

County of Santa Clara

Roads and Airports Department

101 Skyport Drive
San Jose, California 95110-1302
1-408-573-2400



SENT VIA OVERNIGHT MAIL AND EMAIL

September 19, 2019

Raquel Girvin
Western-Pacific Regional Administrator
Federal Aviation Administration
FAA Western-Pacific Region
777 S. Aviation Boulevard, Suite 150
El Segundo, CA 90245

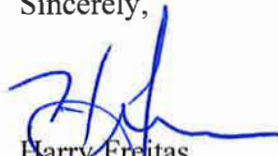
Re: County of Santa Clara ("County") Written Request for Release for "Tully" Parcel at Reid-Hillview Airport ("RHV") for Redesignation for Non-Aeronautical Uses and Long-Term Lease

Dear Ms. Girvin:

The County of Santa Clara, as sponsor for RHV submits this Written Request for Federal Aviation Administration ("FAA") Release for Redesignation for Non-Aeronautical Use ("Request") for an 8.6-acre property located at the northwest corner of Tully Avenue and Capitol Expressway ("Tully Parcel"). The purpose of this request is to redesignate the Tully Parcel for nonaeronautical uses to allow for the long-term ground lease of the Tully Parcel in order to provide substantial and much needed revenues to support RHV's and the County airports' long-term operations.

As the Director of Roads and Airports for the County, I have been duly authorized by the Board of Supervisors to submit this Request on behalf of the County

Sincerely,



Harry Freitas
Director of Roads and Airports

c: Laurie Suttmeier

INTRODUCTION

The County of Santa Clara (“County”) as the sponsor of Reid-Hillview Airport (“RHV”) submits this written request for Release (“Request”) for an 8.6-acre property located at the northwest corner of Tully Avenue and Capitol Expressway (“Tully Parcel”) for redesignation for nonaeronautical uses to authorize long-term lease of the property. The Tully Parcel has not been used for aeronautical purposes since it was purchased in 1963. It is designated for non-aeronautical use in the current RHV Airport Layout Plan (2007) and is not necessary for current or future aeronautical use.

The projected approximately \$1.2 million in annual ground lease revenue generated by the Tully Parcel is desperately needed to support the County airports’ operations. Furthermore, the robust current development market in Silicon Valley makes it critically important that the Federal Aviation Administration (“FAA”) act promptly on the Request in order to maximize the possibility of success for the solicitations of proposals to ground lease and develop the Tully Parcel.

This Request follows up on the County’s two prior release requests since 2015 to allow for long-term ground lease of the Tully Parcel.¹ Because the Request is entirely consistent with applicable FAA guidance relating to property releases, and because of the substantial benefit to the two County-owned airports of approving this request in a robust real estate market, the County respectfully requests FAA swift approval.

¹ For FAA’s convenience, this Request incorporates the information previously submitted as well as more recent information that supports this Request. The County notes that the FAA has not yet responded in writing to the County’s September 15, 2016 Application update and the County specifically requests that FAA respond to this Request in writing.

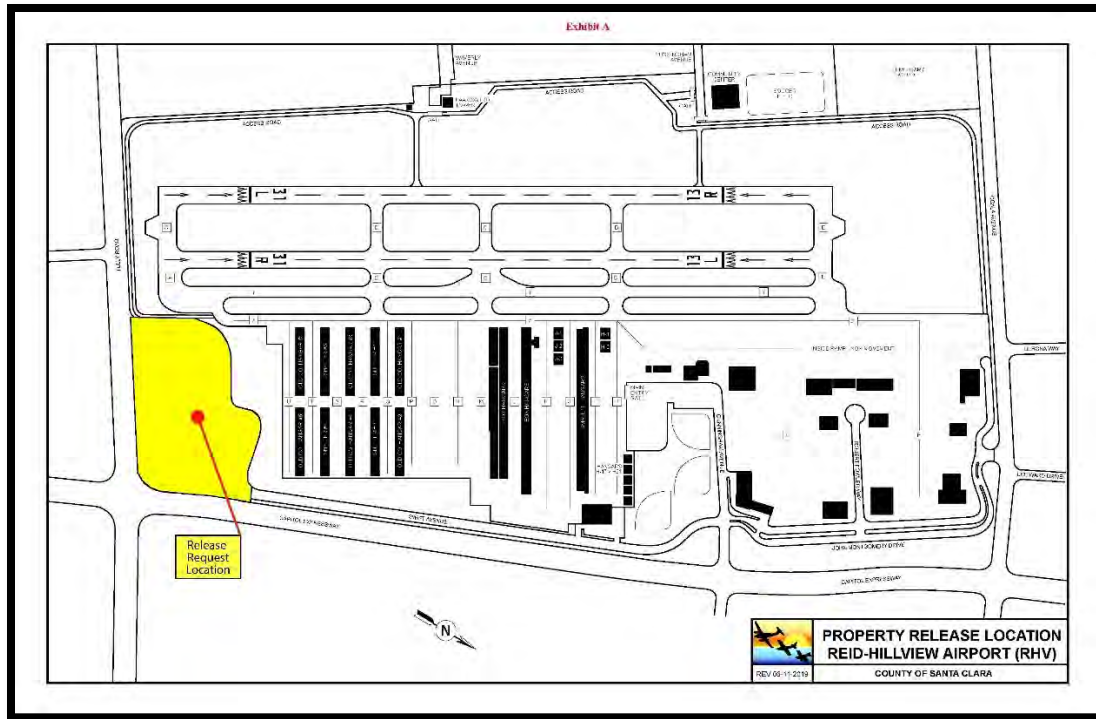
BACKGROUND

The County owns and operates two general aviation airports: South County Airport (“E16”) and RHV. Although this Request seeks the release of the Tully Parcel at RHV, the proceeds from leasing the Tully Parcel will support operations at both RHV and E16.



RHV is a public-use general aviation airport located in the City of San José, Santa Clara County. RHV is located approximately four miles southeast of San José’s downtown area. It encompasses approximately one hundred and seventy-nine acres with another nineteen acres controlled through easements²

² A map showing RHV and its vicinity is attached hereto as Exhibit “A”.



RHV was originally constructed as a privately owned, public use facility in 1939. The County acquired the main RHV airport property in 1961 and acquired the Tully Parcel shortly thereafter. In 1963, the County accepted a grant from FAA to cover 53.89% of the purchase price of the Tully Parcel (in addition to other land). Despite this long County ownership, the Tully Parcel has never been developed and/or used for aeronautical purposes. Since at least 1975, the Tully Parcel has been physically separated from the rest of RHV by Swift Lane. All of the Tully Parcel, including Swift Lane, is outside the RHV security fence. The RHV Airport Master Plan³ does not call for any future aeronautical development of the Tully Parcel and the Tully Parcel is designated for “Future Nonaviation Commercial” on the FAA-approved Airport Layout Plan.⁴

By letter dated February 26, 2015, the County asked FAA to allow the County to lease the Tully Parcel for non-aeronautical use.⁵ On April 2, 2015, FAA responded to the County’s letter and indicated that it was not able to support the County’s request because the Tully Parcel was considered prime airport property, the County was not then in compliance with its Article 16 grant obligations, and there was not sufficient justification for non-aviation use.⁶

³ A true and correct copy of the RHV Master Plan, dated July 2006 is attached hereto as Exhibit “B.”

⁴ The current Airport Layout Plan is included in the Airport Drawings Appendix to the 2006 RHV Master Plan (which is attached as Exhibit “B” hereto).

⁵ A true and correct copy of the County’s February 26, 2015 letter to FAA is attached hereto as Exhibit “C.”

⁶ A true and correct copy of FAA’s April 2, 2015, letter to the County is attached hereto as Exhibit “D.”

On September 15, 2016, the County submitted an updated request for release of the Tully Parcel.⁷ The County's letter summarized historical operations at RHV and future trends, as well as the financial needs of the County's Airport Enterprise Fund, in order to justify the Request. The County never received a written response to its September 15, 2016 request. This Request is intended to replace and supplement the prior requests by consolidating the information in the prior submittals with updated information into a single document for FAA's convenience.

As explained in full detail in this Request, the Tully Parcel has never been used for aeronautical purposes and has been undeveloped since it was purchased in 1963. The Tully Parcel was first identified for non-aeronautical uses in the Airport Layout Plan ("ALP") update associated with the 2006 Master Plan Update. That Master Plan Update determined that based upon the aviation forecast at that time, all anticipated demand for aviation services at RHV could be provided on the existing footprint without the need to expand current aircraft parking or Fixed Based Operator ("FBO") property. This conclusion was confirmed in the more recent 2018 Airport Business Plan Update ("Business Plan Update") presented to the Board of Supervisors in December 2018 that proposed no expansion of airport related uses at RHV.⁸ Both the Master Plan Update⁹ and the Business Plan Update¹⁰ specifically identify the Tully Parcel as suitable for nonaviation use and contemplate economic return on the Tully Parcel.

The Airport Enterprise Fund ("AEF") budget serving the two County airports is heavily reliant upon the income generated by aircraft parking and storage, with hangar rental income representing a large majority of the revenue. As the number of GA aircraft in the United States fleet has declined, demand for aircraft storage and parking at RHV has also declined. This is despite a dramatic increase in flight operations at the airport over the past three years. This decline in demand, and expected revenue can be seen through hangar occupancy and waiting list status. At RHV the County used to enjoy a multi-year waiting list for hangar parking spaces. Over the past several years, the number of people on the waiting list has continued to decline to the point where over FY 2019 the airport now maintains a vacancy of approximately five hangars out of 145 at any given time. At E16 the vacancy rate has held at about 50% since one hundred hangars were constructed in 2005.

For the past several years, the annual AEF budget has included a net deficit. However, through a variety of cost-saving measures, the actuals at the end of each year have been very near break-even. For fiscal year 2020, the AEF budget includes revenue of \$2.5 million and expenses of \$3.1 million, with a deficit of \$560,000. 74% of the expected revenue is from aircraft storage fees. Expenses for this year include no major capital improvements. After all fixed costs, including personnel, which accounts for 42% of budget expense, the AEF is left with approximately \$190,000 for maintenance and repairs of airports infrastructure. This is far short of the funding necessary to address the twenty-million dollars in necessary infrastructure improvements described in the updated Airports Business Plan. It is unlikely the AEF will experience the same level of operational savings this year partly due to the requirement to

⁷ A true and correct copy of the County September 15, 2016, letter to FAA is attached hereto as Exhibit "E."

⁸ A true and correct copy of the Business Plan Update is attached hereto as Exhibit "F".

⁹2006 Master Plan (Exhibit "B"), at p. 408.

¹⁰ Business Plan Update (Exhibit "F"), at p. 31.

replace the airports' two tractors due to air quality regulations. Moreover, the County cannot continue to rely on *ad hoc* cost-savings measures each year to make costs match revenues.

The addition of approximately one-million dollars per year to the AEF would be a game changer in the County's ability to operate and maintain the airport infrastructure. It would also allow the County the flexibility to re-evaluate aircraft storage rates, which currently make up 74% of budgeted income.

WRITTEN REQUEST FOR RELEASE FOR REDESIGNATION AND GROUND LEASE

Consistent with Chapter 22 of FAA Order 5190.6B, (“FAA Airport Compliance Manual”), Paragraphs 22.24 and 22.26, and with FAA’s Policy and Procedures Concerning the Use of Airport Revenue, 64 Fed. Reg. 7696 (Feb. 16, 1999) (“Revenue Use Policy”), the County provides the following information and materials to support the request for a release from the aeronautical designation for the Tully Parcel for purposes of facilitating a long-term, revenue-producing ground lease. No disposal of the Tully Parcel is contemplated at this time.

1. ORDER 5190.6B, PARAGRAPH 22.24 - Content of Written Requests for Release

a. All obligating agreement(s) with the United States.

RHV is grant-obligated. The County received its last federal grant in 2011 in the amount of \$50,350 for a planning for pavement management project.¹¹

b. Type of release requested.

The County is seeking a release to lease the Tully Parcel in order to generate revenue to support the County airports system. This is a request for a release from the aeronautical designation for the Tully Parcel. No disposal is contemplated at this time.

c. Reason(s) for requesting release.

The County seeks this release for redesignation in order to enter into a long-term lease of the Tully Parcel to generate revenue to support the County’s operation of RHV and E16. The 2018 Business Plan Update focused on evaluating the self-sufficiency of the County airports system on a long-term basis. The AEF, a stand-alone account that funds the County Airports system currently generates about \$2.5 million in revenue per year. Budgeted expenses exceeded that revenue. In the past few years, consistent with County policy and due to certain cost-saving measures and deferred maintenance, AEF revenues have been marginally sufficient to fund operating expenses. However, as stated above, aircraft based at RHV that provide the bulk of revenue has decreased and aircraft based at E16 have not increased since the Master Plan update in 2006 resulting in lower than anticipated revenue. At the same time, operating costs have continued to increase. The AEF has \$6.7 million in existing long-term debt and maintains approximately one year of revenues as retained earnings. The 2018 Business Plan Update identifies approximately \$20 million in additional new unfunded necessary capital improvements and maintenance needs for both airports. As discussed above, the County anticipates that structural operating deficits will occur going forward, as well as deferred maintenance and an inability to fund necessary capital and maintenance projects.

Currently the airports system is effectively operating at a structural deficit because revenues are not sufficient to cover operating expenses and long-term debt service necessary to issue bonds to address maintenance and capital improvement needs. Recently, in order to complete runway paving improvements, the airports system was required to borrow significant

¹¹ A true and correct copy of the 2011 Grant is attached hereto as Exhibit “G.”

funds from the County General Fund that must be repaid. Leasing of real property assets, including the Tully Parcel, is a fundamental necessity in order to ensure the long-term viability of the County airports system. This is consistent with Grant Assurance No. 24 because long-term lease of the property will further the goal of financial self-sustainability.

d. The expected use or disposition of the property or facilities.

The expected use of the property is for commercial development pursuant to a long-term ground lease between the County and private developer/business entity.

The County believes that a categorical exclusion is appropriate to comply with FAA's environmental review obligations under the National Environmental Policy Act.¹² For FAA's convenience, the County has provided a completed Documented Categorical Exclusion Form with this Request.¹³

e. Facts and circumstances justifying the Request.

The facts and circumstances that justify approval of the Request are follows.

1. The Tully Parcel is not needed for present or foreseeable public airport purposes. The Property has never served and is not anticipated to serve any existing or future aeronautical purpose. The County has no current or future plans or need to use the Tully Parcel for airport or aeronautical uses. Physically, the Tully Parcel is outside the runway primary surface, and not in the Runway Protection Zone ("RPZ"), Clear Zone, or Runway Safety Area ("RSA").¹⁴ The bulk of the Tully Parcel is beyond the Building Restriction Line ("BRL"), with only small sliver of Swift Lane inside BRL. The County will take steps to assure that no structures are built on that part of the Tully Parcel. No FAA design standard would prevent its use for non-aeronautical purposes, subject only to height, BRL, and noise compatibility restrictions. The FAA Compliance Manual contemplates approval of a release under circumstances similar to the Tully Parcel.¹⁵ Since at least 1975, the Tully Parcel has been physically separated from the airport by a road. Given its location at the intersection of two major roads and the substantial commercial development nearby, the Tully Parcel is ideally situated for non-aeronautical development and will generate fair market value rental revenue for the County airports system.
2. The County will receive fair market value for the Tully Parcel. A March 2018 appraisal of the Tully Parcel conducted by Valbridge Property Advisors concluded that a long-term lease of the Tully Parcel for commercial uses at market value would generate \$1.1984 million per year or approximately \$100,000 per month.¹⁶ The appraisal concludes that

¹² See, e.g., FAA Order 5050.4B at ¶ 207(c)(5)(a) (releases of airport land); see also FAA Order 1050.1E at ¶¶ 5-6.1(b) & (c) (categorical exclusions).

¹³ The completed categorical exclusion form is attached hereto as Exhibit H.

¹⁴ A map of the Property showing the BRL, RPZ, RSA, and Clear Zone is attached hereto as Exhibit "I."

¹⁵ FAA Compliance Manual p. 22-14.

¹⁶ A true and correct copy of the March 2018 appraisal by Valbridge Property Advisors is attached hereto as Exhibit "J."

there is strong market demand for commercial uses at the Tully Parcel. The County would lease the Tully Parcel at market rate.

3. The ability to lease the Tully Parcel will provide necessary revenue to support aeronautical needs. Leasing of the Tully Parcel at market rate would be a game-changer for the viability of the County airports system. This long-term revenue stream would allow the County to operate in a self-sufficient manner, to begin to complete needed improvements and maintenance, and to maintain adequate capital improvement reserves.

The AEF budget for fiscal year 2020 shows a deficit of \$560,000. Included in this number is revenue of \$2.5 million, where 74% is from aircraft storage fees. Expenses for this year include no major capital improvements. After all fixed costs, including personnel, which accounts for 42% of budget expense, the AEF is left with approximately \$190,000 for maintenance and repairs of airports infrastructure. This is far short of the funding necessary to address the twenty-million dollars in necessary infrastructure improvements described in the updated Airports Business Plan.

As stated above, approval of the Request and subsequent long-term ground lease will put the County airports on a path to self-sufficiency and will complete modernization efforts. Such a result will provide a substantial net benefit to civil aviation in Santa Clara County. As there is no aeronautical demand or need for the Tully Parcel, there would be no detriment to civil aviation by granting the Request. But failing to grant the Request would deprive the County of revenue needed to operate and maintain both County-owned airports. Such a result is contrary to the goals of Grant Assurance No. 24 and not in the best interest of civil aviation.

The County's long-standing request to lease the Tully Parcel is practical and benefits civil aviation interests. Leasing the Tully Parcel, rather than selling it, provides the County with ongoing control and enforcement authority and also preserves the land for potential future aeronautical use.

- f. The requirements of state or local law which the ADO or regional office will include in the language of the approval document if it consents to, or grants, the request.**

The County will comply with all applicable state laws relating to leasing of County property, including a competitive process to identify prospective lessees. The release process may require the County to comply with the California Environmental Quality Act ("CEQA"). Development proposals by the ground lessee will be subject to applicable City of San Jose entitlement requirements, including compliance with CEQA.

- g. The involved property.**

The Tully Parcel encompasses approximately 8.6 acres at the northwest corner of Tully Avenue and Capitol Expressway in San José, California, Santa Clara County, California 95122 (Assessor's Parcel Numbers ("APN's") 491-05-020 and 491-05-001 (Portion of)). The Tully Parcel includes Swift Lane and a vacant island parcel located just north of the main site, at the

southwest corner of Swift Lane and Capitol Expressway. The Tully Parcel has 411 linear feet of frontage on Capitol Expressway and 612 linear feet of frontage on Tully Road. The Tully Parcel is physically separated from the rest of RHV by Swift Lane, and all of the Tully Parcel, including Swift Lane, is outside the RHV security fence.

The Tully Parcel has a City of San José zoning designation of Commercial General and a General Plan designation of Neighborhood/Community Commercial. The Commercial General zoning district is intended to serve the needs of the general population. This district allows for a full range of retail and commercial uses with a local or regional market. Development is



expected to be auto-accommodating and includes larger commercial centers as well as regional malls. The Neighborhood/Community Commercial land-use designation supports a very broad range of commercial uses, such as neighborhood serving retail and services and commercial/professional office development.

h. A description of how the sponsor acquired or obtained the property.

The County acquired the Tully Parcel in 1961.

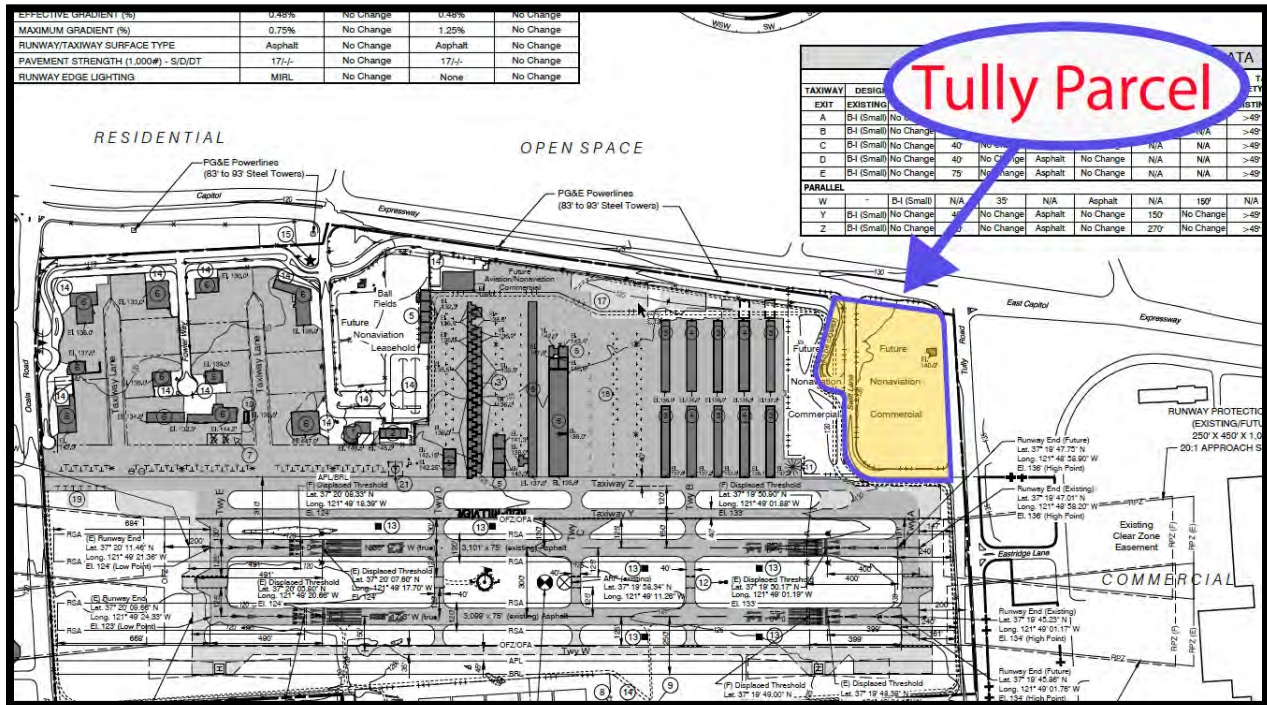
i. The present condition and present use of any property or facilities involved.

The Property is currently vacant and unutilized.

2. ORDER 5190.6B, PARAGRAPH 22.26 - Exhibits to the Written Request for Release

a. Drawings

The Tully Parcel is an 8.6-acre property located at the northwest corner of Tully Avenue and Capitol Expressway. The Tully Parcel is designated for non-aeronautical use on the current RHV Airport Layout Plan.¹⁷



The Tully Parcel is also fully described in the March 2018 appraisal by Valbridge Property Advisors.¹⁸

b. Height and data computations

Please see attached Exhibit L showing Part 77 surfaces.¹⁹

c. Application of proceeds

As described above, the County has conducted an appraisal to determine fair market value of the Tully Parcel. If FAA grants this Request, the County will lease the Tully Parcel at

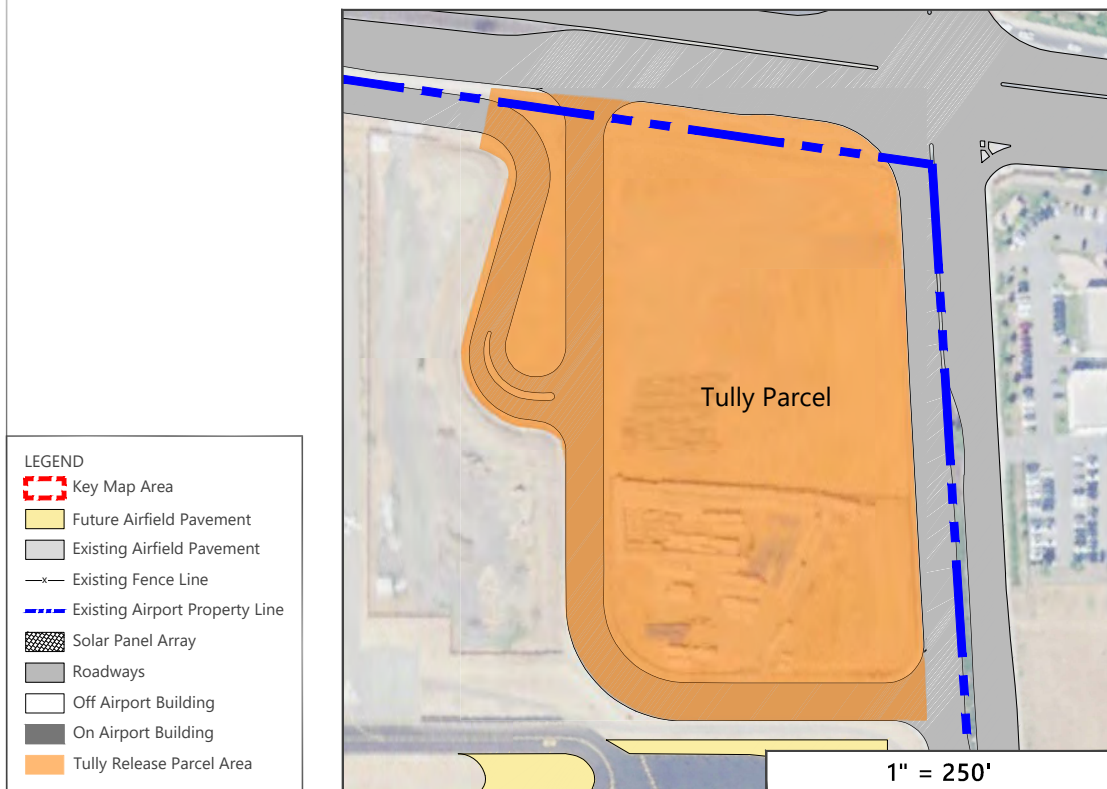
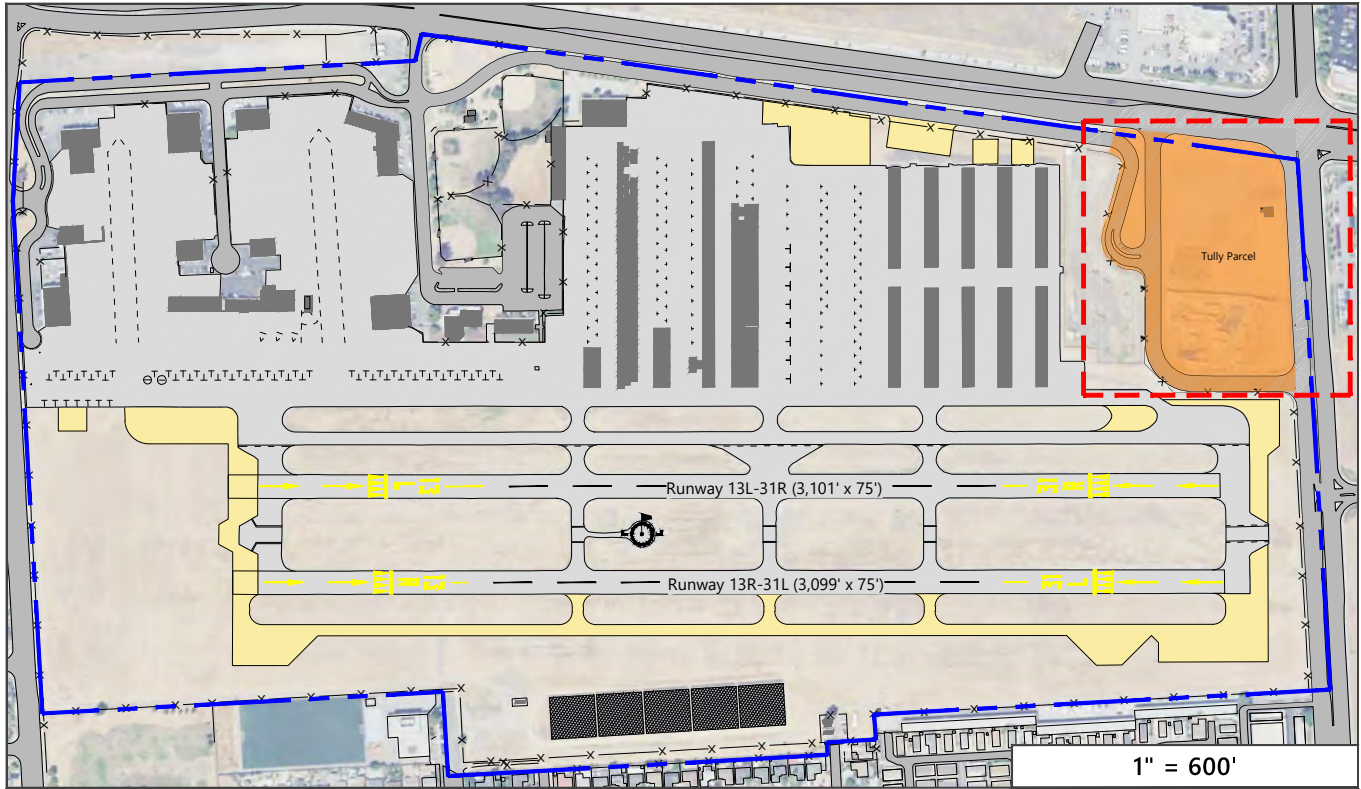
¹⁷ The ALP is Exhibit A to the RHV Master Plan, which is attached as Exhibit "C".

¹⁸ The appraisal is attached as Exhibit "J."

¹⁹ Attached is Exhibit K showing Part 77 surfaces.

fair market value rates, consistent with Grant Assurance 24. The lease revenues would be deposited into the AEF as airport revenue, and will be managed consistent with all relevant restrictions, consistent with Grant Assurance 25.

Exhibit A



LEGEND	
	Key Map Area
	Future Airfield Pavement
	Existing Airfield Pavement
	Existing Fence Line
	Existing Airport Property Line
	Solar Panel Array
	Roadways
	Off Airport Building
	On Airport Building
	Tully Release Parcel Area

SOURCE MEAD & HUNT, INC., AIRPORT LAYOUT PLAN, JULY 2008; THE COUNTY OF SANTA CLARA, PARCEL INFORMATION, AUGUST 2019



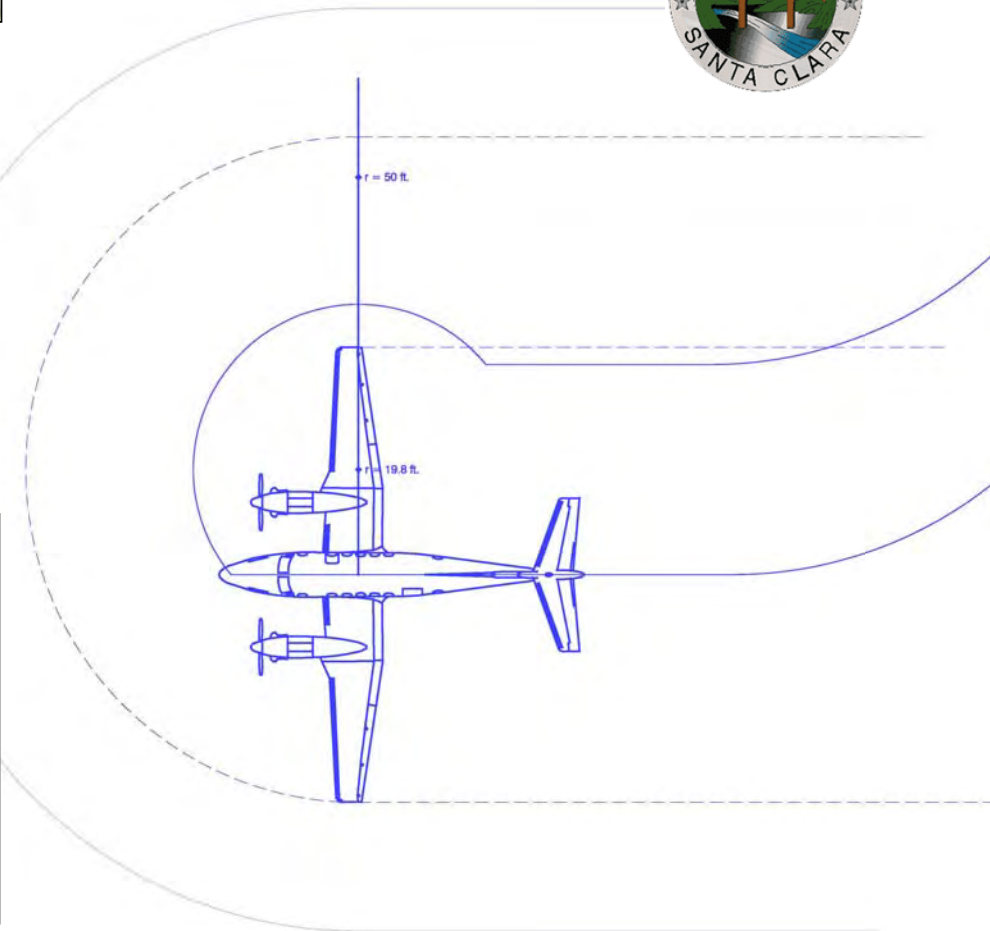
EXHIBIT A

PROPERTY RELEASE LOCATION
REID-HILLVIEW AIRPORT (RHV)

Reid-Hillview Airport Master Plan



Prepared for the
County of Santa Clara



July 2006

County of Santa Clara



Board of Supervisors



Donald F. Gage
District 1



Blanca Alvarado
District 2



Peter A. McHugh
District 3



James T. Beall, Jr.
District 4



Liz Kniss
District 5

COUNTY EXECUTIVE'S OFFICE

Peter Kutras, Jr. County Executive
Jane Decker, Deputy County Executive

ROADS AND AIRPORTS DEPARTMENT

Michael J. Murdter, P.E., Director

COUNTY AIRPORT ADMINISTRATION

Carl Honaker, Director
Eric S. Peterson, Asst. Director
Larry Feldman, Business Manager
Ken Betts, Noise Abatement Coordinator
Chris Nucci, Operations Manager

MEAD & HUNT, INC.

David Dietz, AICP, Project Manager
Maranda Thompson, Airport Planner
Todd Eroh, Graphics Technician
Susan Norvall, Publication Coordinator

The preparation of this document was financed in part through a planning grant from the Federal Aviation Administration (FAA) as provided under Section 505 of the Airport and Airway Improvement Act as amended. The contents of this document do not necessarily reflect the official views 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 herein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws.

Reid-Hillview Airport Master Plan Update

Prepared
for the
County of Santa Clara



Prepared by



June 2007

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Chapter 1

Background and Inventory



Background and Inventory

REID-HILLVIEW AIRPORT

Location and Environs



Reid-Hillview Airport lies within the urban limits of the City of San Jose in Santa Clara County (Figure 1A). The Airport is located four (4) miles southeast of the city's downtown area. At an elevation of 133 feet Mean Sea Level (MSL), the Airport lies on the flat Santa Clara Valley floor, which runs through the middle of the County. The Santa Cruz Mountains bound the Airport to the west and rise to nearly 3,500 feet MSL. Copernicus Peak, the highest peak in the Mt. Diablo Range, is located east of Reid-Hillview Airport and rises to nearly 4,400 feet MSL.

The Airport is surrounded primarily by residential uses to the north, northeast, and west. Raging waters, Lake Cunningham Park, and a public golf course lie directly east of Reid-Hillview Airport, across Capitol Expressway. Tully Road and the Eastridge Mall border the Airport to the south. Several schools are located in the immediate vicinity of the Airport.

The Airport's general aviation terminal is situated off Capitol Expressway. Automobile access to Reid-Hillview Airport is via U.S. Highway 101, Tully Road and Capitol Expressway. Highway 101 connects the San Jose area to San Francisco to the north and Los Angeles to the south. Interstate Highway 680 connects the San Jose area to the East Bay.



Figure 1A

Location Map Reid-Hillview Airport

History



Reid-Hillview Airport was originally constructed as a privately owned, public-use facility in 1939. The Airport was constructed in what was a rural area of east San Jose. In 1961, the County of Santa Clara purchased the Airport. Under County ownership and management, the Airport has been extensively enhanced. Since 1968, the Airport has been a tower-controlled facility. Presently, the Airport has two parallel runways, 726 aircraft parking spaces (i.e., tiedowns and hangars), and is a site for aviation-related and non-aviation related businesses. Additionally, the Airport serves as a Reliever Airport to San Jose International Airport to relieve congestion and to handle overflow of general aviation aircraft demand (aircraft storage and operations) from the Central Santa Clara County. The Airport's environs have also changed significantly over the last several decades. With the boom of the Silicon Valley, development has encroached the Airport on all sides.

Facilities

Reid-Hillview Airport is owned in fee by the County of Santa Clara. The day-to-day operation and management of the Airport is the responsibility of the County's Roads and Airports Department. Policy decisions affecting the Airport are made by the five-member Board of Supervisors. The Santa Clara County Airports Commission serves in an advisory capacity to the Board of Supervisors and staff on matters involving County-owned or leased airports.

The Airport encompasses 179 acres with another 19 acres controlled through easements. The airfield consists of two parallel runways and two 40-foot wide parallel taxiways on the easterly side of the runways. The Airport's air traffic control tower is located west of Runway 13R-31L. A large building area, containing nearly all of the airport buildings, is located east of Runway 13L-31R.

Runway 13L-31R is 3,101 feet in length and 75 feet wide. It is asphalt paved and has basic markings. The surface is rated at 17,000 pounds for aircraft with main landing gear in a single-wheel configuration. Runway 13L-31R is a visual runway with no instrument approaches. The runway is supported by a Medium-Intensity Runway Lighting System (MIRL) and Runway Edge Identifier Lights (REIL). To facilitate landing operations, a two-box Visual Approach Slope Indicator (VASI) with a 4.0° visual glide slope is located to the left side of Runway 13L-31R and Runway 31L.

The published dimensions for the parallel runway, Runway 13R-31L, are 3,099 feet long and 75 feet wide. The runway is asphalt paved with basic markings. The surface is rated 17,000 pounds for

aircraft with main landing gear in a single wheel configuration. Runway 13R-31L is a visual runway with no runway lighting.

Reid-Hillview Airport's principal building area is located east of the runways and backs to Capitol Expressway. The general aviation terminal and airport maintenance buildings are located near the center of the building area along the flight line. Nine (9) of the ten (10) Fixed Based Operator (FBO) buildings are located in the northern corner of the Airport. The remainder of the building area contains 96 T-hangars, 49 box hangars, and 52 aircraft shelters. Reid-Hillview Airport provides 433 tiedown spaces for both based and transient aircraft. Additionally, there are three (3) baseball fields on airport property. A summary of the facilities is presented in Table 1A.

The full range of services is available to general aviation pilots and aircraft. The available services are summarized in Table 1B.

AERONAUTICAL SETTING

Area Airports

Seven public-use airports, one private-use and one federal-use airport are located within 25 nautical miles of Reid-Hillview Airport. Of these airports, San Jose International Airport is the nearest and largest airport. Table 1C summarizes selected features of each of these airports and Figure 1B shows their location.

Area Airspace

Federal regulations define various categories of airspace with distinct operating requirements for each type. The airspace in the vicinity of Reid-Hillview Airport is relatively complex given its proximity to San Jose International Airport. As a VFR facility with an operating control tower (7:00 a.m. to 10:00 p.m.), Reid-Hillview Airport is located in Class D airspace. The Class B airspace associated with San Francisco International Airports and the San Jose Class C airspace start about one (1) nautical mile to the northwest of Reid-Hillview. The Class B airspace is more restrictive than Class C airspace. The airspace is highly controlled and air traffic control clearance is required for all aircraft to operate in this area. The airspace classifications are illustrated in Figure 1C.

MAJOR FEATURES

Property

- 179 acres owned in fee by the County of Santa Clara
- 19 acres controlled by the County through easements

Airfield

- Elevation: 133 feet Mean Sea Level (MSL)
- Runway 13L-31R: 3,101 feet long, 75 feet wide, asphalt paved
 - ▶ Threshold for Runway 13L displaced 491 feet
 - ▶ Threshold for Runway 31R displaced 400 feet
 - ▶ Medium Intensity Runway Lighting System (MIRLS)
 - ▶ Runway End Identifier Lights (REIL).
 - ▶ Visual Approach Slope Indicator (V2L – 4.00°)
 - ▶ Accommodates aircraft with landing gear in a single-wheel configuration and weighing up to 17,000 lbs.
 - ▶ Full-length parallel taxiway on east side; 150 feet from runway centerline
- Runway 13R-31L: 3,099 feet long, 75 feet wide; asphalt paved
 - ▶ Threshold for Runway 13R displaced 490 feet
 - ▶ Threshold for Runway 31L displaced 399 feet
 - ▶ No runway lighting; basic runway markings
 - ▶ Visual glide slope Indicator (V2L – 4.00°) on Runway 31L
 - ▶ Accommodates aircraft with landing gear in a single-wheel configuration and weighing up to 17,000 lbs.
- Rotating beacon; lighted wind indicator; segmented circle

Building Area

- North of runways
- Aircraft parking:
 - ▶ 433 tiedown spaces
 - ▶ 145 hangar spaces
 - ▶ 5 helicopter spaces

AIR TRAFFIC PROCEDURES

Traffic Patterns

- Right traffic pattern to Runway 13L and 31R
- Pattern altitude: 1,133 feet MSL (all aircraft)

Navigational Aids

- Woodside VORTAC: 113.70 MHz
- San Jose VOR/DME: 114.10 MHz

Communications

- UNICOM: 122.95 MHz
- Control Tower (7:am to 10:00pm):
 - ▶ 119.8 MHz (Runway 13L-31R)
 - ▶ 126.1 MHz (Runway 13R-31L)
- ATIS: 125.2 MHz

Source: Data compiled by Shutt Moen Associates (August 2001)

MANAGEMENT AND SERVICES

Management

- Management and maintenance provided by County of Santa Clara, Roads and Airports Department

Services

- Fuel service: 100LL, Jet-A, 80
- FBO services:
 - ▶ Aircraft maintenance
 - ▶ Aircraft rental, sales and charter
 - ▶ Aircraft storage
 - ▶ Avionics
 - ▶ Flight instruction

ENVIRONS

Topography

- Airport lies on flat Santa Clara Valley floor
- Santa Cruz Mountains located west of Airport and rise to nearly 3,500 feet MSL
- Mt. Diablo Range is located east of Airport and rises to 4,400 feet MSL

Access

- Primary access is via US Highway 101, Tully Road, and/or Capitol Expressway

Jurisdiction

- City of San Jose

Principal Land Uses

- North and west: residential uses and several schools
- East: Raging Waters, Lake Cunningham and public golf course
- South: Eastridge Mall



Table 1A

Airport Profile

Reid-Hillview Airport

Fixed Base Operations (Aviation-Related Services)																			
Name	Fuel Sales			Flight Instr'n		Aircraft Rental		Aircraft Parts & Maintenance				Aircraft Storage		Miscellaneous					
	100/100LL	Jet-A	80	Fixed Wing	Sailplane	Fixed Wing	Sailplane	Engine	Airframe	Avionics	Sailplane	Other	Based Tie-downs	Hangars	Transient Ramp	Pilots' Supplies	Charter (FAR 135)	Aircraft Sales	Other
Aero Trend, Inc.	✓												✓	✓					
Amelia Reid Aviation			✓	✓		✓							✓	✓					
Barnick Airport Properties													✓	✓					
Jurado Airport Properties													✓	✓					
Marconet Airport Properties	✓							✓	✓				✓	✓					
Nice Air, Inc.	✓	✓		✓		✓		✓	✓				✓	✓					
Trade Winds, Inc.				✓		✓		✓	✓				✓	✓		✓		✓	
Other Aviation-Related Tenants																			
2Wire Helicopter Group, LLC																			✓ ¹
Airport Shoppe																✓			
Advance Aviation Services										✓									
Aerotech, Inc.								✓	✓										
Air Accord, Inc.				✓		✓													✓
Civil Air Patrol																			✓ ²
Flying S Aviation, Inc.								✓	✓										
Pierce Aircraft Sales																			✓
Squadron Two, Inc.				✓		✓													
Turner Avionics										✓									
Vern Miller Aviation								✓	✓										
Wings International				✓		✓													
Non-Aviation Tenants																			
Name	Type of Business																		
Aborn Properties	Real estate and property management																		
Amasoft Corporation	Software consulting and training																		
Continuing Education Services	Healthcare licensing continuing education																		
Enterprise Rent-a-Car	Car rental agency																		
Flightstore.com	Pilot and aircraft supplies Internet retailer																		
Global Economic Support	Export/import wine and spirits																		
Gordon B. McMillan & Associates	Commercial marketing services																		
M.D. Wooding & Associates	Certified Public Accountant																		
Mr. Peabody's	Carpet cleaning																		
Niacomm Computers	Software consulting																		
V&B Transportation	Medical patient shuttle transport																		
Wooding Electric	Electrical contractor																		

¹ Helicopter Charter Service
² Volunteer air patrol service

Source: Data compiled by Mead & Hunt (July 2005)

Table 1B

**Airport Tenants
 Reid-Hillview Airport**

Airport Name	Owner	Location				Facilities				Services						
		Community/County	Distance ¹ /Direction	Based Aircraft	Number of Runways	Longest Runway (ft.)	Surface ²	Lighted-Intensity ³	Approach Visibility ⁴	Control Tower	Airline Service	AVGas	Jet Fuel	Maintenance	Automobile Rentals ⁵	Food
Area Airports																
Reid-Hillview	Public	San Jose/ Santa Clara	—	663	2	3,101	Asph	M	VFR	✓	—	✓	✓	✓	✓	—
Livermore	Public	Livermore/ Alameda	22N	547	2	5,255	Asph	M	½	✓	—	✓	✓	✓	✓	✓
Hayward Executive	Public	Hayward/ Alameda	25 NW	456	2	5,024	Asph	M	1	✓	—	✓	✓	✓	—	✓
San Carlos	Public	San Carlos/ San Mateo	24 NW	498	1	2,600	Asph	M	1	✓	—	✓	✓	✓	—	✓
Palo Alto	Public	Palo Alto/ Santa Clara	17 NW	521	1	2,443	Asph	M	1	✓	—	✓	✓	✓	✓	—
San Jose Int'l	Public	San Jose/ Santa Clara	6W	417	3	10,200	Asph	H	½	✓	✓	✓	✓	✓	✓	✓
South County	Public	San Martin/ Santa Clara	20 SE	85	1	3,100	Asph	M	1¼	—	—	✓	✓	✓	—	—
Watsonville	Public	Watsonville/ Santa Cruz	24S	331	2	4,501	Asph	M	1	—	—	✓	✓	✓	✓	✓
Moffett Field Airfield	Public	Sunnyvale/ Santa Clara	13 NW	50	2	9,200	Asph/ Conc									Federal Use
Bonny Doon	Private	Santa Cruz/ Santa Cruz	22 SW	2	1	2,200	Asph									Private Use

Notes:

¹ Distance limited to 25 nautical miles from Reid-Hillview Airport

² Asph=asphalt; Conc=concrete

³ L=low; M=medium; H=high

⁴ Statute mile

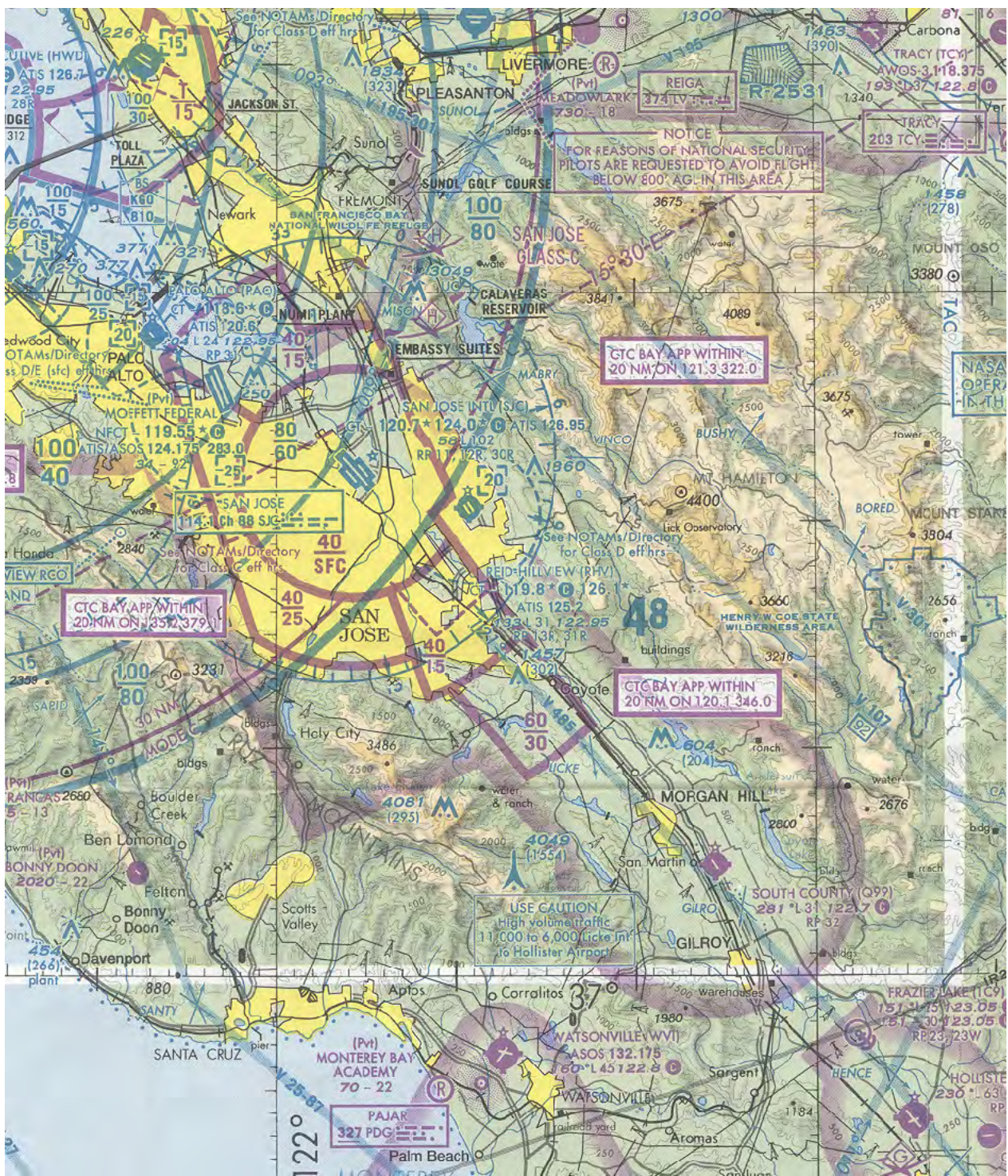
⁵ On-field (outlet)

Source: Data compiled by Mead & Hunt (July 2005)

Table 1C

Area Airports

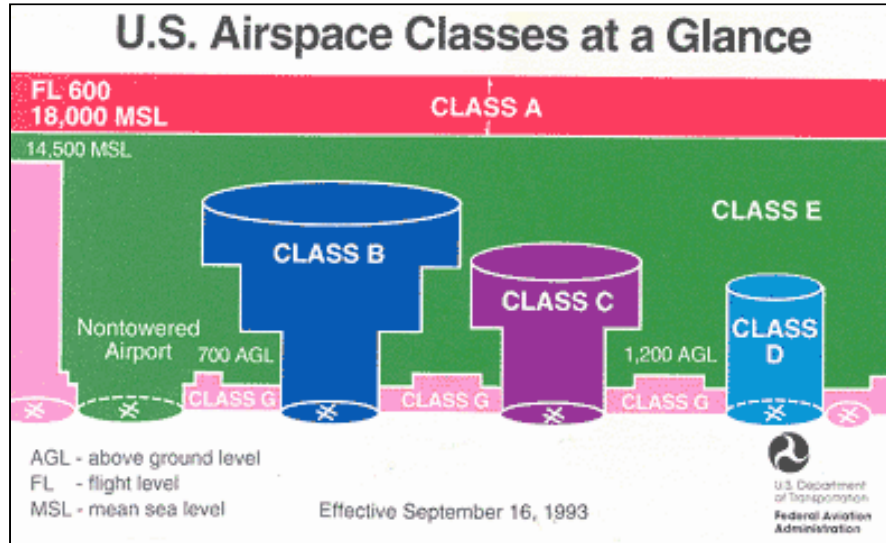
Reid-Hillview Airport Vicinity



Source: San Francisco Sectional Aeronautical Chart (March 2001)

Figure 1B

Area Airports
Reid-Hillview Airport



Airspace Classes	Communications	Entry Requirements	Separation	Special VFR in Surface Area
A	Required	ATC clearance	All	N/A
B	Required	ATC clearance	All	Yes
C	Required	Two-way communications prior to entry	VFR/IFR	Yes
D	Required	Two-way communications prior to entry	Runway operations	Yes
E	Not required for VFR	None for VFR	None for VFR	Yes
G	Not required	None	None	N/A

Figure 1C
Airspace Classes

Two low-altitude Victor Airways pass near Reid-Hillview Airport: V-485 to the west and V-107 to the east. These airways provide defined routes that can be flown under instrument conditions. Pilots using these airways normally do not interact with air traffic utilizing Reid-Hillview Airport.

COMMUNITY PROFILE

Founded in 1777, the City of San Jose was California's first civilian settlement. It was also the first city to be incorporated in 1850 and the site of the first state capital. Today, San Jose is the third largest city in California with a population of nearly 924,000 and encompassing 177 square miles.

The City of San Jose has been experiencing steady growth since 1990. The community has grown by 18 percent over the last decade from 782,248 in 1990 to 923,600 residents in 2000. Comparatively, the county has grown by 16 percent and has an estimated population of just over 1.7 million as of January 2000.

Santa Clara County's local economy is supported predominantly by manufacturing, trade, and service-oriented industries. Located in the heart of the Silicon Valley, the area's specialty is in computer technology – both hardware and software. San Jose's metropolitan area is ranked second among all U.S. cities in export sales (\$28.3 billion in 1999 dollars). Additional information is provided in Table 1D.

PREVIOUS AIRPORT PLANS AND STUDIES

Reid-Hillview Airport was one of three County-owned or leased airports addressed in the *Santa Clara County Airports Master Plan* (1982). The *Master Plan* examined the feasibility of providing new development (e.g., additional aircraft parking) at the Airport considering environmental and land use constraints.

In 1990, the *Reid-Hillview Airport Land Use Safety Compatibility Study* was prepared. The purpose of the *Study* was to examine the existing safety policy for Reid-Hillview Airport and to determine whether additional actions should be taken to enhance the airport/land use safety status of the Airport.

GEOGRAPHY

Location

- The city of San Jose is 177 square miles
- San Jose is located in Santa Clara County, California
- Two major cities near San Jose: San Francisco and Oakland, located approximately 44 miles and 38 miles to the north, respectively
- Other nearby cities, within 6 miles: Santa Clara (west) Campbell (south) and Milpitas (north)

Topography

- Copernicus Peak, situated in the Diablo Range, is the highest point in the San Francisco Bay Area, at 4,372 feet elevation
- San Jose is surrounded by the Santa Cruz Mountains on its western and southern borders

SURFACE TRANSPORTATION

Major Highways

- Main access into the City of San Jose:
 - ▶ US Highway 101 extending north-south
 - ▶ Interstate Highway 280, extending north-south, connects the San Jose Area to San Francisco
 - ▶ Interstate 680 and 880, also extending north-south, connects the San Jose Area to the East Bay Area

Railroads

- The City of San Jose is primarily served by the Southern Pacific and the Western Pacific Railroads

Public Transportation

- Santa Clara County Transportation Authority (VTA) offers light rail service 24 hours a day, seven days per week through the cities of San Jose, Santa Clara, and Sunnyvale and Mountain View. Free Light Rail Shuttles serve eleven employment centers
- Light Rail Service connects to VTA bus routes, employer shuttles, Caltrain commuter rail, and Altamont Commuter Express

POPULATION AND ECONOMY

Current/Historical Population

	1990	1995	2000
➤ Santa Clara County:	1,528,600	1,597,400	1,709,500
➤ City of San Jose:	782,224	839,300	923,600

(Source: California Department of Finance and Santa Clara County Government Website)

Projected Population

	2010	2015	2020
➤ San Clara County:	1,987,800	2,063,000	2,163,000
➤ City of San Jose:	--data not available--		

(Source: Association of Bay Area Governments)

Basis of Economy

- Industry groups with greatest percentage of employment in Santa Clara County:
 - ▶ Service 36%
 - ▶ Manufacturing 25%
 - ▶ Trade 19%

(Source: California Department of Finance)

CLIMATE

Temperatures

	Avg. High	Avg. Low
➤ Hottest month (July):	82.1°F	56.7°F
➤ Coldest month (January):	57.9°F	41.3°F

Precipitation

- Average annual rainfall in San Jose: 14.49 inches.

(Source: Western Regional Climate Center)

Winds

- Prevailing winds from the northwest

Source: Data compiled by Mead & Hunt (July 2005)

Table 1D

Community Profile

Reid- Hillview Airport

Chapter **2**

Airport Role and Activity Forecasts



Airport Role and Activity Forecasts

INTRODUCTION

This version of the Airport Roles and Forecasts Discussion Paper reflects the action taken by the Santa Clara Board of Supervisors on November 19, 2002.

A key purpose of an airport master plan is to define the role of the airport. The airport's adopted role in turn drives its basing capacity, which is the type and number of aircraft that the airport will be developed to accommodate. Once a role is defined, then the facilities necessary to implement the role can be specified.

The term "role" is used in two different contexts. In a strategic context, it means the function and purpose of the airport with respect to the overall transportation network (e.g., whether the airport will be geared to small piston propeller aircraft, larger turbo-props, or even business jets). In another context, it means the function of each airport with respect to accommodating growth in the number of based general aviation aircraft.

The process by which we may determine the airports' roles is outlined as follows:

- ▶ Forecast the overall demand for the airports (in terms of the number of based aircraft) over the 20-year time horizon of the Master Plan.
- ▶ Determine the hypothetical maximum basing capacity of each airport.
- ▶ Compare the forecasted overall demand to the total hypothetical maximum basing capacity of the airports.
- ▶ Identify policy alternatives available with respect to the role of each airport (i.e., the extent to which a particular airport should be developed to accommodate the forecasted demand).

- ▶ Select a role for each airport based on the Guiding Principles adopted at the beginning of the master planning process.

Airport Facility Plans based on the adopted role for each airport will be developed as part of subsequent phases of the master planning process. Appropriate environmental documentation will also be developed in accordance with the California Environmental Quality Act (CEQA).

DEMAND FORECAST

An aggregate forecast of based aircraft was prepared for the four airports in Santa Clara County: Palo Alto, Reid-Hillview, South County and San Jose International. The specific methodology is presented below.

Historical Trends – Based Aircraft

Historical data for Reid-Hillview, Palo Alto, and South County airports was taken from Santa Clara County records. Data for San Jose International Airport was taken from City of San Jose and Federal Aviation Administration records.

It is appropriate to start a discussion of forecasts with an examination of the historical record. Figure 2-1 presents the annual count of based aircraft within Santa Clara County, beginning in 1980. The early 1980s reflect the small residual growth following the boom years of the 1970s. Through the middle 1980s there was little change in the number of based aircraft, merely minor year-to-year variations. The total number of based aircraft remained slightly above 2,000. Beginning in about 1988 the number of based aircraft within the county started a slow decline. This general trend continued through the mid to late 1990s, although there were short periods of increase. The lowest recent total occurred in 1999 when the number of based aircraft dropped to 1,467. The last three years have seen an increase in based aircraft. In February 2002, the number of based aircraft countywide had increased to 1,580. Anecdotal information suggests that these may be the initial steps in a reversal of a decade-long decline. However, the current economic decline may slow the resurgence.

