

HEMET-RYAN AIRPORT
COMPREHENSIVE AIRPORT LAND USE PLAN

1992

SECOND EDITION

INCORPORATES AMENDMENT ADOPTED APRIL 16, 2009

Hemet-Ryan Land Use Plan
Sub-Committee Membership
1989

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INTRODUCTION

In May, 1982, the Riverside County Board of Supervisors, Hemet City Council, and Airport Land Use Commission (ALUC) appointed representatives to the Hemet-Ryan Subcommittee. The purpose of the subcommittee was to assess the need for a new noise study, re-evaluate the Hemet-Ryan Airport Land Use Plan, adopted in 1980, and discuss other issues, including land use, which pertain to the continuing operations of Hemet-Ryan Airport. The subcommittee met monthly to discuss a variety of issues including: area land use, noise, safety, flight patterns and airport operations. This report summarizes the subcommittee's major findings and includes proposed policies for the Hemet-Ryan Airport influence areas. The proposed policies relate to land use, noise and airport operations, and are recommended as policies for the Hemet-Ryan Airport Land Use Plan.

The Hemet Ryan Airport Land Use Plan Subcommittee was reconvened by the Riverside County Airport Land Use Commission (ALUC) during the ALUC's regular May 1987 meeting. The Airport Land Use Plan had been implemented five years prior. Changes have occurred at the airport, and the Master Plan Study was completed. These changes warranted the review of the Airport Land Use Plan.

The membership of the reconvened subcommittee to review the Hemet-Ryan Airport Land Use Plan was approved by the Airport Land Use Commission during their June 4, 1987 regular meeting.

The subcommittee, as appointed, met monthly to discuss the various issues they deemed relative to improve the existing Hemet Ryan Airport Land Use Plan, dated December 1982.

HISTORY/BACKGROUND

In September of 1940, less than three months after construction had started, aircraft operations began at the Hemet-Ryan Airport. Ryan Field, as it was called then, owed its beginning to the rapid expansion of the Army Air Corps in the hectic months before the United States entered World War II.

Named after T. Clyde^{CM} Ryan, the field was built on 318 acres of land purchased by the County for lease to the Ryan School of Aeronautics. The school, an affiliated of Mr. Ryan's Aeronautical Company headquartered in San Diego, was one of several civilian schools selected to train the many eager cadets entering the Army's pilot training program.

The entry of the United States into the war increased training activities at the field, and by war's end, more than 10,000 pilots had learned to fly at Ryan Field. After a great deal of petitioning by citizens of Hemet and the County, the War Assets Administration, by quit claim, returned the leased land to the County along with 72 additional acres that the military had acquired.

CURRENT OPERATIONS

Since then, the County has maintained and expanded facilities at the field. A layout plan for development of the airport was approved by the County Board of Supervisors, and development has followed this plan. Nearly 38 additional acres have been acquired. The runway was extended and repaired and numerous repairs to existing buildings have been made. An additional runway extension is planned for the future.

The 428 acres represents a current land value of over \$9,000,000. The runways, taxiways and buildings are valued at about \$4,500,000. In addition, the combined California Department of Forestry/United States Forest Service air attack base represents a \$5,000,000 investment if the facility had to be duplicated at another airport. The combined air attack base spend \$2,700,000 in 1987, and \$3,500,000 in 1988, for fire bomber flight time, standby time, retardant, and landing fees.

The airport has provided adequate facilities for general aviation, including business and recreational flying to the area for nearly 42 years; and, for over 27 years it has served as a fire bomber base. For most of this time, the aviation activities have been compatible with the surrounding land uses. However, over the last few years, development pressures have arisen in both the City of Hemet and unincorporated areas to permit urbanization of the area around the airport. This has led to

some potential incompatibilities with aviation activities that are perceived by some as a threat that may eventually curtail operations at the airport.

RYAN AIRPORT - AREA GROWTH

The County Airport Land Use Commission (ALUC) designated an interim airport-influenced area around the airport in 1973 based upon a noise study prepared in 1972, as well as flight safety considerations. The Airport Land Use Commission asked the County Planning Department and the Manager of the City of Hemet to prepare airport area land use plans per state legislation to protect the airport from future incompatible uses.

Higher priority work in both agencies and the fact that the then existing land uses appeared compatible with the airport, precluded response to the Airport Land Use Commission's request.

Late in 1977, a developer proposed a 900-unit residential development within the City of Hemet just east of the airport. The Airport Land Use Commission implored the City of Hemet to disapprove the development. It was eventually defeated. This skirmish over residential encroachment toward the airport led, in 1978, to a cooperative effort to prepare an "Airport Land Use Plan" for the Hemet-Ryan Airport that could be adopted by the City, the County, and the Airport Land Use Commission. A plan was approved by the City as a part of its Southwest Area Plan adopted by the City Council June 26, 1979. The County Board of

Supervisors approved its plan on June 10, 1980. Finally, the Airport Land Use Commission adopted both plans formally October 17, 1980. Many of the land use designations in the plan were based upon noise contours that had been mapped in 1978 by a consultant using a computer program based upon operational data provided by the County Aviation Department.

During the plan preparation and adoption process (May 1978 - October 17, 1980), the City of Hemet approved Planned Community Development (PCD) projects for large planned developments east and south of the airport. When these developments were reviewed by the Airport Land Use Commission there was concern with the number of residences involved under the 1986 - 55 Ldn noise contour. There were special concerns with the Lewis Homes Planned Community Development. The Airport Land Use Commission felt that the City had not acted in good faith by approving these Planned Community Developments during the preparation and approval cycle of the Airport Land Use Plan. The City felt that it had considered all aspects of the airport's influence and had acted in full accord with the Southwest Area Plan.

In mid-1982, the Riverside County Aviation Commission voted to oppose the City of Hemet Annexation No. 100. The property is located at the northeast end of the runway under the Federal Aviation Administration defined approach zone. The Commission was concerned with the possibility of incompatible land uses. The Riverside County Board of Supervisors also adopted a position

in opposition to the Annexation. The Local Agency Formation Commission denied the annexation application without prejudice. A refiling based on resolution of the land use concerns, is anticipated.

FORMATION OF HEMET-RYAN AIRPORT SUBCOMMITTEE

As the controversy became more intense, both jurisdictions, as well as the County Planning Commission and Board of Supervisors, became aware that only through a spirit of cooperation could these matters be solved. Since all agencies professed a sincere desire to protect the airport, the new City of Hemet Director of Community Development proposed the formation of a subcommittee comprised of two members each from the Hemet City Planning Commission, County Planning Commission and ALUC, staffed by employees of each jurisdiction. The subcommittee would research and discuss the problem and subsequently report to their separate jurisdictions the proposed policies for land use around the airport. This subcommittee first met on June 17, 1982.

During the course of discussion of the subcommittee, many factors were considered. Safety of flight operations as well as safety and welfare of persons on the ground were discussed. Specific risk areas were mapped and defined. Noise effects were considered with relationship to the flight patterns and altitudes of various types of aircraft involved in taking off from or landing at the airport.

Land uses already committed were identified and discussed as well as trade-offs in those areas that could be negotiated.

Federal Aviation Administration imaginary surfaces prescribed in Federal Aviation Regulations (FAR), Part 77 were used in many cases to define critical areas where aircraft maneuvering created special risk or noise considerations. A need for a new noise study was discussed at length. The subcommittee decided that a new noise study was not necessary at this time because their land use recommendations considered not only noise but flight hazards due to aircraft entering and leaving the flight patterns, reducing or increasing engine settings, turning, ascending and descending, and flying at low altitudes immediately after take off by fire bombers which are heavily loaded.

Finally, the subcommittee tied all of these factors into this report to their separate jurisdictions with the policy statements, land uses, and aviation controls recommended herein.

An Airport Land Use Plan was approved by the City as a part of its Southwest Area Plan adopted by the City Council June 26, 1979. The County Board of Supervisors approved its plan on June 10, 1980. Finally, the Airport Land Use Commission adopted both plans formally October 17, 1980. Many of the land use designations in the plan were based upon noise contours that had been mapped in 1978 by a consultant using a computer program

based upon operational data provided by the County Aviation Department.

The City of Hemet acted as lead agency in the preparation of the Environmental Impact Report. The Environmental Impact Report was adopted by the City of Hemet on July 26, 1983.

In September 22, 1983 the Airport Land Use Commission certified the Environmental Impact Report and adopted the "Position Paper" of the Hemet-Ryan Airport Subcommittee as the Land Use Plan for Hemet-Ryan Airport.

Periodic reviews of Land Use Plans are permitted under PUC 21676. The PUC 21676 indicates that the plan may be reviewed as often as necessary but only can be amended once per year.

The current Hemet-Ryan Airport Land Use Plan is five (5) years old. The Riverside County Board of Supervisors had approved the Master Plan Study for the Hemet-Ryan Airport on May 17, 1988. The Master Plan Study addresses and guides the future development of the Hemet-Ryan Airport. The subcommittee had reviewed the Master Plan Study Board adopted recommendations in the update to the Hemet-Ryan Airport Land Use Plan. The Hemet-Ryan Airport Land Use Plan considers the Master Plan Study as their twenty (20) year long range plan for the Hemet-Ryan Airport.

The following pages present the reconvened subcommittee's findings and policy recommendations.

I. RELATIVE RISK CONCEPT

Relative Risk Principle:

The purpose of this document is to identify potential risks and noise associated with aircraft and airport operations as that risk and noise relates to existing and future land uses within the horizontal surface or area of influence of the airport. This assessment of noise and risk will be used by Riverside County, the City of Hemet, and the Riverside County Airport Land Use Commission in making land use decisions. Three areas are defined herein; Area I, Area of Extreme Risk; Area II, Area of High Risk; and Area III, Area of Moderate Risk. The concept is that each successive area is influenced by less relative risk and less noise than the preceding area. The areas were defined by use of characteristic flight paths of various aircraft using the airport, and existing and projected noise contours. Details of the selection criteria which defines each area is listed in the section defining the relative risk areas.

II. DEFINITIONS

A. Critical Facilities:

Examples (including but not limited to):

1. Telephone Exchanges
2. Electrical Transformer Relays
3. Radio HV Studies

B. Discretionary Review:

Land Uses

There exists a wide variety of land uses categories. To deal with the review of such land uses in a practical manner, a discretionary review procedure is employed.

The discretionary review procedure is located in Section VIII, Discretionary Review Procedures, page 36.

C. Hazardous Materials:

Examples (including, but not limited to):

1. Flammable Liquids
2. Flammable Materials
3. Combustible Materials
4. Explosive Materials
5. Pesticides
6. Cleaning Agents
7. Compressed Gas
8. Feed and Flour Mills
9. Plastics Manufacturing/Storage
10. Breweries

D. Institutional:

Examples (including but not limited to):

1. School
2. Church and Similar Uses
3. Motel
4. Hospital
5. Nursing Home
6. Health Facilities
7. Clinic
8. Care Homes
9. Convalescent Facilities
10. Day Care

E. Places of Assembly

Any structure, public or private, or premise, or portion thereof exceeding 1,500 square feet in area, where the Building Code would provide for occupancy levels of an intensity exceeding one person per 30 square feet, which is designed or used for entertainment, amusement, instruction, education, worship, deliberation, display, meeting, awaiting transportation or for the consumption of food and drink.

Examples include, but are not limited to:

1. Auditorium
2. Theatre
3. Restaurant
4. Church
5. Clubhouse

6. Arena
7. Stadium
8. Circus
9. Bowling Alleys

III. RELATIVE RISK AREAS

A. AREA I: Area of Extreme Risk

The imaginary approach surface defined by Federal Aviation Regulations (Federal Aviation Regulations (FAR), Volume XI, Part 77, Objects Affecting Navigable Airspace), as the approach surfaces for the size and types of runways at the airport.

This area was designated by the subcommittee as the highest relative risk area due to the convergence of flight paths and the resultant high volume of aircraft. Aircraft are descending or ascending, changing power settings, and performing critical turns; thus, the possibility of an aircraft related incident occurring is higher in these areas. The noise level is also higher due to the lower altitude of aircraft.

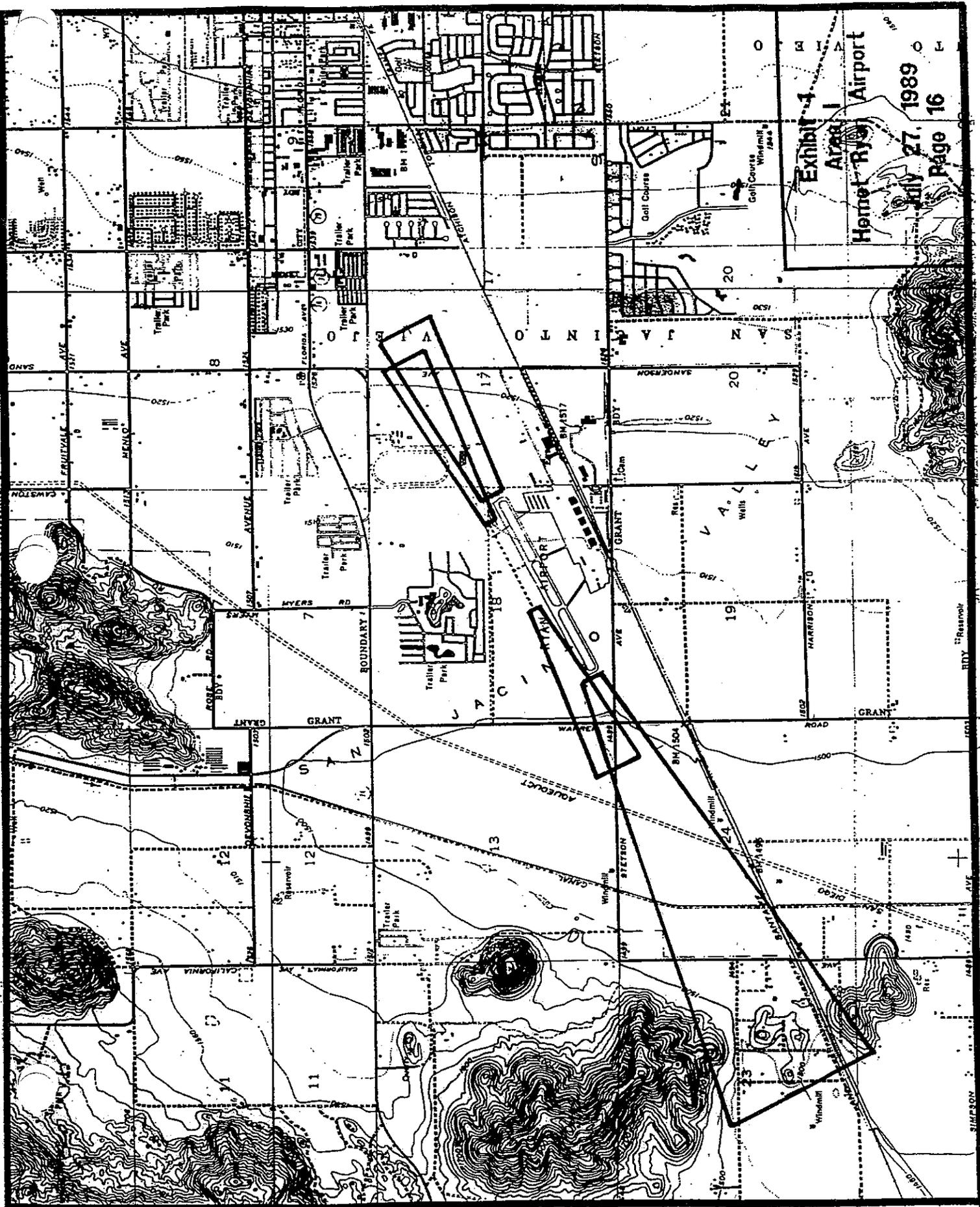


Exhibit 4
Hermet Ryer Airport
July 27, 1989
Page 16

B. AREA II: Area of High Risk

An area defined by the subcommittee on July 29, 1982, and revised October 1982, to be an area of greatest safety concerns. The safety concerns are due to aircraft ascending, descending, turning, and changing power settings when landing at or taking off from the airport.

Area II illustrates the general flight paths of the various types of aircraft using the airport. The hazards in this area are similar to those in Area I approach zones, but the influence of the same factors of landing, take-off and noise are not as severe and the aircraft are higher in altitude; therefore, the policies are not as severe. The boundaries of the area were established to coincide as much as possible to areas where aircraft would be in the landing - take-off generalized pattern and would be turning and applying or reducing power (again, higher risk of something happening).

