/81
A-300	88	89	84	87	86	70	10	0
B-707	724	613	704	674	586	548	494	379
B-720	0	1	2	8	8	1	0	4
B-727	7502	7579	6393	5127	5287	6037	6344	5731
B-737	1482	1537	1299	1514	1548	1444	1628	1615
B-747	1213	1285	1126	1162	1060	1138	1144	1014
Commuter/	4112	3758	3427	3219	3832	3637	4294	2304
Caravelle	0	0	83	23	36	19	0	0
CV-440	0	0	0	0	0	0	9	0
CV-580	254	248	264	344	308	272	285	282
DC-10	2154	2150	1771	1828	1720	1644	1686	1562
DC-9	716	718	742	776	667	744	833	810
DC-8	528	544	422	417	382	409	403	344
DC3-C	0	0	20	4	19	0	0	0
DHC-7	0	0	298	383	340	317	355	488
D-20 Falcon	0	0	0	12	14	17	22	21
F-27	186	243	250	285	218	208	276	234
L-100	0	0	1	1	1	1	2	1
L-1011	1003	1031	864	858	738	785	861	758
L-188	23	23	21	24	19	14	0	0
Total	19985	19819	17771	16746	16869	17305	18646	15547

Table III. B. Number of Aircraft Landings, ONT, July 1980 through February 1981.

Aircraft type	7/80	8/80	9/80	10/80	11/80	12/80	1/81	2/81
B-707	1	0	0	2	6	14	0	0
B-727	755	758	510	341	345	475	433	375
B-737	484	472	464	521	491	511	478	445
Commuter/Taxi	566	558	541	546	1,161	844	1,409	506
D-20 Falcon	0	0	0	0	0	4	1	1
DC-9	169	165	193	0	386	145	131	134
DC-8	1	2	3	2	11	11	2	0
L-100	0	0	1	0	0	0	0	0
L-188	6	3	9	6	8	5	4	2
Total	1982	1958	1721	1418	2408	2009	2458	1463

Table III.C Number of Aircraft Landings, VNY, July 1980 through February 1981.

Aircraft type	7/80	8/80	9/80	10/80	11/80	12/80	1/81	2/81
Commuter / Taxi	14	13	28	16	NA	56	270	154
Total	14	13	28	16	NA	56	270	154

TABLE III.D. MONTHLY SCHEDULED AIR CARRIER LANDINGS, LAX

MONTH	Wide-Body	Other	TOTAL
January 1979	3,432	12,470	15,902
February 1979	2,930	10,415	13,345
March 1979	3,426	12,083	15,509
April 1979	2,887	8,902	11,789
May 1979	3,292	9,016	12,308
June 1979	2,390	12,295	14,685
July 1979	3,189	12,416	15,605
August 1979	4,558	11,718	16,276
September 1979	4,387	10,256	14,643
October 1979	3,743	10,651	14,394
November 1979	3,442	10,236	13,678
December 1979	3,646	11,038	14,684
January 1980	3,510	10,778	14,288
February 1980	3,258	9,716	12,974
March 1980	3,588	11,582	15,170
April 1980	3,797	10,245	14,042
May 1980	4,044	11,533	15,577
June 1980	4,157	11,578	15,735
July 1980	4,458	15,527	19,985
August 1980	4,555	15,264	19,819
September 1980	3,845	13,926	17,771
October 1980	3,935	12,756	16,756
November 1980	3,604	13,265	16,869
December 1980	3,637	13,668	17,305
January 1981	3,701	14,945	18,646
February 1981	3,334	12,213	15,547

Source: LADOA Accounting

TABLE III. E.

Number of Landings, LAX, July 1980 through February 1981

Ranked by Aircraft

Number of Landings	Type of Aircraft
50,000	B-727
28,583	Taxi /Commuter
14,515	DC-10
12,067	B-737
9,142	B-747
6,898	L-1011
6,006	DC-9
4,722	B-707
3,449	DC-8
2,257	CV-580
2,181	DHC-7
1,900	F-27
514	A-300
161	Caravelle
124	L-188
86	D-20-Falcon
43	DC3-C
24	B-720
9	CV-440
7	L-100

Source: LADOA Accounting

TABLE IIIL F.

Number of Landings, ONT, July 1980 through February 1981

Ranked by Aircraft

Number of Landings	Type of Aircraft
6,131	Taxi/Commuter
3,866	B-737
3,992	B-727
1,323	DC-9
43	L-188
32	DC-8
23	B-707
6	D-20-Falcon
1	L-100

TABLE III. G.

Number of Landings, VYN, July 1980 through February 1981*

Ranked by Aircraft

Number of Landings	Type of Aircraft
551	Taxi/ Commuter

Source: LADOA Accounting

* November data not available.

IV. BASED AIRCRAFT

No commercial aircraft are based at LAX. Airesearch Aviation Service Company is the only facility at LAX that leases space to general aviation aircraft. Table IV.A lists the number and use of these aircraft. This number (14) remains fairly constatnt from year to year. All twenty aircraft are used for business purposes.

Table IV.A: Based General Aviation Aircraft, LAX

Number	Type	Use
1	BAC 1-11	Business
2	Citation I	Business
1	Citation II	Business
1	DH 125-731	Business
1	HS 125-700	Business
1	HS 125-731	Business
2	Jetstar 731	Business
1	Jetstar 6	Business
2	King Air 90	Business
1	Lear 25	Business
1	Sabreliner	Business
14	TOTAL	

Source: Airesearch Aviation Service Company

Ontario Airport has a total of 33 based aircraft. Three of the Learjets and the Turbo Commander are owned by a charter company and the remaining 30 are general aviation aircraft. Table IV.B. lists the number, type and use (business or individual ownership) of these based aircraft. Twenty-four are used for business purposes and nine are owned by individuals.

Table IV.B.: Based Aircraft, ONT.

Number	Type	Use*
5	Learjet-25	B,B,B,B,B
1	Turbo Commander	B
1	Falcon-10	B
1	Cessna Centurion	B
2	Cessna-172	B,I
3	Cessna-210	B,I,I
1	Cessna-206	B
1	Cessna-150	I
1	Navion Rangemaster	B
1	Piper, PA-30	B
1	Piper Seneca	B
1	Aerostar, 601-P	B
1	Aerostar, 600	B
1	Aero Commander-5006	B
1	Merlin	I
1	Beechcraft, D-18S	B
1	Beechcraft Queen Air	I
1	Beechcraft Baron	B
1	Beechcraft Duke	B
1	Beechcraft Sierra	B
6	Beechcraft Bonaza	B,B,B,I,I,I
33 Total		

* B=business, I=Individual Ownership.

Approximately 1,350 general aviation aircraft are based at VNY. No definite information is readily available on the specific uses of these aircraft, however the February, 1981, issue of "Air Transport World" estimates that 75% of all general aviation are used for business purposes. In addition, 16 C-130 aircraft owned by the National Guard and used for military training are based at VNY.

The remaining space left blank on purpose to accomodate further information being collected about Van Nuys Airport.

V. General Aviation; Geographical Distribution of Owners

No information is available at this time on the geographical distribution of the owners of based general aviation aircraft at LAX or VNY.

Table V.A. lists the geographical distribution of the owners of general aviation aircraft based at ONT.

Table V.A. General Aviation Aircraft owners, ONT

City	No. of Owners
Alta Loma	1
Azusa	1
Chino	2
Corona	1
Claremont	1
Cucamonga	1
City of Industry	1
El Monte	1
Ontario	13
Orange	1
San Jose	1
Upland	5
Yorba Linda	1
	Total 30

Source: Ontario International Airport

Table V.B. lists the geographical distribution of the owners of general aviation aircraft band at LAX.

Table V.B. General Aviation Aircraft Owners, LAX

City	No. of Owners
Beverly Hills	2
Hawthorne	1
El Segundo	1
Los Angeles	10
TOTAL	14

Source: Airesearch Aviation Company

page left blank on purpose to accommodate general aviation ownership information currently being researched.

VI. VOLUMES OF AIR TRAFFIC AT LAX - PEAK PERIODS

Volumes of air traffic at LAX for the 10-year period 1970-1980 are shown on Tables VI.A and VI.B. Million passengers per month and thousands of aircraft movements per month are listed. During each year between 1970 and 1980, July and August were the peak months for volumes of both passengers and aircraft movements.

Table VI.A. Million Annual Passengers, Peak Months, LAX, 1970-1980

Year	Domestic Passengers	International Passengers	Total Passengers	Total Passengers Peak Months: July - August
1970	18.17	2.61	20.78	NA - NA
1971	17.65	2.70	20.35	NA - NA
1972	18.74	3.34	22.08	NA - NA
1973	19.78	3.72	23.50	2.32 - NA
1974	19.71	3.86	23.58	2.28 - NA
1975	19.73	3.99	23.72	2.42 - 2.70
1976	21.25	4.73	25.98	2.65 - 2.83
1977	23.26	5.10	28.36	2.84 - 3.03
1978	26.63	6.27	32.90	3.33 - 3.74
1979	27.85	7.07	34.92	3.40 - 3.78
1980	25.24	7.80	33.04	3.27 - 3.73

Table VI.B. Aircraft Movements (Thousands), Peak Months, LAX
1970-1980

Year	Total* Aircraft	Total	Scheduled	Non-Scheduled	Total Aircraft, Peak Months (July/August)
1970	544.1	407.9	-	-	49.0/48.3
1971	493.2	373.1	370.0	3.1	43.9/44.1
1972	485.1	371.6	368.2	3.3	42.5/43.8
1973	491.1	377.5	374.8	2.6	43.9/45.7
1974	460.7	342.5	340.6	1.9	41.9/42.5
1975	453.6	340.1	338.1	2.0	41.0/40.9
1976	482.6	356.5	354.6	1.9	43.5/44.2
1977	501.0	360.5	358.1	2.4	44.3/45.3
1978	539.0	380.5	349.3	2.3	47.6/49.0
1979	543.0	387.6	386.1	1.5	47.8/49.7
1980	524.0	410.7	409.2	1.5	47.5/47.5

Source: DOA Accounting

Table VI. C. shows the numbers of hourly aircraft operations for a 24-hour period. The minimum day - Sunday, the maximum day - Friday, and the average day for a 4-week period (7-2-78 through 7-29-78) are listed. Peak hours for Sunday, Friday and an average day are 8am, 10am, 11am, 12 noon and 7pm.

Table VI.D shows aircraft movements at LAX for this 4-week period. For each day of the week the peak hours are listed showing volumes of air carriers, air taxi/commuters, general aviation, military, and total aircraft.

Table VI. E. summarizes the data on Tables VI.C and VI.D. Peak hours are ranked for weekdays, week-ends, and weekly. The average number of aircraft movements and the maximum number of aircraft movements are listed. Eleven a. m. has more aircraft movements than any other hour, both weekdays and week-ends with an average of 111 movements per hours. Mondays through Fridays, 12 noon ranks second with an average of 113 movemnts per hour. Week-ends, 10 pm ranks second with 102 movements per hour.

* includes military, Coast Guard and General Aviation.

Table VI.C. Aircraft Movements, LAX, 4-week Period (7-2-78 thru 7-29-78)
Hourly Aircraft Operations

	Minimum Day-Sunday					Maximum Day-Friday					Average Day				
Local Time	AC	AT	GA	Mil	Total	AC	AT	GA	Mil	Total	AC	AT	GA	Mil	Total
12 midnight	32	0	0	0	32	37	2	2	0	41	37	2	2	0	41
1 am	32	0	1	0	33	30	4	0	0	34	27	3	1	0	31
2 am	19	0	1	0	20	14	3	1	0	18	10	1	1	0	12
3 am	5	0	1	0	6	5	2	0	0	7	4	1	1	0	6
4 am	2	0	0	0	2	9	0	0	0	9	5	1	1	0	7
5 am	4	2	0	0	6	9	1	0	0	10	9	1	1	0	11
6 am	8	4	3	0	15	19	10	1	1	31	14	10	3	0	27
7 am	30	15	3	0	48	46	10	4	0	60	41	14	11	0	66
8 am	64	14	3	0	81	64	13	21	1	99	66	13	14	1	94
9 am	61	5	1	0	67	72	11	13	0	96	66	9	13	1	89
10 am	72	13	4	0	89	69	10	17	4	100	72	11	13	1	97
11 am	76	8	10	0	94	69	19	21	1	110	73	15	14	1	103
12 noon	63	10	7	0	80	84	15	19	0	118	68	12	15	1	96
1 pm	65	4	6	0	75	79	8	20	0	107	67	8	14	1	90
2 pm	33	8	1	0	42	46	13	26	0	85	47	11	16	1	75
3 pm	57	11	1	0	69	50	18	30	0	98	53	15	15	1	84
4 pm	49	12	6	0	67	58	12	13	0	83	53	12	16	1	82
5 pm	44	9	4	0	57	55	19	25	0	99	51	10	16	0	77
6 pm	64	9	5	0	78	62	10	11	0	83	70	10	11	0	91
7 pm	71	12	3	0	86	81	16	12	1	110	73	15	8	1	97
8 pm	52	9	4	0	65	54	17	7	0	78	54	13	7	0	74
9 pm	55	11	4	0	70	66	14	10	1	91	54	11	5	0	70
10 pm	56	4	1	0	61	64	12	1	0	77	57	8	3	0	68
11 pm	38	1	7	0	46	49	1	2	0	52	49	2	4	0	55

AC=air carrier, AT=air taxi, GA=General Aviation, Mil=Military.
Source: LAX Control Tower

Table VI.D. Aircraft Movements, Peak Hour For Each Day, LAX, 4-week Period (7-2-78 thru 7-29-78)

Day of the Week	Local Time	Air Carrier	Air Taxi Commuter	General	Military	Total No.
Monday	7pm	77	13	4	0	94
Monday	10am	80	15	20	1	116
Monday	12noon	73	16	26	0	115
Monday	10am	75	17	20	0	112
Tuesday	6pm	78	11	7	0	96
Tuesday	11am	79	17	15	1	112
Tuesday	11am	82	23	23	1	129
Tuesday	11am	68	16	33	1	118
Wednesday	12noon	83	13	17	0	113
Wednesday	8am	75	16	19	0	110
Wednesday	11am	68	18	25	0	111
Wednesday	6pm	74	11	23	3	111
Thursday	7pm	76	15	14	0	105
Thursday	11am	76	17	19	1	113
Thursday	12noon	67	13	25	1	106
Thursday	11am	73	13	22	1	109
Friday	11am	79	20	14	3	116
Friday	11am	82	15	26	0	123
Friday	12noon	84	15	19	0	118
Friday	6pm	66	16	23	0	105
Saturday	6pm	71	7	8	0	86
Saturday	10am	72	8	9	0	89
Saturday	11am	79	10	6	0	95
Saturday	10am	71	7	9	0	87
Sunday	11am	76	8	10	0	94
Sunday	7pm	74	12	10	0	96
Sunday	7pm	83	14	5	0	102
Sunday	11am	76	15	10	0	101

Source: LAX Control Tower

Table VI.E. Aircraft Movements, LAX, 4-week Period (7-2-78 thru 7-29-78) Peak Hours Ranked: Week Days, Week-ends, Total Week.

Monday Thru Friday	Number of Days In 4-week Period	Average No. of Aircraft Movements	Maximum No. of Aircraft Movements
11am	8	116	129
12noon	4	113	118
6pm	3	104	111
7pm	2	99	105
10am	2	114	116
8am	1	110	110

Saturday & Sunday	Number of Days In 4-week Period	Average No. of Aircraft Movements	Maximum No. of Aircraft Movements
11am	3	97	101
7pm	2	99	102
10am	2	88	89
6pm	1	86	86

Monday Thru Sunday	Number of Days In 4-week Period	Average No. of Aircraft Movements	Maximum No. of Aircraft Movements
11am	11	111	129
12noon	4	113	118
6pm	4	99	111
7pm	4	99	105
10am	4	101	116
8am	1	110	110

Source: LAX Control Tower

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SCAG, "Draft Environmental Impact Report For Draft Regional Transportation Plan Amendment: Aviation Element". July, 1980.

SCAG, "Southern California Aviation System Study: Technical Report". July, 1980.

TASK 1.14

ESTABLISH INTERNAL COORDINATION PROCEDURE

MARCH 1981

Prepared by: Los Angeles County Department of Regional Planning and the Los Angeles Department of Airports

For Information Call: Greg Medeiros (213) 974-6474 or,
Mike Feldman - Env. Mgt. (213) 646-7614

Internal Coordination for the project will be handled jointly by the Los Angeles County Department of Regional Planning (DRP) and the Los Angeles City Department of Airports (DOA). DRP will be primarily responsible for coordination activities on the land use side of the study, whereas DOA will do the same for the airport operations side. Internal coordination will be primarily carried out by using meeting briefings and the status reports. DOA and DRP staff will meet as required to discuss the project status. DRP will keep the participating cities informed of the progress being made by all study participants including the airport operations side of the study. This will be accomplished by distributing study materials, briefing both the Airport Operations and Land Use Technical Committees. In addition, all committee members are encouraged to attend both meetings. Comments from the Land Use Technical Committee regarding airport operations tasks will be submitted to DRP, where they will be combined and forwarded to the DOA. Comments from the Airport Operations Technical Committee on land use tasks are handled in a similar manner. DRP and DOA jointly will brief the Airport Operating Technical Committee, Steering Committee and Airport Area Advisory Committee.

