FINAL DRAFT

COMPREHENSIVE LAND USE PLAN
SANTA CLARA COUNTY

SOUTH COUNTY AIRPORT

Prepared for
SANTA CLARA COUNTY
AIRPORT LAND USE COMMISSION
San Jose, California
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Amended
11/16/16

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Section 1

1 INTRODUCTION AND BACKGROUND

1.1 PURPOSE AND SCOPE

This Comprehensive Land Use Plan (CLUP) is intended to safeguard the general welfare of the inhabitants within the vicinity of South County Airport (also referred to as the "Airport" throughout this report) and the aircraft occupants. This CLUP is also intended to ensure that surrounding new land uses do not affect the Airport's continued operation.

Specifically, the CLUP seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. The implementation of this CLUP is intended to prevent future incompatible development from encroaching on the Airport and allow for its development in accordance with the current airport master plan.

The aviation activity forecast for the Airport was updated to reflect the existing aviation activity and provide at least a 20-year forecast of activity. The updated aviation activity forecast formed the basis for preparation of 2022 aircraft noise contours. The Airport Master Plan and updated aviation activity forecast and available aircraft noise contours formed the basis for preparation of this CLUP.

1.2 LEGAL AUTHORITY

The Public Utilities Code of the State of California, Sections 21670 et seq. authorizes each county to establish an Airport Land Use Commission (ALUC) and defines its range of responsibilities, duties and powers. The Santa Clara County Airport Land Use Commission is composed of 7 members, two appointed by the Santa Clara County Board of Supervisors, two appointed by the Santa Clara County City Selection Committee, two appointed by a committee composed of the Aviation Director of San Jose International Airport and the Director of the County Roads and Airports Department and one appointed at large by the ALUC.

Section 21675 requires the ALUC to formulate and maintain a comprehensive land use plan (CLUP) for the area surrounding each public-use airport within Santa Clara County. A CLUP may also be developed for a military airport at the discretion of the ALUC. The County has four public-use airports, San Jose International, Palo Alto Airport, Reid-Hillview Airport and South County Airport, and one federally owned airport, Moffett Federal Airfield. South County Airport is defined as a General Aviation Airport (as opposed to an Air Carrier Airport) due to the type of aircraft that use this airport. Section 21675 also specifies that comprehensive land use plans will:

> *(a) …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, may specify use of land, and may 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.*

1.3 BACKGROUND AND HISTORY

Legislation passed by the State of California in 1967 mandated the creation of an Airport Land Use Commission in each county that had an airport served by a scheduled airline or operated for use by the general public. In conformance with this legislation the Planning Policy Committee, an existing decision-making body with representation from the 5 cities and the County, was designated to be the Airport Land Use Commission (ALUC) for Santa Clara County by the Board of Supervisors and the Select Committee of Mayors. After certification by the California Secretary of State, the Airport Land Use Commission officially came into existence in Santa Clara County in January of 1971. Their first land use policy plan was adopted on June 28, 1973. The 1973 policy plan (the land use plan preceding this Comprehensive Land Use Plan) was amended in 1974 and 1991, and last adopted by the ALUC in September 1992.

1.4 CONTENTS OF THE COMPREHENSIVE LAND USE PLAN

The Comprehensive Land Use Plan contains several major elements:

- The existing and planned-for facilities at the Airport that are relevant to preparing the CLUP;
- Appropriate noise, height, and safety restriction policies and land use compatibility standards;
- Specific findings of compatibility or incompatibility with respect to existing land uses, proposed General Plan land uses, or existing zoning controls; and
- Specific actions that need to be taken to make the County of Santa Clara and the cities' General Plans, Specific Plans, Master Plans and/or Zoning Ordinances consistent with the Comprehensive Land Use Plan.

The CLUP establishes an airport land use planning area, referred to as the Airport Influence Area (AIA), which sets the boundaries for application of ALUC Policy. The CLUP contains the relevant policies and guidelines for land use compatibility and specific findings of compatibility or incompatibility of land uses within the AIA. Of particular interest to the ALUC are areas "not already devoted to incompatible uses" and, more specifically, undeveloped lands within the AIA. The planning effort is focused on identifying these lands because the policies and standards of the plan are intended to control the compatibility of future development in these areas.

The CLUP is not intended to define allowable land use for a specific parcel of land, although the plan establishes development standards or restrictions that may limit or prohibit certain types of uses and structures on a parcel. The CLUP is not retroactive with respect to existing incompatible land uses, but discusses actions to be taken when expansion, replacement or other significant changes are made to incompatible land uses.

1.5 TECHNICAL REFERENCE DOCUMENT

A separate Technical Reference Library is being maintained by the County of Santa Clara. The Technical Reference Library will contain the major reference documents associated with the land use compatibility planning criteria in this CLUP. The documents will be available for review at Santa Clara County Planning Office.

Section 2

2 SOUTH COUNTY AIRPORT AND ENVIRONS

2.1 AIRPORT ROLE

South County Airport is geographically located in the southeast area of Santa Clara County, between the cities of Morgan Hill and Gilroy. The Airport is located on 179 acres of land, at an elevation of 281 feet above mean sea level (at the FAA Airport Reference Point). The Airport is owned by the County of Santa Clara and surrounded by the community of San Martin. The location of the Airport with respect to nearby communities and other airports is illustrated on Figure 1.

South County Airport (the Airport) is the smallest and least active General Aviation airport in the county. General Aviation is defined as all aviation other than Air Carrier (commercial passenger flights), Commuter/Air Taxi and Military. While commercial airfreight is also a part of General Aviation, General Aviation activity consists mostly of single-engine and small twin-engine aircraft, typically holding six or fewer people. South County Airport has a full range of aircraft parking/storage facilities, aircraft fueling facilities and aircraft support operations, commonly known as Fixed Base Operators (FBOs). FBO activities include flight training, aircraft maintenance and repair, and aircraft engine overhaul facilities. The Airport is developing a new Airport Master Plan involving a significant expansion and it is expected that the flight activity will increase as a consequence of this expansion. This will make this airport very attractive as a destination for corporate aircraft visiting business customers in southern Santa Clara Valley.

South County Airport is classified as a General Aviation Reliever Airport. General Aviation Airports are airports that do not have scheduled commercial air-carrier service. General Aviation Airports are the most convenient source of air transportation for about 19 percent of the U.S. population and are particularly important to corporate aircraft, based on the latest publication of the Federal Aviation Administration's (FAA*) National Plan of Integrated Airport Systems* (NPIAS) (2007-2011). The South County Airport is listed in the NPIAS and is designated as a reliever airport.

Frazier Lake Airpark is the nearest airport to South County Airport, located 11 miles southeast. Frazier Lake Airpark is a privately owned public use general aviation airport. The nearest publicly owned airport is Watsonville Municipal Airport located 15 miles southwest of the Airport. The nearest air carrier airport is San Jose International Airport, located 27 miles northwest of South County Airport. Other airports in the vicinity are Hollister Municipal Airport located 17 miles to the southeast; Reid-Hillview Airport, 22 miles northwest and Salinas Municipal Airport located 28 miles south.

2.2 AIRPORT LAYOUT PLAN

The previous South County Airport, Airport Master Plan was accepted by the Federal Aviation Administration (FAA) in June 1982. The most recent Airport Layout Plan (ALP), illustrated on Figure 2, delineates the layout of existing Airport facilities as of February 1998. This ALP does not reflect the current airport environment or airport data and is currently being revised as a part of the Airport Master Plan update. The FAA-approved ALP is used by the FAA for Airport Improvement Program (AIP) grant funds for eligible construction and development projects. AIP grant funds are dispersed on the basis of a priority based on activity levels.

Selected data about the existing Airport facilities and information about its planned development are presented in the following paragraphs.

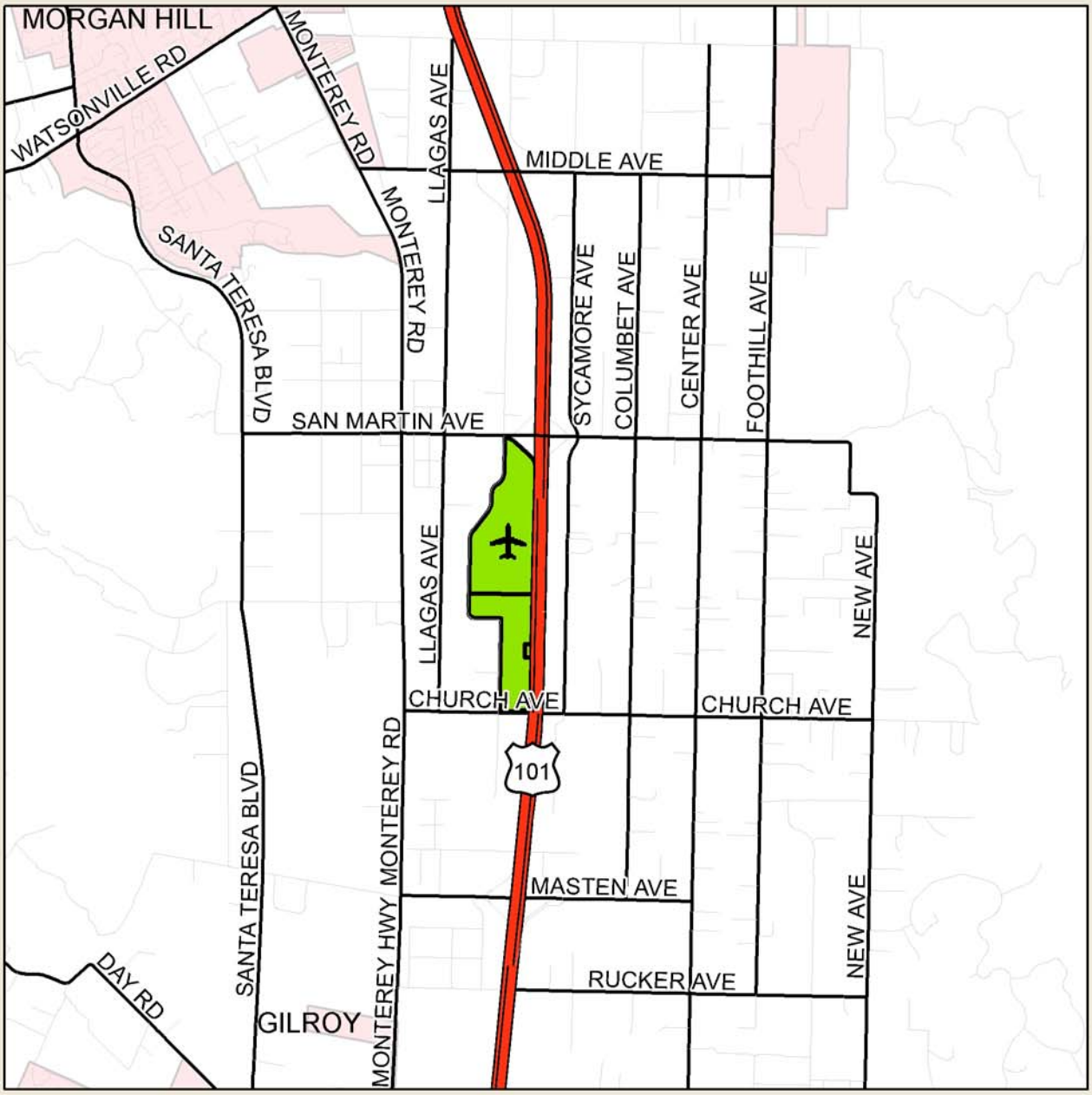
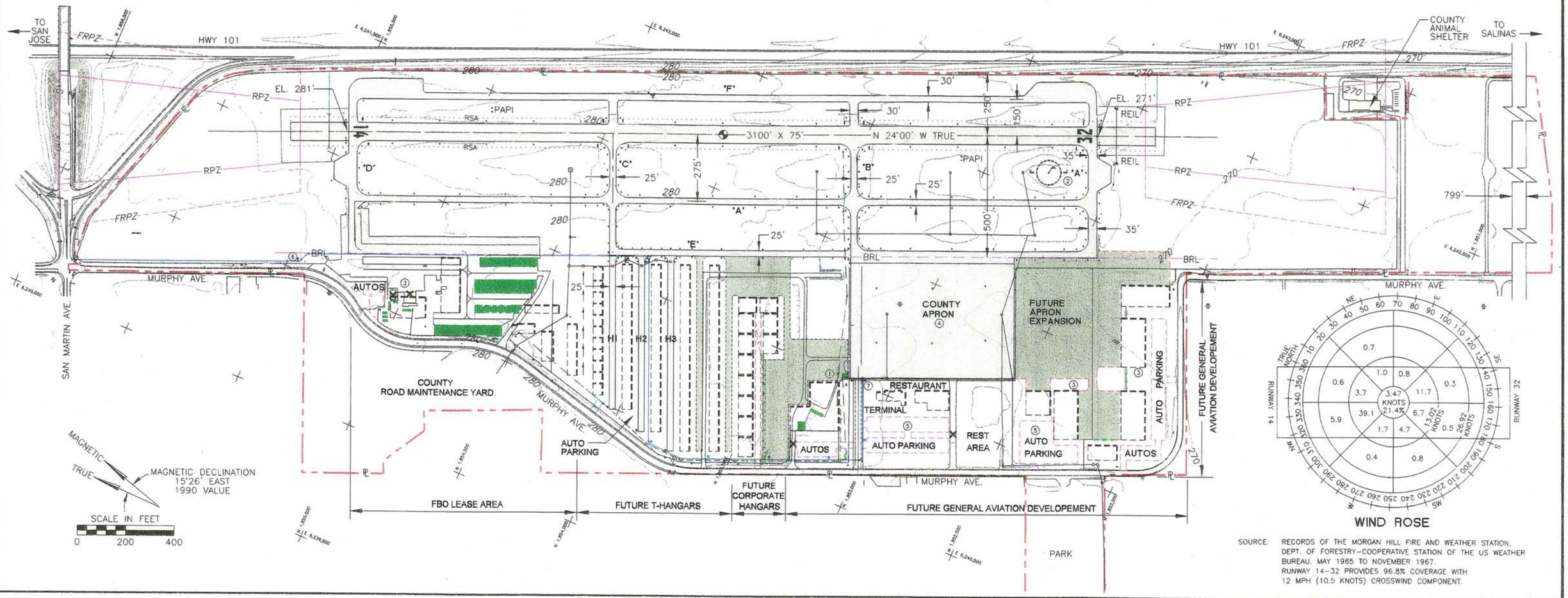


Figure 1
South County Airport
Location Map



SOURCE: RECORDS OF THE MORGAN HILL FIRE AND WEATHER STATION, DEPT. OF FORESTRY–COOPERATIVE STATION OF THE US WEATHER BUREAU. MAY 1965 TO NOVEMBER 1967.
RUNWAY 14–32 PROVIDES 96.8% COVERAGE WITH 12 MPH (10.5 KNOTS) CROSSWIND COMPONENT.