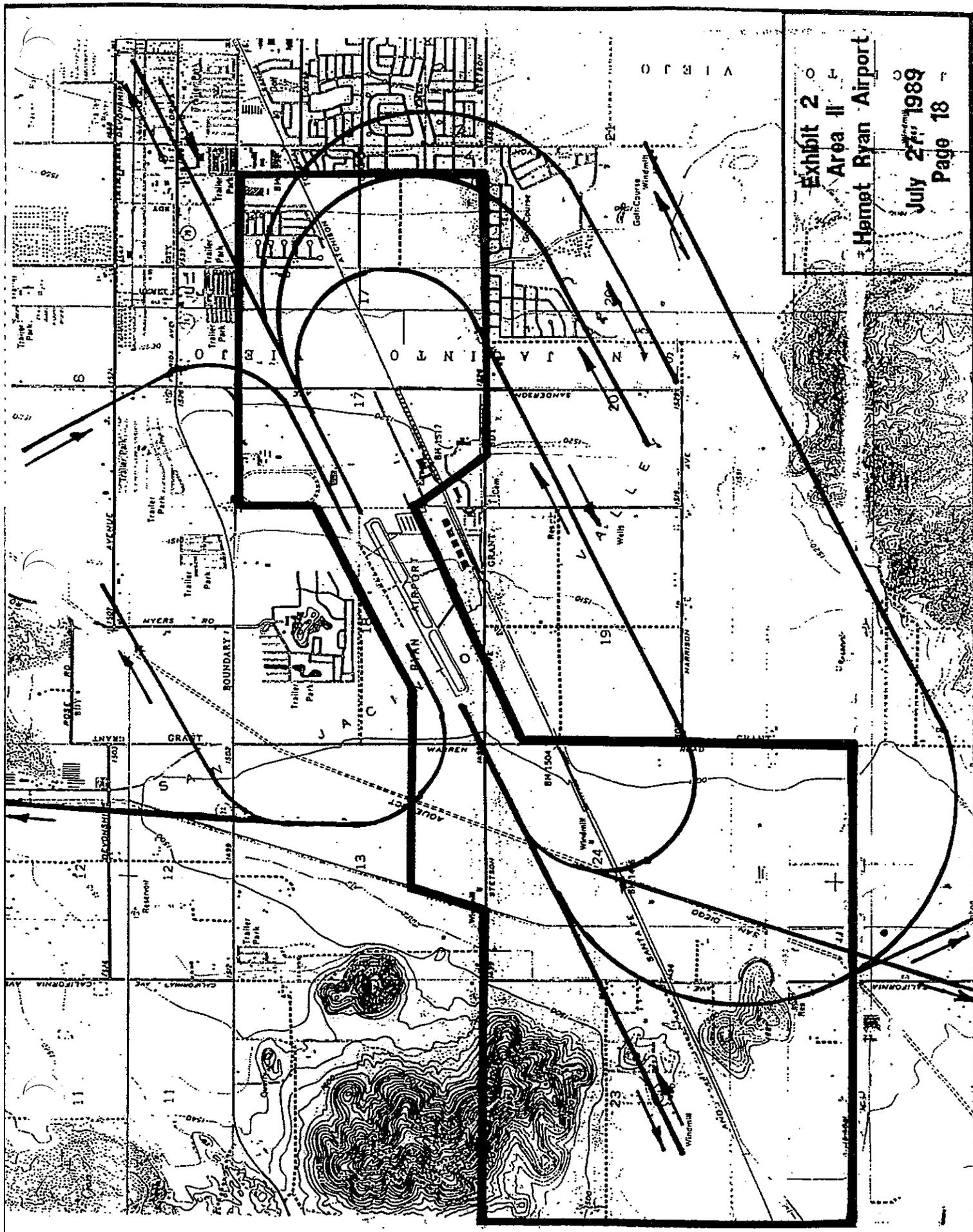


Exhibit 2
Area II
Hermet Ryan Airport
July 27, 1989
Page 18

C. TRANSITION AREA:

The subcommittee determined that the distinction from Area II to Area III is very abrupt. In Area II, residential dwelling units are on large acreage (2-1/2 acres per dwelling unit). In Area III, a wide range of land uses are permitted. The subcommittee reviewed several issues to create a smoother transition. The issues included density, height, institutional uses, place of assembly, and hazardous materials.

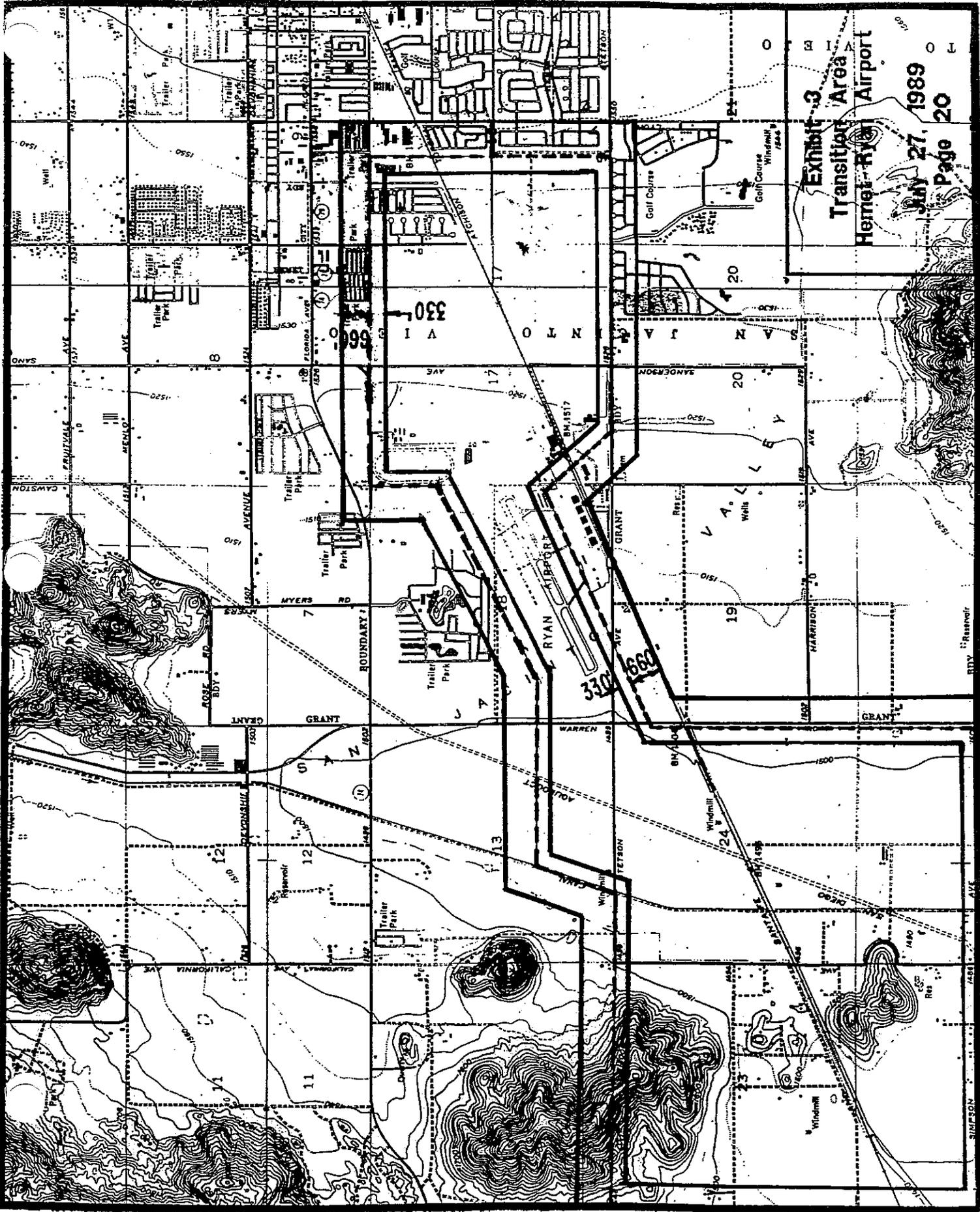
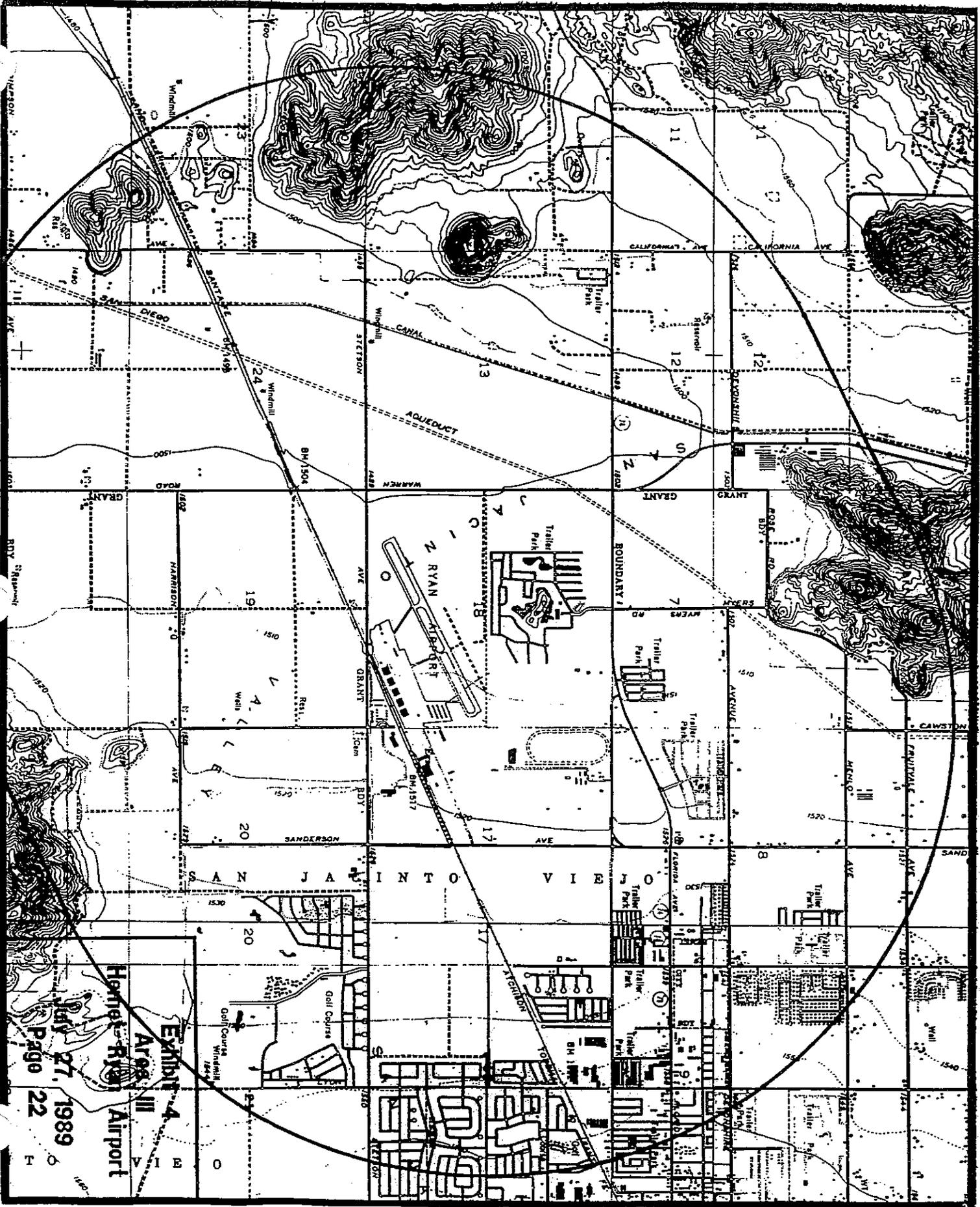


Exhibit 3
Transition Area
Hemet-Ryan Airport
July 27, 1989
Page 20

D. AREA III: Area of Moderate Risk

The outer boundary of the Area of Moderate Risk is based upon the outer radius of the imaginary horizontal surface of the airport as defined in Federal Aviation Regulations (FAR), Part 77. This area is normally used to determine whether obstructions exist within the area where aircraft are most likely to be maneuvering. It was designated by the Airport Subcommittee as the Area of Moderate Risk due to the flight paths and aircraft noise which are present in the entire area. The boundaries of Area III for planning purposes have been adjusted to follow roads or section lines for easy identification. It is bounded by Eaton Avenue on the north, Palm Avenue on the east, Simpson Avenue on the south, and the section line dividing Sections 2 and 3, 10 and 11, 14 and 15, 22 and 23, and N 1/2 of Sections 26 and 27, T5S, R2W, SBB & M on the west.



July 27, 1989
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Exhibit A
 Area III
 Hallett Ryan Airport

IV. FAA PART 77 STANDARDS

A. Height

Part 77 applies:

1. To any object of natural growth, terrain, permanent or temporary construction or alteration including equipment or materials and apparatus of a permanent or temporary nature.
2. To alteration of any permanent or temporary existing structure, equipment or materials by a change in height or lateral dimensions.

B. Construction or Alterations which require notice to the FAA Administrator includes:

1. Any construction or alteration more than 200' above ground level.
2. Any construction or alteration of a greater height than the imaginary surface extending upward and outward.
3. Overcrossings of highways, railroads, or other forms of mobile transportation with heights above the average grade of:

<u>Forms</u>	<u>Height</u>
a. Interstate Highways	17'
b. Public Roadway	15'
c. Private Road	10'
d. Railroad	23'
e. Other forms in the amount equal to the height of the highest form of mobile object.	

4. Construction or alteration which would effect an instrument approach area.

C. Construction or Alteration Not Requiring Notice

1. Any object shielded by existing structures of a permanent or substantial character and natural terrain.
2. Any antenna structure of 20' or less except if it increases the height of an existing structure.
3. Any air navigation facility fixed by a functional purpose.
4. Any construction or alteration which notice is required by other FAA regulations.

D. Submittal of Notices

Applicant must submit notice by completing Form 7460-1, Notice of Proposed Construction or Alteration, and submitting the form to the Chief, Air Traffic Division, FAA Regional Office. The notices must be submitted 30 days prior to the date of proposed construction or alteration is scheduled to begin or the date the construction permit is filed. In cases of emergency involving essential public service, health, or safety that requires immediate construction or alteration, notice may be sent by telephone with executed FAA Form 7460-1 within 5 days thereafter.

A proposed structure over 200' above ground level is a presumed hazard to air navigation and the applicant has the burden of proof of overcoming that presumption.

V. LAND USE POLICIES

A. AREA I: Area of Extreme Risk

Policies

Area I shall be kept free of all high risk land uses. In general, high risk land uses have one or more of the following characteristics:

- 1) Hazardous Material Facilities
- 2) Institutional Uses
- 3) Places of Assembly
- 4) Critical Facilities
- 5) Residential Use
 - a. No residential uses shall be permitted within Area I one mile from the runway threshold.
 - b. Residential lot sizes larger than 2-1/2 acres per dwelling unit shall be subject to discretionary review.

Permitted Uses

1. Agriculture
2. Open Space

Discretionary Review Uses

1. Commercial
2. Industrial
3. Residential uses larger than 2-1/2 acres per dwelling unit.

B. AREA II: Area of High Risk

Policies

1. Area II shall have a minimum residential lot size of 2-1/2 acres or greater
2. Public and Private schools shall not be permitted in Area II.
3. Institutional uses, places of assembly and hazardous material facilities shall not be permitted in Area II.

Permitted Uses

1. Industrial
2. Agricultural
3. Minimum Residential lot sizes larger than 2-1/2 acres per dwelling unit.

Discretionary Uses

1. Commercial

C. TRANSITION AREA

Policies

1. The Transition Area is located between Area II and Area III. It is 330 feet inside the Area II boundary and 660 feet outside the Area II boundary.

2. If 50% or more of the project site is in the Transition Area, it shall be considered part of the Transition Area.
3. The Transition Area shall not extend beyond the outer boundary of Area III or extend into Area I.
4. Residential density in the Transition Area is limited to not more than 20 dwelling units per acre and maybe less pending a discretionary review. All multiple family dwelling units shall be subject to a discretionary review.
5. All structures shall be limited to 35' in height or two stories, whichever is less.
6. Any Institutional Uses, Places of Assembly, and Public and Private Schools shall require a discretionary review as to its location and relative risk area.
7. Commercial, Industrial, Manufacturing, and Agriculture uses which are two stories in height or less shall be permitted in this area subject to relevant standards.
8. Activities involving hazardous materials shall be subject to a discretionary review.

Permitted Uses

1. Commercial
2. Industrial
3. Manufacturing
4. Agricultural

Discretionary Uses

1. Residential dwelling units
2. Institutional
3. Places of Assembly
4. Public and Private Schools
5. Hazardous Material Facilities

D. AREA III: Area of Moderate Risk

Policies

1. Permitted Uses
 - a. Wide range of uses are permitted
2. Discretionary Uses
 - a. Structures over 35' or 2 stories, whichever is greater.
 - b. Institutional
 - c. Places of Assembly
 - d. Hazardous Materials
 - e. Public & Private Schools

E. NOISE AND SOUNDPROOFING REQUIREMENTS

1. Avigation Easements shall be required for all land uses in Areas I, II, and III.
2. Any habitable structures to be constructed in the 2005 average annual day 60 CNEL noise contour (as defined in the Noise Contour Study dated January, 1989, prepared by

Brown-Butin Association, Inc.), shall be soundproofed as necessary to achieve 45 Ldn interior sound levels or quieter. All building plans shall be signed by a qualified acoustical engineer certifying that the 45 Ldn level will be achieved based on construction materials and design of the proposed structure.

3. The Riverside County Aviation Director shall control the flight operations and facilities at the Hemet-Ryan Airport so as not to increase the 60 CNEL noise contours projected in Exhibit 5.

F. LEGAL, NONCONFORMING APPROVALS

1. Description

The first Airport Land Use Plan for Hemet-Ryan Airport was adopted by the Airport Land Use Commission on October 17, 1980. Several land use plans for large planned communities were approved by the City of Hemet prior to that date and prior to the adoption of the first Airport Land Use Plan in 1982. These plans, in some cases, do not conform with the current airport land use plans, but due to prior approval, can be constructed. It has been a goal of the City of Hemet and the Airport Land Use Commission to reduce residential densities in these plans when the developers request amendments.