Historical Trends – Aircraft Operations

Operation (definition): Either a landing or a takeoff. A touch and go, a common training operation that involves a landing and an immediate takeoff without stopping, counts as two operations.

Data on aircraft operations for the three airports is readily available for all three airports back to 1978 and for Reid-Hillview back to 1968. The operations counts for Reid-Hillview and Palo Alto Airports are based upon counts made by the air traffic control tower staff. South County Airport data is based upon estimates and should be considered to be order-of-magnitude only.

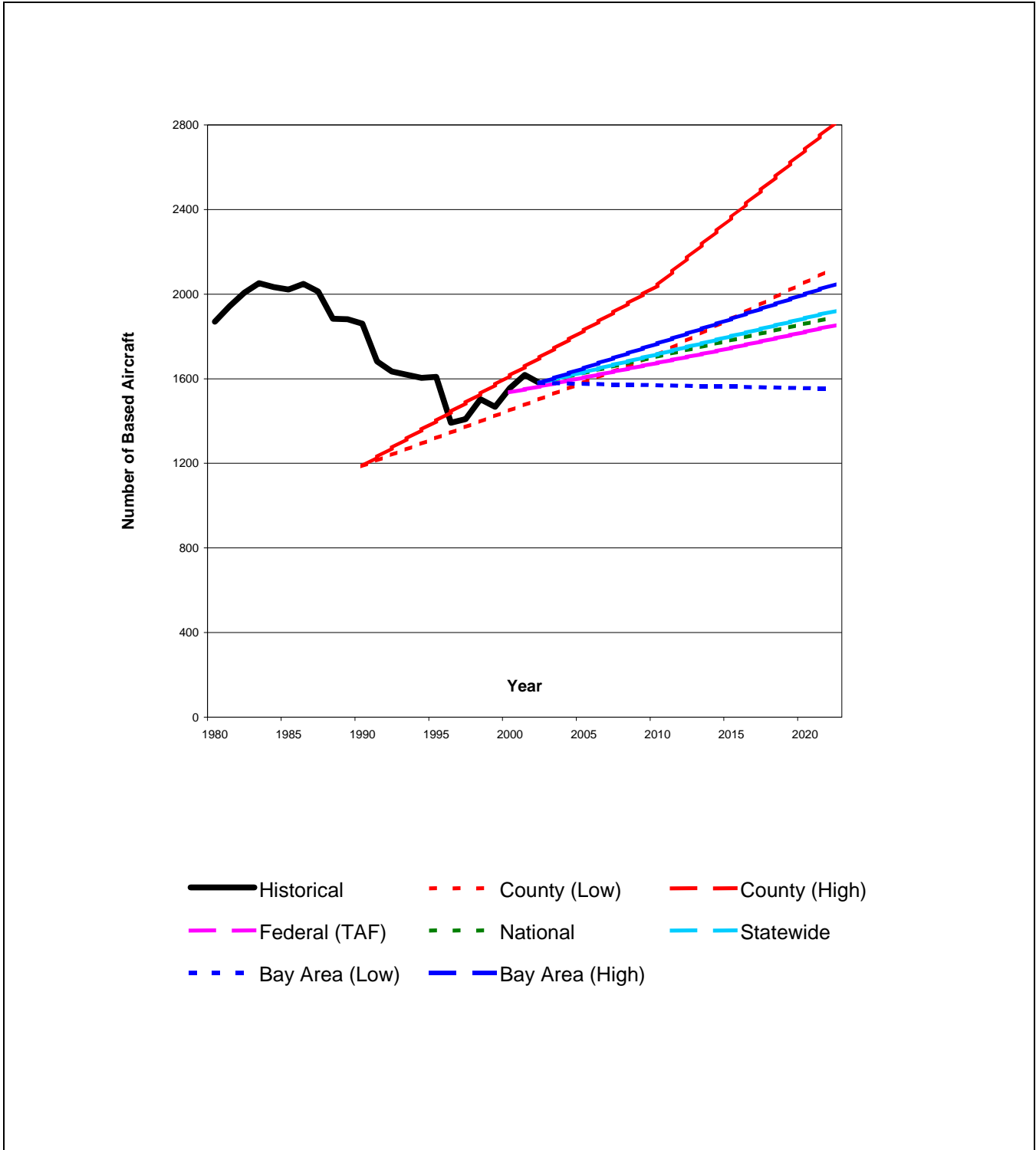


Figure 2A

Based Aircraft Demand Forecast

Santa Clara County

Some of the recent estimates for South County Airport are based upon sample counts made by Caltrans' Division of Aeronautics staff using an acoustical counter. These recent estimates can be assumed to be significantly more accurate than prior estimates.

Reid-Hillview Trends

Aircraft operations at Reid-Hillview grew fairly consistently through the late 1960s and peaked in 1978, with almost 400,000 annual operations (398,640). A very rapid decline followed with a reduction by nearly two-thirds to 137,019 operations in 1982. This was the lowest volume of operations in over 30 years. A second cycle of growth occurred through the 1980s, reaching a plateau of around 200,000 annual operations. Operations again declined, reaching its next low in 1995 with 151,916 operations. Since that time, operations have grown slightly each year. The total for the most recent year (2001) was 235,213.

Palo Alto Trends

The pattern of historical operations at Palo Alto Airport shows markedly less variation than at Reid-Hillview. There was a significant decline in operations from 1978 through 1982 (that paralleled that at Reid-Hillview): 252,425 operations to 144,223 operations. However, the percentage change was much less (44% versus 66%) than at Reid-Hillview. Following that low point, operations grew, reaching its next peak in 1990 with 240,496 operations. Again paralleling the experience at Reid-Hillview, operations declined through the early 1990s reaching its next low in 1995 with 184,285. Since that time, annual operations have hovered around the 200,000 level, with year-to-year variations as high as 10%. In 2001, the annual count was 209,709.

South County Trends

The lack of reliable data sharply limits the ability to discern trends at South County Airport. The most that can be said is that in recent years the number of operations has remained around 56,000 annual operations.

Existing Demand Forecasts

Both the Federal Aviation Administration (FAA) and Caltrans Division of Aeronautics have current forecasts of based aircraft for the four airports located in Santa Clara County. Additionally, it is appropriate to consider the FAA's national forecast for general aviation aircraft and Caltrans' statewide forecast. FAA data are

taken from the *National Plan for Integrated Airport Systems* (NPIAS), the on-line Terminal Area Forecasts, and the *Aerospace Forecasts* report. Caltrans data are taken from its *California Aviation System Plan* (CASP). Specifically, seven existing forecasts are evaluated in the paragraphs that follow:

1. NPIAS Terminal Area Forecast for airports in Santa Clara County
2. NPIAS national growth rate
3. CASP San Francisco Bay Area high forecast
4. CASP San Francisco Bay Area low forecast
5. CASP high forecast for airports in Santa Clara County
6. CASP low forecast for airports in Santa Clara County
7. CASP statewide growth rate

The Metropolitan Transportation Commission prepared forecasts of general aviation based aircraft and operations in its *Regional Airport System Plan Update*. The document provided forecasts through the year 2010. Although this document was released in 1994, it relies upon statewide data from 1988 and earlier, and national data from 1990 and earlier. This data is judged to be too old to reflect current trends and is not used in this analysis.

The FAA annually prepares Terminal Area Forecasts for all airports listed in the *National Plan of Integrated Airport Systems*. The year 2005 Terminal Area Forecasts for the four airports in Santa Clara County predict an increase in the number of based aircraft for the four airports to 1,818 by the year 2020. If this growth rate continues, the total for the four airports would reach 1854 by 2022. This growth rate is somewhat less than FAA's forecast national growth rate of about 0.9% annually. If the national growth rate occurred, the total number of aircraft based in Santa Clara County would grow to 1,782 by 2015 and 1,890 by 2022.

Caltrans' *California Aviation System Plan* (CASP) contains statewide, regional and individual airport forecasts. The most recent forecasts were published in 1999. Forecasts were prepared through the year 2010. The statewide CASP forecast was for 0.978% annual growth. The high forecast for the San Francisco Bay Area was 1.3% annual growth and the low forecast was -0.0847% annual growth. By comparison, the four airports in Santa Clara County were forecast to grow by 14% under the low forecast and 20% under the high forecast. These forecasts were extended to the year 2022, using the following methodology:

- ▶ The forecast statewide and Bay Area growth rates were applied to the actual current (2002) number of based aircraft

- ▶ The 2010 forecasts for the individual airports were extended by applying the growth rates out to 2022.

The results of this effort are forecasts for the year 2022 as follows:

2022 Forecast	Number of Based Aircraft
CASP Santa Clara County – high forecast	2,290
CASP San Francisco Bay Area - high forecast	2,046
CASP statewide growth rate	1,920
FAA – national growth rate	1,890
FAA Terminal Area Forecast – Santa Clara County	1,854
CASP Santa Clara County – low forecast	1,725
CASP San Francisco Bay Area – low forecast	1,553

Countywide Demand Forecast

Change in the number of based aircraft at any one airport is a function of newly manufactured aircraft entering the system and migration of existing aircraft between airports. The first factor is affected by the state of the economy, economic factors within the aviation industry, regulatory constraints, etc. Migration of aircraft is shaped indirectly by the larger economic factors that affect the aircraft owners. However, the single largest short-term factor currently affecting migration of aircraft within Santa Clara County is the availability of hangars. There appears to be a very large, unmet demand for hangars throughout the San Francisco Bay Area and aircraft owners are willing to drive longer distances to where they base their aircraft if they are able to obtain a hangar. In the short run, whichever airports are the first to build hangars can expect to attract aircraft from surrounding areas. In the long term, aircraft owners will try to base as close to their home (or office) as possible, assuming that cost, facilities, etc. are equal. However, given the very slow turnover in hangars, it is likely that the distribution of aircraft will never reach equilibrium where all aircraft are based at the airport most convenient to the owner.

It is appropriate to first eliminate from consideration those forecasts that do not appear to be plausible or are otherwise inappropriate. In examining the various existing forecasts, the CASP high forecast for the four airports in Santa Clara County projects the highest number of based aircraft (2,290) in the year 2022, which equates to a growth rate of about 36 aircraft per year. Over the last

three years, the number of aircraft based in Santa Clara County has increased an average of 26 aircraft per year. Therefore, the CASP high forecast for Santa Clara County is not supported by current trends and was removed from further consideration.

The CASP low forecast for the San Francisco Bay Area has a negative growth rate. In light of the positive growth rate over the last several years, this forecast was also judged inappropriate and removed from further consideration.

The FAA TAF forecasts for San Jose International and South County Airports indicate no change from current totals. The TAF forecasts for Reid-Hillview and Palo Alto both show increases over present levels. However, the most recent (2003) TAF totals for all of these airports differ significantly from the actual counts. The TAF for San Jose indicates 417 based aircraft, while only 279 are actually present. The 2003 TAF count for the other three airports were lower than actual:

- ▶ Reid-Hillview: TAF = 567; actual = 687
- ▶ Palo Alto: TAF = 458; actual = 524
- ▶ South County: TAF 70, actual = 90

Given that the most recent TAF counts for the three county-operated airports are lower than actual, this may result in TAF forecasts that understate growth trends.

In this forecast it is assumed that Moffett Federal Airfield will not serve as a base for civilian, general aviation aircraft during the 20-year span of this plan. If Moffett becomes available for general aviation aircraft, it could reduce demand at other nearby airports.

The remaining CASP forecasts, if extended to the year 2022, project between 1,725 and 2,046-based aircraft. If the current growth rate of 26 aircraft per year continued for 20 years, about 2,100 aircraft would be based in the county by 2022. However, it is believed that the current growth rate will not be sustained for 20 years. Therefore, for the purposes of this master plan, a figure between the CASP statewide growth-rate forecast and the CASP high forecast for Bay Area airports was selected. This growth rate is equivalent to an average increase of 19 aircraft per year or 1,960 based aircraft in the year 2022. This recommended forecast is 5.7% higher than the TAF forecasts for the four airports. Given that the most recent TAF count is 4.5% lower than actual, this slightly higher number can be considered consistent with the trend identified in the TAF.

HYPOTHETICAL MAXIMUM BASING CAPACITY

Determining the extent to which each airport will be developed to meet forecasted demand first requires examination of the physical constraints that affect the ability of each airport to accommodate additional based aircraft. Once the hypothetical maximum basing capacity of each airport has been established we will be in a position to compare the aggregate maximum basing capacity for the three airports against the total forecasted demand. This comparison provides the foundation for identifying policy alternatives available to the Board of Supervisors regarding the role of each airport with respect to meeting future demand. It is important to note that an airport's ability to physically accommodate additional aircraft is only one constraint affecting its ultimate basing capacity and that the hypothetical maximum basing capacity does not represent a specific plan or policy recommendation.

The following assumptions were made solely for the purpose of determining hypothetical maximum basing capacity:

- ▶ No additional real property acquisition at RHV and PAO is feasible (i.e., development would be limited to the existing airport property).
- ▶ No net change in basing capacity will occur on the airport property already developed, including the 12 Fixed Base Operator (FBO) leaseholds.
- ▶ All developable real property at RHV and PAO would be used for aircraft storage.

The additional basing capacity figures discussed below are approximate and based on preliminary site layouts and standard airport design parameters with respect to clearances, setbacks etc. The actual number of additional aircraft that could be accommodated may vary slightly.

Palo Alto Airport

Palo Alto Airport's current role is to serve light, single- and twin-engine piston aircraft. The airport also sees limited use by turbo-prop aircraft. The airport currently has 524-based aircraft with a capacity to accommodate up to 553 aircraft, including approximately 30 spaces needed by fixed base operators to accommodate long-term transient aircraft at the airport for maintenance and other purposes. For the purposes of this document, the 30 spaces used for long-term transient aircraft will be treated the same as spaces for permanently based aircraft in the calculation of basing capacity.

The airport is severely constrained. The presence of tidal waters near both ends of the runway makes it infeasible to lengthen the runway and only about eight acres at the south and southeast areas of the airport remain available for development. Approximately 60 aircraft storage hangars could be developed on the vacant areas, which would increase the airport's basing capacity from 553 to 613. Therefore, although there is limited potential for additional development, there is no potential to change the role of the airport to accommodate larger aircraft.

Reid-Hillview Airport

Reid-Hillview Airport's current role is to serve light, single- and twin-engine piston aircraft. The airport also sees limited use by turboprop aircraft and the smallest business jets. The airport currently has 687-based aircraft with sufficient existing capacity to accommodate a total of 726 aircraft.

The airport has 10 acres of undeveloped property in the southeast corner of the airport between the existing southernmost row of hangars and Tully Road. This property is adjacent to the existing taxiway and could accommodate an additional 167 aircraft. Total capacity for based aircraft would increase to 893.

Approximately 35 acres on the west side of the airport could accommodate an additional 136 aircraft if a new taxiway were constructed on the west side of Runway 31L/13R, bringing the hypothetical maximum basing capacity to 1,029 aircraft.

While it would be possible to extend the length of runway available for departures, it is infeasible to extend significantly the runway for landings. Therefore, it would not be possible to expand substantially the current role of the airport. The most that is physically possible is to use minor extensions to marginally increase the airport's ability to serve turboprops and small business jets.

South County Airport

South County Airport was established in the 1960s to serve as a:

- ▶ General Aviation airport to serve local users in southern Santa Clara County
- ▶ Reliever airport to serve the overflow of demand (parking and operational) from northern and central Santa Clara County

The Airport was originally envisioned as a dual-runway facility with capacity to base 550 aircraft, although the 1982 Airports Master

Plan recommended redefining the airport’s role to a single-runway facility including “aircraft parking capacity commensurate with its single-runway airfield capacity.” The 1982 Master Plan went on to describe how the airfield capacity could become the limiting factor with regard to the airport’s basing capacity if the number of annual operations per based aircraft remained high. At 650 annual operations per aircraft, for example, only 300 or so aircraft could be based at the airport because of the throughput limitations of the single runway, even though the airport has the physical space to accommodate over 600 aircraft. At less than 650 annual operations per aircraft, basing capacity increases accordingly. This issue is discussed here because some feel that the 1982 Master Plan reduced the basing capacity at South County to 300 aircraft.

Santa Clara County is currently undertaking development of about 100 hangars at South County Airport. However, as these units do not currently exist, they are not included as existing capacity.

The airport currently serves light, single- and twin-engine piston aircraft; limited use by turboprop and the smallest business jet aircraft also occurs. The airport currently has 90-based aircraft and a total of 178 aircraft storage spaces, not including the hangars nearing completion.

Among the three County airports, South County Airport is the only one without severe physical constraints on its future development. Two scenarios were developed to illustrate the range of development that could occur at the airport, one based on the existing airport property and one based on airport expansion.

South County – Existing Property

Under this development scenario the airport would retain its current property boundaries. Approximately 45 acres are available for future development within the existing airport footprint, 32 of which would be devoted to aircraft storage while 13 acres would be reserved for FBO leaseholds. This alternative would increase the based aircraft capacity by 519 to 697 aircraft, including approximately 444 aircraft in storage hangars and 75 aircraft on FBO leaseholds.

South County - Expansion

Under this development scenario, the 38-acre parcel adjacent to the southwest part of the airport would be acquired and Murphy Avenue would be realigned. Approximately 83 acres would be available for development. About 68 acres would be devoted to aircraft storage, including large box hangars for corporate aircraft. An additional 15 acres would be reserved for FBO leaseholds and, potentially, limited non-aviation use. This alternative would increase the based aircraft capacity by 794 to 972 aircraft. This in-

cludes an increase in 694 aircraft in storage hangars and 100 aircraft on FBO leaseholds. It is important to note that although the airport would be physically capable of accommodating 972 aircraft under this scenario, airfield capacity limitations in terms of the number of annual operations would most likely limit the maximum basing capacity to less than 972 aircraft.

Existing Basing Capacity vs. Maximum Basing Capacity			
Airport	Existing Basing Capacity	Increase in Basing Capacity Possible	Maximum Basing Capacity
Palo Alto	553	60	613
Reid-Hillview	726	303	1029
South County	178	519-794	697-972
Totals	1457	882-1157	2339-2614

San Jose International Airport

San Jose International Airport currently has 279-based aircraft. The number of based aircraft has been declining in recent years due to elimination of hangars and tiedowns, increasing rental rates, and conversion of FBOs from flight schools to uses oriented towards business jet aircraft. The current SJC master plan adopted in 1997 forecast that the number of general aviation aircraft based at the airport would decline to 320 by 2010.

Since the current number of based aircraft has already fallen below the level forecast in the master plan, there is no source of official guidance on whether the number will decrease further and, if so, by how much. However, it is likely that the number of based aircraft will continue to decline even if the airport does not eliminate any additional publicly owned hangars or tiedowns. Fee increases, continued conversion of FBOs to uses oriented towards business jets and increased security measures are likely to encourage significant further relocation of smaller general aviation aircraft. For the purposes of evaluating demand at the airports operated by Santa Clara County, it will be assumed that the number of aircraft based at San Jose International will be reduced by an additional 100 aircraft by the year 2022. This would reduce the capacity at San Jose International to 179-based aircraft.

MEETING DEMAND – ALTERNATIVES

Earlier in this chapter, we forecasted the countywide demand for based aircraft to reach 1,960 by the year 2022. To fully meet this demand, the four public-use airports would need to provide aircraft storage facilities for 1,960 aircraft. Based upon the preceding analysis, San Jose International Airport (SJC) is forecast to have only 179 general aviation aircraft in the year 2022.

Since the number of general aviation aircraft based at SJC is driven in large part by the previously adopted Master Plan for that airport, we assume that the County has very limited ability to influence this number. This means that space for 1,781 aircraft will need to be provided at the three airports operated by Santa Clara County, if demand is to be met ($1,960 - 179 = 1,781$). Current capacity at the three airports is 1,457. Therefore, there will be a need for space for 324 additional aircraft if the demand is to be fully accommodated.

Since the preceding section established that the three County airports have the ability to accommodate within their existing boundaries up to 882 additional aircraft – over twice the forecasted growth in demand - some latitude exists regarding the extent to which each airport could be developed to accommodate the aggregate demand. In this section, alternatives to the current capacity and role are presented for each of the four airports in Santa Clara County.

GUIDING PRINCIPLES

On April 27, 1999, the Board of Supervisors adopted a set of principles to guide the master planning process. Discussion of these Guiding Principles is appropriate since they represent values to be applied to the available alternatives and will therefore influence to a great degree which alternatives are selected. The following summarizes the Guiding Principles:

- ▶ **Financial Self-Sufficiency.** The Airport Enterprise Fund should be self-sustaining without subsidy from the County General Fund. Revenue from fees and charges, state and federal grants and other sources should be sufficient to fund operating and maintenance costs, capital improvements and an appropriate level of reserves.

The principle of financial self-sufficiency forges an inextricable link between the Master Plan and the Business Plan. Although the Master Plan focuses primarily on the role of each airport

and the subsequent capital improvements necessary to fulfill that role, the influence of these decisions on the Business Plan must be understood in order to properly coordinate the two Plans.

The Board may also wish to formally expand this principle to require that each airport maintain financial self-sufficiency to the maximum extent practicable.

- ▶ **Preserving the Quality of Life.** The safekeeping of the quality of life of residents who live near County-operated facilities is important.

Since this issue is directly related to the number of operations, forecasting the number of operations for various levels of based aircraft is an integral part of the decision-making process.

- ▶ **Maintenance of Safety Zones.** Maintaining the integrity of our safety zones by discouraging the encroachment of incompatible land uses will maintain the safety of airport users as well as those persons who live or work nearby.

Since we have determined that it is infeasible to expand either Palo Alto or Reid-Hillview beyond their current boundaries and the area surrounding both airports is already at its ultimate state of development, this issue will not be a factor in the selection of a role for each airport. However, the Master Plan will consider the potential acquisition of property to ensure adequate safety zones.

- ▶ **Meeting the Needs of the Aviation Community.** Considering the needs of the aviation community with respect to basing capacity and airport operational issues (including availability of on-airport services) is an integral part of the master planning process.

This element of the master planning process is concerned primarily with meeting the forecasted need for basing capacity. The needs of the aviation community with respect to specific services offered at the airports (whether by the County or the FBOs) are the subject of future phases of the Master Plan.

RANGE OF ALTERNATIVES

The South County hangar project currently under design could in itself satisfy almost one-third of the forecasted growth in demand for based aircraft storage by providing about 100 of the 324 additional spaces needed to meet the 2022 forecasted demand of 1,781 spaces. Upon project completion, only 224 additional spaces would be required over the next 20 years to meet the forecasted demand.

The extent to which the basing capacity is increased at each airport – or not increased, as the case may be – is a policy decision of the Board of Supervisors. Fortunately, a wide range of alternatives is available to the Board. Three broad approaches are discussed below:

1. **Develop each airport based on its own demand.** This approach focuses on developing each individual airport based on the demand for basing capacity at that particular airport. Although the total forecasted growth in demand for based aircraft storage at the three County airports is 324, it is reasonable to assume that, absent constraints on basing capacity, demand for spaces at each individual airport would approximate the existing distribution of aircraft.

However, we know that Palo Alto’s basing capacity could be expanded by a maximum of 60 aircraft. Therefore, the forecasted growth in demand cannot occur with the same distribution pattern that currently exists, and the basing capacity of Reid-Hillview and South County combined would need to increase by 264 to meet the forecasted demand (60+264=324). If we assume that aircraft owners unable to base their aircraft at Palo Alto would look first to Reid-Hillview as an alternative home base and then to South County, we could expect the Year 2022 distribution of based aircraft shown in the following table:

Table 2A: Alternative 1

Develop Each Airport Based on Its Own Demand

Airport	Existing Basing Capacity	Change in Basing Capacity	Year 2022 Number of Based Aircraft	Year 2022 Distribution of Based Aircraft
Palo Alto	553	+60	613	34.4%
Reid-Hillview	726	+174	900	50.5%
South County	178	+90	268	15.1%
Totals	1457	+324	1781	100.0%

2. **Designate South County Airport to accommodate all of the forecasted growth in demand.** This approach attempts to direct the anticipated increase in demand for basing capacity to South County. South County could both accommodate the entire forecasted increase in demand plus expand its role with respect to the type and size of aircraft it could accommodate entirely within its existing boundaries. If the airport boundary is expanded through the acquisition of adjacent property, basing capacity and on-airport facilities and services could expand even further. The following table illustrates the Year 2022 distribution of based aircraft resulting from this alternative:

Table 2B

**ALTERNATIVE 2:
Designate South County Airport
to Accommodate All Forecasts Growth In Demand**

Airport	Existing Basing Capacity	Change in Basing Capacity	Year 2022 Number of Based Aircraft	Year 2022 Distribution of Based Aircraft
Palo Alto	553	0	553	31.0%
Reid-Hillview	726	0	726	40.8%
South County	178	+324	502	28.2%
Totals	1457	+324	1781	100.0%

3. **Develop policies that combine elements of Alternatives 1 and 2.** Alternatives that combine elements of the two approaches are possible as well. For example, even if South County is selected to accommodate the majority of growth in demand for basing capacity, building additional hangars at Palo Alto should be considered, for example, to make that airport financially self-sufficient. The following table illustrates one example of the Year 2022 distribution of based aircraft that could result from this alternative:

Table 2C

**ALTERNATIVE 3:
Develop Policies that Combine Elements of
Alternatives 1 and 2**

Airport	Existing Basing Capacity	Change in Basing Capacity	Year 2022 Number of Based Aircraft	Year 2022 Distribution of Based Aircraft
Palo Alto	553	+60	613	34.4%
Reid-Hillview	726	+24	750	42.1%
South County	178	+240	418	23.5%
Totals	1457	+324	1781	100.0%

In all three scenarios our approach up to this point has been focused on how to meet future demand for additional aircraft storage, but it is important to avoid exceeding demand as well. The marketplace attempts to reach equilibrium between supply and demand and we know that other airports on the periphery of Santa Clara County are planning construction of hangars in the near term:

- ▶ San Carlos Airport expects to build 40 units in the next two years and an additional 80 units within 5 years
- ▶ Hayward Executive Airport plans to construct 43 T-hangars within the next two years and is seeking developers for 20 box hangars
- ▶ Hollister Airport has just completed construction of 28 T-hangars and expects to construct 25 - 30 additional T-hangars and 6 - 8 box hangars within 5 years

In the short term, these adjacent airports can expect to receive some of the aircraft whose owners would prefer to locate in Santa Clara County but cannot because space is not available. In the long term, some redistribution could be expected to take place.

BOARD OF SUPERVISORS' DIRECTION

At its meeting on November 19, 2002, the Santa Clara County Board of Supervisors adopted Alternative 3 to guide development of airport master plans for the three county-operated airports. The Board believes that this alternative would best meet the following overall objectives, which conform to the Guiding Principles:

- ▶ Achieve greater parity in the distribution of based aircraft to preclude disproportionate quality of life impacts at any one airport;
- ▶ Meet the needs of the aviation community by accommodating all of the forecasted growth in demand for basing capacity;
- ▶ Ensure the Airport Enterprise Fund remains self-sustaining without subsidy from the County General Fund.

Table 2D

Countywide Based Aircraft Forecast

Airport	Existing Basing Capacity	Previous Master Plan Basing Capacity	Change in Basing Capacity*	Year 2022 Number of Based Aircraft*	Year 2022 Distribution of Based Aircraft
Palo Alto	553	590	+23	613	31.3%
Reid-Hillview	726	900	-150	750	38.3%
South County	178	550	-132	418	21.3%
San Jose Int'l	279	804	-625	179	9.1%
Totals	1736	2844	-884	1960	100.0%

* The Airport Master Plan forecasts for San Jose International Airport adopted by the City of San Jose do not extend to 2022. The forecasted change in basing capacity and based aircraft were developed by Santa Clara County as part of this master plan process and reflect current trends at San Jose International Airport.

The above table is based on the demand forecast of 1,960 aircraft by the Year 2022 and will require adjustment if the demand forecast changes. Staff recommends re-forecasting demand every five years.

Comparisons with Individual Airport TAF Forecasts

While the TAF total for Santa Clara County differs by only 5.7% from the master plan forecast, the assumed allocation among airports does differ more significantly.

The 2020 TAF forecast for Palo Alto shows a growth of 64 based aircraft. These master plan forecasts anticipate an increase of 89 based aircraft.

The 2020 TAF forecast for Reid-Hillview shows a growth of 242 based aircraft. These master plan forecasts anticipate an increase of 63 based aircraft.

The 2020 TAF forecast for South County shows no change in based aircraft. These master plan forecasts anticipate an increase of 328 based aircraft.

The 2020 TAF forecast for San Jose International shows no change in based aircraft. These master plan forecasts anticipate a decrease of 100 based aircraft.

Forecasted Annual Operations at Recommended Basing Capacity

An airport's impact on the surrounding community is proportional to the number of annual operations, which is a function of the number of based aircraft. Since the purpose of this phase of the master planning process is to determine the role — and therefore the basing capacity — of each airport, it is important to know how a change in based aircraft would affect the number of annual flight operations. This section forecasts the number of annual flight operations that would occur if the airports were at their recommended basing capacity.

Forecasts of annual aircraft operations at the recommended basing capacity have been developed by multiplying the recommended number of based aircraft by a ratio of annual operations per based aircraft. Unique ratios were developed for each airport based upon historical data. This ratio reflects the many factors that shape the volume of operations at an airport:

- ▶ The amount of training activity
- ▶ The volume of transient aircraft
- ▶ Congestion
- ▶ Weather cycles
- ▶ Availability and quality of instrument approach procedures
- ▶ The number and quality of aviation businesses
- ▶ Proximity to pilots' residences

Two general principles affect the operations per based aircraft ratios:

- ▶ As the number of based aircraft increases, the average number of operations per based aircraft will decline due to congestion, especially as activity levels approach the operational capacity of the runway(s).
- ▶ Flight training generates more operations per based aircraft than recreational or business flying.

In the previous discussion regarding hypothetical maximum basing capacity, we assumed that all developable property at RHV and PAO would be used for aircraft storage (i.e., none of the property would be made available for aviation businesses, including new flight schools). Therefore, each additional based aircraft would generate on average fewer annual operations than the existing mix of based aircraft, which includes aircraft used primarily for flight training. Therefore, we may conclude that the number of annual

flight operations would not change in the same proportion as the increase in the number of based aircraft.

Reid-Hillview

There are currently about 342 annual operations per based aircraft at Reid-Hillview Airport with 687-based aircraft. The following table summarizes the forecasted annual operations per based aircraft and total annual operations for the existing level of based aircraft, the current basing capacity, and the 2022 recommended basing capacity.

Table 2E

Forecasted Operations for Reid-Hillview Airport			
Scenario	Based Aircraft	Annual Operations per Based Aircraft	Total Annual Operations
Existing Based Aircraft	687	342	235,213
Existing Capacity	726	333	241,882
Recommended Capacity	750	328	245,986

The 2020 TAF operations forecast for Reid-Hillview is 290,061. If the forecast trend was extended to 2022 the total would be 298,406. Therefore, the master plan forecast is over 50,000 lower than the trend implicit in the TAF forecast.

Palo Alto

There are currently about 400 annual operations per based aircraft at Palo Alto Airport with 524-based aircraft. The following table summarizes the forecasted annual operations per based aircraft and total annual operations for the existing level of based aircraft, the current basing capacity, and the 2022 recommended basing capacity.

Table 2F

Forecasted Operations for Palo Alto Airport			
Scenario	Based Aircraft	Annual Operations per Based Aircraft	Total Annual Operations
Existing Based Aircraft	524	400	209,709
Existing Capacity	553	390	215,509
Recommended Capacity	613	371	227,509

The 2020 TAF operations forecast for Palo Alto is 243,862. If the forecast trend was extended to 2022 the total would be 247,495. Therefore, the master plan forecasts are about 20,000 lower than the trend implicit in the TAF forecast.

South County

There are currently about 630 annual operations per based aircraft at South County Airport with 90-based aircraft. The very high number of annual operations per based aircraft reflects the low number of based aircraft relative to the high volume of training activity — much of it generated by aircraft based at other airports. The following table summarizes the forecasted annual operations per based aircraft and total annual operations for the existing level of based aircraft, the current basing capacity, and the 2022 recommended basing capacity:

Table 2G

Forecast Operations for South County Airport			
Scenario	Based Aircraft	Annual Operations per Based Aircraft	Total Annual Operations
Existing Based Aircraft	90	630	56,708
Existing Capacity	178	500	89,000
Recommended Capacity	418	420	175,560

The TAF for South County Airport forecasts no growth in operations from its current estimate of 55,000 annual operations. The master plan forecasts are higher by 120,000 annual operations.

SUMMARY OF FORECASTS

Table 2H presents a summary of the 20-year forecasts presented earlier in this chapter. It also contains forecasts of intermediate years. A brief description of the factors that shaped the forecast for each airport is presented.

Reid-Hillview Airport

This airport’s location in a dense suburban residential area makes significant increases in based aircraft and operations inappropriate. No new acreage will be allocated to fixed base operators, so increases in training activities are not anticipated. A limited number

of new hangars will increase the level of activity slightly during the 20-year planning period.

Palo Alto Airport

This airport is constrained by the levees that protect the facility from San Francisco Bay. There is limited ability to accommodate additional aircraft. The small growth in activity will come from the creation of hangars or an additional fixed base operator on the remaining unutilized land.

South County Airport

The current hangar project will add about 100 based aircraft. These hangars are expected to be occupied in 2005. Continued growth in based aircraft is expected to occur as additional hangars become available; demand is very high. The addition of one or more fixed base operators will become more likely following extension of the runway. The anticipated addition of high-end golf courses and estate homes in the area is expected to generate increase use by turboprops and small jets. Over the long term, development of commercial and industrial uses in the San Jose-Gilroy corridor will also boost activity levels.

Table 2H

Master Plan Activity Forecasts				
	Current 2002	5-Year 2007	10-Year 2012	20-Year 2022
Based Aircraft				
Reid-Hillview Airport	687	695	720	750
Palo Alto Alto Airport	524	540	575	613
South County Airport	90	210	310	418
<i>Total</i>	1301	1445	1605	1781
Annual Aircraft Operations				
Reid-Hillview Airport	235,213	238,000	241,000	245,986
Palo Alto Alto Airport	209,709	215,000	221,000	227,509
South County Airport	56,000	95,000	135,000	175,560

Source: Mead & Hunt, January 2005

Chapter 3

Airfield Design



Airfield Design

OVERVIEW

Due to the presence of significant physical constraints, little change to the existing airfield is anticipated. The emphasis in this plan is on identifying airfield improvements that will enhance safety and provide for more orderly aircraft ground movements. Proposed modifications include expanding the Runway Safety Areas and Object Free Areas at the south end of the parallel runways to meet standards and adding a west side parallel taxiway.

BASIC DESIGN FACTORS

The Federal Aviation Administration (FAA) provides guidance for airport design through a series of Advisory Circulars. These guidelines promote airport improvements that enhance airport safety and operational utility for the types of aircraft currently using or anticipated to use the airport on a regular basis. Major considerations include:

- ▶ Airport role
- ▶ Airport classification
- ▶ Prevailing winds

Airport Role

The airport's role — that of a general aviation airport serving small aircraft — is well established and is not expected to change. Moreover, the maximum basing capacity of 750 aircraft established earlier in the master planning process is only slightly higher than the current basing capacity of 726 aircraft. Therefore, neither the

runway's Airport Reference Code (see discussion below) nor design aircraft are proposed to be modified. The purpose of the proposed airfield improvements is to enhance the airport's established role.

Airport Classification

For airfield design purposes, the Federal Aviation Administration has established a set of airport classifications known as Airport Reference Codes (ARC) applicable to each airport, and its individual runway and taxiway components. The primary determinants of these classifications are the most critical types of aircraft (design aircraft) a runway or taxiway is intended to serve, and the instrument approach minimums applicable to a particular runway end. Each Airport Reference Code consists of two components relating to an airport's design aircraft:

- ▶ **Aircraft Approach Category** – Depicted by a letter (A-E), this component relates to aircraft approach speed, an operational characteristic that provides an indication of runway length requirements.
- ▶ **Airplane Design Group** – Depicted by a Roman numeral (I-VI), the second component relates to airplane wingspan, a physical characteristic.

Generally, Aircraft Approach Category applies to runways and runway related facilities. Airplane Design Group primarily relates to separation criteria involving taxiways and taxilanes. FAA standards also distinguish between small aircraft (i.e., those weighing 12,500 pounds or less) and large aircraft (i.e., those weighing more than 12,500 pounds).

Design Aircraft

The FAA defines the design aircraft as the most demanding aircraft using the airport or expected to use the airport on a regular basis (at least 500 annual operations). Historically, twin-engine, turboprop aircraft have been the most demanding aircraft to regularly use Reid-Hillview Airport. The Beech King Air B100 is typical of this class of aircraft. The King Air has an approach speed of 111 knots, a wingspan of 45.8 feet, and a gross weight of 11,800 pounds. The Airport Reference Code for this aircraft is ARC B-I (small). For airfield planning purposes, the operational and physical characteristics of the design aircraft – approach speed, wingspan and weight – are tied directly to the design criteria for the length, width and strength of the runways, respectively.

Aircraft Approach Category

- ▶ Category A: aircraft approach speed less than 91 knots.
- ▶ Category B: speed 91 knots or more but less than 121 knots.
- ▶ Category C: speed 121 knots or more but less than 141 knots.
- ▶ Category D: speed 141 knots or more but less than 166 knots.
- ▶ Category E: speed 166 knots or more.

Airplane Design Group

- ▶ Group I: wingspan up to but not including 49 feet.
- ▶ Group II: 49 feet up to but not including 79 feet.
- ▶ Group III: 79 feet up to but not including 118 feet.
- ▶ Group IV: 118 feet up to but not including 171 feet.
- ▶ Group V: 171 feet up to but not including 214 feet.
- ▶ Group VI: wingspan greater than 214 feet.



Beech King Air

Instrument Approach Minimums

Reid-Hillview Airport is served by one straight-in instrument approach procedure. The procedure is an RNAV/GPS approach to Runway 31R. This approach requires minimum forward visibility of 1¼ miles and minimum descent altitude of 1,309 feet above the airport elevation. There is also a circle-to-land approach with similar minimums that can be used for either end of Runway 13L-31R. Given the constraints of terrain, runway length, and proximity to San Jose International Airport, it appears unlikely that the minimums for instrument approaches to Reid-Hillview Airport will be reduced (i.e., improved) much in the future; an evaluation of the airfield implications of an approach with minimums less than ¾ mile visibility (i.e. precision approach criteria) is therefore not addressed in this document.

Prevailing Winds

Federal Aviation Administration standards recommend development of a crosswind runway when the primary runway does not provide 95% wind coverage. Wind coverage is based upon the maximum crosswind permitted each class of aircraft. As noted above, the design aircraft for the runways at Reid-Hillview Airport is a Beech King Air B100. This aircraft is in ARC B-I. The maximum crosswind component for this category is 10.5 knots (12 miles per hour). Based upon available wind data, Reid-Hillview Airport's runways have 98.75% wind coverage for this level of crosswind. Therefore, it can be concluded that a crosswind runway is not justified.

RUNWAYS 13L-31R AND 13R-31L

Classification

As noted earlier, the most demanding aircraft that regularly uses Reid-Hillview Airport currently are twin-engine turboprop aircraft, such as the Beech King Air. For runway design purposes, the FAA has defined *regularly* as more than 500 annual operations. This design aircraft will not change over the life of this plan. The Beech King Air is in ARC B-I (small). Therefore, runway design criteria for ARC B-I (small) have been used in this plan.

Runway Length

Runway 13L-31R is currently 3,101 feet long, while Runway 13R-31L is 3,099 long. Both runways have displaced thresholds at both

ends. The displaced thresholds for Runway 13L and 13R were established to increase the height of aircraft over the adjacent park and residential area when landing from the north. The displaced thresholds for Runway 31R and 31L were designed to provide clearance over Tully Road and the airport perimeter fence for aircraft landing from the south. The threshold locations and landing distances are as follows:

- ▶ Runway 13L has a 491-foot displaced threshold which leaves 2,610 feet available for landings
 - ▶ Runway 13R has a 490-foot displaced threshold which leaves 2,609 feet available for landing
 - ▶ Runway 31R has a 400-foot displaced threshold which leaves 2,701 feet available for landing
- ▶ Runway 31L has a 399-foot displaced threshold which leaves 2,700 feet available for landing

The FAA's runway length design software lists the following lengths for a runway with Reid-Hillview's elevation and mean maximum temperature that is designed to serve small aircraft with less than 10 seats:

- ▶ 75% of these small aircraft 2,480 feet
- ▶ 95% of these small aircraft 3,040 feet
- ▶ 100% of these small aircraft 3,610 feet

As this class of aircraft typically requires less runway length for landings than takeoffs, both runways' lengths are adequate to serve slightly over 95% of the types of aircraft that they are intended to serve. Therefore, no increase in runway length is required.

Runway Width

Both runways are currently 75 feet in width, which meets FAA standards for runways with ARC B-I and B-II. No change to the existing runway width is recommended.

Pavement Strength

Both of Reid-Hillview's runways have a design strength of 17,000 pounds for aircraft with single-wheel main gear. No design strength has been designed for aircraft with multiple wheels on their main gear. This strength is slightly higher than required, but consistent with the role of the airport. No change is required.

AIRFIELD DESIGN ELEMENTS

Runway Safety Areas

Runway Safety Area (RSA) dimensions are based upon the ARC and instrument approach minimums. With an ARC of B-I (small) and 1¼ mile visibility minimums, FAA design standards require a runway safety area that is 120 feet wide and extends 240 feet beyond each runway end. Since the runways at RHV are not centered on the airport property, both runways meet this standard at their northern ends but not at their southern ends due to the proximity of the airport's perimeter fence along Tully Road. Runway 13L-31R has only approximately 147 feet clear beyond the runway end, while Runway 13R-31L has about 161 feet. The FAA views substandard RSAs as a serious problem and can be expected to require some form of formal resolution of the current condition as part of this master plan process.

Runway Safety Area (RSA) — A cleared, drained, graded, and preferably stabilized surface, symmetrically located around a runway. Under dry conditions an RSA should be capable of supporting the passage of aircraft without causing major damage to the aircraft.

In RHV's particular situation, the only practical way to enlarge the RSAs physically to meet FAA standards without shortening the usable runway length is to "shift" the runways to the north. If the standards are not met, an FAA modification to standards must be obtained. It is uncertain whether the FAA would grant a modification to standards in this circumstance.

Shift Runways to North

The least complex way to create 240-foot long RSAs at the southerly end of each runway would be to remove the southerly 93 feet of Runway 13L-31R and the southerly 79 feet from Runway 13R-31L and replace this amount at their respective northern runway ends. This would "shift" both runways to the north just enough to provide full-length RSAs at both ends as if each entire runway were picked up and moved to the north. The displaced thresholds would be retained in their same positions relative to the runway ends. In other words, the runways would be physically identical in every respect to the existing runways but would be more centered on the airport property.

The drawback of this small shift in the runways is that the airport noise contours would shift by about the same amount. Several homes that are currently just outside of the 65 CNEL contour would become eligible for federally-funded noise insulation. Additionally, aircraft departing to the north would be about 5 feet lower as they overfly the park and residences. The change in noise levels and overflight altitude are so small that they would be difficult for area residents to perceive. However, at the community workshop held in May 2004, those area residents who attended strongly favored not shifting the southern runway ends. Retaining

the existing southern runway ends at their current location would mean that aircraft departing to the north would retain their current altitude and flight paths.

Based upon the strong community preference, it is proposed to shift the northern runway ends as previously discussed, but retain the present southern runway ends' locations. The displaced threshold markings would be shifted the same amount as the northern runway end. This would ensure that the current landing distances would remain unchanged.

Modification To FAA Standards

FAA approval is required if RSAs meeting FAA design standards are not created. The FAA would evaluate the proposed departure from standards to determine if a reasonable level of safety would be maintained. If a modification to standards were obtained, no changes to the runway, runway markings or lighting would occur. However, the FAA is unlikely to approve a modification to standards unless it is physically impossible to create complying RSAs.

Object Free Areas

Object Free Area (OFA) — A two-dimensional surface surrounding runways, taxiways, and taxilanes. OFA clearing standards preclude parked aircraft or other objects, except for objects that need to be located within the OFA for air navigation or aircraft ground maneuvering. The OFA should be under the direct control of the airport operator.

FAA standards for runways with ARC B-I (small) with visibility minimums of not lower than $\frac{3}{4}$ mile visibility specify that the Object Free Area be 250 feet wide (centered on the runway) and extend 240 feet beyond the runway end. As the OFAs for Reid-Hillview's runways are as long as their RSAs, but wider, they are also substandard at the runway's south end.

Fortunately, adequate OFAs can be created by shifting the runways just a few feet more than is necessary to meet RSA standards. Shifting Runway 13L-31R 95 feet (two feet more than the 93 feet required for the RSA) and shifting Runway 13R-31L 82 feet (three feet more than the 79 feet required for the RSA) would create adequate OFAs. As a practical matter, shifting both runways by the same amount - 95 feet - would avoid having runways that are staggered by 13 feet, thereby keeping the taxiways and other markings identical for both runways.

Obstacle Free Zones

As with RSAs and OFAs, the dimensions of obstacle free zones (OFZs) vary depending upon the size of aircraft served, and the visibility minimums of any associated instrument approaches. At Reid-Hillview, OFZs for the two runways are 250 feet wide (like the OFA), and extend 200 feet beyond each runway end. Again, as

with the RSAs and OFAs, the fence at the runway's eastern end intrudes into the OFZs.

The means of addressing the substandard OFZs is the same as for the substandard RSAs. However, unlike RSAs, the FAA is commonly more willing to consider modifications to standards for OFZs.

Shifting of the runways as recommended will eliminate the current substandard condition. No modifications to standards would be required.

FAR Part 77 Imaginary Surfaces

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, identifies the airspace necessary to ensure the safe operation of aircraft to, from, and around airports. This airspace is defined for each airport by a series of imaginary surfaces. The dimensions and slopes of these surfaces depend on the configuration and approach categories of each airport's runway system. Generally, most critical among the FAR Part 77 surfaces are the approach surfaces.

No objects penetrate the approaches to Runway 13L and 13R. The displaced threshold exists to minimize noise impacts on uses underlying approaches from the north. Numerous objects penetrate the Part 77 surfaces in the approaches to Runway 31R and 31L. The landing threshold was displaced to provide adequate clearance over the objects in the approaches.

As noted earlier in this chapter, no significant change in the one instrument approach procedure is anticipated nor is it anticipated that a separate approach procedure will be developed for the second runway.

Shifting the runways as recommended to create RSAs, OFAs and OFZs meeting FAA standards will shift the Part 77 surfaces an equal amount. Part 77 surfaces are not affected by displaced thresholds.

Runway Protection Zones

Runway protection zones are yet another type of airfield area for which the FAA has defined safety criteria. The function of RPZs is to enhance the protection of people and property on the ground by limiting the uses within RPZs. The runway protection zones for each runway end at Reid-Hillview Airport have the following dimensions:

- ▶ Length: 1,000 feet
- ▶ Width near runway end: 250 feet
- ▶ Width at outer end: 450 feet

For paved runways, runway protection zones begin 200 feet beyond each runway and are aligned along the extended runway centerline.

All four runway protection zones extend off of airport property. To the north, the runway protection zones overlay Ocala Road and the southern end of the adjacent park. To the south, the runway protection zones include a segment of Tully Road and the adjacent shopping center. Shifting the runways as recommended will shift the runway protection zones an identical amount. It is not feasible to acquire additional land or eliminate the nonaviation uses currently within the runway protection zones.

Building Restriction Line

The building restriction line defines those areas that are suitable for construction of terminals, hangars, and other airport structures. Building restriction lines are typically established such that a typical structure would not penetrate the FAR Part 77 surfaces. Other factors that are commonly considered include: air traffic control tower line-of-sight criteria and setbacks from navigational aids and taxiways.

The building restriction line on the east side of Reid-Hillview Airport has historically been set 40 feet from the apron edge taxiway (Taxiway Z). This provides 310 feet of separation from the centerline of Runway 13L-31R to the nearest structure. Although the 40-foot setback is somewhat less than the standard for ARC B-I (small) aircraft, it exceeds the setback required to accommodate the design aircraft (Beech King Air B100). No change is recommended.

On the west side of the airfield, the building restriction line has been set 250 feet from the centerline of Runway 13R-31L. Construction of the proposed south side parallel taxiway will not require an adjustment of the existing southern building restriction line. Therefore, no change is recommended.

OTHER AIRFIELD DESIGN ELEMENTS

Runway Lighting, Marking, and Visual Approach Aids

Runway 13L-31R is equipped with medium intensity runway lighting along the edge of the runway. Runway end identifier lights are also installed at each runway end. The second runway, Runway 13R-31L, does not have runway lights. No change is proposed.

Both runways have basic markings. All four runway ends have displaced threshold markings. No change in the location of displaced thresholds relative to the runway ends is recommended.

Runway 13L-31R has 2-box VASIs to guide landings to both runway ends. Runway 13R-31L has a 2-box VASI to guide landings to the 31L end of the runway. All three VASIs have 4.0 degree approach slope angles. The least used runway end, Runway 13R does not have a visual landing aid. No additional visual approach aids are proposed.

Hold lines

Hold lines are set 125 feet from the centerline of the adjacent runway. This meets the standard for runways serving small aircraft with visual or nonprecision approaches. The proposed west side parallel taxiway will also use a 125-foot setback for the hold lines.

Wind Indicators and Segmented Circle

A single wind cone is located between the runways near midfield. This wind cone is collocated with a segmented circle. The segmented circle contains the L-shaped brackets that indicate that there is left traffic to Runway 13L and right traffic to Runway 31R. No brackets indicate that there is left traffic to Runway 31L and right traffic to 31R. The intent is to indicate that only Runway 13L-31R is to be used when the tower is not in operation.

Taxiway System

Reid-Hillview Airport is served by two full-length parallel taxiways: Taxiway Z and Taxiway Y. Both taxiways are located on the east side of the airfield. Taxiway Z is an apron edge taxiway that runs the full length of the airfield. Five exit taxiways serve the two runways: Taxiways A, B, C, D, and E. Two additional taxiways (F and G) serve the FBO area. Fifteen taxilanes provide access to the tiedowns and hangars.

Construction of a new parallel taxiway on the west side of the airfield is proposed, primarily for aircraft that have landed on Runway 13R-31L and intend to takeoff again. Currently, aircraft landing on Runway 13R-31L must cross Runway 13L-31R in order to taxi back for takeoff. Adding a west side parallel taxiway would:

- ▶ Reduce the number of aircraft landing on Runway 13R-31L that must cross Runway 13L-31R, thereby reducing the risk of runway incursions.
- ▶ Reduce ground congestion, which in turn would reduce the need for extended traffic patterns during peak traffic periods as well as reduce the number of touch-and-gos.

The benefits of adding the west side parallel taxiway will be magnified once the Noise Compatibility Program (NCP) measures are implemented because the NCP designates Runway 31L as the primary landing runway. The FAA Air Traffic Control Tower (ATCT) chief also recommends the west side parallel taxiway.

A short extension of Taxiway Y to the north is also proposed. This additional taxiway segment would facilitate entering and leaving the FBO area and northern-based tiedowns. The existing helipads would be retained in their current locations and incorporated into the new west side parallel taxiway and Taxiway Y extension.

Run-up aprons are located at both ends of Runway 13L-31R. Additional holding aprons are located between the two runways at each end. Reconfiguring the run-up aprons at the northern end of the runways is recommended to increase wingtip clearances between aircraft bypassing aircraft conducting run-ups and thereby reduce the ground collision risk during peak use periods.

Chapter 4

Building Area Design

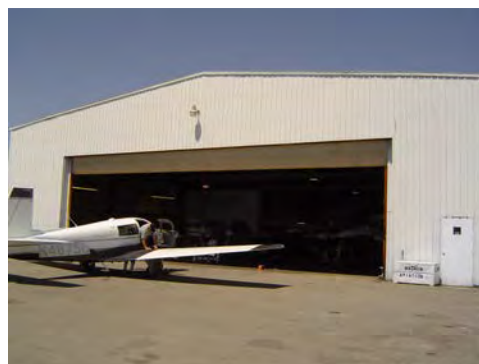


Building Area Design

OVERVIEW

The building area of an airport encompasses all of the airport property not devoted to runways, major taxiways, required clear areas, and other airfield-related functions. Among the facilities that are commonly found at general aviation airports are:

- ▶ Based aircraft tie-downs and hangars
- ▶ Transient aircraft parking
- ▶ Fixed base operations facilities
- ▶ Fuel storage and dispensing systems
- ▶ Access roads and automobile parking
- ▶ Security fencing and gates
- ▶ Lighting, marking, and signage
- ▶ Public rest rooms
- ▶ Public telephones
- ▶ Aircraft wash racks
- ▶ Nonaviation uses



Fixed Base Operation—A business that provides aviation services for general aviation aircraft.



Additional facilities are also common at busy general aviation airports such as Reid-Hillview:

- ▶ A terminal building with pilots' lounge.
- ▶ Air traffic control tower.
- ▶ Airport maintenance facilities.
- ▶ Aviation supporting facilities, such as a restaurant, hotel, and car rental agency.
- ▶ Commercial buildings and other nonaviation, revenue-producing uses.
- ▶ Public viewing area.

This chapter examines the factors that affect the siting and development of future building area facilities at Reid-Hillview Airport. The focus is on providing guidance on the use of available land on an airport severely constrained by limited land availability. The proposed facility design is shown on the building area plan found inside the back cover.

DESIGN FACTORS

- ▶ **Demand**—There is forecast to be demand for additional general aviation building area facilities over the 20-year planning period. Most of the demand will be for upgrading of the existing facilities. However, as documented in Chapter 2, Reid-Hillview's based aircraft population is forecast to increase by approximately 24 aircraft over the next two decades.

The types of aircraft that will use the airport in the future are not expected to differ significantly from those currently using the airport. The mix will be dominated by single- and twin-engine piston aircraft. However, it is anticipated that the airport will see use by small turboprops and jets.

- ▶ **Setback Distances**—The interior boundary of the building area is determined in large part by the necessary setback distances from Runway 13L-31R, taxiways, and taxilanes. These setbacks are defined in Federal Aviation Administration regulations and guidelines. As discussed in the preceding chapter, the following design criteria are recommended:
 - ▶ A minimum of 310 feet from the centerline of Runway 13L-31R to buildings.
 - ▶ A minimum of 45 feet from taxiway centerlines to aircraft parking positions or buildings.
 - ▶ A minimum of 65 feet between facing hangars.

- ▶ **Existing Facilities**—All existing aviation-related structures, except the air traffic control tower, are located on the east side of the airport. Most of the east side is already developed. There is a strip of undeveloped land facing Capitol Expressway, and a small block at the intersection of Capitol Expressway and Tully Road. Except for those two areas, future development will largely consist of upgrading existing facilities or redevelopment of currently developed areas. Generally, the physical condition of existing structures is good.
- ▶ **Height Limitations**—The location of the runways relative to the building area makes it unlikely that Federal Aviation Regulations Part 77 airspace surfaces will significantly constrain construction in the future.
- ▶ **Accessibility**—An important design consideration is the ease of access to individual sections of the building area from both taxiways and public roads. The existence of a full-length parallel taxiway and full-length apron edge taxiway provides excellent circulation for aircraft. The shallow building area is well served by numerous taxilanes at right angles to the parallel taxiways.

The current street layout provides direct access to the general aviation terminal and fixed base operators. Access to based aircraft storage hangars and the tiedown aprons is via gates located in the vicinity of the terminal.

PRINCIPAL BUILDING AREA FEATURES

Based Aircraft Storage and Parking (County-owned)

Hangars, Shelters and Tiedowns

Santa Clara County currently rents 145 hangars, 52 shelters and 190 tiedown spaces located on the public (i.e., County) aprons. Of the 190 tiedowns, 33 are located on the apron fronting the terminal. The balance are located in several rows intermixed with hangars for based aircraft.

Airport users have advocated for construction of additional hangars at RHV to bring the inventory of storage spaces in line with demand – high for hangars and lower for tiedowns. In addition, a number of the existing hangars have reached the end of their useful life and need replacement. Currently, a long waiting list for hangars exists while a small number of tiedowns remain vacant. Since hangars are ineligible for federal assistance under the Airport Improvement Program, the financial risks and rewards of building hangars would accrue solely to the County.

Therefore, the economics of constructing new hangars over existing tiedowns is just as important as physical constraints in the site planning process. For this reason, a specific reconfiguration of the County-owned aircraft storage spaces is not shown in the land use plan. A detailed economic analysis of building hangars over existing tiedowns is contained in the Business Plan.

In any event, increasing the ratio of hangars to tiedowns (by building hangars over existing tiedowns) within the County-owned aircraft storage area would not adversely impact the ability to remain within the maximum basing capacity limitation of 750 aircraft established for the airport since fewer hangars than tiedowns can be accommodated in any given area.

Transient Aircraft Parking

All public transient parking positions are located in a double line in front of the terminal. Presently 60 tiedown positions are marked on the terminal apron. Of these, there are currently 27 spaces designated for transient use. During weekdays, between 8 and 15 spaces are commonly used. On weekends, the number is higher; typically 15 to 20 spaces are used. Holiday peak use often exceeds available transient spaces and unused monthly tiedown spaces are used. Typical holiday peaks are about 30 aircraft.

There has been slow, but steady growth in the average number of transient tiedowns used. This trend is expected to continue. Based upon recent trends, weekday use is expected to grow faster than weekend use. For facility planning purposes, peak weekday use is forecast to grow from 15 to 30 over the next 20-years. Weekend peak use will grow from 20 to 30 spaces. Peak holiday use is forecast to grow from 30 to 45 spaces.

As noted above, there are currently 60 tiedown spaces, including both transient and based positions. There are sufficient spaces to accommodate future transient demand, and some based aircraft. As transient demand increases, based aircraft should be relocated to the tiedowns in the based aircraft hangar area.

Helicopter Parking

One public helicopter parking position is provided at Reid-Hillview Airport. It is located at the south end of the transient apron, near the airport maintenance building. The location is convenient to the terminal, while providing adequate separation from transient and based fixed-wing aircraft parking. One parking position is adequate given the current frequency of transient helicopter operations.

Fixed Base Operations Area

A bit over 18 acres at Reid-Hillview Airport have been leased to businesses that provide aviation-related services. These aviation businesses are termed fixed base operations (or fixed base operators). The seven fixed base operations (FBOs) taken together provide a full range of general aviation services. Several of the FBOs provide a number of services and could be considered to be *full-service* or *multi-service* FBOs. Others provide only one or two services and are referred to as *limited-service* or *specialty* FBOs.

The leaseholds are served by two taxiways that connect to the apron-edge taxiway. Each of the leaseholds faces directly onto a public street. Although the internal configuration of these leaseholds will likely change over the life of this plan, no significant changes to the layout or circulation patterns of the FBO area are required.