LEGEND

	EXISTING	FUTURE
AIRPORT REFERENCE POINT		SAME
AIRPORT PROPERTY LINE	—P—	SAME
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	--BRL--	SAME
RUNWAY SAFETY AREA	RSA	SAME
RUNWAY PROTECTION ZONES	—RPZ—	—FRPZ—
BUILDINGS		
FACILITIES		
FACILITY TO BE REMOVED	N/A	X
FENCE		
LIGHTING		N/A
WIND CONE		N/A

AIRPORT DATA

		EXISTING	FUTURE
AIRPORT REFERENCE CODE		A–1	SAME
ELEVATION (MSL)		281'	SAME
TEMPERATURE (MEAN MAX. OF HOTTEST MONTH)		90°F	SAME
REFERENCE POINT COORDINATES (NAD 1983)	LATITUDE	N 37°04'53.71"	SAME
	LONGITUDE	W 121°35'48.50"	SAME
NAVIGATIONAL AIDS		NONE	SAME
ACREAGE	FEE TITLE	179	SAME
	AVIGATION EASEMENT	–	SAME
BASED AIRCRAFT PARKING DEMAND	TIEDOWNS	–	–
	HANGARS/SHELTERS	–	–
	TOTAL	–	–
TRANSIENT AIRCRAFT TIEDOWN DEMAND		–	–
AIRPORT RESCUE & FIRE FIGHTING INDEX (ARFF)		N/A	N/A

RUNWAY DATA

			RUNWAY 14–32 EXISTING	RUNWAY 14–32 FUTURE
AIRPORT REFERENCE CODE			A–1	SAME
RUNWAY CLASSIFICATION			BU–II	SAME
PHYSICAL LENGTH AND WIDTH			3100'x75'	SAME
THRESHOLD DISPLACEMENT (D) OR RELOCATION (R)			NONE	SAME
EFFECTIVE GRADIENT (%)			0.32	SAME
PAVEMENT STRENGTH (1000#) SINGLE GEAR			12.5	SAME
LIGHTING AND VISUAL AIDS			MIRL	SAME
MARKING			BASIC	SAME
CRITICAL AIRCRAFT	RUNWAY LENGTH		C–182	SAME
	PAVEMENT STRENGTH		C–182	SAME
	WINGSPAN		C–182	SAME
APPROACH TYPE	14		VISUAL	NONPRECISION
	32		VISUAL	NONPRECISION
APPROACH SLOPE: REQUIRED/CLEAR	14		20:1/20:1	SAME
	32		20:1/20:1	SAME
APPROACH & LANDING AIDS	14		VASI	SAME
	32		VASI, REIL	SAME
RUNWAY END COORDINATES (NAD 1983)	14	LAT.	N 37°05'07.73"	SAME
		LONG.	W 121°35'56.21"	SAME
	32	LAT.	N 37°04'39.70"	SAME
		LONG.	W 121°35'40.79"	SAME
RUNWAY SAFETY AREA DIMENSIONS:	WIDTH		120	SAME
	LENGTH (BEYOND END)		240	SAME
RUNWAY PROTECTION ZONE DIMENSIONS: (INNER/OUTER/LENGTH)	14		250/450/1000	500/800/1000
	32		250/450/1000	500/800/1000
WIND COVERAGE (%)	12 MPH ALL WEATHER		96.8%	SAME
	15 MPH ALL WEATHER		N/A	SAME

FAA APPROVAL

SAN FRANCISCO, CALIFORNIA

By: Joseph Rodriguez Date 3/25/98
Manager
Subject to letter dated 3/25/98

COUNTY OF SANTA CLARA

BY: J. Bennett
JEROME T. BENNETT
DIRECTOR, COUNTY AIRPORTS
DATE: MARCH 2, 1998

NOTES

1. ALL AIRFIELD PAVEMENTS ARE ASPHALTIC CONCRETE.
2. SITING OF NAVAIDS AND LIGHTING AIDS SUBJECT TO FAA REVIEW AND DESIGN
3. TOPOGRAPHY SOURCE MARCH 9, 1995 MAPPING.
4. THE AIRPORT IS NOT KNOWN TO BE SUBJECT TO FLOODING.
5. AN AIRPORT HEIGHT ZONING ORDINANCE IS IN EFFECT.
6. CLEAR SLOPES ARE BASED ON ANALYSIS OF MARCH 9,1995 MAPPING TOPOGRAPHY.
7. FUTURE BUILDINGS AND LEASE LINES ARE CONCEPTUAL.

THE PREPARATION OF THIS DOCUMENT WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

COPY

BUILDINGS / FACILITIES DATA

1	AIRPORT VAULT
2	LIGHTING WIND CONE/SEGMENTED CIRCLE
3	FBO
4	APRON
5	AUTO PARKING
6	FUEL FARM
7	TERMINAL BUILDING
8	
9	
10	
11	
12	

TAXIWAY DATA

T/W	TYPE	PAVEMENT SURFACE	PAVEMENT WIDTH EXISTING	PAVEMENT WIDTH FUTURE	STRENGTH (1000#) SINGLE GEAR EXISTING	STRENGTH (1000#) SINGLE GEAR FUTURE	SIGNING/LIGHTING EXISTING	SIGNING/LIGHTING FUTURE
A	PARALLEL	A.C.	25'	SAME	12.5	SAME	MITL	SAME
A	EXIT	A.C.	35'	SAME	12.5	SAME	MITL	SAME
B	EXIT	A.C.	25'	SAME	12.5	SAME	MITL	SAME
C	EXIT	A.C.	25'	SAME	12.5	SAME	MITL	SAME
D	EXIT	A.C.	35'	SAME	12.5	SAME	MITL	SAME
E	PARALLEL	A.C.	25'	SAME	12.5	SAME	MITL	SAME
F	PARALLEL	A.C.	30'	SAME	–	SAME	–	SAME

241–1ALD 02–13–98 (1=200)

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REGISTERED PROFESSIONAL ENGINEER ROBERT PAUL WADELL No. 20360 CIVIL STATE OF CALIFORNIA
Exp 6/30/00

NO.	DATE	BY	REVISIONS

DRAWN DLH CHECKED REV DESIGNED RPW

SOUTH COUNTY AIRPORT

A COUNTY OF SANTA CLARA AVIATION FACILITY
SAN MARTIN CALIFORNIA

AIRPORT LAYOUT DRAWING

JOB NUMBER 1219 DRAWING NUMBER 1241–1ALD

SHEET 1 / 1 SHEETS
SCALE AS SHOWN
DATE FEB 1998

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2.2.1 Existing Airport Facilities

The existing airfield consists of a single runway, Runway 14-32. The runway has a paved surface 3,100 feet long by 75 feet wide with 240 foot paved overruns on each end and has medium intensity runway lights, and Precision Approach Path Indicators (PAPI-2) at both ends of the runway. The existing maximum gross weight for single-wheel aircraft using the runways is as follows:

Aircraft Maximum Gross Weight (pounds)

Runway	Gross Weight
14-32	12,500 lbs.

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, defines imaginary surfaces that are used to identify obstructions to air navigation. The following tabular data shows the FAR Part 77 approach slopes, compared with existing obstacle/obstruction controlled approach slopes and other information relative to the controlling obstacle/obstructions based on the latest FAA Form 5010-1, Airport Master Record, for South County Airport.

Controlling Obstacle/Obstruction: Location from Runway Threshold Related to Extended Runway Centerline						
Runway No.	Elevation	FAR Part 77 Slope	Actual Slope	Type of Obstruction	Height Above Runway Threshold	Location
14	281	20:1	21:1	Pole	41	1100 ft along and 200 feet right of the extended runway centerline
32	271	20:1	26:1	Tree	32	1040 ft along and 73 feet right of the extended runway centerline

The FAA establishes Runway Protection Zones off each runway end to enhance the safety of aircraft operations and the protection of people and property on the ground. The following defines the ultimate size of the Runway Protection Zones for each runway end shown on the ALP.

Runway No.	Protection Zone	Length (feet)	Inner Width (feet)	Outer Width (feet)
32	Nonprecision	1,000	500	800
14	Visual	1,000	500	800

The FAA requires that the airport sponsor have adequate property interest in the Runway Protection Zones (RPZs) as a condition of receiving certain grants. Portions of the Runway Protection Zones for Runway 32 and Runway 14 are outside the Airport boundary but are on state and county owned property.

Access to the Airport is from Murphy Avenue on the west side of the Airport, off of U. S. Highway 101 and San Martin Avenue. There are two entrances to the airfield, one is through the FBO area and the other is through the County Administration area. The aircraft basing areas are located on the west side of the Airport along Murphy Avenue. There are 90 aircraft tiedown spaces, 155 hangars and 33 unmarked FBO

tiedown spaces at the Airport. Airport facilities include a rotating beacon, a lighted windsock and a segmented circle.

2.2.2 Future Airport Facilities

The Airport is considering entering into a period of significant expansion. The runway would be extended from 3100 feet to 5000 feet and strengthened to support aircraft weighing up to 36,000 lbs. It is anticipated that large business aircraft (over 12,500 pounds) will regularly use the airport. Additional tiedowns and hangars are planned, as well as a new terminal/office building and associated infrastructure support facilities. The east side taxiway will be removed and jet fuel will be sold on the airport.

2.3 AVIATION ACTIVITY

The noise impact of an airport is a direct result of the number of aircraft operations at that airport and the types of those aircraft. Given this information, and some other factors such as flight tracks and the distribution of flight operations throughout the day and night, computer models can generate a representation of the noise contours around an airport. The generalized flight tracks for the airport are shown in Figure 3. The noise contours created by the computer model reflect the data provided to the program. Thus the activity data, both current and forecasted, needs to be as accurate as possible.

The aviation activity data is taken from the November 2002 draft of the *Airport Roles and Forecasts*, Chapter 2 of the County Airports Master Plan (AMP) adopted by the Santa Clara County Board of Supervisors on November 19, 2002. This AMP provides forecasts of aircraft operations at the Airport through the year 2022. This forecast of 175,560 operations is less than the previously approved airport master plan (Santa Clara County, Airport Master Plan, Technical Report II, October 21, 1980), which forecasted 195,000 operations.

As the CLUP is a 20-year planning document, the existing base year (2001) aviation activity was reviewed and updated aviation activity forecasts were prepared through the year 2022. A summary of the existing and forecast aviation activity is presented in Table 2-1 and discussed in the following paragraphs.

2.3.1 Based Aircraft

The 1982 AMP forecasts that the number of based aircraft at South County would increase from 90 to 300. This increase has been projected from 2001 to 2022 as shown in Table 2-1. The growth in forecast-based aircraft at the Airport is due in large part to the increase in support and storage facilities planned for the Airport and constrained growth at the other airports in the county. This increase in based aircraft will include some higher performance single-engine and twin-engine turboprop and business jet aircraft based at the airport through 2022.

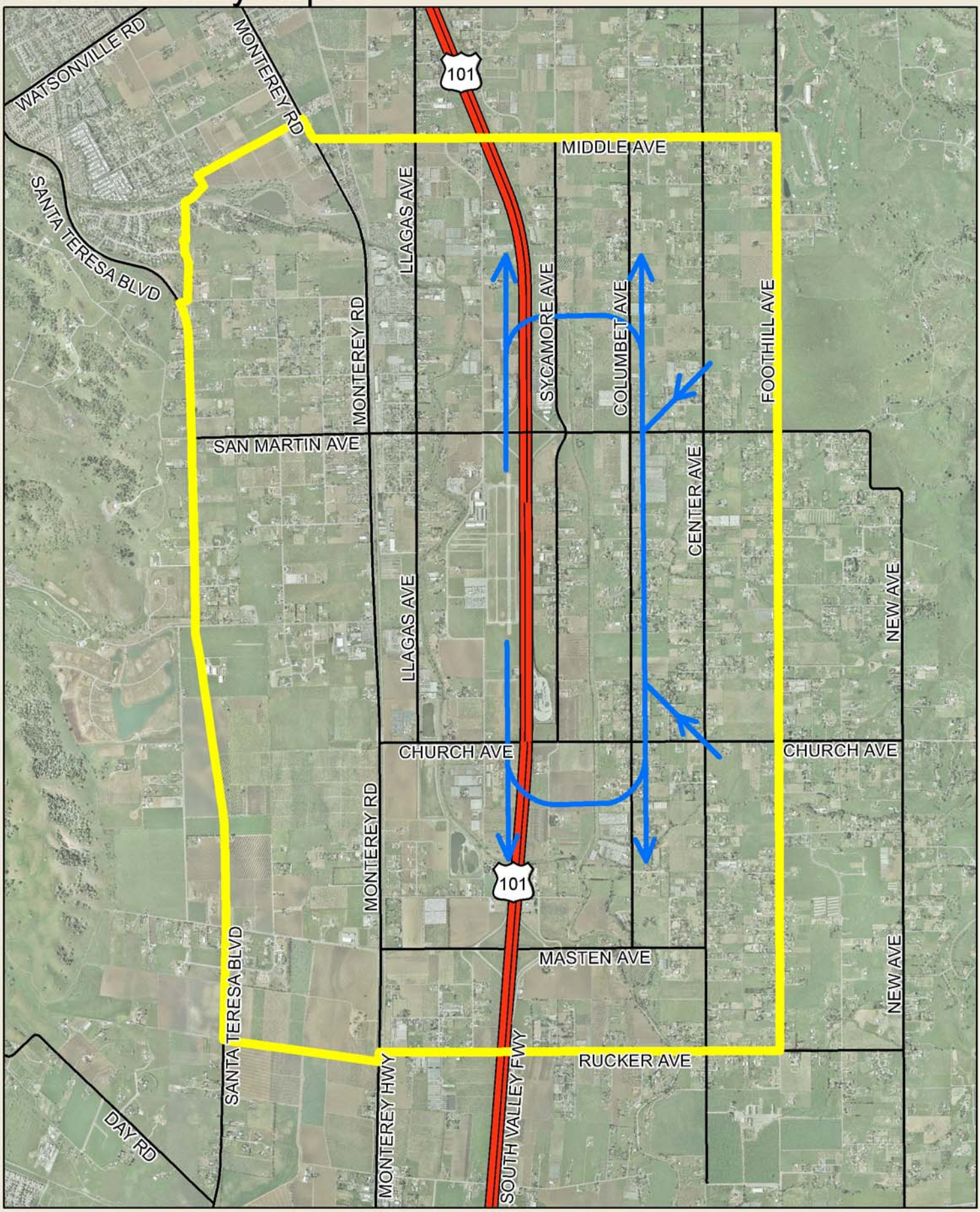
2.3.2 Aircraft Operations

The number of annual aircraft operations at South County Airport, as presented in Table 2-1, is forecast to increase from an estimated 56,000 operations in the year 2002 to 175,560 operations by the year 2022. These data are taken from the 2002 South County Airport Master Plan (AMP) draft since the 1982 AMP lacks sufficient detail. The 2002 AMP indicates that the mix of operations will change over time with a greater percentage of operations being conducted by twin-engine and turboprop and business jet aircraft through the period.

2.3.2.1 General Aviation

Since no commercial passenger (air carrier) operations are forecast for the planning period, general aviation would continue to account for all of the operations at the Airport, increasing from an estimated 56,000 annual operations in 2002 to 175,560 annual operations by 2022.