Site
Preparation of
Noise Contour
Hemet Ryan
Airport

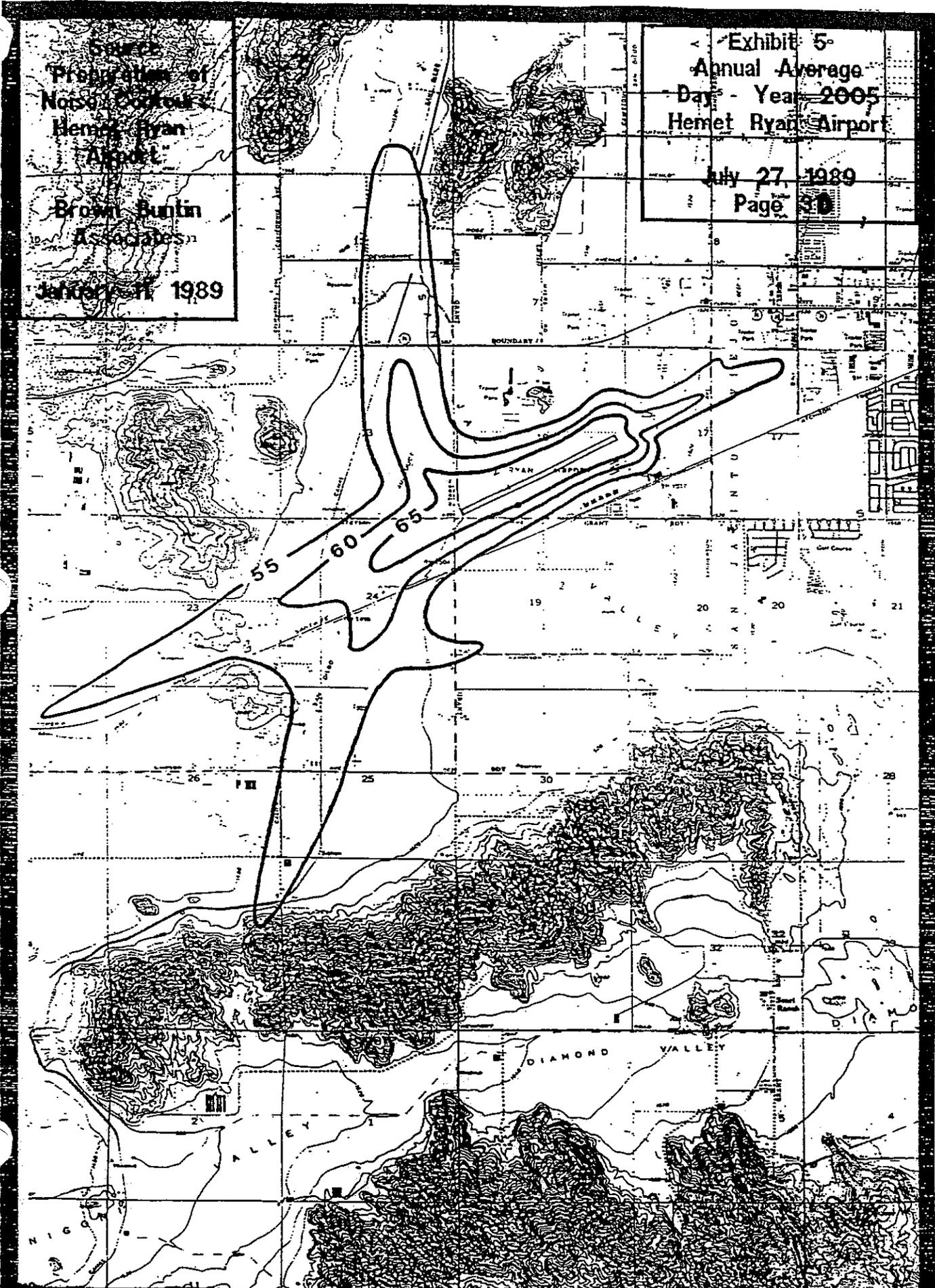
Brown & Bunin
Associates, Inc.

January 11, 1989

Exhibit 5
Annual Average
Day - Year 2005
Hemet Ryan Airport

July 27, 1989

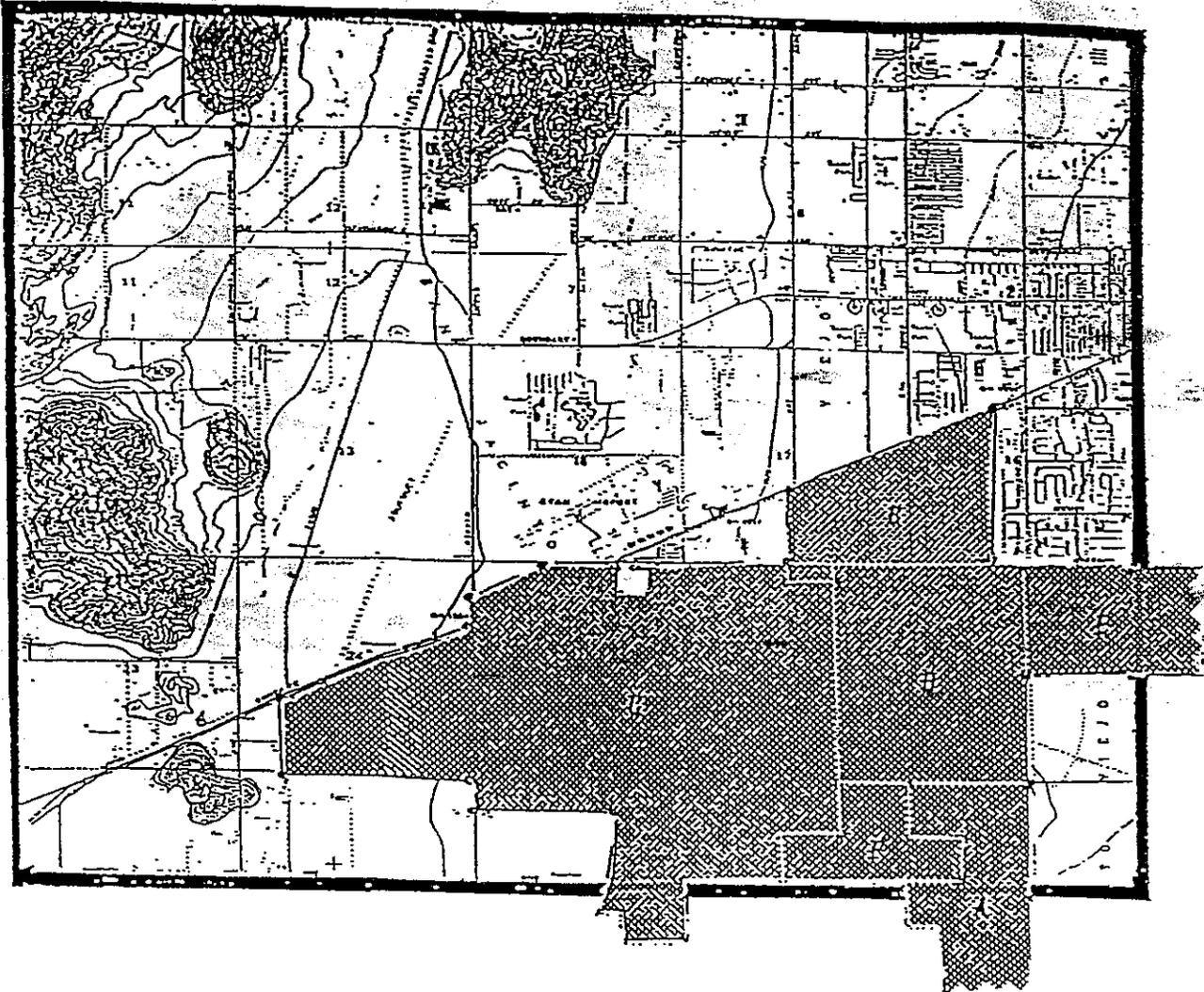
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2. Preapproved Development should be addressed in two forms:

- a. Proponents are encouraged to reduce density in the total project.
- b. Within each segment of the project, proponents are encouraged to shift development to areas of less risk, while attempting to reduce the total density of the project.

Exhibit 6
Preapproved Development
City of Hemet
July 1982



	Approval Date	P.C.D. Number
A. Diamond Valley Investors	12/11/79	79-87
B. Lewis Homes - Terra Linda	12/11/79	79-91
C. Page Ranch	1/08/80	79-93
D. Seven Hills		
North portion	12/13/68	Z/C 01-68
South portion	4/22/80	80-02
* Adoption of Hemet/Ryan Airport Land Use Plan by the Riverside County Board of Supervisors	6/10/80	
E. Broadmoor	10/23/80	79-88
F. Wagner	6/08/82	82-01

G. General Policies

1. The ALUC finds the standard policy statements provided in the Hemet-Ryan Airport Land Use Plan are reasonable and promote consistent land uses within the airport influenced areas. The ALUC will promote these concepts throughout the land use plans around public use airports within the County.

2. Before any major airport change is planned, involving land use, noise sources or policy changes, a subcommittee made up of representatives from the City of Hemet, County of Riverside, and the Airport Land Use Commission shall be formed to evaluate these changes and forward their recommendations to the Hemet City Council, Riverside County Board of Supervisors, and the Riverside County Airport Land Use Commission.

3. The subcommittee stands behind its work as a reasonable basis for land use and airport decisions. The policies stated herein is a group effort and are supported by the entire group based on present conditions; therefore, the subcommittee feels that any major changes involving noise sources, land use or airport related policies, which may change the present conditions, should be reviewed by the subcommittee to achieve the same level of discussion and concurrence attained in this document

for recommendation to the Hemet City Council, Riverside Board of Supervisors, and the Riverside County Airport Land Use Commission.

4. Discretionary Review of Land Use Not Listed

The study of land uses, noise, and relative risk has been comprehensive; however, if a land use is not listed herein, it shall be subject to discretionary review to determine the relative risk and impact of noise relative to the appropriateness of the proposed land use.

VI. DISCRETIONARY REVIEW PROCEDURES

A. Discretionary Review

There is a wide variation in the nature of some land use categories. To deal with the review of such land uses in a practical manner, a discretionary review procedure is employed. Examples of land use issues requiring discretionary review include but are not limited to: density exceeding 20 dwelling units per acre in Area III or any multiple family dwelling units in the transition area, structures in excess of 35' or 2 stories in height (whichever is greater), institutional uses, places of assembly, public and private schools and hazardous material facilities.

B. Procedures

The Airport Land Use Commission shall hold at least one public hearing on each application for discretionary use. The hearing shall be set and notice given as prescribed in Section 65091 of the Government Code and notice shall also be mailed to all affected agencies.

C. Action by Commission:

The Airport Land Use Commission, following the public hearing, shall recommend findings of consistency or inconsistency of the proposed use with the Hemet Ryan Airport

Land Use Plan based on facts presented, discussed at the public hearing, and the findings that are consistent with the Airport Land Use Commission's purpose under PUC 21674. A finding of consistency or inconsistency shall be based upon minimizing the relative risk to the public health, safety, and welfare in relation to the generalized aircraft flight patterns and noise contours with respect to the following:

1. Structure Height
2. Population Density
3. Nature of the Land Use Activity
4. Noise
5. Relevant Safety Factors
6. Institutional Uses
7. Places of Assembly

APPENDIX A

Public Utilities Code
Article 3.5
Airport Land Use Commission

AERONAUTICS LAW

STATE AERONAUTICS ACT

PUBLIC UTILITIES CODE
(CHAPTER 4, ARTICLE 3.5)

AIRPORT LAND USE COMMISSION

Creation; Membership; Selection

21670. (a) The Legislature hereby finds and declares that:

(1) It is in the public interest to provide for the orderly development of each public use airport in this state and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to Section 21669 and to prevent the creation of new noise and safety problems.

(2) It is the purpose of this article to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

(b) In order to achieve the purposes of this article, every county in which there is located an airport which is served by a scheduled airline shall establish an airport land use commission. Every county, in which there is located an airport which is not served by a scheduled airline, but is operated for the benefit of the general public, shall establish an airport land use commission, except that the board of supervisors of the county may, after consultation with the appropriate airport operators and affected local entities and after a public hearing, adopt a resolution finding that there are no noise, public safety, or land use issues affecting any airport in the county which require the creation of a commission and declaring the county exempt from that requirement. The board shall, in this event, transmit a copy of the resolution to the Director of Transportation. For purposes of this section, "commission" means an airport land use commission. Each commission shall consist of seven members to be selected as follows:

(1) Two representing the cities in the county, appointed by a city selection committee comprised of the mayors of all the cities within that county, except that if there are any cities contiguous or adjacent to the qualifying airport, at least one representative shall be appointed therefrom. If there are no cities within a county, the number of representatives provided for by paragraphs (2) and (3) shall each be increased by one.

(2) Two representing the county, appointed by the board of supervisors.

(3) Two having expertise in aviation, appointed by a selection committee comprised of the managers of all of the public airports within that county.

(4) One representing the general public, appointed by the other six members of the commission.

(c) Public officers, whether elected or appointed, may be appointed and serve as members of the commission during their terms of public office.

(d) Each member shall promptly appoint a single proxy to represent him or her in commission affairs and to vote on all matters when the member is not in attendance. The proxy shall be designated in a signed written instrument which shall be kept on file at the commission offices, and the proxy shall serve at the pleasure of the appointing member. A vacancy in the office of proxy shall be filled promptly by appointment of a new proxy.

(e) A person having an "expertise in aviation: means a person who, by way of education, training, business, experience, vocation, or avocation has acquired and possesses particular knowledge of, and familiarity with, the function, operation, and role of airports, or is an elected official of a local agency which owns or operates an airport. The commission shall be constituted pursuant to this section on and after March 1, 1988.

Action by Designated Body Instead of Commission

21670.1. (a) Notwithstanding any other provision of this article, if the board of supervisors and the city selection committee of mayors in the county each makes a determination by a majority vote that proper land use planning can be accomplished through the actions of an appropriately designated body, then the body so designated shall assume the planning responsibilities of an airport land use commission as provided for in this article, and a commission need not be formed in that county.

(b) A body designated pursuant to subdivision (a) which does not include among its membership at least two members having an expertise in aviation, as defined in subdivision (e) of Section 21670, shall, when acting in the capacity of an airport land use commission, be augmented so that the body, as augmented, will have at least two members having that expertise. The commission shall be constituted pursuant to this section on and after March 1, 1988.

Applicability to Los Angeles County

21670.2. (a) Sections 21670 and 21670.1 do not apply to the County of Los Angeles. In that county, the county regional planning commission has the responsibility for coordinating the airport planning of public agencies within the county. In instances where impasses result relative to this planning, an appeal may be made to the county regional planning commission by any public agency involved. The action taken by the county regional planning commission on such an appeal may be overruled by a four-fifths vote of the governing body of a public agency whose planning led to the appeal.

(b) By January 1, 1992, the county regional planning commission shall adopt the comprehensive land use plans required pursuant to Section 21675.

(c) Sections 21675.1, 21675.2, and 21679.5 do not apply to the County of Los Angeles until January 1, 1992. If the comprehensive land use plans required pursuant to Section 21675 are not adopted by the county regional planning commission by January 1, 1992, Sections 21675.1 and 21675.2 shall apply to the County of Los Angeles until the plans are adopted.

Airport Owned by a City, District, or County; Appointment of Certain Members by Cities and Counties

21671. In any county where there is an airport operated for the general public which is owned by a city or district in another county or by another county, one of the representatives provided by paragraph (1) of subdivision (b) of Section 21670 shall be appointed by the city selection committee of mayors of the cities of the county in which the owner of that airport is located, and one of the representatives provided by paragraph (2) of subdivision (b) of Section 21670 shall be appointed by the board of supervisors of the county in which the owner of that airport is located.

Term of Office; Removal of Members; Vacancies; Compensation; Staff Assistance; Meetings

21671.5 (a) Except for the terms of office of the members of the first commission, the term of office of each member shall be four years and until the appointment and qualification of his or her successor. The members of the first commission shall classify themselves by lot so that the term of office of one member is one year, of two members is two years, of two members is three years, and of two members is four years. The body which originally appointed a member whose term has expired shall appoint his or her successor for a full term of four years. Any member may be removed at any time and without cause by the body appointing him or her. The expiration date of the term of office of each member shall be the first Monday in May in the year in which his or term is to expire. Any vacancy in the membership of the commission shall be filled for the unexpired term by appointment by the body which originally appointed the member whose office has become vacant. The chairperson of the commission shall be selected by the members thereof.

(b) Compensation, if any, shall be determined by the board of supervisors.

(c) Staff assistance, including the mailing of notices and the keeping of minutes, and necessary quarters, equipment, and supplies shall be provided by the county. The usual and necessary operating expenses of the commission shall be a county charge.

(d) Notwithstanding any other provisions of this article, the commission shall not employ any personnel either as employees or independent contractors without the prior approval of the board of supervisors.

(e) The commission shall meet at the call of the commission chairperson or at the request of the majority of the commission members. A majority of the commission members shall constitute a quorum for the transaction of business. No action shall be taken by the commission except by the recorded vote of a majority of the full membership.

(f) The commission may establish a schedule of fees for reviewing and processing proposals and for providing the copies of land use plans, as required by subdivision (d) of Section 21675. Those fees shall be charged to the proponents of actions, regulations, or permits, shall not exceed the estimated reasonable cost of providing the service, and shall be imposed pursuant to Chapter 13 (commencing with Section 54990) of Part I of Division 2 of Title 5 of the Government Code. After June 30, 1991, a commission which has not adopted the comprehensive land use plan required by Section 21675 shall not charge fees pursuant to this subdivision until the commission adopts the plan.

Rules and Regulations

21672. Each commission shall adopt rules and regulations with respect to the temporary disqualification of its members from participating in the review or adoption of a proposal because of conflict of interest and with respect to appointment of substitute members in such cases.

Initiation of Proceedings for Creation by Owner of Airport

21673. In any county not having a commission or a body designated to carry out the responsibilities of a commission, any owner of a public airport may initiate proceedings for the creation of a commission by presenting a request to the board of supervisors that a commission be created and showing the need therefor to the satisfaction of the board of supervisors.

Powers and Duties

21674. The commission has the following powers and duties, subject to the limitations upon its jurisdiction set forth in Section 21676:

(a) To assist local agencies in ensuring compatible land uses in the vicinity of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of those airports is not already devoted to incompatible uses.