Given the constraints on airport development, the current acreage is judged to be adequate to serve the needs of aviation through the 20-year life of this plan. Consolidation of the leaseholds into blocks of 3 to 5 acres (after expiration of the existing master leases) would permit reconfiguration of the FBO facilities to produce more efficient layouts. Reconfiguration would also enable the FBOs to more readily serve both transient and based aircraft.

Table 1B in Chapter 1 summarizes all of the services provided at Reid-Hillview Airport. Note: Two of the seven FBOs each hold two master leases for a total of nine master leases.

General Aviation Terminal

A two-story general aviation terminal is located slightly north of midfield on the east side of the airfield. The building currently contains a pilots' lounge, public restrooms and telephones, vending machines, and County airport management and operations offices. The second story is currently being renovated to house the equipment room for the proposed Aircraft Noise and Flight Track Monitoring System (ANFTMS) and to allow the staff offices to move upstairs.

The building is in good condition. With routine maintenance, the structure should continue to serve through the 20-year life of this plan. The floor area should prove adequate through the planning period.

SUPPORTING FACILITIES

Aircraft Fuel Storage and Dispensing

Current County practice is to issue fueling permits to FBOs who wish to sell fuel (and who meet the County's minimum standards

for fueling activities) rather than provide fueling services with County facilities and staff. Four of the FBOs currently provide fuel. Therefore, no site for a County fueling facility has been designated.

Wash Rack

Wash Rack—A facility for washing aircraft. It typically consists of a concrete pad provided with a hose bib. Wash water is collected and directed to a sewage treatment facility.

There is no “rack” associated with wash racks. Because cavalry officers were the first military pilots, the name for an aircraft washing facility was borrowed from horse washing facilities that sometimes do have racks.

One public-use wash rack is located south of the airport maintenance building. This location does not conflict with circulation on either the transient apron or the adjacent based tiedown rows. Therefore, this facility can remain in its present location.

Access and Auto Parking

Access to the east side building area is from Capitol Expressway via Cunningham Avenue. Cunningham Avenue leads directly to the terminal and associated parking lot. John Montgomery Drive and Swift Avenue branch off from Cunningham Avenue near the entrance to the airport. John Montgomery Drive extends to the north, initially paralleling Capitol Expressway, before curving to the west. A cul-de-sac, Robert Fowler Way, joins John Montgomery Drive near its midpoint. These roads provide access to all of the FBOs at Reid-Hillview Airport.

Swift Avenue leads south from its intersection with Cunningham Avenue. This road runs past the ball diamonds, wraps around the hangar area and connects with Tully Road. This road would provide access to the nonaviation commercial leaseholds that face Capitol Expressway and Tully Road.

No major changes in the on-airport road network appear necessary to efficiently accommodate demand through the life of this plan.

Public parking is available in the terminal parking lot and along the public streets on the airport. The L-shaped terminal parking lot contains 152 spaces. Based upon current patterns of use, the current amount of parking exceeds long-term demand. Some of the existing parking could be converted to other uses. In the long-term, the degree to which the FBOs serve transient aircraft will affect the demand for public parking. Automobile parking needs should be specifically addressed when FBO modify their facilities.

A light rail line is proposed to run along Capitol Expressway. The timing and exact configuration of the facility is not currently known. Current planning suggests that a light rail station will be in the immediate vicinity of the airport. The proposed light rail line would not negatively affect current or planned uses of the airport. Introduction of the line would offer an alternative means of accessing the airport.

Fencing, Gates and Security

Most of the airport perimeter is fenced with six-foot chain link fence. However, within the FBO area, many areas have either low fences or no fencing. The principal entrance to the airfield for based pilots is via an electronically controlled gate located adjacent to the terminal parking lot. A punch pad activates this gate.

Although the Transportation Security Agency has not yet adopted security regulations for general aviation airports, it is widely anticipated that the regulations will mandate both physical barriers (e.g., fencing and gates) and operational changes (both by the County and FBOs). County staff has already applied for Airport Improvement Program grants for:

- ▶ Improvements to the system of fencing and gates.
- ▶ Installation of additional security lighting.
- ▶ Development of a centrally-monitored closed circuit TV system
- ▶ Installation of motion detectors on the airfield.

NONAVIATION USES

Commercial Leases

In the previous phase of the master planning process dealing with forecasting demand for aircraft basing and selecting a role for each airport to meet the forecasted demand, the Board of Supervisors preliminarily approved the concept of leasing the undeveloped portion of the airport for compatible commercial uses to generate revenue:

- ▶ to fund operation and maintenance of the airport infrastructure including physical security enhancements;
- ▶ to fund projects that enhance the airport's compatibility with the surrounding community (including projects related to the Noise Compatibility Program);
- ▶ to reduce the Airport Enterprise Fund's reliance on aircraft storage revenue; and
- ▶ for other purposes determined to be appropriate and legally permissible.

Three areas have been identified that are potentially suitable for nonaviation commercial use:

- ▶ An 8.0 acre parcel at the intersection of Capitol Expressway and Tully Road.
- ▶ A 3.0 acre parcel fronting Swift Lane
- ▶ A 5.3 acre parcel that includes the ball fields and a portion of the terminal parking lot

Given the above parcels' proximity to the airfield, it will be important to ensure that any proposed development and use of the parcels is compatible with the airfield with respect to the FAR Part 77 imaginary surfaces¹ and with respect to the safety zones established in the Comprehensive Land Use Plan adopted by the Airport Land Use Commission. Guidance contained in the *California Airport Land Use Handbook* may be of value in evaluating proposed uses.

The third parcel listed above occupies a central location on the airport. Conversion of this parcel to a nonaviation commercial use requires relocating the three existing ball fields. Given the urbanized location of Reid-Hillview Airport, it is not surprising that there are no vacant off-airport sites in the immediate vicinity. Therefore, this plan proposes to create three ball fields on the west side of the airfield. The site is located adjacent to an existing boys and girls club. Since the unlighted ball fields would have adequate lateral separation from Runway 13R-31L as well as from the proposed new parallel taxiway, conflicts with aviation activities are not anticipated.

It should also be noted that the Valley Transportation Authority (VTA) currently plans to construct a light rail line in the Capitol Expressway corridor. Although design of the light rail line has not yet been finalized, it appears that the project will not present a significant impact to the airport property. As of this writing, a station is planned between Cunningham Avenue and Ocala Avenue adjacent to the northeast airport boundary. The light rail project may require the utility towers located between John Montgomery Drive and Capitol Expressway to be relocated to the east side of Capitol Expressway, but it appears unlikely that their current location will be developed as a park-and-ride lot or train car storage area.

¹ The FAR Part 77 imaginary surfaces are discussed in more detail in Chapter 3, Airfield Design.

Chapter **5**

Business Plan



RHV Business Plan

INTRODUCTION

Just as previous chapters have outlined plans for the airport's physical development, this chapter outlines a plan for the airport's financial development. More specifically, this chapter will:

- ▶ Present an overview and analysis of the Airport Enterprise Fund (AEF) and the airport's finances;
- ▶ Identify the capital projects and local funding required to implement the portions of the Master Plan and the Noise Compatibility Program that are not eligible for FAA funding;
- ▶ Discuss potential sources of new revenue, including leasing the parcels identified in the Building Area Design chapter for non-aviation commercial uses; and
- ▶ Recommend a leasing strategy for various airport properties.

AIRPORT ENTERPRISE FUND OVERVIEW

Master Plan Guiding Principles

At the beginning of the planning process, the Board adopted principles to guide the development of the Master Plan. These Guiding Principles include the following:

“The Airport Enterprise Fund should be self-sustaining without subsidy from the General Fund. Revenue from fees and charges, state and federal grants and other sources should be sufficient to fund operating and maintenance costs, capital improvements and an appropriate level of reserves.”

Since the creation of the Roads & Airports Department, the AEF has generated sufficient operating revenue to fund operating expenses. Capital projects have been funded on a pay-as-you-go basis using primarily federal and state grants, the one notable exception being the South County Airport Hangar Project, which was ineligible for grant funding and was therefore bond-funded. Therefore, the AEF has been self-sustaining financially even prior to the Board’s formal adoption of such a principle. Even in the unusual case that occurred in the early 1990s where the County bought out two RHV leaseholders in order to settle litigation brought by the lessees and the General Fund made loans to the AEF to fund the buyouts, the airport generated sufficient revenue from the acquired leasehold assets to pay back the loans with interest.

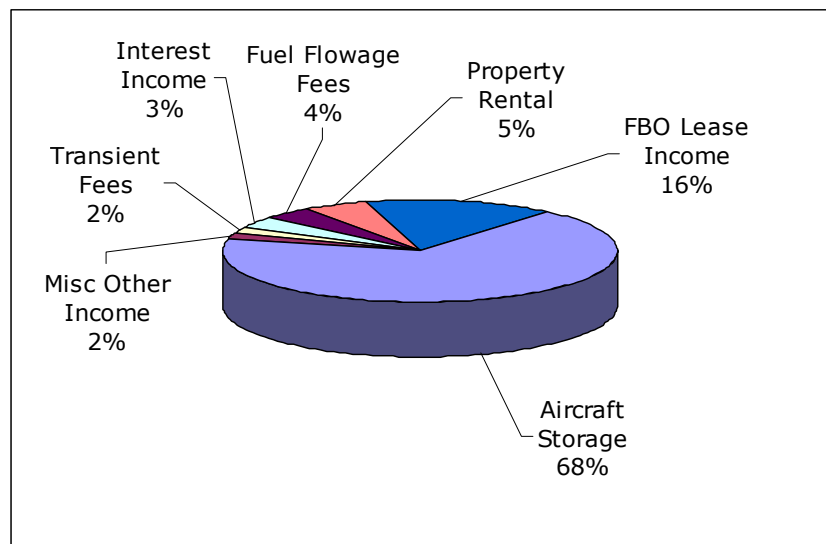


Figure 5A: Airport Enterprise Fund Revenue

AEF Revenues

Total annual AEF revenue is approximately \$2.6 million. Figure 5A above presents the AEF revenue categories and shows that 68% of AEF operating revenue is generated from County-owned aircraft storage spaces (i.e. hangars, shelters and tiedowns). Although demand for aircraft storage is projected to remain strong in the foreseeable future, the AEF’s reliance on this revenue source makes it vulnerable to downturns in the general aviation market.

The next largest revenue component (16%) is lease revenue from the Fixed Base Operators (FBO). The FBO leases specify an annual ground rent of 8.5% of the fee simple value of the leasehold premises (not including improvements) and provide for periodic adjustments pursuant to a reappraisal of the premises. Given the

long-term nature of the FBO leases, the revenue from this source is essentially fixed aside from the occasional minor adjustment to the lease rate (the reappraisal completed in December 2004 resulted in no rate increase).

All other revenue categories including property rental, fuel flowage fees, transient aircraft fees and interest income collectively generate only 16% of AEF revenues.

AEF Expenditures

Figure 5B below presents the AEF expenditure categories and shows that 45% of AEF expenditures are staffing costs (salaries and benefits). Services and supplies account for 34% of AEF expenditures, while the local funding component of capital projects represents 6% of AEF expenditures. Debt service on bonds issued to fund the South County Airport Hangar project and to retire the General Fund loans mentioned above makes up 11% of AEF expenditures.

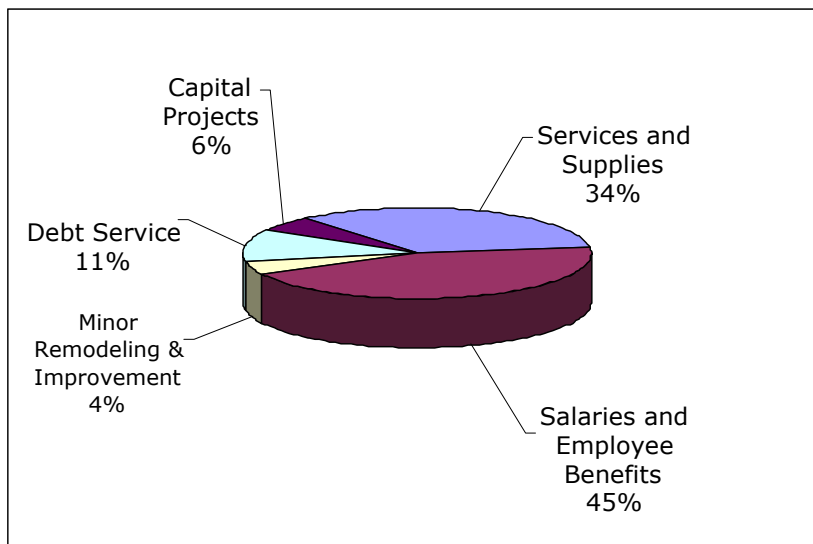


Figure 5B: Airport Enterprise Fund Expenditures

Retained Earnings

Cash flow from revenues and expenditures generally is not uniform and predictable. The AEF Fund Balance (called “Retained Earnings” since the AEF is an enterprise fund) dampens the effect of the irregular cash flow. The unencumbered portion of the Retained Earnings balance represents the AEF’s “rainy day” fund and is a measure of the AEF’s financial health.

The projected AEF unencumbered Retained Earnings balance as of the end of FY 2005 is \$1,700,000. A level of unencumbered Re-

tained Earnings equal to at least one year’s operating expenses is advisable. Upon completion of the South County Airport Hangar Project, the AEF will be in a position to begin increasing the level of Retained Earnings.

Long-term Debt

The AEF carries \$6,115,000 in long-term bond debt (projected as of June 30, 2005) of which \$5,576,000 is attributable to the South County Airport Hangar project and \$539,000 is attributable to the refinancing of the General Fund loans discussed above. The current long-term debt level is approximately 1.9 times annual revenue and 3.6 times the level of unencumbered Retained Earnings.

REID-HILLVIEW AIRPORT REVENUE AND EXPENDITURES

Although the AEF captures all airport finances in a single budget unit, the revenue and expenses associated with each of the three airports are tabulated for internal management accounting purposes. Revenue and expenses directly attributable to each airport such as FBO lease revenue, aircraft storage space rental revenue, operations staff salaries, etc. are easily identified. General and administrative expenses not attributable directly to an individual airport (insurance, management staff salaries, etc.) are captured in an expense pool and allocated to each airport based on a weighted formula that uses cost drivers such as the number of based aircraft, number of aircraft operations and number of major facilities.

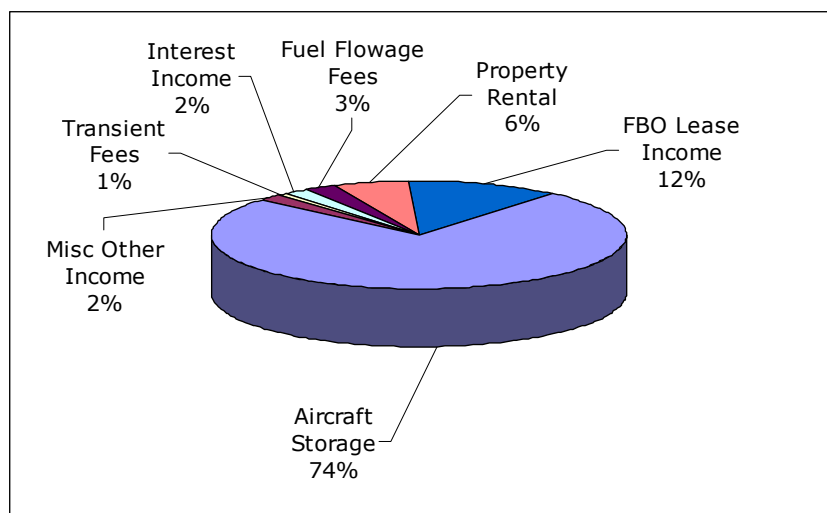


Figure 5C: Reid-Hillview Airport Revenue

RHV revenue is shown in Figure 5C. The airport generates approximately 56% of the total AEF revenue - far more than the other two airports, primarily due to the income from the 145 County-owned hangars. Prior to the South County Airport Hangar Project it was the only one of the three airports to have County-owned hangars.

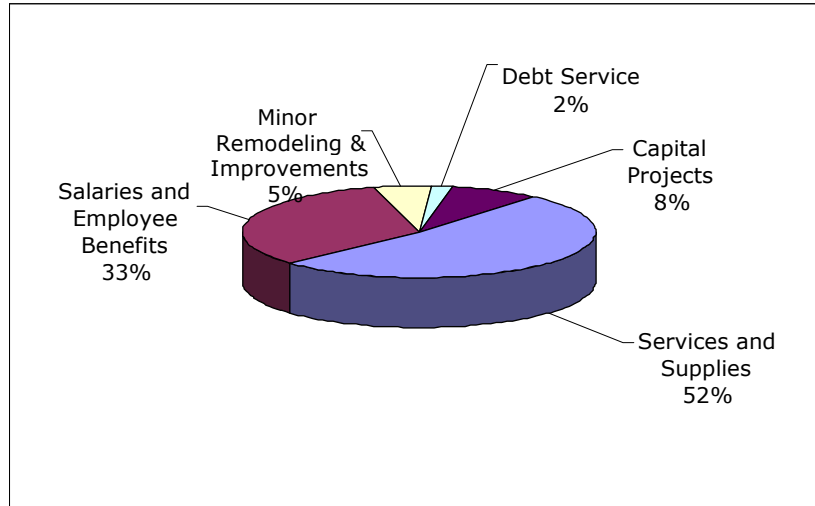


Figure 5D: Reid-Hillview Airport Expenditures

Expenditures are shown in Figure 5D. With the addition of the Noise Abatement Program Coordinator position, the airports division is now at full staffing and additional staff positions at RHV are not anticipated.

Historically, RHV revenue has exceeded expenditures and the surplus has been used to subsidize operations at Palo Alto Airport (PAO) and South County Airport (E16). The result has been that the AEF has not been able to accumulate sufficient funding for infrastructure maintenance, repair and replacement projects at RHV. The airport currently has a large backlog of these types of projects, which are discussed below in greater detail. However, even if all operating revenue stayed at RHV it would still not be sufficient to fund all of the projects ineligible for FAA funding. Therefore, additional funding sources will be required in order to fund these projects.

AIRPORT CAPITAL IMPROVEMENT PLAN (ACIP)

FAA Airport Improvement Program - Funded Capital Projects

All projects identified in Chapter 3, Airfield Design, as well as airfield-related repair projects are eligible for FAA funding under the Airport Improvement Program (AIP). Currently, AIP-eligible projects approved by the FAA receive 95% federal funding and are also eligible for an additional 2.5% state match, subject to availability of funds. Therefore, the local match required for AIP projects can be as low as 2.5%. However, the federal percentage is subject to change whenever the AIP is periodically reauthorized. Previously, the AIP provided 90% funding and there is the possibility that the program may revert to this funding level when next reauthorized.

A small number of AIP-eligible projects are also contained in Chapter 4, Building Area Design. These projects are primarily related to physical security.

The approved Noise Compatibility Program (NCP) also contains a number of AIP-eligible projects. Since AIP-eligible projects are identified in Chapters 3 and 4 and in the NCP, a discussion of these projects will not be repeated here.

Locally - Funded Capital Projects

This section will discuss the funding requirements for projects that are not eligible for AIP funding and therefore must be funded entirely with local funds. These projects fall into two groups: Projects identified in the NCP that are not eligible for AIP funding and major infrastructure repair projects that are not eligible for AIP funding.

The NCP identified 33 measures designed to reduce the impact of airport noise on the surrounding community. Some of the measures require only staff time to implement. Other measures such as installation of a Aircraft Noise and Flight Track Monitoring System (ANFTMS) and soundproofing of homes within the 65 dB CNEL contour require substantial funding but are eligible for AIP funding. Other measures such as soundproofing of homes not within the 65dB CNEL contour are not eligible for AIP funding and must be funded locally.

As discussed above, RHV's utility and building infrastructure has a significant level of deferred maintenance and repair. To correct these deficiencies and bring RHV's infrastructure and maintenance program up to current standards, projects are required to replace obsolete electrical utility systems; replace and install landscaping in

public areas and on the airport perimeter; rehabilitate the Terminal Building and reconfigure the Terminal Building parking lot; relocate electrical utility systems underground; procure mowers, tractors and apron/airfield sweepers; refurbish and paint existing County-owned hangars; and locate and map utility systems and other infrastructure.

It will be necessary to phase both the NCP and infrastructure-related projects over the life of the Master Plan in order to pursue a “pay-as-you-go” strategy. Adopting such a strategy is a prudent business practice since it consistently matches expenditures with available revenue and precludes the need to assume additional debt.

POTENTIAL SOURCES OF ADDITIONAL REVENUE

This section examines two potential sources of additional revenue: The lease of three parcels identified in Chapter 4 for non-aviation commercial uses and reconfiguration of the County-owned aircraft storage area. Each of these potential sources of additional revenue is discussed below.

Non-Aviation Commercial Leases

In the previous phases of the master planning process related to selecting a role for each airport to meet the forecasted demand (Chapter 2) and developing a site plan for the airfield and building areas (Chapters 3 and 4), the Board preliminarily approved the concept of leasing the undeveloped portion of the airport for compatible commercial uses to generate revenue:

- ▶ to fund operation and maintenance of the airport infrastructure including physical security enhancements;
- ▶ to fund projects that enhance the airport’s compatibility with the surrounding community (including projects related to the Noise Compatibility Program);
- ▶ to reduce the Airport Enterprise Fund’s reliance on aircraft storage revenue; and
- ▶ for other purposes determined to be appropriate and legally permissible.

The concept of leasing undeveloped property at the airport is also a Board-approved recommendation of the Harvey Rose management audit of the airports conducted in 1999. The audit report states that non-aviation commercial development “is a sound direction for the Department to take. It would provide a new source

of revenue for the [Airport Enterprise] Fund without increasing air traffic and it would diversify and stabilize the [Airport] Division's revenue sources in the event of a downturn in the general aviation market.”

Chapter 4 identified three parcels at RHV for conversion to non-aviation commercial uses:

1. An 8.0-acre parcel located at the corner of Capitol Expressway and Tully Road.
2. A 5.3-acre parcel located at the intersection of Cunningham Avenue and Swift Avenue (assuming the ball fields are relocated to the other side of the airport).
3. A 2.5-acre parcel located on Swift Avenue.

The AEF could realize a total of approximately \$950,000 annually in ground lease revenue (in current dollars) from these three parcels. The estimated annual lease revenue is based on the expected market rate of return multiplied by the parcels' appraised value. The appraised value is based on a highest and best use as retail development. The estimated annual lease revenue reflects market conditions as of late 2004 and is therefore subject to change.

It is important to note that the County General Fund may be entitled to some or all of the lease revenue from these parcels. Since approximately one-half the total cost of the airport's original real property acquisition was funded by the General Fund and the undeveloped parcels have never been used for aviation-related purposes, the General Fund may have a legitimate claim with respect to ownership of the parcels and the revenue generated from their development for non-aviation commercial uses. Absent legal impediments, the Board may elect to establish new guidance relating to this revenue to allow increased flexibility with respect to its uses.

Economic Analysis of Constructing Hangars Over Existing Tiedowns

As shown above in the AEF overview, the primary component of airport operating revenue is the rental of County-owned aircraft storage spaces. Aside from annual CPI-based increases in rental rates, the total revenue from this source is obviously limited by the number of storage spaces. Given that the size of the County-owned aircraft storage area is fixed and the airport's basing capacity is limited to 750 as outlined in Chapter 2, Roles & Forecasts, the very limited opportunity that exists to increase revenue from this source lies in the possibility of reconfiguring the existing mix of hangars, shelters and tiedowns.

Because the economics of constructing new hangars over existing tiedowns is just as important as physical constraints in the site planning process, Chapter 4, Building Area Design, did not show a specific reconfiguration of the County-owned aircraft storage area. Instead, a discussion of the economics of building hangars over existing tiedowns was deferred to the Business Plan.

Generally speaking, constructing hangars over undeveloped property that is not currently generating revenue is financially attractive at Bay Area airports despite high construction costs due to the high demand for hangars. However, construction costs - which rose 10.5% overall in 2004 and even higher on certain materials such as steel and concrete - are rising much faster than hangar rates. The total cost of a hangar construction project today would be in the neighborhood of \$55/SF. The current environment of steeply rising construction costs coupled with rising interest rates is reducing the economic attractiveness of building new hangars.

The negative effects of high construction costs and rising interest rates are amplified in a situation where an airport is considering constructing hangars over existing tiedowns because the tiedowns that would be eliminated generate about one-quarter the revenue of hangars with no additional capital investment required. Once debt service, hangar maintenance costs and the loss of tiedown revenue are accounted for, building hangars over tiedowns is far less attractive financially than building hangars on undeveloped property that currently is not generating revenue (such as the South County Airport hangar project). In fact, the break even point is at a relatively low interest rate of 7.5%.

If new hangar construction were to be financed through borrowing, a significant issue to consider is the appropriate level of overall financial risk - in the form of a debt ceiling - to be assumed by the AEF. The AEF is currently carrying over \$6,000,000 in long-term debt as previously discussed, which is nearly twice the AEF's annual revenue. Assuming additional debt is not recommended until the Retained Earnings balance is increased.

The AEF debt ceiling issue is directly related to the Board-adopted principle that the AEF should be financially self-sustaining without General Fund support. This principle is especially important given the existing demands on the General Fund and makes it imperative to ensure that the General Fund will not be required at any time in the future to step in and subsidize the AEF. Although the County internally accounts for debt incurred by the airports under the AEF, the County as a whole is the legal entity responsible for the AEF bond debt and would be required to make the debt payments if the AEF itself were unable to do so.

The other financing option would be to accrue revenue from the non-aviation commercial leases and build hangars on a pay-as-you-go basis. This method would be preferable because it avoids the financial risks associated with taking on additional debt. However, it may be some time before the undeveloped parcels are leased and begin to generate revenue; moreover, there will be many competing demands on that revenue as discussed above. Therefore, it appears that hangar construction over tiedowns – whether financed by borrowing or on a “pay-as-you-go” basis - will probably not occur within the foreseeable future.

LEASING STRATEGY

This section discusses recommended leasing strategies for various airport properties. While not a comprehensive analysis, this section does address broad overall approaches and major issues to be considered with respect to leasing the:

1. Non-aviation Commercial Parcels
2. Existing FBO leaseholds
3. Swift Avenue Building
4. Terminal Building Restaurant

Non-Aviation Commercial Parcels

It is essential that the future development of these parcels be compatible with the operation of the airport. It is also essential that the future developments be unrelated to (and therefore independent of) the operation of the airport. The next most important criterion is the creditworthiness of the lessee(s). Provided these baseline criteria are met, each parcel should be leased to the prospective lessee offering the best financial terms.

In order to generate the maximum revenue consistent with the above criteria, it is recommended that the marketplace be allowed to determine the parcels’ highest and best use through the Request For Proposal (RFP) process.

A fundamental determination as to the respective roles of the County and the City of San Jose in the land development process, including activities related to the California Environmental Quality Act (CEQA), will be required in order to develop an appropriate leasing process that includes ample opportunity for community input. Although such a determination is beyond the scope of this document, it is important to note that both the County’s and the

City’s established land development processes are designed to ensure that public input is received and considered.

Existing FBO Leaseholds

There are nine FBO leaseholds at RHV. With 687 based aircraft at RHV, the number of based aircraft per FBO is 76 to 1. This ratio is far lower than 10 other general aviation airports in Northern California with 200 or more based aircraft (see Table 5A).

Ratio of FBOs to Based Aircraft at Northern California Airports			
AIRPORT	BASED AIRCRAFT	FBOs	RATIO OF BASED AIRCRAFT TO FBOs
RHV	687	9	1 : 76
Charles M. Schulz - Sonoma County Airport	380	1	1 : 380
Sacramento Executive Airport	365	1	1 : 365
Watsonville Municipal Airport	331	1	1 : 331
Livermore Municipal Airport	604	2	1 : 302
Gnoss Field Airport [Novato]	301	1	1 : 301
Buchanan Field Airport	591	2	1 : 296
Palo Alto Airport	524	2	1 : 262
San Carlos Airport	503	2	1 : 252
Hayward Executive Airport	444	2	1 : 222
South County Airport*	207	1	1 : 207

* Includes 107 based aircraft and 100 (future) new hangar occupants.

Table 5A: Ratio of FBOs to Based Aircraft

Between the end of 2015 and 2019, eight of the nine RHV FBO leases will expire. The ninth FBO lease expires in 2023. It may be advisable to consolidate the nine leasehold premises; under current conditions between two and four FBOs would most likely be sufficient to provide based aircraft with an adequate range of high-quality services at an adequate level of competition. A market study should be conducted as the lease expirations approach to determine the optimal number of leaseholders. A determination as to the appropriate lease terms (e.g. length of lease(s) to be offered, buyout provisions, etc.) can also be made at that time.

Swift Avenue Building

The Swift Avenue building was acquired by the County in the early 1990s as part of a settlement to litigation brought by the lessee. Most of the building’s approximately 10,600 gross square feet are occupied by a total of five different lessees. All leases are on a month-to-month basis and currently generate a total of approximately \$77,000 in revenue annually. To generate higher lease revenue and reduce the administrative burden and cost of managing multiple small leases, leasing the entire facility to a single user for a longer term is recommended. The future tenant would be required

to lease the building “as is” and would be responsible for all tenant improvements.

A lease term of 10 years should be sufficient to attract potential lessees willing to invest in tenant improvements. If it is desired to retain flexibility regarding the use of the property during the lease term, a lease buyout provision could be included in the lease. To establish such a provision, potential lessees would be required, as part of the proposals submitted in response to the Request For Proposals (RFP), to include an up-front schedule of buyout costs that would show the fixed amount to be paid by the County in the event the County were to terminate the lease for any reason during any given year of the lease term. The proposed buyout costs would be considered in conjunction with all other terms of the proposal as part of the competitive evaluation process and become a binding term of the eventual lease with the successful proposer.

If attempts to lease the facility to a single user are unsuccessful, another option would be to include the building in the offering for the adjacent 2.5-acre parcel. This approach may improve the marketability of the 2.5-acre parcel in addition to eliminating the administrative burden and cost of managing the Swift Ave. building. It would also preclude the need to determine the appropriate lease length and buyout provisions since the lease for the 2.5-acre parcel would be independent of the airport operations.

Terminal Building Restaurant

The second-floor restaurant space located in the Terminal Building has been closed for approximately 15 years. Potential net revenue from the Terminal Building restaurant is not anticipated to be significant due to the costs of preparing the space for “standard shell delivery” (i.e. ready for the lessee to install all floor, ceiling and wall finishes as well as equipment and furnishings), which is estimated to be at least \$150,000. If the County prepares the space for standard shell delivery it could expect lease payments in the neighborhood of \$20,000 annually. If the space is leased in its current condition, the lessee would be responsible for the cost of preparing the space, which would result in lower lease payments to the County. In either case, net lease revenue from the Terminal Building restaurant will not contribute significantly to RHV’s revenue stream during the foreseeable future. Therefore, a decision to lease the space for restaurant purposes would be based primarily on a desire to provide a convenience to airport users rather than for the purpose of generating income for the AEF.

In addition to the initial capital investment required, the potential for competing food service establishments to appear nearby on the non-aviation commercial leaseholds poses additional risk to poten-

tial lessees that may hinder the County's ability to lease the facility. Therefore, the preferred option for providing a restaurant amenity on the airport may be to simply allow a restaurant use in the lease of one or more of the non-aviation commercial parcels. As in the case of the Swift Avenue building discussed above, this would also preclude the need to determine the appropriate lease length and buyout provisions since the leases for the non-aviation commercial parcels would be independent of the airport operations.

SUMMARY

- ▶ The AEF has been financially self-sustaining since at least the inception of the Roads & Airports Department. Operating revenue has been sufficient to fund operating expenses including the local match required for grant-funded capital projects, which have been implemented on a pay-as-you-go basis.
- ▶ Approximately three-quarters of AEF operating revenue is derived from the rental of County-owned aircraft storage spaces, which makes the AEF vulnerable to fluctuations in the general aviation market. Most other components of AEF revenue such as FBO lease revenue and fuel flowage fees present little opportunity for growth.
- ▶ RHV has historically generated a surplus that has been used to subsidize operations at the other two County airports, which has prevented the accumulation of funding to reinvest in the airport infrastructure.
- ▶ Additional revenue sources are required to fund NCP and infrastructure projects not eligible for FAA funding.
- ▶ Building hangars over tiedowns is not likely in the foreseeable future due to its inherent economics and poor financing options.
- ▶ Leasing the airport's undeveloped parcels for non-aviation commercial uses has the potential to generate approximately \$950,000 in revenue annually, however some or all of this revenue may not be available for airport purposes.
- ▶ The AEF should not assume additional long-term debt. All capital projects should be funded on a "pay-as-you-go" basis.
- ▶ The unencumbered Retained Earnings balance should be increased to the equivalent of one year of operating expenses.
- ▶ The nine FBO leaseholds should be consolidated into a fewer number upon expiration of the current master leases.

- ▶ The Swift Avenue Building should be re-leased to a single tenant or included in the lease for the adjacent 2.5 acre parcel to eliminate the administrative burden and costs of managing multiple small leases.
- ▶ A restaurant use should be allowed in the leases of the non-aviation commercial parcels.

Appendices



Land Use Compatibility

COMPATIBILITY PLANNING

Compatibility Concerns

Ensuring the maximum level of compatibility between an airport and surrounding land uses is essential. The land use compatibility concerns for airports fall into four functional categories. These categories are:

- ▶ **Noise:** Generally, defined by cumulative noise exposure contours describing noise from aircraft operations near an airport.
- ▶ **Overflight:** The impacts of routine aircraft flight over a community.
- ▶ **Safety:** From the perspective of minimizing the risks of aircraft accidents beyond the runway environment.
- ▶ **Airspace Protection:** Accomplished by limits on the height of structures and other objects in the airport vicinity and restrictions on other uses which potentially pose hazards to flight.

For each compatibility category, four features are outlined below:

- ▶ **Compatibility Objective:** The objective to be sought by establishment and implementation of the compatibility policies;
- ▶ **Measurement:** The scale on which attainment of the objectives can be measured;
- ▶ **Compatibility Strategies:** The types of strategies which, when formulated as compatibility policies, can be used to accomplish the objectives; and
- ▶ **Basis for Setting Criteria:** The factors which should be considered in setting the respective compatibility criteria.

Noise

Noise is one of the most basic airport land use compatibility concerns. Moreover, at major airline airports, many busy general aviation airports, and most military airfields, noise is usually the most geographically extensive form of airport impact.

- ▶ **Compatibility Objective** — The clear objective of noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of airport noise capable of disrupting noise-sensitive activities.
- ▶ **Measurement** — For the purposes of airport land use compatibility planning, noise generated by the operation of aircraft to, from, and around an airport is primarily measured in terms of the cumulative noise levels of all aircraft operations. In California, the cumulative noise level metric established by state regulations, including for airport noise, is the Community Noise Equivalent Level (CNEL). This metric provides a single

measure of the average sound level in decibels (dB) to which any point near an airport is exposed. To reflect an assumed greater community sensitivity to nighttime and evening noise, events during these periods are counted as being louder than actually measured. Cumulative noise levels are usually illustrated on airport area maps as contour lines connecting points of equal noise exposure. Mapped noise contours primarily show areas of significant noise exposures—ones affected by high concentrations of aircraft takeoffs and landings. Noise contours for the current, and five- and twenty-year forecast activity levels were presented earlier in this chapter.

- ▶ **Compatibility Strategies** — The basic strategy for achieving noise compatibility in an airport vicinity is to limit development of land uses which are particularly sensitive to noise. The most acceptable land uses are ones which either involve few people (such as most forms of agriculture) or generate significant noise levels themselves (such as other transportation facilities or some industrial uses). Where historical development makes this infeasible (as at Reid-Hillview), noise insulation of the most effective means of reducing noise impacts.
- ▶ **Basis for Setting Criteria** — Compatibility criteria related to cumulative noise levels are well-established in federal and state laws and regulations. The basic state and federal criterion sets a CNEL of 65 dB as the maximum noise level normally compatible with urban residential land uses.

Overflight

Experience at many airports has shown that noise-related concerns do not stop at the boundary of the outermost mapped CNEL contour. Many people are sensitive to the frequent presence of aircraft overhead even at noise low levels. These reactions can mostly be expressed in the form of *annoyance*.

At many airports, complaints often come from locations beyond any of the defined noise contours. Areas that underlie common flight patterns are likely places for this to occur. The basis for such complaints may be a desire and expectation that outside noise sources not be intrusive—or, in some circumstances, even distinctly audible—above background noise levels.

While these impacts may be important community concerns, the question of importance here is whether any land use planning actions can or should be taken to mitigate the impacts or otherwise address the concerns. There is typically little that can be done to modify the pattern of air traffic close to the airport; FAA procedures dictate their location. Funding for noise insulation outside of the 65 CNEL contour is commonly not available. Even if it was, the concern would not address annoyance when residents are outdoors.

These limitations notwithstanding, there are steps which ALUCs can and should take to help minimize overflight impacts.

- ▶ **Compatibility Objective** — In an idealistic sense, the compatibility objective with respect to overflight is the same as for noise: avoid land use development which can lead to annoyance and complaints. However, given the extensive geographic area over which the impacts occur, this objective is unrealistic except in rural areas and relatively close to

the airport. A more realistic objective therefore might be to promote conditions under which annoyance will be minimized. Possible strategies in this regard are described below.

- ▶ **Measurement** — Determining where to draw boundaries around areas of potentially significant overflight noise exposure is difficult because these locations extend beyond the well-defined CNEL contours. The general locations over which aircraft regularly fly as they approach and depart an airport are thus a better indicator of overflight annoyance concerns. For general aviation airports, such locations include areas beneath the standard airport traffic patterns, the portions of the pattern entry and departure routes flown at normal traffic pattern altitude, and perhaps additional places which experience a high concentration of overflights. Also, at all types of airports, common IFR arrival and departure routes can produce overflight concerns, sometimes many miles from the airport.
- ▶ **Compatibility Strategies**—As noted above, the ideal land use compatibility strategy with respect to overflight annoyance is to avoid development of residential and other noise-sensitive uses in the affected locations. To the extent that this approach is not practical, three different (but not mutually exclusive) strategies are apparent.
 - ▶ One strategy is to help people with above-average sensitivity to aircraft overflights—people who are highly *annoyed* by overflights—to avoid living in locations where frequent overflights occur. This strategy involves making people more aware of an airport’s proximity and its current and potential aircraft noise impacts on the community before they move to the area. This can be accomplished through buyer awareness measures such as dedication of aviation or overflight easements, recorded deed notices, and/or real estate disclosure statements. In new residential developments, posting of signs in the real estate sales office and/or at key locations in the subdivision itself can be further means of alerting the initial purchasers about the impacts (signs are of little long-term value, however).
 - ▶ A second strategy is to minimize annoyance by reducing the intrusiveness of aircraft noise above normal background noise levels. In this regard, multi-family residences—because they tend to have comparatively little outdoor living areas, fewer external walls through which aircraft noise can intrude, and relatively high noise levels of their own—are preferable to single-family dwellings. To the limited extent that new residential development occurs in the vicinity of Reid-Hillview Airport, multi-family units would be desirable, except near the runway ends.
 - ▶ Finally, Santa Clara County is developing a voluntary program to financially aid aircraft owners willing to add mufflers to their aircraft.
- ▶ **Basis for Setting Criteria**—The basis for setting criteria is primarily the experience and knowledge that airport proprietors and airport land use commissions have about the noise sensitivity of the specific communities involved. This information can come from Part 150 Noise Management Programs, noise complaints, or other interactions with area residents.

Safety

Compared to noise, safety is in many respects a more difficult concern to address in airport land use compatibility policies. A major reason for this difference is that safety policies address uncertain events which *may occur* with *occasional* aircraft operations, whereas noise policies deal with known, more or less predictable events which *do occur* with *every* aircraft operation. Because aircraft accidents rarely happen and the time, place, and consequences of their occurrence cannot be predicted, the concept of *risk* is central to the assessment of safety compatibility. From the standpoint of land use planning, two variables determine the degree of risk posed by potential aircraft accidents:

- *Accident Frequency*: Where and when aircraft accidents occur in the vicinity of an airport; and
 - *Accident Consequences*: Land uses and land use characteristics which affect the severity of an accident when one occurs.
- **Compatibility Objective**—The overall objective of safety compatibility criteria is simply to minimize the risks associated with potential aircraft accidents. There are two components to this objective, however:
- *Safety on the Ground*: The most fundamental safety compatibility component is to provide for the safety of people and property on the ground in the event of an aircraft accident near an airport.
 - *Safety for Aircraft Occupants*: The other important component is to enhance the chances of survival of the occupants of an aircraft involved in an accident which takes place beyond the immediate runway environment.
- **Measurement**—In measuring the degree of safety concerns around an airport, the frequency component of risk assessment is most important: what is the potential for an accident to occur? As mentioned above, there are both *where* and *when* variables to the frequency equation:
- *Spatial Element*: The spatial element describes *where* aircraft accidents can be expected to occur. Of all the accidents which occur in the vicinity of airports, what percentages occur in any given location?
 - *Time Element*: The time element adds a *when* variable to the assessment of accident frequency. In any given location around a particular airport, what is the chance that an accident will occur in a specified period of time?
- **Compatibility Strategies**—Safety compatibility strategies focus on the *consequences* component of risk assessment. Basically, the question is: what land use planning measures can be taken to reduce the severity of an aircraft accident if one occurs in a particular location near an airport? Although there is a significant overlap, specific strategies must consider both components of the safety compatibility objective: protecting people and property on the ground; and enhancing safety for aircraft occupants. In each case, the primary strategy is to limit the intensity of use (the number of people concentrated on the site) in locations most susceptible to an off-airport aircraft accident. This is accomplished by:

- › *Density and Intensity Limitations:* Establishment of criteria limiting the maximum number of dwellings or people in areas close to the airport is the most direct method of reducing the potential severity of an aircraft accident.
 - › *Open Land Requirements:* Creation of requirements for open land near an airport addresses the objective of enhancing safety for the occupants of an aircraft forced to make an emergency landing away from a runway.
 - › *Highly Risk-Sensitive Uses:* Certain critical types of land uses—particularly schools, hospitals, and other uses in which the mobility of occupants is effectively limited—should be avoided near the ends of runways regardless of the number of people involved. Aboveground storage of large quantities of highly flammable or hazardous materials also should be avoided near airports.
- ▶ **Basis for Setting Criteria**—Setting safety compatibility criteria presents the fundamental question of what is safe. Expressed in another way: what is an *acceptable risk*? In one respect, it may seem ideal to reduce risks to a minimum by prohibiting most types of land use development from areas near airports. However, there are usually costs associated with such high degrees of restrictiveness. In practice, safety criteria are set on a progressive scale with the greatest restrictions established in locations with the greatest potential for aircraft accidents.

Airspace Protection

Relatively few aircraft accidents are caused by land use conditions which are hazards to flight. The potential exists, however, and protecting against it is essential to airport land use safety compatibility.

- ▶ **Compatibility Objective**—Because airspace protection is in effect a safety factor, its objective can likewise be thought of in terms of risk. Specifically, the objective is to avoid development of land use conditions which, by posing hazards to flight, can increase the risk of an accident occurring. The particular hazards of concern are:
 - › Airspace obstructions;
 - › Wildlife hazards, particularly bird strikes; and
 - › Land use characteristics which pose other potential hazards to flight by creating visual or electronic interference with air navigation.
- ▶ **Measurement**—The measurement of requirements for airspace protection around an airport is a function of several variables including: the dimensions and layout of the runway system; the type of operating procedures established for the airport; and, indirectly, the performance capabilities of aircraft operated at the airport.
 - › *Airspace Obstructions:* Whether a particular object constitutes an airspace obstruction depends upon the height of the object relative to the runway elevation and its proximity to the airport. The acceptable height of objects near an airport is most commonly determined by application of standards set forth in Part 77 of the Federal Aviation Regulations. These regulations establish a three-dimensional space in the air

above an airport. Any object which penetrates this volume of airspace is considered to be an obstruction and may affect the aeronautical use of the airspace.

- ▶ *Wildlife and Other Hazards to Flight:* The significance of other potential hazards to flight is principally measured in terms of the hazards' specific characteristics and their distance from the airport and/or its normal traffic patterns.
- ▶ **Compatibility Strategies**—Compatibility strategies for the protection of airport airspace are relatively simple and are directly associated with the individual types of hazards:
 - ▶ *Airspace Obstructions:* Buildings, antennas, other types of structures, and trees should be limited in height so as not to pose a potential hazard to flight.
 - ▶ *Wildlife and Other Hazards to Flight:* Land uses which may create other types of hazards to flight near an airport should be avoided or modified so as not to include the offending characteristic.
- ▶ **Basis for Setting Criteria**—The criteria for determining airspace obstructions and other hazards to flight have been long-established in FAR Part 77 and other Federal Aviation Administration regulations and guidelines. Also, state of California regulation of obstructions under the State Aeronautics Act (Public Utilities Code, Section 21659) is based on FAR Part 77 criteria.

Agency Responsibilities

Ensuring the maximum level of compatibility between the Reid-Hillview Airport and adjacent uses is the responsibility of five agencies: Santa Clara County, Santa Clara County Airport Land Use Commission, City of San Jose, California Division of Aeronautics, and the Federal Aviation Administration. Each agencies role is discussed below.

Santa Clara County

Santa Clara County has two roles related to land use compatibility. As owner and operator of the Reid-Hillview Airport, the county has a central role in ensuring the safety of aircraft operations and minimizing off-airport impacts. Although federal preemptions limit the County's authority, it remains responsible for implementation of modifications to the airfield to maximize safety and minimize off-airport effects. Santa Clara County is also responsible for implementing the noise insulation program proposed in the Part 150 Noise Management Program.

Santa Clara County also has jurisdiction over a limited amount of nonaviation land in the vicinity of the Reid-Hillview Airport. This includes nonaviation land uses on airport property and a few isolated properties in the vicinity of the airport.

Santa Clara County Airport Land Use Commission

Requirements for creation of airport land use commissions (ALUCs) were first established under the California State Aeronautics Act (Public Utility Code Sections 21670 et seq.) in 1967. Although the law has been amended numerous times since then, the fundamental purpose of ALUCs to promote land use compatibility around airports has remained unchanged. As expressed in the present statutes, this purpose is:

“...to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public’s exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.”

The statutes give ALUCs two principal powers by which to accomplish this objective. First, ALUCs must prepare and adopt an airport land use compatibility plan. Secondly, they must review the plans, regulations, and other actions of local agencies and airport operators for consistency with that plan.

The basic function of airport land use compatibility plans is to promote compatibility between airports and the land uses that surround them. Compatibility plans serve as a tool for use by airport land use commissions in fulfilling their duty to review proposed development plans for airports and surrounding land uses. Additionally, compatibility plans set compatibility criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances and to landowners (including special district and other local government entities as well as private parties) in their design of new development.

The most recent version of the Santa Clara County Airport Land Use Commission’s compatibility plan was adopted in September 1992. This document is entitled *Land Use Plan for Areas Surrounding Santa Clara County Airports*. As this is a key document, it is described in a separate section below.

Limitations

This fundamental objective notwithstanding, airport land use commissions are limited in their powers to achieve it. Two limitations are explicitly written into the law: ALUCs have no authority over either existing land uses (Section 21674(a)) or the operation of airports (Section 21674(e)). Neither of these terms is defined within the statutes, but the interpretation of their meaning is fairly standard throughout the state.

Existing Land Uses — The precise wording of the Aeronautics Act is that the authority of ALUCs extends only to land in the vicinity of airports that is “not already devoted to incompatible uses.” The working interpretation of this language is that ALUCs have no state-empowered authority over existing land uses.

Operation of Airports — Any actions pertaining to how and where aircraft operate on the ground or in the air around an airport are clearly not within the jurisdiction of ALUCs to regulate. ALUC involvement with aircraft operations is limited to taking the operational characteristics into account in the development of land use compatibility plans. This limitation on the jurisdiction of ALUCs cannot, however, be taken to mean that they have no authority with respect to new development on airport property. For example, the law specifically requires ALUCs to review proposed airport master plans for consistency with the commission’s plans. ALUCs also have authority to review proposals for nonaviation development on airport property.

A third, less absolute, limitation concerns the types of land use actions that are subject to ALUC review. The law emphasizes local general plans as the primary mechanism for implementing the compatibility policies set forth in an ALUC's plan. Thus, Santa Clara County and each city affected by an airport land use compatibility plan is required to make its general plan consistent with the ALUC plan (or to overrule the commission). Once a local agency has taken this action to the satisfaction of the Airport Land Use Commission, the ALUC's authority to review projects within that jurisdiction is narrowly limited. The only actions for which review remains mandatory are proposed adoption or amendment of general plans, specific plans, zoning ordinances, and building regulations affecting land within an airport influence area. For an ALUC to review individual projects, the local agency must agree to submit them.

One final limitation worth noting is that ALUCs have no jurisdiction over federal lands such as lands controlled by the U.S. Forest Service, Bureau of Land Management, or Indian tribes. ALUCs can merely inform these agencies about the ALUC policies and seek their cooperation.

City of San Jose

The City of San Jose has land use authority over most property in the vicinity of Reid-Hillview Airport. As such, the city has principal responsibility for ensuring that land uses in the vicinity of the airport are compatible with its operations. At Reid-Hillview, the opportunity for an optimum relationship between the airport and surrounding land uses was lost long ago. However, where changes in existing land uses are made, there still remains the potential to improve the degree of compatibility.

California Division of Aeronautics

The Division of Aeronautics has multiple roles that directly or indirectly affect compatibility. Annual airfield inspections supplement the ongoing inspections by airport staff. It provides an independent review of airfield conditions and potential obstructions in the approaches to the runways. Agency staff also monitors noise reduction strategies at airports designated as having a noise problems as defined in California's Airport Noise Regulations. The grant program administered by this agency is a potential source for land use compatibility planning and implementation of airfield safety improvements.

Federal Aviation Administration

The many divisions within the Federal Aviation Administration (FAA) play a variety of roles that affect compatibility around Reid-Hillview Airport. A few of those that have the most significant affect are mentioned in the text that follows. The staff of the FAA air traffic control tower has as their primary responsibility ensuring the separation of aircraft arriving and departing the Reid-Hillview Airport. At a busy airport with parallel runways, air traffic control contributes significantly to the safe operation of the airport. In a less direct manner, the FAA also contributes to safety through the promulgation of regulations relating to flight and designation of various classes of airspace. As a grant funding agency the FAA supports measures to reduce noise impacts and improve airfield safety. For example, the home insulation program recommended as part of the Part 150 Noise Mitigation Program is expected to be funded by the FAA.

Airport Land Use Compatibility Plan

The airport land use compatibility plan for an airport is the key document providing guidance on compatible land uses. As part of this master plan, the current plan has been evaluated.

The *Land Use Plan for Areas Surrounding Santa Clara Airports* is a comprehensive document. It begins with an introduction that describes the state-mandated purposes of airport land use commissions. The relationship to local planning agencies and airport owners is documented. The introduction is followed by a description of the public airports in Santa Clara County covered by the plan. Reid-Hillview Airport is one of these airports. Next there is an extensive discussion of the characteristics of aviation noise and its measurement. Safety issues are covered in the subsequent chapter. Recommended safety zones are also presented in this chapter. The next two sections contain implementation procedures and the ALUC's policies. The balance of the document contains a glossary and various appendices.

An administrative draft (dated March 2004) of a *Comprehensive Land Use Plan* for Reid-Hillview Airport has been posted to the official web site of the Santa Clara County Planning Office. Although this plan has not been adopted, it is believed to represent the direction that the ALUC is considering. The new plan differs principally in that it utilizes the standard safety zones contained in the *California Airport Land Use Planning Handbook* prepared by the Division of Aeronautics.

In the most general sense, both the adopted and draft compatibility plans contain policies that are judged to be technically supportable and appropriate for an airport with the characteristics of Reid-Hillview. This airport master plan contains some changes that should be incorporated into the compatibility plan:

- ▶ Airspace plan: has been modified to reflect the shift in the northern runway ends.
- ▶ Runway protection zones: reflects both the changes in runway ends and the use of standard runway protection zones, rather than the approach runway protection zones depicted in the prior airport layout plan

In addition to those mechanical changes, it is also recommended that other changes be considered:

- ▶ Reformat the plan so that policies are clearly differentiated from supporting text. Specifically, it is suggested that all text, tables, and figures associated with policies be placed in one section. Numbered headings should be reserved for policies.
- ▶ The Tall Structure Compatibility policies are an important component of county-wide policies. However, they are not logically part of the Reid-Hillview plan. Another vehicle for their adoption should be found.
- ▶ The infill policies should be reconsidered. The undeveloped acreage requirement is not clearly defined. Modifications to a single-family home that do not increase the number of dwelling units should be permitted without any formulas. There are no real safety or noise benefits to limiting additions to homes. However, limitations on additions may be perceived as unreasonable and contribute to an unfavorable view of the airport.

More elaborate policies for land uses other than single-family should be developed.

Most of the area around the Reid-Hillview Airport is fully developed. Therefore, most attention should be focused on those parcels capable of being developed or significantly redeveloped. For example, the existing guidance for the mall properties should be expanded.

- ▶ Adoption of new policies for Reid-Hillview should be used as an opportunity to engage the key agency, the City of San Jose, to develop meaningful policies acceptable to both agencies. Reaching a mutually acceptable set of compatibility policies will likely require a significant commitment of staff time and other resources. However, the alternative is policies that are not implemented due to court challenges or an override. This process could also be used to define acceptable nonaviation uses on the airport. This process can occur as a stand-alone process or as part of the environmental documentation of the master plan adoption. A full-articulated compatibility plan could be considered a mitigation measure.

Glossary of Terms Used in Airport Master Planning

PREPARED BY

MEAD & HUNT
133 AVIATION BOULEVARD, SUITE 100
SANTA ROSA, CA 95403
(707) 526-5010

PREFACE

Many technical terms and expressions are used in airport master planning and noise management programs. This glossary has been prepared for the County of Santa Clara and interested members of the public. The definitions in this glossary were compiled from various sources including government publications such as Federal Aviation Administration (FAA) Advisory Circulars, FAA Orders, the Federal Aviation Regulations (FARs) and professional literature.

GLOSSARY OF TERMS

AAAE (Triple-A E) - American Association of Airport Executives.

A-WEIGHTED SOUND LEVEL (dBA) - The human ear does not respond equally to all sound frequencies. It is less efficient at low and high frequencies than it is at medium or speech-range frequencies. Thus, to obtain a single number representing the sound level of a noise having a wide range of frequencies in a manner representative of the ear's response, it is necessary to reduce the effects of the low and high frequencies with respect to the medium frequencies. The resultant sound level is said to be A-weighted, and the units are decibels (dB); hence, the abbreviation is dBA. The A-weighted sound level is also called the noise level. Sound level meters have an A-weighting network for measuring A-weighted sound level.

ABOVE GROUND LEVEL (AGL) - An elevation datum given in feet above ground level.

ABSORPTION - Absorption is a property of materials that reduces the amount of sound energy reflected. Thus, the introduction of an "absorbent" into the surfaces of a room will reduce the sound pressure level in that room because sound energy striking the room surfaces will not be totally reflected. The process of absorption is entirely different from that of transmission loss through a material, which determines how much sound enters a room via the walls, ceiling, and floor. The effect of absorption merely reduces the resultant sound level in the room produced by energy that has already entered the room.

AC - See **ADVISORY CIRCULAR**

ACOUSTICS - (1) The science of sound, including the generation, transmission, and effects of sound waves both audible and inaudible; (2) The physical qualities of a room or other enclosure (such as size, shape, amount of noise) that determine the audibility and perception of speech and music.

ADT - See **AVERAGE DAILY TRAFFIC**

ADVISORY CIRCULAR (AC) - A series of external FAA publications consisting of all non-regulatory material of a policy, guidance, and informational nature.

AERONAUTICAL CHART - A representation of a portion of the earth, its culture and relief, specifically designated to meet the requirements of air navigation.

AFFECTED LOCAL GOVERNMENT AGENCIES - The local government agencies that have the authority to control land uses in areas that are adversely affected by aviation activities.

AGL - See **ABOVE GROUND LEVEL**

AIM - See **AIRMAN'S INFORMATION MANUAL**

AIP PROGRAM - See **AIRPORT IMPROVEMENT PROGRAM**

AIR CARRIER - A legal entity who undertakes directly by lease or other arrangements, to engage in air transportation.

AIR CARRIER, CERTIFICATED ROUTE - An air carrier holding a Certificate of Public Convenience and Necessity, issued by the U.S. Department of Transportation under Part 121 of the Federal Aviation Regulations (FAR), to conduct scheduled services over specified routes and a limited amount of nonscheduled operations.

AIR CARRIER, COMMUTER - An air taxi operator who, under FAR Part 135, (1) performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and places between which such flights are performed; or (2) transports mail by air pursuant to a contract with the U.S. Postal Service.

AIRCRAFT ACCIDENT - An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage.

AIRCRAFT APPROACH CATEGORY - A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. An aircraft shall fit in only one category. If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimums for the next higher category should be used. For example, an aircraft which falls in Category A, but is circling to land at a speed in excess of 91 knots, should use the approach Category B minimums when circling to land. The categories are as follows:

1. Category A. Speed less than 91 knots.
2. Category B. Speed 91 knots or more but less than 121 knots.
3. Category C. Speed 121 knots or more but less than 141 knots.
4. Category D. Speed 141 knots or more but less than 166 knots.
5. Category E. Speed 166 knots or more.

AIRCRAFT CLASSES – For the purposes of Wake Turbulence Separation Minima, ATC classifies aircraft as Heavy, Large, and Small as follows:

1. Heavy. Aircraft capable of takeoff weights of 300,000 pounds or more whether or not they are operating at this weight during a particular phase of flight.
2. Large. Aircraft of more than 12,500 pounds, maximum certificated takeoff weight, up to 300,000 pounds.
3. Small. Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

AIRCRAFT PARKING LINE LIMIT (APL) - A line established by the airport authorities beyond which no part of a parked aircraft should protrude.

AIRFIELD CAPACITY (HOURLY) - The maximum number of aircraft operations (landings or takeoffs) that can take place on an airfield in one hour under specific conditions.

AIRMAN'S INFORMATION MANUAL (AIM) - A primary FAA publication whose purpose is to instruct airmen about operating in the National Airspace System of the U.S. It provides basic flight information, ATC Procedures and general instructional information concerning health, medical facts, factors affecting flight safety, accident and hazard reporting, and types of aeronautical charts and their use.

AIRPORT - An area of land or water that is used or intended to be used for the landing and taking off of aircraft, and includes its buildings and facilities, if any.

AIRPORT ELEVATION - The highest point of an airport's usable runways, measured in feet above mean sea level.

AIRPORT ENVIRONS - The area surrounding an airport that is considered to be directly affected by the presence and operation of that airport.

AIRPORT HAZARD - Any structure or natural object located on or in the vicinity of a public airport, or any use of land near such airport, that obstructs the airspace required for the flight of aircraft landing, taking off, or taxiing at the airport.

AIRPORT IMPROVEMENT PROGRAM (AIP) - The AIP program is administered to provide financial grants-in-aid for airport development projects such as runways, taxiways, aircraft parking aprons, terminal buildings and land acquisition associated with airport development including runway protection zones and approach protection.

AIRPORT LAND USE COMMISSION (ALUC) - In California, a state-authorized body existing in each county having the responsibility to develop plans for achieving land use compatibility between airports and their environs.