South County Airport



Airport Flight Tracks

Flight Tracks AIA

Flight Tracks
Figure 3

0 2,000 4,000 Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
7/17/2008 - Y:\Matt\ALUC\projects\SC\SC_figure3_v4.mxd

Table 2 - 1

UPDATED AVIATION ACTIVITY FORECASTS

South County Airport

2001 – 2022

	Base Year	Forecast				
	2001	**2002**	**2007**	**2012**	**2017**	**2022**
GENERAL AVIATION BASED AIRCRAFT						
Single-engine – piston	74	80	149	211	229	246
Single-engine – turbine	0	0	0	3	5	7
Multi-engine – piston	5	8	13	18	24	30
Multi-engine – turbine	1	1	2	3	4	5
Helicopter	0	1	1	2	3	4
Other (Fanjet, quieter than Stage 3)	0	0	0	3	5	8
Total based aircraft	80	90	165	240	270	300
AIRCRAFT OPERATIONS						
General aviation						
-Itinerant	30,450	30,450	53,527	75,665	87,032	98,398
-Local	25,550	25,550	41,974	59,335	68,248	77,162
Subtotal – general aviation operations	56,000	56,000	95,502	135,000	155,280	175,560
Air Taxi	0	0	0	0	0	0
Military	0	0	0	0	0	0
Total operations	56,000	56,000	95,002	135,000	155,280	175,560
OPERATIONS PER BASED AIRCRAFT	700	611	579	562	575	585

Source: *Santa Clara County Airports Master Plan, Technical Report II, October 21, 1980, pg. 39; South County Airport Master Plan Report, Table 2H, July 2005 and Airport Management*

Local Operations. Local operations are performed by aircraft operating in the local traffic pattern and aircraft departing for, or arriving from, local practice areas. These operations include training operations by both aircraft based at the Airport and aircraft from other airports in nearby counties. The local operations include flight training, the activities of based aircraft pilots maintaining their landing skills and activities of itinerant aircraft pilots who come to practice landing at a different airport.

Local operations are forecast to decline from 46 percent of total general aviation aircraft operations to 42% of general aviation aircraft operations and will continue to account for the smaller number of general aviation operations at the airport.

Itinerant Operations. Itinerant operations are conducted by aircraft that takeoff from one airport and land at another airport, or the reverse. They include the operations of aircraft based at the Airport and flights of other aircraft to and from the Airport. The itinerant operations at the Airport include aircraft based on the airport used for personal business and recreational activities traveling to other airports.

Itinerant operations are forecast to increase from 54 percent of total general aviation aircraft operations to 58% of general aviation aircraft operations over the forecast period and would continue to account for the larger number of aircraft operations at the airport.

2.3.2.2 Air Taxi

In 2001 there were no known Air Taxi operations at the Airport. Air taxi operations include the unscheduled "for hire" operations carrying passengers and cargo to and from the area including any operations by bank couriers or other small package carriers. Based on discussions with persons knowledgeable of the Airport and its activities, no Air Taxi operations are foreseen through the year 2022.

2.3.2.3 Military

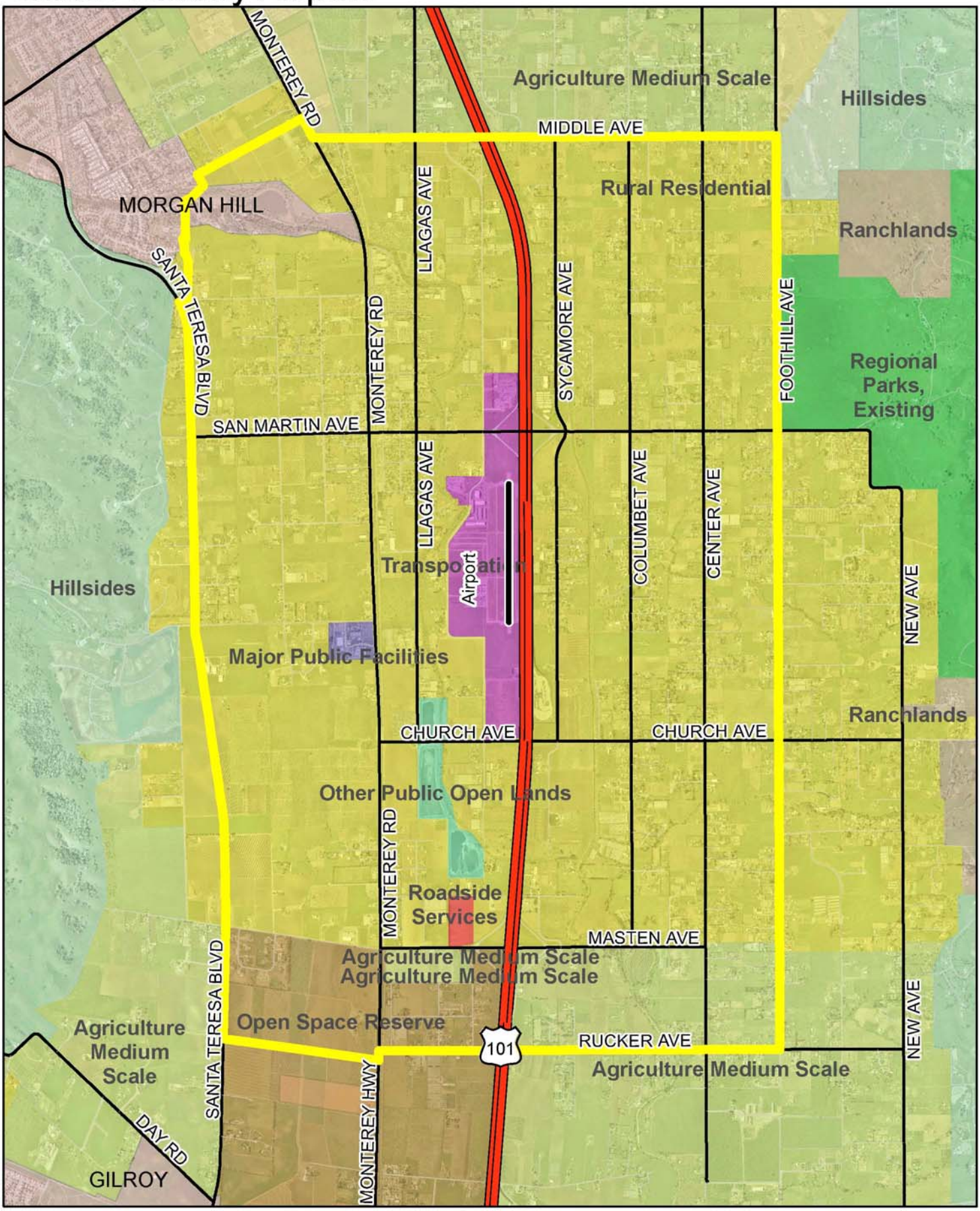
Based on discussions with persons knowledgeable of the Airport and its activities, there were no military operations in 2001. The current runway is not suitable for fixed-wing military aircraft. Current military aircraft require runways of greater length than those at the Airport.

Military helicopter operations are not expected to contribute in a significant manner to the number of annual airport operations through 2022.

2.4 AIRPORT ENVIRONS

Figure 4 presents the land use designations within the Airport environs based on the current Santa Clara County 2002 General Plan. The unincorporated community of San Martin surrounds the Airport property. The predominant land uses in the Airport environs are rural residential, agriculture, and commercial.

South County Airport



General Plan Land Use

- AIA
- Agriculture Medium Scale
- Hillsides
- Major Public Facilities
- Open Space Reserve
- Other Public Open Lands
- Ranchlands
- Regional Parks, Existing
- Roadside Services
- Rural Residential
- Transportation

General Plan Land Use
Figure 4

0 2,000 4,000 Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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Section 3

3 LAND USE COMPATIBILITY GUIDELINES

3.1 OVERVIEW

Land use compatibility policies and standards are based on community values, sound technical knowledge, and acceptable analytical methods. These policies and compatibility criteria form the basis for evaluating existing land use compatibility and provide the foundation for the Santa Clara County Airport Land Use Commission (ALUC) policies. These standards focus on the three areas of ALUC responsibility including aircraft noise, the control of objects in navigable airspace, and the safety of persons on the ground and in aircraft. These compatibility criteria are contained in relevant State and Federal statutes and regulations and are discussed in this section.

Federal, State and other local agencies have developed and published guidelines for airport land use compatibility planning. Unfortunately, no civilian or military authority has established regulations or statutes that specify a single methodology for mitigating the incompatibilities between an airport and its environs, nor have such incompatibilities been adequately defined. The enabling legislation for the Santa Clara County Airport Land Use Commission offers some guidance while directing the Commission to provide for the orderly growth of the airports and the areas surrounding the airports, and to safeguard the general welfare of the inhabitants within the vicinity of the airports and the public in general. The legislation further enables the Commission to develop height restrictions on structures, to specify the use of land, to determine building standards, including noise insulation, and to assist local agencies in ensuring compatible land uses in the vicinity of the airports to the extent that the land in the vicinity of the airports is not already devoted to incompatible uses. The Commission is also empowered 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.

3.2 LAND USE COMPATIBILITY CRITERIA

The principal source for airport land use compatibility planning is the January 2002 *California Airport Land Use Planning Handbook* (2002 Handbook) published by the California Department of Transportation, Division of Aeronautics (Caltrans). The 2002 Handbook provides guidelines for formulating compatibility criteria and policies for preparing Comprehensive Land Use Plans (CLUPs). Noise and safety compatibility concepts and issues are presented, and copies of relevant legislation and examples of mitigation measures, such as model noise and avigation easements are included. The 2002 Handbook is available for review at http://www.dot.ca.gov/hq/planning/aeronaut/htmlfile/landuse.html and at the Santa Clara County Planning Department office. Note that a local agency is not precluded from establishing land use policies and guidelines that are more restrictive than those described in this CLUP.

3.3 NOISE RESTRICTION AREA

Airport noise affects many communities. At certain levels, airport noise can interfere with sleep, conversation, or relaxation. It also may disrupt school and work activities. At even higher levels, airport noise may make outdoor activities impossible and may begin to raise health concerns with respect to hearing loss and stress-related problems. However, hearing damage from airport noise may not be a problem for nearby neighbors because noise levels are simply not of sufficient intensity to cause such damage. An exception to this is the exposure a ground crew member receives during the handling of a jet aircraft. Similarly, medical studies are inconclusive on a cause-and-effect relationship for non-auditory health concerns near airport. A more general conclusion is that noise may have an additive effect for some people with anxieties, ulcers, and tension illness.

The amount of annoyance that aircraft noise creates among people living and working in the vicinity of an airport varies on an individual basis. Studies show that a certain percentage of people will continue to be annoyed by aircraft noise at any given noise level, regardless of how low that aircraft noise level may be.

All levels of government share responsibility for addressing the airport noise issue. The Federal government establishes noise standards for aircraft as published in Federal Aviation Regulations (FAR) Part 36, *Noise Standards: Aircraft Type and Airworthiness Certification*, and conducts research on noise

abatement techniques and noise compatibility. The preparation of a special airport noise study under the provisions of FAR Part 150, *Airport Noise Compatibility Planning*, provides technical assistance to the airport operator in planning and implementing a noise compatibility program. The State of California also prescribes noise standards for all airports as defined in Title 21, *Airport Noise Standards*, of the California Code of Regulations, and sets noise insulation standards for residential structures as defined in Title 24, *California Building Standards Code*, of the California Building Standards Commission. The airport operator may develop airport noise control programs and enact operational restrictions to control and reduce noise levels in the community. Finally, local governments have the responsibility to limit the exposure of the population to excessive airport noise levels through the land use planning and zoning process.

3.3.1 Airport Noise Descriptors

To adequately address the airport noise issue, local governments need a standard way to measure and describe airport noise and establish land use compatibility guidelines. The County of Santa Clara has identified DNL and CNEL as being equivalent measures of noise. Relative to aviation, it is common to use the Community Noise Equivalent Level (CNEL) for determining land use compatibility in the community environment.

The Community Noise Equivalent Level (CNEL) descriptor is a method of averaging single-event noise levels over a typical 24-hour day and applying penalties to noise events occurring during the evening (7 p.m. to 10 p.m.) and night (10 p.m. to 7 a.m.) hours. CNEL is usually defined in terms of average annual conditions, so that the CNEL measured on a given day may be either less than or greater than the annual average.

The State of California uses the CNEL descriptor to describe land use compatibility with respect to aircraft noise exposures. CNEL is the noise descriptor standard defined in Title 21 of the California Code of Regulations, *Airport Noise Standards*, and the standard specified for evaluation of exterior and interior noise impacts in Title 24 of the California Building Standards Commission, *California Building Standards Code*. The CNEL is identified as one of two noise descriptors used in the preparation of a noise element of a general plan according to guidelines established by the Office of Noise Control, California Department of Health Services (now documented as *General Plan Guidelines, Appendix A*).

The Federal Aviation Administration (FAA) recognizes the CNEL as essentially equivalent to the Yearly Day-Night Average Sound Level (DNL), which is the basis for FAA recommendations for land use compatibility with respect to aircraft noise described in FAR Part 150, *Airport Noise Compatibility Planning*.

The decibel (dB) is the unit of measurement for the magnitude of a sound. A decibel is equal to the logarithm of the ratio of the intensity of the sound to the intensity of an arbitrarily chosen standard sound, specifically a sound just barely audible to an unimpaired human ear (e.g., 55, 60, 65, 70 and 75 dB).

3.3.2 Land Use Compatibility Standards – California

Land use compatibility guidelines for airport noise are included in the 2002 Handbook. Amendments to the law enacted in October 1994 mandate the use of these guidelines in the preparation of airport land use plans. These guidelines were originally developed in 1983 after considering State Office of Noise Control (ONC), FAA, and U.S. Department of Housing and Urban Development (HUD) guidelines together with a review of available airport land use plans. Existing Federal and State laws were reviewed as part of the updated 2002 Handbook. The State ONC criteria established the 55 dB CNEL as a residential threshold value to distinguish normally acceptable from conditionally acceptable situations.

The Caltrans guidelines for land use compatibility standards extend below the Federal 65 dB CNEL, as the Federal threshold does not sufficiently explain the annoyance area surrounding general aviation airports. The frequency of operations from some airports, visibility of aircraft at low altitudes and typically lower background noise levels around many general aviation airports are all believed to create a heightened awareness of general aviation activity and potential for annoyance outside of the 65 dB CNEL contour.

At and above the 60 dB CNEL level, the California Building Code, Section 1208A.8.3 requires an acoustical analysis of proposed residential structures, other than detached single-family dwellings, to achieve an indoor noise level of 45 dB CNEL.

The noise attenuating properties of existing types of construction were considered in setting state standards. Typical wood frame construction with drywall interiors provides noise reduction of between 15 and 20 dB. Thus, residential units exposed to outdoors noise in the range between 60 and 65 dB CNEL can be attenuated to achieve the 45 dB CNEL level indoors when built using normal standards of construction.

The 2002 Handbook (see Appendix B herein) urges ALUCs to be conservative when establishing noise contours.

3.3.3 Land Use Compatibility Standards - Santa Clara County

In the *Noise Element* of the 1994 Santa Clara County General Plan, the County identified 55 dB DNL as the normally acceptable standard for residential uses. Above 55 dB DNL, residential uses are cautionary, however the noise exposure is great enough to be of some concern.

3.3.4 South County Airport Noise Contours

An analysis of annual aircraft operations and related noise levels for South County Airport was made to prepare CNEL noise exposure maps for this CLUP using current and forecast aircraft operations based on the existing runway configuration. The detail data for these noise studies was obtained from the 2002 *South County Airport Master Plan, Noise Model Calculation Data, Appendix A*. The ALUC has elected to adopt the most conservative (largest) contours from this study for the purposes of this CLUP.

The Federal Aviation Administration's (FAA) Integrated Noise Model (INM) Version 6.1 was used to prepare CNEL noise exposure maps based on the FAA aircraft noise level database and airport operational factors described below. The INM software was developed by the FAA and represents the Federally sanctioned and preferred method for analyzing aircraft noise exposure.