(b) To coordinate planning at the state, regional, and local levels so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety, and welfare.

(c) To prepare and adopt an airport land use plan pursuant to Section 21675.

(d) To review the plans, regulations, and other actions of local agencies and airport operators pursuant to Section 21676.

(e) The powers of the commission shall in no way be construed to give the commission jurisdiction over the operation of any airport.

(f) In order to carry out its responsibilities, the commission may adopt rules and regulations consistent with this article.

Staff Training and Development

21674.5 (a) The Department of Transportation shall develop and implement a program or programs to assist in the training and development of the staff of airport land use commissions, after consulting with airport land use commissions, cities, counties, and other appropriate public entities.

(b) The training and development program or programs are intended to assist the staff of airport land use commissions in addressing high priority needs, and may include, but need not be limited to, the following:

(1) The establishment of a process for the development and adoption of comprehensive land use plans.

(2) The development of criteria for determining airport land use planning boundaries.

(3) The identification of essential elements which should be included in the comprehensive plans.

(4) Appropriate criteria and procedures for reviewing proposed developments and determining whether proposed developments are compatible with the airport use.

(5) Any other organizational, operational, procedural, or technical responsibilities and functions which the department determines to be appropriate to provide to commission staff and for which it determines there is a need for staff training and development.

(c) The department may provide training and development programs for airport land use commission staff pursuant to this section by any means it deems appropriate. Those programs may be presented in any of the following ways:

(1) By offering formal courses or training programs.

(2) By sponsoring or assisting in the organization and sponsorship of conferences, seminars, or other similar events.

(3) By producing and making available written information.

(4) Any other feasible method of providing information and assisting in the training and development of airport land use commission staff.

SEC. 2. The sum of one hundred thousand dollars (\$100,000) is hereby appropriated from the Aeronautics Account in the State Transportation Fund to the Department of Transportation for the purposes of this act.

SEC. 3. This act is an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting the necessity are:

In order to assist airport land use commissions to comply with state law requiring the development and adoption of comprehensive land use plans for each public airport in California, and in order to provide for the orderly development of public airports and to provide adequate protection from incompatible land uses in the vicinity of public use airports at the earliest possible time, it is necessary that this act take effect immediately.

Land Use Plan

21675. (a) Each commission shall formulate a comprehensive land use plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The commission plan shall include and shall be based on a long-range master plan or an airport layout plan, as determined by the Division of Aeronautics of the Department of Transportation, that reflects the anticipated growth of the airport during at least the next 20 years. In formulating a land use plan, the commission may develop height restrictions on buildings, specify use of land, and determine building standards, including soundproofing adjacent to airports, within the planning area. The comprehensive land use plan shall be reviewed as often as necessary in order to accomplish its purposes, but shall not be amended more than once in any calendar year.

(b) The commission may include, within its plan formulated pursuant to subdivision (a), the area within the jurisdiction of the commission surrounding any federal military airport for all of the purposes specified in subdivision (a). This subdivision does not give the commission any jurisdiction or authority over the territory or operations of any military airport.

(c) The planning boundaries shall be established by the commission after hearing and consultation with the involved agencies.

(d) The commission shall submit to the Division of Aeronautics of the department one copy of the plan and each amendment to the plan.

(e) If a comprehensive land use plan does not include the matters required to be included pursuant to this article, the Division of Aeronautics of the department shall notify the commission responsible for the plan.

Date of adoption; review of actions; approval or disapproval

21675.1. (a) By June 30, 1991, each commission shall adopt the comprehensive land use plan required pursuant to Section 21675.

(b) Until a commission adopts a comprehensive land use plan, a city or county shall first submit all actions, regulations, and permits within the vicinity of a public airport to the commission for review and approval. Before the commission approves or disapproves any actions, regulations, or permits, the commission shall give public notice in the same manner as the city or county is required to give for those actions, regulations, or permits. As used in this section, "vicinity" means land which will be included or reasonably could be included within the plan. If the commission has not designated a study area for the plan, then "vicinity" means land within two miles of the boundary of a public airport.

(c) The commission may approve an action, regulation, or permit if it finds, based on substantial evidence in the record, all of the following:

(1) The commission is making substantial progress toward the completion of the plan.

(2) There is a reasonable probability that the action, regulation, or permit will be consistent with the plan being prepared by the commission.

(3) There is little or no probability of substantial detriment to or interference with the future adopted plan if the action, regulation, or permit is ultimately inconsistent with the plan.

(d) If the commission disapproves an action, regulation, or permit, the commission shall notify the city or county. The city or county may overrule the commission, by a two-thirds vote of its governing body, if it makes specific findings that the proposed action, regulation, or permit is consistent with the purposes of this article, as stated in Section 21670.

(e) If a city or county overrules the commission pursuant to subdivision (d), that action shall not relieve the city or county from further compliance with this article after the commission adopts the plan.

(f) If a city or county overrules the commission pursuant to subdivision (d) with respect to a publicly owned airport that the city or county does not operate, the operator of the airport shall be immune from liability for damages to property or personal injury from the city's or county's decision to proceed with the action, regulation, or permit.

(g) A commission may adopt rules and regulations which exempt any ministerial permit for single-family dwellings from the requirements of subdivision (b) if it makes the findings required pursuant to subdivision (c) for the proposed rules and regulations, except that the rules and regulations may not exempt either of the following:

(1) More than two single-family dwellings by the same applicant within a subdivision prior to June 30, 1991.

(2) Single-family dwellings in a subdivision where 25 percent or more of the parcels are undeveloped.

Failure to Approve or Disapprove

21675.2. (a) If a commission fails to act to approve or disapprove any actions, regulations, or permits within 60 days of receiving the request pursuant to Section 21675.1, the applicant or his or her representative may file an action pursuant to Section 1094.5 of the Code of Civil Procedure to compel the commission to act, and the court shall give the proceedings preference over all other actions or proceedings, except previously filed pending matters of the same character.

(b) The action, regulation, or permit shall be deemed approved only if the public notice required by this subdivision has occurred. If the applicant has provided seven days advance notice to the commission of the intent to provide public notice pursuant to this subdivision, then, not earlier than the date of the expiration of the time limit established by Section 21675.1, an applicant may provide the required public notice. If the applicant chooses to provide public notice, that notice shall include a description of the proposed action, regulation, or permit substantially similar to the descriptions which are commonly used in public notices by the commission, the location of any proposed development, the application number, the name and address of the commission, and a statement that the action, regulation, or permit shall be deemed approved if the commission has not acted within 60 days. If the applicant has provided the public notice specified in this subdivision, the time limit for action by the commission shall be extended to 60 days after the public notice is provided. If the applicant provides notice pursuant to this section, the commission shall refund to the applicant any fees which were collected for providing notice and which were not used for that purpose.

(c) Failure of an applicant to submit complete or adequate information pursuant to Sections 65943 to 65946, inclusive, of the Government Code, may constitute grounds for disapproval of actions, regulations, or permits.

(d) Nothing in this section diminishes the commission's legal responsibility to provide, where applicable, public notice and hearing before acting on an action, regulation, or permit.

Review of Local General Plans

21676. (a) Each local agency whose general plan includes areas covered by an airport land use commission plan shall, by July 1, 1983, submit a copy of its plan or specific plans to the airport land use commission. The commission shall determine by August 31, 1983, whether the plan or plans are consistent or inconsistent with the commission's plan. If the plan or plans are inconsistent with the commission's plan, the local agency shall be notified and that local agency shall have another hearing to reconsider its plans. The local agency may overrule the commission after such hearing by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670.

(b) Prior to the amendment of a general plan or specific plan, or the adoption or approval of a zoning ordinance or building regulation within the planning boundary established by the airport land use commission pursuant to Section 21675, the local agency shall first refer the proposed action to the commission. If the commission determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified.

The local agency may, after a public hearing, overrule the commission by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670.

(c) Each public agency owning any airport within the boundaries of an airport land use commission plan shall, prior to modification of its airport master plan, refer such proposed change to the airport land use commission. If the commission determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified. The public agency may, after a public hearing, overrule the commission by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670.

(d) Each commission determination pursuant to subdivision (b) or (c) shall be made within 60 days from the date of referral of the proposed action. If a commission fails to make the determination within that period, the proposed action shall be deemed consistent with the commission's plan.

Review of Local Plans

21676.5. (a) If the commission finds that a local agency has not revised its general plan or specific plan or overruled the commission by a two-thirds vote of its governing body after making specific findings that the proposed action is consistent with the purposes of this article as stated in Section 21670, the commission may require that the local agency submit all subsequent actions, regulations, and permits to the commission for review until its general plan or specific plan is revised or the specific findings are made. If, in the determination of the commission, an action, regulation, or permit of the local agency is inconsistent with the commission plan, the local agency shall be notified and that local agency shall hold a hearing to reconsider its plan. The local agency may overrule the commission after the hearing by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article as stated in Section 21670.

(b) Whenever the local agency has revised its general plan or specific plan or has overruled the commission pursuant to subdivision (a), the proposed action of the local agency shall not be subject to further commission review, unless the commission and the local agency agree that individual projects shall be reviewed by the commission.

Marin County Override Provisions

21677. Notwithstanding Section 21676, any public agency in the County of Marin may overrule the Marin County Airport Land Use Commission by a majority vote of its governing body.

Airport Owner's Immunity

21678. With respect to a publicly owned airport that a public agency does not operate, if the public agency pursuant to Section 21676 or 21676.5 overrides a commission's action or recommendation, the operator of the airport shall be immune from liability for damages to property or personal injury caused by or resulting directly or indirectly from the public agency's decision to override the commission's action or recommendation.

Court Review

21679. (a) In any county in which there is no airport land use commission or other body designated to assume the responsibilities of an airport land use commission, or in which the commission or other designated body has not adopted an airport land use plan, an interested party may initiate proceedings in a court of competent jurisdiction to postpone the effective date of a zoning change, a zoning variance, the issuance of a permit, or the adoption of a regulation by a local agency, which directly affects the use of land within one mile of the boundary of a public airport within the county.

(b) The court may issue an injunction which postpones the effective date of the zoning change, zoning variance, permit, or regulation until the governing body of the local agency which took the action does one of the following:

(1) In the case of an action which is a legislative act, adopts a resolution declaring that the proposed action is consistent with the purposes of this article stated in Section 21670.

(2) In the case of an action which is not a legislative act, adopts a resolution making findings based on substantial evidence in the record that the proposed action is consistent with the purposes of this article stated in Section 21670.

(3) Rescinds the action.

(4) Amends its action to make it consistent with the purposes of this article stated in Section 21670, and complies with either paragraph (1) or (2) of this subdivision, whichever is applicable.

(c) The court shall not issue an injunction pursuant to subdivision (b) if the local agency which took the action demonstrates that the general plan and any applicable specific plan of the agency accomplishes the purposes of an airport land use plan as provided in Section 21675.

(d) An action brought pursuant to subdivision (a) shall be commenced within 30 days of the decision or within the appropriate time periods set by Section 21167 of the Public Resources Code, whichever is longer.

(e) If the governing body of the local agency adopts a resolution pursuant to subdivision (b) with respect to a publicly owned airport that the local agency does not operate, the operator of the airport shall be immune from liability for damages to property or personal injury from the local agency's decision to proceed with the zoning change, zoning variance, permit, or regulation.

(f) As used in this section, "interested party" means any owner of land within two miles of the boundary of the airport or any organization with a demonstrated interest in airport safety and efficiency.

Action to Postpone Effective Date of Zoning Change, Etc.

21679.5. (a) Until June 30, 1991, no action pursuant to Section 21679 to postpone the effective date of a zoning change, a zoning variance, the issuance of a permit, or the adoption of a regulation by a local agency, directly affecting the use of land within one mile of the boundary of a public airport, shall be commenced in any county in which the commission or other designated body has not adopted an airport land use plan, but is making substantial progress toward the completion of the plan.

(b) If a commission has been prevented from adopting the comprehensive land use plan by June 30, 1991, or if the adopted plan could not become effective, because of a lawsuit involving the adoption of the plan, the June 30, 1991, date in subdivision (a) shall be extended by the period of time during which the lawsuit was pending in a court of competent jurisdiction.

(c) Any action pursuant to Section 21679 commenced prior to January 1, 1990, in a county in which the commission or other designated body has not adopted an airport land use plan, but is making substantial progress toward the completion of the plan, which has not proceeded to final judgment, shall be held in abeyance until June 30, 1991. If the commission or other designated body adopts an airport land use plan on or before June 30, 1991, the action shall be dismissed. If the commission or other designated body does not adopt an airport land use plan on or before June 30, 1991, the plaintiff or plaintiffs may proceed with the action.

(d) An action to postpone the effective date of a zoning change, a zoning variance, the issuance of a permit, or the adoption of a regulation by a local agency, directly affecting the use of land within one mile of the boundary of a public airport for which an airport land use plan has not been adopted by June 30, 1991, shall be commenced within 30 days of June 30, 1991, or within 30 days of the decision by the local agency, or within the appropriate time periods set by Section 21167 of the Public Resources Code, whichever date is later.

APPENDIX B
AVIGATION EASEMENT

1
2 AVIGATION EASEMENT
3

4 WHEREAS, _____, herein
5 called Grantor, is the owner in fee of that certain parcel of
6 land situated in the County of Riverside, State of California,
7 more particularly described as:
8
9

10 herein called the Servient Tenement.

11 NOW, THEREFORE, for valuable consideration, the receipt
12 and sufficiency of which is hereby acknowledged, Grantor, for
13 itself, its heirs, administrators, executors, successors and
14 assigns, does hereby grant and convey unto the County of
15 Riverside, California, herein called Grantee, its successors,
16 assigns, lessees, sublessees, licensees and invitees, for the use
17 and benefit of the public, an easement and right-of-way,
18 appurtenant to the _____ Airport,
19 herein called Dominant Tenement, an avigation easement,

20 For the free and unobstructed passage of all aircraft
21 ("aircraft" being defined for the purposes of this instrument as
22 any contrivance now known or hereafter invented, used, or
23 designed for navigation of or flight in the air), by whomsoever
24 owned and operated, in the airspace over, through, across and
25 adjacent to the Servient Tenement,

26 Together with the right to cause in said airspace such
27 noise, sound or shock waves, vibrations, odors, fumes, dust, fuel
28 particles, smoke, light, thermal waves, air quality changes and
other results transmitted from the operation of aircraft of all
types now known or hereafter designed and used for navigation of
or flight in the air, by reason of any use ancillary or
incidental to the operation of the Dominant Tenement and by
reason of any operational incidental effects thereof including
such as may occur in and from take-off, landing and approach
patterns into and from the Dominant Tenement.

29 To have and to hold said easement and right-of-way and
30 all rights appertaining thereto unto Grantee, its successors,
31 assigns, lessees, sublessees, licensees and invitees, until the
32 Dominant Tenement shall be abandoned and shall cease to be used
33 for public airport purposes, it being understood and agreed that
34 these covenants and agreements shall run with the land.
35

1 Grantor, for itself, its heirs, administrators,
2 executors, successors and assigns, does hereby waive, remise and
3 release any right or cause of action which it may now have or
4 which it may have in the future against Grantee, its successors
5 and assigns, due to such noise, sound or shock waves, vibrations,
6 odors, fumes, dust, fuel particles, smoke, light, thermal waves,
7 air quality changes and other results in said airspace that may
8 be caused or may have been caused by the operation of aircraft of
9 all types now known or hereafter designed and used for navigation
10 of or flight in the air, by reason of any use ancillary or
11 incidental to the operation of the Dominant Tenement and by
12 reason of any operational incidental effects thereof including
13 such as may occur in and from take-off, landing and approach
14 patterns into and from the Dominant Tenement. Said waiver and
15 release shall include, but shall not be limited to, claims, known
16 or unknown, for damages for physical or emotional injuries,
17 discomfort, inconvenience, property damage, death, interference
18 with use and enjoyment of property, diminution of property
19 values, nuisance or inverse condemnation or for injunctive or
20 other extraordinary or equitable relief. Grantor, for itself,
21 its heirs, administrators, executors, successors and assigns,
22 agrees that Grantee shall have no duty to avoid or mitigate such
23 damages by, without limitation, setting aside or condemning
24 buffer lands, rerouting air traffic, erecting sound or other
25 barriers, establishing curfews, noise or other regulations.

14 Grantor, for itself, its heirs, administrators,
15 executors, successors and assigns, agrees not to construct or
16 permit the construction or growth of any structure, tree or other
17 object that obstructs or interferes with the use of the rights
18 herein granted or that creates electrical interference with radio
19 communication between any installation within said airport and
20 aircraft, or to cause difficulty for pilots to distinguish
21 between airport lights and other lights, or to impair visibility
22 in the vicinity of said airport, or to otherwise endanger the
23 landing, take-off or maneuvering of aircraft. Grantor, for
24 itself, its heirs, administrators, executors, successors and
25 assigns, agrees that Grantee shall have the right to mark and
26 light as obstructions to air navigation any such building,
27 structure, tree or other object now upon, or that in the future
28 may be upon the Servient Tenement, together with the right of
ingress to, egress from and passage over and within the Servient
Tenement for the purpose of accomplishing such marking and
lighting.

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APPENDIX C

"Preparation of Airport Noise Contours"
Hemet-Ryan Airport
Brown Buntion Associates
January 11, 1989

FINAL REPORT
PREPARATION OF AIRPORT NOISE CONTOURS

**HEMET RYAN AIRPORT
RIVERSIDE COUNTY, CALIFORNIA**

PREPARED FOR
RIVERSIDE COUNTY DEPARTMENT OF AVIATION
4165 BOCKTON AVENUE
RIVERSIDE, CALIFORNIA 92501

PREPARED BY
BROWN-BUNTIN ASSOCIATES, INC.
807 W. OAK AVENUE, SUITE B
VISALIA, CALIFORNIA 93291

JANUARY 11, 1989

INTRODUCTION

The following report summarizes the methods and assumptions used in the preparation of Community Noise Equivalent Level (CNEL)* contour maps for present (1990) and projected future (2005) aircraft operations at the Hemet Ryan Airport in Riverside County, California. Of particular emphasis in the study was the impact of noise generated by fire suppression aircraft operated by the California Division of Forestry (CDF) and United States Forest Service (USFS). It is intended that the noise exposure information developed during the study be utilized by Riverside County and the City of Hemet in updating the Land Use Plan around the airport.