Land Use Technical Committee

Meeting Dates:	Regular meetings of the Committee will generally be held on the fourth Thursday of each month.
Meeting Place:	Hawthorne City Hall Engineering Conference Room 4455 West 126th Street Hawthorne, California
Meeting Time:	10 a.m.

Representatives:

L. A. County Department of Regional Planning - 320 W. Temple Street, Los Angeles 90012	
*Norman Murdoch	974-6401
Geoffrey Taylor	974-6474
**Ron Hoffman	974-6474
Greg Medeiros	974-6474
L. A. City - 200 N. Spring Street, Room 605, Los Angeles 90012	
*Calvin Hamilton	485-5073
**Lothar Von Schoenborn	485-5386
Patricia Brown	485-5386
Department of Airports - One World Way, Los Angeles 90009	
+Clifton Moore	646-6250
++Maurice Laham	646-7614
Mike Feldman	646-7614
Inglewood - One Manchester Blvd., Inglewood 90301	
*Lew Pond, Asst. City Administrator	649-7301
**Melanie Fallon-McKnight	649-7230

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* Land Use Technical Committee Member
** Land Use Technical Committee Alternate
\+ Ex-officio Member
++ Ex-officio Member Alternate

(Note: Committee roster will be modified to reflect membership changes during the study.)

Representatives: (Continued)

El Segundo - 350 Main Street, El Segundo 90245

* Wendy Cosin	322-4670

Hawthorne - 4455 West 126th Street, Hawthorne 90250

*Bradley Stevens	970-7940
**James Marquez	970-7940

FAA-West Airport Division - AWE-613, P.O. Box 92007
World Way Postal Center
Los Angeles 90009

+Gerald M. Dallas	536-6243

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* Land Use Technical Committee Member
** Land Use Technical Committee Alternate
\+ Ex-officio Member
++ Ex-officio Member Alternate

Airport Operations Technical Committee

Meeting Dates: Regular meetings of the Committee are scheduled on the fourth Thursday of each month.

Meeting Place: DOA - Administration Building
Board Room 208
#1 World Way - LAX
Los Angeles, CA 90009

Meeting Time: 1:30 p.m.

Representatives:

Department of Airports - One World Way, Los Angeles 90009

*Clifton Moore	646-6250
*Maurice Laham	646-7614
Mike Feldman	646-6961

FAA - West Airport Division - AWE 613, P.O. Box 92007
Western Way Postal Center
Los Angeles 90009

*Gerald M. Dallas	536-6243
**Ellis Ohnstad	536-6250

LAX - Control Tower - One World Way, Los Angeles 90009

*Ivan Hunt	642-3969
**Jon Ross	642-3969

Airline Pilots Association - Suite 1400, 9841 Airport Blvd.
Los Angeles 90045

*Ray Lahr	649-1600

Air Transport Association - Western Regional Office
8939 S. Sepulveda Boulevard
Suite 408
Los Angeles 90045

*George Carver	670-5183

CalTrans-Division of Aeronautics - 1120 "N" Street
Sacramento, CA 95814

*Enid S. Walker	(916)322-9966

Civil Aeronautics Board - 1500 Aviation Boulevard
Lawndale, CA 90261

*Ellen Rose 536-6106

So. Calif. Assoc. of Governments - 600 S. Commonwealth Ave.
Suite 1000, Los Angeles 90005

*Margorie Kaplan

L. A. County of Regional Planning - 320 W. Temple Street
Los Angeles 90012

+Ron Hoffman 974-6474
++Greg Medeiros 974-6474

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*Airport Operations Technical Committee Member
**Airport Operations Technical Committee Alternate
+Ex-Officio Member
++Ex-Officio Member Alternate

Other Meetings:

The Airport Area Advisory Committee meets monthly.

The Steering Committee will meet quarterly or more often if necessary. It will be briefed by both the Department of Regional Planning and Department of Airports.

Periodic Status Reports:

Written status reports from each city should be completed and submitted to Los Angeles County by the 3rd Friday of each month.

The County will call eachcityon the 2nd Wednesday of each month to receive an interim status report.

The County will use these status reports to monitor the progress of the study as well as to inform individuals of the activities of others.

The Airport Operations Technical Committee status reporting procedures are different due to the structure of the committee. The DOA has been preparing the task work with technical assistance provided as required from the other committee members. This structure simplifies monitoring study progress.

Phase I Tasks Due Dates:

The attached flow charts and task descriptions for land use, airport operations, and coordination tasks were prepared to assist in the completion and coordination of Phase I products.

Similar flow charts and task descriptions will be prepared for Phase II and Phase III and incorporated in this report. The land use tasks were divided into a formulation stage to be completed by each jurisdicton and a correlation stage to be completed by the County of Los Angeles. Once correlated, the products will be circulated to each jurisdiction for their review and then forwarded to the Department of Airports.

Below are the due dates for Phase I tasks:

LAND USE

	Formulation	Coordination
1.04	11/07/80	11/21/80
1.05	1/09/81	2/06/81
1.06	12/05/80	12/31/80
1.08	10/17/80	10/31/80
1.10	1/30/81	2/20/81
1.11	2/20/81	3/13/81

STUDY COORDINATION

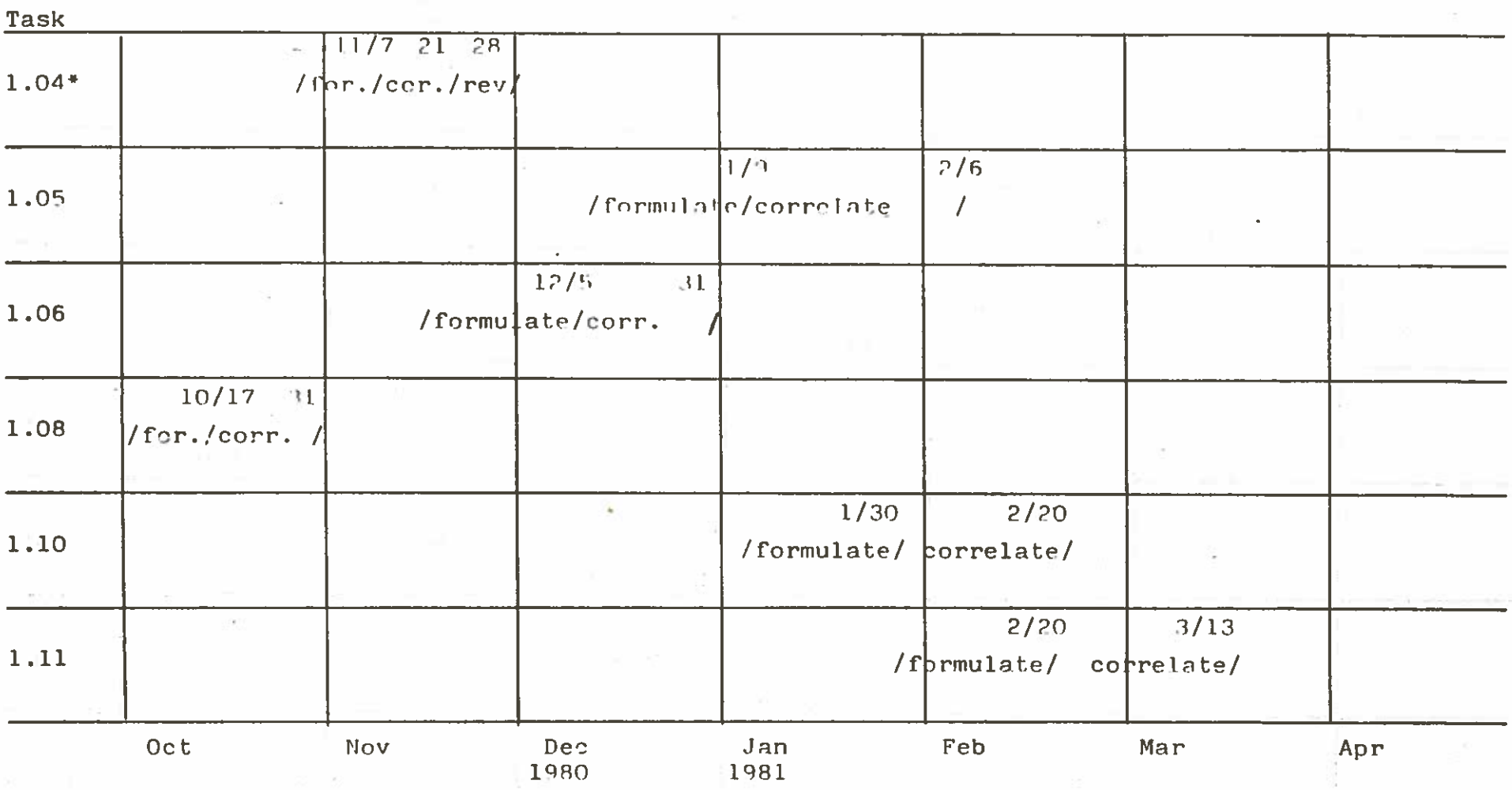
1.14	10/24/80
1.15	10/24/80
1.16	3/31/81
1.17	3/31/81
1.18	11/07/80
1.19	3/31/81

AIRPORT OPERATIONS

	Formulation	Coordination
1.01	1/10/81	3/4/81
1.02	1/10/81	3/15/81
1.03	1/10/81	3/15/81
1.07	3/11/81	4/25/81
1.09	3/11/81	5/1/81
1.12	3/11/81	5/12/81
1/13	1/10/81	------

LOS ANGELES INTERNATIONAL AIRPORT NOISE
CONTROL AND LAND USE COMPATIBILITY STUDY

Phase I
Land Use



*Requires output from Task 1.01 (DOA)
and Task 1.15 (Study Coordination)

LOS ANGELES INTERNATIONAL AIRPORT NOISE
CONTROL AND LAND USE COMPATIBILITY STUDY

Phase I
Land Use

Task

Task	Oct	Nov	Dec 1980	Jan 1981	Feb	Mar	Apr
1.04*		11/7 21 28 /for./cor./rev/					
1.05				1/9 /formulate/correlate	2/6 /		
1.06			12/5 31 /formulate/corr. /				
1.08	10/17 31 /for./corr. /						
1.10				1/30 /formulate/	2/20 correlate/		
1.11					2/20 /formulate/	3/13 correlate/	

*Requires output from Task 1.01 (DOA)
and Task 1.15 (Study Coordination)

Task 1.04 Define Preliminary Boundaries for the Community Planning Area

Description: Using current areawide plans, existing 65 CNEL noise contour and expected flight paths, delineate preliminary boundaries of the Community Planning Area associated with Los Angeles International Airport. Criteria to be used in arriving at these boundaries include:

- Existing 65 CNEL noise contour
- Expected flight paths of aircraft using the airport (Task 1.01)
- Local street networks
- Natural terrain features
- Existing urban development patterns and jurisdictional limits of both general and special purpose governmental units (do not split lots)
- Community planning areas

As a result of the effort, establish a preliminary Community Planning Area which is related to and directly affected by the operation and development of Los Angeles International Airport. Because of the possibility of boundary conflicts between jurisdictions, a two week correlation period has been included to resolve these differences.

Output: Map delineating preliminary boundaries of the Los Angeles International Airport Community Planning Area prepared on 1" = 1,000' base map.

Task 1.05 Update Existing Community Area Conditions

Description: Update existing land uses within the preliminary Community Planning Area delineated in Task 1.04, including but not limited to: low density residential (single family and duplex), high density residential (multi-family), commercial, industrial, recreation/open space, institutional vacant, and public uses. (Information should include dwellings/acre, and height.) In addition, inventory and map principal public utilities and facilities such as water and sewer lines, drainage and flood control works, major power and pipeline rights-of-way, railroads, and key ground transportation routes (roadways and public transportation) within the Community Planning Area.

Output: Information should be plotted on 1" = 1,000' base maps. Prepare map depicting land use patterns, include the identification of noise sensitive facilities such as hospitals, rest-homes and schools. Utilize standard land use legend to be prepared by the Department of Regional Planning. Prepare map depicting existing and proposed sewerage system, identify trunk sewers, local truck sewers, local collector sewers (indicate size, direction of flow, and available capacity), trunk sewer pump or lift station, local collector system pump or lift station, major waste water treatment or reclamation facility, local or private treatment or reclamation facility (indicate plant capacity and excess capcity if any). Prepare map depicting water system identify Los Angeles Aqueduct (DWP), M.W.D. feeder,

watermains (over 12", 10" & 12", 6" & 8" and under 6"), wells (pumping capacity in gallons per minute), stations (pumping capacity in gallons per minute, reservoirs (capacity in gallons), water service boundaries, water purveyor name, underserved areas, and overserved areas. Prepare map depicting drainage and flood control works include major channelized flood facilities distinguish between open channels and closed conduits. Identify areas prone to flooding. Prepare map depicting major power and pipeline rights of way. Prepare map depicting key ground transportation routes include railroads right of way (existing and abandoned); Pacific Electric right of way; existing and proposed freeways, major highways, secondary highways (indicate right-of-way width, number of lanes, parking, average daily traffic (ADT), and level of service); and existing and proposed bus routes, exclusive facilities (bus and rail) and related facilities.

Task 1.06 Assemble and Document Local Plans and Land Use Regulations

Description: Assemble and document existing local community planning and land use regulations, i.e., zoning, subdivision ordinances and building codes, to ensure that the resultant Land Use Compatibility Program will properly reflect local and regional long-range planning goals, objectives and policies.

This review will include key elements and policies of general plans, specific plans and local coastal plans for the cities of Los Angeles, (with emphasis on the Playa del Rey, Westchester,

and Hyde Park communities), El Segundo, Hawthorne, and Inglewood; Los Angeles County (with emphasis on Lennox, Del Aire, Athens, and Florence Firestone); *the Southern California Association of Governments (SCAG); and any other local or regional governmental entity (such as the California Coastal Commission) that has a direct relationship to the development of the airport and Community Planning Area.

Output: A working paper that contains a summary of present planning efforts, land use control and planning goals and objectives for the Community Planning Area, including a documentation of key plan elements and policies of local plans which have a direct relationship to development of the airport. Include a review of local standards and criteria for land uses permitted in various noise impact areas.

*The Department of Regional Planning will be responsible for the review of regional documents.

Task 1.08 Obtain Existing Community Area Environmental Planning Documents

Description: Assemble available environmental plans, policies, regulations and studies; previous environmental impact and noise study reports; and other documents that discuss and delineate environmental conditions of relevance to Los Angeles International Airport and the Community Planning Area. These documents relate to the existing natural environmental (plant and animal life,

topography, air and water quality, drainage, mineral deposits, etc.), or to the prevailing community environment (human settlement patterns, noise, traffic conditions, attitudes, governmental jursidictions etc.) or to combinations of both.

Output: A working paper formulated much as a bibliography including title, author, prepared for, date, and pages. Also include summary of applicable community area environmental planning data and how this data can be utilized in subsequent analyses. All documents should be available for reproduction.

Task 1.10 Inventory and Assess Community Planning Area Financial Data and Information

Description: Obtain and review essential financial information concerning the phasing and construction of public capital improvements in the community. Investigate the range of financing concepts (both public and private) and identify financing vehicles available by means of, or under legislation applicable to, the City of Los Angeles, City of El Segundo, City of Hawthorne, City of Inglewood, Los Angeles County, and any special purpose districts that may be involved in the study.

Identify federal and state financial assistance potentially available to support identified capital improvement needs relative to the Community Planning Area. These investigations will be performed by review of appropriate documents and by consultation with state, regional, county and municipal officials as appropriate.

Output: A working paper that contains an inventory of community area financial data and information, including capital financing improvement program. The paper will also identify and discuss concepts and sources of funds available to local governmental jurisdictions in support of alternative capital improvement and land use compatibility programs.