3.3.5 Aircraft Operations

Aircraft operational factors that can significantly affect overall noise levels as described by CNEL include the aircraft fleet mix, the number of daily operations and the time of day when aircraft operations occur. Runway use factors also significantly influence CNEL values. Trip length can affect aircraft single-event noise levels. An aircraft that is making a local flight may carry less fuel and fewer passengers than that for a long flight and therefore make less noise on departure. The INM software applies corrections to air carrier aircraft takeoff profiles to account for these differences, but makes no corrections to general aviation aircraft takeoff profiles.

Aircraft operational assumptions for the Airport were based upon analyses of airport activity provided by Caltrans and Airport Management. These assumptions are summarized in Tables 3-1 and 3-2.

Very Light Jet aircraft are represented by the INM MU3001. Twin-engine turboprop aircraft are represented by the INM CNA441 and twin-engine piston aircraft are represented by the INM BEC58P aircraft. The high-performance single-engine propeller aircraft such as the Cessna 210 were represented by the INM GASEPV aircraft, and standard single-engine propeller aircraft were represented by the INM GASEPF aircraft type. Single-engine piston aircraft (GASEPF and GASEPV) were assumed for 100 percent of the local operations. Helicopters are represented by the INM H500D aircraft type.

Descriptions of aircraft flight tracks were developed for use in the INM through discussions with Airport Management and review of the assumptions used for previous descriptions of aircraft operations at the Airport. Based on these data, generalized flight tracks were prepared for use in the noise modeling process to describe areas with a concentration of aircraft overflights. It is recognized that variations in flight paths occur at the Airport and that the tracks used for this analysis are a general representation of those flight tracks.

Table 3 - 1

AIRPORT CONFIGURATION AND RUNWAY USE

South County Airport

2022

Airport Configuration	
Runway Configuration:	14-32
Field Elevation: (Runway High Point)	281 feet MSL
Runway Use:	Runway 32 – 85% Runway 14 – 15%

Temporal Distribution of Runway Operations Percentage of Use			
Aircraft Class	Day 7 a.m. to 7 p.m.	Evening 7 p.m. To 10 p.m.	Night 10 p.m. to 7 a.m.
Takeoffs:			
Single-Engine, Propellor, All	94%	5%	1%
Twin engine, propellor, Piston	94%	5%	1%
Single-Engine, Turboprop	94%	5%	1%
Business Turboprop (Twin)	94%	5%	1%
Jets, All	94%	5%	1%
Helicopter	95%	5%	0%
Landings:			
Single-Engine, Propellor, All	94%	5%	1%
Twin engine, propellor, Piston	94%	5%	1%
Single-Engine, Turboprop	94%	5%	1%
Business Turboprop (Twin)	94%	5%	1%
Jets, All	94%	5%	1%
Helicopter	95%	5%	0%

Source: *South County Airport Master Plan, Noise Model Calculation Data, Appendix A, Table 4, July 2005*

Table 3 - 2

ANNUAL AIRCRAFT OPERATIONS

South County Airport

2022

Generalized Aircraft Type	Year 2022
Small Jet (VLJ) (MU3001)	142
Twin-Engine Turboprop (CAN 441)	7,553
Twin-Engine Piston (BEC58P)	11,030
Single-Engine, Turboprop (GASEPV)	2,616
Single-Engine Piston, High Performance (GASEPV)	49,636
Single-Engine Piston, Standard (GASEPF)	102,946
Helicopters (H50D)	1,837
Gliders	0
Total	175,560

Source: *South County Airport Master Plan, Noise Model Calculation Data, Appendix A, Table 2(scaled up), July 2005 and airport mgmt*

3.3.5.1 CNEL Noise Exposure Contours

The Integrated Noise Model (INM) Version 6.1 was used to prepare CNEL noise exposure contours for the Airport based on the aircraft noise level and operational factors described in the previous sections.

User inputs to the INM include the following:

- Airport altitude and mean temperature
- Runway configuration
- Aircraft flight track definition
- Aircraft stage length (not applicable to South County Airport)
- Aircraft departure and approach profiles
- Aircraft traffic volume and fleet mix
- Flight track utilization by aircraft types

The INM database includes aircraft performance parameters and noise level data for numerous commercial, military and general aviation aircraft classes. When the user specifies a particular aircraft class from the INM database, the model automatically provides the necessary inputs concerning aircraft power settings, speed, departure profile, and noise levels. INM default values were used for all fixed-wing aircraft types.

After the model had been prepared for the various aircraft classes, INM input files were created containing the number of operations by aircraft class, time of day and flight track for annual average day aircraft operations and future operations.

From these data, the INM produces lines of equal noise levels, i.e. noise contours. The location of these noise contours become less precise with distance from the runway since aircraft do not follow each flight track exactly as defined in the model. However, they are accurate enough to indicate general areas of likely community response to noise generated by aircraft activity and serve as the basis for land use compatibility determinations.

3.3.6 Impacts on Land Use

The 65, 60, and 55 dB CNEL noise contours based on the forecast aircraft operations are illustrated on Figure 5 and discussed below.

3.3.6.1 65 dB CNEL Noise Level

The 65 dB CNEL aircraft noise contour is completely contained within the Airport boundary except to the northwest, where it extends into the County Maintenance Yard and on the east side of the Airport, where it extends east of the US 101 freeway by about 400 feet from the San Martin Avenue onramp to the CHP inspection station.

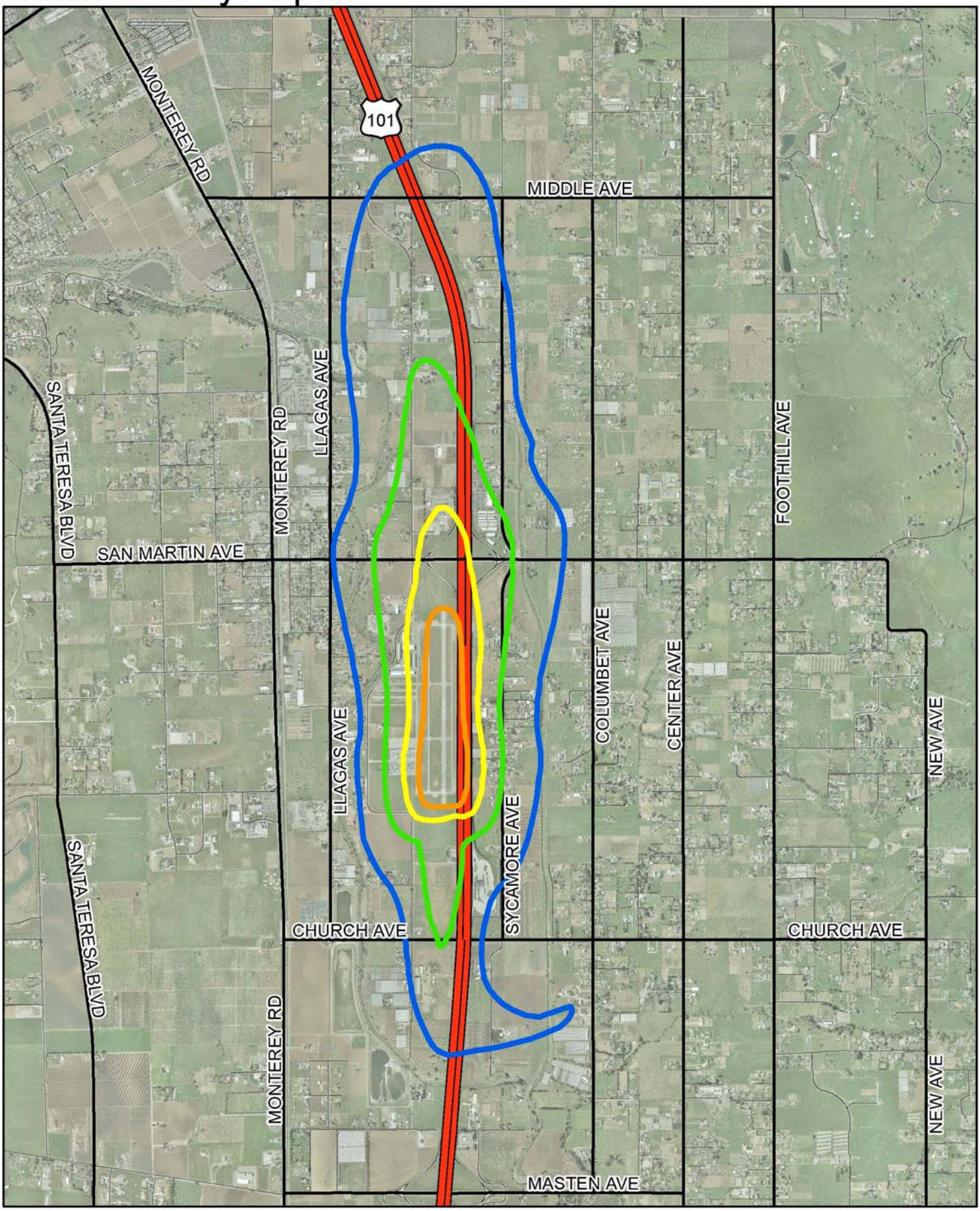
3.3.6.2 60 dB CNEL Noise Level

The 60 dB CNEL aircraft noise contour runs from the CHP inspection station to Church Avenue, then to the northern hangars along Murphy Avenue then continues northwest just east of Llagas Creek, north to just north of where the creek turns west, then crosses Murphy Avenue to the intersection of Sycamore and San Martin Avenues, then south along Sycamore Avenue to just northwest of the CHP inspection station. The land east of US Highway 101 inside this contour is a combination of Commercial and Rural Residential, and the land northwest of the airport is Rural Residential.

3.3.6.3 55 dB CNEL Noise Level

The 55 dB CNEL aircraft noise contour is generally bounded by Llagas Avenue on the west, northwest to about 1000 feet northwest of the Middle Avenue to Highway 101 overpass, then southeast along Sycamore Avenue to the west bend in the Little Llagas Creek then to the end of Mammini Court, crossing San Martin Avenue midway between Mammini Court and Columbet Avenue, then to Little Llagas Creek at Moreno Court, then along the creek to the intersection with Llagas Creek and up Llagas Creek to along Llagas Avenue. The majority of the land between the 60 dB and the 55 dB contours is Rural Residential.

South County Airport



Noise Contours (CNEL)

55 60 65 70

2022 Aircraft Noise Contours

Figure 5

0 1,000 2,000 Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability
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3.4 HEIGHT RESTRICTION AREA

Airport vicinity height limitations are required to protect the public safety, health, and welfare by ensuring that aircraft can safely fly in the airspace around an airport. This protects both those in the aircraft and those on the ground who could be injured in the event of an accident. In addition, height limitations are required to protect the operational capability of airports, thus preserving an important part of National and State aviation transportation systems.

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, establishes imaginary surfaces for airports and runways as a means to identify objects that are obstructions to air navigation. Each surface is defined as a slope ratio or at a certain altitude above the airport elevation.

FAA uses FAR Part 77 obstructions standards as elevations above which structures may constitute a safety problem. Any penetrations of the FAR Part 77 surface are subject to review on a case-by-case basis. If a safety problem is found to exist, FAA may issue a determination of a hazard to air navigation. FAA does not have the authority to prevent the encroachment, however California law can prevent the encroachment if the FAA has made a determination of a hazard to air navigation. The local jurisdiction can establish and enforce height restrictions.

The dimensions of the imaginary surfaces vary depending on the type of approach to a particular runway as illustrated on Figure 6 for the Airport based on the ultimate dimensions shown on the current (1998) FAA Approved Airport Layout Plan. Nonprecision runways generally have larger surfaces and flatter approach slopes than visual runways. Table 3-3 tabulates the imaginary surfaces described below.

3.4.1 Primary Surface

A surface longitudinally centered along a runway, and extending 200 feet beyond the end of each instrument runway. For Runway 14-32 the ultimate width is 500 feet and the primary surface extends 200 feet beyond the ends of the runway.

3.4.2 Approach Surface

A surface longitudinally centered on the extended runway centerline, extending outward and upward from each end of the primary surface. An Approach Surface is applied to each end of each runway based upon the type of approach available or planned for that runway end. The inner edge of the Approach Surface is the same width as the Primary Surface and it extends for a length of 5000 feet at a slope of 20:1. Runway 14-32 Approach Surfaces have a width of 2000 feet at the outer end.

3.4.3 Transitional Surface

A surface extending outward and upward from the sides of the Primary Surface and from the sides of the Approach Surfaces at a slope of 7 to 1.

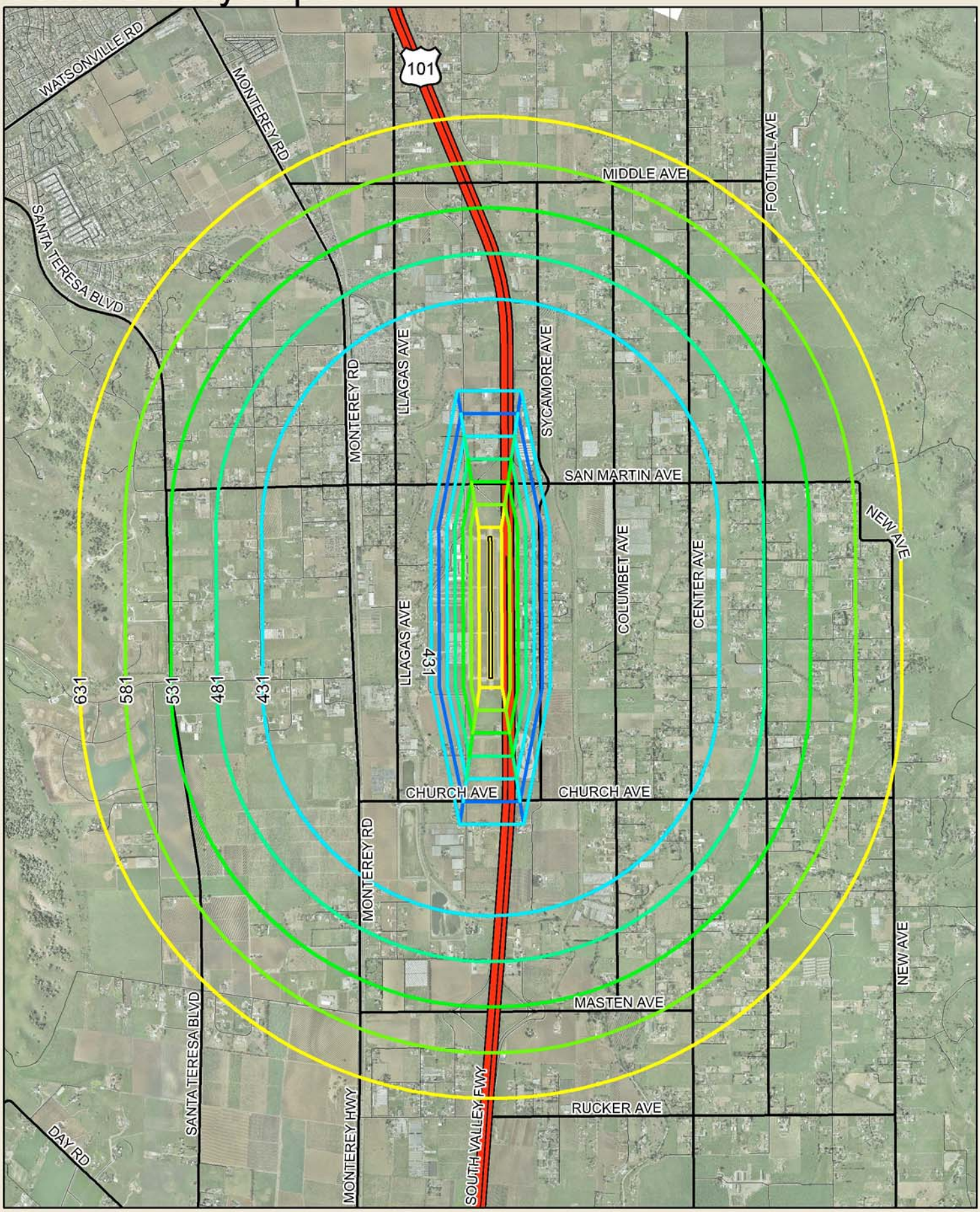
3.4.4 Horizontal Surface

A horizontal plane 150 feet above the established airport elevation (the highest point of an airport's usable landing area measured in feet above mean sea level), the perimeter of which is constructed by swinging arcs 5,000 feet out for Runway 14-32, from the center of each end of the Primary Surface of each runway and connecting the arcs with tangent lines.