LAND USE COMPATIBILITY

There are two descriptors of community noise exposure commonly applied to airport/aircraft operations. These are the Day/Night Average Level (L_{dn}) and Community Noise Equivalent Level (CNEL). The Federal Aviation Administration (FAA), U.S. Environmental Protection Agency (EPA) and U.S. Department of Housing and Urban Development (HUD) use the L_{dn} descriptor, which is the average noise level over a 24-hour day with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The land use compatibility standard applied by the FAA and HUD for determining the acceptability of the aircraft noise environment for the development of residential and other noise-sensitive land uses without special mitigation is 65 dB L_{dn} . The EPA suggests a goal of 55 dB L_{dn} for exterior noise environments in residential areas, but recognizes that this level is difficult to achieve in areas near major transportation noise sources.

* For an explanation of the terminology used in this report, refer to Appendix A: "Acoustical Terminology"

The California Airport Noise Regulation (CAC Title 21, Subchapter 6) establishes CNEL as the descriptor to be used for quantifying the community noise environment around airports. CNEL is determined in the same way as L_{dn} , only a penalty of approximately 5 dB is added to noise levels occurring during the evening hours (7:00 p.m.-10 p.m.), as well as the 10 dB penalty at night. Recently-proposed changes to the CAC Title 21 regulation may result in the use of L_{dn} . L_{dn} and CNEL are generally considered to be equivalent descriptors of the community noise environment within plus or minus 1.0 dB.

Most city and county jurisdictions throughout the state apply land use compatibility criteria of either 60 or 65 dB L_{dn} (or CNEL) when addressing the issue of developing residential or other noise-sensitive land uses near a major transportation noise source such as an airport. The City of Hemet Noise Element of the General Plan presently applies a land compatibility criterion of 60 dB L_{dn} to the land use planning and project review processes.

In this report, noise exposure contours are expressed in terms of CNEL to be consistent with the present CAC Title 21 regulations. Contour values of 65, 60 and 55 dB are shown on maps. The 65 dB CNEL contour should be used to address compliance with federal and state airport noise standards, the 60 dB CNEL contour should be used to judge compliance with the City of Hemet's land use compatibility standards and the 55 dB CNEL contour should be interpreted as delineating areas around the airport where significant numbers of overflights are likely to occur. Although overflights in these areas do not result in noise exposure exceeding applicable federal, state or local standards, they have the potential to cause some annoyance and/or activity interference.

OVERVIEW OF NOISE MODELING PROCESS

The Integrated Noise Model (INM) Version 3.9 was used to prepare CNEL noise exposure maps for the Hemet Ryan Airport based upon a combination of noise level and aircraft performance data from the INM data base and the results of detailed measurements of noise levels from aircraft types not described by the INM. The INM was developed for the FAA, and represents the federally-sanctioned and preferred method for analyzing aircraft/airport noise exposure. Version 3.9 is the most recent version of the INM available, and incorporates

an updated algorithm for calculating sideline noise exposure and an updated data base of aircraft performance parameters and noise levels.

The INM calculates aircraft noise exposure by mathematically combining aircraft noise levels and airport operational factors at a series of points within a cartesean coordinate system which defines the location of airport runways, and aircraft flight tracks. User inputs to the INM include the following:

- a. Airport altitude and mean temperature
- b. Runway configuration
- c. Aircraft flight track definition
- d. Aircraft stage length (where applicable)
- e. Aircraft departure and approach profiles
- f. Aircraft traffic volume and fleet mix
- g. Flight track utilization

The INM data base includes aircraft performance parameters and noise level data for 81 commercial, military and general aviation aircraft classes. When the user specifies a particular aircraft class from the INM data base, the model automatically provides the necessary inputs concerning aircraft power settings, speed, departure profile and noise levels. Since many of the aircraft types used at the Hemet Ryan Airport in the fire suppression role are not represented in the INM data base, measurements of noise levels on the ground at reference distances from the runway were conducted to provide the necessary noise level data inputs for use in the noise modeling process. Aircraft performance data and operating procedures for aircraft not represented in the INM data base were obtained from logs kept by flight crews during test flights and interviews with flight instructors. The aircraft types for which modeling assumptions were developed in this way included the DC4, S-2, SP2H and C123. The INM data base was used to represent all other aircraft types which operate at the airport, including the DC6 and C130.

Airport operational assumptions used in the noise modeling process were derived from the 1985 Master Plan Report prepared by CH2M-Hill and from discussions with Riverside County Department of Aviation staff and CDF and

USFS operators. Aircraft traffic volumes for present and projected future airport operations were based upon aviation activity forecasts for the years 1990 and 2005, respectively. Aircraft noise level data and airport operational scenarios are described in the following sections of this report.

AIRCRAFT NOISE LEVELS

Aircraft noise level measurements were conducted as part of the study for the DC4, S-2, SP2H and C123 aircraft types. Since it was not possible to arrange special flights exclusively for noise measurement purposes, it was necessary to conduct tests during normal pilot training flights prior to the 1988 fire season. Such tests were conducted at the Chico Municipal Airport (4/15/88) for the DC4 and SP2H, at Fresno Air Terminal (5/23/88) for the C123 and at the Hemet Ryan Airport (4/27/88) for the S-2.

The measurement procedure at the three airports consisted of meeting with flight crews prior to the measurement sessions to discuss aircraft operating characteristics and to determine the location of flight paths to be followed during the tests. After appropriate noise monitoring sites had been established, flight crews were asked to fly directly over the sites to the greatest extent practical and to log in the aircraft speed, power settings and altitude at each monitoring location.

Noise monitoring equipment consisted of ANSI-approved Type I (Precision) sound level meters and microphones which were calibrated in the field prior to use to ensure the accuracy of the measurement results. Equipment used included Bruel & Kjaer (B&K) Type 2218 and 2230 integrating sound level meters, a Larson-Davis Laboratories LDL800 integrating sound level meter and Metrosonics dB604 and Digital Acoustics dA607 automated sound level analyzers. B&K Type 4230 acoustical calibrators were used in the calibration process. All instruments are currently certified to be in compliance with their manufacturer's specifications and are traceable to National Bureau of Standards (NBS) reference levels.

During the tests, aircraft were being flown under operating conditions which are comparable to actual fire suppression activities. The aircraft were fully loaded and carried the normal amount of fuel necessary for their mission. In Chico and Hemet, air temperatures were cooler (60-75°F) and humidity was higher than would be expected during the normal fire season. At Fresno, the air temperature was approximately 95°F during the measurement period. Although aircraft performance is hampered by higher temperatures, it has been BBA's experience that the flatter departure profiles flown on warm days are offset to a large extent by the more efficient transmission of sound through cool moist air. For this reason, it is believed that noise levels measured during the tests are representative of noise levels which would be expected during the fire season.

Monitoring sites were selected so that they would be directly beneath the aircraft to the greatest practical extent. The distance from brake release or runway threshold was carefully determined from USGS topographic maps. For DC4 and SP2H measurements, 1 arrival and 3 departure sites were used. For C123 measurements, 2 arrival and 2 departure sites were used. For S-2 measurements, a total of 5 arrival and 5 departure sites were used. A copy of the Aircraft Noise Level Data Sheet used during the monitoring sessions is included as Appendix B of this report.

After noise monitoring tests had been completed, the measurement data were compared to aircraft speed, power settings and slant range distance (distance from the aircraft to the microphone) in order to prepare the necessary noise modeling inputs. Additionally, aircraft flight profiles and operating procedures reported by aircraft operators were used as the basis for preparing the required aircraft performance inputs for the modeling process. The level of agreement between measured and predicted noise levels at the reference noise measurement sites achieved during the modeling process is summarized in Appendix C of this report. In general, noise levels predicted by the modified INM were within plus or minus 1.5 dB of measured results. This should be regarded as excellent agreement and indicates that the noise exposure maps prepared using the model may be used with confidence in the land use planning process.

AIRPORT OPERATIONS

As previously described, the 1985 Master Plan was used as the basis for operational assumptions in the noise modeling process. A total of 6 operational scenarios were analyzed, as described in Table I. It should be noted that based upon information obtained from the CDF Air Attack Officer, it was assumed that large turboprop aircraft (such as the C130) would replace the present CDF/USFS fire tanker fleet by the year 2005. In addition to the aircraft activity and fleet mix reported in Table I, the following assumptions were made concerning airport operations.

- a. Annual average runway usage: 98% Runways 22 and 23 and 2% Runways 04 and 05.
- b. Day/Evening/Night split: 88%/10%/2%
- c. Present fire bomber operations are evenly split between DC4 and S-2 aircraft.
- d. 60% of fire bomber departures on Runway 23 are downwind departures and 40% are crosswind departures.
- e. 23% of all single and twin engine propeller aircraft operations on Runway 05-23 are touch and go operations.

TABLE I
OPERATIONAL ASSUMPTIONS USED FOR NOISE CONTOUR PREPARATION
HEMET RYAN AIRPORT
RIVERSIDE COUNTY, CALIFORNIA

	<u>Daily Operations</u>		
	<u>Annual</u> <u>Avg. Day</u>	<u>Fire</u> <u>Season Day¹</u>	<u>Peak Fire</u> <u>Season Day²</u>
<u>1990 (139,700 Annual Operations)</u>			
Fire Tankers (S-2 & DC4)	6.3	12.5	224
Single Eng. Prop. (Sailplane Tows) ³	114.6	114.6	114.6
Single Eng. Prop. (Others)	193.5	193.5	193.5
Twin Eng. Prop.	9.8	9.8	9.8
G.A. Jets	3.5	3.5	3.5
<u>2005 (330,000 Annual Operations)</u>			
Fire Tankers (130)	6.3	12.5	224
Single Eng. Prop. (Sailplane Tows) ³	208.6	208.6	208.6
Single Eng. Prop. (Others)	546.2	546.2	546.2
Twin Eng. Prop.	27.6	27.6	27.6
G.A. Jets.	11.3	11.3	11.3

- Notes: 1 Based upon 184 days of operations (May 15-Nov. 15)
2 Based upon a typical worst-case day for a fire season
3 Includes powered flights only

Sources: Hemet Ryan Master Plan (1985)
CDF Air Attack Officer
Brown-Buntin Associates, Inc.

A map showing the generalized aircraft flight tracks used in the noise modeling process is shown as Figure 1. The generalized flight tracks shown in Figure 1 are based upon information obtained from the 1985 Master Plan, observations by BBA staff during field studies at the airport and information obtained from Riverside County Department of Aviation staff and CDF/USFS aircraft operators. The flight tracks shown in Figure 1 are indicative of areas near the airport with the greatest concentration of overflights and should not be interpreted to mean that overflights do not occur in other areas.

NOISE EXPOSURE MAPS

CNEL contour maps were prepared for the six airport operational scenarios described in the previous section of this report. For general aviation aircraft not related to fire suppression activities, aircraft noise level and performance data were obtained directly from the INM data base. Aircraft types from the INM data base used to model such operations included the single engine propeller with variable pitch (GASEPV), the composite single engine propeller (COMSEP) and the Beech Baron for twin engine propeller aircraft operations (BEC58P). The Lear 35 (LEAR35) was selected from the INM data base to model noise exposure from general aviation jet aircraft which presently use or may use the airport in the future. Since the C130 and DC6 are represented in the INM data base, aircraft noise level and performance data for these aircraft were obtained directly from that source. Although the airport is used by all of the fire suppression aircraft types addressed in this report on an intermittent basis, the majority of such operations are by the S-2 and DC4. For this reason, the S-2 and DC4 were used to represent all present fire suppression operations at the airport for the preparation of CNEL contour maps.

Figures 2-7 show CNEL contours of 55, 60 and 65 dB for existing (1990) and projected future (2005) airport operations. The scale of the contour maps is 1 inch equals 4000 feet. As previously mentioned, it was assumed that the DC4 and S-2 make up the majority of the current fire suppression operations and that the C130, or a similar turboprop aircraft, would make up the majority of fire suppression operations by 2005. The present runway configuration was