Task 1.11 Update Community Area Socioeconomic Data

Description:

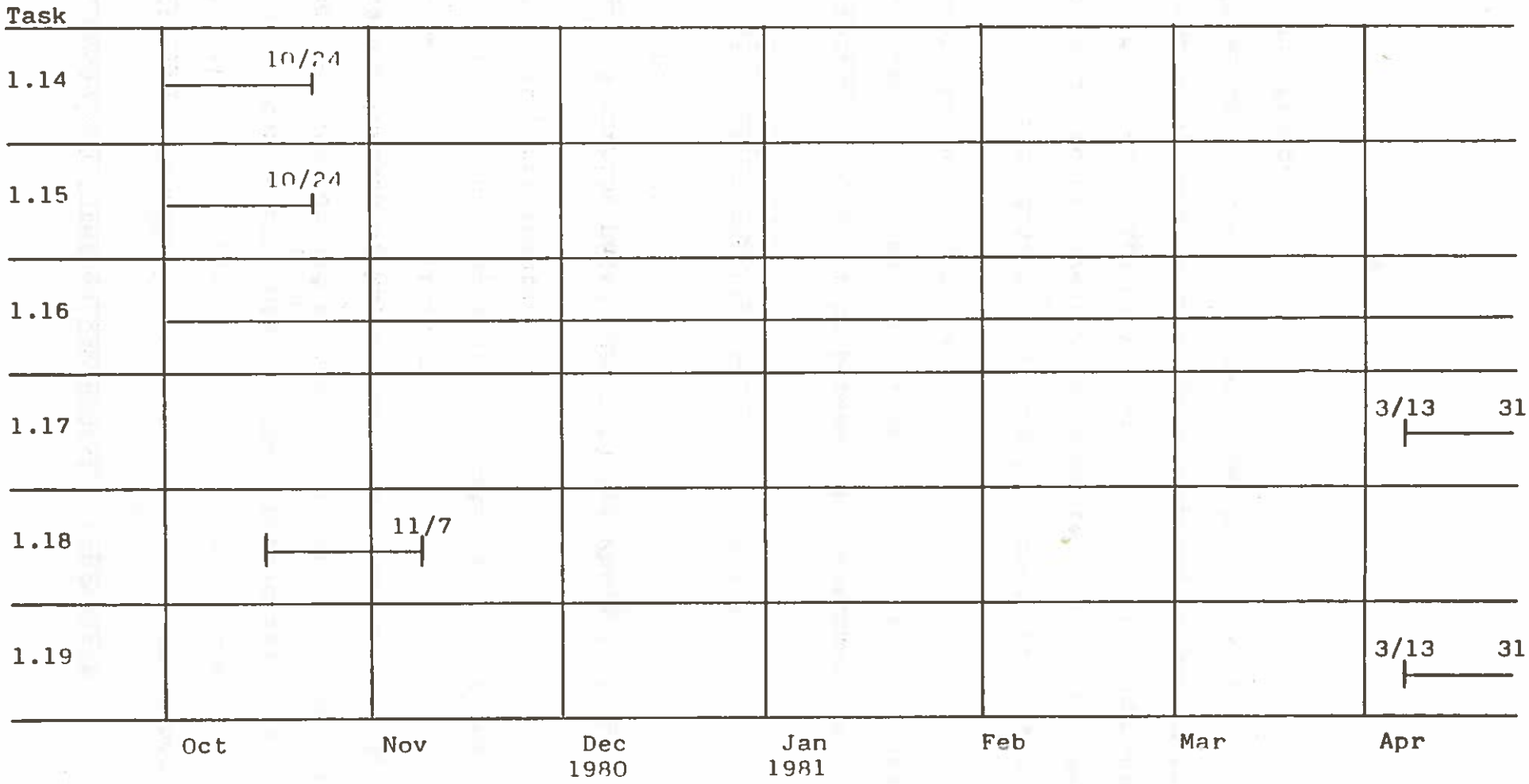
- Population
- Economic base (business, income and employment)
- Present and projected land uses

Data will be obtained from the previously referenced EIR, U. S. Census Bureau documents, local, regional and statewide development plans and studies, and other sources as available.

Output: A working paper that contains applicable socioeconomic data to be used in subsequent analyses. Document the trends (1960, 1970, 1980) of the following characteristics by census tract: population, race, median family income, length of residence, unemployment, number of dwelling units, tenure and vacancy status, housing value and rent. In addition to the above-mentioned characteristics, the following items should be compiled from the 1980 census data by census tract: age of population, number of units in structure, year structure built, and year moved into unit. An analysis of the tabulated data will also be incorporated into the working paper.

LOS ANGELES INTERNATIONAL AIRPORT
NOISE CONTROL AND LAND USE
COMPATIBILITY STUDY

Phase I
Coordination



Task 1.14 Establish Internal Coordination Procedures

Description: Establish and initiate Phase I coordination procedures between the Department of Airports and the Community Area Study participants. These procedures will include the presentation and submission of periodic progress reports; identification of key contact personnel in the various organizations; and the preliminary scheduling of regular progress meetings (including tentative dates and locations) of all technical participants.

Output: A working paper that outlines Phase I study coordination procedures.

Task 1.15 Establish Study Participation Format and Responsibilities

Description: Coordination between the Department of Airports and Community Area participants will be established as appropriate for ensuing phases.

Memoranda of Understanding between the Department of Airports and participating local governmental agencies will be prepared. Study commitments and roles of the agencies will be documented in these memoranda, along with an understanding of the extent to which local agencies will be committed to the citizen participation effort.

The roles of the Airport Land Use Commission (ALUC), the Airport Area Advisory Committee, the City wide Citizens Advisory Committee, the South Bay Cities Association, and other existing groups will be determined.

Items to be considered as part of this ask will be ways and means to:

- Maximize opportunity for citizen participation in the study
- Promote overall community interest in the study
- Maximize public understanding of technical presentations and reports, and keep the public well informed at all times

Output: A working paper that includes:

(a) Confirmation of study participation responsibilities, and preparation of Memoranda of Understanding; and

(b) Formulation of a frame work for the related public participation process.

Task 1.16 Project Coordination

Description: Maintain continuous project coordination throughout the project as established under Tasks 1.14 and 1.15. Such continuous coordination will enhance the timely identification of unforeseen problems or possible schedule conflicts and will permit resolution of these problems. The following coordination activities will assist all study participants in being informed of the progress of the project.

Progress Reports. Prepare monthly progress reports.

Coordination Reviews. Corrdination and review meetings shall be held to review the progress of the project.

Public Information Sessions. Study consultant shall assist the Department of Airports and local agency participants in conducting any public information sessions, as determined by Task 1.15.

Output: Reports, reviews, and public information sessions.

Task 1.17 Prepare Report Summarizing Data Updating

Description: Prepare a report that consolidates and documents the findings of Tasks 1.01 through 1.14.

Output: Fifty (50) copies of the updated data report.

Task 1.18 Prepare Report on Study Participation Format

Description: Prepare a report that documents the study coordination and participation format and responsibilities (Tasks 1.14 and 1.15).

Output: Fifty (50) copies of the Study Participation Format report.

Task 1.19 Coordinate Phase I Findings

Description: At the outset of this task, submit to the Department of Airports fifty (50) copies of a brief letter report summarizing activities undertaken in Phase I for review

and coordination. All reports and working papers will be submitted as attachments to this letter report. Conduct a work session with the Department of Airports and local agency participants (as appropriate) to coordinate comments on the materials submitted and to examine the project status, remaining schedule, tasks to be completed prior to the next study milestone, and the like.

The above review and coordination process shall be completed within forty-five (45) days of submittal of the letter report.

Output: Fifty (50) copies of a brief letter report that transmits key Phase I documents.

The Airport Operations Technical Committee, Phase I Work Tasks are described in detail in the work program and summarized in Task 1.17.

TASK 1.15

ESTABLISH STUDY PARTICIPATION FORMAT AND RESPONSIBILITIES

APRIL 1981

Prepared by: Los Angeles County Department of Regional Planning
and the Los Angeles City Department of Airports

For Information Call: Ron Hoffman (213) 974-6474 or,
Mike Feldman - Env. Mgt. (213) 646-7615

FEDERAL AVIATION ADMINISTRATION (FAA)

Primary funding for the Los Angeles International Airport Noise Control and Land Use Compatibility (ANCLUC) Study is through a grant from the Federal Aviation Administration (FAA). Representatives of the FAA will participate in the land use portion of the study primarily in a monitoring capacity, attending meetings of the Land Use Technical Committee, but will actively participate in the Airport Operations Technical Committee. The FAA will also provide data at various points of the study, suggest solutions for airspace and air traffic control conflicts, and review study products to assure conformance with Federal regulations. The FAA also will sit as an ex-officio member of the Steering Committee.

STEERING COMMITTEE

Organization - The Committee will be composed of one representative or alternate from the cities of El Segundo, Hawthorne, Inglewood and Los Angeles; the County of Los Angeles, the Los Angeles City Board of Airport Commissioners and the Los Angeles County Airport Land Use Commission. The representative should be either an elected official, e.g., City councilperson or an appointed official, e.g., planning commissioner. Representatives of the Federal Aviation Administration, Air Transport Association, chairpersons of the Airport Operations Technical Committee and the Land Use Technical Committee will be ex-officio committee members. The representative of the Airport Land Use Commission will serve as chairperson. The Project Coordinator will serve as committee secretary.

Purpose - The Steering Committee provides a means by which the activities of the Airport Operation and Land Use Planning Committees are reviewed and the information and analysis from the committee's work are evaluated and integrated into the final ANCLUC document.

The Steering Committee is envisioned as a forum to bring high-level dicision-makers together in a positive constructive way. The group will provide policy direction for the study with an emphasis on seeking realistic implementation programs and strategies. The committee will review products as they are being prepared and will give guidance to the Airport Operations and Land Use Technical Committee as to the product content and emphasis. The committee will meet as needed to receive briefings from the two Technical Committees and give them suggestions and direction relative to their tasks.

The Steering Committee will receive completed products via the Project Coordinator whose comments and recommendations will accompany them. The Committee will review these products and select alternatives, resolve policy conflicts and make recommendations. The final product of the Steering Committee's

action will be a report containing the Committee's recommendations. This report will be transmitted to each of the affected jurisdictions and organizations; the Airport Commission, the individual cities, the County, the Federal Aviation Administration and the aviation industry.

The Steering Committee will function as a vehicle for the transfer of ideas by bringing the points of view and perspectives from the agencies and jurisdictions they represent.

PROJECT COORDINATION

Purpose - The Project Coordinator should serve as the executive staff person to the Steering Committee. The Coordinator should report to, and be directed by, the Steering Committee. The Coordinator will be the Steering Committee Secretary and will participate in the preparation of press releases.

The Coordinator will be responsible for integrating the various recommendations and alternatives of both the airport operating and land use sides of the Study. As such, the Coordinator should be an unbiased person who has expertise in airport noise commercial aircraft operations and land use planning. The Los Angeles City Department of Airports (DOA) together with the FAA, ATA, ALPA, CAB and CALTRANS will formulate various airport operating strategies. Each strategy will generate a different set of noise contours. On the other side of the Study, the Land Use Committee, comprised of the local jurisdictions affected, will be identifying various incompatible land uses, evaluating alternatives and suggesting adjustments to the existing land use patterns.

The Coordinator will specifically work in the following capacities:

Evaluator -- will assist in formulation of decisions and recommendations. Will advise the Steering Committee regarding approval of tasks, products and policy recommendations.

Monitor -- will evaluate all documents to ensure that a good faith effort has been made. Will advise the Steering Committee regarding the sufficiency of completed products.

Moderator -- will assist in achieving understanding between all parties. Will advise the Steering Committee regarding controversial issues.

The Coordinator will resolve minor conflicts where possible and forward major policy issues to the Steering Committee with recommendations. Each city, the county and public agencies, will have an equal opportunity to review and comment on all aspects of the study including study products. The Coordinator will also analyze the comments made by all study participants on study products.

DEPARTMENT OF AIRPORTS

The City of Los Angeles Board of Airport Commissioners will designate a representative to sit on the project Steering Committee.

Project Administrative Management - DOA will administratively manage the contracts between the FAA and the DOA. Publishing reports, press releases and public hearing arrangements will also be under the purview of the DOA. Moreover, the DOA will review all study products to determine if they satisfy the tasks described in the two contracts including those products from the land use portions of the overall study. This review will focus on the contractual obligations of each task and product rather than the content of the products.

In addition, the DOA will coordinate the airport operations portion of the study, chairing the Airport Operations Committee. It will prepare meeting agenda, maintain the minutes and brief the committee on the activities of the other groups. It will work closely with the land use coordinator, the Los Angeles County Department of Regional Planning (DRP). It will be the DOA's responsibility to ensure that all participants are aware of the tasks to be completed by the Operations Committee and that such tasks are completed as scheduled. Also, DOA will compile the operational findings into one report.

The DOA will be an ex-officio member of the Steering Committee and the Land Use Technical Committee. The DOA, together with the DRP will provide staff support services for the Steering Committee. It will monitor and brief the Airport Area Advisory Committee with regard to study progress and related issues.

AIRPORT OPERATIONS COMMITTEE

Organization - The committee will be composed of representatives from the DOA, FAA Caltrans, Civil Aeronautics Baord, Airline Pilots Association, Air Transport Association, the airline industry, aircraft manufacturers, and any other group intimately involved with the operations at the airport. The DOA will chair this committee. DRP will be an ex-officio member of this committee and attend all meetings.

Purpose - The committee will meet regularly to discuss issues related to the study program work tasks being done by the DOA. The committee will serve as a forum to allow diverse viewpoints to be considered during the formulation of policies related to airport operations. The committee will also receive briefings and material from the Land Use Technical Committee. DRP will maintain liaison with the Airport Operations Committee to receive their input which will then be reported back to the Land Use

Technical Committee. In addition, DRP will represent the concerns of the Land Use Technical Committee regarding airport operation issues.

COUNTY OF LOS ANGELES

The Board of Supervisors of the County of Los Angeles will designate a representative to sit on the project Steering Committee.

The Airport Land Use Commission will designate a representative to chair the project Steering Committee.

The Los Angeles County Department of Regional Planning (DRP) will coordinate the land use portion of the study. It will work closely with the DOA who is coordinating the airport operations side. In this role, it will be the DRP's responsibility to make sure all participating communities are aware of the tasks which each jurisdiction must accomplish. DRP will provide each jurisdiction with detailed instructions, outlines, formats, etc. to assure consistency between the various products. Upon receipt of the work products, DRP will review them to determine if they are complete. All products for each task will be consolidated and compiled into one report, map, etc. for the entire study. As the study evolves, it will be DRP's responsibility to keep the land use portion on schedule.

DRP staff will chair the Land Use Technical Committee and prepare agendas and minutes for said group. At these committee meetings, DRP will report on the progress being made by all participants. DRP staff will also sit as an ex-officio member of the Steering Committee and Airport Operations Committee. DRP will monitor and brief the Airport Area Advisory Committee. DRP will also brief the Land Use Technical Committee on the activities of these other groups. The DRP together with the DOA will provide staff support services for the Steering Committee.

DRP staff will also assume the same role as a city for the unincorporated areas within the study boundary. All of the various tasks being performed by each city for its jurisdiction will also be done by DRP for the unincorporated areas.

LAND USE TECHNICAL COMMITTEE

Organization - The committee will be composed of one representative or alternate from the cities of El Segundo, Hawthorne, Inglewood, Los Angeles and the County of Los Angeles. The DOA and the FAA will be ex-officio members on the committee. Each representative must be a technically oriented staff member who is directly involved with the study. The representative of the County of Los Angeles will serve as the chairperson and secretary.

Purpose - The committee will meet regularly to discuss all aspects of the study. Any problems encountered by the participants can be discussed and hopefully resolved. Material prepared by the DOA will be reviewed; suggestions or changes to DOA's products will be made by individual participants or by the committee as a whole. Status reports on the study's progress will be made to the committee by DRP. The committee will also be briefed on any other groups (e.g., citizens) which affect the study.

PARTICIPATING CITIES

The cities of El Segundo, Hawthorne, Inglewood, and Los Angeles will be responsible for the land use planning tasks within their jurisdiction. Representatives of the cities will be members of the Steering Committee and Land Use Technical Committee.

CITIZEN PARTICIPATION

Organization -

- Citizens Advisory Committee - The primary emphasis of the LAX ANCLUC Study citizen involvement will be the utilization of the existing Airport Area Advisory Committee. This Committee is comprised of three representatives from each of the following communities: Culver City, El Segundo, Hawthorne, Inglewood, Lennox, Marine/Westchester, and Playa del Rey. The representatives were appointed by the jurisdiction they represent. This is a viable group which meets regularly and is familiar with many of the issues to be addressed by the ANCLUC Study. An agenda item dealing with the ANCLUC Study will be included for each meeting. Some jurisdictions may want to establish other permanent groups to supplement the Airport Area Advisory Committee. This decision will be left to the discretion of each jurisdiction.

- Regular Study Committees - In order to satisfy the intent of the Study, three committees were formed to provide policy and technical direction. The Land Use Technical Committee and Airport Operations Technical Committee meet on the 4th Thursday of each month to discuss study progress. A Steering Committee will meet about every 6 weeks. All meetings pertaining to the LAX ANCLUC Study will be open to the public and the media. Each committee meeting offers an opportunity for citizen involvement. An agenda item titled Public Comments will be included at the end of each meeting. The comprehensive mailing list will be used to inform the public of the time, date and location of these meetings.

- Mailings - A comprehensive mailing list of various civic groups, homeowner associations, citizen groups, chambers of commerce, individuals, etc. is being prepared. The list will be expanded and updated as the study progresses. Various study information (including agenda, minutes, status reports, study products) will be mailed in an attempt to keep these groups informed of study progress.

- Study Brochure, Information Bulletins, Newsletters - A brochure containing a description of the study, the issues involved in the study, and a summary of the opportunities for the public to participate in the study will be prepared. Typically brochures are used to reach new groups or inform known groups of the initiation of the study. Information bulletins or newsletters are periodic reports to the public published as a means of maintaining a continuing interest in the study, as well as documenting the progress in the study. Quarterly bulletins will be prepared and distributed to individuals and groups on the mailing list.

- Speakers Bureau - a speakers service is being created to brief civic groups, homeowners groups, chambers of commerce and others on the LAX ANCLUC Study. Presentations will cover study background, status and identification of means for additional citizen involvement. The speaker bureau service will be advertised in mailings, newsletters, press releases and word-of-mouth.

- Hotline - a hotline is an "easy to remember" telephone number which is publicized through repetition in brochures, reports, news stories, paid advertising, etc., as a single telephone number that citizens can call to ask questions or make comments about the study.