AIRPORT LAND USE PLAN (ALUP) - In California, the formal plan, developed and adopted by an ALUC, setting forth criteria, policies and specifications for the preservation of long-term, land use compatibility between an airport and its environs.

AIRPORT LAYOUT PLAN - A plan (drawings) for an airport showing boundaries and proposed additions to all areas owned or controlled by the sponsor for airport purposes, the location and nature of existing and proposed airport facilities and structures, and the location on the airport of existing and proposed non-aviation areas and improvements thereon.

AIRPORT MASTER PLAN - An assembly of appropriate documents and drawings covering the development of a specific airport from a physical, economic, social, and political jurisdictional perspective. The Airport Layout Plan is a part of this plan.

AIRPORT NOISE COMPATIBILITY PLANNING STUDY - A study designed to increase the compatibility of land and facilities in the areas surrounding an airport that are most directly affected by the operation of the airport. The specific purpose is to reduce the adverse effects of noise as much as possible by implementing both on-airport noise control measures and off-airport land use control programs. The basic products of an Airport Noise Compatibility Planning Study typically include:

- (1) workable on-airport noise abatement actions such as preferential runway use programs, new or preferential flight tracks, curfews, etc.;
- (2) off-airport land use control programs and regulations such as land acquisition, soundproofing, or special actions and programs; and
- (3) policies and procedures related to the implementation of on-airport and off-airport programs.

A community involvement program is usually carried on throughout all phases of the study. Conduct of such studies are eligible for federal funding participation. (Also see FAR Part 150.)

AIRPORT PROPRIETOR - Owner of an airport or other party having authority to control airport operations. In California, the holder of an airport permit issued by the Department of Transportation, Division of Aeronautics pursuant to Article 3, Chapter 4, Part 1, Division 9, Public Utilities Code.

AIRPORT RADAR SERVICE AREA (ARSA) - Regulatory airspace surrounding designated airports wherein FAA Air Traffic Control provides radar vectoring and sequencing on a full-time basis for all IFR and VFR aircraft. As of September 1993, the term ARSA has been replaced by the term Class C Airspace.

AIRPORT REFERENCE POINT - A point established on an airport, having an equal relationship to all existing and proposed landing and takeoff areas, and used to geographically locate the airport for other planning purposes.

AIRPORT SPONSOR - A public agency or tax-supported organization, such as an airport authority, that is authorized to own and operate an airport, to obtain property interests, to obtain funds, and to be legally, financially, and otherwise able to meet all applicable requirements of the current laws and regulations.

AIRPORT SURVEILLANCE RADAR (ASR) - Approach control radar used to detect and display an aircraft's position in the terminal area. ASR provides range and azimuth information but does not provide elevation data. Coverage of the ASR can extend up to 60 miles.

AIRPORT TRAFFIC AREA - Unless otherwise specifically designated in FAR Part 93, that airspace within a horizontal radius of 5 statute miles from the geographical center of any airport at which a control tower is operating, extending from the surface up to, but not including, an altitude of 3,000 feet above the elevation of an airport. Unless otherwise authorized by ATC, no person may operate an aircraft within an airport traffic area except for the purpose of landing at or taking off from an airport within that area. ATC authorizations may be given as individual approval of specific operations or may be contained in written agreements between airport users and the tower concerned.

AIRPORT TRAFFIC CONTROL TOWER (ATCT) - A terminal facility that uses air-to-ground communications, visual signaling, and other devices to provide ATC services to aircraft operating in the vicinity of an airport or on the movement area.

AIR ROUTE SURVEILLANCE RADAR (ARSR) - Air route traffic control center (ARTCC) radar used primarily to detect an aircraft's position which en route between terminal areas, enabling controllers to provide radar air traffic control service when aircraft are within the ARSR coverage.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC) - An FAA facility established to provide air traffic control service to aircraft operating on an instrument flight rule (IFR) flight plan within controlled airspace and principally during the en route phase of flight.

AIR TAXI - Operations performed by operators of aircraft holding an air taxi certificate under Part 135 of the Federal Aviation Regulations. This category includes commuter airline operations (excluding certificated commuter airlines), mail carriers under contract with the U.S. Postal Service, and operators of nonscheduled air taxi services. Typically, air taxis do not utilize aircraft with a payload capacity over 7,500 pounds or capable of carrying more than 30 passengers.

AIR TRAFFIC - Aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.

AIR TRAFFIC CLEARANCE/ATC CLEARANCE - An authorization by air traffic control, for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified traffic conditions within controlled airspace.

AIR TRAFFIC CONTROL (ATC) - A service operated by appropriate authority (the FAA) to promote the safe, orderly, and expeditious flow of air traffic.

AIRWAY/FEDERAL AIRWAY - A Class E airspace area established in the form of a corridor, the centerline of which is defined by radio navigational aids. (See also **CONTROLLED AIRSPACE**.)

ALERT AREA - A special use airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither or which is hazardous to aircraft.

ALPA - Airline Pilot's Association.

ALTITUDE - The height of a level, point, or object measured in feet Above Ground Level (AGL) or from Mean Sea Level (MSL).

ALUC - See **AIRPORT LAND USE COMMISSION**

ALUP - See **AIRPORT LAND USE PLAN**

AMBIENT NOISE - The total of all noise in a system or situation, independent of the presence of the specific sound to be measured. In acoustical measurements, strictly speaking, ambient noise means electrical noise in the measurement system. However, in popular usage ambient noise means is also used with the same meaning as "background noise" or "residual noise." (See also **AMBIENT NOISE LEVEL**.)

AMBIENT NOISE LEVEL – The composite of noise from all sources near and far. The ambient noise level constitutes the normal or existing level of environmental noise at a given location. (i.e., the background noise level.)

APPROACH CLEARANCE - Authorization by ATC for a pilot to conduct an instrument approach at an airport with appropriate facilities.

APPROACH LIGHT SYSTEM (ALS) - An airport lighting system which provides visual guidance enabling a pilot to align the aircraft with the extended runway centerline during final approach to landing.

APPROACH SPEED - The recommended speed contained in aircraft manuals used by pilots when making an approach to landing. This speed will vary for different segments of an approach as well as for aircraft weight and configuration.

APRON/RAMP - A defined area on an airport or heliport intended to accommodate aircraft for purposes of loading passengers or cargo, refueling, parking, or maintenance.

ARSR - See **AIR ROUTE SURVEILLANCE RADAR**

ARTCC - See **AIR ROUTE TRAFFIC CONTROL CENTER**

ASNA - See **AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979**

ASR - See **AIRPORT SURVEILLANCE RADAR**

ATA - Air Transport Association.

ATC - See **AIR TRAFFIC CONTROL**

ATIS - See **AUTOMATIC TERMINAL INFORMATION SERVICE**

AUTOMATED WEATHER OBSERVING SYSTEM (AWOS) - Airport electronic equipment which automatically measures meteorological parameters, reduces and analyzes the data via computer, and broadcasts weather information which can be received on aircraft radios.

AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS) - The continuous broadcast of recorded non-control information in selected terminal areas (e.g. time, weather, ceiling, visibility, etc.).

AVERAGE DAILY TRAFFIC (ADT) - An expression of traffic volume, ADT means the average number of vehicles per day that pass over a given point.

AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979 (ASNA) - Public Law 96-193, enacted February 18, 1980. The purpose of the Act is to provide assistance to airports in preparing and carrying out noise compatibility programs and in assuring continued safety for aviation. The Act also contains provisions that extend, until January 1, 1988, the requirement for

certain types of aircraft to comply with Part 36 of the Federal Aviation Regulations (see also FAR Part 36 and FAR Part 150). Funding for the noise studies has been appropriated by the U.S. Congress and has commenced in 1983. Funding for program implementation, including acquisition and soundproofing of affected residences, has been approved by FAA and is being implemented at several U.S. airports.

AVIGATION EASEMENT - A type of acquisition of an interest in land or property which involves less-than-fee purchase (see also **LESS-THAN-FEE ACQUISITION**). One form of avigation easement grants an airport the right to perform aircraft operations over the designated property, including operations that might cause noise, vibration, and other effects. A stronger form of easement is a deed restriction that may include (1) the right to perform aircraft operations on the property, and (2) public acquisition of a landowner's rights restricting future development of the property for any use more intensive than that existing at the time of the transaction. This easement may also include specific prohibitions on the uses for which the property may be developed. Maximum heights of structures and other objects may also be specified.

AZIMUTH - Horizontal direction or bearing; usually measured from the reference point of 0 degrees clockwise through 360 degrees.

BACKCOURSE APPROACH - A non-precision instrument approach utilizing the rearward projection of the ILS localizer beam.

BACKGROUND NOISE - See **AMBIENT NOISE**.

BAFFLE - A baffle is a shielding structure or series of partitions used to increase the effective length of the external transmission path between two points in an acoustic system. For example, baffles may be used in sound traps (as in air conditioning ducts) or in automotive mufflers to decrease the sound transmitted while affording a path for airflow.

BASED AIRCRAFT - Aircraft stationed at an airport on a long-term or permanent basis, usually by some form of agreement between the aircraft owner and airport management.

BASE LEG - A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. (See also **TRAFFIC PATTERN**.)

BLAST PAD - A paved area, of runway width, extending beyond the runway takeoff threshold for a sufficient distance (typically 150 to 300 feet) to prevent soil erosion caused by jet engine backblast.

BUILDING CODE - A legal document that sets forth requirements to protect the public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures. The code establishes the minimum acceptable conditions for matters found to be in need of regulation. Topics generally covered are exits, fire protection, structural design, sanitary facilities, light, and ventilation. Sound insulation may also be included.

BUILDING RESTRICTION LINE (BRL) - A line established with respect to the runway centerline to assure that structures will not project above the imaginary surfaces required by Federal Aviation Regulations, Part 77, “*Obstruction Clearance Criteria*,” (FAR Part 77).

BUSINESS AVIATION - The sector of general aviation (as defined by ICAO) which concerns the operation of aircraft by companies for the carriage of passengers or goods as an aid to the conduct of their business, flown for purposes generally considered not for public hire, and piloted by individuals having at the minimum a valid commercial pilot license with an instrument rating.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) – An Act of the State of California designed to:

- (1) Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- (2) Identify the ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved. (CEQA Guidelines, Sec. 15002[a]).

CATEGORICAL EXEMPTION - An exemption from CEQA for classes of projects based on findings by the secretary of the resources agency that the listed classes of projects do not have a significant effect on the environment.

CBD - Central Business District

CEILING - Height above the earth’s surface to the lowest layer of clouds or obscuring phenomena that is reported as “broken,” “overcast,” or “obscuration” and not classified as “thin” or “partial.”

CEQ - See **COUNCIL ON ENVIRONMENTAL QUALITY**

CEQ 1500 - Regulations of the Federal Council on Environmental Quality (CEQ) for implementing the procedural provisions of the National Environmental Policy Act (NEPA).

CEQA - See **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

CERTIFICATED ROUTE AIR CARRIER - See **AIR CARRIER, CERTIFICATED ROUTE**

CIRCLING APPROACH/CIRCLE-TO-LAND MANEUVER - A maneuver initiated by the pilot to align the aircraft with a runway for landing when a straight-in landing from an instrument approach is not possible or not desirable.

CLEAR ZONE - See **RUNWAY PROTECTION ZONE**

CLEARWAY - For turbine engine powered airplanes certificated after August 29, 1959, an area beyond the runway, not less than 500 feet wide, centrally located about the extended centerline of the runway, and under the control of the airport authorities. The clearway is expressed in terms of clearway plane, extending from the end of the runway with an upward slope not exceeding 1.25 percent, above which no object nor any terrain protrudes. However, threshold lights may protrude above the plane if their height above the end of the runway is 26 inches or less and if they are located to each side of the runway.

CNEL - See **COMMUNITY NOISE EQUIVALENT LEVEL**.

COMMON TRAFFIC ADVISORY FREQUENCY (CTAF) - A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an uncontrolled airport. The CTAF may be a UNICOM, Multicom, FSDS, or tower frequency and is identified in appropriate aeronautical publications.

COMPASS LOCATOR - A low power, low or medium frequency radio beacon installed at the site of the outer or middle marker of an instrument landing system (ILS).

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) - A method of predicting, by a single number rating, cumulative aircraft noise that affects communities in airport environs. As defined in the California Airport Noise Standards, CNEL represents the average daytime noise level during a 24-hour day, adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and nighttime periods relative to the daytime period. Weighting factors equivalent to penalties of about five decibels and ten decibels are applied to operations conducted from 7:00 PM to 10:00 PM and from 10:00 PM to 7:00 AM, respectively, to account for increased sensitivity during those periods.

COMMUTER AIR CARRIER - See **AIR CARRIER, COMMUTER**

COMPREHENSIVE LAND USE PLAN (CLUP) - See **ALUP**.

COMPUTER MODELING - An analytical process which employs an electronic digital computer to perform difficult, laborious calculations involving mathematical functions or formulas. Computation of cumulative noise exposure (Ldn or CNEL) contours requires the use of computer modeling in order to process enormous quantities of data concerning aircraft traffic, performance and operating procedures.

CONTROLLED AIRSPACE - Any of several types of airspace within which some or all aircraft may be subject to air traffic control. An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. Controlled airspace is a generic term that covers Classes A-E airspace. Controlled airspace is also that airspace within which all aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements in Part 91 (for specific operating requirements, please refer to Part 91). For IFR operations in any class of controlled airspace, a pilot must file an IFR flight plan and receive an appropriate ATC clearance. Each Class B, Class C, and Class D airspace area designated for an airport contains at least one primary airport around which the

airspace is designated (for specific designations and descriptions of the airspace classes, refer to FAR Part 71).

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) - Established by the National Environmental Policy Act (NEPA) of 1969, the Council is composed of three members appointed by the President. A major purpose of the Council is to formulate and recommend national policies to promote the improvement of environmental quality.

CTAF - See **COMMON TRAFFIC ADVISORY FREQUENCY**.

DATABASE - A computer file (or set of files) containing a field of related numerical information (data) for use in automated analysis or processing. A computerized “land use database” is a computer file containing the coordinates, dimensions and areas of all individual land use polygons which comprise the pattern of land use within a specific geographic area.

DAY-NIGHT AVERAGE SOUND LEVEL (DNL or Ldn) - A method for predicting, by a single number rating, cumulative aircraft noise that affects communities in airport environs. The Ldn value represents decibels of noise as measured by an A-weighted sound-level meter (see also). In the Ldn procedure, the noise exposure from each aircraft takeoff or landing at ground level around an airport is calculated, and these noise exposures are accumulated for a typical 24-hour period. (The 24-hour period often used is the average day of the year being analyzed.) Daytime and nighttime noise exposures are considered separately. A weighting factor equivalent to a penalty of 10 decibels is applied to operations between 10:00 p.m. and 7:00 am to account for the increased sensitivity of people to nighttime noise. The Ldn values can be expressed graphically on maps using contours of equal noise exposure. Ldn may also be used for measuring other noise sources, such as automobile traffic, to determine combined noise effects.

dB - See **DECIBEL, dB**

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

DEREGULATION ACT - Airline regulatory reform act of 1978. Designed, among other things, to encourage competition among domestic air carriers, the Act allows an air carrier greater freedom to enter and leave any given market.

DEVELOPMENT RIGHTS - Rights of landowners to develop a parcel of land according to the zoning of that parcel. Land is often assessed on a combination of its “resource” value and its “commodity” value. The resource value is the value of the property in its natural state; the commodity value is an artificial value placed on it by the marketplace - that is, its value for development purposes. In less-than-fee acquisition (see also), the airport sponsor purchases only the development rights; the ownership of the land remains unchanged.

DIGITIZE - A mechanical-electronic process whereby the locations, sizes and identities of individual polygons, noise contours or other physical features are translated into a set of numerical

data within a computer data file or database for subsequent automated analysis, sorting or manipulation.

DISPLACED THRESHOLD - A runway landing threshold that is located at a point other than the designated beginning of the runway (where departures would begin).

DISTANCE MEASURING EQUIPMENT (DME) - Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.

DME - See **DISTANCE MEASURING EQUIPMENT**

DNL - See **DAY-NIGHT AVERAGE SOUND LEVEL**

DOWNWIND LEG - A flight path parallel to the landing runway in the direction opposite the landing direction.

DURATION - Length of time, in seconds, a noise event such as an aircraft flyover is experienced. (May refer to the length of time a noise event exceeds a specified threshold level.)

EA - See **ENVIRONMENTAL ASSESSMENT**

EFFECTS - See **IMPACT**

EIR - See **ENVIRONMENTAL IMPACT REPORT**

EIS - See **ENVIRONMENTAL IMPACT STATEMENT**

ENGINE RUN-UP AREA - An area on an airport where aircraft engines are serviced or tested. The noise from such servicing or testing can affect neighborhoods adjacent to the airport.

ENVIRONMENTAL ASSESSMENT (EA) - An assessment of the environmental effects of a proposed action for which federal financial assistance is being requested or for which federal authorization is required. The EA serves as the basis for the FAA's Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI), as specified in FAA Orders 1050.1D and 5050.4.

ENVIRONMENTAL IMPACT REPORT (EIR) - An EIR is a detailed statement prepared in accordance with CEQA describing a proposed project, analyzing significant environmental effects of the proposed project, identifying a reasonable range of alternatives, and discussing possible ways to mitigate or avoid the significant environmental effects.

ENVIRONMENTAL IMPACT STATEMENT (EIS) - A document prepared under the requirements of the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(c). The EIS represents a federal agency's evaluation of the effect of a proposed action on the environment. New regulations relating to the preparation of an EIS are published in FAA Orders 1050.1D and 5050.4.

ENPLANED/DEPLANED PASSENGERS - The volume of passengers outbound from an airport (enplaned) or inbound to an airport (deplaned). The annual passenger volume of an airport is the total of enplaned and deplaned passengers.

EQUIVALENT ENERGY LEVEL, Leq - The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.

EPA - The U.S. Environmental Protection Agency

FAA - See **FEDERAL AVIATION ADMINISTRATION**

FAA NOISE POLICY - The Aviation Noise Abatement Policy of the Department of Transportation, Federal Aviation Administration issued on November 18, 1976. The policy outlines the responsibilities and actions that may be taken to reduce adverse effects of aviation-related noise.

FAA ORDER - An internal FAA directive which sets standards, procedures and guidelines for FAA execution of its various regulatory and grant administration mandates.

FAA ORDER 1050.1D - An order published by the FAA, dated December 21, 1983, entitled "*Policies and Procedures for Considering Environmental Impacts.*" This order was prepared in response to the CEQ 1500 Regulations.

FAA ORDER 5050.4A - This document, entitled "*Airport Environmental Handbook,*" was revised by the FAA on October 8, 1985. It contains all of the essential information an airport sponsor needs to meet both procedural and substantive environmental requirements, including relevant text from Order 1050.1D.

FAR – See **FEDERAL AVIATION REGULATIONS (FAR)**

FAR PART 36 - Federal Aviation Regulations, Part 36. Establishes noise standards for the civil aviation fleet. Some extensions for compliance are included in the Aviation Safety and Noise Abatement Act of 1979 (see also).

FAR PART 77 - Federal Aviation Regulations, Part 77. Establishes standards for identifying obstructions to aircraft in navigable airspace.

FAR PART 77 SURFACES - Imaginary surfaces established with relation to each runway of an airport. There are five types of surfaces: (1) primary, (2) approach, (3) transitional, (4) horizontal, and (5) conical.

FAR PART 91 – Establishes criteria for general operating and flight rules.

FAR PARTS 121 AND 135 - The parts of Federal Aviation Regulations that deal with certification and operational requirements for commercial operators of large aircraft and air taxis, respectively.

FAR PART 150 - Federal Aviation Regulations, Part 150. Effective February 28, 1982, FAR Part 150 is the regulation which implements the noise compatibility standards and provisions contained in the Aviation Safety and Noise Abatement Act of 1979 (ASNA). FAR Part 150 prescribes procedures for airport sponsors who wish to develop Noise Exposure Maps and Airport Noise Compatibility Plans to identify and mitigate airport - land use compatibility problems. FAR Part 150 was published in the Federal Register in amended form September 14, 1993.

FBO - See **FIXED BASE OPERATOR**.

FEDERAL AVIATION ADMINISTRATION - The FAA is the agency of the U.S. Department of Transportation that is charged with (1) regulating air commerce to promote its safety and development; (2) achieving the efficient use of navigable airspace of the United States; (3) promoting, encouraging, and developing civil aviation; (4) developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and (5) promoting the development of a national system of airports.

FEDERAL AVIATION REGULATIONS (FAR) - Regulations established by the Federal Aviation Administration (FAA). These regulations are the rules which govern the operation of aircraft, airways, and airmen.

FEE-SIMPLE LAND ACQUISITION (PURCHASE) - The full purchase by the airport sponsor of land and improvements. The land is usually maintained for airport purposes or leased for uses that are compatible with airport operations. Alternatively, the airport sponsor can resell the land with an aviation easement (see also) and deed restrictions that specify the compatible land uses that are permitted. The resale option has the benefit that the land is returned to the tax rolls.

FERRY FLIGHT – A flight for the purpose of:

1. Returning an aircraft to base.
2. Delivering an aircraft from one location to another.
3. Moving an aircraft to and from a maintenance base.

FINDING OF NO SIGNIFICANT IMPACT (FONSI) - An administrative determination by the FAA that a proposed action by the airport sponsor will have no significant impact (on the environment). Specific guidelines for the preparation of a FONSI report (see EA) are included in FAA Orders 1050.1D and 5050.4A.

FIXED BASE OPERATOR (FBO) – (1) A business operating at an airport that provides aircraft services to the general public, including but not limited to sale of fuel and oil; aircraft sales, rental, maintenance and repair; parking and tie down or storage of aircraft; flight instruction; air taxi/charter operations; and specialty services, such as instrument and avionics maintenance, painting, overhaul, aerial application, aerial photography, aerial hoists or pipeline patrol. (2) The owner of such an operation.

FLIGHT PATH/TRACK - A line, course, or track along which an aircraft is flying or intended to be flown.

FLIGHT SERVICE STATION (FSS) - FAA facilities that provide pilot briefings on weather, airports, altitudes, routes, and other flight planning information. More specifically, these FSS facilities also provide en route communications and VFR search and rescue services, assist lost aircraft and aircraft in emergency situations, relay ATC clearances, originate Notices to Airmen, broadcast aviation weather and NAS information, receive and process IFR flight plans, and monitor NAVAID's. In addition, at selected locations, FSS's provide Enroute Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of transborder flights.

FLIGHT STANDARDS DISTRICT OFFICE (FSDO) - An FAA field office serving an assigned geographical area and staffed with Flight Standards personnel who serve the aviation industry and the general public on matters relating to the certification and operation of air carrier and general aviation aircraft. Activities include general surveillance of operational safety, certification of airmen and aircraft, accident prevention, investigation, enforcement, etc.

FLIGHT WATCH - A shortened term for use in air-ground contacts to identify the flight service station providing En Route Flight Advisory Service; e.g., "Oakland Flight Watch."

FLIGHT VISIBILITY - See **VISIBILITY**.

FLOW CONTROL - Measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome (airport) so as to ensure the most effective utilization of the airspace.

FONSI - See **FINDING OF NO SIGNIFICANT IMPACT**

GENERAL AVIATION (GA) - All civil aviation except that classified as air carrier or air taxi. The types of aircraft typically used in general aviation activities vary from multi-engine jet aircraft to single-engine piston aircraft.

GENERAL AVIATION OPERATIONS - Operations performed by all civil aircraft not classified as air carrier or air taxi aircraft.

GLIDE SLOPE (GS) - An electronic signal radiated by a component of an ILS to provide descent path guidance to approaching aircraft.

GLOBAL POSITIONING SATELLITE SYSTEM (GPS) - A navigational system utilizing satellites to provide non-precision guidance in azimuth, elevation, and distance measurement.

GROUND VISIBILITY - See **VISIBILITY**.

HEAVY AIRCRAFT - Aircraft capable of takeoff weights of 300,000 pounds or more whether or not they are operating at this weight during a particular phase of flight.

HELICOPTER - Rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors.

HELIPAD - A small, designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters.

HELIPORT – An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters and includes its buildings and facilities if any.

HUD - The U.S. Department of Housing and Urban Development

ICAO – International Civil Aviation Organization.

IFR - See **INSTRUMENT FLIGHT RULES**

IFR CONDITIONS - Weather conditions that require aircraft to be operated in accordance with instrument flight rules.

IFR MINIMUMS AND DEPARTURE PROCEDURES (FAR PART 91) - Prescribed takeoff rules. For some airports, obstructions or other factors require the establishment of nonstandard takeoff minimums or departure procedures, or both. Both may be required to assist pilots in avoiding obstacles during climb to the minimum en-route altitude.

ILS - See **INSTRUMENT LANDING SYSTEM**.

ILS CATEGORIES –

1. ILS Category I – An ILS approach procedure which provides for approach to a height above touchdown of not less than 200 feet and with runway visual range of not less than 1,800 feet.
2. ILS Category II – An ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet and with runway visual range of not less than 1,200 feet.
3. ILS Category III.
 - a. IIIA – An ILS approach procedure which provides for approach without a decision height minimum and with runway visual range of not less than 700 feet.
 - b. IIIB – An ILS approach procedure which provides for approach without a decision height minimum and with runway visual range of not less than 150 feet.
 - c. IIIC – An ILS approach procedure which provides for approach without a decision height minimum and without runway visual range minimum.

IMPACT - In environmental and noise control studies, the word “impact” is used to express the extent or severity of an environmental problem, e.g., the number of persons exposed to a given noise environment. As indicted in CEQ 1500 (Section 1508.8), impacts and effects are considered to be synonymous. Effects or impacts may be ecological, aesthetic, historic, cultural, economic, social, or health related, and they may be direct, indirect, or cumulative.

IMPACT INSULATION CLASS (IIC) - A single-figure rating that is intended to permit comparisons of the sound-insulating merits of floor-ceiling assemblies in terms of a reference contour.

INCOMPATIBLE LAND USE - Residential, public, recreational and certain other noise-sensitive land uses which are designated as unacceptable within specific ranges of cumulative (Ldn) noise exposure as set forth in Table 2 of Appendix A of FAR Part 150.

INSTRUMENT APPROACH PROCEDURE - A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority.

INSTRUMENT FLIGHT RULES (IFR) - Rules specified by the FAA for flight under weather conditions in which visual reference cannot be made to the ground and the pilot must rely on instruments to fly and navigate.

INSTRUMENT LANDING SYSTEM (ILS) - An electronic system which provides the aircraft with lateral, longitudinal and vertical guidance necessary for an instrument landing.

INSTRUMENT OPERATION - An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal traffic control facility.

INSTRUMENT RUNWAY - A runway equipped with electronic and visual navigation aids for which a precision or non-precision approach procedure having straight-in landing minima has been approved.

INVERSE SQUARE LAW - Describes the reduction in sound pressure where the mean square sound pressure changes in inverse proportion to the square of the distance from the source. Under this ideal condition, the sound pressure level decreases 6dB with each doubling of distance from the source.

ITINERANT OPERATION - An arrival or departure performed by an aircraft from or to a point beyond the local airport area. Also defined as all aircraft arrivals and departures other than local operations.

LAND USE COMPATIBILITY - The compatibility of land uses surrounding an airport with airport activities and particularly with the noise from aircraft operations.

LAND USE COMPATIBILITY ASSURANCE - Documentation provided by an airport sponsor to the FAA. The documentation is related to an application for an airport development grant. Its purpose is to assure that a reasonably appropriate action, including the adoption of zoning laws, has been taken or will be taken to restrict the use of land adjacent to the airport or in the immediate vicinity of the airport. Such uses are limited to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft. This assurance is required of airport sponsors by Section 511 (a) (5) of the Airport and Airway Improvement Act of 1981. (Also see AIP Program.)

LAND USE CONTROLS - Controls established by local or state governments to carry out land use planning. The controls include zoning, subdivision regulations, land acquisition (in fee simple,

lease-back, or easements), building codes, building permits, and capital improvement programs (or provide sewer, water, utilities, or other service facilities).

LAND USE PLANNING - Comprehensive planning carried out by units of local government, for all areas under their jurisdiction, to identify the optimum uses of land and to serve as a basis for the adoption of zoning or other land use controls.

LARGE AIRCRAFT - An aircraft of more than 12,500 pounds maximum certificated takeoff weight, up to 300,000 pounds.

Ldn - See **DAY-NIGHT AVERAGE SOUND LEVEL**

Lmax - The maximum A-weighted noise level recorded during a noise event.

LEAD AGENCY - In California, the public agency that has the principal responsibility for carrying-out or approving a project. The Lead Agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared. Criteria for determining which agency will be the Lead Agency for a project are contained in Section 15051 of the CEQA guidelines.

Leq - See **EQUIVALENT ENERGY LEVEL, Leq**

LESS-THAN-FEE ACQUISITION (PURCHASE) - The purchase of development rights (see also) from landowners by airport sponsors in areas that should remain at very low densities or in open space uses. The airport sponsor negotiates with the landowner to determine the fair market value of the unused development rights. Once sold, the land cannot be developed except in specified ways. (See also **FEE-SIMPLE m LAND ACQUISITION**.)

Lmax - See **MAXIMUM A-WEIGHTED NOISE LEVEL**

LOC - See **LOCALIZER**.

LOCAL AGENCY - In California, any public agency other than a state agency, board, or commission. "Local Agency" includes but is not limited to cities, counties, charter cities and counties, districts, school districts, special districts, redevelopment agencies, local agency formation commissions, and any board, commission, or organizational subdivision of a local agency when so designated by order or resolution of the governing legislative body of the local agency.

LOCAL OPERATION - An aircraft operation which remains no more than 25 nautical miles from the departure point, or which terminates at the point of departure, or which does not include a stop of a greater duration than 15 minutes. Touch-and-go operations are local operations.

LOCAL TRAFFIC - Aircraft operating in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.

LOCALIZER (LOC) - The component of an ILS which provides horizontal course guidance to the runway.

LOCALIZER TYPE DIRECTIONAL AID (LDA) - A NAVAID used for non-precision instrument approaches with utility and accuracy comparable to a localizer, but which is not part of a complete ILS and is not aligned with the runway.

LOUDNESS - The judgment of the intensity of a sound by a person. Loudness depends primarily on the sound pressure of the stimulus. Over much of the loudness range it takes about a tenfold increase in sound pressure (approximately 10 decibels) to produce a doubling of loudness.

LOW APPROACH - An approach over an airport or runway following an instrument approach or a VFR approach including the go-around maneuver where the pilot intentionally does not make contact with the runway.

MAJOR AIRPORT DEVELOPMENT - Airport development of such a scale as to require shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity.

MARKER BEACON - The component of an ILS which informs pilots that they are at a significant point on the approach course.

MASKING - The action of making one sound (audible when heard alone) inaudible or unintelligible by the introduction of another sound. The masking is most marked when the masked sound is of higher frequency than the masking sound.

MEAN SEA LEVEL (MSL) - An elevation datum given in feet above mean sea level.

MICROWAVE LANDING SYSTEM (MLS) - An advanced electronic system of ground-based devices and aircraft avionics which provides the aircraft with lateral, longitudinal and vertical guidance necessary for an instrument landing. In the U.S., MLS technology has been supplanted by GPS (which see).

MILITARY OPERATION - Operations performed by military groups, such as the Air National Guard, the U.S. Air Force, U.S. Army, U.S. Marine Corps, or the U.S. Navy.

MILITARY OPERATIONS AREA (MOA) - A type of special use airspace established to separate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

MINIMUM DESCENT ALTITUDE (MDA) - The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

MINIMUM SAFE ALTITUDE - The minimum altitude specified in Part 91 for various aircraft operations.

MINIMUMS - Weather condition requirements established for a particular operation or type of operation; e.g., IFR takeoff or landing, alternate airport for IFR flight plans, VFR flight, etc.

MISSED APPROACH –

1. A maneuver conducted by a pilot when an instrument approach cannot be completed to a landing. The route of flight and altitude are shown on instrument approach procedure charts. A pilot executing a missed approach prior to the Missed Approach Point (MAP) must continue along the final approach to the MAP. The pilot may climb immediately to the altitude specified in the missed approach procedure.
2. A term used by the pilot to inform ATC that he is executing the missed approach.
3. At locations where ATC radar service is provided, the pilot should confirm to radar vectors when provided by ATC in lieu of the published missed approach procedure.

MITIGATION MEASURE - An action that can be planned or taken to alleviate (mitigate) an adverse environmental impact. As set forth in CEQ 1500 (Section 1508.20), “mitigation” includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing the impact by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

A proposed airport development project, or alternatives to that project, may constitute a mitigation measure as defined by the CEQ. CEQA contains a similar definition of mitigation measure (Cal. Pub. Res. Code 21002, et seq.).

MLS - See **MICROWAVE LANDING SYSTEM**

MSL – See **MEAN SEA LEVEL**

NATIONAL AIRSPACE SYSTEM/NAS - The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

NAVAID - See **NAVIGATIONAL AID**

NAVIGATIONAL AID (NAVAID) - Any visual or electronic device (airborne or on the ground) that provides point-to-point guidance information or position data to pilots of aircraft in flight.

NDB – See **NONDIRECTIONAL RADIO BEACON (NDB)**

NEPA - National Environmental Policy Act of 1969 (PL 91-190).

NOISE - Any sound or signal that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

NOISE ABATEMENT PROCEDURES - Changes in operational procedures affecting runway use, in flight approach and departure routes and procedures, and in other air traffic procedures that are made to shift adverse aviation effects away from noise-sensitive areas (such as residential neighborhoods).

NOISE ATTENUATION OF BUILDINGS - The use of building materials to reduce noise through absorption, transmission loss, and reflection of sound energy.

NOISE COMPLAINT - A recorded complaint concerning aircraft noise made by an individual and kept on file at an airport.

NOISE CONTOURS - Lines drawn on a map that connect points of equal noise exposure (Ldn or CNEL) values. They are usually drawn in 5-dB intervals, such as Ldn 75 dB values, Ldn 70 dB values, Ldn 65 dB values, and so forth.

NOISE CONTROL PLANS - Documentation by the airport sponsor of actions to be taken by the sponsor to reduce the effect of aviation noise. These actions are to be taken by the sponsor either alone or in cooperation with the FAA, airport users, and affected units of local government, with appropriate comments from affected citizens. Alternative actions should be considered, particularly where proprietary use restrictions (see also) on aircraft operations are involved).

NOISE LEVEL REDUCTION (NLR) - The noise reduction between indoor and outdoor environments of two rooms is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of “noise level reduction” combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

NOISE-SENSITIVE LAND USE - Land uses that can be adversely affected by high levels of aircraft noise. Residences, schools, hospitals, religious facilities, libraries, and other similar uses are often considered to be sensitive to noise.

NONCOMPATIBLE LAND USE - See **INCOMPATIBLE LAND USE**.

NONDIRECTIONAL RADIO BEACON (NDB) - A low or medium frequency radio beacon transmitting non-directional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to or from the radio beacon and “home” on or track to or from the station.

NONPRECISION APPROACH PROCEDURE - A standard instrument approach procedure in which no electronic glideslope is provided, such as VOR, GPS, or LOC (which “see”).

NONPRECISION INSTRUMENT RUNWAY - A runway with an instrument approach procedure utilizing air navigation facilities, with only horizontal guidance, or area-type navigation equipment for which a straight-in non-precision instrument approach procedure has been approved or planned, and no precision approach facility or procedure is planned.

NOTAM – See **NOTICE TO AIRMEN**

NOTICE TO AIRMEN - A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

OBSTACLE - An existing object, object of natural growth, or terrain, at a fixed geographical location, or which may be expected at a fixed location within a prescribed area, with reference to which vertical clearance is or must be provided during flight operation.

OBSTACLE FREE ZONE (OFZ) - A volume of space above and adjacent to a runway and its approach lighting system if one exists, free of all fixed objects except FAA-approved frangible aeronautical equipment and clear of vehicles and aircraft in the proximity of an airplane conducting an approach, missed approach, landing, takeoff, or departure.

OBSTRUCTION - An object that exceeds a limiting height or penetrates an imaginary surface described by current Federal Aviation Regulations (Part 77).

OPERATION - A take-off or a landing.

ORDER - See **FAA ORDER**.

OUTER MARKER - A marker beacon at or near the glide slope intercept position of an ILS approach.

PAPI - See **PRECISION APPROACH PATH INDICATOR**

PILOT IN COMMAND - The pilot responsible for the operation and safety of an aircraft during flight time.

POLYGON - An irregular geometric figure, encoded into a computer database, coincident with the physical conterminous boundaries of a single land use category. Individual polygons are encoded into a computer database using a process termed “digitizing.”

PRECISION APPROACH PATH INDICATOR (PAPI) - An airport landing aid similar to a VASI, but which has light units installed in a single row rather than two rows.

PRECISION APPROACH PROCEDURE – A standard instrument approach procedure in which an electronic glideslope/glidepath is provided; e.g., ILS/MLS and PAR.

PRECISION INSTRUMENT PROCEDURE - A standard instrument procedure for an aircraft to approach an airport in which an electronic glide slope is provided, e.g., an instrument landing system (ILS) or military precision approach radar.

PRECISION INSTRUMENT RUNWAY - A runway with an instrument approach procedure utilizing an instrument landing system (ILS), microwave landing system (MLS), precision approach radar (PAR), or GPS.

PREFERENTIAL RUNWAY USE (PROGRAM) - A noise abatement action whereby the FAA Air Traffic Division, in conjunction with the FAA Airports Division, assists the airport sponsor in developing a program that gives preference to the use of a specific runway(s) to reduce overflight of noise-sensitive areas.

PROPRIETARY USE RESTRICTIONS - Restrictions by an airport sponsor on the number, type, class, manner, or time of aircraft operations at the airport. The imposition of a curfew is an example of a proprietary use restriction.

PUBLIC AGENCY - In California, includes any state agency, board, or commission and any local or regional agency, as defined in the CEQA guidelines. It does not include the courts of the state. The term does not include agencies of the federal government.

RADAR APPROACH CONTROL FACILITY - A terminal ATC facility that uses radar and non-radar capabilities to provide approach control services to aircraft arriving, departing, or transiting airspace controlled by the facility. Provides radar ATC services to aircraft operating in the vicinity of one or more civil and/or military airports in a terminal area. Specific facility nomenclatures are used for administrative purposes only and are related to the physical location of the facility and the operating service generally as follows:

- Army Radar Approach Control/ARAC (Army),
- Radar Air Traffic Control Facility/RATCF (Navy/FAA),
- Radar Approach Control/RAPCON (Air Force/FAA),
- Terminal Radar Approach Control/TRACON (FAA),
- Tower/Airport Traffic Control Tower/ATCT (FAA) [only those towers delegated approach control authority].

REIL - See **RUNWAY END IDENTIFIER LIGHTS**

RELIEVER AIRPORT - An airport serving general aviation aircraft that might otherwise use a congested air carrier airport.

RESPONSIBLE AGENCY - In California, a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency which have discretionary approval power over the project.

RESTRICTED AREA - Designated airspace within which the flight of aircraft, while not wholly prohibited, is subject to restriction.

RETROFIT - The retroactive modification of existing jet aircraft engines for noise abatement purposes.

RUNWAY - A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees; e.g., Runway 01, Runway 25.

RUNWAY EDGE LIGHTS - Lights used to define the lateral limits of a runway.

RUNWAY END IDENTIFIER LIGHTS (REILs) - Two synchronized flashing lights, one on each side of the runway threshold, which provide a pilot with a rapid and positive visual identification of the approach end of a particular runway.

RUNWAY HEADING - The magnetic direction indication by the runway number. When cleared to “fly/maintain runway heading,” pilots are expected to comply with the ATC clearance by flying the heading indicated by the runway number without applying any drift correction; e.g., Runway 4, 040^o magnetic heading; Runway 20, 200^o magnetic heading.

RUNWAY PROTECTION ZONE - A trapezoidal area at ground level whose perimeter conforms to the projection on the ground of the innermost portion of the Approach Surface as defined in FAR Part 77. The runway protection zone is centered on the extended runway centerline and begins at the end of the FAR Part 77 Primary Surface, terminating below the line where the Approach Surface reaches a height of 50 feet above the elevation of the runway end. FAA regulations require that runway protection zones be kept free of obstructions and any uses that cause an assemblage of persons.

RUNWAY SAFETY AREA - A cleared, drained, graded, and preferably turfed area symmetrically located about the runway which, under normal conditions, is capable of supporting snow removal, fire fighting, and rescue equipment and of accommodating the occasional passage of aircraft without causing major damage to the aircraft.

RUNWAY THRESHOLD - The beginning of that portion of a runway usable for landing or takeoff. (See also **DISPLACED THRESHOLD**.)

RUNWAY USE PROGRAM - See **PREFERENTIAL RUNWAY USE PROGRAM**

SEL – See **SOUND EXPOSURE LEVEL (SEL)**

SEVERE NOISE EXPOSURE - Exposure to aircraft noise that is likely to interfere with human activity in noise-sensitive areas; repeated vigorous complaints can be expected and group action is probable. This exposure may be specified by a cumulative noise descriptor as a level of noise exposure, such as the Ldn (or CNEL) 75 dB level. (See also **SIGNIFICANT NOISE EXPOSURE**.)

SHIELDING - The attenuation of a sound by placing walls, buildings, plants, or other barriers between a sound source and the receiver.

SIGNIFICANT ENVIRONMENTAL EFFECT - A significant effect on the environment is a substantial or potentially substantial adverse change in the physical conditions of the area affected by a project.

SIGNIFICANT NOISE EXPOSURE - Exposure to aircraft noise that is likely to interfere with human activity in noise-sensitive areas; individual complaints may be expected and group action is possible. This exposure may be specified by a cumulative noise descriptor as a level of noise exposure, such as the Ldn (or CNEL) 65 dB level. (See also **SEVERE NOISE EXPOSURE**.)

SMALL AIRCRAFT - Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

SOUND EXPOSURE LEVEL (SEL) – The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the level of time-integrated A-weighted squared sound pressure for a stated time interval or event, based on the reference pressure of 20 micronewtons per square meter and reference duration of one second.

SOUND INSULATION - (1) The use of structures and materials designed to reduce the transmission of sound from one room or area to another, or from the exterior to the interior of a building, (2) the degree of reduction in sound transmission by means of sound insulating structures and materials.

SOUND LEVEL (NOISE LEVEL) - The weighted sound pressure level obtained by the use of a sound level meter having a standard frequency filter for attenuating or accentuating part of the sound spectrum.

SOUND LEVEL METER - An instrument, comprising a microphone, an amplifier, an output meter, and frequency weighting networks, that is used to measure noise and sound levels in a specified manner.

SOUND TRANSMISSION CLASS (STC) - The preferred single figure rating system designed to give an estimate of the sound insulation properties of a partition or a rank ordering of a series of partitions. It is intended for use primarily when speech and office noise constitute the principal noise problem.

SOUND TRANSMISSION LOSS - A measure in decibels of sound insulation provided by a structural configuration.

SPECIAL USE AIRSPACE - Airspace of defined horizontal and vertical dimensions wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities.

SPECIAL VFR CONDITIONS - Meteorological conditions that are less than those required for basic VFR flight in Class B,C,D, or E surface areas and in which some aircraft are permitted flight under visual flight rules.

SPECIAL VFR OPERATIONS - Aircraft operating in accordance with clearances within Class B, C, D, and E surface areas in weather conditions less than the basic VFR weather minima. Such operations must be requested by the pilot and approved by ATC.

STANDARD - A specific statement by an authority of permitted environmental conditions.

STANDARD INSTRUMENT DEPARTURE (SID) - A pre-planned instrument flight rules (IFR) air traffic control departure procedure printed for pilot use in graphic and/or textual form. SIDs provide transition from the terminal to the appropriate en route structure.

STANDARD TERMINAL ARRIVAL ROUTE (STAR) - A pre-planned instrument flight rules (IFR) air traffic control arrival route published for pilot use in graphic and/or textual form. STARS provide transition from the en route structure to an outer fix or an instrument approach fix/arrival waypoint in the terminal area.

STOPWAY - An area beyond the takeoff runway, no less wide than the runway and centered upon the extended centerline of the runway, able to support the aircraft during an aborted takeoff, without causing structural damage to the aircraft, and designated by the airport authorities for use in decelerating the aircraft during an aborted takeoff.

STRAIGHT-IN INSTRUMENT APPROACH - An instrument approach wherein final approach is begun without first having executed a procedure turn; it is not necessarily completed with a straight-in landing or made to straight-in landing weather minima.

SUBDIVISION REGULATIONS (ORDINANCE) - Regulations promulgated by local governments to guide development in defined ways and by prescribed methods to control the use of private land in the public interest. Subdivision regulations were initially established to prevent (1) the uncontrolled subdivisions of land that often left communities without adequate streets, water mains, or sewers, and (2) disorderly, chaotic growth - urban sprawl.

SUBSTANTIAL EVIDENCE - Under CEQA, if there is substantial evidence that a project may have a significant environmental effect, an EIR must be prepared. Substantial evidence includes facts, reasonable assumptions based on facts, and expert opinions supported by facts. The following are *not* substantial evidence: argument, speculation, unsubstantiated opinion or narrative, clearly inaccurate or erroneous information, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment.

TAXI - The movement of an airplane under its own power on the surface of an airport. Also, it describes the surface movement of helicopters equipped with wheels.

TAXILANE - The portion of the aircraft parking area used for access between taxiways, aircraft parking positions, hangars, storage facilities, etc.

TAXIWAY - A defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

TERMINAL AIRSPACE - See **TERMINAL AREA**.

TERMINAL AREA - A general term used to describe airspace in which approach control service or airport traffic control service is provided.

TERMINAL INSTRUMENT PROCEDURES (TERPS) - Procedures for instrument approach and departure of aircraft to and from civil and military airports. There are four types of terminal instrument procedures: (1) precision approach, (2) non-precision approach, (3) circling, and (4) departure.

TERPS - Terminal Instrument Procedures.

THRESHOLD - The beginning of that portion of the runway usable for landing.

TOUCH-AND-GO OPERATION - A practice maneuver consisting of a landing and a takeoff performed in one continuous movement—the aircraft lands and begins takeoff roll without stopping. A touch-and-go is considered as two operations.

TOWER - See **AIRPORT TRAFFIC CONTROL TOWER (ATCT)**.

TRAFFIC PATTERN - The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

1. Upwind Leg – A flight path parallel to the landing runway in the direction of landing.
2. Crosswind Leg – A flight path at right angles to the landing runway off its upwind end.
3. Downwind Leg – A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.
4. Base Leg – A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.
5. Final Approach – A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. An aircraft making a straight-in approach VFR is also considered to be on final approach.

TRANSFER OF DEVELOPMENT RIGHTS (TDR) - TDR involves separate ownership and use of the various rights associated with a parcel of real estate. Under the TDR concept, some of the property's development rights (see also) are transferred to another location where they may be used to intensify allowable development. For example, lands within an area affected by aircraft noise could be kept in open space or agricultural uses, and development rights for residential or other uses could be transferred to locations outside the area. Landowners could be compensated for the transferred rights by their sale at the new locations, or the rights could be purchased by the airport. Depending on market conditions and legal requirements, the airport could either hold or resell the rights.

TRANSIENT AIRCRAFT - Aircraft not based at the airport.

TRANSITIONAL AIRSPACE - That portion of controlled airspace wherein aircraft change from one phase of flight or flight condition to another.

TRANSMISSOMETER - An apparatus used to measure runway visibility on an ILS runway.

TRANSPORT AIRPORT - An airport designed, constructed, and maintained to serve airplanes having approach speeds of 121 knots or more.

TURBOJET AIRCRAFT - An aircraft having a jet engine in which the energy of the jet operates a turbine which in turn operates the air compressor.

TURBOPROP AIRCRAFT - An aircraft having a jet engine in which the energy of the jet operates a turbine which drives the propeller.

UNICOM (Aeronautical Advisory Station) - A non-government air/ground radio communication facility which may provide airport information (winds, weather, etc.) at specific airports.

UTILITY AIRPORT - An airport designed, constructed, and maintained to serve airplanes having approach speeds less than 121 knots.

URBAN GROWTH MANAGEMENT (UGM) - The identification and management of the demands on municipal facilities, improvements or services created by any proposed residential, commercial, industrial, or other type of development. UGM is intended to (1) provide the means for satisfying such demands, (2) identify any harmful effects of development, and (3) protect the jurisdictions and their residents against such harmful effects by minimizing the costs of municipal facilities, improvements, and services. The intent of UGM is usually not to prevent development or growth, but rather to avoid free or disorganized development or growth in the UGM area, which is generally located in and around the fringe of an urban area. The UGM area usually is either relatively undeveloped or predominantly agricultural and lacks most, if not all, municipal facilities, improvements, or services.

ULTRALIGHT VEHICLE - An aeronautical vehicle operated for sport or recreational purposes which does not require FAA registration, an airworthiness certificate, nor pilot certification. They are primarily single-occupant vehicles, although some two-place vehicles are authorized for training purposes. Operation of an ultralight vehicle in certain airspace requires authorization from ATC.

VASI - See **VISUAL APPROACH SLOPE INDICATOR**

VECTOR - A heading issued to a pilot to provide navigational guidance by radar.

VERY HIGH FREQUENCY (VHF) OMNIDIRECTIONAL RANGE (VOR) - The standard navigational aid used throughout the airway system to provide bearing information to aircraft. When combined with Tactical Air Navigation (TACAN) the facility, called VORTAC, provides distance as well as bearing information.

VFR - See **VISUAL FLIGHT RULES**

VFR CONDITIONS - Weather conditions that permit aircraft to be operated in accordance with visual flight rules.

VICTOR AIRWAY - A control area or portion thereof established in the form of a corridor, the centerline of which is defined by VOR's.

VISIBILITY - The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet or meters.

1. Flight Visibility. The average forward horizontal distance, from the cockpit of an aircraft in flight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.
2. Ground Visibility. Prevailing horizontal visibility near the earth's surface as reported by the United States National Weather Service or an accredited observer.

VISUAL APPROACH - An approach to an airport wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of a radar facility and having an air traffic control authorization, may deviate from the prescribed instrument approach procedure and proceed to the airport of destination, served by an operational control tower, by visual reference to the surface.

VISUAL APPROACH SLOPE INDICATOR (VASI) - An airport landing aid which provides a pilot with visual descent (approach slope) guidance while on approach to landing. See also **PAPI**.

VISUAL FLIGHT RULES (VFR) - Rules that govern the procedures for conducting flight under visual conditions (Federal Aviation Regulations, Part 91).

VISUAL RUNWAY - A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan.

VOR - See **VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE**

WAKE TURBULENCE - Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.

WARNING AREA - Airspace which may contain hazards to non-participating aircraft in international airspace.

WIND SHEAR - A change in wind speed and/or wind direction in a short distance resulting in a tearing or shearing effect. It can exist in a horizontal or vertical direction and occasionally in both.

ZONING AND ZONING ORDINANCES - Ordinances that divide a community into zones or districts according to the present and potential use of properties for the purpose of controlling and directing the use and development of those properties. Zoning is concerned primarily with the use of land and buildings, the height and bulk of buildings, the proportion of a lot which buildings may cover, and the density of population of a given area. As an instrument of plan implementation, zoning deals principally with the use and development of privately owned land and buildings. The objective of zoning legislation is to establish regulations that provide locations for all essential uses

of land and buildings and to ensure that each use is located in the most appropriate place. In FAR Part 150 planning, zoning can be used to achieve two major aims: (1) to reinforce existing compatible land uses and promote the location of future compatible uses in vacant or undeveloped land, and (2) to convert existing non-compatible uses to compatible uses over time.

Noise Model Calculation Data

Reid-Hillview Airport

Table 1

Existing (2002) Itinerant Operations (Arrivals and Departures are equal and half of listed number) and Local Operations (Two Operations per Local Pattern)

Aircraft (INM)	Operations						
	Type	Annual	%	Day	Evening	Night	Total
Single-Engine, Propeller, (GASEPF)	Itinerant	11,987	5.08%	27.0100	4.7140	1.1160	32.8400
	Local	23,010	9.75%	53.6740	9.3680	0.0000	63.0420
Single-Engine, Propeller, (CNA172)	Itinerant	55,938	23.70%	126.0500	22.0020	5.2040	153.2560
	Local	107,383	45.49%	250.4780	43.7220	0.0000	294.2000
Twin-Engine Propeller, Piston (BEC58P)	Itinerant	3,197	1.35%	7.2020	1.2580	0.2980	8.7580
	Local	6,136	2.60%	14.3140	2.4980	0.0000	16.8120
Single-Engine, Turboprop (GASEPV)	Itinerant	7,992	3.39%	18.0080	3.1440	0.7440	21.8960
	Local	15,340	6.50%	35.7820	6.2460	0.0000	42.0280
Business Turboprop (Twin) (CNA441)	Itinerant	2,332	0.99%	5.3780	0.9380	0.0740	6.3900
Helicopter (H500D)	Itinerant	1,060	0.45%	2.8500	0.0540	0.0000	2.9040
	Local	867	0.37%	2.3320	0.0440	0.0000	2.3760
	Run-ups	554	0.23%	1.4910	0.0280	0.0000	1.5190
Helicopter (B206L)	Itinerant	117	0.05%	0.3160	0.0060	0.0000	0.3220
	Local	96	0.04%	0.2600	0.0040	0.0000	0.2640
	Run-ups	62	0.03%	0.1660	0.0030	0.0000	0.1690
TOTAL		236,071	100.00%	545.3110	94.0290	7.4360	646.7760

Table 2

Five-Year Forecast (2007) Itinerant Operations (Arrivals and Departures are equal and half of listed number) and Local Operations (Two Operations per Local Pattern)

Aircraft (INM)	Operations						
	Type	Annual	%	Day	Evening	Night	Total
Single-Engine, Propeller, (GASEPF)	Itinerant	13,351	5.06%	30.1260	5.3800	1.0720	36.5780
	Local	25,753	9.76%	59.8660	10.6900	0.0000	70.5560
Single-Engine, Propeller, (CNA172)	Itinerant	62,304	23.62%	140.5900	25.1060	5.0000	170.6960
	Local	120,180	45.56%	279.3720	49.8880	0.0000	329.260
Twin-Engine Propeller, Piston (BEC58P)	Itinerant	3,560	1.35%	8.0340	1.4340	0.2860	9.7540
	Local	6,867	2.60%	15.9640	2.8500	0.0000	18.8140
Single-Engine, Turboprop (GASEPV)	Itinerant	8,900	3.37%	20.0840	3.5860	0.7140	24.3840
	Local	17,168	6.51%	39.9100	7.1260	0.0000	47.0360
Business Turboprop (Twin) (CNA441)	Itinerant	2,608	0.99%	6.0000	1.0720	0.0720	7.1440
Helicopter (H500D)	Itinerant	1,185	0.45%	3.1840	0.0620	0.0000	3.2460
	Local	969	0.37%	2.6040	0.0500	0.0000	2.6540
	Run-ups	619	0.23%	1.6650	0.0320	0.0000	1.6970
Helicopter (B206L)	Itinerant	131	0.05%	0.3540	0.0060	0.0000	0.3600
	Local	108	0.04%	0.2900	0.0060	0.0000	0.2960
	Run-ups	69	0.03%	0.1850	0.0040	0.0000	0.1890
TOTAL		263,772	100.00%	608.2280	107.2920	7.1440	722.6640

Table 3

Twenty-Year Forecast (2022) Itinerant Operations (Arrivals and Departures are equal and half of listed number) and Local Operations (Two Operations per Local Pattern)

Aircraft (INM)	Operations						
	Type	Annual	%	Day	Evening	Night	Total
Single-Engine, Propeller, (GASEPF)	Itinerant	12,451	5.06%	28.0940	5.0180	1.0000	34.1120
	Local	24,016	9.76%	55.8290	9.9690	0.0000	65.7980
Single-Engine, Propeller, (CNA172)	Itinerant	58,103	23.62%	131.1100	23.4140	4.6620	159.1860
	Local	112,076	45.56%	260.5340	46.5240	0.0000	307.0580
Twin-Engine Propeller, Piston (BEC58P)	Itinerant	3,320	1.35%	7.4920	1.3380	0.2660	9.0960
	Local	6,404	2.60%	14.8880	2.6580	0.0000	17.5460
Single-Engine, Turboprop (GASEPV)	Itinerant	8,300	3.37%	18.7300	3.3440	0.6660	22.7400
	Local	16,010	6.51%	37.2190	6.6450	0.0000	43.8640
Business Turboprop (Twin) (CNA441)	Itinerant	2,432	0.99%	5.5960	1.0000	0.0680	6.6640
Helicopter (H500D)	Itinerant	1,105	0.45%	2.9700	0.0580	0.0000	3.0280
	Local	903	0.37%	2.4280	0.0470	0.0000	2.4750
	Run-ups	578	0.23%	1.5530	0.0300	0.0000	1.5830
Helicopter (B206L)	Itinerant	123	0.05%	0.3300	0.0060	0.0000	0.3360
	Local	101	0.04%	0.2700	0.0060	0.0000	0.2760
	Run-ups	65	0.03%	0.1730	0.0040	0.0000	0.1770
TOTAL		245,988	100.00%	567.2160	100.0610	6.6620	673.9390

Table 4

Time of Day Distribution for All Years (2002, 2007, and 2022)

Aircraft Type		Percentage of Operations by Aircraft Type		
		Day 7:00 a.m. 7:00 p.m.	Evening 7:00 p.m. 10:00 p.m.	Night 10:00 p.m. 7:00 a.m.
Single-Engine, All Twin-Engine, Propeller, Piston	Takeoff	82.0%	15.0%	3.0%
	Landing	82.0%	15.0%	3.0%
	Local	85.0%	15.0%	0.0%
Helicopter	Takeoff	98.0%	2.0%	0.0%
	Landing	98.0%	2.0%	0.0%
	Local	98.0%	2.0%	0.0%
	Run-up	98.0%	2.0%	0.0%

Table 5
Runway Utilization (2002 and 2007)

Aircraft Type		Percentage of Takeoffs and Landings						
		Runway 13L	Runway 31R	Runway 13R	Runway 31L	Helipad Y	Helipad X	Helipad H
Fixed Wing	Day	9.8	55.2	5.2	29.8			
	Evening	9.8	55.2	5.2	29.8			
	Night	9.8	55.2	5.2	29.8	-	-	-
	Locals	7.5	55.0	7.5	30.0			
Helicopter	Day					100.0	0.0	0.0
	Evening					100.0	0.0	0.0
	Night	-	-	-	-	100.0	0.0	0.0
	Locals					0.0	0.0	100.0
	Hovers					0.5	1.0	98.5

Table 6
Runway Utilization (2022)

Aircraft Type		Percentage of Takeoffs and Landings						
		Runway 13L	Runway 31R	Runway 13R	Runway 31L	Helipad Y	Helipad X	Helipad H
Fixed Wing	Day	9.8	55.2	5.2	29.8			
	Evening	9.8	55.2	5.2	29.8			
	Night	15.0	85.0	0.0	0.0	-	-	-
	Locals	7.5	55.0	7.5	30.0			
Helicopter	Day					100.0	0.0	0.0
	Evening					100.0	0.0	0.0
	Night	-	-	-	-	100.0	0.0	0.0
	Locals					0.0	0.0	100.0
	Hovers					0.5	1.0	98.5

Table 7
Flight Tracks – Takeoff, All Fixed-Wing Aircraft, All Years

Percentage of Track Usage by Runway									
Runway 13L		Runway 31R				Runway 13R		Runway 31L	
Straight Out	Left turn to Downwind	Right turn	Left turn	Left turn to Left Downwind	Right turn to Right Downwind	Straight Out	Right turn to Downwind	Left turn to Downwind	Straight Out
50.0	50.0	25.0	25.0	25.0	25.0	50.0	50.0	50.0	50.0

Table 8
Flight Tracks – Landing, All Fixed-Wing Aircraft, All Years

Percentage of Track Usage by Runway						
Runway 13L	Runway 31R		Runway 13R	Runway 31L		
Left Downwind	Straight In	Right Downwind	Right Downwind	Straight In	Right Downwind	Left Downwind
100.0	50.0	50.0	100.0	33.4	33.3	33.3

Table 9
Flight Tracks – Helipad Y, All Rotary-Wing Aircraft, All Years

Percentage of Track Usage by Runway							
Operation	Straight Out	North Arrival, Circle North, Land South	North Arrival, Circle South, Land North	South Arrival, Circle North, Land South	South Arrival, Circle South, Land North	Right Downwind to Land South	Left Downwind to Land North
Departure	100.0	-	-	-	-	-	-
Arrival	-	25.0	25.0	25.0	25.0	-	-
Local	-	-	-	-	-	85.0	15.0

Source: Data compiled by Mead & Hunt and HMMH (October 2004)

Environmental Overview

ENVIRONMENTAL FACTORS

Development projects for Reid-Hillview Airport will occur within the regulatory structure of the State of California (including its subunits) and the United States. Both levels of government have environmental regulations that must be considered. This section is intended to identify potential environmental concerns that should be assessed as part of the environmental review.