3.4.5 Conical Surface

A surface extending outward and upward from the periphery of the Horizontal Surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

South County Airport



Height Restrictions
(Feet above Mean Sea Level)

Runway, 281, 306, 331, 356, 381, 406, 431, 481, 531, 581, 631

FAR Part 77 Surfaces
Figure 6

0 1,000 2,000 4,000 Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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Table 3 - 3

FAR PART 77 DIMENSIONS

South County Airport

	Runway	
	14	32
Runway Type	Visual	Nonprecision
Primary Surface		
Length (feet)	3,500	3,500
Width (feet)	500	500
Approach Surface		
Slope	20:1	20:1
Length (feet)	5,000	5,000
Inner Width	500	500
Outer Width	1250	2,000
Transitional Surface		
Slope	7:1	7:1
Horizontal Surface		
End Radius (feet)	5,000	5,000
Elevation (feet MSL)	434	434
Conical Surface		
Slope	20:1	20:1
Width (feet)	4,000	4,000

Source: Federal Aviation Regulations, Part 77 and 1998 Airport Layout Plan

3.4.6 Summary

Where imaginary surfaces overlap, such as in the case where the Approach Surface penetrates and continues upward and outward from the Horizontal Surface, the lowest surface is used to determine whether or not an object would be an obstruction to air navigation.

Any proposed new construction or expansion of existing structures that would penetrate any of the FAR Part 77 imaginary surfaces of the Airport is considered an incompatible land use, unless either the FAA has determined that the proposed structure does not constitute a obstruction to air navigation or Caltrans Aeronautics Program has issued a permit allowing construction of the proposed structure. The FAA has established minimum standards for the determination of obstructions to aviation. The FAA permits local agencies such as the ALUC to establish more restrictive criteria for determining if the height of a structure creates a safety hazard to aircraft operations. A determination by the FAA or Caltrans that a project does not constitute a hazard to air navigation does not limit the ALUC from determining that a project may be inconsistent under the policies of this CLUP. In their airspace analysis, the FAA evaluates the airspace use based on current conditions and does not consider one-engine inoperative conditions for multi engine aircraft. However the ALUC is charged by the statutes with protecting the airspace for at least the next 20 years. Thus a more restrictive height limitation policy is consistent with protecting airspace for future aviation use.

3.5 SAFETY RESTRICTION AREA

Safety of people on the ground and in the air and the protection of property from airport-related hazards are among the responsibilities of the Airport Land Use Commission. The 2002 Handbook presents guidelines for the establishment of airport safety areas in addition to those established by the FAA.

Airport safety zones are established to minimize the number of people exposed to potential aircraft accidents in the vicinity of the Airport by imposing density and use limitations within these zones. Figure 7 illustrates the airport safety zones for Runway 14-32 at the Airport. The safety zones are related to runway length and expected use. The safety zones shown on Figure 7 are based on a runway length of 3100 feet. Aircraft flight tracks are shown on Figure 3.

In addition, the survivability of aircraft occupants in the event of an emergency landing has been shown to increase significantly if the aircraft is able to reach the ground under control of the pilot. As a result, open area requirements are established for the safety zones in addition to density and use requirements.

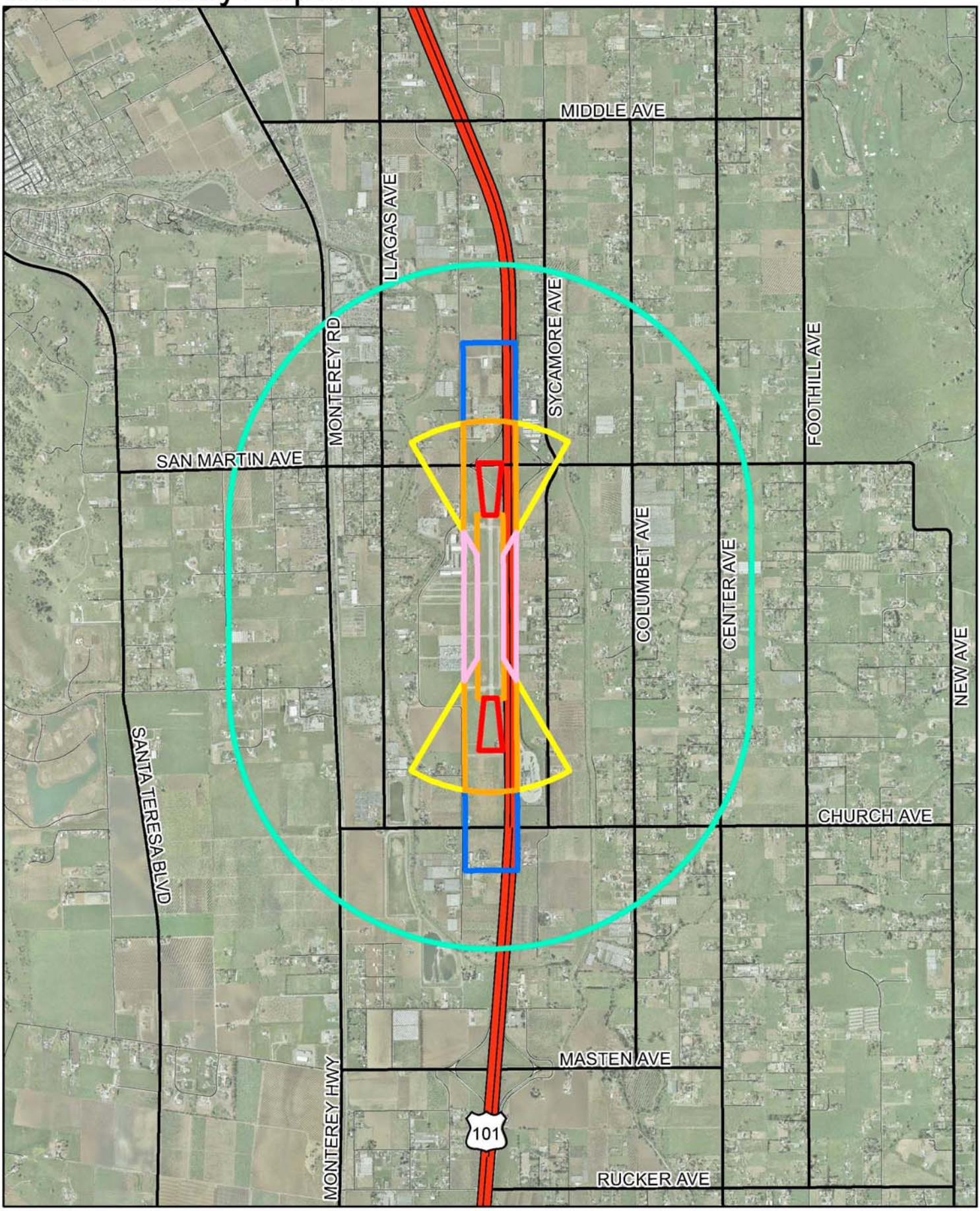
Exposure to potential aircraft accidents diminishes with distance from the airport runways. The safety zones shown below are in descending order of exposure to potential aircraft accidents, with the Runway Protection Zone (RPZ) having the highest exposure followed by the Inner Safety Zone (ISZ), Turning Safety Zone (TSZ), Outer Safety Zone (OSZ) and Sideline Safety Zone (SSZ), with the Traffic Pattern Zone (TPZ) having the lowest level of exposure.

At airports with displaced runway thresholds, a choice exists to use either the runway threshold (end of pavement) or the displaced threshold to determine the location of the safety zones. This CLUP uses the threshold adopted by the Airport and the FAA for positioning the FAA RPZs, as depicted on the FAA approved Airport Layout Plan, as the basis for positioning the ALUC safety zones. At this airport all four RPZs are based on the displaced thresholds and thus the ALUC safety zones are positioned accordingly.

The safety zones defined for the Airport are generally based on the 2002 Handbook guidelines for an airport having a general aviation runway less than 4,000 feet in length. Some deviations from the guidelines have been made to account for a single traffic pattern on the northeast side of the airport.

Safety zones are exclusive in their coverage, and do not overlay each other. Thus land in the RPZ is only in the RPZ, and is not also in the ISZ or TSZ. The order of precedence is, from highest to lowest: RPZ, ISZ, TSZ, OSZ, SSZ and TPZ. If a development project spans more than one safety zone, each part of the project must meet the requirements for the safety zone in which the land for that portion of the project is located. Thus a single building that extends over two safety zones may have differing height and density-of-use requirements for the two parts of the same physical structure. The following safety zones apply to South County Airport based on guidelines provided in the 2002 Handbook:

South County Airport



Safety Zones

- Inner Safety Zone
- Outer Safety Zone
- Runway Protection Zone
- Sideline Safety Zone
- Traffic Pattern Zone
- Turning Safety Zone

Airport Safety Zones
Figure 7

0 1,000 2,000
Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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3.5.1 Runway Protection Zone

The function of the Runway Protection Zone (RPZ) is to enhance the protection of people and property on the ground and aircraft occupants. RPZs should be clear of all objects, structures and activities. At this airport the RPZ as adopted by the airport and the FAA, begins 200 feet out from the runway thresholds. It is a trapezoidal area centered on the extended runway centerline. The size is related to the expected aircraft use and the visibility minimums for that particular runway.

- Runway 14-32, Existing 3100 feet: The RPZ for Runway 32 is 1,000 feet long, with an inner width of 500 feet and an outer width of 800 feet. The RPZ for Runway 14 is 1,000 feet long, with an inner width of 500 feet and an outer width of 800 feet.

3.5.2 Turning Sector Defined

Some of the safety zones are bounded by a geometric feature defined as a "Turning Sector". This feature is constructed as follows:

Each runway end has a sector, which is bounded on the inside by the extended runway centerline. The radius of these sectors is 3000 ft with the center point located 1000 ft along the runway centerline from the runway threshold towards the opposite end of the runway. The arc for the sector is swung centered on the extended runway centerline. The interior angle of the sector is 30 degrees on each side of the extended runway centerline, or 60 degrees wide.

The Turning Sector is defined as the outside bounds of the feature constructed above. There is one Turning Sector for each end of the runway system.

3.5.3 Inner Safety Zone

The Inner Safety Zone (ISZ) is located within the Turning Sector boundary described above. The ISZ represents the approach and departure corridors that have the second highest level of exposure to potential aircraft accidents. The ISZ is centered on the runway centerline starting at the apex of the Turning Sector boundary and except as noted below, extends for a length of 2000 feet. The length of the runway determines the dimensions.

- The ISZ for Runway 14 and 32 is an area 1,000 feet wide, centered on the runway centerline, and bounded by the Turning Sector, if present.

- The Inner Safety Zone excludes the RPZ and the Primary Surface.

3.5.4 Turning Safety Zone

The Turning Safety Zone (TSZ) represents the approach and departure areas that have the third highest level of exposure to potential aircraft accidents. The Turning Safety Zones are defined below.

- The TSZs for Runways 14 and 32 are the areas east of the ISZ within the Turning Sector.

- The Turning Safety Zone areas do not include the RPZ or the ISZ.

3.5.5 Outer Safety Zone

The Outer Safety Zone (OSZ) is a rectangular area centered on the extended runway centerline starting at the outer end of the ISZ and extending away from the runway end. The length of the runway determines the dimensions.

- The OSZ for each end of the runways is a rectangular area 1000 feet wide and 1500 feet long centered on the extended runway centerline, starting at the outer edge of the ISZ and extending away from the runway threshold.

3.5.6 Sideline Safety Zone

The Sideline Safety Zone (SSZ) is an area along side and parallel to the runways. Aircraft do not normally overfly this area, except aircraft losing directional control on takeoff (especially twin-engine aircraft).

- The SSZ for Runway 14-32 is 1000 feet wide centered on the runway centerline and extending along the runway to intercept the Turning Sector boundaries.

3.5.7 Traffic Pattern Zone

The Traffic Pattern Zone (TPZ) is that portion of the airport area routinely overflown by aircraft operating in the airport traffic pattern. The potential for aircraft accidents is relatively low and the need for land use restrictions is minimal. The TPZ excludes all other zones described above.

- The perimeter of the TPZ is constructed by swinging arcs of 5,000-foot radius for Runway 14-32 from a point 200 feet out from the runway pavement end on the extended centerline and connecting the arcs with a line tangent to these arcs.

3.6 OVERFLIGHT RESTRICTION AREA

All areas within the Airport Influence Area (AIA) should be regarded as potentially subject to aircraft overflights. Although sensitivity to aircraft overflights will vary from one person to another, overflight sensitivity is particularly important within residential land uses and certain agricultural uses (open-air turkey farming, etc.).