- Newspaper Articles - Newspaper articles and press releases can announce general study information, important products, study status and upcoming meetings. A monthly press release will be prepared and distributed to newspapers. A weekly newspaper series answering questions pertaining to the study can be carried in local newspapers serving the study area.

- Television/Radio - because of the number of people reached by the electronic media, it holds considerable potential as a tool for both informing the public and soliciting participation. Announcements of upcoming meetings, public information announcements, interviews with key study participants, etc., can be broadcasted. Press releases will be sent to television and radio stations on a regular basis.

- Provide Technical Assistance to Citizens - The purpose in providing technical assistance is to insure that citizens who have different values and orientation than the agency are able to develop their ideas using the same kind of technical expertise as that possessed by the agency itself. "Facts" generated by independent technical assistance may be accepted more readily than "facts" generated by the agency's professional staff. The majority of assistance will be provided at workshops or through "hotline" inquiries.

- Information Meetings, Workshops, Public Hearings - Periodic information meetings, workshops and public hearings can be held at major milestones of the study. Staff will report on study progress at information meetings. At workshop meetings, staff will solicit citizen attitudes on important study recommendations, in addition to reporting on study progress. Public hearings are scheduled when formal review is needed. The steering Committee or subcommittee of the Steering Committee can serve as a hearing board.

  An information meeting will be held at the beginning of Phase II to discuss Phase I products and upcoming Phase II tasks, specifically, the development of airport operation and community land use alternatives. Several workshops will be held during Phase II at about 2 month intervals to provide input and review of various alternatives. A public hearing will be conducted at the conclusion of Phase II to review the preliminary set of alternatives. Workshops are scheduled during the first 6 months of Phase III to provide input on the review and evaluation of study alternatives. Also during Phase III, public hearings are scheduled for critical milestone dates when alternatives are evaluated and ranked, the select program concept is presented, and the final study documentation, program implementation, and responsibilities and scheduling is discussed. All meetings will be scheduled to allow the greatest amount of public involvement.

- Displays/Exhibits - Displays or exhibits may be set in places such as agency lobbies, civic centers, libraries, shopping centers or anywhere there are a number of individuals passing by. Displays may be particularly useful in identifying groups that had not been previously identified as interested in aviation issues. This can be done by having response forms available. Displays/exhibits will be used to provide additional exposure for upcoming workshops and public hearings.

- Conduct Survey - Surveys are an effort to determine public attitudes, values, and perceptions on various issues employing a rigorous methodology to insure that the findings of the survey are statistically valid. Task 1.13 of the work program

outlines the updating of a community attitudes concerning the locale and how it can best be developed in the future. Particular emphasis will be given to local attitudes concerning LAX.

Purpose - Citizen involvement and participation are critical ingredients for the future success of any planning study, particularly the Los Angeles International Airport Noise Control and Land Use Compatibility (ANCLUC) Study. Changes to existing airport operations or land uses may have significant impacts on local citizens. As such, the need for public review of recommendations and alternatives is essential. In order for citizen involvement to be a meaningful process, it must begin at the earliest possible time and continue throughout the study. No single citizen participation technique can adequately respond to all forms of citizen involvement. Therefore, the LAX ANCLUC Study will use various techniques in an effort to maximize citizen participation.

TASK 1.16

PROJECT COORDINATION

APRIL 1981

Prepared by: Los Angeles County Department of Regional Planning
and the Los Angeles City Department of Airports

For Information Call: Greg Medeiros (213) 974-6474 or,
Mike Feldman - Env. Mgt. (213) 646-7615

LAND USE TECHNICAL COMMITTEE

PHASE I MEETINGS

AGENDAS AND MINUTES

Task 1.16, Project Coordination, is a study coordination task, carried out jointly by the Los Angeles City Department of Airports and the Los Angeles County Department of Regional Planning (DRP). DRP is responsible for coordination activities on the land use side of the study. The purpose of the task was to maintain continuous project coordination throughout the project as established under Task 1.14, Establish Internal Coordination Procedures and 1.15, Establish Study Format and Responsibilities. Such continuous coordination was intended to enhance the timely identification of unforeseen problems or possible schedule conflicts and to permit resolution of these problems. The coordination activities assisted all study participants in being informed of the progress of the project. The project coordination activities broadly fall within three categories:

- o Progress Reports
- o Meeting Reviews
- o Public Information Sessions

Progress Reports - As outlined in Task 1.14, monthly written status reports as well as oral reports were required from the cities of El Segundo, Hawthorne, Inglewood and Los Angeles. Written reports were completed and submitted to DRP by the 3rd Friday of each month. Copies of these reports are on file with DRP. Interim phone status reports were made on the 2nd Wednesday of each month. DRP used these status reports to monitor the progress of the study as well as to inform individuals of the activities of other study participants at Land Use Technical Committee meetings, Airport Operation Committee meetings, and Steering Committee meetings.

The DOA maintained a progress schedule for each Phase I work task. These work tasks were assigned to specific bureaus within the DOA. The Airport Operations Technical Committee members supplied technical support as required to complete each task. The Environmental Management Bureau coordinated these assignments on a continual basis using periodic meetings and telephone calls.

Meeting Reviews - Regular meetings of both the Land Use and Airport Operation Technical Committees are held on the fourth Thursday of each month at 10:00 A.M. and 1:30 P.M., respectively. Agendas and minutes from each committee for the period August 1980 through June 1981 are attached. The meetings were structured to keep all study participants informed of the progress being made on both sides of the study. Agenda items included status of work products (land use and airport), discussion of task work, and distribution of study products and materials.

Public Information Sessions - Various outside committees and groups were briefed on the purpose and status of the Los Angeles International Airport Noise Control and Land Use Compatibility (ANCLUC) Study including the West Area Planning Council, Southwest Area Planning Council, El Segundo Noise Abatement Committee, Airport

A G E N D A

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY FOR LOS ANGELES INTERNATIONAL AIRPORT

Community Land Use Planning Compatibility Committee
August 14, 1980 - 10 a.m.
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

1. Study Status Report

2. Discussion of Organizational Topics

   a. Schedule

   b. Work Program

   c. Monitoring

   d. Billing Procedure

   e. Contractual Arrangements

   f. Committee Organization

   g. Citizen Input

   h. Data Base

   i. Etc.

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY

SUMMARY OF COMMUNITY LAND USE PLANNING COMPATIBILITY COMMITTEE MEETING, AUGUST 14, 1980

Attendance

Name		Phone
Jim Hartl	L.A. Co. Dept. of Reg. Plng.	974-6474
Ron Hoffman	L.A. Co. Dept. of Reg. Plng.	974-6474
Greg Medeiros	L.A. Co. Dept. of Reg. Plng.	974-6474
Maurice Laham	Dept. of Airports	646-7614
Dick Bean	Dept. of Airports	646-6961
Arch D. Crouch	L.A. City Planning	485-5051
Lothar Von Schoenborn	L.A. City Planning	485-5386
Patricia Brown	L.A. City Planning	485-5386
Lew Pond	City of Inglewood	649-7301
Phil Freeland	City of Inglewood	649-7230
Tony DeBellis	City of Inglewood	649-7230
Harry Reeves	City of Hawthorne	970-7907
Mark Subbotin	City of Hawthorne	970-7939
Wendy Cosin	City of El Segundo	322-4670

Meeting Summary

Mr. Hoffman of the Los Angeles County Department of Regional Planning (DRP) chaired the meeting. In his introductory remarks, Mr. Hoffman discussed the current status of the LAX Airport Noise Control and Land Use Compatibility Study (ANCLUC). He stated that the contract between the County of Los Angeles and the City of Los Angeles Department of Airports for study coordination was executed by the Board of Supervisors on May 28, 1980 and by the Department of Airports Board of Airport Commissioners on July 9, 1980.

He added that the subcontracts with the cities of El Segundo, Hawthorne, and Inglewood have been signed and thanked those cities for the speed in which these subcontracts were processed. The subcontract with the City of Los Angeles is proceeding through the city's hierarchy. Mr. Hoffman asked Mr. Von Schoenborn to briefly summarize the status of the Los Angeles City subcontract. Mr. Von Schoenborn explained that the subcontract already has been approved by the Finance Committee of the City Council and will be considered by the full Council on August 20, 1980. They anticipate that the Mayor should sign the contract within the next two weeks. The remainder of the meeting dealt with a discussion of organizational topics.

Schedule and Work Program

Mr. Hoffman informed the committee members that a program schedule and work program will shortly be prepared by DRP and sent to them for their review and comment prior to the next meeting. The

schedule will include milestone dates for submittal of city products. It also will identify time for product review and final summation by the County. The work program will describe the products required for each task.

Monitoring

The committee agreed to set the fourth Thursday of each month at 10 a.m. at the Hawthorne City Hall as the permanent meeting place for the technical committee. In addition, Mr. Hoffman reminded members to notify the DRP as to the official contact person and alternate from each jurisdiction. Written monthly status reports will be required from each study participant. These reports should be submitted to the DRP no later than the Friday preceding each monthly meeting. In this way, the DRP can summarize the status report and distribute them to each study participant. The committee also agreed to telephone status reports every two weeks.

Billing Procedure

A sample request for payment form and memorandum describing the preparation of billing was distributed to committee members. The committee members were urged to set up a billing process based on individual tasks dollar amounts. Committee members were referred to Mr. Ted Elias of the Department of Regional Planning, Budget and Special Studies Section, at 974-6489 for specific questions dealing with the billing process.

Contractual Arrangements

Specific tasks outlined in the contract were briefly discussed including the recommended method of payment as well as the procedure for submitting and reviewing study products.

Committee Organization

There was a lengthy discussion as to committee organization. A high level consultative committee made up of elected officials was suggested. Mr. Laham recommended that representatives of the Airline Pilot Association, Airlines, Federal Aviation Administration, and others must also be included in the study. The committee was not able to agree on a recommended hierarchy for the study and suggested that the County prepare a recommended program hierarchy describing the composition and purpose of each committee. The question of a project manager to oversee the operation of both the airport planning and land use planning portion of the study also was discussed.

Citizen Input

The committee discussed the need and possible mechanism for citizen input. Mr. Laham described the make-up of the currently organized airport citizens planning group. Committee members agreed that it would be advantageous to utilize an existing citizen group. The committee recommended that this would be a good issue to be discussed by the consultative committee.

Data Base

Mr. Hoffman distributed copies of a recommended study logo, report cover and map title block. After some minor editorial changes, the committee agreed to utilize these designs. Further, Mr. Hoffman discussed the need for uniform map legends and scales. He suggested that the scale be no larger than 1" = 1,000'. The committee agreed that this would be an appropriate scale. A subcommittee was formed, comprised of representatives from Los Angeles City Planning, Department of Airports and DRP, to determine if any existing base maps at the 1" = 1,000' scale are available. The Department of Airports informed the committee that they would prepare aerial photographs of the study area at the appropriate scale to be utilized by each participant.

Other Items

Mr. Hoffman informed the committee that the Board of Supervisors recently approved a work program and grant for an economic development study along the Century Freeway Corridor. Some of the planning area for this project will coincide with our study. He suggested that both programs be closely coordinated so that similar data can be shared.

A G E N D A

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY FOR LOS ANGELES INTERNATIONAL AIRPORT

Land Use Technical Committee
September 25, 1980 - 10 a.m.
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

1. Study Status Report
2. Discussion of Study Objectives
3. Discussion of Study Hierarchy
4. Discussion of Roles and Responsibilities
5. Discussion of Phase I Work Program and Schedule
6. Discussion of Internal Coordination Procedure
7. Other Items

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF LAND USE TECHNICAL COMMITTEE MEETING
SEPTEMBER 25, 1980

Attendance

Name		Phone
Ron Hoffman	L.A. Co. Dept. of Reg. Plng.	974-6474
George Burza	L.A. Co. Dept. of Reg. Plng.	974-6491
Greg Medeiros	L.A. Co. Dept. of Reg. Plng.	974-6474
Maurice Laham	Dept. of Airports	646-7614
Lothar Von Schoenborn	L.A. City Planning	485-5386
Patricia Brown	L.A. City Planning	485-5386
Lew Pond	City of Inglewood	649-7301
Tony DeBellis	City of Inglewood	649-7301
Vi Moyer	City of Inglewood	649-7301
Brad Stevens	City of Hawthorne	970-7940
Wendy Cosin	City of El Segundo	322-4670
Gerald Dallas	Federal Aviation Administration	536-6243
Ellis Ohnstad	Federal Aviation Administration	536-6250

Study Status

Mr. Ron Hoffman introduced Mr. George Burza, of the Los Angeles County Department of Regional Planning, and informed the Committee that Mr. Burza would be in charge of the study for the County if his pending transfer is finalized. Mr. Hoffman informed the Committee members that the subcontracts were signed by the Board of Supervisors on September 16, 1980 and thanked the cities for their efforts in getting the subcontracts approved. Signed subcontracts were distributed to city representatives.

Discussion of Study Objectives

Mr. Hoffman briefly summarized the purpose and intent of the handout. He indicated that it is important that all study participants understand the objectives at the onset of the study. He explained that the study will be divided into two efforts - one dealing with airport operation improvements and the other with land use changes. These two efforts must be closely coordinated. It was suggested that the study objectives be approved by the yet-to-be-formed steering committee. All committee members agreed that this was a good approach. Ms. Wendy Cosin asked what would be the role of the Airport Land Use Commission (ALUC) and ultimate use of the study. Mr. Hoffman explained that it was his hope that each jurisdiction would modify their general plan, zoning ordinance, and capital improvement program to be consistent with the recommendations of the ANCLUC Study. Similarly, it is possible that the ALUC will adopt this study as the land use plan for Los Angeles International Airport. If the ALUC adopts the plan, all

development within the study boundary would need to be consistent with the study recommendations. However, the cities would have the power to override the decision of the ALUC by a 4/5 majority of the city council. This provision would permit cities to continue to have ultimate jurisdiction over land use decisions within their boundaries. The committee questioned Mr. Maurice Laham as to the possibility of making operational improvements at the airport. Mr. Laham explained that safety would be the foremost concern. However, certain operational changes can be made by the Board of Airport Commissioners.

Discussion of Study Hierarchy

A lengthy discussion centered around the formation of a steering committee. The major point of discussion was the composition of the committee and if the Federal Aviation Administration (FAA), Airline Pilots Association (ALPA), and Air Transport Association (ATA) should be members of this committee. The committee agreed to delete the ALPA and ATA from the committee and make the FAA an ex officio member.

Ms. Cosin suggested that an outside consultant be hired as a project manager to coordinate and integrate the land use portion and airport operation portion of the study. The consultant could impartially evaluate the feasibility of various recommendations. The committee recommended that the discussion of roles and responsibilities be modified to reflect changes made to the study hierarchy.

Discussion of Roles and Responsibilities

This discussion was merged with the above item. Mr. Lew Pond suggested that the narrative be expanded regarding the specific responsibilities of the project coordinator. Mr. Hoffman asked that any additional changes be conveyed in writing or by phone. He suggested that the roles and responsibilities as well as the study hierarchy be reviewed and approved by the steering committee.

Discussion of Phase I Work Program and Schedule

Mr. Greg Medeiros briefly highlighted the work schedule and program description for Phase I tasks. The study will officially begin on October 1, 1980. The tasks were divided into a formulation stage to be completed by each jurisdiction and a correlation stage to be completed by the Los Angeles County Airport Land Use Commission. Once correlated, the product will be circulated to each jurisdiction for their review. The tasks have been scheduled in such a way that no two tasks would be performed concurrently. Mr. Brad Stevens had some questions dealing with the level of detail required for some of the maps. He will send a letter outlining his concerns to the Los Angeles County representative.

Discussion of Internal Coordination Procedures

Mr. Medeiros briefly discussed the internal coordination procedures for Phase I, including meeting dates for the Land Use Technical Committee, completion dates for status reports, completion dates for oral status reports, and the composition of the Land Use Technical Committee, as well as other study contact persons. Citizen participation was briefly discussed. The study will utilize the existing Airport Area Advisory Committee; however, local jurisdictions may want to establish other citizen groups. Also discussed was a draft letter to mayors or city managers requesting participation on the Steering Committee and Land Use Technical Committee. Mr. Stevens asked that the letter to the City of Hawthorne be sent to the city manager.

Other Business

A bibliography of airport related publications was distributed to the committee. It was suggested that each agency obtain a copy of these publications or have access to them.

A list of newspapers serving the study area was distributed to the committee members. Members asked to review the list and revise it if necessary.

A draft written status report form was distributed and briefly discussed. Again committee members were requested to review it.

A proposed base map was given to each committee member to review and update. The committee members felt that the base map was adequate for the purpose of the study.

A G E N D A

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY FOR LOS ANGELES INTERNATIONAL AIRPORT

Land Use Technical Committee
October 23, 1980 - 10 a.m.
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

1. Study Status Report
2. Discussion of Tasks 1.04 and 1.06
3. Discussion of Steering Committee
4. Distribution of Base Map
5. Other Items

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF LAND USE TECHNICAL COMMITTEE MEETING
October 23, 1980

Attendance

Name		Phone
George Burza	L.A. Co. Dept. of Reg. Plng.	974-6474
Greg Medeiros	L.A. Co. Dept. of Reg. Plng.	974-6474
Maurice Laham	Dept. of Airports	646-7614
Dick Bean	Dept. of Airports	646-6961
Michael Feldman	Dept. of Airports	646-6961
Lothar Von Schoenborn	L.A. City Planning	485-5386
Patricia Brown	L.A. City Planning	485-5386
Melanie Fallon-McKnight	City of Inglewood	649-7230
Vi Moyer	City of Inglewood	649-7230
Brad Stevens	City of Hawthorne	970-7940
Jim A. Marquez	City of Hawthorne	970-7940
Wendy Cosin	City of El Segundo	322-4670
Herb Hyatt	Federal Aviation Administration	536-6205

Study Status

Minutes of the September 25, 1980 Land Use Technical Committee meeting were approved. The committee agreed that approval of minutes should be made an official agenda item for future meetings.