Biological

Potential biological issues were identified based upon information gathered from prior field investigations not associated with the Master Plan. Based upon these investigations, only one biological issue has been identified.

Sensitive Species — There are no federal or state listings for endangered species on the airport site. However, the Department of Fish and Game has observed the following species on the airport, which is listed as Species of Special Concern:

- ▶ Burrowing Owl (*Athene cunicularia*)



The last official documentation of Burrowing Owls occurred on a Department of Fish and Game visit on January 23, 2004. Burrowing Owls were located on airport property just west of the intersection of Tully Road and Capitol Expressway. However, the species is known to relocate nesting sites. Near-term field investigations may be appropriate prior to development on the airport. No other biological topics have been identified.

Geology and Soils

Geology—Reid-Hillview Airport is located in the San Andreas Fault Zone (SAFZ), with the San Andreas Fault located approximately 10 miles west of the airport, and the Calaveras Fault less than 5 miles to the east. The Working Group on California Earthquake Probabilities estimates that there is a 70 percent probability that one or more large earthquakes will occur within the San Francisco Bay Area during the 30 year period 2000 to 2030. Therefore, it is reasonable to expect that the airport would be subject to intense shaking during the life of the Airport Master Plan. This factor should be considered in the design of new facilities, but is not a significant constraint to development.

Soils—The Reid-Hillview Airport is not located in a fault rupture hazard zone, compressible soil hazard zone, landslide hazard zone or dike failure hazard zone. The airport has been mapped as having a range of liquefaction potential from “moderate” to “high”. Most of the

airport has moderate liquefaction susceptibility. Small portions in the northeastern and northwestern corners of the airport have high liquefaction susceptibility. This factor should be considered in the design of new facilities, but is not a significant constraint to development.

Hazards and Hazardous Material

Some of Reid-Hillview Airport facilities contain fuels, oils and other hazardous materials normally associated with operation and maintenance of aircraft, buildings and the airfield. None of the uses are known to present a significant risk.

Aircraft accidents are statistically rare. The areas of greatest concern lie immediately beyond the runway ends. Federal Aviation Administration advisory circular on airport design (AC 150/5300-13) recommends airport acquisition of land beyond runway ends that lies with the Runway Protection Zones. Due to the historical pattern of development, this is not possible at Reid-Hillview Airport. The runway protection zones for Runways 13R and 13L fall partially on airport property. These runway protection zones also overlie a public street (Ocala Road) and a public park. The runway protection zones for Runway 31L and 31R include some airport property, a major arterial (Tully Road) and portions of an adjacent shopping mall. Only one building (a bank) lies within the section of the runway protection zones that overlies mall property. The optimum mixture of property acquisition and compatibility policies should be defined to maximize safety.

Aesthetics

No significant scenic resources such as trees, rock outcroppings, or historical buildings would be affected by the proposed Master Plan. New development on the airport will need to meet standard site design requirements.

Cultural Resources

There are no known archeological, paleontological resources, or unique geological features within or on the airport site.

Transportation and Traffic

Reid-Hillview Airport is located in the northwest corner of the intersection of Capitol Expressway and Tully Road. This intersection suffers from congestion. Based upon available data, this intersection appears to be operating at a level of service D during the peak hour of PM traffic and level of service F during the peak hour of AM traffic.

Level of Service D at signalized intersections as stated in the Highway Capacity Manual prepared by the Transportation Research Board describes operations with delays greater than 25 and up to approximately 40 seconds per vehicle. At level D the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume per capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. The average delay for vehicles at this intersection is 44.3 seconds.

Level of Service F as stated in the Highway Capacity Manual describes operations with delay in excess of 60 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when the ratio of arrival flow rate to actual capacity exceeds 1.00. This occurs during the peak AM traffic condition at this intersection. The right turn movement for westbound traffic exhibits a volume per capacity ratio of 1.56, and the left turn movement for southbound traffic exhibits a volume per capacity ratio of 1.04. The average delay for vehicles at this intersection is 82.1 seconds.

An increase in vehicle trips at Reid-Hillview Airport may contribute to the existing congestion. This is a potentially significant issue that should be evaluated in detail as part of the environmental documentation process. An order-of-magnitude estimate of the traffic impacts of the proposed master plan has been made assuming that the growth in traffic will be proportionate to the growth in based aircraft.

Current airport vehicle counts were taken in June 2004 by Santa Clara County's Department of Roads and Airports. During the sample period, vehicle trips ranged from 2 to 86 trips per hour and 1,405 to 1,745 vehicle trips daily. The number of trips averaged 1,558 on weekdays and 1,218 on weekends.

The number of based aircraft for Reid-Hillview Airport is forecast to increase from 687 to 750 over the next 20 years. If vehicular traffic due to aviation uses increase proportionately to the increase in based aircraft, the number of trips would increase to between 2 to 92 vehicle trips per hour, and 1,503 to 1,867 vehicle trips per day. This would equate to 6 more trips per hour, and 98 to 122 per day.

This increase does not include traffic increases due to nonaviation uses. Because specific uses have not been identified for the parcels designated for nonaviation uses, traffic generation has not been estimated. Traffic generation for a range of plausible uses should be documented in the environmental documents.

The relocation of the existing baseball fields from Cunningham and Swift, to Cunningham near Tynn Way will remove some existing traffic from the adjacent segments of Capitol Expressway and Tully Road. This traffic will be shifted to the section of Cunningham Avenue that passes through the residential area west of the airport. Data does not currently exist to quantify the volume of activity. This data should be developed to aid in the analysis of the effect of relocation of the ball fields.

Noise Effects

Noise is often described as unwanted or disruptive sound. Because of its routine, everyday occurrence, it is usually perceived as the most significant adverse impact of airport activity. This section will evaluate the noise effects of implementation of the master plan.

Integrated Noise Model Inputs

- › The number of operations by aircraft type or group.
- › The distribution of operations by time of day for each aircraft type.
- › The average takeoff profile and standard approach slope used by each aircraft type.
- › The amount of noise transmitted by each aircraft type, measured at various distances from the aircraft.
- › The runway system configuration and runway lengths.
- › Runway utilization distribution by aircraft type and time of day.
- › The geometry of common aircraft flight tracks.
- › The distribution of operations for each flight track.

A pure sound is measured in terms of: its magnitude, (often thought of as loudness) as indicated on the decibel (dB) scale; its frequency, (or tonal quality) measured in cycles per second (hertz); and its duration or length of time over which it occurs. To measure the noise value of a sound or series of sounds, other factors must also be considered. Airport noise is particularly complex to measure because of the widely varying characteristics of the individual sound events and the intermittent nature of these events' occurrence.

In an attempt to provide a single measure of airport noise impacts, various cumulative noise level metrics have been devised. The metric most commonly used in California is the Community Noise Equivalent Level (CNEL). This measure is similar to the Day-Night Average Sound Level (DNL or L_{dn}) metric used elsewhere in the United States. The results of CNEL calculations are normally depicted by a series of contours representing points of equal noise exposure in 5 dB increments. Key factors involved in calculation CNEL contours are noted to the left.

Noise contours were prepared using the FAA's Integrated Noise Model (Version 6.1). The results are presented in Figures D-1, D-2, and D-3. Figure D-1 presents the noise contours for the current (2002) activity level. Figure D-2 depicts the contours for 2007. Noise contours for 2022 are presented in Figure D-3. Noise model inputs are presented in Appendix A. The first two noise contour graphics are taken from the Part 150 Noise Management Program. Implementation of the measures contained in the Noise Management Program will reduce the effects of the forecast growth. If the forecast growth occurs, additional residents will qualify for the home insulation program. The need for other mitigation measures should be assessed.

Air Quality

The volume of aircraft use is forecast to increase over the 20-year planning period. Growth in aircraft use will result in a parallel growth in automobile use. Both of these will cause an incremental increase in air pollutants attributable to airport operations. Construction activities will also create short-term increases in air pollution. Basic modeling is appropriate to quantify air quality impacts of Master Plan projects. Due to the proximity the heavily congested intersection of Tully Road and Capital Expressway, modeling of hot spots may be warranted.

Physical

Reid-Hillview Airport is physically constrained due to its proximity to a highly developed and urbanized area of Santa Clara County. Expansion of the physical boundaries of the airport is nearly impossible because the airport is surrounded by urban development, and is physically bound to the northeast by Capitol Expressway, and to the east by Tully Road.

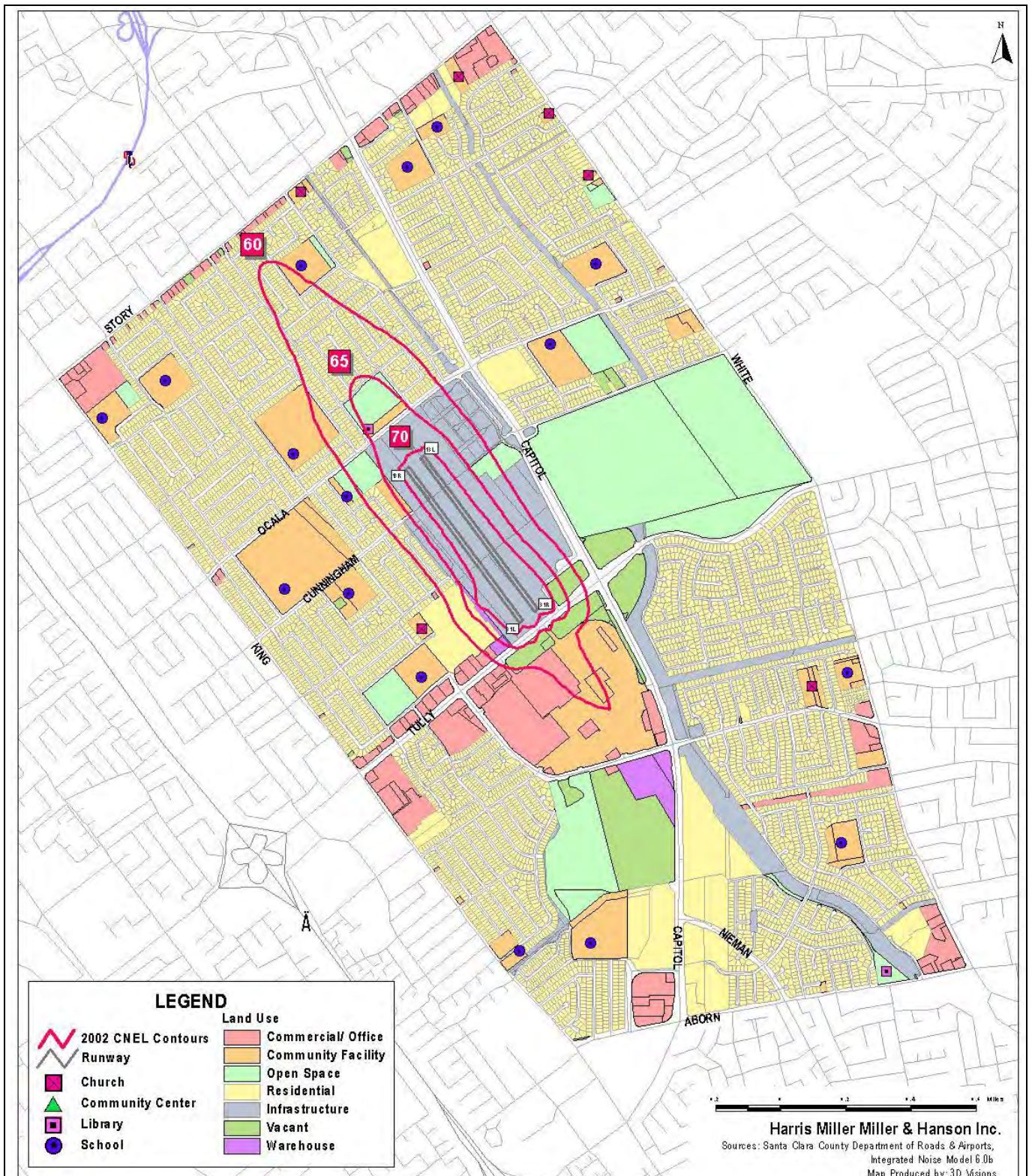


Figure D-1

Noise Contours – 2002
 Reid-Hillview Airport

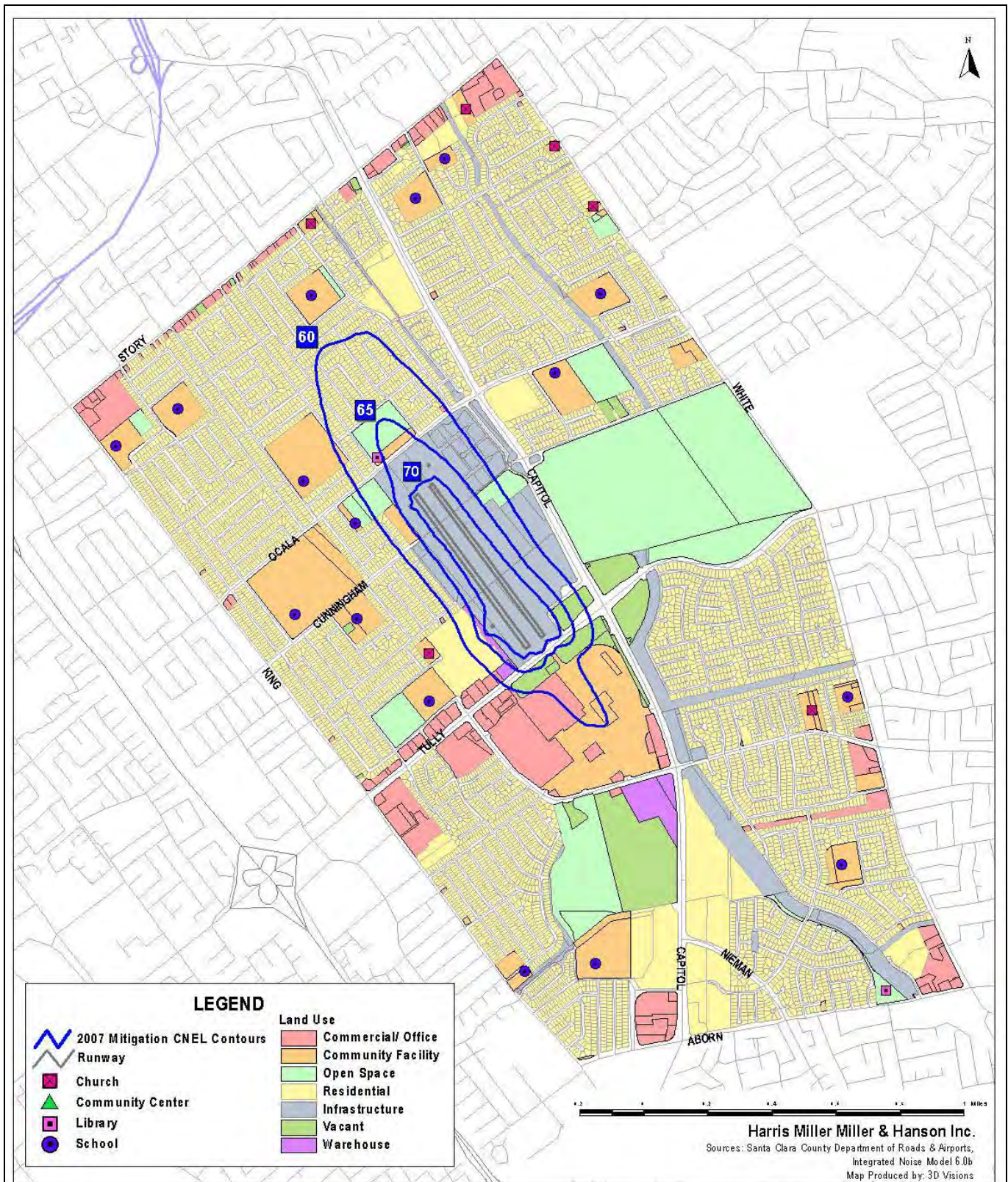
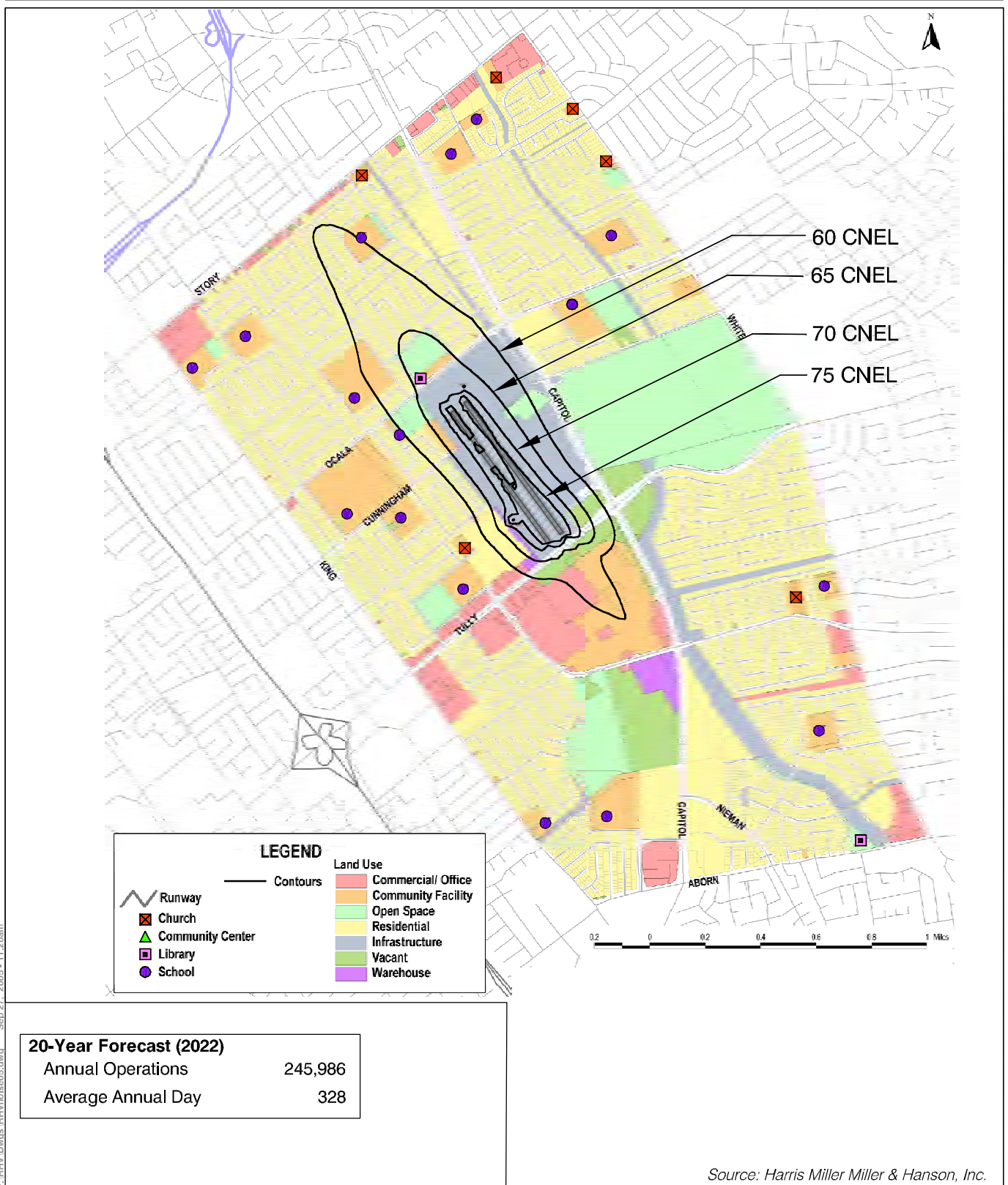


Figure D-2

Noise Contours – 2007

Reid-Hillview Airport



Source: Harris Miller Miller & Hanson, Inc.

Figure D-3

Noise Contours - 2022

Reid-Hillview Airport

Hydrology

The majority of Reid-Hillview Airport is located outside of the 100-year floodplain. According to Federal Emergency Management Agency (FEMA) Rate Maps Community Panel 060337-0255 and 060349-0026, only the northeastern corner of the airport property, north of the entrance and east of the existing FBOs, is designated as within the 100-year shallow flood zone with an average depth of inundation at 1 foot. Proposed future commercial and transit development may occur within this designated flood hazard area.

There are no known mudslide hazards affecting Reid-Hillview Airport. Tsunamis are unlikely to reach the project site since it is located away from coastal areas.

Environmental Review

Environmental review under the provisions of the California Environmental Quality Act will be required before this plan can be adopted. Given the sensitive nature of the runway modifications, and the traffic impacts to Capital Expressway and its intersection with Tully Road, and Environmental Impact Report is likely to be appropriate. However, the decision of whether to prepare an environmental impact report or a mitigated negative declaration will rest with Santa Clara County.

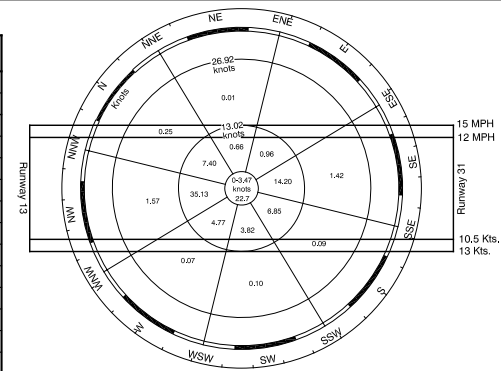
It is anticipated that an Environmental Assessment will need to be prepared under the provisions of the National Environmental Policy Act to address the proposed runway modifications. While it is possible that an Environmental Impact Statement might be needed, the magnitude of project's impacts does not seem to warrant this approach. Ultimately this decision will rest with the Federal Aviation Administration.

Airport Plan Drawings



RUNWAY END DATA					
APPROACH END OF RUNWAY:		13L	31R	13R	31L
RUNWAY END COORDINATES (a)	Latitude	Existing 37° 20' 11.46" N	37° 19' 47.01" N	37° 20' 09.66" N	37° 19' 45.23" N
	Future	37° 20' 12.20" N	No Change	37° 20' 10.29" N	No Change
Longitude	Existing	121° 49' 21.36" W	121° 48' 58.20" W	121° 49' 24.33" W	121° 49' 01.17" W
	Future	121° 49' 22.06" W	No Change	121° 49' 24.92" W	No Change
RUNWAY END ELEVATIONS (a)	Existing	124'	136'	123'	134'
	Future	No Change	No Change	No Change	No Change
RUNWAY MARKINGS	Existing	Visual	Visual	Visual	Visual
	Future	No Change	No Change	No Change	No Change
RUNWAY TOUCH DOWN ZONE ELEVATION	Existing	133'	130'	131'	128'
	Future	No Change	No Change	No Change	No Change
NAVIGATION AIDS	Existing	None	None	GPS	None
	Future	No Change	No Change	No Change	No Change
VISUAL AIDS	Existing	VASI 4", REIL	VASI 4", REIL	None	VASI 4"
	Future	No Change	No Change	No Change	No Change
APPROACH TYPE (FAR Part 77 Category)	Existing	Visual [A(V)]	Visual [A(V)]	Visual [A(NP)]	Visual [A(V)]
	Future	No Change	No Change	No Change	No Change
APPROACH VISIBILITY (Minimums)	Existing	Visual	Visual	1 1/4 Mi. Straight-in	Visual
	Future	No Change	No Change	No Change	No Change
APPROACH SLOPE (Required/Clear)	Existing	20:1/42:1	20:1/37:1	20:1/39:1	20:1/33:1
	Future	No Change	No Change	No Change	No Change
RUNWAY SAFETY AREA (Width)	Existing	120'	120'	120'	120'
	Future	No Change	No Change	No Change	No Change
RUNWAY SAFETY AREA (Length Beyond Runway End)	Existing	684'	147' (c)	668'	161' (c)
	Future	591'	No Change	589'	No Change
OBSTACLE FREE ZONE (Width)	Existing	250'	250'	250'	250'
	Future	No Change	No Change	No Change	No Change
OBSTACLE FREE ZONE (Length Beyond Runway End)	Existing	200'	200'	200'	200'
	Future	No Change	No Change	No Change	No Change
OBJECT FREE AREA (Width)	Existing	250'	250'	250'	250'
	Future	No Change	No Change	No Change	No Change
OBJECT FREE AREA (Length Beyond Runway End)	Existing	684'	147' (c)	668'	161' (c)
	Future	No Change	No Change	No Change	No Change
HOLD LINE (DISTANCE FROM RUNWAY CL)	Existing	125'	125'	125'	125'
	Future	No Change	No Change	No Change	No Change

RUNWAY DATA					
AIRPORT REFERENCE CODE	RUNWAY 13L-31R		RUNWAY 13R-31L		
	EXISTING	FUTURE	EXISTING	FUTURE	
CRITICAL AIRCRAFT	AIRCRAFT	Baron 58	No Change	Baron 58	No Change
WINGSpan	37.8'	No Change	37.8'	No Change	
UNDERCARRIAGE WIDTH	>7'	No Change	>7'	No Change	
APPROACH SPEED (kts.)	96	No Change	96	No Change	
MAX. TAKEOFF WT. (lbs.)	5,500	No Change	5,500	No Change	
PHYSICAL LENGTH AND WIDTH	3,101 x 75'	3,194' x 75'	3,099' x 75'	3,178' x 75'	
RUNWAY HIGH POINT	133'	No Change	131'	No Change	
RUNWAY LOW POINT	121'	No Change	120'	No Change	
VERTICAL LINE OF SIGHT PROVIDED	Yes	No Change	Yes	No Change	
EFFECTIVE GRADIENT (%)	0.48%	No Change	0.48%	No Change	
MAXIMUM GRADIENT (%)	0.75%	No Change	1.25%	No Change	
RUNWAY/TAXIWAY SURFACE TYPE	Asphalt	No Change	Asphalt	No Change	
PAVEMENT STRENGTH (1,000#) - S/D/DT	17/-/-	No Change	17/-/-	No Change	
RUNWAY EDGE LIGHTING	MIRL	No Change	None	No Change	



ALL WEATHER WIND ROSE

WIND COVERAGE		
Runway	12 M.P.H. (10.5 Knots)	15 M.P.H. (13 Knots)
13L-31R	98.75%	99.61%
13R-31L	98.75%	99.61%
Combined	98.75%	99.61%

SOURCE: RECORDS OF SAN JOSE WEATHER STATION, DEPARTMENT OF PUBLIC WORKS, COOPERATIVE STATION OF THE U.S. WEATHER BUREAU, 1937-1947.

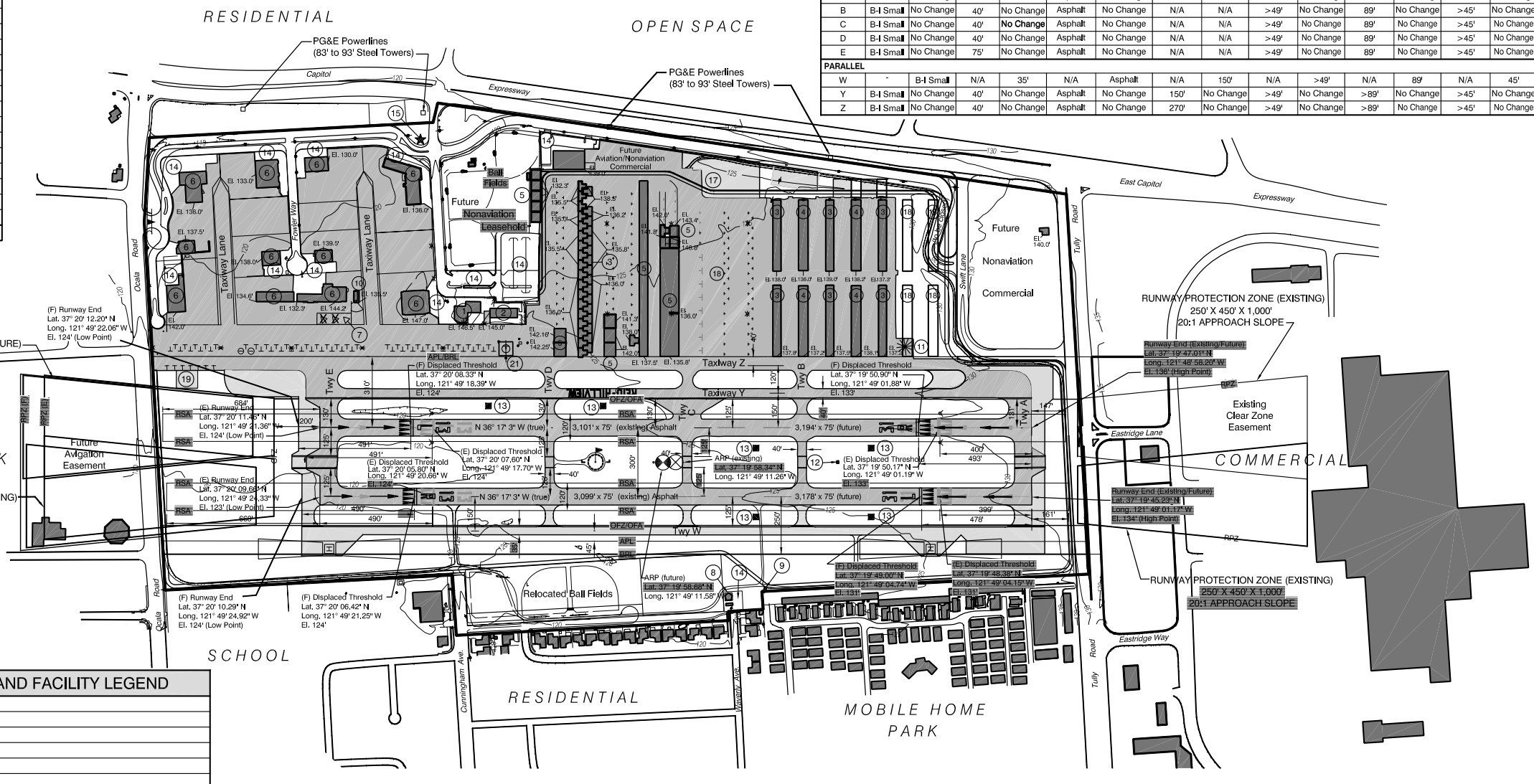
PROPOSED DECLARED DISTANCES					
TAKEOFF RUN AVAILABLE	TORA	13L	31R	13R	31L
TAKEOFF DISTANCE AVAILABLE	TODA	3,194'	3,194'	3,178'	3,178'
ACCELERATE-STOP DISTANCE AVAILABLE	ASDA	3,101'	3,194'	3,099'	3,178'
LANDING DISTANCE AVAILABLE	LDA	2,703'	2,701'	2,609'	2,700'

TAXIWAY DATA																
TAXIWAY	DESIGN GROUP	WIDTH		SURFACE TYPE		RWY CL. TO TWY CL.		TAXIWAY SAFETY AREA WIDTH		TAXIWAY OBJECT FREE AREA WIDTH		TWY. CL. TO FIXED or MOVEABLE OBJECT		TAXIWAY WING TIP CLEARANCE		
EXIT	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE		
A	B-I Small	No Change	75'/100'	130'/150'	Asphalt	No Change	N/A	N/A	>49'	No Change	89'	No Change	>45'	No Change	20'	No Change
B	B-I Small	No Change	40'	No Change	Asphalt	No Change	N/A	N/A	>49'	No Change	89'	No Change	>45'	No Change	20'	No Change
C	B-I Small	No Change	40'	No Change	Asphalt	No Change	N/A	N/A	>49'	No Change	89'	No Change	>45'	No Change	20'	No Change
D	B-I Small	No Change	40'	No Change	Asphalt	No Change	N/A	N/A	>49'	No Change	89'	No Change	>45'	No Change	20'	No Change
E	B-I Small	No Change	75'	No Change	Asphalt	No Change	N/A	N/A	>49'	No Change	89'	No Change	>45'	No Change	20'	No Change
PARALLEL																
W	B-I Small	No Change	N/A	35'	N/A	Asphalt	N/A	150'	N/A	>49'	No Change	89'	N/A	45'	N/A	20'
Y	B-I Small	No Change	40'	No Change	Asphalt	No Change	150'	No Change	>49'	No Change	>89'	No Change	>45'	No Change	20'	No Change
Z	B-I Small	No Change	40'	No Change	Asphalt	No Change	270'	No Change	>49'	No Change	>89'	No Change	>45'	No Change	20'	No Change

AIRPORT DATA			
	EXISTING	FUTURE	
AIRPORT REFERENCE CODE	B-I (small)	No Change	
AIRPORT REFERENCE POINT (a)	Latitude	37° 19' 58.34" N	37° 19' 58.68" N
	Longitude	121° 49' 11.28" W	121° 49' 11.58" W
AIRPORT ELEVATION (Above Mean Sea Level)	136'	No Change	
MEAN MAX. TEMP. (Hottest Month)	84.0° F (July)	No Change	
AIRPORT AND TERMINAL NAVIGATIONAL AIDS	Beacon, VOR/DME	No Change	
GPS APPROACH ESTABLISHED	Yes	No Change	
AIRPORT ACREAGE	Fee Simple	179	186
	Avigation Easement	19	27
AIRCRAFT PARKING SPACES	Tiedowns	460	No Change
	Hangar Units	185	222
	Helicopter	5	No Change

RUNWAY PROTECTION ZONE (FUTURE)
250' X 450' X 1,000'
20:1 APPROACH SLOPE

RUNWAY PROTECTION ZONE (EXISTING)
250' X 450' X 1,000'
20:1 APPROACH SLOPE



DRAWING LEGEND		
	EXISTING	FUTURE
ACTIVE AIRFIELD PAVEMENT	[Symbol]	[Symbol]
OTHER PAVEMENT IN USE	[Symbol]	[Symbol]
AIRPORT PROPERTY LINE	[Symbol]	[Symbol]
OTHER PROPERTY LINES	[Symbol]	[Symbol]
AVIGATION EASEMENT	[Symbol]	[Symbol]
INTERNAL BOUNDARY (lease, R.O.W., etc.)	[Symbol]	[Symbol]
CRITICAL AIRFIELD AREAS *	XYZ	XYZ
BUILDING	[Symbol]	[Symbol]
FENCE	[Symbol]	[Symbol]
VEHICLE GATE	[Symbol]	[Symbol]
WIND CONE	[Symbol]	[Symbol]
AIRFIELD LIGHTS: SINGLE/GROUP/FLASHING	[Symbol]	[Symbol]
BEACON	[Symbol]	[Symbol]
UTILITY POLE / POWER LINE	[Symbol]	[Symbol]
TOPOGRAPHIC CONTOURS	[Symbol]	[Symbol]
WATERWAY / CULVERT	[Symbol]	[Symbol]
CHANNEL	[Symbol]	[Symbol]
AIRPORT REFERENCE POINT	[Symbol]	[Symbol]
SECTION CORNER (b)	[Symbol]	[Symbol]

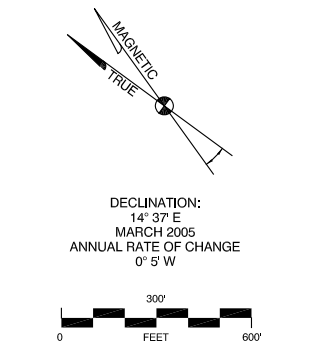
* Applicable to the following:
 APL - Aircraft Parking Limits
 BRL - Building Restriction Line
 OFA - Object Free Area

OFZ - Obstacle Free Zone
 RPZ - Runway Protection Zone
 RSA - Runway Safety Area

BUILDING AND FACILITY LEGEND	
(1) Terminal Building	
(2) Maintenance Building	
(3) T-Hangars	
(4) Aircraft Shelters	
(5) Aircraft Box Hangars	
(6) Fixed Base Operator	
(7) FBO	
(8) Air Traffic Control Tower (el. 170', top of handrail)	
(9) Electrical Vault	
(10) Fuel Island	
(11) Compass Rose	
(12) Ceilometer	
(13) VASI	
(14) Automobile Parking	
(15) Beacon Tower	
(16) (Not Used)	
(17) Future Fuel Farm	
(18) Future Storage Hangars	
(19) Future Compass Rose	
(20) Future Aircraft Parking	
(21) Future Helicopter Parking	

Note: Elevations of structures shown in the drawing.

ALP NOTES	
(a)	Airport coordinate data source: National Oceanic and Atmospheric Administration (NOAA) Obstruction Chart dated May 4, 1992. Data is NAD 83 and NAVD 88. NOAA's VERTCON program used to convert original NGVD 29 data to NAVD 88.
(b)	The airport is in Township 7 South, Range 1 East. This quadrangle has not been sectioned.
(c)	Nonstandard Conditions: - Runway Safety Area and Object Free Area for Runway 31L & Runway 31R is less than 300'. - Declared distances established.



SUBMITTED BY: County of Santa Clara

By _____ Date _____

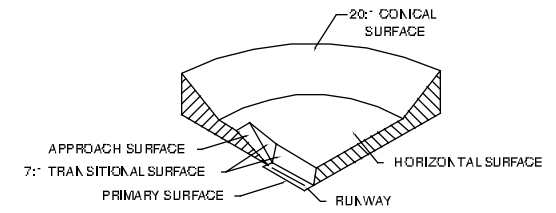
NO. _____ REVISION _____ SPONSOR _____ DATE _____

REID-HILLVIEW AIRPORT SAN JOSE, CALIFORNIA AIRPORT LAYOUT PLAN

MEAD HUNT ENGINEERS ARCHITECTS SCIENTISTS PLANNERS
707 Aviation Blvd., Santa Rosa, California 95403 - (707) 525-5010

DESIGN: DD/MT DRAWN: TE/GJ DATE: June 2007 SHEET 1 OF 3

The preparation of these documents 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 these documents by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws.



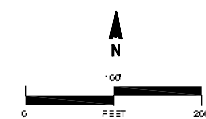
TYPICAL FAR PART 77 SURFACES

NOTES:

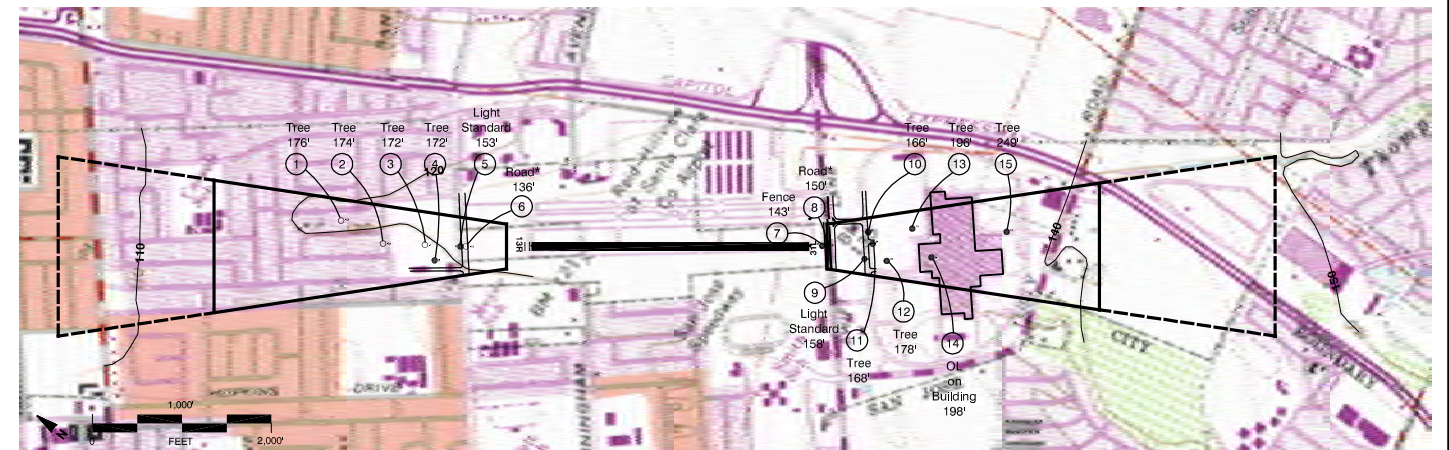
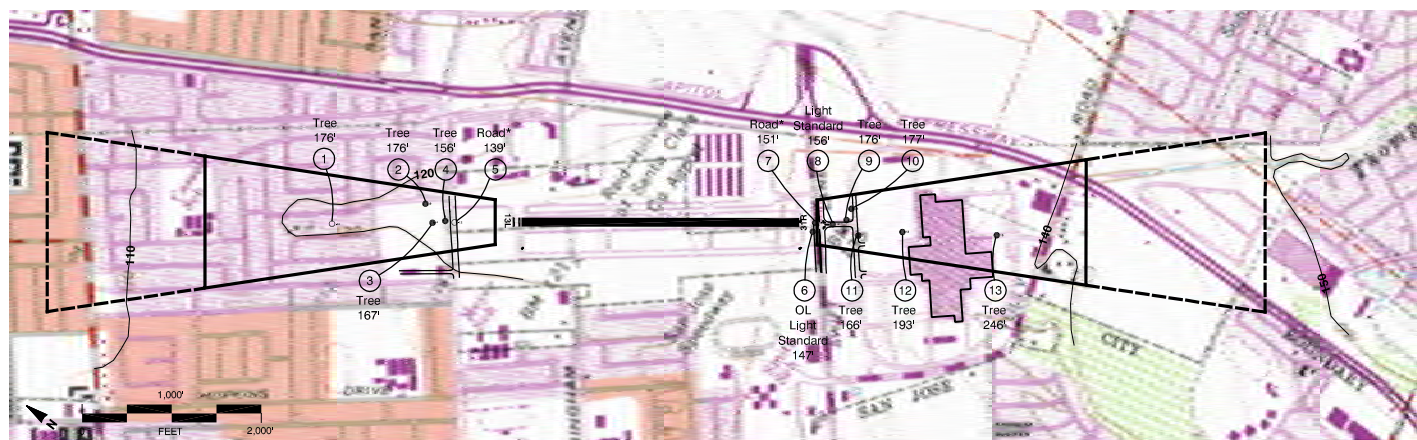
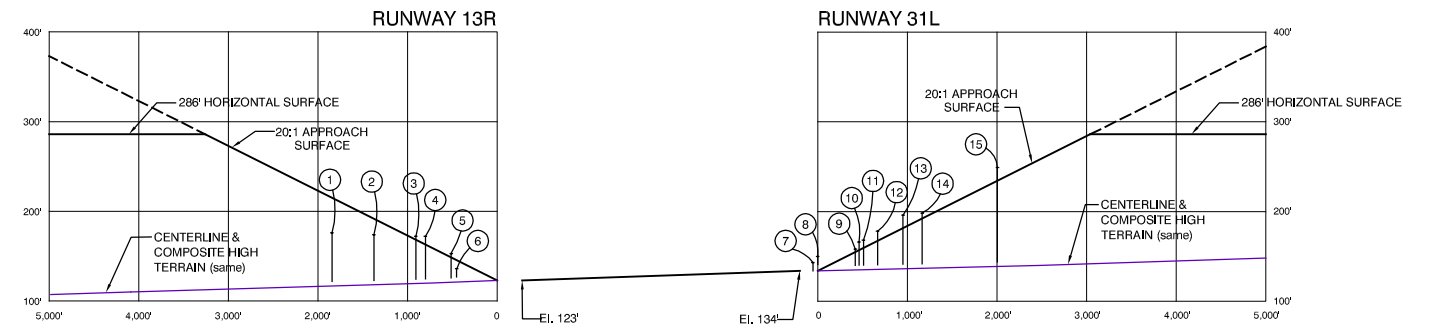
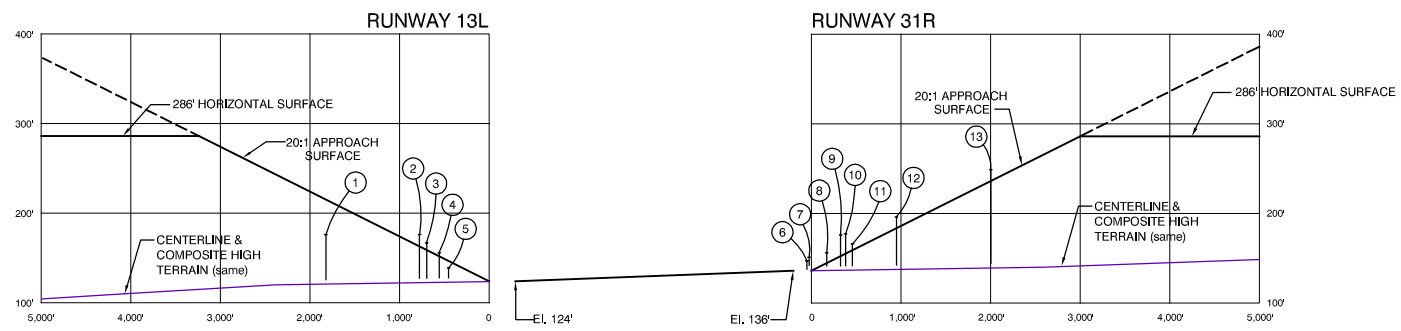
All elevations in feet above mean sea level (MSL) and NAVD83.
No terrain penetration of indicated surfaces.

SOURCES:

Reid-Hillview Airport Construction Chart No. OC5581
USGS Topographic Maps



NO.	REVISION	SPONSOR	DATE
REID-HILLVIEW AIRPORT SAN JOSE, CALIFORNIA			
AIRSPACE PLAN			
MEAD HUNT		ENGINEERS ARCHITECTS SCIENTISTS PLANNERS	
DESIGN: DD		DRAWING: TE	
DATE: June 2007		SHEET: 2 OF 3	



LEGEND

- = Object penetrates indicated surface
- = Object falls outside or below indicated surface
- * = 15 feet vertical clearance added to road elevations

NOTES:

All elevations in feet above mean sea level (MSL) and NAVD88

SOURCES:

Reid-Hillview Airport Obstruction Chart No. OC5591
USGS Topographic Maps

NO.	REVISION	SPONSOR	DATE
REID-HILLVIEW AIRPORT SAN JOSE, CALIFORNIA			
APPROACH SURFACE DETAIL			
MEAD HUNT		ENGINEERS ARCHITECTS SCIENTISTS PLANNERS	
<small>707 Aviation Blvd., Santa Rosa, California 95403 - (707) 526-0010</small>			
DESIGN:	DD	DRAWN:	TE
DATE:	June 2007	SHEET	3 OF 3

County of Santa Clara

Roads & Airports Department

Airports Division
Reid-Hillview & San Martin Airports
2500 Cunningham Avenue
San Jose, California 95148
(408) 918-7700 FAX (408) 929-8617
www.countyairports.org

Exhibit C

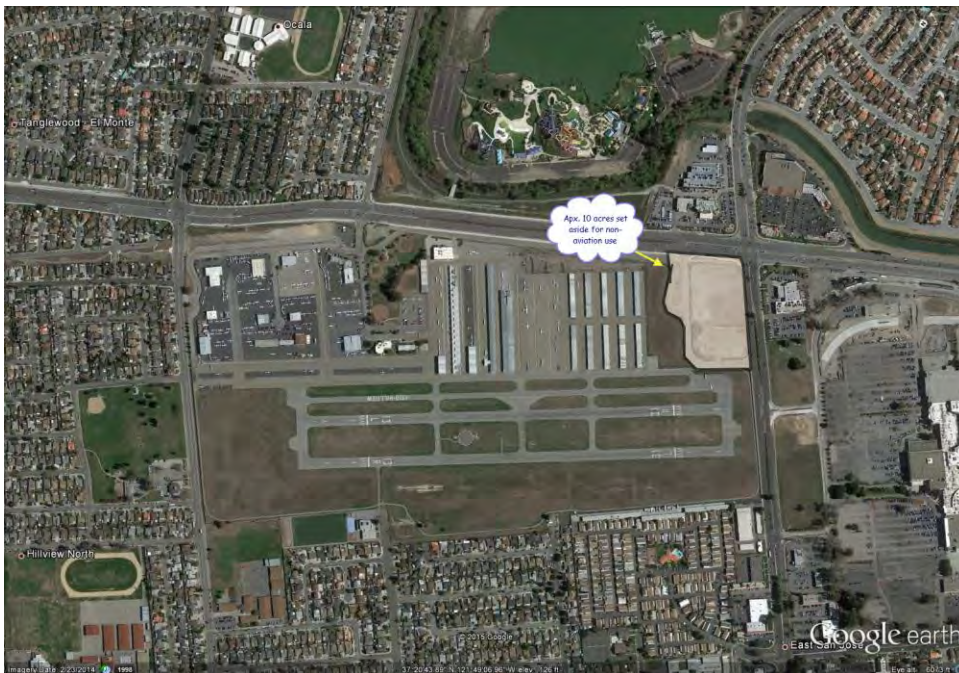


February 26, 2015

Robert Lee
FAA ADO Office
1000 Marina Blvd., Suite 220
Brisbane, CA 94005-1853
Sent via e-mail

Dear Mr. Lee:

The County of Santa Clara is the owner and sponsor for Reid-Hillview (RHV) and San Martin (E16) airports in the San Jose area. As such we are tasked with the responsibility to operate these airports in a manner to best maximize revenue while providing all the necessary aviation services required of our constituents. For many years now, a parcel of property at the south east corner of RHV (see image below) has been depicted on our ALP as non-aviation commercial use. It is to that end that I write you today.



During our Master Plan update of 2007 it was determined that given the aviation forecast, all anticipated demand for aviation services at RHV could be provided on the existing footprint without the need to expand current aircraft parking or FBO property. Any additional growth demand beyond that anticipated in the Master Plan would be funneled to San Martin airport. Since 2007, aviation use at the airport has dropped dramatically, resulting in lower than anticipated revenue, all while costs continue to increase.

J:\Projects\RHV\Tully and Capitol RFP\FAA Land Release\FAA Release Request 2015 02-26.docx

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian
County Executive: Jeffrey V. Smith

Without any foreseeable change in the near future for small GA, the County finds itself in the untenable position of running two airports that very soon will not be able to support themselves. Fortunately, the parcel of property we would like to develop is on a very busy intersection in San Jose, and represents a fairly large revenue source for the airports division that will not only help us maintain fiscal solvency but will provide the funding necessary to complete many airport modernization and infrastructure repairs that are not AIP eligible.

The parcel of property was originally purchased by the County around 1963 as part of the initial development project shortly after the County purchased the airport from the Reid brothers in 1961. In 1963 the County requested federal participation in the purchase of this property and was subsequently granted \$384,878.00 dollars as part of project 9-04-125-D402 . At some point following purchase of the property, a side-road was built on the property bisecting it from the rest of the airport. It was the intention at the time to build an overpass at the intersection of Tully and Capitol and using the side-road as access between the two roads. The project never came to fruition and the property has sat vacant for the past 40+ years.

An environmental review was recently completed on the property with no significant negative findings. Additionally, the city of San Jose has rezoned the property for commercial development. The County has a consultant working on an RFP for development of the parcel that we would like to have available in the next couple months. As part of the RFP process, the consultant will provide an updated property appraisal to ensure we are getting market value.

Our intent is to take the highest and best use bidder that can develop the property in compliance with all the airspace and safety area restrictions. Until we have received bids on the development we will not know what that design will look like. We have been contacted by many developers over the years, including representatives from auto dealers, big box grocery store and oil companies. Our best guess at this point is the property will either be retail or an auto dealer. Beshoff Motors has two of the other three corners – a Mercedes Dealership and an Audi dealership- and has expressed great desire in the property.

Due to the obligations on this property as a result of the federal participation, I would like to get FAA concurrence to release this property for non-aviation commercial development, with the understanding that the property will be leased –not sold- and that all revenue from said property will be deposited into the Airport Enterprise Fund (AEF) for use at either RHV or E16. Please let me know what the next step will be to obtain FAA release of this property.

I can be reached at x27722 or via email at eric@countyairports.net. I look forward to your reply.

Best Wishes,



Eric Peterson

Acting Director County Airports



U.S. Department
of Transportation
**Federal Aviation
Administration**

Exhibit D

4-2-15 10:41

Western-Pacific Region
San Francisco Airports District Office

1000 Marina Boulevard, Suite 220
Brisbane, CA 94005-1835

April 2, 2015

Mr. Eric Peterson
Acting Director County Airports
Airports Division
2500 Cunningham Avenue
San Jose, CA 95148

Land Release Request
Reid-Hillview Municipal Airport
Santa Clara County

Dear Mr. Peterson:

We have received your letter, dated February 26, 2015, requesting our support for the release of a parcel of airport land. The particular parcel is located adjacent to the northeast end of Taxiway Z at the Reid-Hillview Airport (Airport). We have reviewed the information you provided. Based on the information provided, and the airport sponsor's present status of being found in non-compliance with its grant assurances, the Federal Aviation Administration (FAA) is not able to support your request to release the requested parcel of airport land for non-aviation commercial use.

According to the information provided, the land described for the release was acquired with Federal Grant funding, in March 1963 under Project No. 9-04-128-D402. One of the conditions of the grant included the requirement that the land was to be available to the public for aviation purposes. From our evaluation of the property's size and location, the FAA does not support the release of land obligated for aviation purposes. We considered the following factors in making our determination:

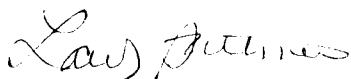
1. The Airport Sponsor, the County of Santa Clara, is currently in non-compliance with the Sponsor's federal obligations. As a matter of procedure when considering a sponsor's request for a land release, the FAA completes an evaluation of the site file. One of the areas reviewed pertains to the Sponsor's past and present compliance record under all its airport agreements. Equally important is the Sponsor's commitment to ensuring the airport is maintained and operated in a safe manner for the benefit of the public. As a result, we cannot undertake or commit to any federal action regarding the land release request until the County of Santa Clara has returned to compliance.
2. The location of the particular parcel of airport land is approximately 350 feet from runway centerline, adjacent to Taxiways Y, Z & A. This particular location is considered prime airport property. Allowing for non-aviation commercial development so close to the airport operation area may be problematic. We see

the proposed non-aviation use of the requested land as an encroachment that may negatively impact the airport.

3. This particular parcel of land was acquired for airport purposes in 1963 with federal assistance under Project No. 9-04-128-D402. One of the conditions of that grant was that the land was to be used for aviation purposes. Your explanation of having not used the land for aviation purposes for the last 40 years does not justify its non-aviation use. We do not see any compelling justification that this land cannot have an aviation purpose. Although the Airport Layout Plan labeled the parcel of land as "Future Non-aviation Commercial Use," the ALP is a planning document only and does not constitute FAA approval for non-aviation use.

For the reasons noted above, the FAA does not support the release of the requested parcel of land for non-aviation commercial. You do not need to provide additional information to officially process the release. We conclude that the release of the requested parcel of land for non-aviation commercial use would not have a net benefit to civil aviation.

Sincerely,



Laurie J. Suttmeier
Acting Manager, Airports District Office

cc: AWP-620

Airports Division
Reid-Hillview & San Martin Airports
2500 Cunningham Avenue
San Jose, California 95148
(408) 918-7700 FAX (408) 929-8617
www.countyairports.org



September 15, 2016

Jim Lomen
FAA ADO Office
1000 Marina Blvd, Suite 220
Brisbane, CA 94005-1835

Dear Mr. Lomen:

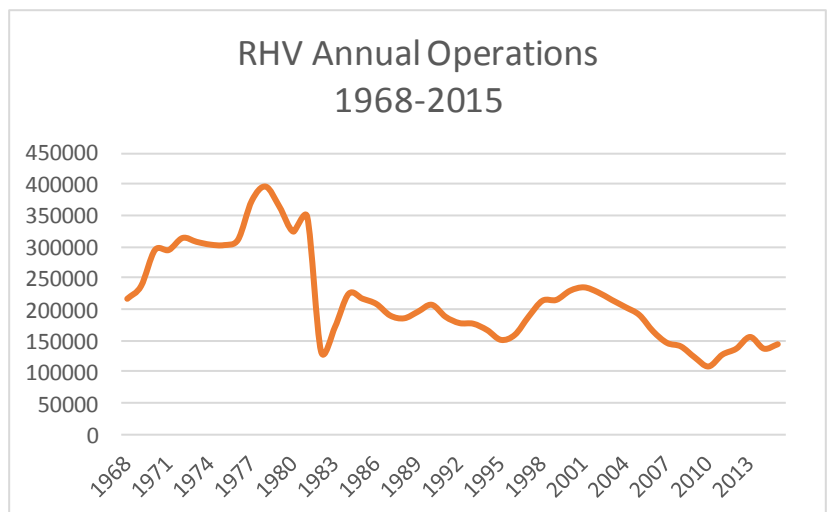
Thank you for taking the time recently to talk with me regarding the County’s property release request for a parcel of property at the corner of Tully Avenue and Capitol Expressway on the Reid-Hillview Airport (*corner parcel*). The corner parcel was original purchased by the County as part of its expansion program after the county purchased the airport from the Reid brothers in 1961. In 1963, the County requested federal participation in the property purchase of the corner parcel through the [Federal Airport Act Application](#). A [grant agreement](#) was issued that same year for land acquisition with 53.89% participation by the federal government.

As you suggested, this letter contains many of the details we discussed regarding the county's desire to utilize this property for non-aviation use and why the FAA should release the property. They include:

- Historical operations at the airports;
- GA trends and the anticipated need for use of the corner parcel for aviation uses;
- Financial needs of the Airport Enterprise Fund

Despite the airport expansion anticipated in the early 1960's, since at least 1975 (*Photo 1*) the corner parcel has been segregated from the remainder of the airport property by a road that was intended to be part of an overpass at the Tully and Capitol Expressway intersection. The overpass was never constructed and the loop roads on the northeast and southeast corners of the intersection have since been absorbed into developments on those properties. However, the road on airport property remains today as a physical boundary between the corner parcel and the remainder of the airport.