Figure 1: Generalized Aircraft Flight Tracks

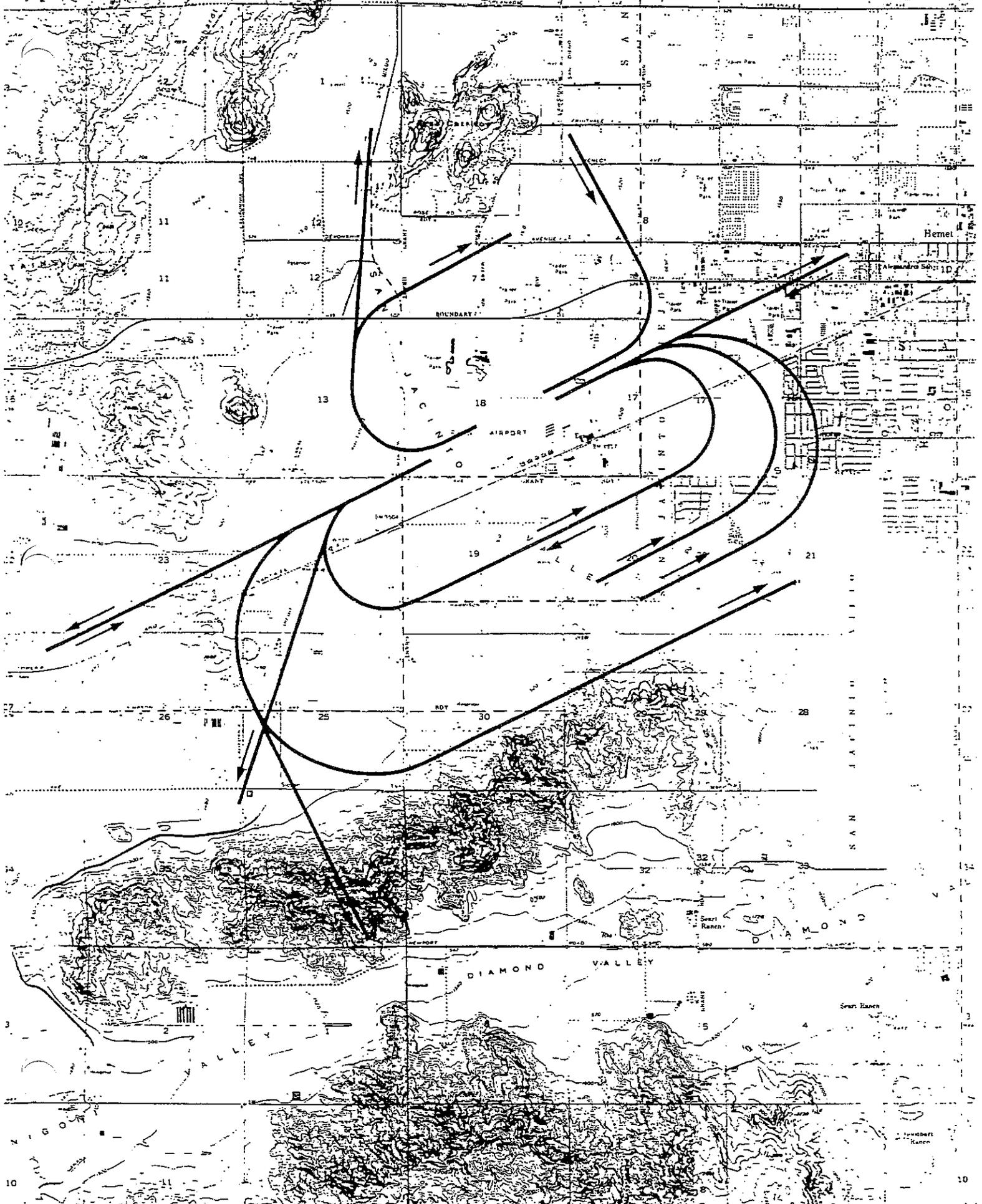


Figure 2: Annual Average Day-1990

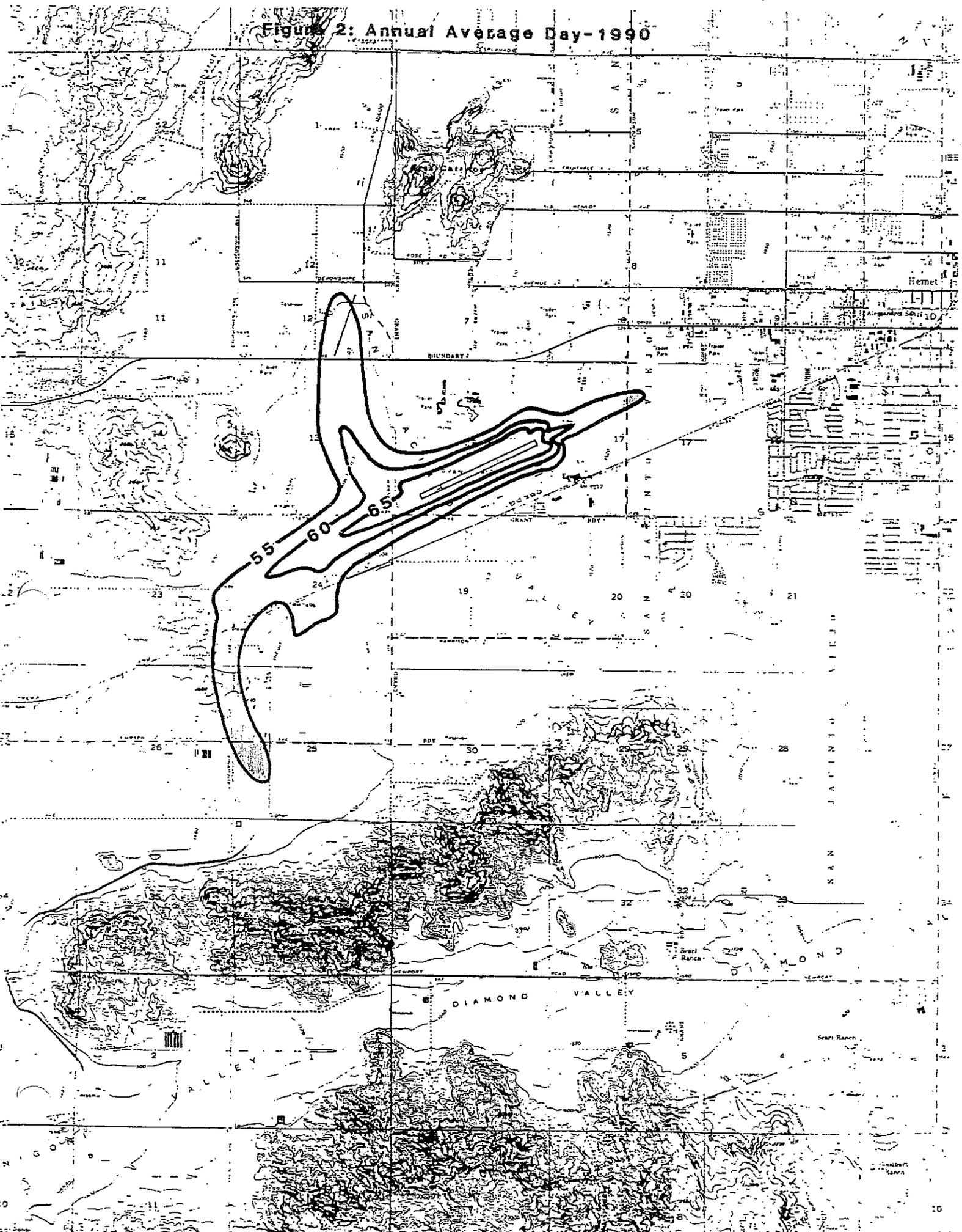


Figure 3. Average Fire Season Day-1990

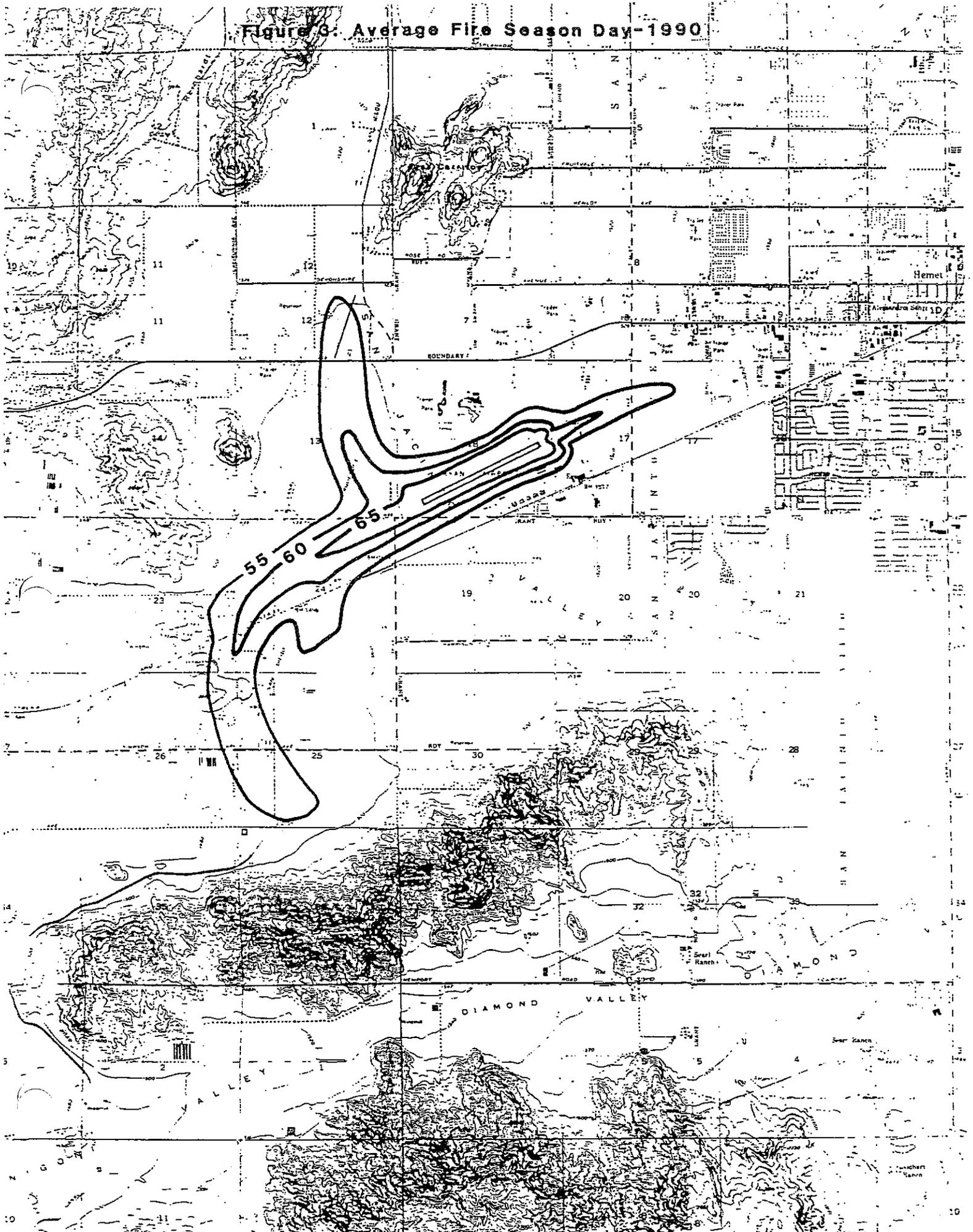


Figure 4: Worst Case Fire Day-1990

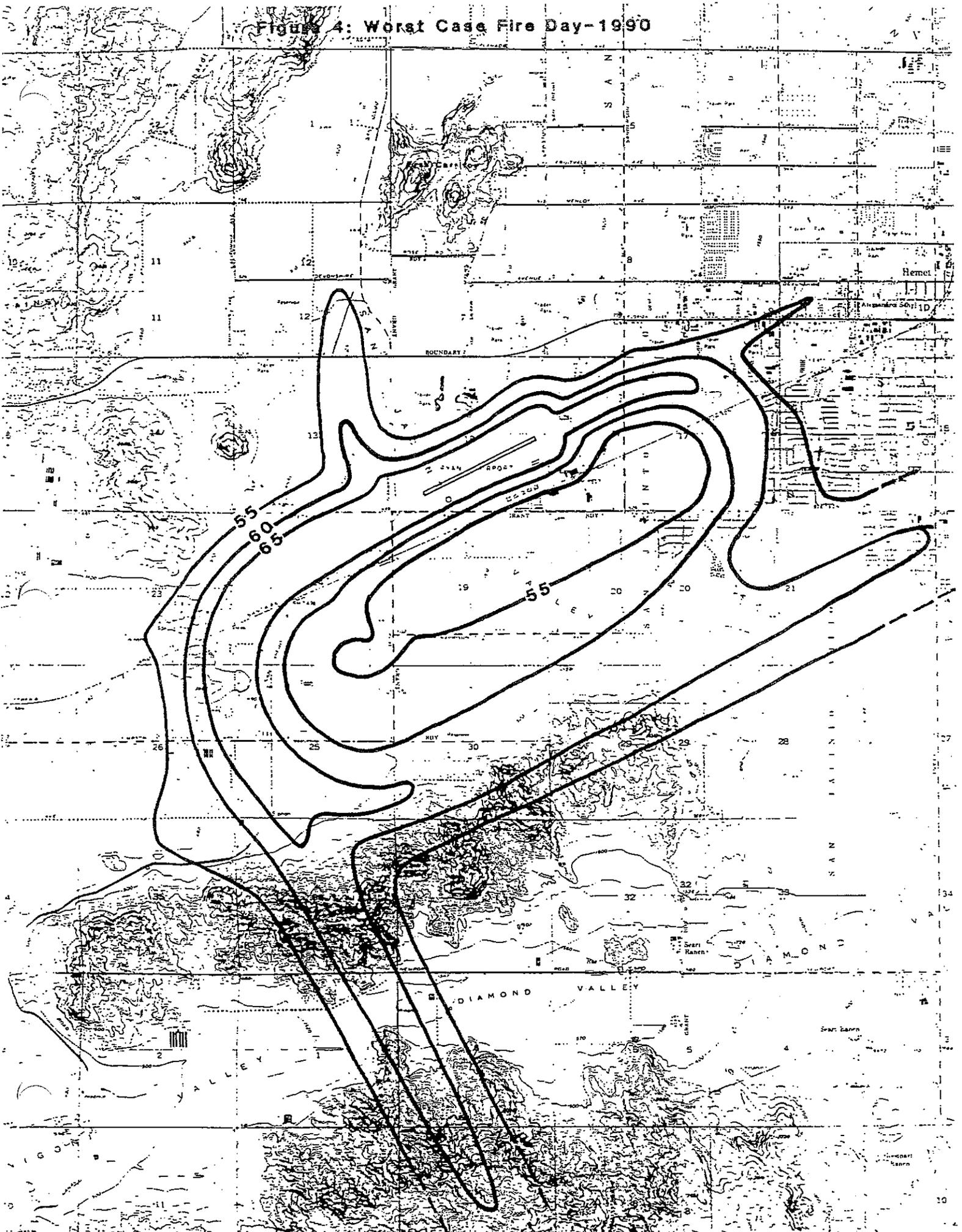


Figure 5: Annual Average Day-2005

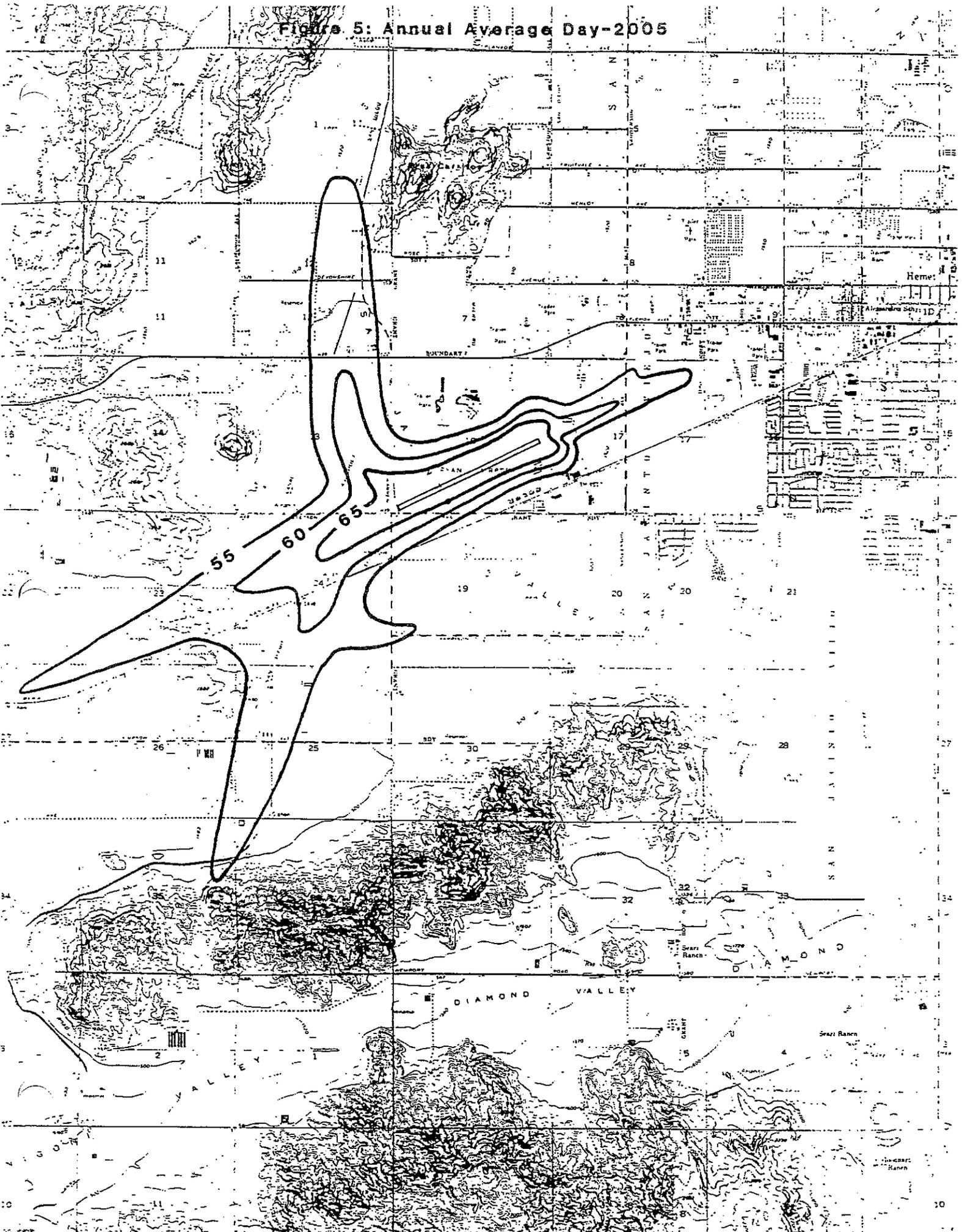


Figure 6: Average Fire Season Day-2005

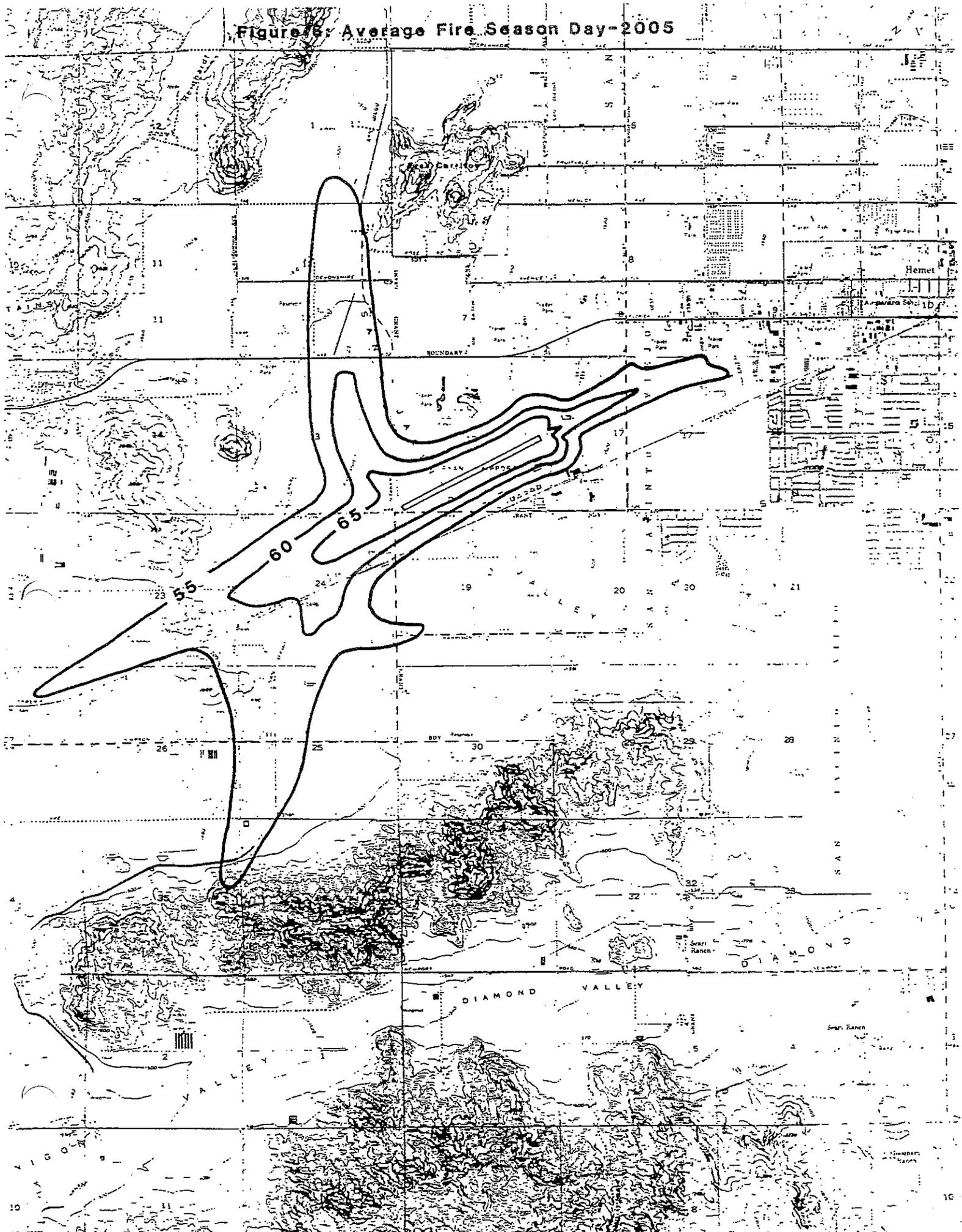
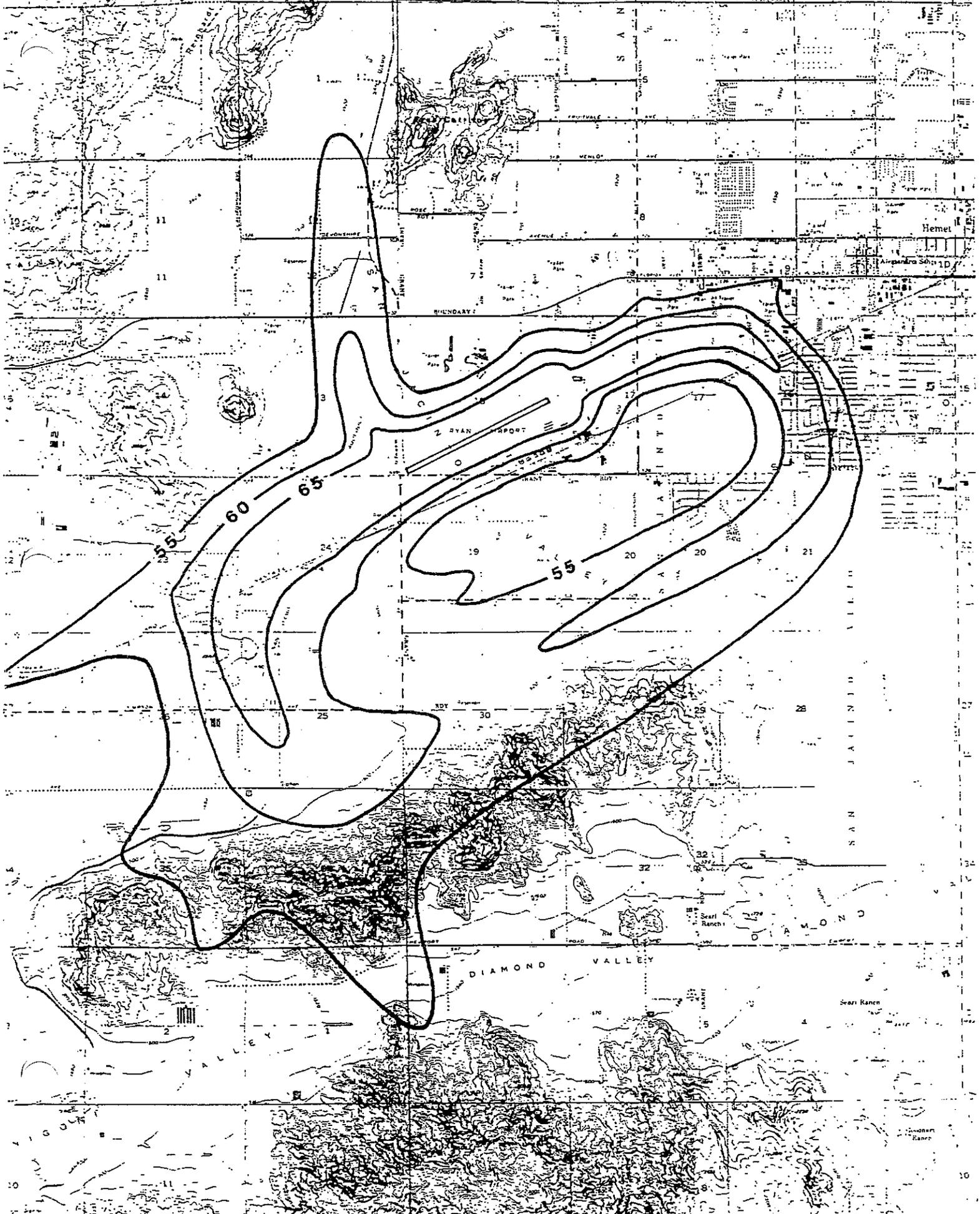