The Airport Operations Technical Committee met for the first time on October 16, 1980. Representatives of the Department of Airports (DOA), Federal Aviation Administration, Caltrans, the Air Transport Association (ATA), the Airline Pilots Association (ALPA), and United Airlines were present. The committee discussed citizen participation and roles and responsibilities. The committee appears agreeable to the roles and responsibilities paper previously reviewed by the Land Use Technical Committee. Mr. Maurice Laham added that the Airport Operations Committee will evaluate new operational strategies as well as previously studied strategies.

Agendas and minutes for the Airport Operations Technical Committee meetings will be sent to all members of the Land Use Technical Committee. Also, any member of the Land Use Technical Committee may attend the Airport Operations Technical Committee meetings. Next meeting is November 20, 1980, 2:00 p.m. at LAX. Similarly, agendas and minutes for the Land Use Technical Committee will be sent to members of the Airport Operations Technical Committee. Several members of the Airport Operations Technical Committee expressed interest in attending the next Land Use Technical Committee meeting.

Committee members were reminded that Task 1.08 (Assembly of Environmental Documents) and the October Monthly Status Report were due on October 17, 1980. Several cities had not submitted these products and were urged to do so as soon as possible.

Discussion of Tasks 1.04 and 1.06

Task 1.04 (Define Preliminary Boundaries for the Community Planning Area) is due November 7, 1980. Using the first quarter 1980 65 CNEL contour prepared by DOA, each city should delineate the precise study boundaries for their city. The boundary should, wherever possible, follow the existing street pattern, reflect natural terrain features and existing urban development patterns and include noise sensitive uses in close proximity to the 65 CNEL. The boundary should not split parcels or blocks. A narrative should be included to justify substantial deviations from the 65 CNEL contour.

Task 1.06 (Assemble and Document Local Plans and Land Use Regulations) is due December 5, 1980. A bibliography and narrative similar to the Task 1.08 should be prepared. The working paper should contain a summary of present planning efforts, land use controls, and planning goals and objectives for each city.

Discussion of Steering Committee

Letters were sent to mayors of the cities of El Segundo, Hawthorne, Inglewood, and Los Angeles, the County of Los Angeles, the Board of Airport Commissioners, and the Federal Aviation Administration. A mid-November meeting date is scheduled for the first meeting of the steering committee. All cities are urged to appoint a representative as soon as possible.

Distribution of Base Map

An updated base map reflecting changes recommended by the cities was distirbuted. Committee members were asked to recheck the changes and contact the County with any additional changes. A chronoflex base map will be sent to each city. The base map will identify the Century I-105 Freeway and study boundaries.

Other Items

Upon completion and approval of a given task, a participating community should request payment from the County. Billings should be limited to once every two months. The County will process and forward billings to the Department of Airports for payment. All costs charged to the contract by each city should be supportable by properly executed payrolls and time records.

Since Thanksgiving falls on the fourth Thursday in November, the next meeting of the Land Use Technical Committee will be November 20, 1980.

A G E N D A

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY STUDY FOR LOS ANGELES INTERNATIONAL AIRPORT

Land Use Technical Committee
November 20, 1980 - 10 a.m.
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

1. Approval of Minutes

2. Study Status Report

3. Discussion of Legend Items for Task 1.05, Update Existing Community Area Conditions.

4. Discussion of Steering Committee

5. Distribution of Roles and Responsibilities Paper, Internal Coordination Procedure, and Final Phase I Work Program.

6. Distribute Task 1.08, Existing Community Area Environmental Planning Documents.

7. Other Items

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF LAND USE TECHNICAL COMMITTEE MEETING

November 20, 1980

Attendance

Name		Phone
George Burza	L.A. Co. Dept. of Reg. Plng.	974-6474
Greg Medeiros	L.A. Co. Dept. of Reg. Plng.	974-6474
Maurice Laham	Dept. of Airports	646-7614
Michael Feldman	Dept. of Airports	646-6961
Lothar Von Schoenborn	L.A. City Planning	485-5386
Patricia Brown	L.A. City Planning	485-5386
Lew Pond	City of Inglewood	649-7301
Melanie Fallon-McKnight	City of Inglewood	649-7230
Brad Stevens	City of Hawthorne	970-7940
Jim A. Marquez	City of Hawthorne	970-7941
Wendy Cosin	City of El Segundo	322-4670
Gerald Dallas	Federal Aviation Administration	536-6205

1) Approval of Minutes

Minutes of the October 23, 1980 Land Use Technical Committee meeting were approved with no changes.

2) Study Status Report

It was reported that all cities have submitted products for Task 1.04, Study Boundary Definition. Task 1.06, Assembly of Land Use Plans, is due on December 5, 1980. The cities should be beginning work on Task 1.05, Updating Existing Community Area Conditions.

3) Discussion of Legend Items for Task 1.05, Updating Existing Community Area Conditions

Proposed legends for approximately 15 maps dealing with existing community conditions were discussed. Sewerage, water, and flood control information is available from the County. The cities need only review this information and make appropriate modifications if necessary. The County will supply copies of these maps to each city. Legend items under noise sensitive uses will be expanded to include all those identified under State noise law. The Department of Airports will supply copies of this legislation to each city. The single-family resident item on the existing land use map should include duplexes. Committee members were reminded that the existing land use map is a use map and not a density map. The committee felt the height map legend requires clarification. The cities will be notified on any proposed changes.

4) Discussion of Steering Committee

On October 22, 1980, letters, under the signature of Carolyn Llewellyn, Chairman of the Airport Land Use Commission, were sent to the mayors of El Segundo, Hawthorne, Inglewood, and Los Angeles, the president of the Los Angeles City Board of Airport Commissioners and the Federal Aviation Administration asking that each agency designate a high-level representative to participate on a steering committee for the LAX ANCLUC study. The FAA has responded and designated Gerald Dallas as their representative. The Board of Airport Commissioners has appointed Mary Lou Cunningham as their representative. We have also had inquiries from several cities but have yet to receive the names of their designees. All those agencies that have not appointed a representative were urged to do so as soon as possible. We are anticipating the first meeting of the steering committee in early December.

5) Distribution of Roles and Responsibilities Paper, Internal Coordination Procedure and Phase I Work Program

Final copies of the above documents were distributed to members of the committee. Changes were made to reflect comments discussed at the October 23, 1980 Land Use Technical Committee meeting. The Department of Airports reviewed the products and have no changes. Unless comments are received to the contrary, these documents will be considered completed.

6) Distribution of Task 1.08, Existing Community Area Environmental Planning Documents

Due to the overlap between this task and Task 1.06, Assembly of Land Use Documents, it was decided that the final report will combine the products from both tasks. Since Task 1.06 is not due until December 5, 1980, a combined product will not be available until the next Land Use Technical Committee meeting on December 18, 1980.

7) Other Items

Committee members were briefed on a recent SCAG Airport Program Working Committee meeting in which Clifton Moore discussed the LAX "Maximum Total Air Operations (MTAO)" formula. The formula is based on ground traffic measured at the central terminal roadway. Several concerns were raised regarding the lack of correlation between this formula and the projected noise exposure in the surrounding communities. A more detailed discussion was postponed until Phase II of the ANCLUC study, when the issue of possible airport operational constraints will be addressed.

Committee members were reminded that billing for task work should be submitted every two months for products completed during that period. Billings should be for not more than the contractual amount for each task. However, a record of actual expenses should be kept in the event monies can be transferred between tasks. Inquiries regarding billings should be made to Ted Elias, Department of Regional Planning, 974-6474.

The County reviewed revisions to the proposed study boundary as submitted by each city. The boundary was expanded to include noise sensitive uses adjacent to the 65 CNEL boundary. In addition, the study boundary was squared off to generally follow major highways.

Finally, the need to amend existing State noise law was discussed. State law now requires noise insulation and an easement for a use to be considered compatible. This issue will be considered by the steering committee.

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: January 22, 1981

TIME: 10 a.m.

1. Approval of Minutes
2. Study Status Report
3. Discussion of Task 1.05, Update Existing Community Area Conditions
4. Distribute Joint Tasks 1.06 and 1.08, Assemble and Document Local Plans, Land Use Regulations and Environmental Planning Reports
5. Discussion of Task 1.1[illegible] and Assess Community Planning Area Financial [illegible] Information
6. Discussion of Task 1.11, Update Community Area Socioeconomic Data
7. Other Items

For further information, contact the
AIRPORT LAND USE SECTION
Department of Regional Planning at (213) 974-6474 in Room 349 Hall of Records

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: January 22, 1981
TIME: 10:00 a.m.

Attendance

Name		Phone
George Burza	L.A. Co. Dept. of Reg. Plng.	974-6474
Greg Medeiros	L.A. Co. Dept. of Reg. Plng.	974-6474
Maurice Laham	Dept. of Airports	646-7614
Michael Feldman	Dept. of Airports	646-6961
Lothar Von Schoenborn	L.A. City Planning	485-5386
Patricia Brown	L.A. City Planning	485-5386
Melanie Fallon-McKnight	City of Inglewood	649-7230
Maggie Parker	City of Inglewood	649-7230
Brad Stevens	City of Hawthorne	970-7940
Jim A. Marquez	City of Hawthorne	970-7941
Wendy Cosin	City of El Segundo	322-4670
Ellis Ohnstad	Federal Aviation Administration	536-6205

1) Approval of Minutes

Minutes of the November 20, 1980 Land Use Technical Committee Meeting were approved as written.

2) Study Status Report

It was reported that the land use portion of the ANCLUC study is proceeding on schedule and no obstacles are foreseen in completing Phase I tasks by March 31, 1981. The upcoming Janaury 30, 1981 Steering Committee meeting was discussed and the proposed agenda distributed. All committee members were asked to contact the Department of Regional Planning before Friday, January 23, 1981 with the exact number of participants that will attend the Steering Committee meeting. The Department of Airports was asked to brief the Land Use Technical Committee on the progress of the airport operation portion of the study. DOA reported that all task work is proceeding as scheduled.

The issue of project coordinator was again brought up. Ellis Ohnstad informed the committee that San Francisco Airport hired a non-partisan, non-profit consultant, which served as a "quasi encounter group" to resolve conflicts. The issue of project coordinator will be discussed at the January 30, 1981 Steering Committee meeting.

Wendy Cosin requested clarification regarding the mechanism for reviewing and approving study products. The Land Use Committee favored an informal review process. DOA stated that there was no need to develop a cumbersome review process, and that they will study any operational change suggested by the communities or any measure studied elsewhere. Policy oriented products will be approved by the Steering Committee.

Mr. Ohnstad reported that the FAA is in the process of reviewing the 22 existing ANCLUC studies funded by FAA. This report will be available during March of this year.

3) Discussion of Task 1.05, Updating Existing Community Area Conditions

Committee members were asked if they had encountered any problems during the preparation of Task 1.05 maps. The committee reported no difficulties and submitted completed products to the Department of Regional Planning representative.

4) Distribute Joint Task 1.06 and 1.08, Assemble and Document Local Plans, Land Use Regulations and Environmental Planning Reports

The combined Tasks 1.06 and 1.08 product was distributed to committee members to review and file. The product is a combination of information submitted by each community. Committee members were asked to notify the Department of Regional Planning if they would like to make any changes to the report.

5) Discussion of Task 1.10, Inventory and Assess Community Planning Area Financial Data and Information

Because of the redundant nature of this task, due to the use of similar funding sources by each study participant, Task 1.10 will be developed using a "brainstorming" approach. Committee members agreed to meet on February 17, 1981 to identify existing funding sources. The County will act as secretary and prepare the output for this task.

6) Discussion of Task 1.11, Update Community Area Socioeconomic Data

This task was postponed until the 1980 census data is available.

7) Other Items

The bus tour for the January 30, 1981 Steering Committee meeting was discussed. Each community participant was asked to identify points of interest in their city which could be highlighted on the tour.

The LAX ANCLUC study was discussed in a recent issue of SOUND ADVICE, prepared by the University of California Berkeley Center for a Quiet Environment.

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: February 26, 1981

TIME: 10:00 a.m.

1. Approval of Minutes
2. Study Status Report
3. Discussion of Task 1.10, Inventory and Assess Community Planning Area Financial Data and Information
4. Discussion of Task 1.11, Update Community Area Socioeconomic Data
5. Other Items

For further information, contact the
AIRPORT LAND USE SECTION
Department of Regional Planning at (213) 974-6474 in Room 349 Hall of Records

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: February 26, 1981
TIME: 10:00 a.m.

Attendance

Name	Agency	Phone No.
Wendy Cosin	City of El Segundo	322-4670
Jim Marquez	City of Hawthorne	970-7941
Melanie Fallon-McKnight	City of Inglewood	649-7230
Patricia Brown	L.A. City Planning	485-5386
Lothar Von Schoenborn	L.A. City Planning	485-5386
Ron Hoffman	County of Los Angeles	974-6474
Mike Feldman	Dept. of Airports	646-6961
Charles Zeman	Dept. of Airports	646-6961
Ellis Ohnstad	Federal Aviation Admin.	536-6250
Ed Mosley	Federal Aviation Admin.	536-6250
Enid Walker	Calif. Div. of Aeronautics	(916)322-9966
Margorie Kaplan	So. Calif. Assn. of Govts.	385-1000

1) Approval of Minutes

Minutes of the January 22, 1981 Land Use Technical Committee meeting were approved as written. (Mr. Ohnstad's phone number was corrected to read 536-6250.)

2) Study Status Reports

Ron Hoffman reported on the status of the Land Use tasks. The methodology and boundary description is being written for Task 1.04. Final changes are being made to Tasks 1.06 and 1.08 (Local Plans and Environmental Documents). Copies of the final draft of these tasks will be sent to committee members for their review.

Mike Feldman reported on the Airport Operations tasks. He indicated that the Department of Airports (DOA) is making good progress on their tasks. They are also in the process of compiling a master mailing list for the Steering Committee. DOA is sending a letter to the Federal Aviation Administration (FAA) requesting permission to shift funds between tasks and phases. If the FAA approves the shifting of funds, study participants would be able to reallocate funds between tasks and phases. A brief synopsis of new Part 150 of the Federal Aviation Regulations (FARs) was given to Committee members.

Ellis Ohnstad briefed the committee on Part 150 which was written pursuant to the Aviation Safety and Noise Abatement Act of 1979. Part 150 would establish the A-Weighted Sound Level - dB(A) as the method for measuring single noise events and the Day-Night Average Sound Level (Ldn) for expressing noise exposure. Part 150 contains voluntary provisions for airport proprietors to prepare noise maps and noise compatibility programs. Municipalities would also be able to apply directly to the FAA for funds to be used on land use compatibility programs. Implementation of Part 150 is being held up because of President Reagan's freeze of federal regulations.

3) Discussion of Task 1.10 - Financial Data Inventory

Committee members were asked to complete an information form for each program that has been used in their jurisdiction or with which they are familar. Members were asked to comment on the use of the programs as land use compatibility techniques. Past funding levels are to be included if they can easily be obtained. New programs could also be suggested which could be used for land use compatibility. It was the general consensus that this task would be presented in a general fashion due to the uncertainty of future federal funding. The committee was asked to send this material to the Department of Regional Planning (DRP) in two weeks (March 13)

4) Discussion 1.11 - Socioeconomic Data

There was a discussion regarding the categories of information to be collected and the time period to be studied. Copies of U.S. Census material showing various categories of population and housing information were distributed. Members were asked to review the categories and indicate which ones should be used in this task. Responses are to be sent to the DRP by March 12. Additional comments were made concerning the use of 1960 and 1970 Census data to compare with 1980 data which will be available later this year. There was lack of agreement on the relevance of analyzing trends over a 20 year period. Members were also asked to submit their comments on this point to the DRP by March 12.

The use of census tracts to compile socioeconomic data was discussed. It was generally considered preferable to use entire census tracts within the study area rather than splitting or dividing tracts. Committee members were to review the study boundary in relation to the census tracts to determine what adjustments should be made. Any changes are to be forwarded to DRP on March 12 with the other comments.

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: March 26, 1981

TIME: 10:00 a.m.

1. Approval of Minutes

2. Study Status Report.

3. Distribute Department of Airports Task 1.02, Update Airport Plans, Physical Facilities and Land Use and Task 1.03, Update Airport Access Traffic, Circulation and Parking.

4. Distribute final products for Task 1.04, Define Preliminary Boundaries for the Community Planning Area; Task 1.06, Assemble and Document Local Plans and Land Use Regulations; and Task 1.09, Obtain Existing Community Area Environmental Planning Documents.