The air traffic control tower began keeping operational statistics in 1968. During 1978, the tower recorded 398,640 operations; to date, the highest operations count in the history of the airport. Even during that record breaking year, we can verify through Photo 1, that the corner parcel was not used for aviation purposes. In fact, the infrastructure of the airport has not



C:\Users\eric.peterson\Desktop\Prop Release letter to Jim Lomen 2016 09-15.docx

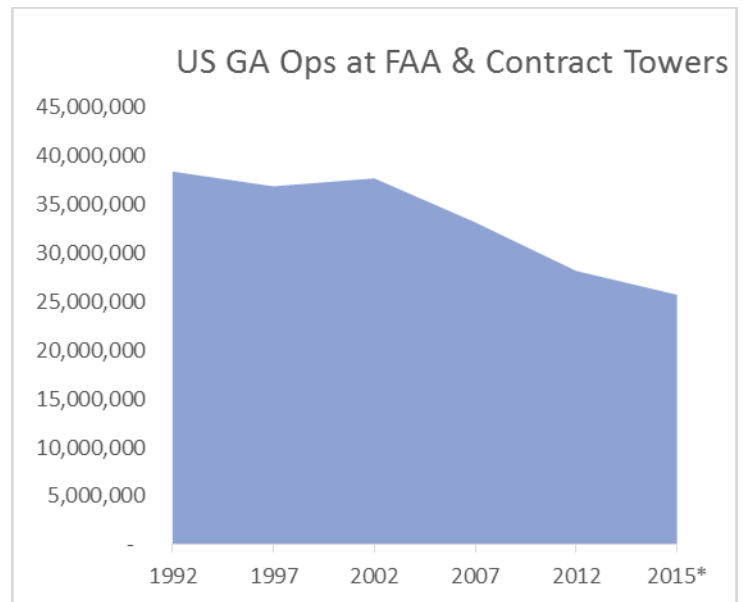
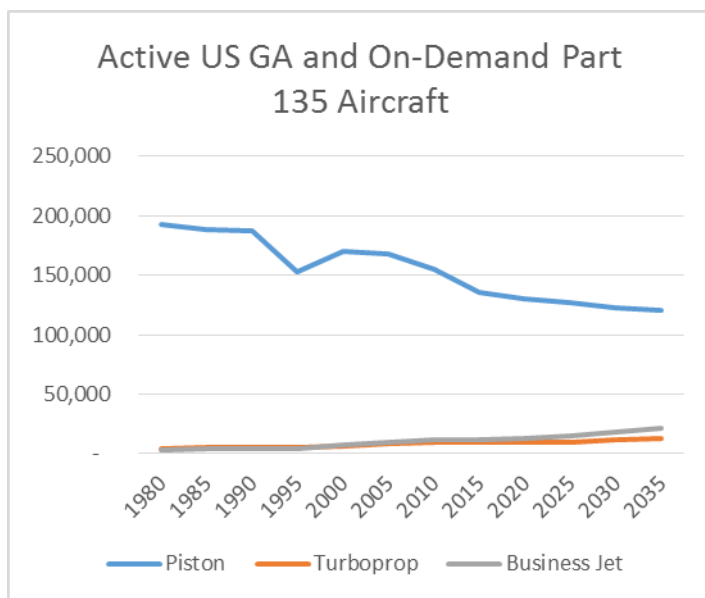
changed dramatically since 1978, indicated that should we ever reach the all-time high again, that activity level could be supported without the development of additional facilities. A comparison of 1978 with 2015 operations count of 145,003 shows a 63% reduction in activity. While there appears to be a small uptick in operations from 2014, there are no indicators that would lead one to believe that the peak of nearly 400,000 operations will be surpassed.

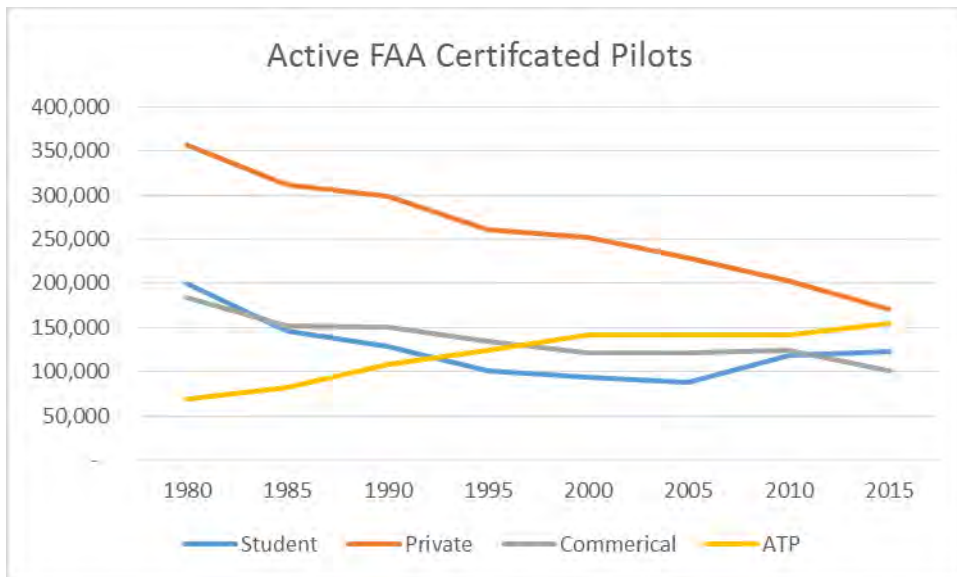
During the master planning process, several options were considered to meet the anticipated demand for aircraft services within Santa Clara County. At its November 19, 2002 meeting, the Santa Clara County Board of Supervisors adopted Alternative 3 of the [Airport Master Plan](#). This alternative anticipated distributing the anticipated demand for aircraft parking across all the county airports (*Master Plan pg 2-16*) with the intention of:"

- Achieve greater parity in the distribution of based aircraft to preclude disproportionate quality of life impacts at any one airport;
- Meet the needs of the aviation community by accommodation all of the forecasted growth in demand for basing capacity;
- Ensure the Airport Enterprise Fund remains self-sustaining without subsidy from the County General Fund."

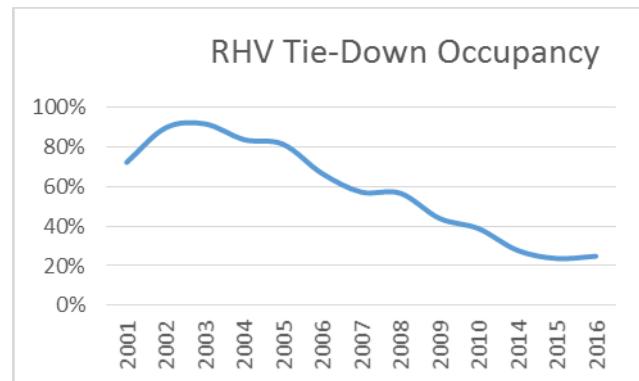
In addition, the approved Master Plan dictates that no additional property will be developed for the purposes of aircraft storage. Reid-Hillview, which has an existing capacity of 726 spaces would need to accommodate only 24 additional aircraft by the year 2020 to meet the demand anticipated by the Master Plan; a requirement that can be met without the use of the corner parcel. Current trends however indicate that the anticipated demand is unlikely to materialize.

A look at [GAMA's 2015 General Aviation Statistical Datebook](#) shows a continual decline in most areas of general aviation. Indicators such as certificated pilot numbers, Active U.S. General Aviation and On-Demand Part 135 Aircraft and U.S. General Aviation Operation's numbers (see below) all indicate a continual decline. As you can see from the following graphs, growth in GA is only occurring in the turbine and business jet sectors. Reid-Hillview is constrained on all sides by houses, schools, roads, a park and a mall leaving no feasible opportunity for the County to extend the runway beyond its current 3,100'. It is this limitation that greatly reduces the desirability of RHV to turbine and business jet operators.





The County operates 145 hangars, 52 shelter spaces and 190 tie-downs at Reid-Hillview Airport. We have been able to maintain full hangars and shelters, but our tie-down subscription rate has continued to drop from a high of 172 in 2003 to our current level of 43. We also have FBO property divided into nine long-term leaseholds with four licensed fuel providers. As you can see from these numbers, over the past 15 years, the airport has seen a steady decline in the number of based aircraft. While our hangars and shelters remain full, we have gone from a multi-year wait for hangars and shelters to a wait of a few months, indicating a continue softening of demand for aircraft parking space.



Since at least 1996 the Airports Division of Santa Clara County has been able to maintain self-sufficiency without the need of additional funds from the County. This despite the fact that the only source of significant revenue is aircraft parking fees. When there was a strong demand, the budget for the three county airports was always in the black, even though revenue from RHV had to be used to balance the books for E16 and PAO. In 2014, the County gave operational control of PAO back to the city of Palo Alto. With the divestiture of the airport, the County lost about 1/3 of its airport revenue, and while expenses went down at that time, they did not go down in proportion to the loss of revenue. We have worked very hard to reduce our costs, and have eliminated a number of positions, both operational and administrative, but since the loss of PAO, we have shown a continual decline in income resulting in an approximate budget deficit of \$300,000 for this year. We are fortunate to have enough money saved to transfer funds from our savings account into our operational account to balance our budget, and thereby not requiring additional funds from the County. But that can only continue for a short time before we have depleted our savings.

According to the March 4, 2015 property appraisal completed by Valbridge (attached), the corner parcel represents \$721,462 a year in additional revenue to the Airport Enterprise Fund. This revenue will allow the County to continue to operate the airport in a cash-positive manner, while putting aside additional funds for development, both AIP eligible and non-eligible at both county airports, and relieve the stress on our airport tenants to meet the ever increasing cost of operating the airports.

The FAA should release the corner parcel at Reid-Hillview for non-aviation development for the following reason:

- Trends in the sector of general aviation that utilize RHV do not support the need for additional property for aviation use.
 - Current growth in GA is in the turbine and business jet market, which is limited from using RHV due to its runway length;
 - Airport operations counts are substantially lower than the high of 1978;
 - Aircraft parking demand has softened dramatically;
- Long term financial stability of the airport requires new non-aviation revenue;
 - The Board of Supervisors has established that the airport must operate in a self-sufficient manner without need of subsidy from the General Fund;
 - The appraised value of the property in question is \$721,000 per year;
 - These funds would be used at RHV and E16 to:
 - Provide matching funds for federal and state grants;
 - Complete projects not eligible for grant funding;
 - Increase the airports reserve;
 - Reduce demand from parking tenants to meet the continual increase in airport operational costs through parking fee increases;
- The Board of Supervisors has elected to distribute any additional growth beyond the current Master Plan basing capacity, to San Martin Airport;
 - The airport in its current configuration would be able to accommodate the small increase in basing capacity allotted in the Master Plan;
 - Use of the airport during its highest recorded activity level in 1978 was accomplished with the current existing infrastructure.

I hope after reviewing this letter you will reconsider our request to release the corner parcel for non-aviation use.

Feel free to contact me with any additional questions.

Sincerely,



Eric Peterson
Director County Airports



Photo 1: 1975 Aerial Photo of RHV

Exhibit F



Santa Clara County

Airports Business Plan

Reid-Hillview and San Martin Airports



San Martin Airport



Reid-Hillview Airport

November 2018

County of Santa Clara Airports Business Plan

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EXECUTIVE SUMMARY

The general objective of updating the 2006 Airport Business Plan for the Reid-Hillview and San Martin Airports is the need to provide a foundation for future policy decisions by the County of Santa Clara Board of Supervisors (BOS) regarding the two County-owned and operated airports. The updated Business Plan addresses the self-sustaining ability of the Airport Enterprise Fund, capital improvement programs, public and private development on the airports, including the use of properties for non-aviation commercial uses not needed for future aviation facilities.

The airports are federally designated reliever airports for the San Jose International Airport and are intended to provide additional capacity, or relief, for San Jose International Airport and to accommodate general aviation activity in the area. The airports primarily serve small, piston and propeller single-engine and twin-engine aircraft with limited use by turboprop and business jet aircraft.

The Airport Enterprise Fund (AEF) budget is currently about \$2.5 million per year. Historically, the AEF revenues have been sufficient to fund expenses and provide the local matching funds for Federal Aviation Administration (FAA) Airport Improvement Program (AIP) grants. The number of small, single-engine and twin-engine aircraft has been decreasing on a nationwide basis over many years. There were 777 based aircraft at County airports in 2006. In 2018 County airports had 627 based aircraft. The decreases in based aircraft at the Reid-Hillview Airport in particular have negatively affected the AEF and its ability to remain financially self-sustaining. These trends suggest that the County update its business model, which has historically relied on aircraft storage fees for over 75 percent of the total revenues, to a business model with a more diversified and higher-yielding revenue stream.

The major source of funding for capital improvement projects for the County airports has been from FAA Airport Improvement Program grants plus matching California Department of Transportation, Division of Aeronautics grants. The County has not accepted FAA Airport Improvement Program grants since 2011.

The Airport Enterprise Fund has \$6.7 million in long-term debt: \$3.7 for the San Martin Airport Hangar Project completed in 2008 and a \$3 million loan from the County General Fund in 2017 to fund airfield pavement rehabilitation projects at both airports. The FAA has indicated that a portion of the \$3 million pavement projects can be retroactively reimbursed to the County if the County accepts FAA Airport Improvement Program grants. The projected Airport Enterprise Fund has an unencumbered retained earnings balance at the end of fiscal year 2018 of \$2.8 million that is equivalent to slightly more than one year of operating expenses.

Generating a more diversified and higher-yielding revenue stream will require putting the airports' real property assets to work by leasing certain parcels that are not required for aviation use for non-aviation commercial development and by restructuring the fixed base operator leaseholds at the Reid-Hillview Airport. Several parcels have been identified that could be developed for non-aviation commercial activities. It is estimated that developing these properties could add approximately \$3 million annually to the Airport Enterprise Fund revenues. FAA approval is required before the County can lease these properties for private development.

In all, the report identifies about \$5 million in possible new revenue. Although some of the new revenues items will require policy decisions, lease negotiations, and business decisions that may involve risk.

This report identifies approximately \$20 million in capital and maintenance needs for both airports. These costs can be programmed over a 10 year period depending on the urgency of the need. Approximately \$10.7 million in airfield investment is needed, most of which would be eligible for FAA Airport Improvement Program grants. In addition, an estimated \$8.9 million in deferred maintenance needs have been identified for the existing buildings at both airports.

While some items can be deferred to later years, the existing condition of the administration/terminal building at RHV is described as critical in the consultant's report. Minor maintenance issues were identified for the County-owned hangars at the San Martin Airport.

Over the long term, the Airport Enterprise Fund can generate sufficient revenue to fund anticipated operating and capital costs by leasing the airports' real property assets. Since it can take several years for the leasing process to begin producing revenue, a subsidy may be required in the short term. The Airport Enterprise Fund cannot remain financially self-sustaining unless the airports' real property assets are utilized to generate additional revenue.

The FAA Airport Improvement Program grants currently provide 90 percent of eligible project costs, providing leverage for use of Airport Enterprise Fund dollars.

INTRODUCTION

The existing Business Plan for Reid Hillview Airport (RHV) and San Martin Airport (E16) was originally developed in conjunction with the Airport Master Plan updates in 2006 (Attachment). The Business Plan provides a comprehensive analysis of the airports' finances and outlines their respective business strategies.

Since that plan was approved, a number of significant events have transpired that warrant an update to the Business Plan.

- The economy experienced a deep recession and slow recovery;
- Palo Alto Airport was transferred to the City of Palo Alto and is no longer part of the County of Santa Clara's airport system;
- All nine of the Fixed Base Operator (FBO) leases at RHV were amended to synchronize their expiration dates to December 31, 2021;
- San Jose State University relocated its aviation program to RHV and Gavilan College relocated its aviation program to E16.

In addition, a long-running dispute with the Federal Aviation Administration (FAA) relating to skydiving at E16 was resolved. During the period that the dispute was active the FAA did not grant any federal monies to the County of Santa Clara Airports.

These events alone have enough effect on the Airports business model to warrant an update to the Business Plan. Staff is also concerned about the current state of the Airport Enterprise Fund (AEF).

The AEF by County Policy is required to be a stand-alone, self-sufficient fund that generates enough revenue to pay for all operating expenses. The following two figures compare revenue and expenses at the airports for the past ten years. Figure 1 is inclusive of capital projects and FAA AIP funding while Figure 2 has removed capital projects and FAA AIP funding to more clearly depict the general operating budget.

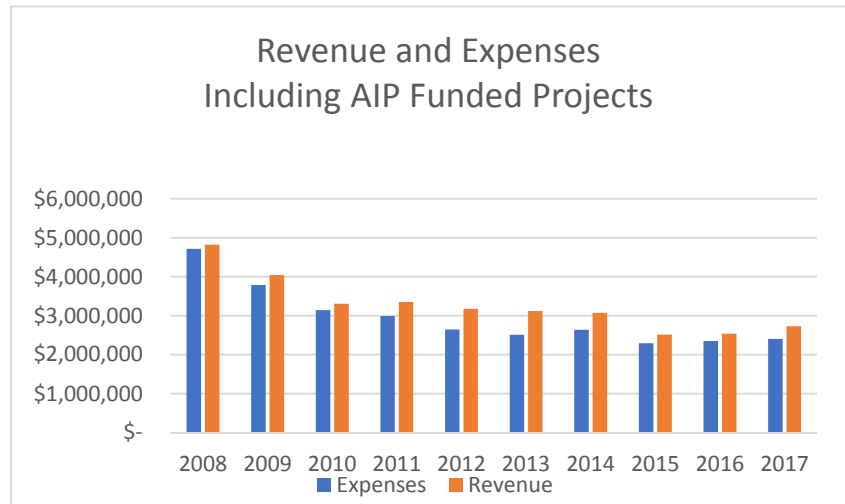


Figure 1: Revenues and Expenses Including AIP Funded Projects by Fiscal Year

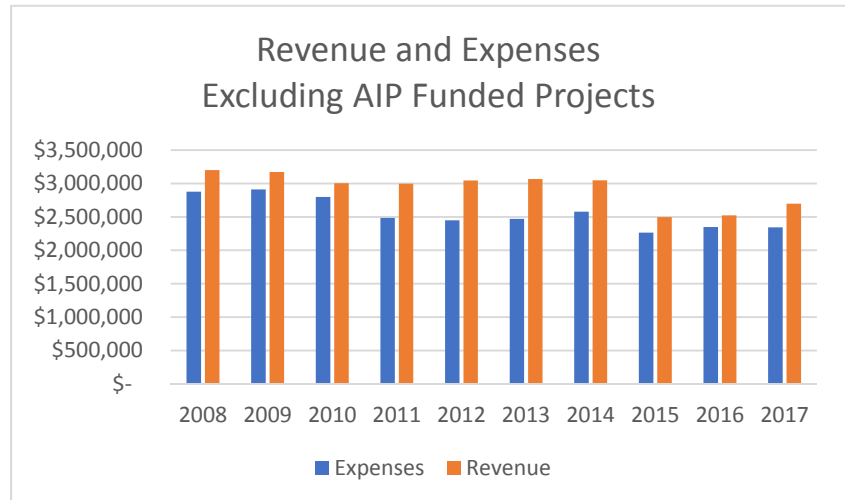


Figure 2: Airport Enterprise Fund Revenues and Expenses Excluding AIP Funded Projects by Fiscal Year

All fees charged for use of the airports are published in the *Schedule of Fees and Charges for Santa Clara County Airports*. Most of those fees are indexed to the Bay Area Consumer Price Index. The AEF has benefited from this annual adjustment. In addition, cost savings efforts including staff reductions have kept expenses below revenues. Forward-looking projections that take into account expected increases in operational costs and continued decrease in demand for

aircraft storage however indicate the AEF is quickly reaching the intersection point of revenues and expenses. Figure 3: 2018-2025 Projected Revenues and Expenses by Fiscal Year depicts revenues and expenses projected to 2025 with the following assumptions:

- Annual 3.0% increase in expenses and revenues which is the average annual CPI increase for the preceding 15 years; and,
- New solar revenues (discussed on page 29) begin to accrue in FY 2019; and,
- FY 2020, the AEF begins making \$200,000 annual principal payments on the General Fund loan for the 2018 pavement reconstruction project at RHV and E16; and,
- 1.5%¹ annual decrease in based aircraft.

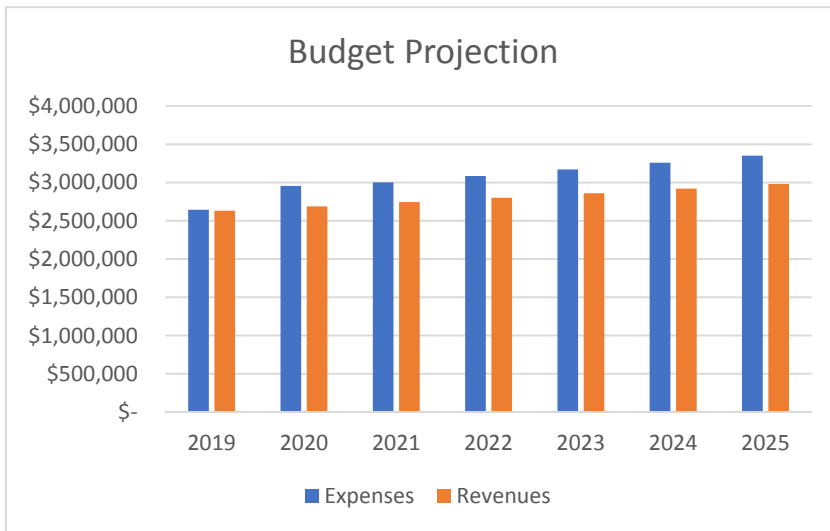


Figure 3: 2018-2025 Projected Revenues and Expenses by Fiscal Year

In light of the aforementioned information, the County of Santa Clara Board of Supervisors directed staff to update the Airports business plan and approved the scope to include:

- Performing a fresh analysis of the AEF overall, as well as the individual airport’s finances;
- Examining the interrelationship between the AEF operating budget and capital budget;

¹ Average annual decrease in county tie-down, hangar and shelter occupancy over the past ten years.

- Developing long-range facilities plans (LRFP) for the airports' infrastructure, including associated cost estimates;
- Reviewing the Airports Capital Improvement Plans (ACIP) including associated cost estimates;
- Determining the additional revenue necessary to fund the airports' projected operating and capital expenses going forward;
- Identifying ways to diversify the airports' existing revenue streams as well as identifying potential cost-saving measures;
- Reexamining the airports' Schedule of Fees and Charges and recommending changes accordingly;
- Determining the optimal re-leasing strategy for the airports' FBO leasehold areas;
- Determining the optimal leasing strategy for the areas identified in the RHV Master Plan for non-aviation commercial development;
- Determining the appropriate role of federal Airport Improvement Program (AIP) grants to fund eligible capital improvement projects;
- Identifying trends in the piston-propeller segment of General Aviation and their effect on the type of operations occurring at the County airports as well as their effect on the AEF's longstanding Business Model;
- Developing a new Business Model for the County airports necessitated by the changing nature of the airports' operations.

OVERVIEW OF THE 2006 AIRPORT MASTER PLANS

In 2018, the master planning process sought to define the role of each county airport, in terms of both its purpose with respect to the overall transportation network as well as its function with respect to accommodating the projected growth in the number of airport-based aircraft. Once the airport's role was defined, the consultant team then determined the facilities necessary to implement that role.

The Board adopted the following principles to guide development of the Master Plan (MP) and Business Plan for each County airport:

- Meet the needs of the aviation community.
- Preserve the quality of life for residents living near the airports.
- Maintain the integrity of the airport safety zones.
- Ensure that the AEF is self-sustaining without subsidy from the County General Fund. (Discussed in more detail below).

Based on existing demand and projected future growth in the San Jose – Gilroy corridor over the Master Plan lifespan, the MP recommended that E16 be developed to accommodate regular use by business jets. E16 was also designated to accommodate the majority of the projected countywide growth in airport-based aircraft.

As a result, the E16 MP proposed that the existing 3,100 foot runway be extended to 5,000 feet on its current alignment and be widened from 75 feet to 100 feet. Corresponding non-airfield improvements included construction of additional aircraft storage hangars², more transient aircraft parking and a second FBO as well as a new terminal building, maintenance building and vehicle parking.

With respect to RHV, the MP recommended maintaining the airport's existing role as serving primarily small piston-propeller aircraft and proposed a minimal increase in basing capacity. The RHV MP focused on airfield improvements that would enhance safety and provide for more orderly aircraft ground movements. Proposed improvements related to these goals included expanding the Runway Safety Areas (RSA) and Object Free Areas (OFA) at the south end of the existing parallel runways to meet current FAA design standards as well as constructing a west side parallel taxiway.

RECENT TRENDS IN GENERAL AVIATION

The term “General Aviation” (GA) encompasses a wide range of aeronautical activities and types of aircraft including business jets, piston-propeller aircraft, light sport aircraft, fixed-wing turbine-powered aircraft, rotorcraft, and other similar aircraft³. The relative strength of these various segments of GA business can differ substantially, thus, when citing GA statistics it is essential to avoid generalizations and to cite statistics appropriate to the particular seg-

² In addition to the 100 hangars that were already under construction at the time the Draft Master Plan was completed.

³ General aviation is defined by the FAA as all civil aviation not classified as air carrier, commuter/air taxi or military.

ment being considered. It is also important to note that local conditions may differ substantially from nationwide trends. Since all but a very small percentage of aircraft based at the County airports are piston-propeller aircraft, this section focuses on the piston-propeller segment of GA.

By most metrics, the piston-propeller segment of GA has contracted nationwide since the completion of the BP in 2006, which also coincided with the start of the Great Recession⁴:

- Average annual U. S. manufactured GA piston-propeller airplane shipments dropped 60% in the nine-year period⁵ between 2009 and 2017 (755 annually) compared to the immediately preceding nine-year period between 2000 and 2007 (1,870 annually).⁶
- The number of total active U. S. General Aviation and On-Demand Federal Aviation Regulations Part 135 piston aircraft declined by 15% from 2008 to 2017 and is predicted to continue to decline by about 1% annually⁸ through 2025. According to the FAA Aerospace Forecast Fiscal Years 2017 – 2037, "Unfavorable pilot demographics, overall increasing cost of aircraft ownership, coupled with new aircraft deliveries not keeping pace with retirements of the aging fleet are the drivers of the decline."
- The total number of estimated hours flown by these piston aircraft declined by 15% during this same ten-year time period and is predicted to continue to decline by 1.4% annually through 2025.
- The total number of U. S. General Aviation operations at airports with an operational air traffic control tower declined by 15% from 2008 to 2017.
- The number of active⁹ FAA certificated pilots declined from 613,746 in 2008 to 609,306 in 2017.

⁴ Source: *General Aviation Manufacturers Association (GAMA) 2016 General Aviation Statistical Databook & 2017 Industry Outlook*

⁵ Between 2008 and 2009 U.S. G.A. aircraft manufacturing dropped by 55% (1,792 to 9802) and has remained closed to that level since.. That dramatic drop makes a natural break-point to most accurately depict the current status of aircraft manufacturing.

⁶ Source: *General Aviation Manufacturers Association (GAMA) 2017 Annual Report*

⁸ On-Demand FAR Part 135 operations include air taxi (i.e. charter), air tours, and airmedical operations.

⁹ An active pilot is defined as a pilot who holds a pilot certificate and a valid medical certificate (except for sport pilots, which comprise about 1% of the total number of pilots).

- The average number of original private pilot certificates and student pilot certificates issued annually in the ten-year period between 2008 and 2016 dropped by 27%, compared to the immediately preceding ten-year period between 1998 and 2007.

These national trends indicate a decline in the GA market and in particularly the piston-propeller segment which is most prevalent at the County of Santa Clara airports.

RECENT TRENDS AT COUNTY OF SANTA CLARA AIRPORTS

These overall trends negatively affected the County airports by reducing demand for aircraft parking. Use of County-owned hangars, shelters and tie-downs dropped from 319 in 2007 to 270 in 2017, a 15% decrease.

Conversely, the number of aircraft operations¹⁰ at RHV *increased* nearly 50% from 2010 to 2017. In 2010 RHV had approximately 110,000 operations and in 2017 it had about 163,000 operations. The significant factor in the increase in aircraft operations, despite a decrease in total based aircraft, is flight training.

The increase in the number of flight training operations has its roots in several commercial aviation trends that have increased demand for commercial and Airline Transport (ATP) rated pilots:

- Domestic commercial passenger enplanements are projected to increase steadily throughout the FAA's 20-year forecast period from 2017 – 2037; and,
- Airlines are embracing smaller, more efficient aircraft which allow more point-to-point flights; and,
- The number of GA business jets continues to grow; and,
- Use of the GA business jet fleet is projected to grow annually by 3%.

The increase in demand for professional pilots is causing a commensurate increase in the demand for professional flight training. A

¹⁰ An operation is defined as a single take-off or landing.

number of flight training schools operate at RHV and attract students from all over the world, including Japan, China, India and Korea.

The FAA Air Traffic Control Tower (ATCT) tracks and categorizes all operations at an airport during the tower's operational hours. Of the many metrics used to categorize those flights, the itinerant and local¹¹ categories are helpful to highlight the effect of flight training on the operations level at Reid-Hillview Airport. A local flight is one that does not leave the general area around the airport, and thus is most likely the result of pilot training. For calendar year 2017, Reid-Hillview had approximately 163,000 operations with 45% of them categorized as itinerant and 55% of them categorized as local flights.

There are 518 airports nationwide that report operation statistics to the FAA. When ranking airports by the quantity of operations, RHV is ranked No. 73 nationally and No. 12 in California. When the operations numbers are refined to remove military and commercial air-carrier operations, leaving primarily GA operations, **Reid Hillview is ranked No. 24 nationally and No. 7 among California airports.**

The high number of flight training operations at RHV impacts the number of operations at E16 as well. San Martin airport is a short flight from RHV and provides a convenient location to practice pattern work without the congestion present at RHV and without the pressure of communicating with the Air Traffic Control Tower. This is especially beneficial for newer student pilots.

¹¹ (1) *Local operations mean operations performed by aircraft which:(i) Operate in the local traffic pattern or within sight of the airport;(ii) Are known to be departing for, or arriving from flight in local practice areas located within a 20-mile radius of the airport; or(iii) Execute simulated instrument approaches or low passes at the airport.*
(2) *Itinerant operations mean all aircraft operations other than local operations.*
<https://definitions.uslegal.com/a/aircraft-operations-aeronautics-and-space/>

AIRPORT ENTERPRISE FUND OVERVIEW

AEF Revenues

AEF revenue is approximately \$2.7 million and is comprised of several categories whose relative contribution to total revenue has been consistent over time. For many years, approximately three-quarters of total AEF operating revenue has been generated from County-owned aircraft storage spaces (i.e. hangars, shelters and tie-downs). In FY 2017, this revenue source generated \$2.1 million (76% of total revenue). Revenue from the ten Fixed Base Operators (FBO) ground leases (nine at RHV and one at E16) comprises 10% of total revenue. All other miscellaneous revenue sources including property rental, fuel flowage fees, transient aircraft fees and interest income collectively generate about 14% of AEF revenues.

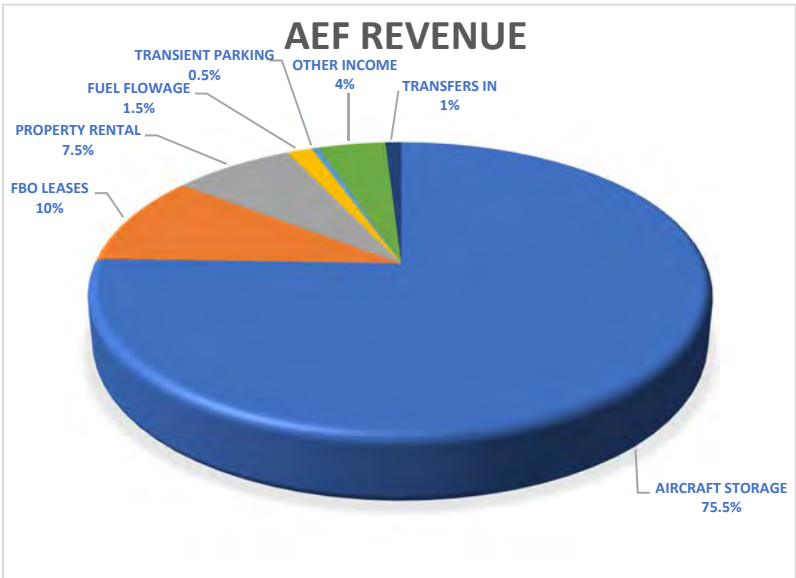


Figure 4: Fiscal Year 2018 Airport Enterprise Fund Revenue.

AEF Expenditures

Salaries and benefits comprise approximately 45% of total AEF expenditures. Debt service on bonds issued to fund the San Martin Airport Hangar project account for 15% of total airport expenses for FY 2018. The interest-only payment on the \$3,000,000 loan from the County General Fund to fund airfield pavement rehabilitation projects at both airports comprises 3 % of AEF expenditures. Internal County charges account for 17% of total expenditures, facility maintenance 9%, utilities 6% and services/supplies 5%.

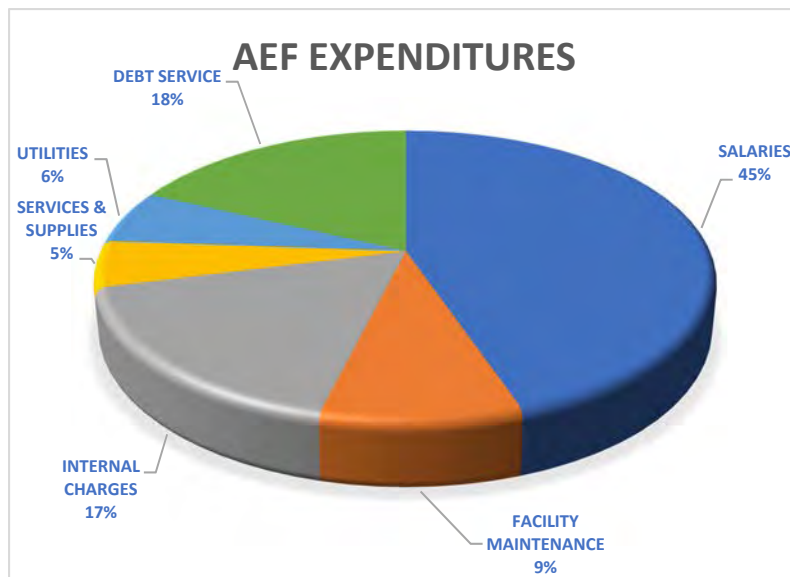


Figure 5: Fiscal Year 2018 Airport Enterprise Fund Expenditures.

RHV vs. E16

Although the AEF captures all airport finances in a single budget unit, the revenue and expenses associated with each of the two airports are tabulated for internal management and accounting purposes. Revenue and expenses directly attributable to each airport such as FBO lease revenue, aircraft storage space rental revenue, operations staff salaries, etc. are easily identified. General and administrative expenses (i.e. overhead) not attributable directly to an individual airport (insurance, management staff salaries, etc.) are captured in an expense pool and allocated to each airport based on a weighted formula that uses cost drivers such as the number of based aircraft, number of aircraft operations and number of major facilities.

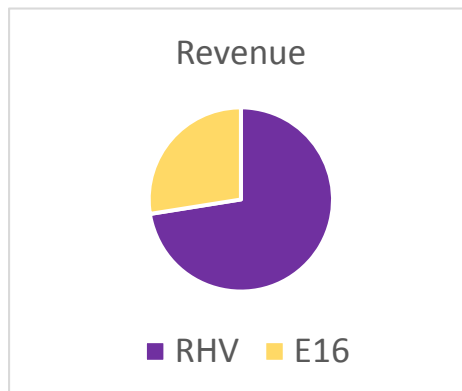


Figure 6: AEF Revenue by Airport

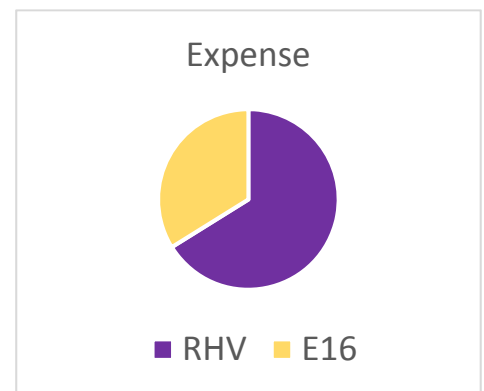


Figure 7: AEF Expense by Airport

RHV revenue generates approximately 72% of total AEF revenue and accounts for 64% of total expenditures (including allocated overhead). San Martin Airport generates approximately 28% of total AEF revenue and accounts for 37% of total expenditures. Thus, RHV currently subsidizes E16 to a slight degree.

AEF Trend

As mentioned above, the Board adopted principles to guide the development of the 2006 Airport Master Plan, including the following:

“The Airport Enterprise Fund should be self-sustaining without subsidy from the General Fund. Revenue from fees and charges, state and federal grants and other sources should be sufficient to fund operating and maintenance costs, capital improvements and an appropriate level of reserves.”

Since the creation of the Roads & Airports Department, the AEF has generated sufficient operating revenue to fund operating expenses. Capital projects have been funded on a pay-as-you-go basis using primarily federal and state grants when eligible. (The San Martin Airport Hangar Project mentioned earlier was ineligible for AIP funding and was bond-funded.) Therefore, the AEF had been self-sustaining financially prior to the Board’s formal adoption of such a policy.

Due to a continual softening in demand for aircraft storage, revenue is rising slower than operating expenses, thereby putting pressure on the AEF operating budget. Staff has responded by cutting costs where possible, including reducing staffing to minimal levels. In light of the earlier discussion regarding trends in the piston-propeller segment of GA and RHV’s emerging primary role as a flight training airport, it is clear that the AEF business model must adapt. **The AEF cannot continue to maintain financial self-sufficiency while relying on aircraft storage as its primary revenue source.** Under the current business model, the high number of aviation operations does not translate into revenue for the AEF. A key objective of this Business Plan is to identify a new business model going forward that comports with the airports’ primary use as flight training airports while generating sufficient revenue.

Retained Earnings

The unencumbered portion of the AEF Fund Balance, referred to as Retained Earnings (RE) represents the AEF’s “rainy day” fund and is one measure of the AEF’s financial health. RE also serves to dampen the effect of irregular cash flow. A third function of RE is

that it provides a place to accumulate an operating surplus, if any, for future capital project expenditures.

The projected AEF unencumbered Retained Earnings balance as of the end of the 2018 Fiscal Year is \$2.8 million, equivalent to slightly more than one year of operating expenses.

Long-term Debt

The AEF carries \$6,710,000 in long-term debt (projected as of June 30, 2018), \$3,710,000 of which is attributable to the San Martin Airport Hangar project completed in 2008 and \$3,000,000 of which is attributable to a loan from the County General Fund in 2017 to fund airfield pavement rehabilitation projects at both airports. The costs of the current pavement projects are eligible for retroactive reimbursement by the federal Airport Improvement Program (AIP) should the County resume accepting AIP grants, which is discussed in more detail below. The current long-term debt level is approximately 2.5 times annual revenue and 2.4 times the level of unencumbered Retained Earnings.

AIRPORT CAPITAL IMPROVEMENT PLANS AND LONG RANGE FACILITY PLANS

ACIPs

The Roads and Airports Department maintains six-year Airport Capital Improvement Plans (ACIP) for both E16 (*Table 1: E16 ACIP*) and RHV (*Table 2: RHV ACIP*). The ACIPs are documents submitted to the FAA each year and generally include only those projects eligible for FAA AIP funding. The main projects featured in the current RHV ACIP and not yet funded are identified as part of the master plan and include expanding the Runway Safety Areas (RSA) and Object Free Areas (OFA) at the south end of the existing parallel runways by shifting the runways 100 feet to the north to meet current FAA standards for airport design. Additional projects include constructing a west side parallel taxiway (estimated to cost \$2,480,000) and rehabilitating the perimeter fencing to enhance the airport's security and appearance (estimated to cost \$560,000).

The main projects featured in the current E16 ACIP and not yet funded include constructing an access road between the transient apron and the County-owned hangar area (estimated to cost \$720,000), installing a backup generator for the runway lighting and fire protection systems (estimated to cost \$110,000) and acquiring property at the south end of the airport for safety zones for the proposed runway extension (estimated to cost \$3,100,000).

Year	E16 Project Description	Cost
2019	Reimbursement for Pavement Rehabilitation	\$700,000
2020	ALP update with narrative and AGIS	\$250,000
2021	Prepare design, and bid documents for construction of access road between transient apron and hangar area	\$70,000
2021	Prepare Airport Pavement Management System	\$40,000
2022	Construction of access road between transient apron and hangar area	\$650,000
2022	Install backup generator for runway lighting and fire protection system.	\$110,000
2023	Prepare design and bid documents for construction of perimeter fencing	\$110,000
2023	Environmental assessment for property acquisition to protect approach for proposed runway extension	\$110,000
2024	Construction of perimeter fencing	\$400,000
2024	Property acquisition for safety zones and encroachment prevention	\$3,000,000
San Martin Total		\$5,440,000

Table 1: E16 ACIP

Year	RHV Project Description	Cost
2019	Reimbursement for Pavement Rehabilitation ¹²	\$1,800,000
2020	ALP update with narrative and AGIS	\$250,000
2020	Reimbursement for Pavement Rehabilitation	\$166,667
2021	Prepare Airport Pavement Management System	\$45,000
2022	Prepare design and bid documents and perform Perimeter Fencing rehabilitation	\$560,000
2023	Prepare design and bid documents for shift of runways and construction of west side parallel taxiways and run-up areas	\$280,000
2024	Perform shift of runways and construction of west side parallel taxiways and run-up areas	\$2,200,000
Reid-Hillview Total		\$5,301,667

Table 2: RHV ACIP

It must be noted that many of the projects on the ACIPs were originally identified over 12 years ago as part of the 2006 Master Plan process and should thus be reevaluated. For example, the project listed in E16 ACIP (Table 2) to acquire private property outside San Martin Airport to prevent future encroachment was envisioned in conjunction with a project to extend the runway to 5,000 feet. Although the property acquisition is still desirable, its necessity in the short term is questionable.

Long Range Facility Planning

The airports' utility and building infrastructure has a significant level of deferred maintenance and repair. In addition, a number of facility improvement projects have been identified as capital improvements.

¹² This work was funded by a loan from the County General Fund but is eligible for reimbursement in the event the County resumes accepting AIP grants.

The County prepared a Long Range Facility Plan (LRFP) that identifies the airports' long-range facilities needs along with associated cost estimates. The LRFP is included in the Business Plan.

Kitchell prepared the LRFP report (page 38) outlining the 10-year Capital Renewal Costs for the RHV Terminal, RHV Swift Avenue office and hangar building and county owned E16 Hangars. They are currently working on an LRFP for RHV hangars/shelters and E16 fire pump. Roads & Airports staff prepared corresponding estimates for the airport pavements.

Similar to the ACIPs, some of the identified costs relate to capital improvements that, although desirable, are not mission-essential and thus can be deferred. For example, nearly \$5.5 million of the costs identified for the RHV Terminal Building are for rehabilitating the long-vacant second floor including a new elevator and exterior stairs.

Uni-format Code	Reid-Hillview Terminal Building System Class	Current Cost Without Escalation
B1020	Roof Construction	\$272,800
B1080	Stairs	\$430,700
B2020	Exterior Windows	\$700
B3060	Horizontal Openings	\$3,300
C2030	Flooring	\$300
C2050	Ceiling Finishes	\$300
D1010	Vertical Conveying Systems	\$321,600
D2010	Domestic Water Distribution	\$18,500
D2030	Building Support Plumbing Systems	\$10,100
D3030	Cooling Systems	\$209,800
D3050	Facility HVAC Distribution Systems	\$3,700
D3060	Ventilation	\$4,500
D5020	Electrical Service and Distribution	\$70,800
D5030	General Purpose Electrical Power	\$11,700
D5040	Lighting	\$223,400
D7050	Detection and Alarm	\$151,000
F3010	Special Construction and Demolition ¹³	\$4,701,100
G2020	Parking Lots	\$24,700
G2030	Pedestrian Plazas and Walkways	\$4,100
Totals		\$6,463,100

¹³ This item is for construction necessary to convert the RHV terminal building 2nd floor into a warm shell for potential restaurant and office.

Table 3: (source: Kitchell)

Moreover, the expenditure of \$2.1 million of AEF resources in the Swift Avenue office building may not be justified given that the facility is tenant-occupied and does not serve a mission-essential function at the airport. The current tenants in this building include San Jose State University and Palmetto Ranch. The Swift leases should be reviewed in light of the LRFPP report to ensure the lease rates provide for full cost recovery and that the AEF is not subsidizing the lease.

Uni-format Code	Swift Avenue Office and Hangar Building Building System Class	Current Cost Without Escalation
B1020	Roof Construction	\$ 502,400
B2010	Exterior Walls	\$ 4,300
B2020	Exterior Windows	\$ 500
B2050	Exterior Doors and Grilles	\$ 600
B3020	Roof Appurtenances	\$ 1,300
B3060	Horizontal Opening	\$ 3,300
C1010	Interior Partitions	\$ 300
C1030	Interior Doors	\$ 2,100
C2030	Flooring	\$ 51,900
C2050	Ceiling Finishes	\$ 6,000
D2010	Domestic Water Distribution	\$ 11,500
D2030	Building Support Plumbing Systems	\$ 8,100
D2060	Process Support Plumbing Systems	\$ 3,300
D3030	Cooling Systems	\$ 121,300
D3050	Facility HVAC Distribution Systems	\$ 8,100
D5020	Electrical Services and Distribution	\$ 45,500
D5030	General Purpose Electrical Power	\$ 12,900
D5040	Lighting	\$ 401,400
D7050	Detection and Alarm	\$ 162,400
E2010	Fixed Furnishing	\$ 9,300
F1050	Special Facility Components	\$ 370,300
G2020	Parking Lots	\$ 372,900
G4050	Site Lighting	\$ 4,100
Totals		\$ 2,103,800

Table 4: (source: Kitchell)

Capital maintenance of the hangers at San Martin Airport are estimated to cost about \$335,000.

Uni-format Code	San Martin County Owned Hangars Building System Class	Current Cost Without Escalation
B1020	Roof Construction	\$ 300
B2010	Exterior Walls	\$ 700
B2050	Exterior Doors and Grilles	\$ 3,000
B3020	Roof Appurtenances	\$ 3,500
C1010	Interior Partitions	\$ 3,000
D3060	Ventilating	\$ 40,000
D5020	Electrical Services and Distribution	\$ 31,300
D5040	Lighting	\$ 234,200
D7050	Detection and Alarm	\$ 14,100
G2020	Parking Lots	\$ 4,900
Totals		\$ 335,000

Table 5: (source: Kitchell)

The current ACIP and estimated LRFP costs total approximately \$33 million¹⁴. Staff's analysis indicates that approximately \$20 million of the \$33 million will need to be invested over the next 10 years (in current dollars) to fund mission-essential repairs and improvements to the airports' infrastructure. Of this amount, roughly half would be eligible for AIP funding.

SCHEDULE OF FEES & CHARGES

Aries Consultants Ltd. was retained to review the County airports' existing Schedule of Fees and Charges and recommend adjustments. Aries notes that the County's current rates for aircraft storage are near the high end of airports surveyed and recommends reductions in the rates for RHV tie-downs and E16 hangars to attract more tenants. The report does not estimate the change in total revenue that might result from the combination of lower prices and the higher occupancy that would presumably follow the price reduction. For total revenue to increase, the increase in occupancy must generate at least enough new revenue to compensate for the reduction in revenue from existing tenants.

¹⁴ Not including line items relating to reimbursement of costs for the 2017/2018 pavement projects, which were funded by a loan from the County General Fund and are thus already included in the calculation of Long Term Debt.

It is also important to note that FAA Grant Assurances place some restrictions on the level of fees charged for aviation services at obligated airports. For instance, fees may not be set at a level that would unjustly discriminate against a class of aviation user. The FAA recognizes the right of airport sponsors to set reasonable fees and charges to offset the cost of operating the airport, however, when a disagreement occurs over a fee, the FAA is the final arbitrator as to what constitutes a fair and reasonable fee.

One source of revenue that is generally not utilized at GA airports is a landing fee. Traditionally found at commercial service airports, a landing fee is levied, based on the aircraft takeoff weight, on a commercial operator once the aircraft lands. Where there are a large number of flight operations at an airport, there is a substantial administrative burden related to tracking and billing landing fees. The cost of administering a landing fee program, when taking into account the market for such fees and the pricing constraints applied through Federal grant assurances, makes the implementation of a landing fee program unpopular for GA airports.

The larger issue is the AEF's overreliance on revenue from aircraft storage and the aforementioned industry trends that have resulted in both airports having excess basing capacity. The modest growth in based aircraft predicted in the MPs not only failed to materialize, the number of based aircraft in County-owned spaces at RHV dropped by 15% from 2007 to 2017.

A NEW BUSINESS MODEL FOR THE AEF

Given the downward trends in the piston-propeller segment of GA, the South Bay's high commercial land values, and trends at other airports, it makes sense to put the airports' available real property assets to work by leasing certain parcels for non-aviation commercial development and thereby generate a more diversified and higher-yielding revenue stream than the current business model. This section explores the following potential sources of additional revenue:

- Leasing RHV parcels suitable for non-aviation commercial development.
- Reconfiguring the existing RHV FBO leaseholds.
- Establishing solar farms at both RHV and E16.
- Reconfiguring the existing E16 FBO Leasehold.
- Leasing the parcel at 12415 Murphy Ave., San Martin

RHV Non-Aviation Commercial Parcels

The airport MP proposed leasing undeveloped airport parcels for compatible commercial uses to generate revenue to:

- Fund the operation and maintenance of the airport infrastructure;
- Fund projects that enhance the airport's physical security and compatibility with the surrounding community; and
- Reduce the Airport Enterprise Fund's reliance on aircraft storage revenue.

The concept of leasing undeveloped property at the airport is also a Board-approved recommendation of the Harvey Rose management audit of the airports conducted in 1999. The audit report states that non-aviation commercial development "is a sound direction for the Department to take. It would provide a new source of revenue for the Fund without increasing air traffic and it would diversify and stabilize the Division's revenue sources in the event of a downturn in the general aviation market."

The following parcels have been identified for lease for non-aviation commercial uses:

1. An undeveloped 8.6-acre parcel in the southeast corner of the airport at the Capitol Expressway/Tully Road intersection.
2. A 4.65-acre parcel located at the intersection of Cunningham Avenue and Swift Avenue (currently used for Little League baseball fields).
3. An undeveloped 3.75-acre parcel located on Swift Avenue.
4. An undeveloped 2.4-acre parcel located between the southernmost row of hangars and the Capitol/Tully parcel listed above (currently rented by the Roads Dept. as a material laydown area).
5. A currently developed 9.5-acre parcel located west of John Montgomery Drive (currently part of several RHV long term leases.)

Valbridge Property Advisors was retained to prepare an appraisal for each of the aforementioned parcels. According to the Valbridge appraisals, the AEF could realize a total of approximately \$3.2 million

annually in ground lease revenue from the five parcels.¹⁵ It is important to note that commercial property leasing can be speculative and that these revenue assumptions may not be realized.

It is essential that the future development of these parcels be compatible with the operation of the airport. It is also essential that the future developments be independent of the operation of the airport. In order to generate the maximum revenue consistent with the above criteria, staff recommends that the marketplace be allowed to determine each parcel's highest and best use through a Request for Proposal (RFP) process and the parcels leased to the prospective lessee(s) offering the best financial terms. These lease returns may be affected by any business or use conditions the County, FAA, City of San Jose, or Santa Clara County Land Use Commission places on the properties.

Existing RHV FBO Leaseholds

There are nine FBO leaseholds at RHV (Figure 8) occupying a total of 18 acres in the northeast corner of the airport. In 2016, as the FBO master leases approached the expiration of their 50-year terms, they were amended to synchronize their expiration dates to December 31, 2021. Upon expiration of the leases, all leasehold improvements will revert to the County.

¹⁵ *The estimated annual lease revenue reflects market conditions as of early 2018 and is therefore subject to change.*



Figure 8: Existing FBO Leasehold Configuration

Valbridge appraised the annual bare-dirt lease rate for the 18-acre FBO area at \$15,246 per acre. By contrast, the appraised annual lease rate for the Cunningham/Capitol parcel and the Tully/Capitol parcel are \$137,258/acre and \$139,348/acre, respectively. Therefore, leasing property for non-aviation commercial development has the potential to generate nine times more revenue per acre than leasing property for FBO use.

Given the downward trends in the piston-propeller segment of General Aviation market discussed earlier, the high vacancy rate at the airport and the very large disparity between the expected lease rate for commercial development versus FBO use, staff recommends that the eastern half of the existing 18-acre FBO footprint (bordered by Ocala Ave. to the north, Cunningham Ave. to the south and John Montgomery Dr. to the east) be re-designated for non-aviation commercial development.

Only two of the nine leaseholds at RHV provide a full range of transient aircraft services, such as aircraft parking, aircraft service, fuel, pilots lounge and rental cars. These services are typically characteristic of FBO's¹⁶ as defined by the FAA. With the current leasehold

¹⁶ The FAA defines a FBO as “a commercial entity providing aeronautical services such as fueling, maintenance, storage, ground and flight instruction, etc. to the public”. FAA Airport Compliance Manual (FAA, 2009)

configuration, RHV leasehold sizes of 1.0 – 2.7 acres are too small to provide transient aircraft parking along with the other services currently provide by the leaseholders.

Most RHV leaseholds are not true FBO's but are instead Specialized Aviation Service Operations (SASO¹⁷) which generally provide one or two aviation services (e.g. flight training, fueling, aircraft maintenance, aircraft rental, avionics sales and repair, aircraft sales).

By reducing the number of leaseholds with a corresponding increase in leasehold size, future FBO leaseholders will have the space necessary to provide a full-service FBO. New leases will include “Minimum Standards”, each leaseholder will be expected to provide. Typically this will include a bundle of services, such as flight training, aircraft maintenance, aircraft parking, fueling, etc. It is not expected that the leaseholder provide all of these services independently, as some of these services may be contracted out to existing SASO's, including the current leaseholders.

Minimum Standards are created to “promote safety in all airport activities, protect airport users from unlicensed and unauthorized products and services, maintain and enhance the availability of adequate services for all airport users, promote the orderly development of airport land, and efficiency of operations”¹⁸ Staff recommends developing minimum standards that would spell out expectations for all aviation businesses on the airport, including future FBO leaseholders.

With these changes it is expected that each of the leaseholders will be financially secure enough to reinvest in their leasehold as necessary. This will benefit both the aviation community through well maintained facilities, and the surrounding community, by eliminating the gradual decay that otherwise may occur.

¹⁷ Also known as single service provides or special FBOs.

¹⁸ FAA Advisory Circular 150/5190-6

To mitigate the loss of FBO area, staff also recommends expanding the remaining half of the FBO footprint by extending the existing western leasehold boundary further west (i.e. toward Runway 13L/31R) and dividing it to create two future FBO leaseholds of approximately seven acres each in place of the existing nine FBO leaseholds, which average two acres each.

Adopting Minimum Standards¹⁹ and re-leasing the reconfigured FBO footprint for two or more FBOs would ensure that a range of high-quality services (e.g. aircraft maintenance and repair, sales, flight training and rental aircraft) remain available to based aircraft owners and flight training clients at an adequate level of competition.

The aircraft currently based on the existing FBO footprint could all be accommodated by the new FBOs and/or in vacant County-owned tie-downs.

Finally, the County should consider taking on the responsibility of managing the self-fueling island. The FBO’s would retain the right to provide truck-based fueling services. However, by taking over self-service fueling the AEF could realize approximately \$100,000 in additional annual revenue.



Figure 9: Future FBO Leasehold Reconfiguration

¹⁹ Minimum standards establish criteria for the minimum requirements that must be met by businesses in order to engage in providing on-airport aeronautical activities or services (source: Aries Consultants Ltd.)

RHV/E16 Solar Farms

Development of solar farms at both RHV and E16 has been completed as part of a larger County-wide effort led by the Santa Clara County Facilities and Fleet Department to promote renewable energy by establishing solar farms on suitable County properties. Annual revenue from the solar farms escalates each year for the duration of the 25-year term of the agreement with the solar provider. Total net AEF revenue expected over the 25-year term is \$11,849,618. During the first 14 years of the agreement, average annual income for the AEF will be approximately \$160,000. Revenue jumps dramatically in years 15-25 once the installation costs have been amortized, averaging \$873,000 annually.

Existing E16 FBO Leasehold

The existing FBO leasehold at E16 expires on December 11, 2020. Upon expiration of the lease, ownership of all improvements on the 10.3-acre site will revert to the County, including 56 aircraft hangars and an office/maintenance hangar facility. Appraisals prepared by Valbridge indicate the County could expect \$600,000 in annual lease revenue if the 10.3-acre site were to be re-leased in its entirety, and \$220,000 in annual lease revenue if just the portion of the leasehold excluding the hangars were leased. In that case, the County would assume management of the hangars and realize the revenue therefrom, which staff estimates at approximately \$550,000 annually. Staff recommends this latter scenario, which would result in total annual revenue of \$770,000 to the AEF.

As part of the business plan, staff proposed taking over management of the FBO property and leasing out the maintenance hangar and office space to various SASO's to provide flight training, aircraft rental, maintenance and repair, trucked fuel service and other desired services. Airport staff will then take over the self-fueling island. Through the additional revenue generated by fueling and property the County would be able to dedicate a full-time employee to San Martin airport, instead of the current 1/5 employee that is currently assigned.

Existing E16 Non-Aviation Parcel

The 4.64-acre parcel on the west side of Murphy Ave. adjacent to Llagas Creek has been leased to the Lions Club for the past several years at \$100 per month. The Santa Clara Valley Water District is currently in the process of acquiring, from the County, a 1.87-acre undeveloped portion of this site abutting Llagas creek for a flood control project. An appraisal prepared by Valbridge indicates the County could expect \$57,600 in annual lease revenue for the remaining 2.77 acres of the site.

The increase in revenue from the FBO lease, hangars, Murphy Ave. parcel and the solar farm would ensure that San Martin Airport is financially self-sustaining.

Future Considerations for Community Benefitting Parcels

It is understood that the Lions Club use allows for a tangible community benefit. Because the San Martin community lacks a community center, the Lions Club has allowed their facility to be used in that manner, holding various community meetings weekly.

Likewise, Eastridge Little League provides an opportunity for residents of the surrounding neighborhoods to learn sportsmanship, engage with similarly-minded individuals and enjoy an outdoor activity.

However, by Board Policy, the AEF should be self-sufficient. Continuing the use of these properties without fair market financial benefit to the AEF (Eastridge Little League pays \$1.00 per year and the Lions Club pays \$1,200 per year) hinders the airport's ability to comply with Board policy.

For example, the County has paid the fair market rent for the St. Francis Assisi animal clinic, which is located on the San Martin Airport property to the AEF. A similar agreement could be considered in which the County make annual rental payments to the AEF for the Lions Club and Little League fields, in recognition of the community benefit these organizations provide.

NEW REVENUE SUMMARY

The following table summarizes the potential new revenue sources outlined in the preceding sections. Figure 10 and Figure 11 Summary are airport maps depicting each of the areas mentioned in the following table.