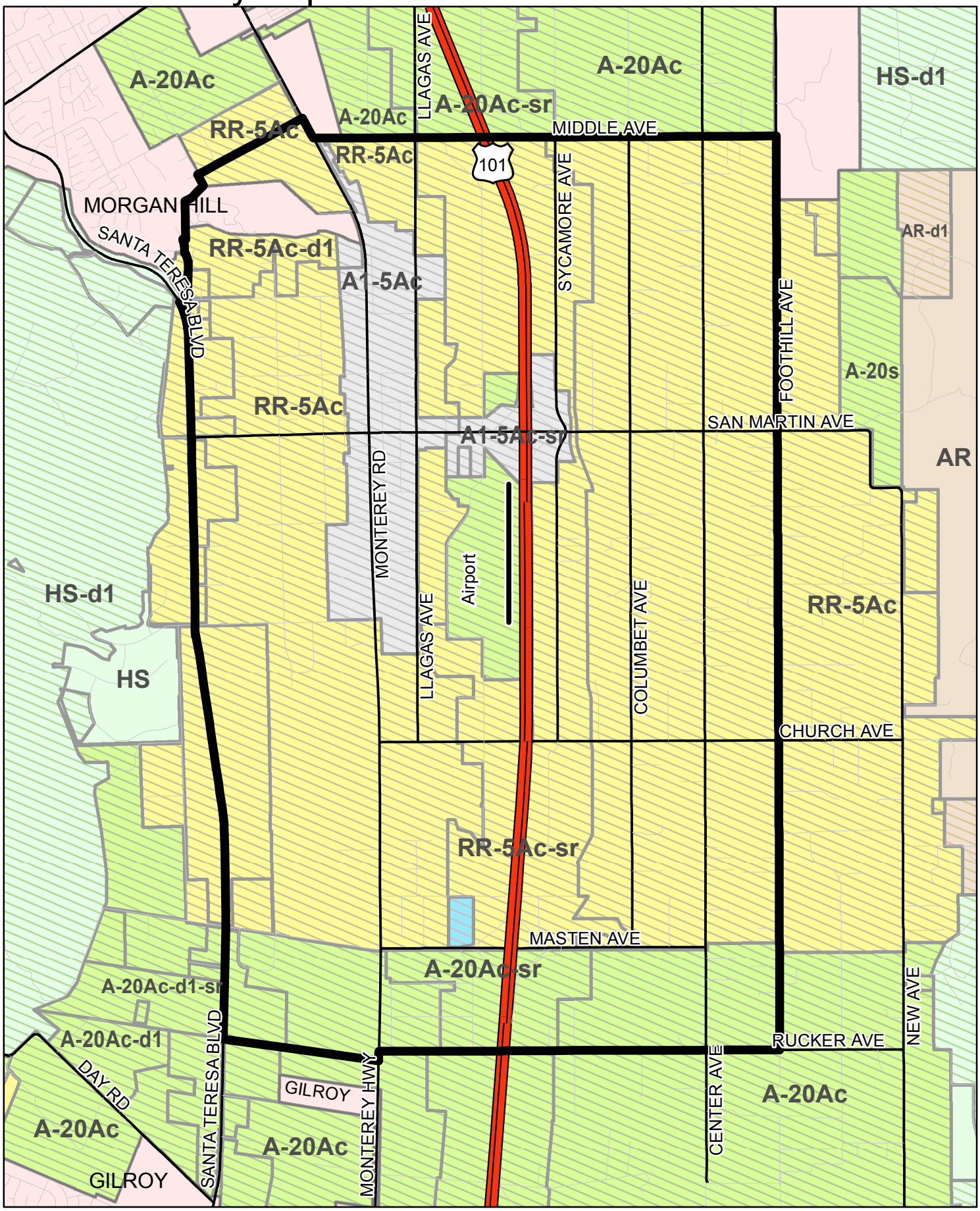
3.7 AIRPORT INFLUENCE AREA

The Airport Influence Area (AIA) is a composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations. The AIA is defined as a feature-based boundary around the Airport within which all development projects must be evaluated by local agencies to determine how the Airport Comprehensive Land Use Plan may impact the proposed development. This evaluation is to determine that the development meets the conditions specified for height restrictions, and noise and safety protection to the public. [A.B. 332 (Stats. 2003) to be codified in Public Utilities Code 21674.7 (b)].

The Airport Influence Area for South County Airport (Figure 8) is defined as the area bounded by East Middle Avenue at Monterey Road on the north to Foothill Avenue on the east to Rucker Avenue to Highway 101 south to the southeast parcel line for parcels 783-18-010 and 783-18-005, west to Santa Teresa Blvd, northwest to California Avenue, east to Water Avenue then along the westerly parcel line of parcels 779-06-023, 779-49-002 and 779-49-001 north to Easy Street, east to Atherton Circle to Olive Avenue to the northwest parcel lines of parcels 779-05-043, 779-05-042 and 779-05-044 to Monterey Road, south to East Middle Avenue. In addition, for structures (including antennae) with a height of 500 feet or greater above ground level, the AIA is defined as the entire county.

The compatibility of land uses within the AIA should be preserved to the maximum extent feasible with particular emphasis on the preservation of existing agricultural and open space uses. The conversion of land from existing or planned agricultural, industrial, or commercial use to residential uses should be the subject of careful consideration of the potential impacts of aircraft overflights.

South County Airport



Zoning Designations

- AIA
- A
- A with Combining District
- A1
- A1 with Combining District
- AR
- AR with Combining District
- HS
- HS with Combining District
- RR
- RR with Combining District
- RS
- RS-sr

AIA
with County Zoning

Figure 8

0 2,000 4,000 Feet

This map created by Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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4 LAND USE COMPATIBILITY POLICIES

4.1 LAND USE PLANNING ISSUES

The land use planning criteria for the individual land use planning issues applicable to the Airport are discussed in Section 3.0. Figure 8 presents a composite of the land use planning categories and the criteria that establishes the Airport Influence Area (AIA). The Santa Clara County Airport Land Use Commission (ALUC) and the Comprehensive Land Use Plan (CLUP) for the Airport address policies based on the following criteria:

- **Noise Restriction Area.** The Noise Restriction Area is defined as the 60 dB CNEL contour, inside which an acoustical analysis is required by the local agency with land use jurisdiction demonstrating how low-density, single-family, duplex and mobile home dwelling units have been designed to meet an interior noise level of 45 dB CNEL.

- **Height Restriction Area.** The Height Restriction Area is to protect the airspace around the Airport. The Horizontal Surface is 150 feet above the Airport elevations, the perimeter of which is constructed by swinging arcs out from the ends of the Primary Surface. The radius of the arc is 5,000 feet for this airport. The Conical Surface extends outward and upward from the periphery of the Horizontal Surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet. The Height Restriction Area is defined as the Approach Surfaces plus the Transitional Surfaces plus the Horizontal Surface plus the Conical Surface.

- **Safety Restriction Area.** The Safety Restriction Area is to provide land use safety with respect to people and property on the ground and the occupants of aircraft. The safety zones applicable to the Airport are defined in Section 3.5 and presented on Figure 7.

- **Overflight Restriction Area.** The Overflight Restriction Area is a composite of the areas surrounding the Airport that are areas affected by noise, height, and safety considerations. All areas within the AIA (Figure 8) should be regarded as potentially subject to aircraft overflights as discussed in Section 3.6.

4.2 JURISDICTIONAL RESPONSIBILITIES

The policies set forth in this section contain criteria intended to prevent future conflicts between airport operations and surrounding land uses. Implementation of these criteria requires action by the local jurisdictions that have control over the land uses in the Airport Influence Area (AIA) presented on Figure 8.

The jurisdictional responsibilities for implementation of the CLUP are described below. In addition, actions that are available to the local jurisdictions are also presented.

Implementation of the CLUP will be the responsibility of the County of Santa Clara the Cities of Morgan Hill and Gilroy for those areas within the AIA under their jurisdiction. Note that Policies T-1 and T-2 extend countywide. The Santa Clara County Airport Land Use Commission (ALUC) will provide policy direction, advice, and technical assistance to the County and the Cities of Morgan Hill and Gilroy as needed to facilitate implementation of the CLUP.

4.2.1 Santa Clara County Airport Land Use Commission

The Santa Clara County Airport Land Use Commission shall:

- Adopt the airport land use policies and the AIA boundary maps. The CLUP and its planning boundary maps shall, upon adoption, be subject to annual review by the ALUC and be updated as required.

  Amendments to the CLUP document are limited to no more than once per calendar year.

- Review the General Plan and applicable Specific Plans for the County of Santa Clara and the Cities of Morgan Hill and Gilroy to determine if such plans and regulations are consistent with the policies of this CLUP.

  Until the ALUC has determined that the General Plans and Specific Plans of the County and cities are consistent, or until the County or associated city has overridden the ALUC's determination, all discretionary permits within the AIA shall be referred to the ALUC for a consistency determination.

- Review all proposed amendments to the General Plans, Specific Plans, and zoning and building regulations that may affect land use in the AIA.

  The ALUC shall determine if the proposed amendments are consistent or inconsistent with this CLUP.

- Review proposed changes to the Airport Master Plan or Airport Layout Plan or modifications to the aircraft flight tracks, new aircraft noise contours, or any other development that would alter the land use compatibility issues addressed in Section 3.0.

  The ALUC shall determine if the proposed changes are consistent with this CLUP or if the CLUP requires an amendment.

- Consider and comment on local government decisions relating to proposed land use where there is a conflict with ALUC plans and policies. A review of land use issues within the AIA relating to ALUC policies may be requested by any member of the ALUC, or by the owner/operator of the Airport.

- Coordinate off-airport land use planning efforts of the cities within the county, the County of Santa Clara and Federal and State agencies concerned with airport land use.

- Gather and disseminate information relating to airport land use and aircraft noise, height and safety factors that may affect land use.

4.2.1.1 Review of Development Projects

Once the ALUC has determined that a local jurisdiction's General Plan and applicable Specific Plans are consistent with the CLUP (or the local jurisdiction has overruled the ALUC and made the required findings of consistency with the purposes stated in Public Utilities Code section 21670), to the extent that these are not mandated referrals the ALUC encourages the local jurisdictions to submit referrals to the ALUC for the following proposed developments:

- Any project that requires use of the Infill policies or Reconstruction policy R-3 in order to be deemed consistent with this CLUP.

- Proposed residential development, including land divisions, consisting of five or more dwelling units or parcels within the AIA.

- Major infrastructure development or improvements (e.g., water, sewer, roads) that would promote urban development within the AIA.

- Proposed land acquisition by any entity for the purpose of developing a school, hospital, nursing home, library, outdoor theater, or other high-density or low-mobility uses within the AIA.

- Any proposal anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level, to verify compliance with FAR 77.13 and ALUC policies.

- Any proposed land use action by a city or County planning agencies involving a question of compatibility with the Airport’s activities. For example, creation of a landfill within the AIA would generally meet all height and density requirements, however the tendency of landfills to attract bird activity may create a safety hazard for airport operations.

- Any project within the AIA that is voluntarily referred to the ALUC for review by the local agency.

4.2.1.2 Project Submittals

When review of a land use development proposal is required under this CLUP, the referring agency shall provide the following information to the ALUC in addition to the information required by the city or County:

- A map, drawn to an appropriate scale, showing the relationship of the project to the Airport's boundaries and runways, airport safety zones, airport noise contours and the FAA Part 77 Surfaces for the airport.

- A detailed site plan showing ground elevations, location of structures, open spaces and the heights of structures and landscaping.

- A description of permitted or proposed land uses and restrictions on the uses.

- An indication of the potential or proposed number of dwelling units per acre for residential uses.

- The maximum number of people potentially occupying the total site or portions of the site at any one time.

- Any project submitted for airport land use compatibility review for reasons of height-limit issues shall include a copy of the Federal Aviation Administration's evaluation and reply to proponent's notification to the FAA using FAA Form 7460-1, *Notice of Proposed Construction or Alteration*.

4.2.1.3 Review Process

The proposed actions referred to in Section 4.2.1.1 shall be referred to the ALUC at the earliest possible time but no later than the time allowed in the applicable statutes and regulations, in order that the ALUC's findings may be considered by the local agency prior to finalizing the proposed action.

The ALUC must find a proposal either 1) consistent with the CLUP or 2) inconsistent with the CLUP. Additionally, the ALUC can provide recommendations for changes that would enhance the project's compatibility with the CLUP or the ALUC can state under which conditions the proposal would be consistent.

The ALUC must take action on a request for a consistency determination within 60 days of the referral. If the proponent desires to request a delay in determination, the proponent must withdraw the project from consideration and reapply at a later date. If the determination is not made within 60 days (or as extended by proponent's request), the proposal shall be considered consistent with the CLUP.

The ALUC may, at the request of the local jurisdiction or interested party, provide an interpretation of any of the policies found in this CLUP.

4.2.2 Affected Local Agencies

To bring their General Plan and Specific Plans into conformity with this CLUP, the ALUC recommends that the affected agencies consider the following:

- Adopt the ALUC policies and the AIA boundary maps.

- Incorporate the adopted ALUC policies, boundary maps, and land use recommendations into the local agency's General and/or Specific Plan and Zoning Ordinances.

- Provide ongoing review of land uses within the AIA to ensure that land use changes are compatible with ALUC policies and plans. The affected local agency shall work closely with ALUC staff to establish and carry out review coordination with the ALUC.

- Incorporate the AIA boundary maps into the local agency's geographic information system (GIS).

4.2.2.1 Overrule Notification Process

The affected local agencies shall:

- Notify the ALUC at least 45 days in advance, of their intent to overrule any ALUC non-consistency determination including a copy of their proposed decision and specific findings.

- Notify the ALUC if and when the local agency overrules any ALUC non-consistency determinations.

4.2.3 Airport Owner/Operator Responsibilities

To ensure that the ALUC is able to fulfill its statutory responsibilities, South County Airport should:

- Notify the ALUC of operational or physical changes at any of the airports they manage, such as aircraft flight tracks, airfield configuration, structural development, relocation of facilities, and proposed new and/or updates to planning documents.

- Notify the ALUC of any changes that may affect Federal Aviation Regulations (FAR) Part 77 height restriction surfaces or CNEL aircraft noise contours.

- Provide CNEL noise contour data including the most recent actual data as well as forecasts covering at least twenty years into the future.

4.3 COMPATIBILITY POLICIES

The compatibility of land uses in the vicinity of the Airport will be evaluated for each of the potential land use impact categories in terms of the compatibility guidelines or policies established for each category of concern. The graphic illustrations of each area of concern presented in this CLUP are to be included in the evaluation. The following compatibility policies will be used for ALUC consistency review.

4.3.1 General Compatibility

4.3.1.1 Policies

G-1 In the case of conflicting guidelines or policies, the most restrictive guideline or policy shall be applied.

G-2 If a project falls into an area within two or more Airport Influence Areas (AIA), the most restrictive conditions from each separate airport shall apply to the project.

G-3 The Airport is exempt from the policies of this CLUP for the development of projects on airport property that are directly related to airport operations (examples: terminals, FBOs, fuel storage, passenger and employee parking). The policies of this CLUP apply to all land uses on airport property that are not directly related to airport operations (examples: commercial non-aviation uses, athletic fields). In the case of mixed use, the primary use of the project shall be used to determine if the project is exempt, for example:

- A terminal building would be considered related to airport operations even though it also provided retail food and product sales.

- A commercial office complex would not be considered related to airport operations even though some of the office space might be used for airport administration.

In cases of uncertainty, the ALUC is available to help determine if a land use is or is not directly related to airport operations. This policy does not relieve the Airport of its other obligations to the ALUC, such as providing Airport Master Plan Updates for ALUC review.

G-4 Local jurisdictions should encourage the conversion of land uses that are currently incompatible with this CLUP to uses that are compatible, where feasible.

G-5 Dedication of an avigation easement to the County of Santa Clara shall be required as a condition of approval on all projects located within an Airport Influence Area, other than reconstruction projects as defined in paragraph 4.3.7. All such easements shall be similar to that shown as Exhibit 1 in Appendix A.

G-6 Any proposed uses that may cause a hazard to aircraft in flight are not permitted within the AIA. Such uses include electrical interference, high intensity lighting, attraction of birds (certain agricultural uses, sanitary landfills), and activities that may produce smoke, dust, or glare. This policy requires the height at maturity of newly planted trees to be considered to avoid future penetration of the FAA FAR Part 77 Surfaces.

G-7 All new exterior lighting or large video displays within the AIA shall be designed so as to create no interference with aircraft operations. Such lighting shall be constructed and located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting shall be arrayed in such a manner that it cannot be mistaken for airport approach or runway lights by pilots.

4.3.2 Noise Compatibility

The objective of noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of aircraft noise.

4.3.2.1 Policies

N-1 The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.

N-2 In addition to the other guidelines and policies herein, the Noise Compatibility Guidelines presented in Table 4-1 shall be used to determine if a specific land use is consistent with this CLUP.

N-3 Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on Figure 5.

N-4 No residential construction shall be permitted within the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound levels will be less than 45 dB CNEL and there are no outdoor patios or outdoor activity areas associated with the residential project. All property owners within the 65 dB CNEL contour boundary who rent or lease their property for residential use shall include in their rental/lease agreement with the tenant, a statement advising that they (the tenants) are living within a high noise area and the exterior noise level is predicted to be greater than 65 dB CNEL.