5. Discuss Task 1.10, Community Planning Area Financial Data.

6. Discuss Task 1.11, Update Community Area Socioeconomic Data.

7. Discuss Phase II, Land Use; Task 2.05, Establish Community Planning Criteria and Refine Community Planning Area Boundaries and Task 2.10, Prepare Community Requirements Report.

8. Report on DOA environmental evaluation process for new service.

9. Other Items

10. Public Comments

Land Use Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Land Use Technical Committee
Hawthorne City Hall
Engineering Conference Room
4455 West 126th Street
Hawthorne, California

MEETING DATE: March 26, 1981

TIME: 10:00 a.m.

Attendance

Name		Phone
Wendy Cosin	City of El Segundo	322-4670
Jim A. Marquez	City of Hawthorne	970-7941
Lew Pond	City of Inglewood	649-7301
Melanie Fallon-McKnight	City of Inglewood	649-7230
Pat Brown	L.A. City Planning	485-5386
Lothar Von Schoenborn	L.A. City Planning	485-5386
Ron Hoffman	County of Los Angeles	974-6474
Greg Medeiros	County of Los Angeles	974-6474
Michael Feldman	Dept. of Airports	646-6961
Maurice Laham	Dept. of Airports	646-7614
Walt Gillfillan	Consultant to Inglewood	(714) 673-3918
		(415) 524-3966
Enid Walker	Calif. Div. of Aeronautics	(916) 322-9966
Paul Hatanaka	So. Calif. Assn. of Govts.	385-1000
Ellis Ohnstad	Federal Aviation Admin.	536-6250

1) Approval of Minutes

Minutes of the February 26, 1981 Land Use Technical Committee Meeting were approved as written.

2) Study Status Report

Ron Hoffman reported on the status of the Land Use tasks. Task 1.04, Boundary Definition, and Tasks 1.06 and 1.08, Local Plans and Environmental Documents, have been completed. The mapping for Task 1.05, Update of Community Land Use Information is continuing. Mr. Hoffman reported that information for Task 1.05 has been received from all cities. A draft report summarizing the information submitted from the cities for Task 1.10, Update of Financial Information, is being prepared and will be distributed at the next meeting. Task 1.11, Update Community Socioeconomic Data, will be discussed later in the meeting.

Mike Feldman reported on the Airport Operations tasks. He indicated that the Department of Airports (DOA) is making good progress on their tasks. Tasks 1.01, 1.02, and 1.03 have been completed. Task 1.07, which summarizes noise regulations, is almost completed. Task 1.09, dealing with noise litigation, is being prepared by the City Attorney and is about 75 percent complete. Task 1.12, Forecast of Air Traffic Demand, is being prepared by the DOA Facility Section and is about 75 percent complete. Little has been done on Task 1.13, Community Attitute Survey. This prompted a discussion by the Committee members on the purpose of an attitude survey. Maurice Laham reported that DOA currently updates their community attitude survey at 5 year intervals. He is awaiting the results of this update to determine its applicability for the ANCLUC Study. Walt Gillfillan believes it would be more important to define the noise problem and how the general public perceives noise, then to determine how the public rated noise relative to other social problems. The noise problem definition can be determined through the use of workshops rather than a scientific survey. DOA offered to give the money to the cities to conduct their own attitude survey; the offer was not accepted.

3) Discussion of DOA Tasks

Mike Feldman briefly summarized Task 1.02, Update Airport Plans, and Task 1.03, Update Airport Access and Traffic. Some of the Committee members expressed concern that Task 1.03 did not address congestion on arterials leading to the airport. The members agreed that a product review process for all DOA tasks is needed. Each Committee member will submit comments to the Department of Regional Planning (DRP) by the second Thursday of each month. The County, in turn, will prepare a consensus opinion for the Committee's approval and forward this analysis to the Steering Committee.

4) Distribute Final Product for Task 1.04, Task 1.06 and Task 1.08

Greg Medeiros briefly summarized the work products and distributed final copies of the above tasks. Hearing no objections, these tasks will now be forwarded to DOA. He also reported that the issue of what would be the appropriate CNEL year has been raised. The study boundary is now based on a 1976 figure. DOA has suggested that a 1980 figure would be more appropriate. The Committee, following a lengthy discussion, agreed to retain the 1976 figure, which would show a worse case situation. In addition, they suggested that when the boundary is reviewed during Phase II that the CNEL noise contours for 1980 and other years be identified on the study boundary map.

5) Discussion of Task 1.10, Community Planning Financial Data

Ron Hoffman reported on the progress being made on this task. A draft report is being prepared and will be available for committee review at the next meeting. It was the general consensus that the current financial picture is very bleak and it is not likely that existing sources of funds will be adequate for implementing future recommendations of the ANCLUC Study. Maurice Laham brought up the possibility of a "head tax" on passengers using LAX. The Committee believed that this would be an extremely good source of funding because those people utilizing the facility would pay for some of the problems associated with it's use. However, it was pointed out that federal law must be amended to allow the use of "head taxes".

6) Discussion of Task 1.11, Update Community Area Socioeconomic Data

Ron Hoffman reviewed a list of census categories recommended for use by the Committee members. A final list of categories was agreed on by the Committee. Members were requested to submit available census data for 1960 and 1970 and narratives to the DRP by April 9, 1981. The Committee felt that the 1976 data on industrial and commercial businesses and employment was out of date and shouldn't be used. It was also decided that retail sales data would be too expensive to gather for the study. A draft report will be prepared that summarizes this data. The report will be available for Committee review at the next meeting.

7) Discussion of Phase II Land Use Tasks

Greg Medeiros distributed a tentative time schedule for the completion of land use tasks for Phase II. Task 2.05 deals with the establishment of community planning criteria and refinement of the community planning boundary. Task 2.10 involves the preparation of a community requirements report. Committee members were asked to review the task descriptions and submit comments to DRP by April 9, 1981. Based on these comments, the task descriptions will be revised as necessary and discussed at the next meeting.

Due to the lateness of the meeting, agenda Item 8 was held over until the next Land Use Technical Committee meeting which is April 23, 1981 at 10:00 a.m. The meeting was adjourned at 12:15 p.m.

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF AIRPORT OPERATIONS TECHNICAL COMMITTEE MEETING
OCTOBER 16, 1980

Attendance

Name	Organization	Phone
William M. Schoenfeld	DOA-Deputy General Manager	646-7393
Maurice Laham	DOA-Environmental Management	646-7614
Dick Bean	DOA-Environmental Management	646-6961
Mike Feldman	DOA-Environmental Management	646-6961
Walt Collins	DOA-Noise Abatement	646-9410
Lothar Von Schoenborn	L.A. City Planning	485-5386
George Burza	L.A. County Regional Planning	974-6474
Enid Walker	Caltrans-Aeronautics Division	(916)322-9966
Gerald Dallas	FAA-Airports	536-6243
Ivan Hunt	FAA-LAX Tower Chief	642-3969
Jon Ross	FAA-LAX Tower	642-3969
George H. Carver	Air Transport Association	670-5183
Ray Lahr	Airlines Pilots Association	459-2232
Ken Lemke	United Airlines	646-4102
Glenn Greenleaf	United Airlines	646-4855

Introduction

Mr. Maurice Laham opened the meeting by explaining that due to illness, Mr. Clif Moore would not be able to attend but to the extent time permitted, Mr. William Schoenfeld would represent senior airport management. The intent of the ANCLUC program was briefly described. Relationships between the ANCLUC study and past, present, and future LAX development plans were explained to update the committee members not familiar with the chronology or interrelationships of the plans.

Discussion of the ANCLUC Organization

Committee members reviewed the organizational structure and were invited to make suggestions to improve it. It was explained that a decision to hire an independent consultant as a project coordinator to act as liaison between committees and supply an independent review capability, has not yet been made. The manner in which the Citizens Advisory Committee would interface with the Airports Operations and Land Use Committees was discussed at length. The Steering Committee will be asked to decide how public participation should be accommodated. A number of alternatives were reviewed including the following:

- have the various citizens groups represented by one or two selected members;
- use of written briefs;
- direct unlimited attendance

The latter alternative was the least attractive to most committee members because of the potential for distraction and wasted time in answering technical questions.

Implementation of the ANCLUC Study

Mr. George Carver, who has participated on four previous ANCLUC programs, was asked to comment on this considerable experience. He suggested that an initial step would be an analysis of all previous noise abatement studies, both those that have been implemented and those that could not be effectuated. He volunteered to assemble a history of the noise abatement measures reviewed to date and offer explanation on why the measures were or were not implemented. An attempt will be made to have this review ready for the next committee meeting. Mr. Walt Collins added that LAX has historically sought to control noise since 1959.

Mr. Lothar Von Schoenborn indicated that during the Land Use Committee Meeting, it was implied that many potential noise control measures are dropped with the excuse of maintaining "safe operations". He further advised the committee members to be more conscious of this type of public opinion. A history of the various noise abatement measures instituted by the organizations represented on the committee should mitigate such adverse opinions.

Discussion of Roles and Responsibilities

The committee members received a "draft" work program which described objectives and roles of each committee member. This draft program will be commented on and finalized during the second meeting. Mr. Laham requested that any changes be conveyed in writing before the next meeting, to allow time to prepare the revised text.

The FAA, in defining its roles, has indicated its involvement will be more than just a "monitoring" role, in that they will actively participate in discussion regarding aircraft/airfield operations and safety, as well as contributing whatever information and data they have available. However, it was also established that the FAA could not take a lead role in the committee.

Mr. Mike Feldman of the DOA staff has been designated the Secretary for the Airport Operations Technical Committee.

MDF/10-27-80

A G E N D A

LAX - AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

Airport Operations Technical Committee Meeting*

Thursday, November 20, 1980 2:00 p.m.
Board Room
Department of Airports Administration Bldg.
#1 World Way
Los Angeles International Airport

- Status Report from L.A. County Regional Planning
- Presentation of proposed Capacity Ordinance by Mr. Breton Lobner, Assistant City Attorney, DOA
- Discussion of Historical Modifications to the Air Transport System for Noise Reduction
- Review of jurisdictional policies and programs to identify available "give and takes"
- Establish General Goals, Objectives and implementation strategies for the Airport Operations Technical Committee

*Note: December 16, 1980 is the tentative date for the following meeting. The time and place are the same.

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF AIRPORT OPERATIONS TECHNICAL COMMITTEE MEETING

NOVEMBER 20, 1980

Attendance

Name	Organization	Phone
William M. Schoenfeld	DOA-Deputy General Manager	646-7393
Maurice Laham	DOA-Environmental Management	646-7614
Mike Feldman	DOA-Environmental Management	646-6961
Bret Lobner	DOA-City Attorney's Office	646-3260
Jeff Pappas	DOA-Noise Abatement	646-9410
Cal Egerton	DOA-Community Relations	646-5742
Lothar Von Schoenborn	Los Angeles City Planning	485-5386
Patricia Brown	Los Angeles City Planning	485-5386
George Burza	Los Angeles Regional Planning	974-6474
Enid Walker	Caltrans-Aeronautics Division	(916)322-9966
George H. Carver	Air Transport Association	670-5183
Glenn Greenleaf	United Airlines	646-4102
Wendy Cosin	El Segundo	322-4670
Melanie Fallon-McKnight	Inglewood	649-7230

County Status Report

Mr. George Burza briefly highlighted the progress of the Land Use Technical Committee. Explanation of the various tasks in progress or completed to date included:

* Establishment of base map including all areas impacted by 65 CNEL noise contour plus noise sensitive uses outside the contour.

* Assembly of data base maps using standardized legend based on existing land use categories.

* Compilation of existing planning and environmental documents pertinent to the ANCLUC program.

The draft maps of existing conditions will be completed in January 1981. Mr. Burza closed by requesting a similar status report by the Airport Operations Technical Committee, at the next Land Use Technical Committee meeting.

Proposed Capacity Control Regulation

Mr. Bret Lobner briefly presented the proposed capacity control regulation. He explained that the regulation is an attempt to

set a maximum number of air operations based on traffic congestion figures from 1977. The formula was developed by traffic engineer Robert Crommelin. The Board of Airport Commissioners (BOAC) is taking comments on the regulation until December 18th. No comments have yet been received from the Federal Aviation Administration (FAA) Southern California Association of Governments (SCAG), Air Transportation Association (ATA), etc.

The need for some regulation became necessary after deregulation increased operations. The current recessionary economy has caused a temporary dip in passengers but future increases are still projected. The 40 Million Annual Passengers (MAP) adopted by the City Council in 1974 will be maintained. The regulation is an attempt to manage future increases.

The regulation is based on a formula which supplies the Maximum Total Air Operations (MTAO) for the year. The MTAO is set by the BOAC for the year. Factors computed into the MTAO include:

* Average number of passengers per vehicle on World Way.
* Roadway congestion factors.
* Scheduled operations versus actual operations.
* Average passengers per plane.

Air carriers will be required to file six month schedules based on the MTAO. If total operations do not rise then there are no penalties. If, however, scheduled operations increase beyond the established MTAO each airline will be reduced to 80 percent of their operations for the previous year and have to bid for the remaining operations up to the MTAO level. Civil penalties or court actions are among the enforcement policies.

A number of potential problems were identified and discussed, including the following:

* Relationship to ANCLUC program.
* Lack of empirical data to support the formula.
* Would not encourage use of buses or other high occupancy vehicles (HOV).
* Potential undue burden to interstate commerce.
* Scheduling problems.
* Equity between small and large air carriers.

These questions and others will be addressed after the commenting period is completed.

Operational Noise Abatement Procedures

Mr. George Carver of ATA compiled a brief history of noise abatement techniques utilized by air carriers. These were passed out to those in attendance. Mr. Carver reviewed these briefly.

The next phase will involve an analysis of other various noise abatement scenarios accompanied by the technical explanation from a regulatory, operational or safety viewpoint which made implementation impractical. All committee members will contribute to this effort.

General Roles and Responsibilities

The draft roles and responsibilities distributed at the previous meeting were adopted in principle. Letters of comment not yet received will be considered when the document is finalized.

Goals and Objectives

This agenda item was postponed until the next Airport Operations Technical Committee meeting.

MDF/12-01-80

A G E N D A

LAX - AIRPORT NOISE CONTROL AND ALND USE COMPATIBILITY (ANCLUC) STUDY

Airport Operations Technical Committee Meeting

Tuesday, December 16, 1980 10:00 a.m.
Board Room
Department of Airports Administration Bldg.
#1 World Way
Los Angeles International Airport

- Finalization of General Roles and Responsibilities document
- Establish Goals and Objectives of the Airport Operations Technical Committee
- Description of Specific Phase I Work Tasks
- Discuss committee members assignments in conjunction with the various Phase I Work Tasks and establish progress report dates and task completion dates
- Other committee business

LAX AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

SUMMARY OF AIRPORT OPERATIONS TECHNICAL COMMITTEE MEETING
DECEMBER 16, 1980

Attendance

NAME	ORGANIZATION	PHONE
Michael Feldman	DOA-Environmental Management	646-6961
Jeff Pappas	DOA-Noise Abatement	646-9410
Ellis Ohnstad	FAA-Airports	536-6250
Greg Madeiros	L.A. County Regional Planning	974-6474
Pat Brown	L.A. City Planning	485-5386
George Carver	Air Transport Association	670-5183

General Roles and Responsibilities

Committee members present approved the Roles and Responsibilities document as adequate. Comments from CalTrans regarding the relationship between ANCLUC and the existing state noise variance proceeding are still forthcoming. Mr. Carver noted that ATA was not a member of the Steering Committee but would provide technical input as required.

Goals and Objectives of Committee

Committee members briefly expressed various goals and objectives considered important to the success of the entire ANCLUC program.

Mr. Ellis Ohnstad commented that an educational process should commence early in the study. This process should include operational characteristic of aircraft, improvements in noise abatement techniques, and an analysis of various operation scenarios. It was suggested that the educational process could also encourage respect for other ANCLUC participants' jurisdictional problems and lead to greater cooperation.

It was agreed that the lack of an active Steering Committee inhibits efforts because no official study approach has been adopted. Committee members were informed by Greg Madeiros that only El Segundo and the City of Los Angeles had not designated members to the Steering Committee. The first Steering Committee meeting has been tentatively scheduled for mid January, 1981.

Phase I Work Tasks

Phase I Work Tasks which the Airport Operations Technical Committee will be undertaking between January and March 1981 are listed below:

* Task 1.01 Obtain Airspace and Air Traffic Control Data from FAA

* Task 1.02 Update Airport Plans Physical Facilities and Land Use

* Task 1.03 Update Airport Access Traffic Circulation and Parking

* Task 1.07 Update Noise Regulation Policies on Airport Operations

* Task 1.09 Inventory Noise Litigation Documents

* Task 1.12 Review and Update Air Traffic Forecasts

* Task 1.13 Update Community Attitudes Survey

The DOA will be ultimately responsible for the completion of the tasks. Committee members will be asked to participate as required and the whole committee will be kept abreast of work progress. Actual completion dates have not yet been assigned.

Other Business

Mr. Ellis Ohnstad announced that the FAA and DOT had signed off the Final Environmental Impact Statement (FEIS) on LAX. Mr. Ohnstad briefly described the conditions attached by DOT and how ANCLUC could relate to these conditions.