Figure 7: Worst Case Fire Day-2005



assumed for the 1990 maps. The extended runways described in the 1985 Master Plan were assumed for the preparation of the 2005 maps. It should be noted that the 55 dB CNEL contour for a worst-case fire day with the present fire suppression aircraft fleet (S-2 and DC4) extends off the base map used to show the contours. In reality, it is expected that the 55 dB CNEL contour would not extend to such a great distance from the airport due to variations in flight paths followed as aircraft head for their drop locations. Table II contains a comparison of land area within the contours for each of the six operational scenarios analyzed.

TABLE II

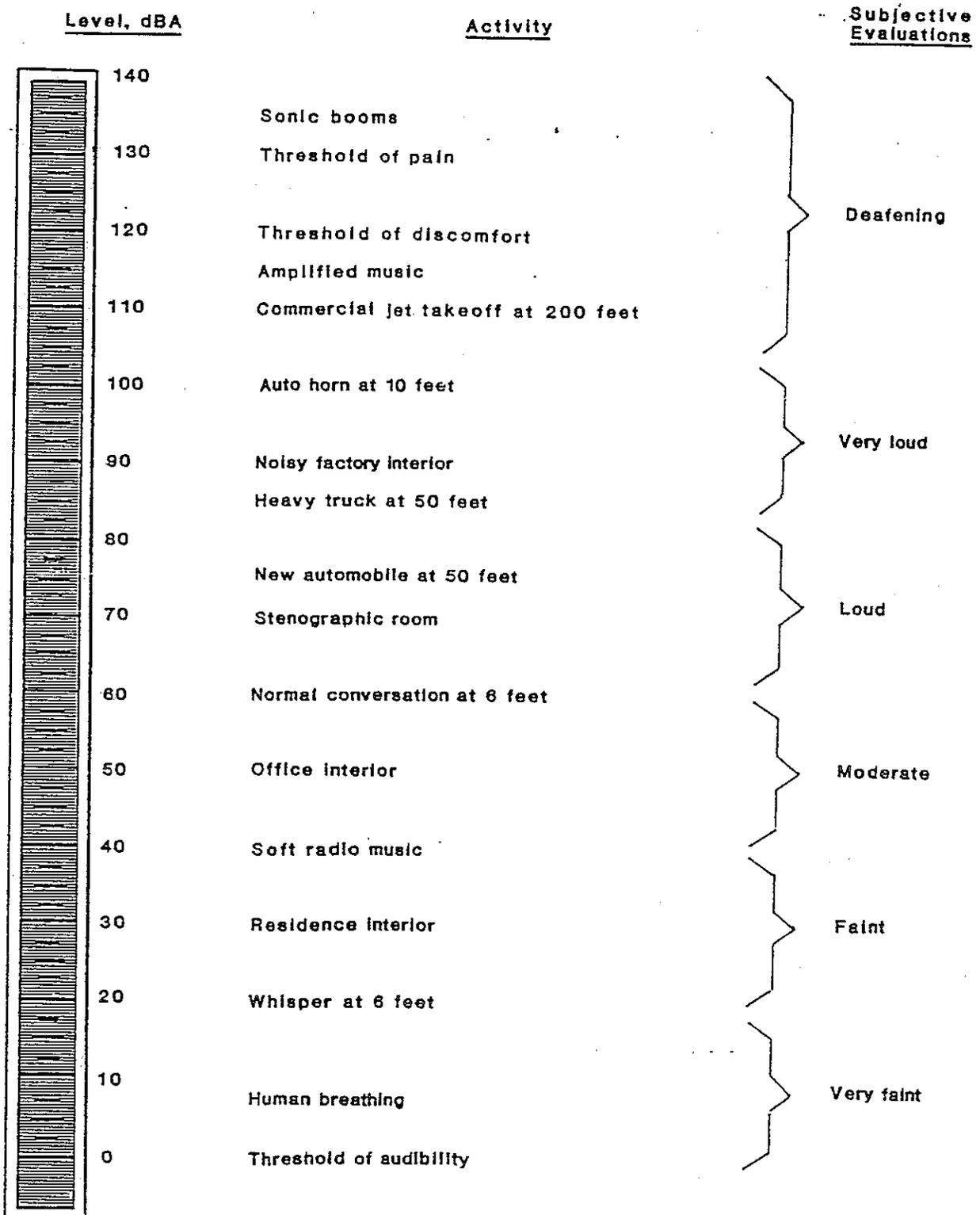
SUMMARY OF LAND AREA WITHIN CNEL CONTOURS
HEMET RYAN AIRPORT
RIVERSIDE COUNTY, CALIFORNIA

Operational Scenario	Area (sq. mi.) Within Contours		
	55 CNEL	60 CNEL	65 CNEL
1990 (Annual Avg. Day)	1.62	0.54	0.21
1990 (Avg. Fire Season Day)	1.98	0.66	0.25
1990 (Peak Fire Season Day)	17.73	5.80	1.60
2005 (Annual Avg. Day)	3.36	1.01	0.39
2005 (Avg. Fire Season Day)	3.64	1.09	0.40
2005 (Peak Fire Season Day)	11.40	4.30	1.50

Source: Brown-Buntin Associates, Inc.

In order to provide a frame of reference for comparing noise levels generated by individual operations by the different types of fire suppression aircraft, single event contours representative of the area around the airport exposed to maximum noise levels of 90 dBA or greater were prepared. These contours are included in Appendix D of this report, along with drawings of each aircraft type for identification purposes. The drawings were taken from the 1982 edition of Jane's World Aircraft Recognition Handbook by Derek Wood. Although each aircraft type has a distinctive sound due to the frequency content of engine, propeller and aerodynamic sources, 90 dBA may be compared to Figure 8, which describes noise levels from various familiar community sources.

Examples of Noise Levels



BBA

APPENDIX A

ACOUSTICAL TERMINOLOGY

- AMBIENT NOISE LEVEL:** The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- A-WEIGHTED SOUND LEVEL:** The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
- CNEL:** Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
- DECIBEL, dB:** A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
- EQUIVALENT ENERGY LEVEL, L_{eq} :** The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
- L_{dn} :** Day/Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
- NOTE:** CNEL and L_{dn} represent daily levels of noise exposure average on an annual basis, while L_{eq} represents the equivalent energy noise exposure for a shorter time period, typically one hour.
- L_{max} :** The maximum A-weighted noise level recorded during a noise event.
- L_n :** The sound level exceeded "n" percent of the time during a sample interval. L_{10} equals the level exceeded 10 percent of the time (L_{90} , L_{50} , etc.)
- NOISE EXPOSURE CONTOURS:** Lines drawn about a noise source indicating constant energy levels of noise exposure. CNEL and L_{dn} are the descriptors utilized herein to describe community exposure to noise.

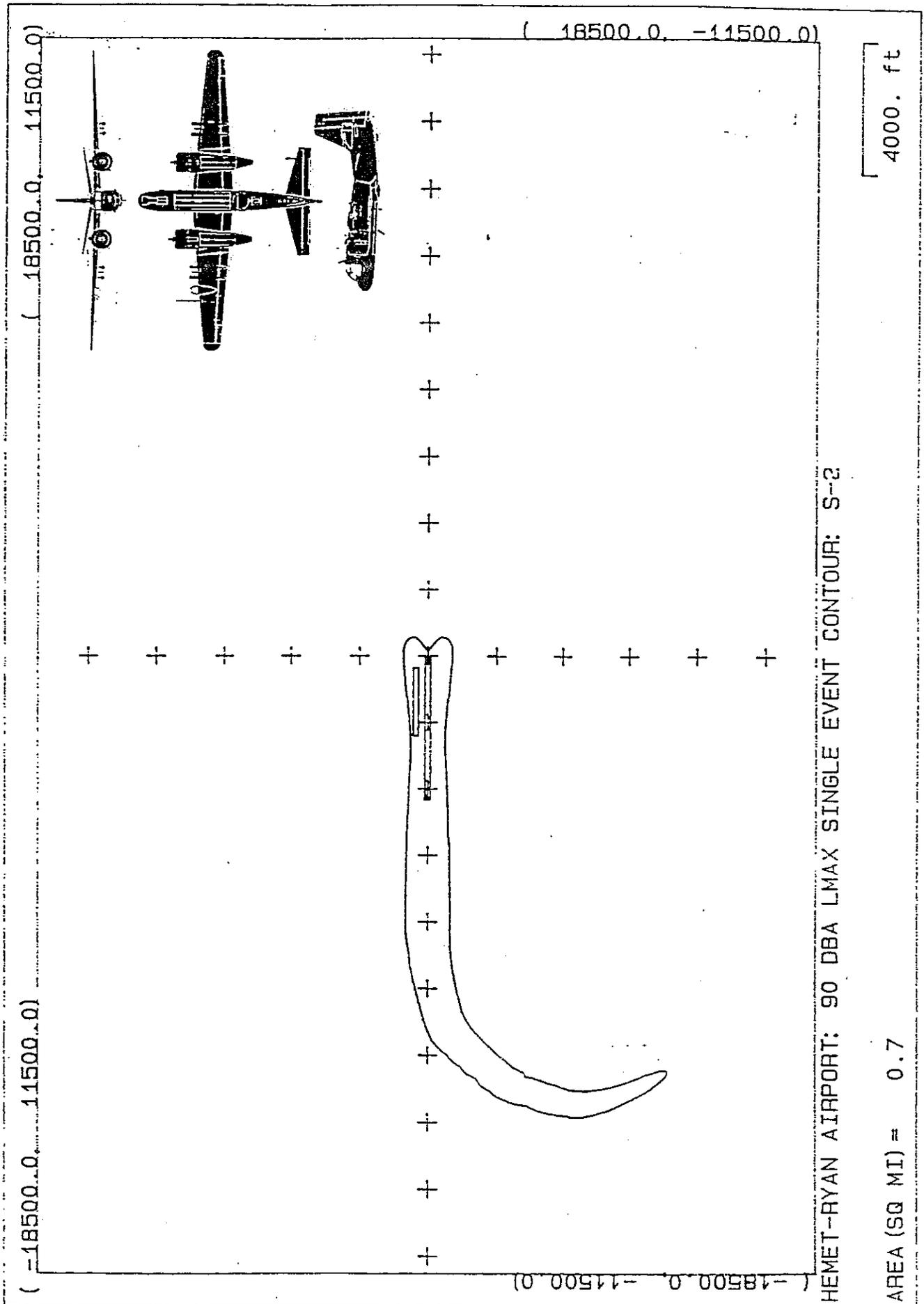
APPENDIX C

COMPARISON OF MEASURED AND PREDICTED NOISE LEVELS HEMET RYAN AIRPORT RIVERSIDE COUNTY, CALIFORNIA

Aircraft Type	Monitoring Site	Takeoff (T) or Landing (L)	Distance*	Measured SEL, dB	Predicted SEL, dB
C123	1	(T)	13,100'	108.1	108.8
	2	(T)	23,500'	104.6	103.9
	3	(L)	4,500'	89.5-90.3	91.2
	4	(L)	9,500'	87.8-89.9	88.1
S-2	1	(T)	5,400'	104.6-110.5	108.5
	2	(T)	9,000'	90.4-96.1	93.7
	3A	(T)	22,000'	93.4	91.6
	3B	(T)	22,000'	93.0	94.8
	3C	(T)	22,000'	94.7	94.1
	3 (Composite)	(T)	22,000'	93.7	93.7
	4	(L)	12,000'	86.8-91.7	89.5
	5	(L)	6,000'	90.2	92.4
	5A	(L)	6,000'	96.3	96.0
	5B	(L)	6,000'	79.8-96.3	92.2
	5 (Composite)	(L)	6,000'	91.2	92.7
6	(L)	3,800'	97.1	97.7	
DC4	1	(T)	10,250'	103.8	104.2
	2B	(T)	14,000'	94.3-99.8	92.2
	2C	(T)	14,000'	101.7	101.7
	3	(L)	5,500'	92.0-95.7	93.4
SP2H	1	(T)	10,250'	90.9-95.8	92.8
	2B	(T)	14,000'	86.4	86.1
	3	(L)	5,500'	84.9-86.0	85.2

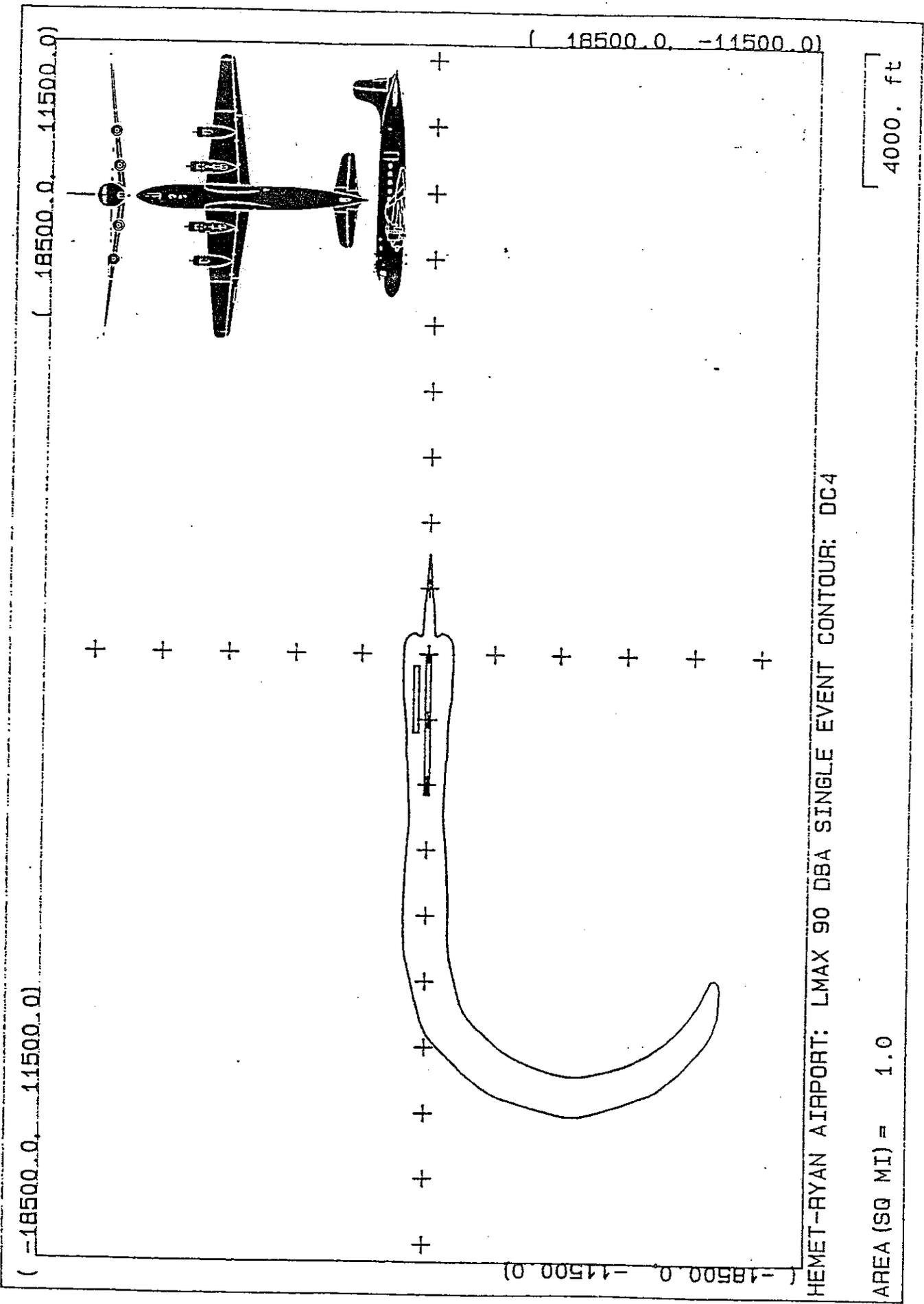
* Distance from brake release for takoffs and from runway landing threshold for landings. Not all measurements were obtained directly beneath the aircraft.