N-5 Residential construction will not be permitted in the area between the 60 dB CNEL contour boundary and the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound level will be no greater than 45 dB CNEL.

N-6 Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 4-1 presents acceptable noise levels for other land uses in the vicinity of the Airport.

N-7 Single-event noise levels (SENL) are also to be considered when evaluating the compatibility of highly noise-sensitive land uses such as schools, libraries, outdoor theaters, and mobile homes. Single-event noise levels are especially important in the areas regularly overflown by aircraft, but which may not produce significant CNEL contours, such as the down-wind segment of the traffic pattern, and airport entry and departure flight corridors.

4.3.3 Height Compatibility

The objective of height compatibility criteria is to avoid development of land uses, which, by posing hazards to flight, can increase the risk of an accident occurring.

Table 4 - 1

NOISE COMPATIBILITY GUIDELINES

LAND USE CATEGORY	CNEL					
	55-60	60-65	65-70	70-75	75-80	80-85
Residential – low density Single-family, duplex, mobile homes	*	**	****	****	****	****
Residential – multi-family, condominiums, townhouses	*	**	****	****	****	****
Transient lodging - motels, hotels	*	*	**	****	****	****
Schools, libraries, churches, hospitals, nursing homes	*	***	****	****	****	****
Auditoriums, concert halls, amphitheaters	*	***	****	****	****	****
Sports arena, outdoor spectator sports, parking	*	*	*	**	***	****
Playgrounds, neighborhood parks	*	*	***	****	****	****
Golf courses, riding stables, water recreation, cemeteries	*	*	*	**	***	****
Office buildings, business commercial and professional, retail	*	*	**	***	****	****
Industrial, manufacturing, utilities, agriculture	*	*	**	***	***	****
* Generally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. Mobile homes may not be acceptable in these areas. Some outdoor activities might be adversely affected.					
** Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Outdoor activities may be adversely affected. <u>Residential:</u> Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.					
*** Generally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor activities are likely to be adversely affected.					
**** Unacceptable	New construction or development shall not be undertaken.					

Source: Based on General Plan Guidelines, Appendix A (1998), Figure 2 and Santa Clara County ALUC 1992 Land Use Plan, Table 1

4.3.3.1 Policies

H-1 Any structure or object that penetrates the Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace, (FAR Part 77) surfaces, as presented in Table 3-3 and illustrated on Figure 6 will be considered an incompatible land use.

H-2 Any project that may exceed a FAR Part 77 surface must notify the Federal Aviation Administration (FAA) as required by FAR Part 77, Subpart B on FAA Form 7460-1, *Notice of Proposed Construction or Alteration*. (Notification to the FAA under FAR Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the FARs).

4.3.4 Tall Structure Compatibility

Structures of a height greater than 200 feet above ground level can be a special hazard to aircraft in flight.

4.3.4.1 Policies

T-1 The applicant for any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall submit to the FAA a completed copy of FAA Form 7460-1, *Notice of Proposed Construction or Alteration*. A copy of the submitted form shall be submitted to the Santa Clara County ALUC as well as a copy of the FAA's response to this form.

T-2 Any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall comply with FAR 77.13(a)(1) and shall be determined inconsistent if deemed to be a hazard by the FAA or if the ALUC determines that the project has any impact on normal aircraft operations or would increase the risk to aircraft operations.

4.3.5 Safety Compatibility

The objective of safety compatibility criteria is to minimize the risks associated with potential aircraft accidents. These include the safety of people on the ground and the safety of aircraft occupants. Land uses of particular concern are those in which the occupants have reduced effective mobility or are unable to respond to emergency situations.

4.3.5.1 Policies

S-1 These policies and the Safety Zone Compatibility Guidelines presented in Table 4-2 shall be used to determine if a specific land use is consistent with the CLUP. Safety impacts shall be evaluated according to the Airport Safety Zones presented on Figure 7.

S-2 Schools, hospitals, nursing homes, and other uses in which the majority of occupants are children, elderly, and/or disabled shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), and Outer Safety Zones (OSZs) presented in Table 3-2. These uses should also be discouraged in the Traffic Pattern Zones (TPZs).

S-3 Amphitheaters, sports stadiums and other very high concentrations of people shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), Outer Safety Zones (OSZs) and Traffic Pattern Zones (TPZs) presented in Table 4-2.

S-4 Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone. Above ground storage of fuel or other hazardous materials shall be prohibited in the Inner Safety Zone and Turning Safety Zone. Beyond these zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.

Table 4 - 2

SAFETY ZONE COMPATIBILITY GUIDELINES

Safety Zone	Maximum Population Density	Open Area Requirements	Land Use
Runway Protection Zone – RPZ	-0- (No people allowed)	100 percent (No structures allowed)	Agricultural activities, roads, open low-landscaped areas. No trees, telephone poles or similar obstacles. Occasional sort-term transient vehicle parking is permitted.
Inner Safety Zone – ISZ	Nonresidential, maximum 40 people per acre (includes open area and parking area required for the building's occupants)	30 percent of gross area open. No structures or concentrations of people between or within 100 feet of the extended runway centerlines.	Very low-density residential. 10 acres or more per dwelling unit - Nonresidential uses should be activities that attract relatively few people. No shopping centers, restaurants, theaters, meeting halls, stadiums, multi-story office buildings, labor-intensive manufacturing plants, educational facilities, day care facilities, hospitals, nursing homes or similar activities. No hazardous material facilities (gasoline stations, etc.).
Turning Safety Zone - TSZ	Nonresidential, maximum 80 people per acre (includes open area and parking area required for the building's occupants)	20 percent of gross area Minimum dimensions: 300 ft by 75 ft parallel to the runway(s).	Very low-density residential, 5 acres or more per dwelling unit. No regional shopping centers, theaters, meeting halls, stadiums, buildings with more than three above ground habitable floors, schools, day care centers, hospitals, nursing homes or similar activities. No hazardous material facilities (gasoline stations, etc.).
Outer Safety Zone – OSZ	Nonresidential, maximum 80 people per acre (includes open area and parking area required for the building's occupants)	20 percent of gross area	Rural areas - allow residential, 2 acres or more per dwelling unit. Urban areas - allow residential infill to existing density. No regional shopping centers, theaters, meeting halls, stadiums, buildings with more than three above ground habitable floors, schools, large day care centers, hospitals, nursing homes or similar activities. No above ground bulk fuel storage.
Sideline Safety Zone - SSZ	Nonresidential, maximum 100 people per acre (includes open area and parking area required for the building's occupants)	30 percent of gross area	Residential - 5 acres or more per dwelling unit. No regional shopping centers, theaters, meeting halls, stadiums, buildings with more than three above ground habitable floors, schools, large day care centers, hospitals, nursing homes or similar activities. No above ground bulk fuel storage.
Traffic Pattern Zone – TPZ	Nonresidential, maximum 100 people per acre.	10 percent of gross area every one-half mile	Residential – No Limit. No sports stadiums or similar uses with very high concentration of people.

Source: Based on 2002 *Airport Land Use Planning Handbook* prepared by the California Department of Transportation, Division of Aeronautics

S-5 In addition to the requirements of Table 4-2, open space requirements, for sites which can accommodate an open space component, shall be established at the general plan level for each safety zone, as individual parcels may be too small to accommodate the minimum-size open space requirement. To qualify as open space, an area must be free of structures, walls, large trees or poles (greater than 4" in diameter) and overhead wires, and have minimum dimensions of at least 75 feet wide by 300 feet long along the normal direction of flight. In addition, a clear path must exist which allows aircraft to reach the open space. Hence, an open area surrounded by structures or trees may not qualify as open space if such obstructions preclude a gliding aircraft from reaching the ground under full control of the pilot. The clustering of development and provision of contiguous landscaping and parking areas will be encouraged to increase the size of open space areas.

S-6 The principal means of reducing risks to people on the ground is to restrict land uses so as to limit the number of people who might gather in areas most susceptible to aircraft accidents. A method for determining the concentration of people for various land uses is presented in Section 5.0, Implementation.

S-7 The following uses shall be prohibited in all Airport Safety Zones:

- Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.

- Any use that would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.

- Any use which would generate smoke or water vapor, or which would attract large concentrations of birds, or which may otherwise negatively affect safe air navigation within the area.

- Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation, communication or navigation equipment.

S-8 Structures or trees that would interfere with an aircraft gliding to an emergency landing in a safety zone open area are not permitted.

S-9 In exceptional cases a variance can be granted, at the discretion of the ALUC, on the basis of mitigation measures proposed by the applicant which would result in the final project improving the overall safety in the safety zones in comparison to the situation existing prior to the project. An example of such a possible mitigation is the removal of existing incompatible structures in exchange for constructing less incompatible structures. The following conditions must be met for this variance to be granted:

a. There must be a clear, demonstrable net improvement in safety.

b. The mitigation must provide a permanent improvement in safety. For instance, in the example above, the removed structures could not be replaced by other structures at a later date.

4.3.6 Overflight

The objective of the overflight compatibility criteria is to assist those persons who are highly annoyed by overflights or have an above-average sensitivity to aircraft overflights to avoid living in locations where these impacts may occur.

4.3.6.1 Policies

O-1 All new projects within the AIA shall be required to dedicate an avigation easement to the County of Santa Clara. The avigation easement shall be similar to that shown as Exhibit 1 in Appendix A.

(In September of 2002 Assembly Bill AB2776 was signed into law and became effective on January 1, 2004. This statute requires that as part of the real estate transfer process, the residential property purchaser

be informed if the property is in an Airport Influence Area and be informed of the potential impacts resulting from the associated airport.)

4.3.7 Reconstruction

Reconstruction as used in this CLUP is the rebuilding of a legally established structure located in any of the safety zones, to its original conditions (typically due to a fire, or earthquake damage or destruction). "Original conditions" means the same or lesser footprint, height and intensity of use. Reconstruction projects may be approved under the following policies:

4.3.7.1 Policies

R-1 Reconstruction projects that are not subject to a previous avigation easement shall not be required to provide an avigation easement as a condition for approval.

R-2 Residential reconstruction projects must include noise insulation to assure interior noise levels of less than 45 dB CNEL.

R-3 An application for reconstruction increasing the structure's internal square footage, footprint square footage, height, and/or intensity of use may be approved if the ALUC determines that such increase will have no adverse impact beyond that which existed with the original structure. However, a project approved under this policy shall require the property owner to provide an avigation easement to the jurisdiction operating the airport, similar to Exhibit 1 in the Appendix.

4.3.8 Infill

Infill as used in this CLUP is defined as the development of vacant or underutilized properties located in a safety zone, of less than 0.25 acres in size, in areas that are already substantially developed with uses not ordinarily permitted by the CLUP compatibility criteria. In some circumstances, infill projects may be acceptable if the following criteria are met.

4.3.8.1 Policies

I-1 Infill projects must comply with all safety policies and guidelines of this CLUP with the possible exception of the land use density requirements.

I-2 Infill projects may be approved if all of the following conditions are met:

a) The total contiguous undeveloped land area at this location is less than 0.25 acres in size. Note that this means the total contiguous undeveloped land area, not just the land area being proposed for development. Lots larger than 0.25 acres shall not be considered for infill.

b) The site is already surrounded on three sides and a street, or two sides and two streets, by the same land use as that being proposed.

c) The ALUC determines that the project will create no adverse impacts beyond those that already exist due to the existing incompatible land uses.

d) The property owner shall provide an avigation easement to the jurisdiction operating the airport, similar to Exhibit 1 in the Appendix.

Section 5

5 IMPLEMENTATION

5.1 CONSISTENCY WITH LOCAL PLANS AND ZONING

The California State Aeronautics Act {Public Utilities Code: Division 9, Part 1, Chapter 4, Article 3.5, Section 21670 et seq} places the responsibility for implementing and enforcing this Comprehensive Land Use Plan (CLUP) on the local governmental agencies responsible for land use planning within each airport's Airport Influence Area (AIA).

Once the ALUC has adopted a revised (or new) CLUP, the affected local agencies are mandated to incorporate the CLUP's provisions into their General and/or Specific Plans within 180 days {Government Code 65302.3(b)}. Implicitly, the local agencies are then required to adopt zoning ordinances that implement the policies of their General/Specific Plan(s).

If a local agency decides not to incorporate the CLUP policies verbatim in its General and/or Specific plans, it may overrule portions (or all of) the CLUP if it finds that its General and/or Specific Plans are consistent with the State Aeronautics Act, PUC 21670 et seq. The overrule process requires a two-thirds vote of the local agency's governing body, supported by specific findings which demonstrate that the plan(s) satisfy the purposes of the State Aeronautics Act {PUC 21670 et seq} and guidance of the state's Airport Land Use Planning Handbook.

During the amendment process and subsequent to adoption of revised General and/or Specific Plan(s) by a local agency, the ALUC is required to promptly review both the draft and final Plan(s) for a CLUP consistency determination {PUC 21676}.

5.2 LAND USE DESIGNATIONS

The most fundamental means of assuring compatibility between an airport and surrounding land uses is by the designation of appropriate land uses in local general plans, specific plans, and zoning ordinances. Even with the designation of appropriate land uses, the long-term maintenance of airports and land use compatibility is often difficult to achieve.

Land use designations can be limited in the degree of restrictiveness that can be applied. If the land use restrictions eliminate all reasonable economic use of private property, they can be considered an unconstitutional taking and result in inverse condemnation. This is particularly applicable in areas near the ends of the runways where such extreme restrictions may be appropriate. For this reason airport owners/operators are encouraged to purchase the land containing the most restrictive safety zones.

Land use designations for an area for different uses than already exist may encourage change in the long term, but it may not eliminate existing incompatible uses. Other actions such as fee simple acquisition or purchase of development rights may be necessary to bring about the changes.

5.2.1 Airport Overlay Zones

One way of achieving aviation-oriented land use designations is adoption of an overlay or combining zone. An overlay zone supplements local land use designations by adding specific noise and, often more importantly, safety criteria (e.g., maximum number of people on the site, site design, and open space criteria, height restrictions, etc.) applicable to future development in the AIA.

An airport overlay zone has several important benefits. Most importantly, it permits the continued utilization of the majority of the design and use guidelines contained in the existing zones. At the same time, it provides a mechanism for implementation of restrictions and conditions that may apply to only a few types of land uses within a given land use category or zoning district. This avoids the need for a large number of discrete zoning districts. It also enables local jurisdictions to use the policies provided in the CLUP, rather than through redefinition of existing zoning district descriptions.

The County and cities should consider the following for inclusion in the Airport Overlay District Zone (Airport Safety Overlay Zone):

- **Noise Insulation Standards** - In areas that will potentially be impacted by noise, the Airport Overlay District Zone could be used to assure compliance with the State statutes regarding interior noise levels. The Overlay District Zone could specify the construction techniques necessary to meet the requirements.

- **Height Limitations** - Restrictions on the height of buildings, antennas, trees, and other objects near the Airport, as defined by Federal Aviation Regulations (FAR) Part 77, Subpart C, and regulated by the California Aeronautics Law, can be implemented as part of the Airport Overlay District Zone.