To facilitate the best use of time and exchange of information, both technical committees will continue to meet on the same day. The Land Use Technical Committee meets at 10:00 AM in Hawthorne City Hall the fourth Thursday of every month. Therefore, the Airport Operations Technical Committee will meet at 1:30 in the DOA Administration Building Board Room on the following dates:

January 22	April 23
February 26	May 28
March 26	June 25

M E M O R A N D U M

LAX - AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) STUDY

TO: Members of the Airport Operation Technical Committee and all other interested parties

FROM: Maurice Z. Laham, Committee Chairman

SUBJECT: Cancellation of the January 22, 1981 Meeting

Committee work remains on schedule, but at this time there is no need for the usual January 22 monthly meeting.

MZL:lkg

AIRPORT OPERATIONS TECHNICAL COMMITTEE
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Airport Operations Technical Committee
Department of Airports
Administration Building - Board Room 208
#1 World Way, Los Angeles, CA 90009

MEETING DATE: February 26, 1981
TIME: 1:30 p.m.

1. Update on the ANCLUC Steering Committee.
   A. Initial Meetings
   B. Project Coordination
   C. Public Participation
2. Project Status Report
   A. County DRP review
   B. DOA review
3. Review of Study Products
   A. DRP maps
   B. DOA while papers
4. New Business
5. Public comments

For further information, contact the
Environmental Management Bureau, LAX (213) 646-7614

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: February 26, 1981

TIME: 1:30 P.M.

Name	Organization	Telephone
Michael Feldman	DOA-Environmental Mgt.	646-6961
Chuck Zeman	DOA-Environmental Mgt	646-3853
Ernie Gonzalez	DOA-Environmental Mgt.	646-6961
Walter Collins	DOA-Noise Abatement	646-9410
Jeff Pappas	DOA-Noise Abatement	646-9410
Ron Hoffman	L.A. County Regional Plan.	974-6474
Ivan Hunt	FAA-Control Tower	642-3969
Jon Ross	FAA-Control Tower	642-3969
Ellis Ohnstad	FAA-Program Support	536-6250
Ed Moseley	FAA-Intern	536-6250
Enid Walker	CalTrans-Aeronautics	(916)322-9966
Ellen Rose	Civil Aeronautics Board	536-1000
Majorie Kaplan	SCAG-Transportation	385-1000
George Carver	Air Transport Asso.	670-5783
Ray Lahr	Airlines Pilots Asso.	649-1600
Lew Pond	City of Inglewood	649-7307
Melanie Fallon-Mcknight	City of Inglewood	649-7230
Pat Brown	L.A. Planning Dept.	485-5386

1. Steering Committee Update

Committee members were briefed on the formation of the ANCLUC Steering Committee. The Steering Committee membership is listed below:

Name	Jurisdiction
Carolynn Llewellyn (Chair)	L.A. County Regional Plan. Comm.
Lee Weinstein (Vice-Chair)	Mayor-City of Inglewood
Chuck Armstrong	El Segundo City Council
Pat Russell	Los Angeles City Council
Mary Lou Cunningham	Board of Airport Commissioners
Maybelline Griffin	District 2-L.A. County Board of Supervisors

The Steering Committee is currently discussing the roles, responsibilities and form of project coordination to incorporate into the study program. A list of candidates is being developed and interviews at the staff level will soon begin. Also under consideration is the Steering Committee's role in the study and relationship to the Board of Airport Supervisors.

Staff has been instructed to develop an effective public participation program identifying both effective techniques and target dates where public input would have its greatest effect. The development of a comprehensive mailing list of concerned citizen groups and an update of an outdated community survey (Task 1.13) are underway.

2. Project Status Report

Committee members were briefed on work progress of the Land Use Technical Committee by Mr. Ron Hoffman of Los Angeles County Regional Planning. Work is on schedule. The update of socio-economic data has been delayed pending the release of the 1980 Census data. Mapping of existing infrastructure systems is almost complete and a set of overlays for the base map of the study area are being prepared. A brief discussion regarding the size of the study area occurred. The current base map utilizes a 65 CNEL contour extrapolated from 1978 noise data, creating a impacted area much larger than actually exists. Some mechanism for updating this 65 CNEL contour as the study progresses needs to be developed. Further discussion of this matter is anticipated. Airport Operations Technical Committee work progress is on schedule also. A meeting of DOA bureaus involved in the study is scheduled for early March to assign the remaining Phase I work tasks.

3. Study Product Review

The completed draft copy of Task 1.02 an, Update of Airport Plans, Facilities and Land Use, was distributed to committee members and interested parties present.

4. New Business

New FAR Part 150 was briefly described by Mr. Ellis Ohnstad of the FAA and a synopsis prepared by Wal Collins was distributed. FAR Part 150 is an interim regulation prepared in response to EPA recommendations. New Part 150 contains the procedures, standards and methodology governing the development and submission of "airport noise exposure maps" and "airport noise compatibility programs." This new FAR has been frozen by the Reagan Administration impeding its implementation. The effect of Part 150 on the ANCLUC program is not entirely clear, at this time. Information related to this subject will be reviewed, as it develops.

The next Airport Operations Technical Committee meeting is scheduled for March 26, 1981, at 1:30 in the DOA administration building board room.

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: March 26, 1981
TIME: 1:30 p.m.

1. Approval of Minutes
2. Work Product Review
   a. Task 1.03
3. Project Status Report
   a. DOA Assignments
   b. County Land Use Maps
4. Project Coordination Update
   a. List of Candidates
   b. Roles and Responsibilities
5. Steering Committee Actions
6. Public Participation Program
7. New Business
8. Public Comment

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: March 26, 1981

TIME: 1:30 p.m.

COMMITTEE ATTENDANCE

Name	Organization	Telephone
Maurice Laham	DOA - Environmental Mgt.	646-7614
Michael Feldman	DOA - Environmental Mgt.	646-6961
Ernie Gonzalez	DOA - Environmental Mgt..	646-7615
Walt Collins	DOA - Noise Abatement	646-9410
Jeff Pappas	DOA - Noise Abatement	646-9410
Ron Hoffman	L. A. County Reg. Planning	974-6474
Ray Lahr	Airlines Pilots Assoc.	649-1600
Glenn Greenleaf	United Airlines	646-4102
Ellis Ohnstad	FAA - Program Support	536-6250
Jon Ross	FAA - Control Tower	642-3969
Ellen Rose	Civil Aeronautics Board	536-6106
Enid S. Walker	CalTrans - Aeronautics	(916)322-9966

GUEST ATTENDANCE

Name	Organization	Telephone
Melanie Fallon-McKnight	City of Inglewood	649-7230
Walt Gillfillan	Consultant-Inglewood	(714)673-3918
Pat Brown	L. A. City Planning	485-5386
Lothar Von Schoenborn	L. A. City Planning	485-5386

1. APPROVAL OF MINUTES

Minutes of the February 26, 1981 meeting were approved as written.

2. WORK PRODUCT REVIEW

Ernie Gonzalez presented the draft products for Task 1.01, Airspace and Air Traffic Control Data, and Task 1.03, Update of Ground Access information. Task 1.01 provides a general background of the air space regions and how air traffic control is provided. Noise mitigation techniques both implemented and proposed by the FAA were discussed. Task 1.03 describes

existing access into and around LAX and planned improvements to increase the systems overall efficiency and reduce periodic episodes of extreme congestion. The improvements described included: double decking the World Way Loop, increased peripheral parking and shuttle service, freeway and street improvements and the development of remote parking and shuttle services at strategic points in the region.

3. PROJECT STATUS REPORT

Mike Feldman briefly reviewed work progress on the DOA Phase I tasks. Tasks 1.01, 1.02, 1.03 have been completed. Task 1.07, a synopsis of noise regulations, was delivered by the Noise Abatement office, but had not yet been reviewed. Task 1.09, a compilation of noise litigation documents, is still being compiled by the City Attorney's Office. Task 1.12, an update of Air Traffic Forecasting for LAX, is under preparation by the Facilities Planning Office. Task 1.13, an update of the community attitudes survey for LAX, is being coordinated by the Community Relations officer.

Ron Hoffman briefed the committee on work progress of the Land Use committee. All work tasks are on schedule except for those dependent on U.S. Census data, which should soon be released. The study boundary being used is based on the 1976, 65 CNEL sound contour, but was expanded to encompass census tracts which overlap the contour. This will enable the use of the U. S. Census data for the study area. Mr. Hoffman also presented a generalized study area land use map, which indicates a predomination of single and multiple family housing.

4. PROJECT COORDINATION UPDATE

Committee members were told that 15 of the 22 candidates contacted had responded and that the screening process to develop a short list for the Steering Committee's consideration is currently underway. Maurice Laham indicated that the Steering Committee would rank the candidates after interviewing them during a special meeting. A recommendation from the Steering Committee will be forwarded to the Board of Airport Commissioners for their approval and subsequent permission to negotiate a contract.

5. STEERING COMMITTEE ACTIONS

The meeting of the sub-committee consisting of Mayor Lee Weinstein and Mrs. Mary Lou Cunningham resulted in the approval of the roles and responsibilities for the Project Coordinator, project administrative management and Steering Committee. Mayor Weinstein also requested that staff meet and draft an explanation and purpose defining ANCLUC. A draft of this document will be circulated soon.

Additional news included that the Air Transport Association representing the airline industry, would be added as an ex-officio member of the Steering Committee. Also, Chairman Carolyn Llewelyn has been replaced by her alternate Delta Murphy.

6. PUBLIC PARTICIPATION PROGRAM

Techniques to generate public input including meetings, mailings, etc., were approved in concept. The County Department of Regional Planning is now preparing a cost breakdown for the Steering Committee. A timeline targeting appropriate points along the study was briefly explained and a white paper describing this timeline will be made available. A comprehensive list of interested citizen groups has been developed and a letter inviting the groups to participate will be mailed out soon.

7. NEW BUSINESS

A map comparing the 1976 65 CNEL noise contour and the 1980 contour was displayed. The area within the contour has shrunk and the shape had changed, indicating a switch in the approach and departure flight paths. This may result in the use of numerous contours establishing a continuous shrinking of the impacted area.

Mr. Walt Gillfillan, a consultant for Inglewood, suggested that a problem is the noise descriptor currently in use, because it is difficult for residents to identify individual offenders.

Walt Collins indicated that the change in the contour map was due to an increased use of the north runways by wide bodied aircraft, over the last 15 months.

A round-table to discuss noise regulations and aircraft operation was initiated by Mr. Laham. Ray Lahr of ALPA, Glenn Greenleaf of United Airlines and Jon Ross of the FAA all contributed to an interesting discussion of approach patterns, safety considerations, and problems associated with over the ocean operations.

Enid Walker of CalTrans informed committee members that the State is considering revising the noise variance procedures and is accepting comments. She will make the existing procedures available on request. Also stated was the fast that neither a date nor judge has been designated to hear the State's suit pending against LAX.

The next meeting of the Airport Operations Technical Committee is scheduled for April 23, 1981 at 1:30 p.m., in the DOA Board Room.

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: April 23, 1981
TIME: 1:30 p.m.

1. Approval of Minutes
2. Work Product Review
   a. Task 1.09 Review and Comment session (distributed in previous Steering Committee mailing)
   b. Comments on other draft Task work.
3. Project Status Report
   a. Phase I Completion Schedule
   b. Phase II Task Work
4. Steering Committee Actions
   a. Project Coordination selection process
   b. Budget considerations
5. Public Participation Program Process
6. New Business

For further information, contact the
Department of Airports at (213) 646-7614, One World Way, L.A., CA 90009

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: April 23, 1981
TIME: 1:30 P.M.

1. Approval of Minutes

Glenn Greenleaf of United Airlines requested that the fourth paragraph of Section 7, "New Business", be reworded to associate concerns and problems with over the ocean operations specifically to ALPA.

The minutes were approved with this amendment.

2. Work Product Review

Jeff Pappas of the DOA Noise Abatement Office briefed the committee regarding the contents of Task 1.07, a chronology of regulations and resolutions affecting noise abatement procedures from 1959. Copies of this task will be included in the next Steering Committee mailing.

James Pearson of the DOA City Attorney Office presented Task 1.09, a compilation of noise related litigations which have affected airport operations. The recent decision by Judge Hill regarding operations at Santa Monica was discussed. This decision removed the ban on only jet traffic since some propellar driven aircraft are noisier.

Mr. Pearson answered many questions relative to the adopted LAX Noise Regulation, regarding the equity in its application to intinerant carriers versus scheduled air carriers.

Maury Laham briefly outlined the contents of the LAX Noise Regulation for those not entirely familiar with its requirements.

Ron Hoffman who chairs the Land Use Technical Committee described Task 1.10 which inventories community financial data in an effort to identify revenue sources available to fund land use conversions and other noise abatement procedures. The last section of the Task 1.10 describes potential programs which could become funding mechanisms to achieve increased compatibility. One example discussed was the head tax on airline passengers. Many suggestions such as a sliding scale of landing fees depending on the noise level or type of aircraft used were discussed.

Walt Gillfillan suggested the need for "linkage" between noise generation and economic incentives to reduce noise levels.

3. Project Status Report

Mike Feldman informed Committee Members that all work tasks were in draft form, except task 1.12, a traffic forecasting document. Vi Moyer of the DOA Facilities Planning Bureau explained that the work product was roughed out and would soon be in draft form.

Phase Two work tasks description were distributed for committee review. Mr. Feldman explained that some of the task work may be combined or scaled down in an effort to generate funds for the Project Coordinator.

4. Steering Committee Actions

The Steering Committee at the April 20, 1981 meeting was informed they must comply with the Brown Act. This requires them to do all Project Coordinator interviews and selection in a public forum.

The budget amendments to establish funds for the project coordinator were briefly described. Funds for various tasks were either reduced or eliminated entirely depending on how this might effect the entire study. It was explained that any budget amendments would require the approval of the Board of Airport Commissioners, the FAA, and in some instances the County Board of Supervisors. Copies of the approved ANCLUC budget were distributed to those interested.

5. Public Participation Program Process

A form letter inviting approximately 90 different citizen groups to participate in th study has been mailed. Only one response has been received to date.

6. New Business

Maury Laham described a discussion at the Land Use Technical Committee regarding the communities responsibilities to change the impact of the airport within their respective jurisdiction. The concern expressed was that the commitment of the cities to reduce the noise impact area may not be as strong as the aviation industry's commitment to become a better neighbor. This discussion was precipitated by the wording of Phase Two work tasks 2.04 and 2.10 which calls for environmental impact

assessments of LAX's affect on the communities, without requiring the communities to assess the impact of their own actions in relation to the ANCLUC study.

Ron Hoffman stated he was concerned that the focus of the study could move away from noise and become diluted if other impact (i.e., traffic, air quality, etc.) are studied in depth.

No conclusions regarding this potential problem were reacted. Committee members will be kept informed as this discussion proceeds.

7. Meeting Date

The next Airport Operations Technical Committee meeting will be held at 1:30 p.m. on May 28, 1981 in the Board Room in the Tower Administration building.

COMMITTEE ATTENDANCE

Name	Organization	Telephone
Maury Laham	DOA - Environmental Mgt.	646-7614
Mike Feldman	DOA - Environmental Mgt.	646-6961
Ernie Gonzalez	DOA - Environmental Mgt.	646-7614
James Pearson	DOA - City Attorney	646-3260
Jeff Pappas	DOA - Noise Abatement	646-9410
Ellis Ohnstad	FAA - Airport Operations	536-6250
Jon Ross	FAA - Control Tower	642-3969
Enid Walker	CalTrans-Div. of Aeronautics	(916)322-9966
Ellen Rose	Civil Aeronautic Board	536-6106
Glenn Greenleaf	United Airlines	646-2100

GUEST ATTENDANCE

Name	Organization	Telephone
Ron Hoffman	County of L. A. - Regional Planning	974-6474
Pat Brown	L. A. City Planning	485-5386
Melanie Fallon-McKnight	Inglewood City Planning	649-7230
Dave Lanigan	Inglewood City Planning	649-7230
Walt Gillfillan	Consultant to Inglewood	649-7301

MDF:jre

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: May 28, 1981
TIME: 1:30 p.m.

1. Approval of Minutes
2. Work Product Review
   a. Presentation of Task 1.12 Air Traffic Forecast
   b. Comment on other draft Task Work
3. Project Status Report
   a. Phase I Documentation
   b. Phase II
   c. Community Impact Evaluation Discussion
4. Steering Committee Action
   a. Selection of Project Coordinator
   b. Proposed Budget Amendment
5. New Business

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: May 28, 1981
TIME: 1:30 p.m.

Announcements

The Committee was informed that Mr. Glenn Greenleaf of United Airlines had to withdraw his membership from the committee due to administrative changes within United Airlines.

Jon Ross of the LAX Control Tower notified the Committee Chairman that due to the Federal hiring freeze the air traffic control staff has decreased because of transfers and he cannot attend the meetings until the situation improves. However, he wishes to remain a Committee member and will continue to provide input as requested.

1. Approval of Minutes

The minutes were approved as written.

2. Work Product Review

Vi Moyer of the DOA Facilities Planning Bureau summarized the contents of Task 1.12, - Update Air Traffic Forecast. Forecasts developed by the FAA, ATA, SCAG as well as the DOA's were described and compared. The apparent differences between the forecasts are indicative of different sets of modeling assumptions and the goals of each group. The relevancy of million annual passengers (MAP) as the main forecasting descriptor was discussed as a potential issue for consideration during Phase II, since aircraft not passengers generate noise. Maury Laham suggested switching from MAP to operations. He explained that MAP originated in the 1960's when the LAX plan was under preparation. This plan identified ground access as the weaklink in capacity constraints at LAX and was measured in MAP rather than operations.