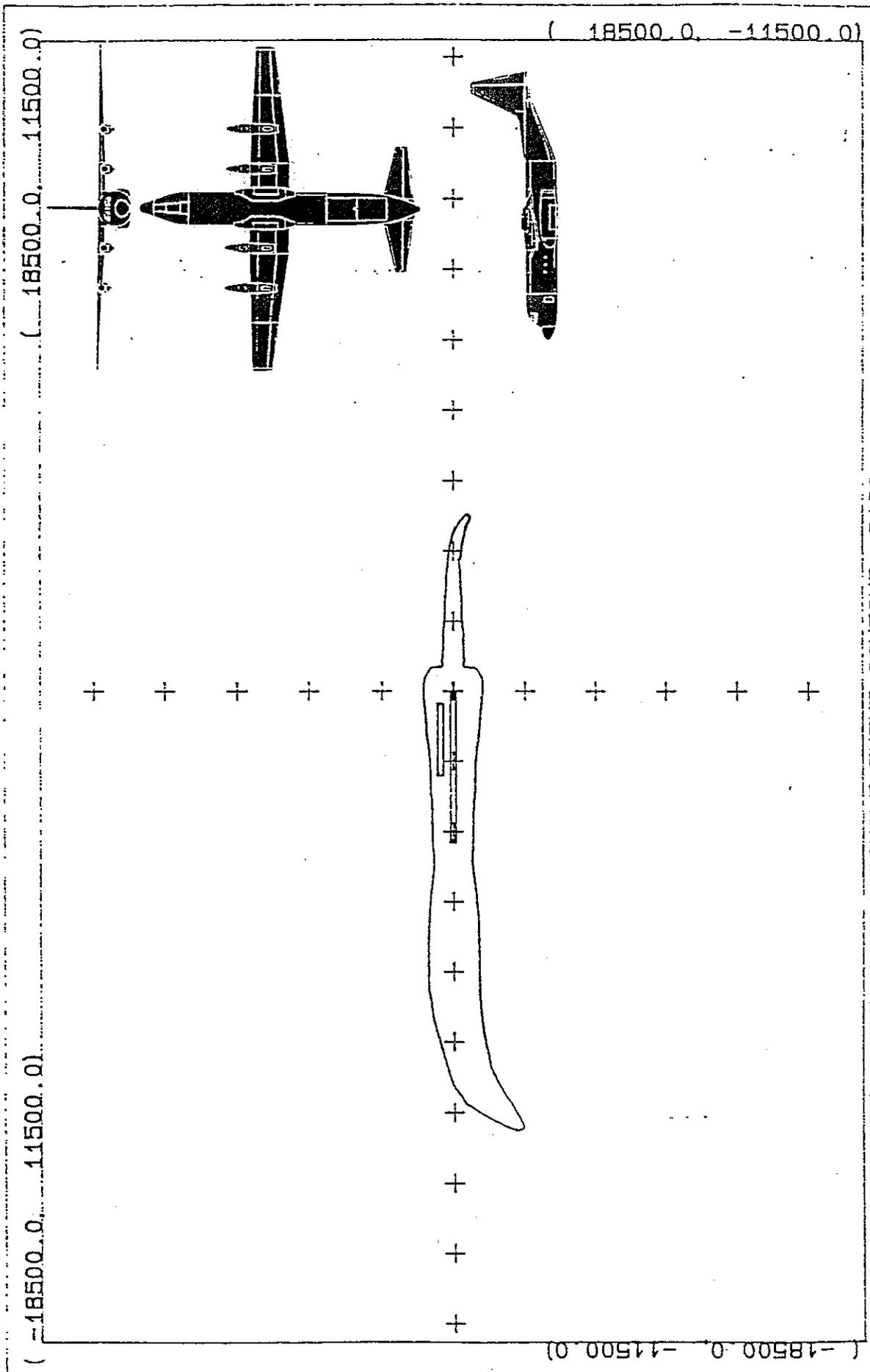
Source: Brown-Buntin Associates, Inc.



HEMET-RYAN AIRPORT: 90 DBA LMAX SINGLE EVENT CONTOUR: S-2

AREA (SQ MI) = 0.7

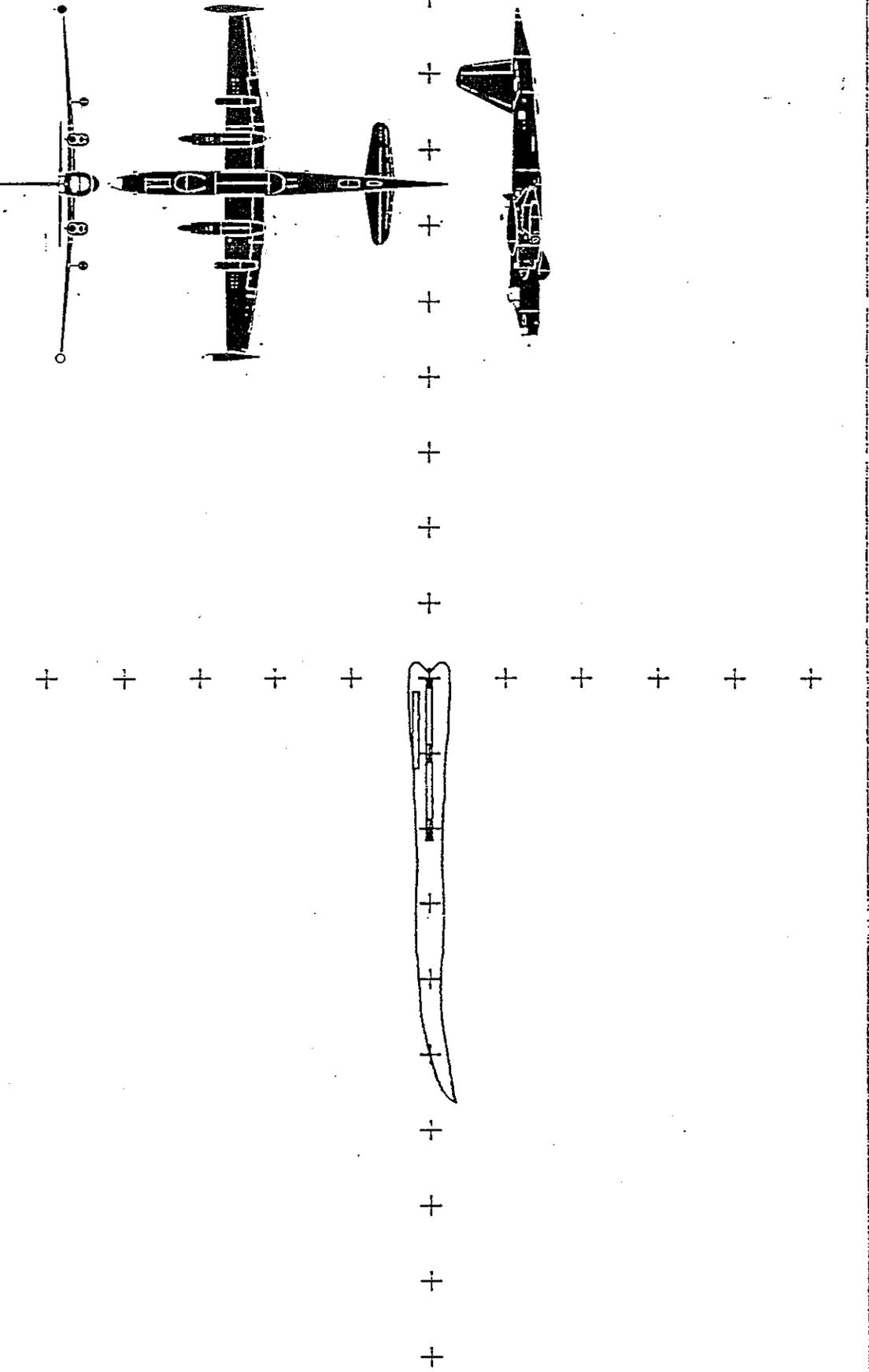




HEMET-RYAN AIRPORT: LMAX 90 DBA SINGLE EVENT CONTOUR: C130

AREA (SQ MI) = 0.7

(-18500.0, 11500.0) (18500.0, 11500.0)

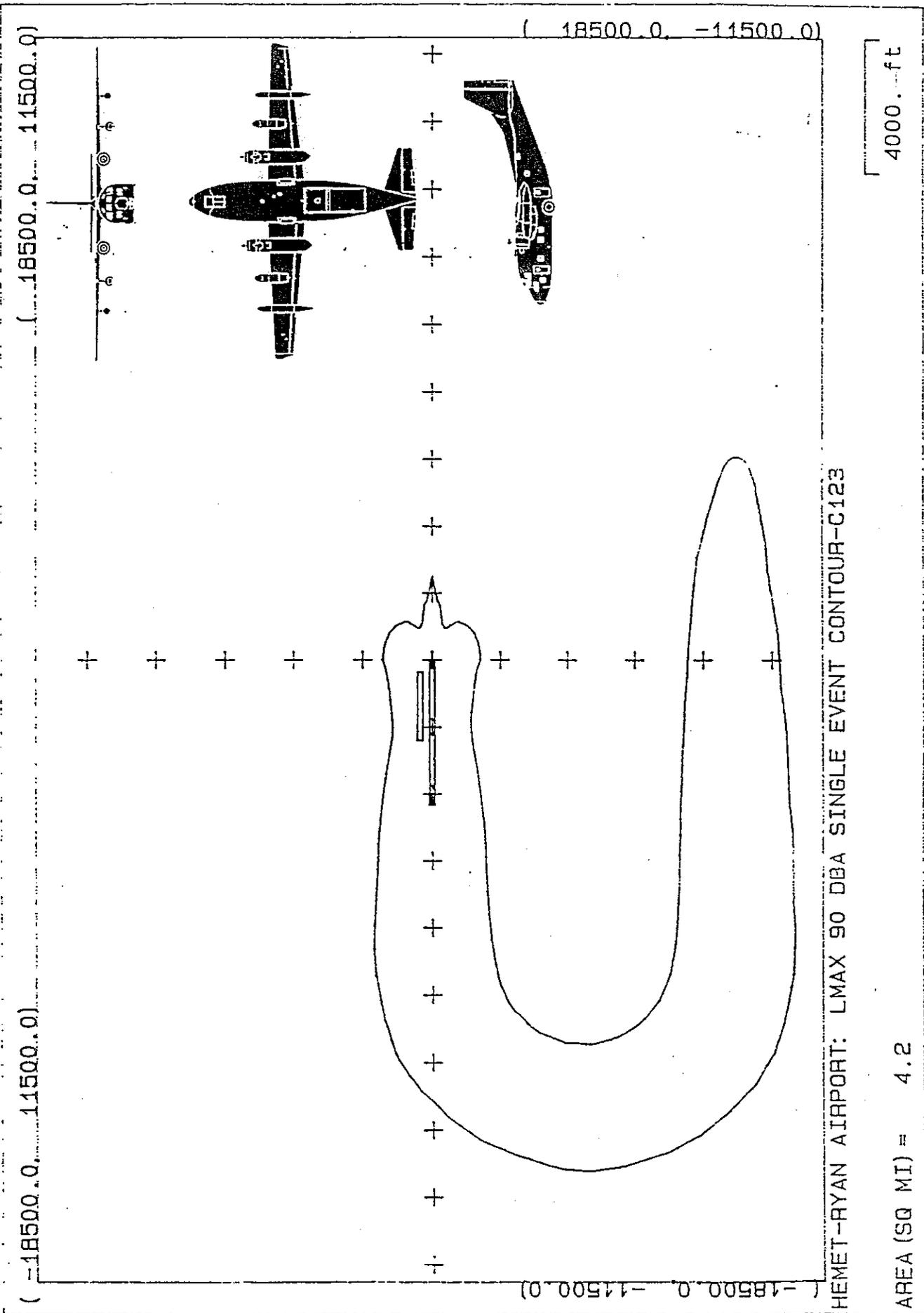


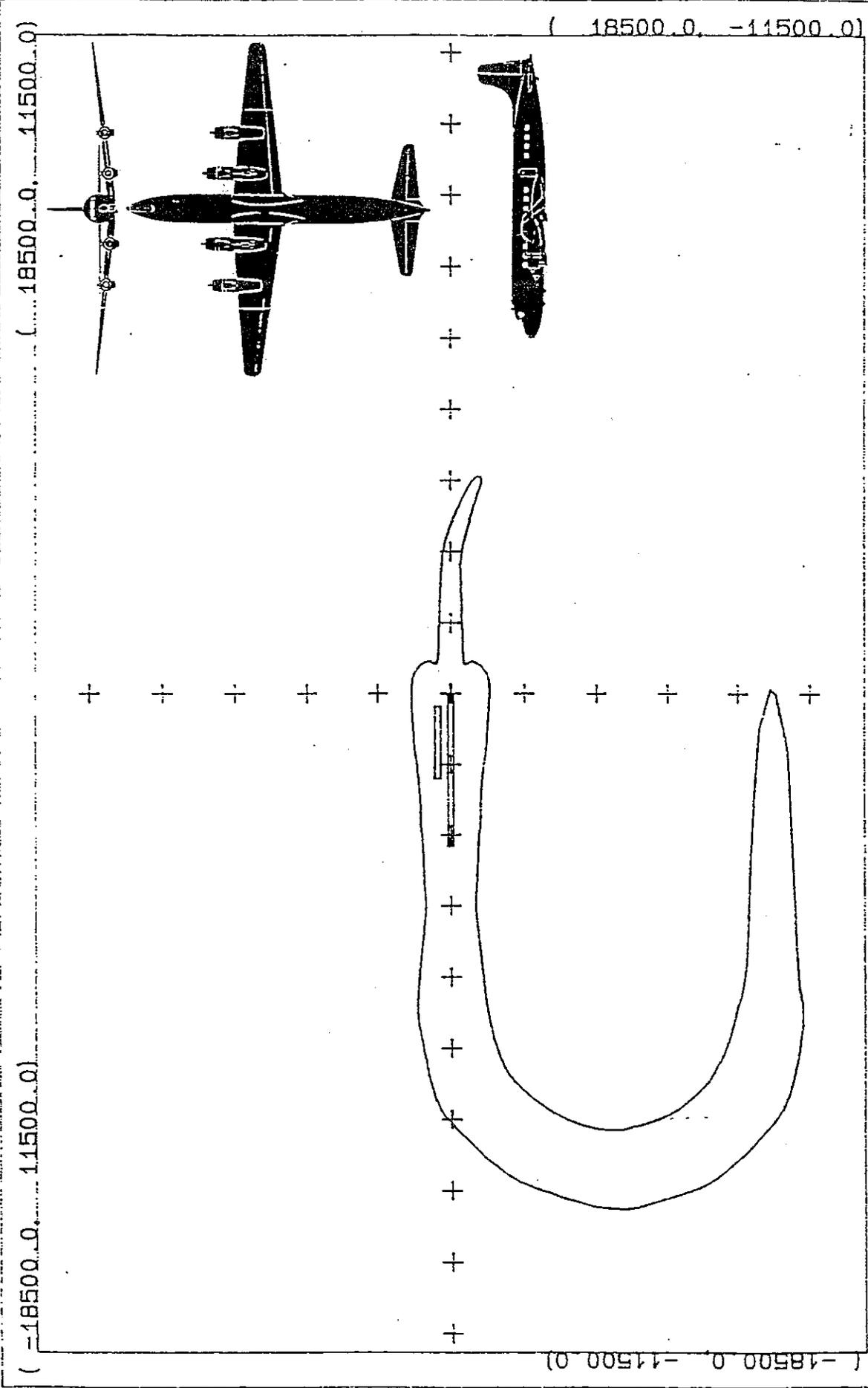
(18500.0, -11500.0)

HEMET-RYAN AIRPORT: LMAX 90 DBA SINGLE EVENT CONTOUR: SP2H

AREA (SQ MI) = 0.3

4000. ft





HEMET-RYAN AIRPORT: 90 DBA SINGLE EVENT CONTOUR: DC6

AREA (SQ MI) = 2.1

4000. ft