<u>Source</u>	<u>Est. Annual Revenue</u>
1. RHV Tully/Capitol Lease (8.6 ac)	\$ 1,198,400
2. RHV Cunningham/Capitol Lease (4.65 ac)	\$ 638,250
3. RHV Swift Ave. Lease (3.75 ac)	\$ 285,600
4. RHV Laydown Yard Lease (2.4 ac)	\$ 205,100
5. RHV NE Corner Lease (9.5 ac)	\$ 930,750
6. RHV FBO Leases (14.8 ac)	\$ 280,526
7. RHV Fuel Sales	\$ 100,000
8. RHV/E16 Solar Farms (avg.)	\$ 160,000
9. E16 FBO Lease/Hangars	\$ 770,000
10. E16 Murphy Ave. Lease (2.77 ac)	<u>\$ 57,600</u>
 TOTAL	 \$ 4,626,225

It is important to note that it will take a significant amount of time to bring the lease-based revenue sources online. Moreover, the existing grant obligations require the County to obtain approval from the FAA to use airport property for non-aviation commercial development (“property releases”). Under ideal circumstances, if a property release were approved by the FAA, it could take up to two years.

A request to release the Tully/Capitol parcel has been denied previously by the FAA despite the fact that the parcel is identified on the FAA-approved Airport Layout Plan (ALP) for future non-aviation commercial development.



Figure 10: E16 Revenue Property Summary

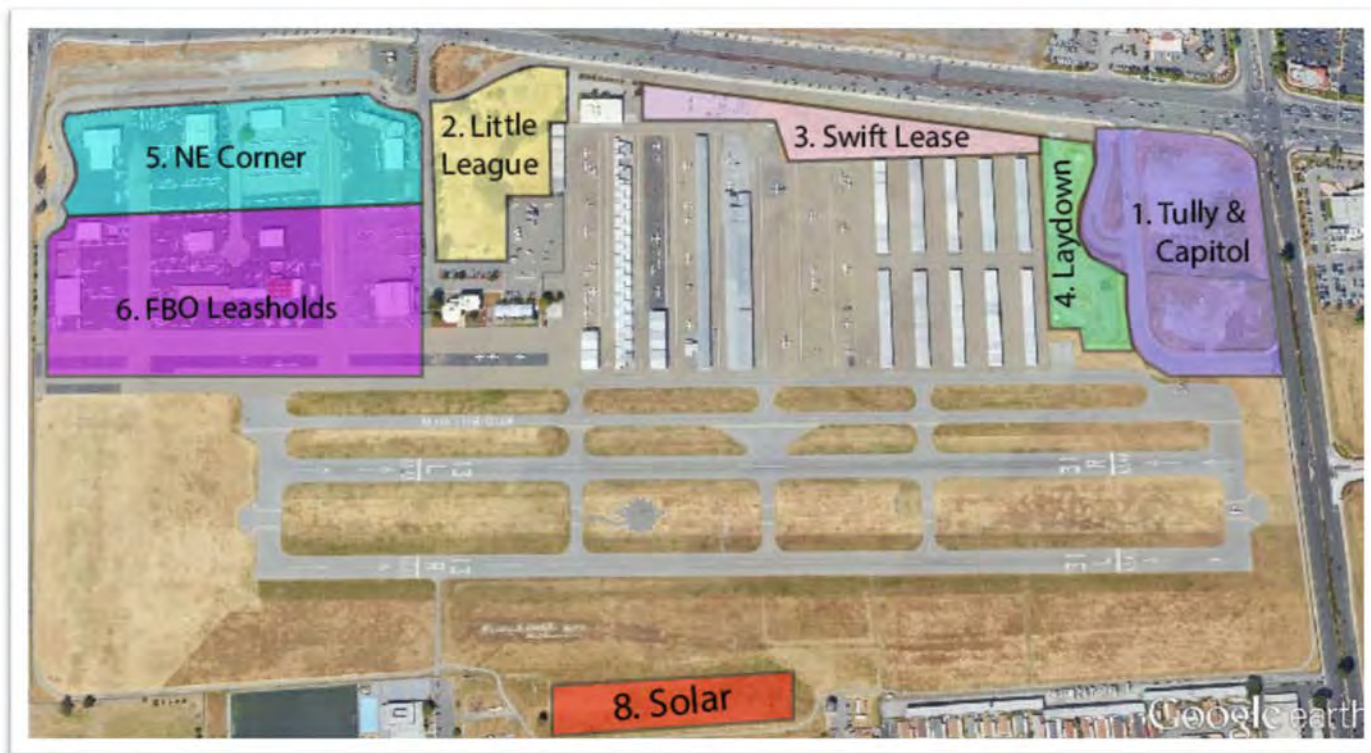


Figure 11: RHV Revenue Property Summary

ROLE OF THE FEDERAL AIRPORT IMPROVEMENT PROGRAM (AIP)

Overview

The FAA AIP (codified under Title 49, United States Code) has existed, under various names, since the end of World War II for the purpose of developing a system of airports to meet the nation's needs. The Airport and Airway Trust Fund was established by the Airport and Airway Revenue Act of 1970 to provide the revenue used to fund AIP eligible projects through taxes or user fees collected from the various segments of the aviation community. In 1982 the Airport and Airway Improvement Act was established to provide funding for airport planning and development. No general taxpayer funds go into the Airport and Airway Trust Fund.

To be eligible for funding, projects must advance the basic goals and objectives of AIP policies, which generally include promoting airport safety, security and capacity, complying with FAA standards, preserving airport infrastructure, protecting the environment, minimizing airport noise impacts, and conducting airport planning.

Currently, AIP-eligible projects approved by the FAA receive 90% federal funding and are also eligible for an additional 4.5% state match, subject to availability of funds. Therefore, the local match required for AIP projects can be as low as 5.5%²⁰. Experience indicates, however that limitations on reimbursement for some tasks such as construction inspection, coupled with the Bay Area's high labor costs typically push the total local contribution closer to 20%.

Generally, most airfield capital improvement and rehabilitation projects are AIP-eligible, including runway/taxiway/apron construction and rehabilitation, as well as airfield lighting, signage and drainage. Thus, all of the airfield projects identified in the current airport Master Plans are AIP-eligible. Moreover, some non-primary airports (such as RHV and E16) are eligible for funding for some other pavement *maintenance* projects. It is very important to note, however, that this is virtually the only exception to the rule that maintenance work is ineligible for AIP funding, due to the fact that maintenance is not "airport development" as defined by Title 49. Costs related to airport operations are likewise ineligible.

History of AIP Funding and Future Need

²⁰ The federal percentage is subject to change whenever the AIP is periodically reauthorized.

Over the last 20 years, the County has received approximately \$8.2 million in AIP grants. Of this, \$6.4 million was for projects at RHV and \$1.8 million was for projects at E16. This equates to an annual average of approximately \$400,000²¹. Relative to the AEF's small operating budget, the AIP funding was important and enabled the completion of projects that otherwise would not have been possible financially.

When the MP updates were completed in 2006, the prospect of future funding from the AIP was essential to the County's ability to fund the improvement projects identified in the MPs. Large-scale projects such as extending the runway at San Martin Airport, acquiring surrounding property to prevent encroachment, and constructing a west side taxiway at RHV were deemed not possible without federal financial assistance. Events during the intervening 12 years, however, have reduced the need for some of these projects. Several of the improvement projects identified in the MPs can now be deferred indefinitely.

The need for additional investment of \$20 million in the airports' aging infrastructure over the next 10 years was discussed earlier. Approximately half this need would be eligible for AIP funding. It is anticipated that by carefully planning and applying for federal grants the County would be able to obtain approval for this funding.

AIP Grants and Santa Clara County Airports

Both RHV and E16 are currently federally obligated airports, meaning that the County is required to comply with a list of 39 "Grant Assurances" that are part of the grant agreements the County and FAA executed when the County accepted federal AIP funds. These grant assurances can be grouped into two categories²²; assurance specific to the project, of which there are nineteen, and assurances that dictate specific requirements for long-term operations of an airport, of which there are twenty.

Generally speaking, the intent of the group of twenty grant assurances is to ensure the grant recipient maintains and operates the airport safely and efficiently. Most of these assurances align with the

²¹ Beginning in 2012, the County was ineligible for grant funding due to an ongoing disagreement with the FAA over skydiving at E16. For the period between 1998 and 2011, the County was awarded an average of \$631,000 annually in grant funding. It is reasonable to expect the \$400,000 value referenced above would be considerably larger had the FAA not denied several grant requests due to the disagreement on skydiving.

²² There are three grant assurances that are specific to commercial air-carrier airports and consequently do not apply to the County airports. 10. Metropolitan Planning Organization, 12. Terminal Development Prerequisites, and 39. Competitive Access.

County's desire for safe and efficient airports and consequently make good business sense.

In addition to the Grant Assurances, The Airport Noise and Capacity Act of 1990 (ANCA) also imposes some restrictions on the ability of the County to restrict use of either airport. Through ANCA, the FAA retains authority over the creation and implementation of access restrictions at all publicly owned airports, regardless of the jurisdictions acceptance of AIP grant funding.

If the County declines to accept new AIP grants going forward, it may be freed from the requirements of several grant assurances and regain some local control of the airport operations when the most recently accepted existing grant assurances expire in September, 2031. But the county must still obtain FAA approval for any use restriction (i.e. curfew, specific aircraft restrictions, aviation uses such as skydiving) on either airport. At a minimum, the expiration of the Grant Assurances would terminate the FAA's authority over **some** aspects of the operation and management of the airports, thus potentially eliminating a regulatory burden on the County.

Over the long term, it is possible for the AEF to generate sufficient revenue to fund anticipated operating and capital costs without subsidy from the federal AIP or the County General Fund provided the County takes maximum advantage of the airports' real property assets through the recommended leasing strategies. Since it will take several years for the leasing process to begin producing revenue, however, a subsidy between \$500,000 and \$1,000,000 will be required annually in the interim period.

SUMMARY

- The AEF has been financially self-sustaining since at least the inception of the Roads & Airports Department. Operating revenue has been sufficient to fund operating expenses as well as the local match required for grant-funded capital projects, which have been implemented on a pay-as-you-go basis.
- The piston-propeller segment of GA is in decline, which has negative repercussions on the financial health of the AEF and its ability to remain financially self-sustaining. Nevertheless, the number of operations at the County airports is growing due to the demand for professional pilots and the associated flight schools required to train them. These trends dictate that the County change its longstanding business model, which relies on aircraft storage spaces for over 75%

of total revenue, to a business model with a more diversified and higher-yielding revenue stream.

- The key to generating a more diversified and higher-yielding revenue stream is to put the airports' real property assets to work by leasing certain parcels for non-aviation commercial development and by restructuring the FBO leaseholds.
- The airports' infrastructure needs an additional \$20 million in investment over the next 10 years.
- Over the long term, the AEF can generate sufficient revenue to fund anticipated operating and capital costs by utilizing the airports' real property assets. Since it can take several years for the leasing process to begin producing revenue, a subsidy will be required in the short term. Under current conditions, the AEF cannot remain financially self-sustaining unless the airports' real property assets are employed to generate additional revenue.
- AIP grants currently cover 90% of eligible project costs and the state provides an additional 4.5% matching grant, providing leverage for use of AEF dollars.

APPENDICES

Appraisals

All appraisal reports may be downloaded from the County Airports website, www.countyairports.org. Use the link below each title to go directly to the report.

- Reid-Hillview Airport FBO Land
Cunningham Avenue
San Jose, Santa Clara County, California 95148
goo.gl/YFB3Sc
- Vacant Commercial Land
Swift Avenue
San Jose, Santa Clara County, California 95148
goo.gl/pHU3uN
- Little League baseball fields on Cunningham Avenue
Cunningham Avenue
San Jose, Santa Clara County, California 95148
goo.gl/AHJP2y
- NWC of Tully Road and Capitol Expressway
San Jose, Santa Clara County, California 95122
goo.gl/nd6LXv
- Roads and Airports Laydown Yard
NWC Swift Avenue and Swift Lane
San Jose, Santa Clara County, California 95148
goo.gl/B7saHn
- Northeast Corner Parcel
Cunningham Avenue and John Montgomery Drive
San Jose, Santa Clara County, California 95148
<https://goo.gl/wVGQbu>
- Lion's Club
12415 Murphy Avenue
San Martin, Santa Clara County, California 95037
goo.gl/dKxLqT
- San Martin Airport FBO
13030 Murphy Avenue
San Martin, Santa Clara County, California 95146
goo.gl/rfimsA

Airports Master Plan and Business Plan

- The Master Plan containing the most recent Business Plan can be downloaded from our website (www.countyairports.org) or by using these links:
 - Reid-Hillview goo.gl/z79tey
 - San Martin goo.gl/6m1Mhz

Santa Clara County Airports Business Plan Updates

The report from Aries can be downloaded from our website (www.countyairports.org) or by using the following link. goo.gl/XeErxp

Long Range Facility Plan

The report from Kitchell can be downloaded from our website (www.countyairports.org) or by using the following link. goo.gl/Umtghm

FAA Grant Assurances

The FAA grant assurances can be downloaded from the FAA website (www.faa.gov/airports/aip/grant_assurances/) or by using the following link. goo.gl/Zj1wm5



GRANT AGREEMENT

U. S. Department of Transportation
Federal Aviation Administration

Date of Offer: September 9, 2011

Recipient: County of Santa Clara
(Herein called ["Sponsor"])

Project Number: 3-06-0225-14

Airport: Reid Hillview

OFFER

THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES to pay, as the United States' share, Ninety-five percent (95.00%) of the allowable costs incurred in accomplishing the project consisting of the following:

"Rehabilitate Runway 13L/31R (crack/slurry seal including marking/signage) - Design; Rehabilitate Taxiways A, B, C, D, E, Y and Z (crack/slurry seal including marking/signage) - Design"

as more particularly described in the Project Application dated August 15, 2011.

The maximum obligation of the United States payable under this Offer shall be \$50,350.00 for airport development.

This offer is made in accordance with and for the purpose of carrying out the provisions of Title 49, United States Code, herein called Title 49 U.S.C. Acceptance and execution of this offer shall comprise a Grant Agreement, as provided by Title 49 U.S.C., constituting the contractual obligations and rights of the United States and the Sponsor.

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION

Signature of Ted K. Hunt
Manager, San Francisco Airports District Office

SPECIAL CONDITIONS

This Grant Offer may be funded all or in part with funds from the Small Airport Fund.

ACCEPTANCE

The Sponsor agrees to accomplish the project in compliance with the terms and conditions contained herein, in the Project Application, and in the May 2011 "Terms and Conditions of Accepting Airport Improvement Program Grants" to be signed concurrent with the Grant acceptance.

Executed this 12 day of Sept., 20 11

Signature of Sponsor's Designated Official Representative

President, Board of Supervisors, Santa Clara County

(Seal)

CERTIFICATE OF SPONSOR'S ATTORNEY

I, Elizabeth E. Pinner, acting as Attorney for the Sponsor do hereby certify: That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of California. Further, I have examined the foregoing Grant Agreement, and the actions taken by said Sponsor relating thereto, and find that the acceptance thereof by said Sponsor's official representative has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and Title 49 U.S.C. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms thereof.

Signature of Sponsor's Attorney

Executed this 12 day of September 20 11

APPENDIX A. DOCUMENTED CATEX

Airport sponsors may use this form for projects eligible for a categorical exclusion (CATEX) that have greater potential for extraordinary circumstances or that otherwise require additional documentation, as described in the Environmental Orders (FAA Order 1050.1F and FAA Order 5050.4B).

To request a CATEX determination from the FAA, the sponsor should review potentially affected environmental resources, review the requirements of the applicable special purpose laws, and **consult with the Airports District Office or Regional Airports Division Office staff** about the type of information needed. The form and supporting documentation should be completed in accordance with the provisions of FAA Order 5050.4B, paragraph 302b, and submitted to the appropriate FAA Airports District/Division Office. The CATEX cannot be approved until all information/documentation is received and all requirements have been fulfilled.

Name of Airport, LOC ID, and location:

Reid-Hillview Airport, RHV, San Jose, California

Project Title:

Request for Redesignation of 8.6 Acre Parcel at the northwest corner of Tully Avenue and Capitol Expressway, San Jose, California ("Tully Parcel") for non-aeronautical use and long-term ground lease.

Give a brief, but complete description of the proposed project, including all project components, justification, estimated start date, and duration of the project. Include connected actions necessary to implement the proposed project (including but not limited to moving NAVAIDs, change in flight procedures, haul routes, new material or expanded material sources, staging or disposal areas). Attach a sketch or plan of the proposed project. Photos can also be helpful.

The County of Santa Clara as the sponsor of Reid-Hillview Airport is requesting a Release for Redesignation for Non-Aeronautical Use for an 8.6-acre property located at the northwest corner of Tully Avenue and Capitol Expressway known as the Tully Parcel to authorize long-term lease of the property. The Tully Parcel has not been used for aeronautical purposes since it was purchased in 1963. It is designated for non-aeronautical use in the current RHV Airport Layout Plan (2007) and is not necessary for current or future aeronautical use.

Give a brief, but complete, description of the proposed project area. Include any unique or natural features within or surrounding airport property.

The Tully Parcel encompasses approximately 8.6 acres at the northwest corner of Tully Avenue and Capitol Expressway in San José, California, Santa Clara County, California 95122 (Assessor's Parcel Numbers ("APN's) 491-05-020 and 491-05-001 (Portion of)). The Tully Parcel includes Swift Lane and a vacant island parcel located just north of the main site, at the southwest corner of Swift Lane and Capitol Expressway. The Tully Parcel has 411 linear feet of frontage on Capitol Expressway and 612 linear feet of frontage on Tully Road. The Tully Parcel is physically

	YES	NO
Are there any properties protected under Section 4(f) (as defined by FAA Order 1050.1F) in or near the project area? This includes publicly owned parks, recreation areas, and wildlife or waterfowl refuges of national, state or local significance or land from a historic site of national, state or local significance.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will project construction or operation physically or constructively “use” any Section 4(f) resource? If yes, describe the nature and extent of the use and/or impacts, and why there are no prudent and feasible alternatives. See 5050.4B Desk Reference Chapter 7.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project affect any recreational or park land purchased with Section 6(f) Land and Water Conservation Funds? If so, please explain, if there will be impacts to those properties.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b(3) Threatened or Endangered Species

	YES	NO
Are there any federal or state listed endangered, threatened, or candidate species or designated critical habitat in or near the project area? This includes species protected by individual statute, such as the Bald Eagle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project affect or have the potential to affect, directly or indirectly, any federal or state-listed, threatened, endangered or candidate species, or designated habitat under the Endangered Species Act? If yes, Section 7 consultation between the FAA and the US Fish & Wildlife Service, National Marine Fisheries Service, and/or the appropriate state agency will be necessary. Provide a description of the impacts and how impacts will be avoided, minimized, or mitigated. Provide the Biological Assessment and Biological Opinion, if required.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project have the potential to take birds protected by the Migratory Bird Treaty Act? Describe steps to avoid, minimize, or mitigate impacts (such as timing windows determined in consultation with the US Fish & Wildlife Service).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d. Coastal Resources	YES	NO
Will the project occur in or impact a coastal zone as defined by the State's Coastal Zone Management Plan? If yes, discuss the project's consistency with the State's CZMP. Attach the consistency determination if applicable.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project occur in or impact the Coastal Barrier Resource System as defined by the US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. National Marine Sanctuaries	YES	NO
Is a National Marine Sanctuary located in the project area? If yes, discuss the potential for the project to impact that resource.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Wilderness Areas	YES	NO
Is a Wilderness Area located in the project area? If yes, discuss the potential for the project to impact that resource.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Farmland	YES	NO
Is there prime, unique, state, or locally important farmland in/near the project area? Describe any significant impacts from the project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include the acquisition and conversion of farmland? If farmland will be converted, describe coordination with the US Natural Resources Conservation and attach the completed Form AD-1006.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b(6) Environmental Justice

	YES	NO
Are there minority and/or low-income populations in/near the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project cause any disproportionately high and adverse impacts to minority and/or low-income populations? Attach census data if warranted.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b(7) Surface Transportation

	YES	NO
Will the project cause a significant increase in surface traffic congestion or cause a degradation of level of service provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project require a permanent road relocation or closure? If yes, describe the nature and extent of the relocation or closure and indicate if coordination with the agency responsible for the road and emergency services has occurred.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b(8) Noise

	YES	NO
Will the project result in an increase in aircraft operations, nighttime operations, or change aircraft fleet mix?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project cause a change in airfield configuration, runway use, or flight patterns either during construction or after the project is implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the forecast exceed 90,000 annual propeller operations, 700 annual jet operations or 10 daily helicopter operations or a combination of the above? If yes, a noise analysis may be required if the project would result in a change in operations.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b (10) Water Quality

	YES	NO
Are there water resources within or near the project area? These include groundwater, surface water (lakes, rivers, etc.), sole source aquifers, and public water supply. If yes, provide a description of the resource, including the location (distance from project site, etc.).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project impact any of the identified water resources either during construction or operations? Describe any steps that will be taken to protect water resources during and after construction.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project increase the amount or rate of stormwater runoff either during construction or during operations? Describe any steps that will be taken to ensure it will not impact water quality.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project have the potential to violate federal, state, tribal or local water quality standards established under the Clean Water and Safe Drinking Water Acts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are any water quality related permits required? If yes, list the appropriate permits.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2.b(11) Highly Controversial on Environmental Grounds

	YES	NO
Is the project highly controversial? The term “highly controversial” means a substantial dispute exists as to the size, nature, or effect of a proposed federal action. The effects of an action are considered highly controversial when reasonable disagreement exists over the project’s risks of causing environmental harm. Mere opposition to a project is not sufficient to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement exists regarding the effects of a proposed action.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2 .b (14) Public Involvement

	YES	NO
Was there any public notification or involvement? If yes, provide documentation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5-2 .b (15) Indirect/Secondary/Induced Impacts

	YES	NO
Will the project result in indirect/secondary/induced impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
When considered with other past, present, and reasonably foreseeable future projects, on or off airport property and regardless of funding source, would the proposed project result in a significant cumulative impact?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Preparer Information

Point of Contact: Harry Freitas		
Address:		
City: 101 Skyport Dr, San Jose	State: CA	Zip Code: 95110
Phone: 408-573-2438	Email Address: harry.freitas@rda.sccgov.org	

Signature: _____



Date: 09/18/2019

Airport Sponsor Information and Certification (may not be delegated to consultant)

Provide contact information for the designated sponsor point of contact and any other individuals requiring notification of the FAA decision.

Point of Contact: Eric Peterson		
Address: 2500 Cunningham Avenue		
City: San Jose	State: CA	Zip Code: 95148
Phone Number: 4089187722	Email Address: eric.peterson@rda.sccgov.org	
Additional Name(s): Harry Freitas, Director of Roads and Airports	Additional Email Address(es): harry.freitas@rda.sccgov.org	

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s) and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.

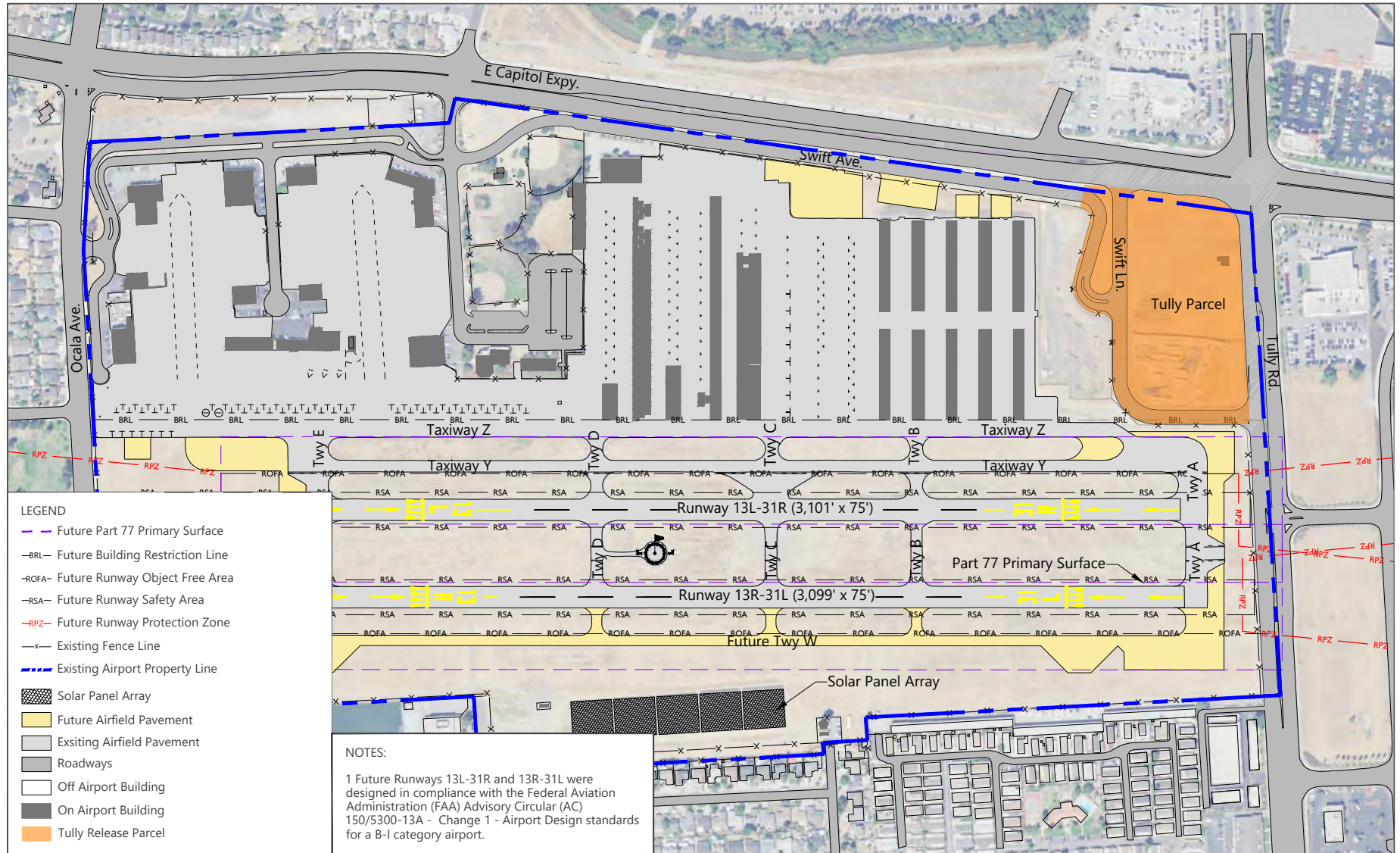
Signature: _____



Date: _____

9/19/19

Exhibit I



SOURCE: MEAD & HUNT, INC., AIRPORT LAYOUT PLAN, JULY 2008; THE COUNTY OF SANTA CLARA, PARCEL INFORMATION, AUGUST 2019



EXHIBIT

FAA DESIGN STANDARDS TULLY PARCEL

Exhibit J



Valbridge
PROPERTY ADVISORS

Appraisal Report

NWC of Tully Road and Capitol Expressway
San Jose, Santa Clara County, California 95122

Report Date: March 15, 2018



FOR:

Mr. Eric Peterson
Airport Business Manager
Roads and Airport Department
County of Santa Clara
2500 Cunningham Avenue
San Jose, CA 95148

Valbridge Property Advisors

55 South Market Street, Suite 1210
San Jose, CA 95113
408.279.1520 phone
408.279.3428 fax
valbridge.com

Valbridge File Number:
CA02-18-0019-001



55 South Market Street, Suite 1210
San Jose, CA 95113
408.279.1520 phone
408.279.3428 fax
valbridge.com

March 15, 2018

Maria Aji, PhD
408.279.1520, ext. 7120
maji@valbridge.com

Mr. Eric Peterson
Airport Business Manager
Roads and Airport Department
County of Santa Clara
2500 Cunningham Avenue
San Jose, CA 95148

RE: Appraisal Report- Land Valuation and Fair Market Rent Estimate
Vacant Land
NWC of Tully Road and Capitol Expressway
San Jose, Santa Clara County, California 95122

Dear Mr. Peterson:

In accordance with your request, we have performed an appraisal of the above referenced property. This appraisal report sets forth the pertinent data gathered, the techniques employed, and the reasoning leading to our value opinions. This letter of transmittal is not valid if separated from the appraisal report.

The subject property, as referenced above, is located at the northwest corner of Tully Road and Capitol Expressway, San Jose, Santa Clara County, California 95122. The subject site is further identified as Assessor's Parcel Number (APN) 491-05-020 and APN 491-05-001 (portion of), along with public right-of-ways. More specifically, the subject's site area includes Swift Lane and a vacant island parcel located just north of the main site, at the southwest corner of Swift Lane and Capitol Expressway. The client has not provided a site survey of the subject site and its area has been estimated at 8.6 acres or 374,616 square feet via Google Earth. It appears that a portion of the site is located within the Capitol Expressway right-of-way and may not be developable. Furthermore, a portion of the site is located within the Reid Hillview Turning Safety Zone and has restrictions on development as well. The net developable area of the subject is currently unknown but is expected to be less than 8.6 acres. The subject represents vacant land and has the potential for commercial development in the future.

The purpose of this appraisal is to develop an opinion of the market value and fair market rent of the property. We developed our analyses, opinions, and conclusions and prepared this report in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation; the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute; and the requirements of our client as we understand them.

Eric Peterson is our client in this assignment and he, along with the County of Santa Clara Roads & Airports Department, is the sole intended user of the appraisal and report and no others. The intended use is for preparation of a long-term business plan for Reid-Hillview Airport and no other use. The value opinions reported herein are subject to the definitions, assumptions and limiting conditions, and certification contained in this report.

The acceptance of this appraisal assignment and the completion of the appraisal report submitted herewith are subject to the General Assumptions and Limiting Conditions contained in the report. The findings and conclusions are further contingent upon the following extraordinary assumptions and/or hypothetical conditions which might have affected the assignment results:

Extraordinary Assumptions:

- We were not provided with a site survey and have relied on our own measurements from Google Earth for the subject site. If at a later time the site size is shown to be different, the report and market rent conclusion may need to be revisited.

Hypothetical Conditions:

- It is a hypothetical condition of this appraisal that the subject site has been carved out from the larger airport property and is considered its own separate legal parcel, separate from the Reid-Hillview Airport, and capable of transferring on its own.

Based on the analysis contained in the following report, our value conclusions are summarized as follows:

Value Conclusions

Component	As Is	As Is
Value Type	Market Value	Fair Market Rent
Property Rights Appraised	Fee Simple	N/A
Effective Date of Value	January 22, 2018	January 22, 2018
Value Conclusion	\$14,980,000	\$1,198,400 per year
	\$40 psf	\$99,867 per month

Respectfully submitted,
Valbridge Property Advisors



Maria Aji, PhD
Senior Appraiser
California Certified License #AG027130



Yvonne J. Broszus, MAI
Director
California Certified License #AG019587

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Summary of Salient Facts

Property Identification

Property Address	Northwest Corner of Tully Road and Capitol Expressway San Jose, Santa Clara County, California 95122
Latitude & Longitude	37.331441, -121.814745
Tax Parcel Numbers	491-05-020, a portion of 491-05-001 and Swift Lane, a right-of-way
Property Owners	Santa Clara County

Site

Zoning	Commercial General (CG)
FEMA Flood Map No.	06085C0254H
Flood Zone	D
Primary Land Area	8.600 acres

Valuation Opinions

Highest & Best Use - As Vacant	Commercial development
Reasonable Exposure Time	9 to 12 months
Reasonable Marketing Time	9 to 12 months

Value Conclusions

Component	As Is	As Is
Value Type	Market Value	Fair Market Rent
Property Rights Appraised	Fee Simple	N/A
Effective Date of Value	January 22, 2018	January 22, 2018
Value Conclusion	\$14,980,000	\$1,198,400 per year
	\$40 psf	\$99,867 per month

Our findings and conclusions are further contingent upon the following extraordinary assumptions and/or hypothetical conditions which might have affected the assignment results:

Extraordinary Assumptions:

- We were not provided with a site survey and have relied on our own measurements from Google Earth for the subject site. If at a later time the site size is shown to be different, the report and market rent conclusion may need to be revisited.

Hypothetical Conditions:

- It is a hypothetical condition of this appraisal that the subject site has been carved out from the larger airport property and is considered its own separate legal parcel, separate from the Reid-Hillview Airport, and capable of transferring on its own.

Aerial and Front Views

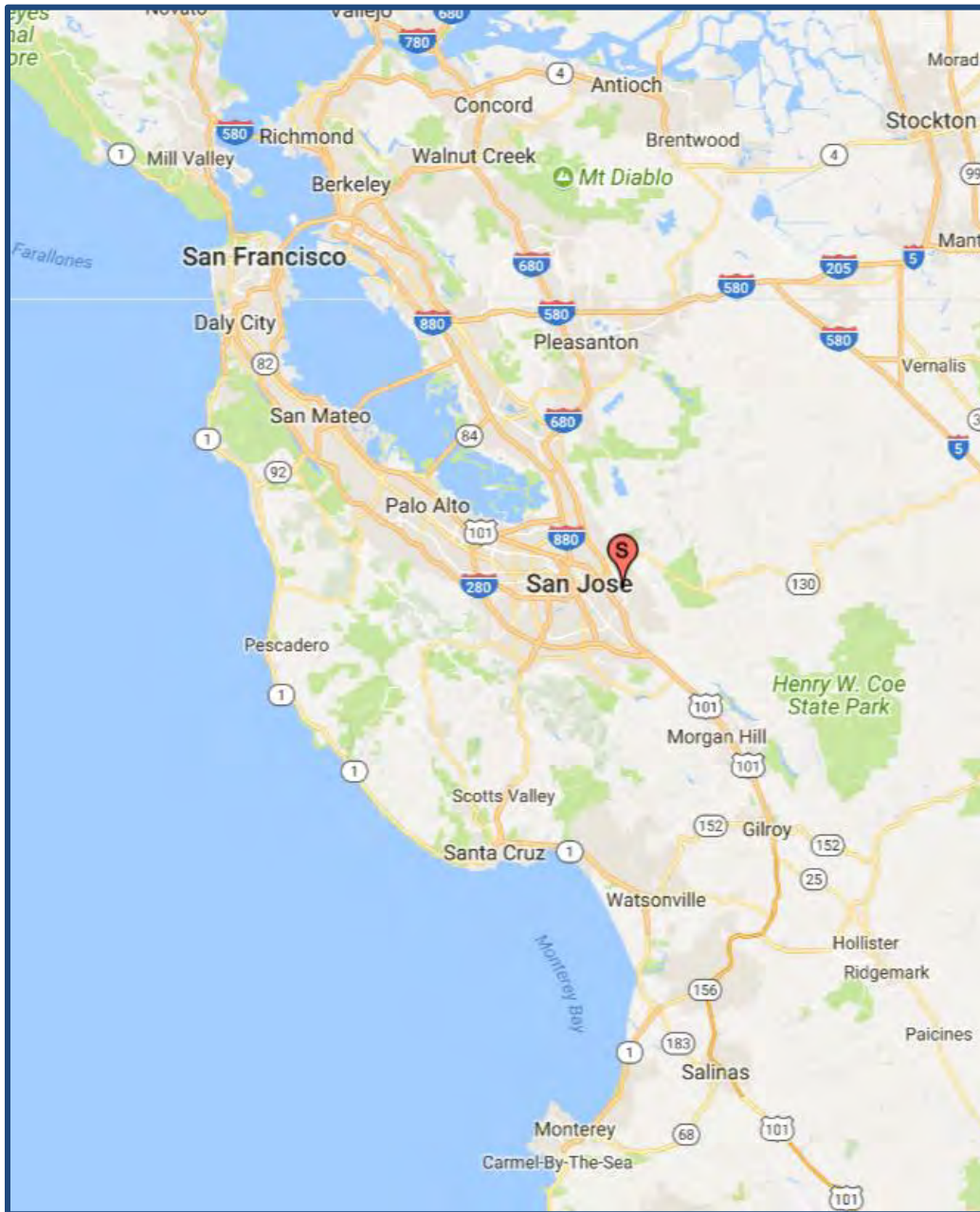
AERIAL VIEW



FRONT VIEW



Location Map



Introduction

Client and Intended Users of the Appraisal

Eric Peterson is our client in this assignment and he, along with the County of Santa Clara Roads & Airports Department, is the sole intended user of the appraisal and report and no others.

Intended Use of the Appraisal

The intended use of this report is for preparation of a long-term business plan for the airport and no other use.

Real Estate Identification

The subject property is located at the NWC of Tully Road and Capitol Expressway, San Jose, Santa Clara County, California 95122. The subject property is further identified as Assessor's Parcel Number (APN) 491-05-020 and a portion of APN 491-05-001, along with public right-of-ways. More specifically, the subject includes Swift Lane and a vacant land island located just north of the main site, at the southwest corner of Swift Lane and Capitol Expressway.

Legal Description

A legal description for APN 491-05-020 was provided in a Preliminary Title Report for the subject by First American Title Company, dated April 20, 2015. We were not provided with a legal description of the remaining subject property. A recent survey was not available. The site size and description are based upon information provided by the client and our own site measurements via Google Earth (See Extraordinary Assumption).

Use of Real Estate as of the Effective Date of Value

As of the effective date of value, the subject was a portion of the Reid-Hillview Airport and was vacant commercial land.

Use of Real Estate as Reflected in this Appraisal

The use that is reflected in the valuation is vacant commercial land.

Ownership of the Property

According to public records, title to the subject property is vested in Santa Clara County, Roads and Airports Department.

History of the Property

Ownership of the subject property has not changed within the past three years. We have considered and analyzed the known history of the subject in the development of our opinions and conclusions.

Listings/Offers/Contracts

The subject is not currently listed for sale or under contract for sale. We are unaware of any offers to purchase the subject property.

Type and Definition of Value

The purpose of this appraisal is to develop an opinion of the market value of the subject land as well as estimate the fair market rent for the subject property. "Market Value," as used in this appraisal, is defined as "The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress."¹ Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- *Buyer and seller are typically motivated.*
- *Both parties are well informed or well advised, each acting in what they consider their own best interests;*
- *A reasonable time is allowed for exposure in the open market;*
- *Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and*
- *The price represents the normal consideration for the property sold unaffected by special or creative financing or sale concessions granted by anyone associated with the sale."*

"Fair market rent," as used in this appraisal, is defined as "The most probable rent that a property should bring in a competitive and open market reflecting the conditions and restrictions of a specified lease agreement, including the rental adjustment and revaluation, permitted uses, use restrictions, expense obligations, term, concessions, renewal and purchase options, and tenant improvements (TIs). ." ²

The value conclusions apply to the value of the subject property under the market conditions presumed on the effective date(s) of value.

Please refer to the Glossary in the Addenda section for additional definitions of terms used in this report.

Valuation Scenarios, Property Rights Appraised, and Effective Dates of Value

Per the scope of our assignment we developed opinions of value for the subject property under the following scenarios of value:

Valuation Scenario	Effective Date of Value
As Is Market Value of the Subject Land	January 22, 2018
As Is Fair Market Rent of the Subject Land	January 22, 2018

¹ *The Dictionary of Real Estate Appraisal*, Sixth Edition, (Appraisal Institute, 2015), 141

² *The Dictionary of Real Estate Appraisal*, Sixth Edition, (Appraisal Institute, 2015), 140

We completed an appraisal inspection of the subject property on January 22, 2018.

Date of Report

The date of this report is March 15, 2018 which is the same as the date of the letter of transmittal.

List of Items Requested but Not Provided

- Preliminary Title Report and Site Survey

Assumptions and Conditions of the Appraisal

The acceptance of this appraisal assignment and the completion of the appraisal report submitted herewith are subject to the General Assumptions and Limiting Conditions contained in the report. The findings and conclusions are further contingent upon the following extraordinary assumptions and/or hypothetical conditions which might have affected the assignment results:

Extraordinary Assumptions:

- We were not provided with a site survey and have relied upon our own measurements from Google Earth for the subject site. If at a later time the site size is shown to be different, the report and market rent conclusion may need to be revisited.

Hypothetical Conditions:

- It is a hypothetical condition of this appraisal that the subject site has been carved out from the larger airport property and is considered its own separate legal parcel, separate from the Reid-Hillview Airport, and capable of transferring on its own.

Scope of Work

The elements addressed in the Scope of Work are (1) the extent to which the subject property is identified, (2) the extent to which the subject property is inspected, (3) the type and extent of data researched, (4) the type and extent of analysis applied, (5) the type of appraisal report prepared, and (6) the inclusion or exclusion of items of non-realty in the development of the value opinion. These items are discussed as below.

Extent to Which the Property Was Identified

The three components of the property identification are summarized as follows:

- Legal Characteristics - The subject was legally identified via an aerial map provided by the client.
- Economic Characteristics - Economic characteristics of the subject property were identified via information provided by the client, discussion with active market participants, as well as a comparison to properties with similar locational and physical characteristics.
- Physical Characteristics - The subject was physically identified via a physical property inspection by Maria Aji, PhD.

Extent to Which the Property Was Inspected

We inspected the subject on January 22, 2018.

Type and Extent of Data Researched

We researched and analyzed: (1) market area data, (2) property-specific market data, (3) zoning and land-use data, and (4) current data on comparable listings and lease transactions. We also interviewed people familiar with the subject market/property type.

Type and Extent of Analysis Applied (Valuation Methodology)

We observed surrounding land use trends, demand for the subject property, and relevant legal limitations in concluding a highest and best use. We then estimated the fair market value of the property via the Sales Comparison Approach. We have estimated ground rent based on the fee simple land value under the Highest and Best Use and an appropriate rate of return. This is a very common method to estimate ground rent. These approaches are the most relevant in estimating fair market value and market rent for vacant land.

Appraisal Conformity and Report Type

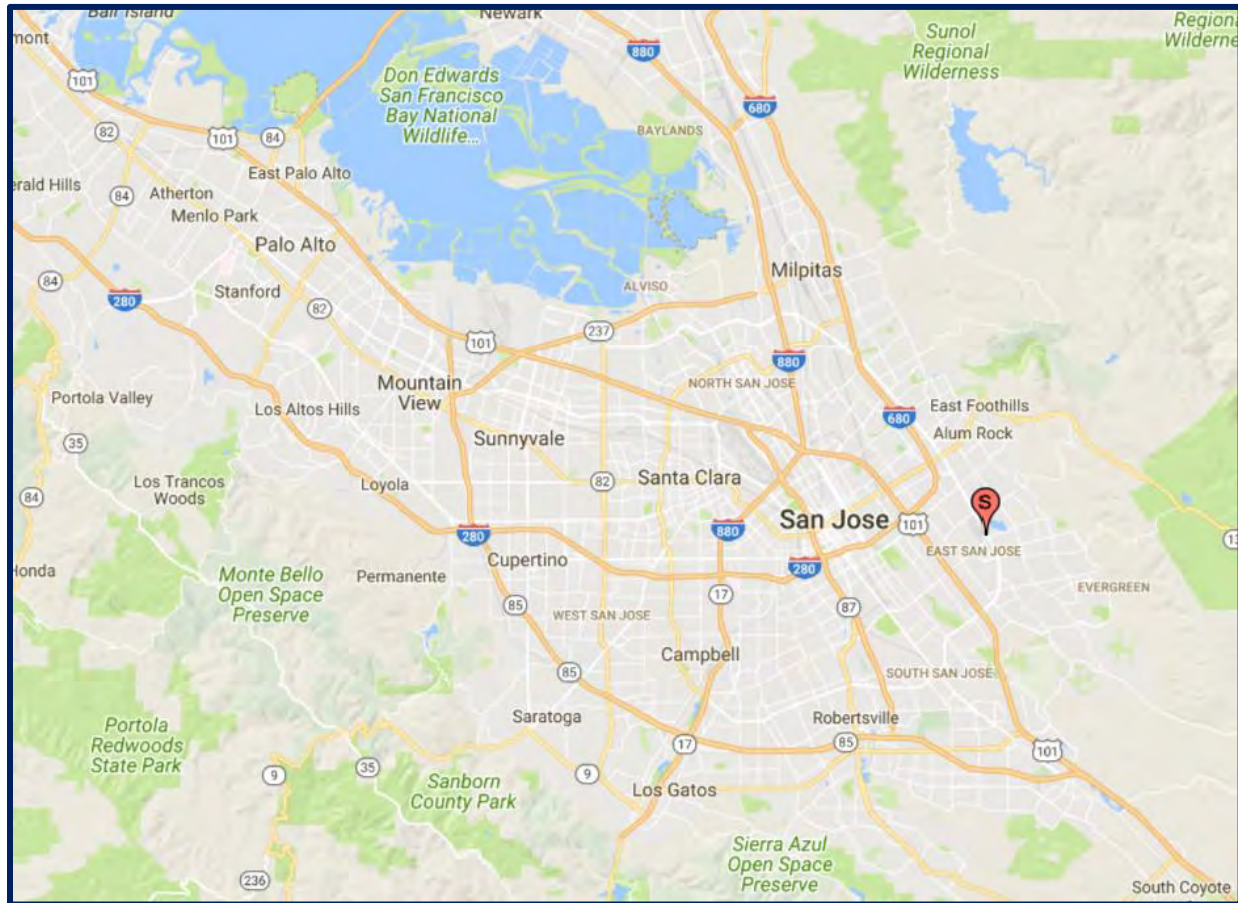
We developed our analyses, opinions, and conclusions and prepared this report in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation; the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute; and the requirements of our client as we understand them. This is an Appraisal Report as defined by the Uniform Standards of Professional Appraisal Practice under Standards Rule 2-2a.

Personal Property/FF&E

All items of non-realty are excluded from this analysis. The opinion of market value developed herein is reflective of real estate only.

Regional and Market Area Analysis

REGIONAL MAP



Overview

The subject property is located in the San Francisco Bay Region, an area which is comprised of the nine counties bordering the San Francisco Bay. According to the State of California Department of Finance, the area had a combined population of approximately 7.71 million as of January 1, 2017. The Department of Finance characterizes the San Francisco Bay Area by a moderate climate, diversified economy and one of the highest standards of living in the United States.

Population

Santa Clara County is the most populous of the nine counties comprising the San Francisco Bay Region, with an estimated 1,938,180 residents as of January 1, 2017 according to the State of California Department of Finance. San Jose is the largest city in the county and the third largest in California, surpassing San Francisco.

According to the Site to Do Business projections, presented on the following page, the county's population is expected to increase 1.2% between 2017 and 2022, while San Jose will increase approximately 1.2% over the same period.

Population

Area	2000	2010	Annual % Change 2000 - 10	Estimated 2017	Projected 2022	Annual % Change 2017 - 22
United States of America	281,421,906	308,745,538	1.0%	327,514,334	341,323,594	0.8%
California	33,871,648	37,253,956	1.0%	39,611,295	41,298,900	0.9%
Santa Clara County	1,682,585	1,781,642	0.6%	1,958,087	2,075,690	1.2%
San Jose	911,461	952,705	0.5%	1,042,940	1,103,315	1.2%

Source: Site-to-Do-Business (STDB Online)

Transportation

Excellent transportation routes and linkages to all major cities within the region and throughout the state are primary reasons for the advancement of business activity in the Bay Area, including Santa Clara County.



Air service in the area is provided by Norman Y. Mineta San Jose International Airport, which accommodated almost 12.5 million passengers in 2017. San Francisco and Oakland airports are also within an hour's drive from most portions of the county. Although air travel is down over the past two years, in 2010, San Jose International Airport completed the first phase of a two-phase expansion with the goal of increasing service to 17.3 million travelers a year, at a cost of \$1.3 billion. Planning for the second phase, nine additional gates and a new concourse extension at the south end of Terminal B, began early in 2018.

The area has a well-developed freeway system although traffic congestion is unquestionably one of the negative aspects. The county's transportation network also includes a number of expressways, which provide streamlined access to most interior locations. Lawrence Expressway, San Tomas Expressway and Foothill Expressway run north-south, while Central Expressway and Montague Expressway run roughly east-west.

Employment

High-technology employment and a skilled workforce translate into relatively high-income levels, and Santa Clara County is one of the most affluent metropolitan regions in the nation. Silicon Valley's economy is stable, although its narrow range of driving industries has kept recent growth very slow.

Significant employment sectors within Santa Clara County include manufacturing; professional, scientific, and technical services; health care; retail; and educational services. Some of the largest employers are associated with the computer industry such as Adobe, Apple, AMD, and Hewlett-

Packard; hospitals such as the VA Medical Center, Kaiser Permanente, and the San Jose Medical Center; space and aerotech including NASA and Lockheed Martin; and educational facilities such as San Jose State University and Stanford University School of Medicine.

Employment by Industry - Santa Clara County

Industry	2017 Estimate	Percent of Employment
Agriculture/Mining	6,643	0.70%
Construction	51,243	5.40%
Manufacturing	167,015	17.60%
Wholesale trade	19,928	2.10%
Retail trade	85,406	9.00%
Transportation/Utilities	27,520	2.90%
Information	34,162	3.60%
Finance/Insurance/Real Estate Services	44,601	4.70%
Services	491,556	51.80%
Public Administration	20,877	2.20%
Total	948,950	100.0%

Source: Site-to-Do-Business (STDB Online)

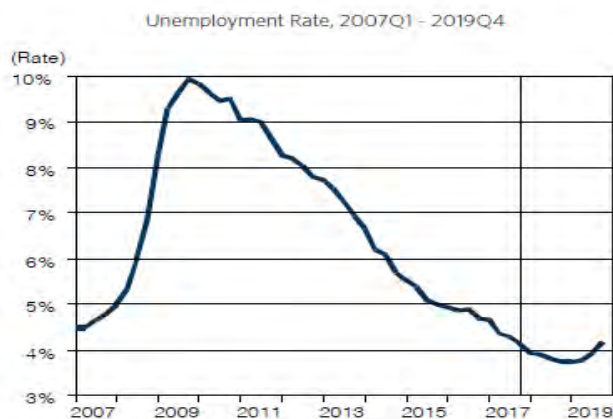
Unemployment

The unemployment rate in Santa Clara County is currently less than the rates of the state and nation. The County unemployment rate was 2.6% as of December 2017. The State of California was at 4.2% while the nation was at 4.1% for the same time period. Unemployment rates locally and nationwide have been on a decreasing trend over the last several years, as shown in the table below.

Unemployment Rates

Area	YE 2010	YE 2011	YE 2012	YE 2013	YE 2014	YE 2015	YE 2016	YE 2017
United States of America	9.3%	8.5%	7.9%	6.7%	5.6%	5.0%	4.7%	4.1%
California	11.0%	9.6%	8.0%	6.6%	5.6%	5.1%	4.2%	4.2%
Santa Clara County	8.4%	7.0%	5.5%	4.3%	3.7%	3.3%	2.6%	2.6%
San Jose	9.4%	7.8%	6.1%	4.8%	4.1%	3.7%	2.9%	2.9%

Source: Bureau of Labor Statistics - Year End - National & State Seasonally Adjusted



Sources: U.S. Bureau of Labor Statistics and UCLA Anderson Forecast

The information below was obtained from the "UCLA Anderson Forecast for the Nation: December 2017 Report," presented by the UCLA Anderson School of Management.

The forecast for 2018 is sunny, while 2019 will be cloudy according to the Anderson School of Management. The national GDP is growing at a strong rate and is expected to continue to do so into through the second quarter of 2018, but then as the unemployment rate drops below 4% and employment growth slows due

to a shortage of labor, growth will drop back to the 2% growth rate seen previously. By the end of 2019, the cloudy prediction is for a growth rate of 1.5% or possibly lower.

Monetary Policy in the Post-Yellen Era

The Janet Yellen era is coming to an end with Jerome Powell's appointment; however, his views on monetary policy are very similar to hers on monetary policy and not many changes are expected on that front. That said, on regulatory policy, Powell is anticipated to be more open than Yellen when it comes to reconsidering the 2009-2012 financial crisis regulations. Therefore, it is anticipated that the gradual interest rate normalization policy that has been underway for a year will continue well into 2019 with a 25 basis point increase from the current 1.375% rate in December and three more increases in 2018. By the end of 2019, the federal funds rate will likely approximate 3%.

Powell's Fed will also continue the policy of gradually shrinking the Fed's balance sheet, which began in October – quantitative easing that expanded the balance sheet from \$800 billion to over four trillion dollars over several years, now with a target of tightening back to \$2.5-\$3.0 trillion.

Inflation

It appears that the second quarter slowdown in inflation was transitory and inflation will continue in excess of 2% at a steady pace for the foreseeable future. The primary source for the rising inflation rate will be a significant rebound in wage growth, which after creeping along around 2%, is forecast to accelerate to approximately 4% by late 2018 on a year-over-year basis.

Real consumption spending is maintaining its strength experienced in 2016 by increasing 2.7% and 2.8% in 2017 and 2018, respectively. However, as auto sales slow in 2019 consumption growth will slip back to 2.2%. However, it is forecast by the Anderson report that as long as stock and house prices remain elevated, the consumer, or at least the high-end consumer, will remain in good shape. In the case of the lower end consumer they are encouraged by Walmart reporting a strong 2.7% increase in year-over-year same store sales in their latest quarter.

Global Economy

In response to a recovering global economy, real exports are recovering from the near zero growth of 2015 and 2016. Real exports are estimated to increase by 3.2% this year and 4.5% and 4.1% in 2018 and 2019, respectively.

The real risk to our export forecast and for that matter the entire forecast is political. In less than a year, President Trump has dismantled the Trans Pacific Partnership (TPP) trade treaty and the global climate accord. The North American Free Trade Treaty (NAFTA) could be next. Leaving NAFTA is not so simple because it would undo countless supply chains among the three countries (U.S., Canada and Mexico) involved, and the gross trade volumes among the three NAFTA partners amounts to over one trillion dollars per year. Especially hard hit would be the U.S. automobile industry where parts cross borders several times in the manufacturing of a single automobile. In the view of the Anderson Report, should the U.S. leave NAFTA, the growth outlook would deteriorate and the chance of a recession in late 2018 or 2019 would significantly increase.

The California Forecast

In the September 2017 quarterly UCLA Anderson forecast essay UCLA Anderson Forecast Director and Senior Economist Jerry Nickelsburg states that the forecast for California's unemployment is for continued growth, but that is likely due to the federal administration's difficulty getting legislation

through Congress and a result of more job seekers brought into the market, rather than more jobs being available. The tightening of immigration rules is expected to have a significant effect in California; however, protections already in place will lessen the effect. California is expected to grow at a rate slightly faster than the US as a whole, and be at a 4.5% unemployment rate by the end of 2019.

Median Household Income

In Santa Clara County, San Jose, the county seat, ranks first out of the entire nation in terms of median household income for major metropolitan areas. San Francisco, about 50 miles to the north of San Jose, also ranked as one of the wealthiest cities in the nation: it holds the number two spot with a median household income of about 9% less than San Jose.

Total median household income for the region is presented in the following table. Overall, the subject compares favorably to the state and the country.

Median Household Income

Area	Estimated 2017	Projected 2022	Annual % Change 2017 - 22
United States of America	\$56,124	\$62,316	2.2%
California	\$65,223	\$74,370	2.8%
Santa Clara County	\$99,069	\$108,576	1.9%
San Jose	\$88,028	\$100,012	2.7%

Source: Site-to-Do-Business (STDB Online)

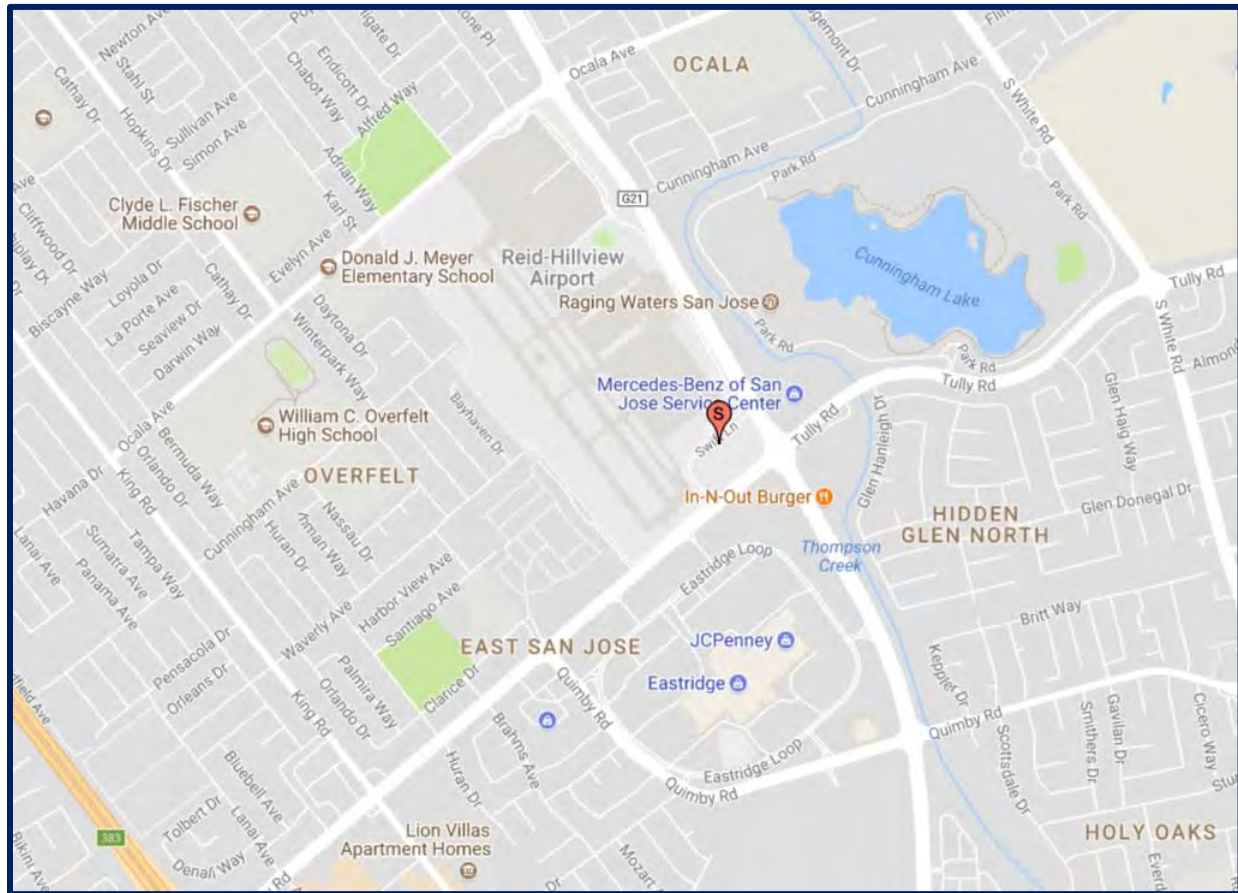
Conclusions

Historically, the Santa Clara County region has been considered a desirable place to both live and work. Physical features and a strong local economy attract both businesses and residents. It is a worldwide leader in technology and a regional employment center, with an increasingly diversified economy. While traffic congestion will continue to be a problem, residents remain among the most affluent in the country.

The election of Donald Trump signaled a change in economic policy. In the short run that will likely bring with it more real growth and inflation along with higher interest rates. However, because the economy is operating at or close to full employment, the growth spurt is expected to be short-lived. There is uncertainty in the long-term economic forecast. Nevertheless, in the short term, 2018 is expected to be another prosperous year as we continue to say goodbye to the effects of the financial crisis.