- **FAA Notification Requirements** - The Airport Overlay District Zone also can be used to assure that project developers are informed about the need for compliance with the notification requirements of FAR Part 77. Subpart B of the regulations requires that the proponent of any project that exceeds a specified set of height criteria submit a FAA Form 7460-1 *Notice of Proposed Construction or Alteration* to the FAA prior to commencement of construction. The height criteria associated with this notification requirement are lower than those in FAR Part 77, Subpart C, which define airspace obstructions. The purpose of the notification is to determine if the proposed construction would constitute a potential hazard or obstruction to flight. Notification is not required for proposed structures that would be shielded by existing structures or by natural terrain of equal or greater height, where it is obvious that the proposal would not adversely affect air safety.

- **Maximum Densities** - The principal noise and safety compatibility standards in the CLUP are expressed in terms of dwelling units per acre for residential uses and people per acre for other land uses. These standards can either be included as is in the Airport Overlay District Zone or used to modify the underlying land use designations. For residential land uses, the correlation between the compatibility criteria and land use designations is direct. For other land uses, the implications of the density limitations are not as clear. One step that can be taken by local governments is to establish a matrix indicating whether specific types of land uses are or are not compatible with each of the four compatibility zones. To be useful, the land use categories will need to be more detailed than typically provided by general plan or zoning ordinance land use designations.

- **Open Space Requirements** - CLUP criteria regarding AIA open space suitable for emergency aircraft landings can be implemented by the Airport Overlay District Zone. These criteria are most effectively carried out by planning at the general or specific plan level, but may also need to be addressed in terms of development restrictions on large parcels.

5.2.2 Avigation Easements

Avigation easements are another type of land use control measure available to local jurisdictions. Historically, avigation easements have been used to establish height limitations, prevent other flight hazards, and prevent noise impacts. More recently, they have been used as a form of buyer awareness - the recording of an easement against a property ensures that prospective buyers of the property are informed about the Airport impacts. (See the Appendix for a typical Avigation Easement).

An avigation easement applies only to the specific property to which it is attached and it is binding on all subsequent owners of the property. Avigation easements can be obtained either by purchase or by required dedication.

- **Purchase** - Acquisition of avigation easements for a monetary amount is usually done by the Airport owner, which may or may not be the same as the local land use jurisdiction. In most instances, the purchase of avigation easements is limited to property within Runway Protection Zones or elsewhere very close to the Airport's boundaries where some significant degree of restriction or impact is involved.

- **Dedication** - Required dedication of avigation easements is sometimes set as a condition for local jurisdiction approval of a proposed land use development, especially a residential development, in the

vicinity of an Airport. Generally, when avigation easements are obtained in this manner, they are primarily intended to serve as a comprehensive and stringent form of a buyer awareness measure.

A standard avigation easement conveys the following property rights from the owner of the property to the holder of the easement:

- **Overflight** - A right-of-way for free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface specified in the easement (in accordance with Federal Aviation Regulations Part 77 and/or criteria for terminal instrument procedures).

- **Impacts** - A right to subject the property to noise, vibration, fumes, dust, and fuel particle emissions associated with airport and aircraft activity.

- **Height Limits** - A right to prohibit the construction or growth of any structure, tree, or other object that would penetrate the acquired airspace.

- **Access and Abatement** - A right-of-entry onto the property, with appropriate advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.

- **Other Restrictions** - A right to prohibit electrical interference, glare, misleading light sources, visual impairments, and other hazards to aircraft from being created on the property.

Easements that convey only one or more of these rights are common. An easement containing only the first two rights is usually referred to as an overflight or noise easement. The latter three rights are often collectively called a height-limit or airspace easement. Overflight easements are useful in locations sufficiently distant from an airport where height limits and other restrictions are not a concern. Height-limit easements have most frequently been obtained by purchase of properties close to an airport where restrictions on the height of objects are necessary. Because height-limit easements do not include the overflight easement rights, there is little apparent advantage to obtaining them rather than a complete avigation easement.

5.2.3 Buyer Awareness Measures

Buyer awareness is an umbrella category for types of airport/land use compatibility measures whose objective is to ensure that prospective buyers of property in the vicinity of an airport are made aware of the airport's existence and the impacts that the airport activity has on surrounding land uses. Avigation easements are the most definitive form of a buyer awareness measure. Buyer awareness can also be successfully implemented through other types of programs. Two primary methods are deed notices and real-estate disclosure statements.

- **Deed Notices.** Deed notices are statements recorded with the County Clerk-Recorder disclosing that the property is subject to routine overflights and associated noise and other impacts by aircraft operating at a nearby airport. An ideal application of deed notices is as a condition of approval for development of residential land use in airport-vicinity locations where neither noise nor safety are significant factors, but frequent aircraft overflights may be annoying to some people. In addition to being recorded with the deed to a property, the notices should be recorded with parcel maps and any tentative or final subdivision maps. (See the Appendix for a typical Deed Notice).

  Deed notices are similar to avigation or other aviation-related easements in that they become part of the title to a property and thus are a permanent form of buyer awareness. The distinguishing difference between deed notices and avigation easements is that deed notices only serve as a disclosure of potential overflights, whereas avigation easements convey an identified set of property rights. In locations where height limitations or other land use restrictions are unnecessary, deed notices have the advantage of being less cumbersome to define. Also, they have less appearance of having a negative effect on the value of the property.

- **Real Estate Disclosure Statements.** A more comprehensive form of buyer awareness program is to require that information about an Airport Influence Area be disclosed to prospective buyers of all airport-vicinity properties prior to the transfer of title. The advantage of this type of program is that it applies to previously existing land uses as well as to new development.

  This type of program can be implemented through adoption of a local ordinance requiring real estate disclosure upon the transfer of title or it can be established in conjunction with the adoption of an airport overlay zone. Notification describing the zone and discussing its significance could be formally sent to all local real-estate brokers and title companies. The brokers would be obligated by State law to pass it along to prospective buyers after receiving this information.

  At a minimum, the area covered by a real estate disclosure program should include the Airport Influence Area as established in the CLUP. The boundary also could be defined to coincide with the boundaries of an airport overlay zone.

5.2.4 Methods of Calculating Density and Building Occupancy

The Safety Compatibility Guidelines for non-residential uses limit the persons per acre in certain safety zones. Determining the maximum number of persons likely to occupy a structure is not an exact science, however, the following methods are available to provide a reasonable estimate of how many persons will use a proposed facility.

- **Parking Ordinance.** Most jurisdictions have parking regulations, which specify how many parking spaces are required for particular types of uses. Once an assumption is made regarding the number of persons per vehicle, an estimate can be made of the maximum number of persons that could occupy the structure. The assumption of persons per vehicle must be based on the type of use.

- **Number of Seats.** If the proposed use provides seating for its patrons, such as a restaurant, it is relatively easy to determine the maximum number of people that could occupy the structure.

- **Uniform Building Code.** The Uniform Building Code (UBC) specifies a certain number of square feet per occupant that are required for certain uses. This number can be determined through contact with the city or County Building Department.

- **Similar Uses.** Certain uses may require an estimate based on a survey of similar uses. This method is more difficult but is appropriate for uses, which because of the nature of the use, cannot be reasonably estimated based on parking or square footage.

6 BIBLIOGRAPHY

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7 APPENDIX A

Sample Implementation Documents

Some ALUC approvals may require the dedication of Avigation Easements or use of Deed Notices in selected areas around the Airport. Examples might be the dedication of Avigation Easements for any development within the Traffic Pattern Zone, especially within the Safety Zones and Runway Protection Zones. Deed Notices might be more appropriate for development outside the Traffic Pattern Zone but within the Airport Influence Area.

Examples of these documents are presented on the following pages.

Exhibit 1 – Avigation Easement

Exhibit 2 – Deed Notice

Exhibit 1
Sample Avigation Easement

AVIGATION EASEMENT DEED

_____ [list owners of property in exact form as on deed for property] (hereinafter "Grantor") hereby grant an avigation easement to the County of Santa Clara, a political subdivision in the State of California (hereinafter "Grantee").

The Grantor, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the Grantee, its successors and assigns, a perpetual and assignable easement over the following described parcel of land in which the Grantor holds fee title. The property which is subject to this Avigation Easement is located at [insert address and assessor's parcel number] and is more particularly described on Exhibit A attached hereto and incorporated herein (hereinafter "Property").

The easement conveyed herein ("Avigation Easement") applies to both the Property and the airspace above an imaginary plane over the Property (hereinafter "Airspace"), which is described as follows:

The imaginary plane above the hereinbefore described real property, as such plane is defined by Part 77 of the Federal Aviation Regulations and consists of a plane [describe approach, transition, or horizontal surface]: the elevation of said plane being based upon the official FAA South County Airport elevation of _____ feet Above Mean Sea Level (AMSL), the approximate dimensions of which said plane are described and shown on Exhibit B attached hereto and incorporated herein by reference.

The purposes of this Avigation Easement include, but are not limited to, the following:

(1) The use and benefit of the public for the continuing right to fly, or cause or permit the flight by any and all persons, or any aircraft, of any and all kinds now or hereafter known, in, through, across, or about any portion of the Property and Airspace; and

(2) The right to cause or create, or permit or allow to be caused or created within all space above the existing surface of the Property and any and all Airspace above the Property, such noise, vibration, currents and other effects of air, illumination and fuel consumption as may be inherent in, or may arise or occur from or during the operation of aircraft of any and all kinds, now or hereafter known or used, for navigation of or flight in air; and

(3) A continuing right to clear and keep clear from the Property and Airspace any portions of buildings, structures, or improvements of any kinds, and of trees or other objects, including the right to remove or demolish those portions of such buildings, structures, improvements, trees, or other things which extend into or above the Airspace, and the right to cut to the ground level and remove any trees which extend into or above the Airspace; and

(4) The right to mark and light, or cause or require to be marked or lighted, as obstructions to air navigation, any and all buildings, structures, or other improvements, and trees or other objects which extend into or above the Airspace; and

(5) The right of ingress to, passage within, and egress from the Property for the purposes described in subparagraphs (3) and (4) above at reasonable times and after reasonable notice.

For and behalf of itself, its successors and assigns, the Grantor hereby covenants with the Grantee, for the direct benefit of the real property constituting the South County Airport (hereinafter "Airport"), that

neither the Grantor, nor its successors in interest or assigns will construct, install, erect, place or grow in or upon the Property, nor will they allow, any building structure, improvement, tree or other object to extend into or above the Airspace or constitute an obstruction to air navigation, or to obstruct or interfere with the use of this Avigation Easement.

This Avigation Easement shall be deemed both appurtenant to and for the direct benefit of that real property which constitutes the Airport in the County of Santa Clara, State of California; and shall further be deemed in gross, being conveyed to the Grantee for the benefit of the Grantee and to any and all members of the general public who may use Airspace for landing at, taking off from or operating such aircraft in or about the Airport, or in otherwise flying above the Property or through said Airspace.

Grantor, together with its successors in interest and assigns, hereby waives its right to legal action against Grantee, its officers, employees, successors, and assigns for monetary damages or other redress due to impacts associated with aircraft operations in the air or on the ground at the Airport, including future increases in the volume or changes in location of said operations. Furthermore, Grantee, its officers, employees, successors, and assigns shall have no duty to avoid or mitigate such damages through physical modifications of airport facilities or establishment or modification of aircraft operational procedures or restrictions. This grant of Avigation Easement shall not operate to deprive the Grantor, its successors or assigns, of any rights which it may have against any air carrier or private operator for negligent or unlawful operation of aircraft.

These covenants and agreements run with the land and are binding upon the heirs, administrators, executors, successors and assigns of the Grantor, and, for the purpose of this Avigation Easement, the Property and Airspace hereinabove described constitute the servient tenement and property comprising the Airport is the dominant tenement.

DATED: _____ _____

Name: _____

_____

Name: _____

[Note: Signatures of grantors must be notarized.]

Exhibit 2

Sample Deed Notice

The following statement should be included on the deed and recorded by the transferor with the County Clerk-Recorder for any property located within the Airport Influence Area. This statement should also be included on any parcel map, tentative map or final map for subdivision approval for any property within the Airport Influence Area.

> The *Santa Clara County Airport Comprehensive Land Use Plan* identifies Airport Influence Areas. Properties within these areas are routinely subject to overflights by aircraft using the associated airport and, as a result residents may experience inconvenience, annoyance or discomfort arising from the noise or sight of such operations. State law (Public Utilities code sections 21670 et. Seq.) establishes the importance of public use airports to protection of the public interest of the people of the State of California. Residents of property near such airports should therefore be prepared to accept the inconvenience, annoyance or discomfort from normal aircraft operations. Residents also should be aware that the current volume of aircraft activity may increase in the future in response to government needs, Santa Clara County population and/or economic growth. Any subsequent deed conveying this parcel or subdivisions there of shall contain a statement in substantially this form.

8 APPENDIX B

Selected Excerpts
California Airport Land Use Planning Handbook (January 2002)

Establishing Noise Compatibility Policies

[Page Summary-8]
"Compatibility plans should be based upon the noise contours for the time frame that results in the greatest noise impacts. Usually, this time frame is the long-range future (at least 20 years), but sometimes can be the present or a combination of the two. Also, for busy airports, the capacity of the runway system may be the best representation of potential long-range future activity levels."

[Pages 7-18,19]
"State statutes specify that airport land use compatibility plans must be based upon an airport development plan "that reflects the anticipated growth of the airport during at least the next 20 years." Forecasts having the required 20-year time horizon are normally included in airport master plans. The FAA, the Division of Aeronautics, and some regional planning agencies also prepare individual airport forecasts, some extending to 20 years.

For the purposes of compatibility planning, however, 20 years may be shortsighted. For most airports, a lifespan of more than 20 years can reasonably be presumed. Moreover, the need to avoid incompatible land use development will exist for as long as an airport exists. Once development occurs near an airport, it is virtually impossible or at least very costly and time consuming to change the land uses to ones which would be more compatible with airport activities

In conducting noise analyses for compatibility plans, the long-range time frame is almost always of greatest significance. Barring vast improvements in aircraft noise reduction technology, the growth in aircraft operations expected at most airports will result in larger noise contours. A possible exception to this trend is that, at some airports, planned changes in runway configuration or approach procedures could result in reduction of noise impacts in some portions of the airport environs. In these instances, a combination of current and future noise contours may be the appropriate basis for compatibility planning.

Past improvements in aircraft noise reduction technology or, more to the point, the elimination of older, noisier aircraft from the fleet have caused noise contours at some airports to shrink. One result of shrinking contour sizes during the late 1990s was pressure to allow residential and other noise-sensitive development closer to airports. Allowing such development might be reasonable in situations where no potential exists for the contours to expand back to their former size (for example, where policies to limit contour sizes have been adopted). However, whether future technology will again enable significant reduction in noise impacts is uncertain. Thus, looking to the long-range future, the scenario which has the greatest land use planning implications for most airports is that anticipated future growth in airport activity will result in expansion of noise contours.

G U I D A N C E
The "at least" phrase in the statutory guidelines deserves emphasis. The 20-year time frame should be considered a minimum for compatibility plans. Noise impacts (as well as other compatibility concerns) should be viewed from the longest practical time perspective."

E16 CLUP
CHANGE DOCUMENT
11/19/08 to 11/16/16
WBW

Cover page: Added "Amended 11/16/16",

Page 4-5, Section 4.3.1.1, Policy G-6 Added the following sentence to the end of this paragraph: "This policy requires the height at maturity of newly planted trees to be considered to avoid future penetration of the FAA FAR Part 77 Surfaces."

Page 4-5, Section 4.3.1.1, Policy G-7 Added the phrase "or large video displays" in the first sentence.