Walt Gillfillan discussed the potential of analyzing conditions created by operations over the current 40 MAP limitation. Maury Laham suggested that "environmental capacity" (i.e. noise, air quality, etc.) should be assessed rather than 40 MAP or other MAP limitations.

Air cargo forecasts were obtained from the FAA. The DOA cargo forecast model is not yet ready. It was interesting to note that half of all cargo is transported in regular air carrier flights rather than freighters. Widebody aircraft with increased extra

lift have led to this increased cargo carrying capacity.

Another potential Phase II issue was identified regarding the use of older freighters operating at night, such operations heavily penalize the CNEL contours around LAX. The potential to instruct non-Part 36 complaint aircraft to operate during the day rather than night was suggested.

The Committee was informed that the Task 1.12 document would be distributed in the next Steering Committee mailing.

3. Project Status Report

Committee members were informed that Phase I was essentially complete, except for responding to comments made on a few of the work tasks. The task work completed by both technical committees will be compiled into a single document for presentation to the Steering Committee. Phase II task work has been started and will continue concurrently with the completion of Phase I.

4. Steering Committee Action

The Steering Committee recommendation of Dale Beland for the Project Coordinator position has been forwarded to the Board of Airport Commissioners (BOAC). The BOAC is tentatively scheduled to consider this recommendation during their June 17th meeting. A budget amendment must also be approved by the FAA, as well as the BOAC.

5. New Business

Enid Walker briefly described the role andmission of the State Division of Aeronautics. The division has five primary functions including; the administration of the state noise standards and noise variance proceedings, environmental review of aviation related projects, monitoring the State Transportation Implementation Program and managing numerous local assistance programs.

The next meeting of the Airport Operations Technical Committee is scheduled for June 25, 1981 at 1:30 p.m., in the DOA board room.

MDF:jre

COMMITTEE ATTENDANCE

Name	Organization	Telephone
Maury Laham	DOA - Environmental Mgt.	646-7614
Mike Feldman	DOA - Environmental Mgt.	646-6961
Ernie Gonzalez	DOA - Environmental Mgt.	646-6961
Walt Collins	DOA - Noise Abatement	646-9410
Enid Walker	CalTrans - Aeronautics	(916)322-9966
Ellis Ohnstad	FAA - Airport Operations	536-6250

GUEST ATTENDANCE

Name	Organization	Telephone
Greg Madeiros	L.A. Co. Regional Planning	974-6474
Walt Gillfillan	Consultant to Inglewood	(714)673-3918
Melanie Fallon-McKnight	Inglewood City Planning	649-7230
Tony DeBellis	Inglewood City Planning	649-7225
Wendy Cosin	El Segundo City Planning	322-4670
Pat Brown	L.A. City Planning	485-5386

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

AGENDA

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: July 30, 1981
TIME: 1:30 P.M.

1. Approval of Minutes
2. Study Status Report
3. Task 2.07 Development of Preliminary list of Potential Issues to be addressed in the study. (Please review the issues included as Attachment 1 and note additional issues you feel should be added.
4. Task 2.05 Development of ANCLUC Study Area Planning Policies, Standards and Criteria progress update.
5. Discussion of Noise Impact Analysis RFP and Aircraft Operations /Noise Abatement Alternative Analysis RFP.
6. Steering Committee Action
7. Other Business
8. Public Comments

IMPORTANT NOTICE
Both technical committees will meet on July 30th at their regularly scheduled times and locations.

For further information, contact the
Department of Airports at (213) 646-7614, One World Way, L.A., CA 90009

Airport Operations Technical Committee
LAX NOISE CONTROL AND/
LAND USE COMPATIBILITY STUDY

MINUTES

MEETING PLACE: Department of Airports
Administration Building
One World Way
Los Angeles, CA 90009

MEETING DATE: July 30, 1981
TIME: 1:30 P.M.

1. Approval of Minutes

The minutes were approved as written.

2. Study Status Report

Mike Feldman briefly summarized study progress. Phase One work tasks assigned to the Airport Operations Committee are complete. Tasks being prepared jointly by the DOA and County are near completion and should be finalized within two weeks. The finalized tasks will be compiled in a Phase One document and presented to the Steering Committee and the public in late August or early September. Task 1.17 a summary of all Phase One tasks will be distributed to the public during the proposed public information meeting. Copies of the entire Phase One document will be distributed to public libraries and other facilities to facilitate public review.

Ron Hoffman of the County briefed the committee on Land Use Committee progress. A majority of the tasks are completed. Task 1.05 which requires the preparation of many maps is near completion. Task 1.11, on community socio-economic conditions has been completed to the extent possible because of delays, in the release of the 1980 U.S. Census data.

Mike Feldman indicated that Phase Two work tasks have been started. Tasks 2.01 - Forecast Analysis, 2.05 - Planning Criteria, 2.07 - Potential Issues are underway. Further discussion of these tasks occurred later in the meeting.

3. Task 2.07 Discussion

Maury Laham described the purpose of Task 2.07 which requires developing a preliminary set of issues to be addressed in the alternative courses of action developed for further analysis in Phase Three. Comments from the committee were requested.

Walt Gillfillan pointed out the similarity between the issue lists submitted by the DOA, City of Inglewood and City of El Segundo.

Ivan Hunt discussed the use of million annual passengers (MAP) as a noise related capacity descriptor. He felt that current

capacity constraints are not properly considered in relating MAP to a certain CNEL value. Corky Kronshage concurred and suggested that level of operation may be a more realistic capacity descriptor.

4. Task 2.05 Discussion

Mike Feldman represented the Airport Operation Committee on the Land Use Sub-Committee preparing Task 2.05. He explained that Task 2.05 involves developing a set of uniform planning policies, criteria and standards for the ANCLUC Community Planning Area. These policies will control development within the planning area to ensure that the proposed uses are compatible with LAX and provide a guide for zone changes and re-development projects.

Ron Hoffman explained that these policies are very important to the analysis of alternatives in Phase Three. Each alternative will be assessed for its compliance with the established policies. In addition each city will adopt these policies to regulate development within their jurisdiction.

5. Discussion of Request for Proposals

The Noise Impact Analysis RFP calls for a study of a variety of airport operation scenarios to document what effect various changes in current operating procedures would have on the CNEL contours generated by LAX.

Ivan Hunt questioned to what degree airport operations would be altered and how the effects of these operational changes on airport safety regulations would be assessed. Maury Laham answered that safety transcends all other considerations. Corky Kronshage stated that some differences exist between FAA and ATA safety regulations. It was indicated that FAA safety standards transcend the ATA.

Ellis Ohnstad spoke regarding the development of scenarios and the potential for applying the operational changes in degrees to quantify what each degree of application will achieve. The example of incremental increases to the amount of time over the ocean operations are utilized and how each increase in time affects the CNEL value, was used to illustrate this point. Maury Laham suggested developing a matrix of operation scenarios using a variety of criteria including safety, reducing noise impact effect on fuel burn, taxi time, etc. Criteria would be tiered with safety being emphasized. If a scenario does not get through this matrix it would not receive further consideration.

All Committee members were invited to submit scenarios for evaluation. These scenarios will be collectively ranked and screened prior to in depth analysis. A sub-committee to accomplish this ranking was formed and will include the following study participants:

- o Mike Feldman - DOA Environmental Management
- o Ernie Gonzalez - DOA Environmental Management
- o Jeff Pappas - DOA Noise Abatement
- o Corky Kronshage - ATA
- o Ron Hoffman - Dept. of Regional Planning
- o Melanie Fallon-McKnight - City of Inglewood

Walt Gillfillan stated that he hopes the scenarios will be realistic so that community actions interface with the airports. The example of the realized noise reduction of the DC-9-80 not being as significant as the anticipated reduction was cited. It was pointed out that many variables including flight rules, pilot training, climatic conditions affect the noise level created by the aircraft.

The Aircraft Operations/Noise Abatement Alternative Analysis RFP was discussed next. Wendy Cosin stated that she thought all items in both RFPs should be studied to some degree. Maury Laham answered that the noise analysis RFP would provide the information necessary and that the Alternative Analysis RFP would allow us to develop information in greater detail.

The importance of ground access was debated. Ivan Hunt stated that sooner or later every ANCLUC program has had to study access. No consensus was formed. Enid Walker opted to deemphasize access. Walt Gillfillan informed the committee that his comments on the RFP will be delivered soon.

6. Steering Committee Action

Mike Feldman informed the committee that Dale Beland had been approved by the airport commission and the contract negotiation process has been started. In addition, the committee was informed that Mayor Lee Weinstein of Inglewood had been replaced by Councilman Edward Vincent.

The next Steering Committee is tentatively scheduled for late August or early September.

7. Other Business

The committee was informed that a motion to instruct the airport commission to investigate the feasibility of soundproofing had been introduced to the City Council and was awaiting action. The City Attorney would also be instructed to investigate the potential for tax exemptions being granted to citizens who participate in the program.

An organization structure was presented to the committee for discussion. After minor modifications it was agreed that this chart was an accurate representation. The chart will be presented to the Steering Committee in Task 1.18 of the Phase One document.

COMMITTEE ATTENDANCE

Name	Organization	Telephone
Maury Laham	DOA - Environmental Mgt.	646-7614
Mike Feldman	DOA - Environmental Mgt	646-6961
Ernie Gonzalez	DOA - Environmental Mgt.	646-6961
Vi Moyer	DOA - Facilities Planning	646-6261
Enid Walker	CalTrans - Aeronautics	(916)322-9966
Ivan Hunt	FAA - LAX Tower	642-3969
Ellis Ohnstad	FAA - Airport Operations	536-6250
M. C. Kronshage	Air Transport Association	670-5183
Ellen Rose	Civil Aeronautics Board	536-6106
Larry Goldman	SCAG	385-1000

GUEST ATTENDANCE

Name		
Ron Hoffman	L. A. Co. Regional Planning	974-6474
Walt Gillfillan	Consultant to Inglewood	(714)673-3918
Melanie Fallon-McKnight	Inglewood City Planning	649-7230
Wendy Cosin	El Segundo City Planning	322-4670

TASK 1.18

STUDY PARTICIPATION FORMAT

JULY 1981

Prepared by: The City of Los Angeles Department of Airports and the Los Angeles City Department of Airports

For Information Call: Ron Hoffman (213) 974-6474 or
Mike Feldman - Env. Mgt. (213(646-7614

Task 1.18 Study Participation Format

The LAX-ANCLUC Study participants have been organized into three working groups, a Steering Committee, and two technical committees, one on Airport Operations and the other on Land Use. The Organizational Chart indicates both contractual authority-responsibility relationships, and advisory functions.

The Board of Airport Commissioners, the County of Los Angeles, and the FAA together have entered into an interrelated series of contracts necessary to prepare the study. Accordingly, the solid line connecting various designated agencies and individuals on the ANCLUC Organization Chart indicates authority-responsibility relationships while the dashed line indicates advisory relationships.

After the ANCLUC contracts were consumated, it was determined that a Steering Committee in an advisory capacity would keep the involved jurisdictions actively involved during the study and facilitate the development of an effective implementation program. Subsequent to the Steering Committee formation a Project Coordinator who will advise the Steering Committee was also deemed necessary. The Steering Committee's relationship to the Board of Airport Commissioners and the two technical committees is beyond the scope of the enabling contracts. Task 1.15 describes the role of the Steering Committee.

The flow of study products then, will be upward from the two technical committees, with input from the Airport Area Wide and Citywide Advisory Committees plus concerned citizens, through the Project Coordinator to the Steering Committee, and at the same time the Project Administrator, to ensure that the tasks are adequately performed as prescribed by the contracts, thus enabling parties to the contract to be paid. The Project Administrator is also responsible for setting public hearings and providing secretarial services to the Steering Committee. The Project Coordinator will review the work of both technical committees and report his findings to the Steering Committee.

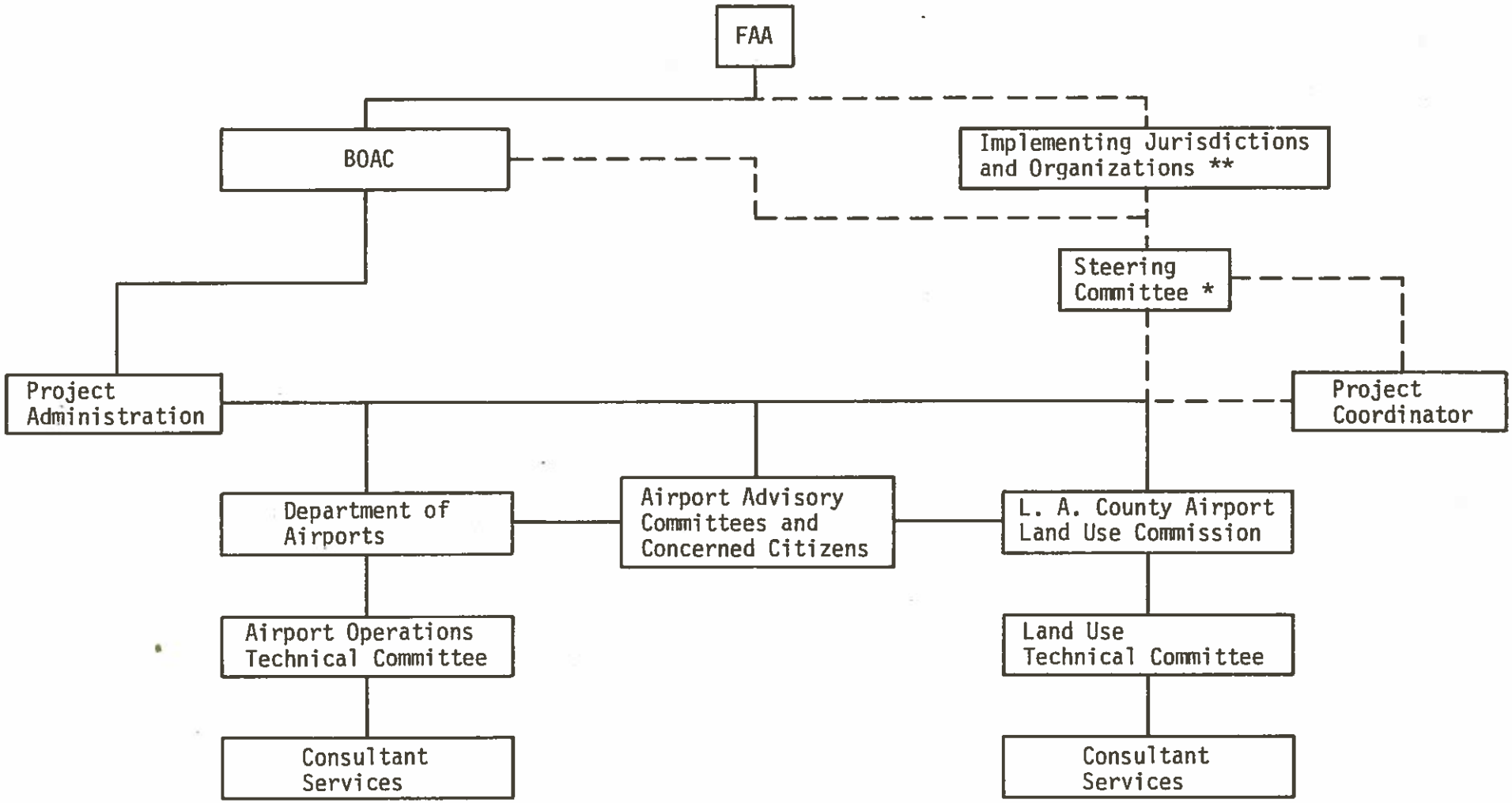
The Steering Committee is comprised of elected and appointed officials from affected local jurisdictions with membership from the airport, the FAA and the ATA. This broad based membership represents those that are actually able to effect change to reduce noise. Each member on the Steering Committee in turn represents an elected body from an local jurisdiction or an organization. The Steering Committee will make recommendations both to their respective jurisdictions and organizations as well as the Board of Airport Commissioners.

Just as each local jurisdiction maintains its sole right affecting land use policies within its respective corporate boundaries, the Board of Airport Commissioners will retain its rights in operating the airport.

Each jurisdiction then will advise and suggest adjustments for the purpose of reducing noise impact, both through operational and land use techniques.

The Board of Airport Commissioners will forward the final ANCLUC study to the FAA. The product will be submitted to the FAA and will satisfy all ANCLUC requirements as well as FAR Part 150 requirements such that when federal funding is available to implement the plan, procedural requirements already will have been accomplished.

LAX-ANCLUC ORGANIZATION CHART



Legend

——— Contractual Authority-Responsibility

– – – – Advisory Relationship

* Membership includes: the L.A. County Board of Supervisors, L.A. County Airport Land Use Commission, the cities of Los Angeles, Inglewood, El Segundo, Hawthorne, Board of Airport Commissioners. Ex-officio members include: Department of Airports General Manager, L.A. County Regional Planning Director, Air Transport Association Regional Director, and the Federal Aviation Administration, Airport Programs Chief.

** Includes the decision making bodies represented on the Steering Committee plus The California Department of Transportation, Civil Aeronautics Board and the Southern California Association of Governments.