City and Neighborhood Analysis

NEIGHBORHOOD MAP



The subject is located in the City of San Jose. San Jose is the largest city in the county and is the County Seat. Historically, San Jose was a support city for the surrounding agricultural industry, acting as a cannery and distribution center. More recently, San Jose served as a bedroom community for Sunnyvale and Santa Clara (the original "Silicon Valley"), providing affordable housing for workers. Today, San Jose has come into its own right as an industrial and commercial center.

San Jose is located in the heart of "Silicon Valley," in the central portion of Santa Clara County. San Jose is bordered by the City of Santa Clara and the San Francisco Bay to the north, the City of Morgan Hill to the south, and the cities of Saratoga and Cupertino to the west.

San Jose is the largest city in Santa Clara County, both in terms of population and area. The Urban Service Area is approximately 87,000 acres, of which 20% is vacant or unused. About 40% of this vacant land is designated for residential development. These residential land reserves will enable San Jose to accommodate demands for new housing created by future economic development.

Newer industrial development in San Jose consists of administrative offices, research and development, and light manufacturing uses, replacing many of the heavier manufacturing uses that

historically characterized the central city industrial areas. In fact, some of the older, heavy-industrial development is being rehabilitated and converted to new, high-technology uses. Most of San Jose's industrial development has a low-profile, landscaped industrial park character.

San Jose has excellent access to local transportation and is served by many regional transportation networks. Interstate 280 runs within the central region of the city in an east-west direction and provides access to the San Mateo peninsula and San Francisco to the northwest. Interstate 280 eventually turns into Interstate 680, where it crosses east of Highway 101. At this point it veers northeast toward the East Bay and Tri-Valley areas of Alameda County. Interstate 880 originates in the East Bay and slashes through San Jose where it changes into Highway 17 and continues onward toward the Pacific Ocean and Santa Cruz.

The Bayshore Freeway, Highway 101, traverses the city in a generally north-south direction and also links to the peninsula and San Francisco with San Jose. The Stevens Creek Freeway, Highway 85, runs along the western boundary of the city and links the two major east-west routes. Highway 85 was recently extended from Interstate 280 south to the southern portions of San Jose, Los Gatos, and Saratoga. This extension has dramatically improved access to these desirable residential areas with the northern employment centers in Mountain View. Similarly, Highway 237 runs in an east-west direction through the northern portion of San Jose connecting Mountain View to the west with the City of Milpitas to the east.

The San Jose downtown core has undergone major renovation and revitalization over the last 15 years. Improvements to the freeway system, as well as construction of the new light rail system, have significantly improved access to the downtown core from other areas of the city and county. Other major downtown public projects include the Children's Discovery Museum, the new San Jose Convention Center, as well as the San Jose Arena, home of the San Jose Sharks of the National Hockey League and also the San Jose Barracuda of the American Hockey League, who began play in San Jose with their 2015-16 season.

Today, San Jose's revitalized Downtown Core has evolved into financial, office, cultural and entertainment centers. Outside the Downtown Core Area, commercial development exists in the form of neighborhood and community commercial centers, strip commercial developments along arterial streets, and regional shopping centers.

Reid Hillview Airport

The Reid Hillview Airport is one of the most significant land uses in the immediate area. The airport consists of approximately 179 acres and another 19 acres are controlled through easements. It is located about five miles east of San Jose International Airport in an urban area surrounded by residential and commercial uses. The airport has two parallel runways measuring approximately 3,100 feet in length and two parallel taxiways. These runway lengths will only support small aircraft; they do not support corporate jets. Given the surrounding uses, it is unlikely that the runways will be extended to support larger aircraft.

The airport also includes an air traffic control tower and a terminal building, facilities for fixed base operator (FBO) tenants and hangars and tie-down spaces, rented to aircraft owners. The airport does not have a restaurant operator, or other food-service provider. This is uncommon as most other

general aviation airports have some sort of food provider on-site. The lack of a food provider negatively affects the appeal of the airport for transient traffic, as many recreational pilots fly to airports for a meal.

The proximity of the residential uses and the Eastridge Mall to this airport has been of public concern for many years. This resulted in a somewhat tumultuous time over the past three decades. During this time, the County considered closing the airport several times. Several studies were conducted to explore the possibility. The legal options relating to a potential sale or lease of the airport, however, would be extremely complex and lengthy. Likely for this reason, there is no current or anticipated motivation to pursue this course of action.

Reid Hillview Airport is currently home to several hundred aircraft, multiple Fixed Based Operators (FBOs), and a flight school. In addition, there are other general aviation tenants at the airport that lease land directly from the airport. There are no private corporate leaseholders of land at the airport, as the airport does not serve this market segment.

Operations at the airport have increased over the past five years, but still remain lower than the levels experienced 10 years ago. The recent increase is likely due, at least in part, to the overall growth in the economy. Additionally, Reid Hillview may be taking overflow from nearby San Jose International for smaller aircrafts.

Neighborhood Location and Boundaries

The subject neighborhood is located in the southeast section of San Jose. The area is urban in nature. The neighborhood is bounded by Highway 680 and Alum Rock Avenue to the north, Highway 101 to the east, and the city limits of San Jose to the south and west.

Immediate Environs

The subject's immediate environs include a mix of uses, including public, residential, retail and entertainment uses. The Reid-Hillview Airport is a dominant use in the immediate area. The airport is located immediately to the north and west of the subject. At the corner of Capitol Expressway and Tully Road, are various retail uses including Eastridge Mall, a Mercedes Benz dealership, and a neighborhood shopping center with Safeway and food establishments. In the wider area, there are single family neighborhoods to northeast, southeast, and southwest of the subject neighborhood. Also to the northeast is Cunningham Park.

Access to the area is good. Highways 680 and 101 are located about two miles from the subject via both Capitol Expressway and Tully Road. Capitol Expressway has four lanes of traffic in each direction, plus turn lanes at the intersection with Tully Road and Cunningham Avenue. Both intersections are fully signalized. Average daily traffic on Capitol, in the subject's area, is about 78,000 vehicles on Capitol Expressway. This is an especially high level of traffic providing visibility to the subject site. Overall, the subject has good visibility and is easily accessible to both public and private transportation.

The area around the subject has experienced growth over the past two decades, especially at the Capitol and Tully intersection. The Mercedes dealership and a neighborhood shopping center were built, on the northeast and southeast corners of the intersection, respectively, in the early 2000s. This

dealership is reported to be the most successful new Mercedes dealership launch in Mercedes Benz history. This may be partly attributed to the high traffic in the area. It is also likely attributable to high-income residential developments and population growth in the Silver Creek area, a few miles to the south. The shopping center, tenanted with mostly national, credit tenants, had no vacancies at the time of inspection. This is indicative of the overall area, which appears to have a low vacancy rate of less than 5%. At the southwest corner of the intersection is an infinity auto dealership which was constructed in 2008.

A super-regional shopping center, Eastridge Shopping Center, is located near the southwest corner of Capitol and Tully. Eastridge has been experiencing a steady decline in profitability in recent years, a trend that increased with the recent renovations and expansions of other regional malls in the San Jose Metropolitan Area. The owners of Eastridge Mall have plans to invest \$90 million into updating the property, including demolishing 307,000 square feet of existing space and then building the same amount of space, but including an 80,000-square-foot movie cinema, and an outdoor promenade section which would feature rows of shops in a village style, similar to Santa Clara's new Santana Row shopping center. The mall has been undergoing renovations throughout 2017 and the present time.

Tully Road is the predominant retail corridor in the area. There are no other retail uses traveling north on Capitol Expressway until Story Road, about one mile north of the subject.

In summary, the subject is located in an area with a variety of uses. The airport and nearby commercial uses are most dominant. Most retail uses are located to the south along Tully Road. The subject has good visibility and access from Capitol Expressway and Tully Road, major arterials in the area. Thus, it is considered a desirable location for future commercial use.

Demographics

The following table depicts the area demographics in San Jose within a one-, three-, and five-mile radius from the subject.

Neighborhood Demographics

Radius	1 mile	3 miles	5 miles
Population Summary			
2000 Population	31,068	256,962	483,826
2010 Population	29,616	254,965	505,217
2017 Population	31,294	273,577	548,529
2022 Population Estimate	32,503	287,202	578,715
Annual % Change (2017 - 2022)	0.8%	1.0%	1.1%
Housing Unit Summary			
2000 Housing Units	5,969	60,073	130,885
% Owner Occupied	75.9%	63.6%	59.8%
% Renter Occupied	23.6%	35.3%	38.4%
2010 Housing Units	6,128	64,747	148,768
% Owner Occupied	67.0%	56.5%	53.9%
% Renter Occupied	30.4%	40.0%	41.7%
2017 Housing Units	6,327	68,029	158,519
% Owner Occupied	65.8%	55.3%	52.7%
% Renter Occupied	32.3%	41.9%	43.9%
2022 Housing Units	6,571	71,441	167,611
% Owner Occupied	65.6%	54.9%	52.2%
% Renter Occupied	32.3%	42.0%	44.0%
Annual % Change (2017 - 2022)	0.8%	1.0%	1.1%
Income Summary			
2017 Median Household Income	\$68,548	\$68,752	\$76,451
2022 Median Household Income Estimate	\$77,145	\$77,983	\$85,505
Annual % Change	2.4%	2.6%	2.3%
2017 Per Capita Income	\$17,510	\$22,844	\$29,269
2022 Per Capita Income Estimate	\$19,754	\$25,857	\$33,363
Annual % Change	2.4%	2.5%	2.7%

Source: Site-to-Do-Business (STDB Online)

Transportation Routes

Within the immediate area of the subject, transportation access helps define the character of its development. Tully Road and Capitol Expressway are the major travel and commuter routes within the area of the subject, with average daily traffic counts of 30,000 and 78,000 vehicles, respectively. This provides excellent exposure to the subject site. Capitol Expressway carries four lanes of traffic in each direction while Tully Road carries three. Major transportation in the larger area includes Highway 101, Highway 680, and Alum Rock Avenue about two miles from the subject. Access to the area is considered good.

Neighborhood Land Use

The subject neighborhood is located in an area with primarily commercial land uses along primary arterials such as Capitol Expressway and Tully Road and residential uses along secondary roadways. An approximate breakdown of the development in the area is as follows:

LAND USES

Use	Percent
Developed	95%
Built up:	95%
Residential:	70%
Retail:	15%
Public/ Quasi-Public:	10%
Industrial:	0%
Vacant:	5%

Conclusions

The subject enjoys good visibility and access from its location at the intersection of Tully Road and Capitol Expressway, two major neighborhood commuter routes. The surrounding area consists of a mix of commercial and residential buildings with primarily single-family residences on interior streets. The location is desirable due to its prominent exposure and proximity to commercial amenities as well as major transportation arterials. Overall, the subject neighborhood is in a stable stage of its life cycle.

Site Description

The subject site is located at the northwest corner of Tully Road and Capitol Expressway, San Jose, Santa Clara County, California 95122. The subject consists of Assessor's Parcel Number (APN) 491-05-020, and a portion of a larger parcel, APN 491-05-001, along with public right-of-ways. More specifically, the subject includes Swift Lane and a vacant island parcel located just north of the main site, at the southwest corner of Swift Lane and Capitol Expressway, portion of APN 491-05-001.

Swift Lane is an access road the runs around the northwest side of APN 491-05-020. The road intersects both Capitol Expressway and Tully Road, which also provides access to Swift Avenue, another access road running parallel to Capitol Expressway.

The characteristics of the site are summarized as follows:

Site Characteristics

Location:	Northwest corner of Tully Road and Capitol Expressway, San Jose, Santa Clara County, California 95122
Gross Land Area:	8.6 Acres or 374,616 SF
Usable Land Area:	8.6 Acres or 374,616 SF
Usable Land %:	100.0%
Shape:	Irregular
Average Depth:	260 feet
Topography:	Level
Drainage:	Assumed adequate
Grade:	At street grade
Utilities:	All public utilities are available to the site.
Off-Site Improvements:	Both Tully Road and Capitol Expressway are fully improved roadways with sidewalks, curbs, gutters, streetlights, and landscaping. Capitol Expressway carries four lanes of traffic in each direction, north and south. Tully Road carries three lanes of traffic in each direction, east and west.
Interior or Corner:	Corner
Signalized Intersection:	Yes: Traffic signal nearby that enhances access to the site

Street Frontage / Access

Frontage Road	Primary	Secondary
Street Name:	Capitol Expressway	Tully Road
Street Type:	Commercial	Commercial
Frontage (Linear Ft.):	411	612
Number of Curb Cuts:	0	0
Traffic Count (Cars/Day):	78,000	30,000

Flood Zone Data

Flood Map Panel/Number: 06085C0254H
Flood Map Date: 05-18-2009
Flood Zone: D

Zone D designation is used for areas where there are possible but undetermined flood hazards. In areas designated as Zone D, no analysis of flood hazards has been conducted. Mandatory flood insurance purchase requirements do not apply, but coverage is available. The flood insurance rates for properties in Zone D are commensurate with the uncertainty of the flood risk.

Other Site Conditions

Soil Type: We have not been provided a geotechnical report for the subject property. Based on our physical inspection, soil conditions appear stable.

Environmental Issues: We make no representations as to the presence of toxins and hazardous materials on the subject site. We are appraising the site as if clean. If this is of concern to any reader of this report, it is our recommendation that an environmental report be obtained from the appropriate professionals qualified to issue such opinions.

Easements/Encroachments: According to the Preliminary Report by the First American Title Company dated April 20, 2015, the subject property includes an easement for a single line of towers for the transmission of electrical energy and incidental purposes, an easement for a single line of towers for the transmission of electrical energy and telegraph wires and incidental purposes, and an easement for cross arms and wires and incidental purposes in favor of the Pacific Gas and Electric Company. Furthermore, the public has a right in and to the portion of the subject land lying within Swift Lane, Tully Road, and Capitol Expressway.

The impact of these easements to the value of the property is expected to be minimal.

Earthquake Zone: The property is not located in an Alquist-Priolo Special Studies Zone for earthquake hazard. Earthquake hazard is typical for the overall area.

Adjacent Land Uses

North:	Public/ Quasi-Public (Reid-Hillview Airport)
South:	Commercial (Eastridge Shopping Mall)
East:	Commercial (Mercedes-Benz dealership)
West:	Public/Quasi-Public (Reid-Hillview Airport)

Site Ratings

Access:	Excellent
Visibility:	Excellent

Zoning Designation

Zoning Jurisdiction:	City of San Jose
Zoning Classification:	CG, Commercial General
General Plan Designation:	Neighborhood/Community Commercial
Permitted Uses:	A variety of commercial uses

Zoning Comments

The subject property is under the jurisdiction of the City of San Jose and is zoned Commercial General. The General Plan land use designation is Neighborhood/Community Commercial.

The Commercial General zoning district is intended to serve the needs of the general population. This district allows for a full range of retail and commercial uses with a local or regional market. Development is expected to be auto-accommodating and includes larger commercial centers as well as regional malls.

Allowed uses include retail sales, child day care centers, medical offices, veterinary clinics, hotels or motels, laundromat, personal services, general business offices, financial institutions, and other conforming uses.

The minimum lot area is one acre. The minimum front setback is 15 feet and side setback at a corner is 12.5 feet. The maximum building height is 65 feet.

The Neighborhood/ Community Commercial land use designation supports a very broad range of commercial activity, including commercial uses that serve the communities in neighboring areas, such as neighborhood serving retail and services and commercial/professional office development. Neighborhood/ Community Commercial uses typically have a strong connection to and provide services and amenities for the nearby community and should be designed to promote that connection with an appropriate urban form that supports walking, transit use and public interaction. General office uses, hospitals and private community gathering facilities are also allowed in this designation. The maximum FAR is 3.5 (1 to 5 stories).

The subject is also governed by the Airport Land Use Plan (ALUP) specific to Reid Hillview. This plan indicates that a portion of the subject, at the southwestern portion of the site, is in the Turning Safety Zone. The Turning Safety Zone (TSZ) allows a non-residential maximum of 100 people per acre

which includes open area and parking area for the building occupants. A minimum of 20% of the gross site area of the TSZ must be devoted to open space. Prohibited uses in this area include 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. Low density residential uses are permitted though it is not a likely use given the subject's commercial location. No hazardous material facilities (gasoline stations, etc.) are permitted either.

We estimate that the Turning Safety Zone (TSZ) impacts roughly 20-25% of the site. At an average 22% impact, it impacts roughly 82,500 square feet of the site. Of this amount, 20%, or 16,480 square feet would need to be devoted to open space. This represents about 4.5% of the entire site area.

The TSZ on the subject is located on the westerly side of the subject. Given that a retail use is the most likely use for the subject (as discussed in the next Highest and Best Use section), the normal building coverage ratio for a one-story development is 25%. This leaves about 75% of the site available for parking and landscaping/open space. It is likely that most of the 16,480 square feet of open space necessary within the TSZ zone could be accommodated as part of the normal parking and landscaping requirement for a retail development. We would expect that any buildings would be located on the eastern side of the property. Thus, the TSZ has a negligible impact, on the development potential or utility of the site.

Analysis/Comments on Site

The subject consists of an 8.6-gross acre corner site at a high-trafficked intersection. Based on our site visit, it is likely that a portion of the Capitol Expressway street frontage is part of that roadway and would not be included in the net developable land area. Furthermore, a portion of the site is located within the Turning Safety Zone of the adjacent Reid Hillview Airport. Development within this area is impacted due to its proximity to the airport's runways. The site is level and has a rectangular shape and corner lot configuration. There are 760 feet of frontage along Tully Road and 490 feet of frontage along Capitol Expressway.

The subject site is mostly level. The parcel is at grade with the street frontages. Curbs and gutters are present on all sides of the parcel. Sidewalks are only in place along the Tully Road frontage. Utilities are located overhead along Capitol Expressway. Overall, the physical characteristics of the site would make it suitable for a variety of developments.

Site access is currently provided via two curb cuts on Swift Lane, a feeder road that connects with Swift Avenue, Tully Road, and Capitol Expressway. However, Swift Lane is part of the subject property in this appraisal assignment and we expect that Swift Lane will continue to provide access to the subject property in the future. Additional access is provided via Capitol Expressway.

Swift Avenue runs parallel to Capitol Expressway and is separated from that roadway by a 10-foot landscape strip that has not been maintained and is now mostly either vacant dirt or overgrown with weeds.

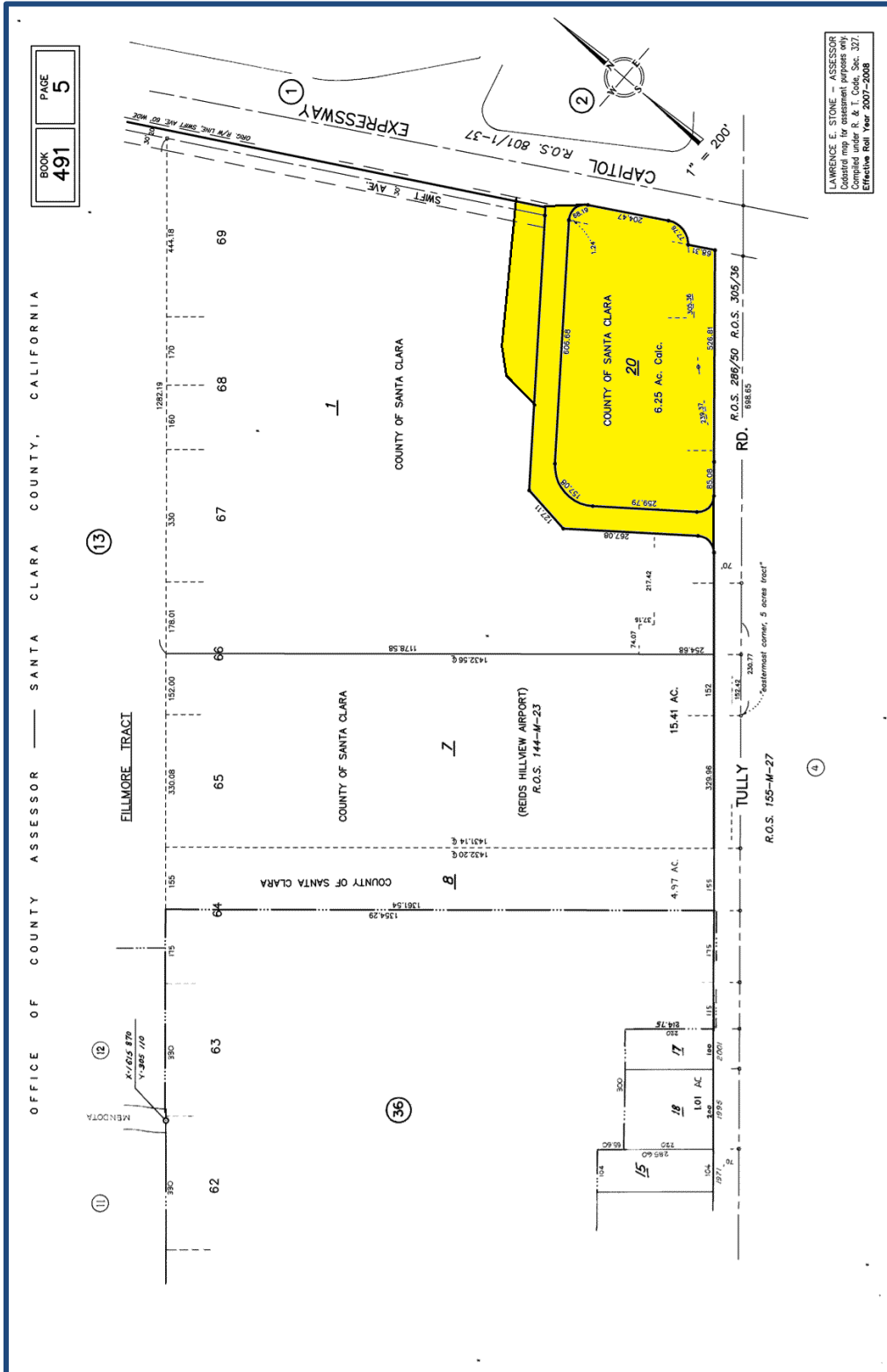
We assume the site is environmentally clean and that the soils could support development. The zoning is Commercial General and the General Plan land use designation is Neighborhood/

Community Commercial, which support a wide variety of permitted commercial uses. Overall, the site is well suited for a variety of developments.

At the time of inspection, the western portion of the site was sectioned off and fenced. It appears that this area is being used as a storage yard; several cars were also parked in this area. It is our understanding that occasional occupancy exists on short-term lease agreements. For purposes of this report we assume that the subject site is cleared and leveled and free of long-term leases.

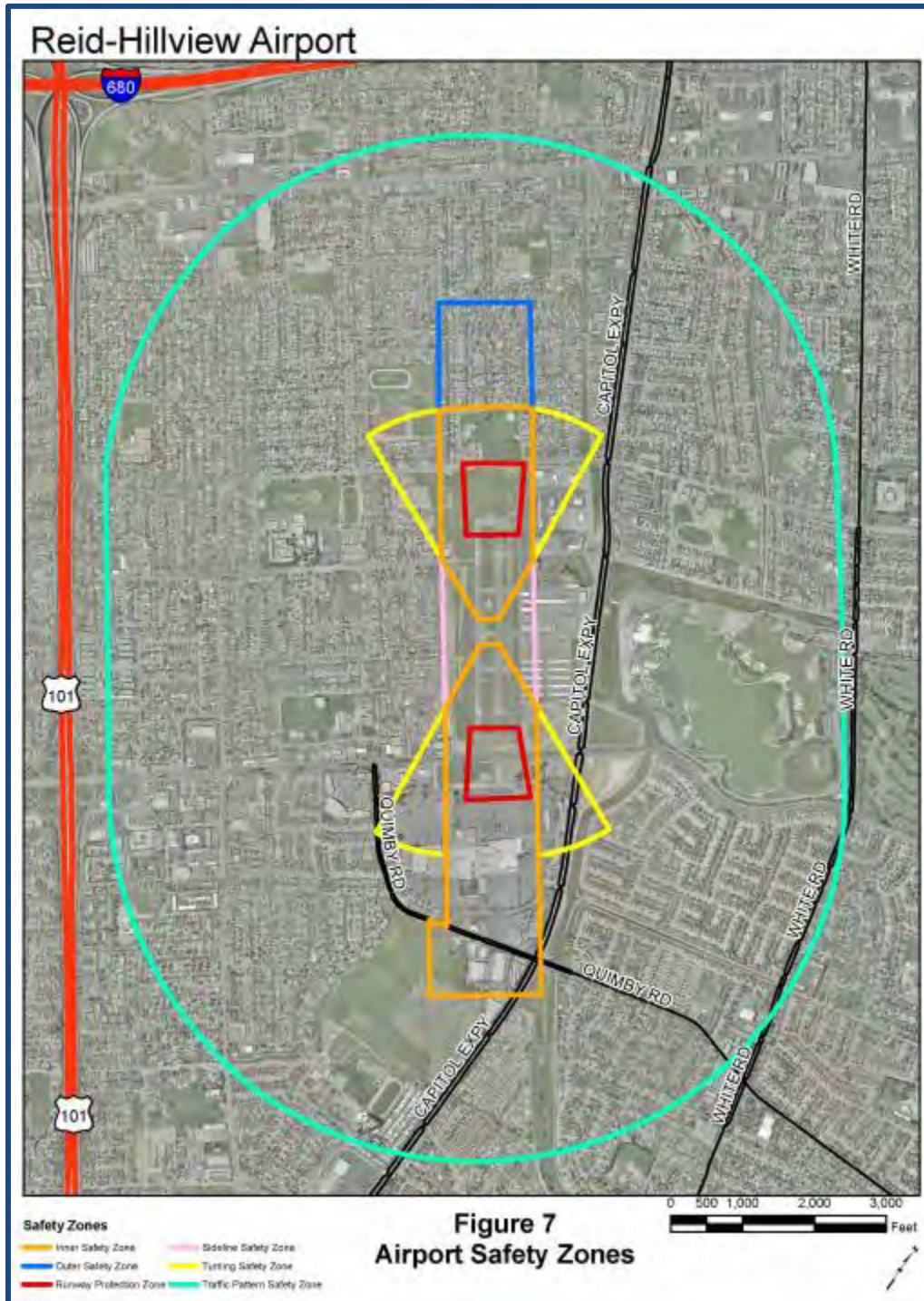
We note that a portion of the site is located within the Turning Safety Zone of the adjacent, Reid Hillview Airport. Airport vicinity height limitations are required to protect the public safety, health, and welfare by ensuring that aircraft can safely fly in the airspace around an airport. This protects both those in the aircraft and those on the ground who could be injured in the event of an accident. This zone has some restrictions on development, although the restrictions are not intense. Overall, the subject zoning would permit a variety of commercial developments.

TAX/PLAT MAP (APPROXIMATION)

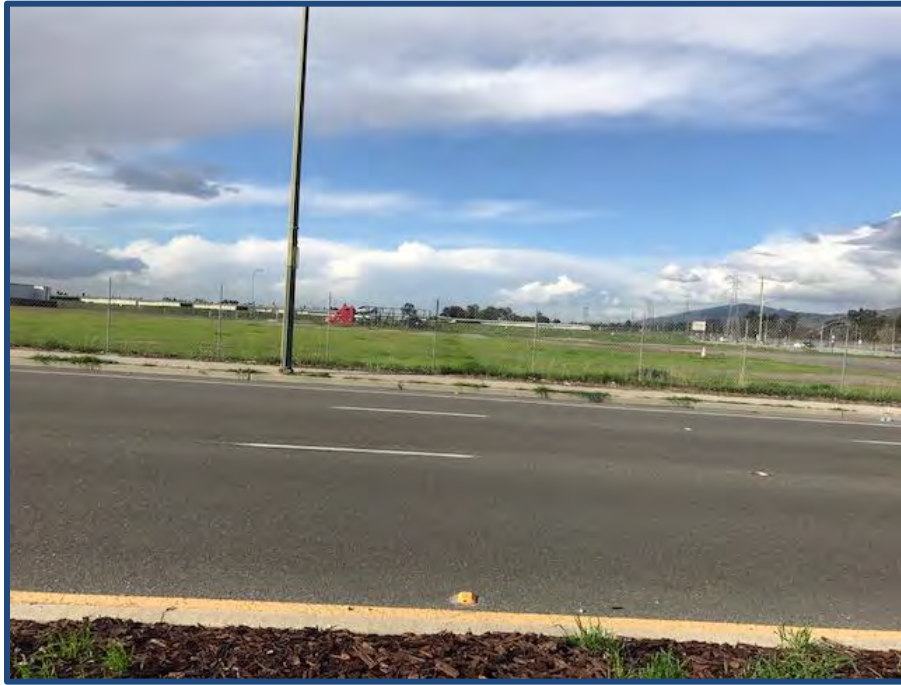


LAWRENCE E. STONE — ASSESSOR
Commissioner of the State Board of Equalization
Credentialed under R. & T. Code, Sec. 3271
Effective Roll Year 2007-2008

REID-HILLVIEW AIRPORT SAFETY ZONES



Subject Photos



View of subject land from Tully Road



View of Swift Lane



View of the subject from Swift Lane facing east



Closer view of the subject land

Assessment and Tax Data

Assessment Methodology

The State of California has provided for a unified system to assess real estate for property taxes. Assessment Districts are established on a county basis to assess real estate within the county. The appraised property falls under the taxing jurisdiction of Santa Clara County.

Assessed Values and Property Taxes

The subject is owned by the County of Santa Clara and is not currently taxed. If the property were leased by a private party, the property would be re-assessed at full market value and the possessory interest would be taxed at rates similar to other properties in the area.

General Taxes

The amount of General Taxes due is quantified by multiplying the assessed value by the tax rate. In the State of California, real estate is assessed at 100% of market value as determined by the County Assessor's Office. The tax rate consists of a base rate of 1% plus any bonds or fees approved by the voters. The County Tax Rate for the subject area is 1.293160%.

Direct Assessments

Direct assessments are tax levies that are not dependent upon the assessed value of the property. They are levied regardless of assessment. According to the Santa Clara County Tax Collector's Office, the direct assessments for the subject area are as follows: Evergreen Elementary assessment, Santa Clara Valley Water District flood and safe clean water assessments, San Jose sewer sanitation and storm assessment, San Jose library assessment, Santa Clara County mosquito-vector control assessments, San Francisco Bay Restoration Authority assessment, and Santa Clara Valley Open Space Authority assessments.

Current and Future Taxes

Proposition 13 was passed by voters in June 1978 and substantially changed the taxation of real estate in California. This constitutional amendment rolled back the base year for assessment purposes to the tax year 1975-1976. Annual increases in assessed value are limited to 2 percent per year, regardless of the rate of inflation. Real estate is subject to re-appraisal to current market value upon a change in ownership or new construction. Property assessments in years subsequent to a change of ownership or new construction are referred to as factored base values.

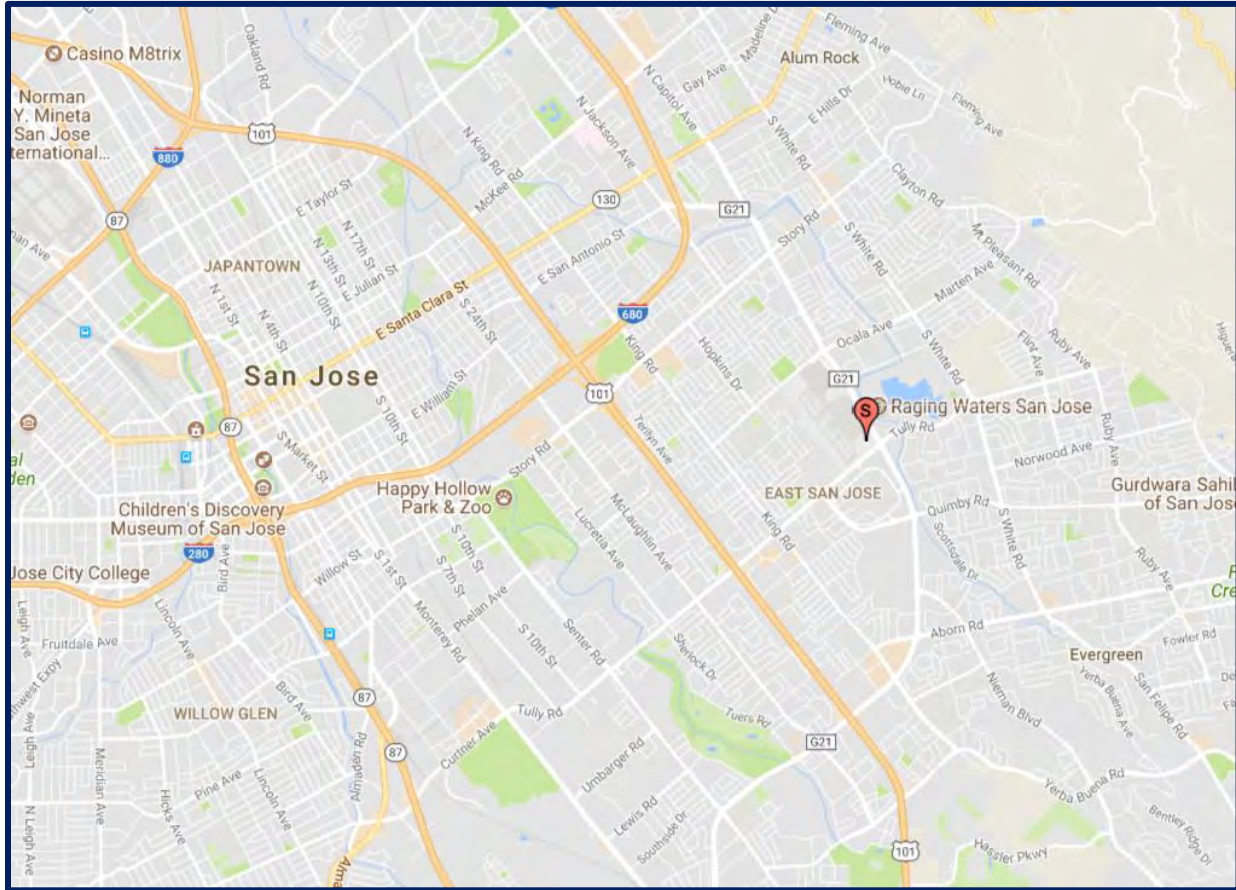
Proposition 8, which passed in 1979, states that the Assessor shall lower tax roll values to fair market value whenever the assessed value exceeds fair market value. It mandates that the lower of fair market value or factored base value be placed on the assessment roll. When fair market values are enrolled, the Assessor reassesses the property annually until such time as fair market value again equals or exceeds the factored base year value. For properties that have been owned for several years, the assessed value may not reflect the current fair market value. Furthermore, due to adjustments following a Prop 8 reduction, increases in assessed value can increase substantially more than 2% per year until the assessment again matches the factored base year value.

Conclusions

The subject property is not currently taxed because it is under government ownership. If the property is leased to a private party, it will be re-assessed at full market value and the possessory interest would be taxed at rates similar to other properties in the area.

Market Analysis

MARKET AREA MAP



In this appraisal, the subject property represents vacant commercial land. A discussion of the Santa Clara County Retail market as well as of the commercial land market is warranted.

Santa Clara County Retail Market

Santa Clara County is one of the strongest job markets in the United States. The unemployment rate as of the end of the fourth quarter 2017 stood at a mere 2.6%, with an all-time high of one million employed. The County has added nearly 208,000 new jobs across many sectors since bottoming out in mid-2009. Putting this in perspective, Santa Clara County has created more new jobs since 2010 than the combined population of the cities of Sunnyvale and Cupertino.

According to Costar statistics, the retail market experienced positive net absorption of 433,597 square feet in the fourth quarter of 2017. The South Bay/ San Jose metro retail vacancy rate decreased slightly in the fourth quarter of 2017 to 4.2%. At the end of the fourth quarter 2017, there was a total of 3,347,267 square feet of vacant retail space in the South Bay/ San Jose metro.

Average quoted asking rental rates in the South Bay/ San Jose metro are down over previous quarter levels, and up from their levels four quarters ago. Quoted rents ended the fourth quarter of 2017 at

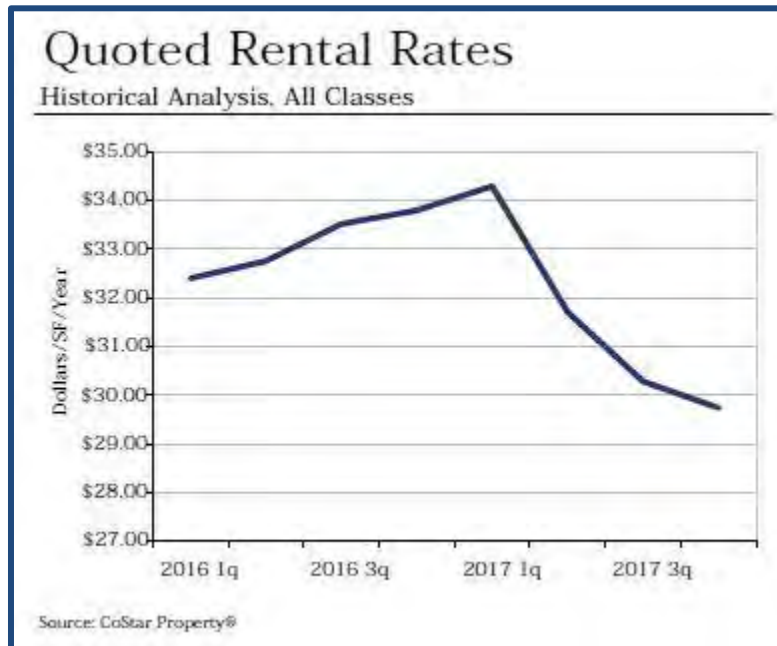
\$2.68 per square foot per month, NNN, \$0.01 below the \$2.69 per square foot reported in the third quarter of 2017. We anticipate that deal activity will continue to rise and rental rates will continue to grow for quality space.

South San Jose Submarket

We next turn our attention to the subject's submarket area and competition. Demand for retail space in the subject's market area is considered good. The South San Jose submarket had a total inventory of 27,727,053 square feet at the end of the fourth quarter 2017, with a total of 271,619 square feet under construction. Vacancy in the South San Jose submarket is low, which we estimate to be less than 5%.

The average asking rate for retail space in the submarket for the quarter was \$2.48 per square foot per month, NNN, a decrease of 14% over the previous year. This compares to the Silicon Valley average of \$2.68 per square foot, NNN, which saw a 5.39% increase during this period. The submarket is performing below the overall Silicon Valley market in which it competes. Still, there is good retail activity in the subject's immediate area, especially along the areas main thoroughfares including Tully Road.

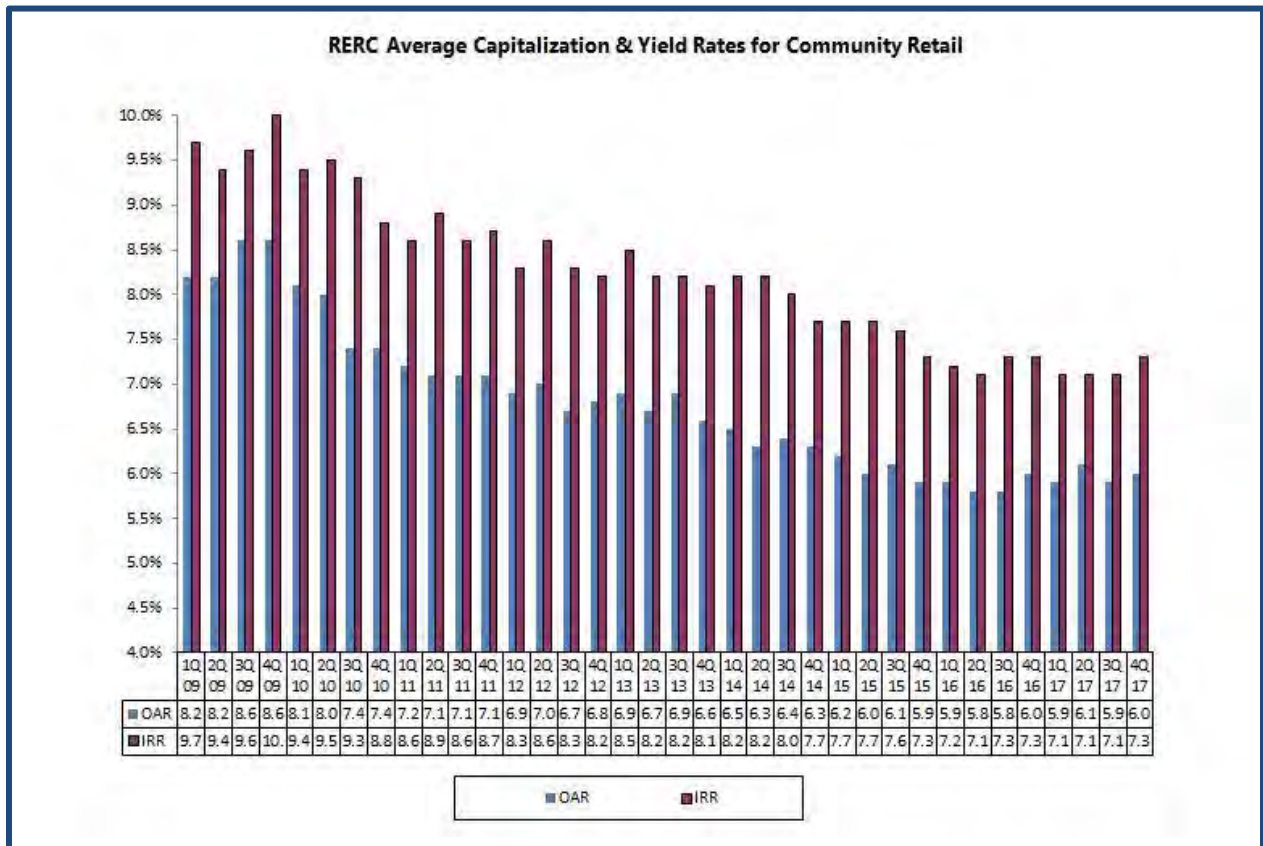
The chart below shows the decline in quoted rental rates in the South San Jose submarket since the first quarter of 2017. As can be seen, the asking rental rate had been slowly increasing between the first quarter 2016 to the first quarter 2017. From the first quarter 2017 to fourth quarter 2017 a decreasing trend in rental rates is shown.



Based on our analysis, retail buildings in the subject's market area sell for \$300 to \$600+ per square foot, depending on income, size, location, quality, and other factors. Capitalization rates for these types of investments range from 4.5% to 6%. South San Jose generally under performs more desirable Silicon Valley locations such as Cupertino and Sunnyvale, and demand for space in South San Jose is considered average in comparison to the overall South Bay metro given the city's good access to regional transportation and central location.

Capitalization & Yield Rate Trends

We have also considered the historical average capitalization and yield rates for retail strip centers over the past several years, as reported by the RERC. The historical rates are illustrated in the table below.



Rates were low in 2007, consistent with the peak of the commercial real estate market. At that time, the average cap rate was as low as 6.5%. Rates gradually increased in 2008 and 2009 and ultimately peaked in the Fourth Quarter of 2009 with an average cap rate of 8.6%. Throughout 2010, 2011, 2012 and 2013, rates have decreased and fluctuated between 6.6% and 8.1%. The average capitalization rate for fourth quarter of 2017 was 6.0%. The table below shows the national range for the overall community retail cap rate in the third quarter 2017.

RERC Published Rates for Community Retail - 4th Quarter 2017

	Current		Year Ago	
	Range	Average	Range	Average
Discount Rate (IRR)	6.5% - 8.0%	7.3%	5.5% - 9.5%	7.3%
Overall Cap Rate (OAR)	5.5% - 7.0%	6.0%	5.0% - 7.3%	6.0%
Terminal Cap Rate	6.0% - 7.5%	6.5%	5.5% - 8.0%	6.6%
Rental Growth	2.0% - 3.0%	2.8%	2.0% - 6.0%	2.8%
Expense Growth	2.0% - 3.0%	2.6%	2.0% - 3.0%	2.8%

Commercial Land Overview

The commercial land market in the subject area is characterized by good demand and an undersupply of available properties for development. Most sites that sell are typically previously developed sites with functionally obsolete improvements. For many development sites, the improvements have either run out of economic life and/or represent a low FAR. Buyers in the marketplace consist of owner-users looking for sites to accommodate their business, as well as developers looking to build speculative projects.

Land values have increased over the past several years, as demand has increased for new space, and as rental rates have climbed upwards. This mirrors improvements in the overall economy. Values for sites like the subject reflect a wide range of value, depending in large part on the development costs and challenges to be faced by the developer. The feasibility of a project is evaluated based on the total development costs. Overall, the cost to develop a site significantly impacts the land value.

Based on our research of land values in the subject's area, we estimate that land values have increased about 30% since 2013. This is consistent with the increase in rental rates during this time. Commercial land values typically range from \$35-\$200+ per square foot of land area, depending on location, FAR, construction costs and land use entitlements, among other factors. Value is also frequently quoted on a price per square foot of allowable building area or FAR foot.

At the high end of this range is commercial land in prime location and high traffic areas, as well as for sites where high FARs are likely. The subject is expected to compete at the low end of the range.

Conclusion

The retail market is currently strong in Santa Clara County. Investor and owner-user demand for commercial space in the Bay Area is considered good. Likely, we will continue to see positive trends for the Santa Clara County commercial market. Rents and occupancy will likely remain strong and grow, however, at a slower rate than in the past few years, while sale volume remains high and cap rates remain low.

Santa Clara County finds itself among the strongest markets in the United States given that employment in the region has increased substantially since the beginning of the current cycle. Thus, office properties will remain a preferred investment over other property types given the location and proximity to Silicon Valley.

We believe the outlook for commercial property, especially well located product has historically been and is still, positive. Overall, the subject is a large commercial site with good visibility through a highly trafficked arterial. The site is suited for destination retail or service commercial / semi-industrial use. Given the paucity of other similar sites that are available we opine that the subject would be well received if placed on the market for sale at market value.

Highest and Best Use

The Highest and Best Use of a property is the use that is legally permissible, physically possible, and financially feasible which results in the highest value. An opinion of the highest and best use results from consideration of the criteria noted above under the market conditions or likely conditions as of the effective date of value. Determination of highest and best use results from the judgment and analytical skills of the appraiser. It represents an opinion, not a fact. In appraisal practice, the concept of highest and best use represents the premise upon which value is based.

Analysis of Highest and Best Use As If Vacant

The primary determinants of the highest and best use of the property as if vacant are the issues of (1) Legal permissibility, (2) Physical possibility, (3) Financial feasibility, and (4) Maximum productivity.

Legally Permissible

The subject site is zoned CG, Commercial General which controls the general nature of permissible uses but is appropriate for the location and physical elements of the subject property, providing for a consistency of use with the general neighborhood.

The adjacent airport use has the greatest impact on the potential uses for the subject. Given its gateway location to the airport, we consider a commercial use as the most probable legally permissible use. Allowed uses include retail sales, child day care centers, medical offices, veterinary clinics, hotels or motels, laundromats, personal services, general business offices, financial institutions, and other conforming uses.

The location of the subject property is appropriate for the uses allowed by the proposed zoning and General Plan, and a change in zoning is likely to be approved. There are no known easements, encroachments, covenants or other use restrictions that would unduly limit or impede development.

Physically Possible

The physical attributes allow for a number of potential uses. Elements such as size, shape, availability of utilities, known hazards (flood, environmental, etc.), and other potential influences are described in the Site Description and have been considered.

The subject has good exposure from Capitol Expressway. Exposure is highly desirable for a variety of retail users. The size and configuration of the site could accommodate a variety of uses. The size of the subject is ideal for big box retail development or auto-dealership use. In all, the site could accommodate a variety of supporting uses on a single site, or could be subdivided into smaller sites.

Financially Feasible

The probable use of the site for commercial development conforms to the pattern of land use in the market area. A review of published yield, rental and occupancy rates suggest that there is an undersupply and demand is sufficient to support construction costs and ensure timely absorption of additional inventory in this market. Therefore, near-term speculative development of the subject site is financially feasible.

Maximally Productive

Among the financially feasible uses, the use that results in the highest value (the maximally productive use) is the highest and best use. Considering these factors, the maximally productive use as though vacant, is for commercial development.

Conclusion of Highest and Best Use As If Vacant

The conclusion of the highest and best use as if vacant is for commercial development.

Most Probable Buyer

As of the date of value, the most probable buyer of the subject property is an owner-user or developer. The most likely lessee is an local business operator or a developer.

Appraisal Methodology

The client has requested an estimate of the market value of the subject property, as is, as well as an estimate of fair market rent. Ground rent is often estimated as a percentage of the underlying fee simple land value. So, as a method of estimating ground rent for the subject site, we must first value the fee interest in the land. A rate of return is then selected and applied to arrive at an annualized ground rent indication for the subject land.

Fee simple land value is estimated by comparing the subject property with similar unimproved parcels of land, which were available for similar types of development at the time of sale as the subject, mostly low intensity commercial development. This type of development represents the subject's highest and best use as discussed earlier.

To estimate the fair market rent of the subject land, we have focused on the approach discussed above. We have also cross-checked our conclusion of market rent through recent leases of commercial sites, sites that had similar development potential and use, as well as similar physical and functional features as the subject property.

Land Valuation

Methodology

Site Value is most often estimated using the sales comparison approach. This approach develops an indication of market value by analyzing closed sales, listings, or pending sales of properties similar to the subject, focusing on the difference between the subject and the comparables using all appropriate elements of comparison. This approach is based on the principles of supply and demand, balance, externalities, and substitution, or the premise that a buyer would pay no more for a specific property than the cost of obtaining a property with the same quality, utility, and perceived benefits of ownership.

Unit of Comparison

The unit of comparison depends on land use economics and how buyers and sellers use the property. The unit of comparison in this analysis is price per square foot of land area.

Elements of Comparison

Elements of comparison are the characteristics or attributes of properties and transactions that cause the prices of real estate to vary. The primary elements of comparison considered in sales comparison analysis are as follows: (1) property rights conveyed, (2) financing terms, (3) conditions of sale, (4) expenditures made immediately after purchase, (5) market conditions, (6) location, and (7) physical characteristics.

Comparable Sales Data

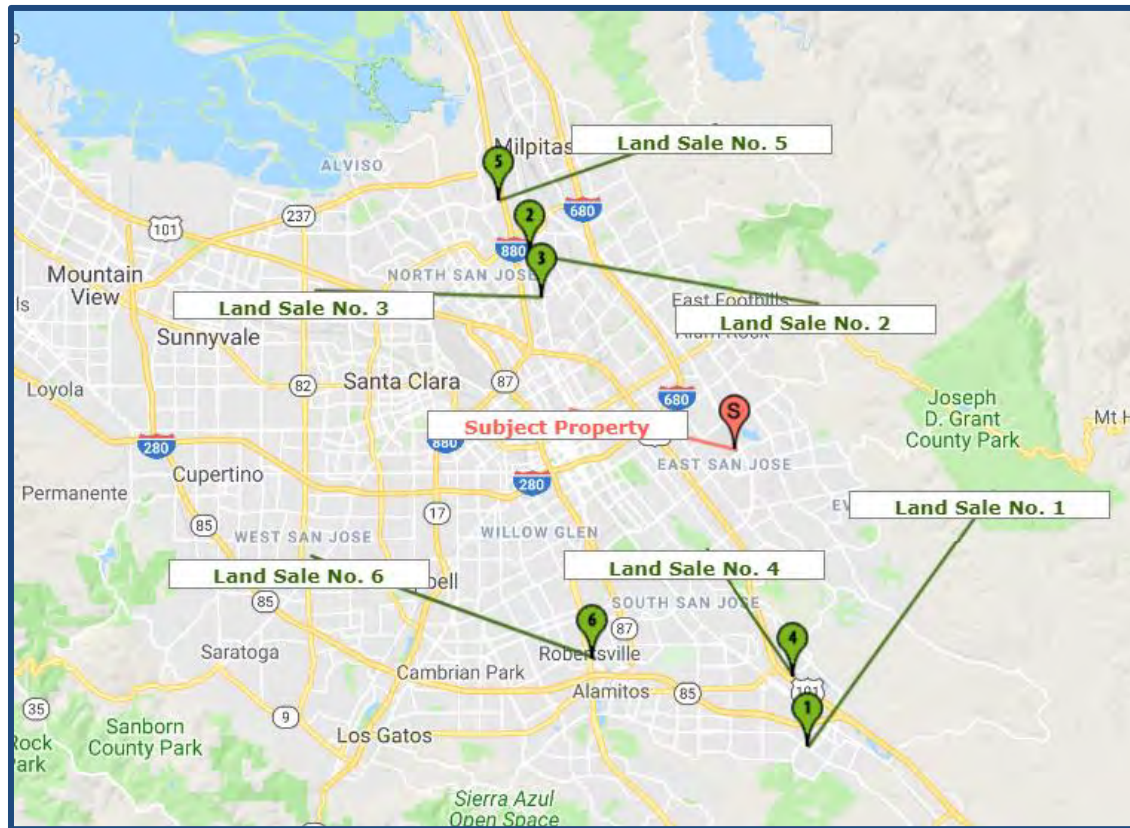
To obtain and verify comparable sales of vacant land properties, we conducted a search of public records, field surveys, interviews with knowledgeable real estate professionals in the area, and a review of our internal database.

We included seven sales in our analysis, as these sales were judged to be the most comparable to develop an indication of market value for the subject property. While these comparables were selected from the broader market area, they were similar in use, development potential and physical characteristics. The following is a table summarizing each sale comparable and a map illustrating the location of each in relation to the subject. Details of each comparable follow the location map.

Land Sales Summary

Comp. No.	Date of Sale	Gross Acres	Location	Zoning	Proposed Use	Sales Price Actual	Per Sq. Ft.
1	February-16	16.980	Santa Teresa Blvd, between San Ignacio Ave and Great Oaks	San Jose, California	IP Hospital and Medical Office	\$23,443,636	\$31.70
2	February-17	4.760	2059-2063 Oakland Road	San Jose, California	IP Unknown	\$5,287,500	\$25.50
3	November-14	13.903	1040 East Brokaw Road and 1633 Oakland Road	San Jose, California	A(PD) Retail	\$23,000,000	\$37.98
4	December-15	5.860	5855 Silver Creek Valley Place	San Jose, California	A(PD) Development of a VA Clinic	\$11,896,000	\$46.60
5	October-16	3.340	Northwest corner of Alder Drive and Barber Lane	Milpitas, California	MP/RE Hotel	\$7,000,000	\$48.11
6	September-15	3.553	4606 Almaden Expressway	San Jose, California	CN Future Development	\$7,500,000	\$48.46

COMPARABLE SALES MAP



COMPARABLE SALE 1



Property Identification

Property/Sale ID	116691/428064
Property Type	Industrial
Property Name	El Camino Hospital - South Bay Development Site
Address	Santa Teresa Boulevard, between San Ignacio Avenue and Great Oaks Boulevard
City, State Zip	San Jose, California 95119
County	Santa Clara
Latitude/Longitude	37.231934/-121.784649
Tax ID	706-02-055 and -056

Transaction Data

Sale Date	February 2016	Grantee	El Camino Hospital
Sale Status	Recorded	Recording Number	23214820
Grantor	SV1, LLC	Sale Price	\$23,443,636

Property Description

Gross Acres	16.98	Zoning Jurisdiction	Center; Industrial Park
Gross SF	739,649	Zoning Code	IP
Corner/Interior	Double Corner	Zoning Description	Industrial Park
Shape	Irregular		
Use Designation	Transit Employment		

Indicators

\$/Gross SF	\$31.70
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Remarks

This property consists of a 16.98-acre or 739,649-square-foot parcel of land situated in South San Jose, in the Edenvale West submarket, along Santa Teresa Boulevard, in between San Ignacio Avenue and Great Oaks Boulevard. The site, consisting of two legal parcels, is further bound by Highway 85 to the north, Bernal Road to the east, and Cottle Road to the west. The surrounding area is a mix of single-family residential and commercial-industrial uses. Kaiser Permanente San Jose Medical Center is situated approximately one-mile to the west, and the Cottle Light Rail Station is a quarter-mile to the west.

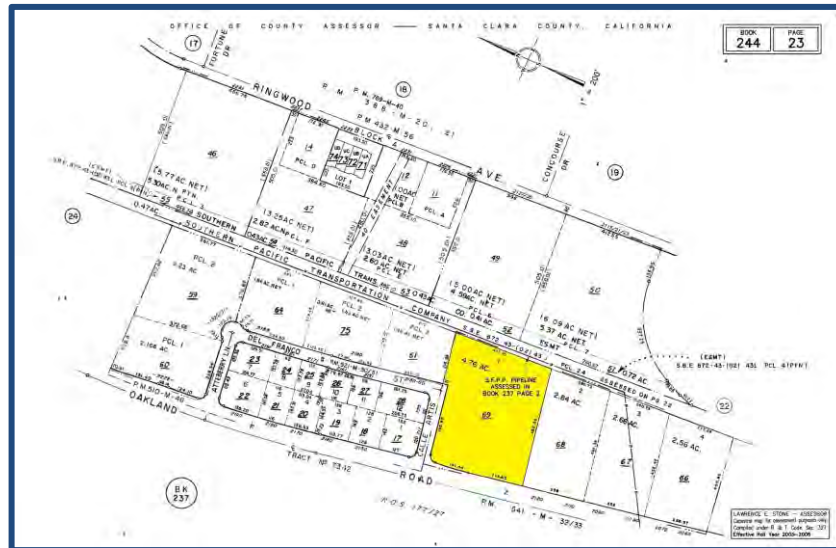
The undeveloped site is generally level and has frontages along Santa Teresa Boulevard, Great Oaks Boulevard and San Ignacio Avenue. Site improvements consist of sidewalks along the Santa Teresa Boulevard frontage, and curb, gutters, and storm drain inlets along all three street frontages. Electricity, gas, water, and telephone services are available. The zoning is Industrial Park and the General Plan land use designation is Transit Employment Center (APN -056) and Industrial Park (APN -055).

The site, along with a 16.85-acre portion fronting Via Del Oro totaling 33.83 acres, was previously purchased by Equinix in March 2015. Equinix plans to develop a data center on the 16.85-acre portion retained.

The site was purchased by El Camino Hospital, a Mountain View and Los Gatos-based, non-profit health care provider. Plans are to develop a hospital onsite and to expand its health care services to areas outside of its current service area that comprises Mountain View, Sunnyvale, Los Altos, Los Altos Hills, as well as Los Gatos. Plans are to develop a hospital and medical office buildings onsite.

The site was purchased for \$23,443,636, or \$31.70 per square foot of land area. The terms of the sale were all-cash to the seller.

COMPARABLE SALE 2



Property Identification

Property/Sale ID	127558/434054
Property Type	Industrial
Address	2059-2063 Oakland Road
City, State Zip	San Jose, California 95131
County	Santa Clara
Latitude/Longitude	37.396355/-121.901148
Tax ID	244-23-069

Transaction Data

Sale Date	February 2017	Grantee	CP Logistics Oakland, LLC
Sale Status	Recorded	Recording Number	0023577495
Grantor	Pestana 1986 Family Trust	Sale Price	\$5,287,500

Property Description

Gross Acres	4.76	Use Designation	Industrial Park
Gross SF	207,346	Zoning Jurisdiction	City of San Jose
Corner/Interior	Corner	Zoning Code	IP
Shape	Generally Rectangular	Zoning Description	Industrial Park

Indicators

\$/Gross SF	\$25.50
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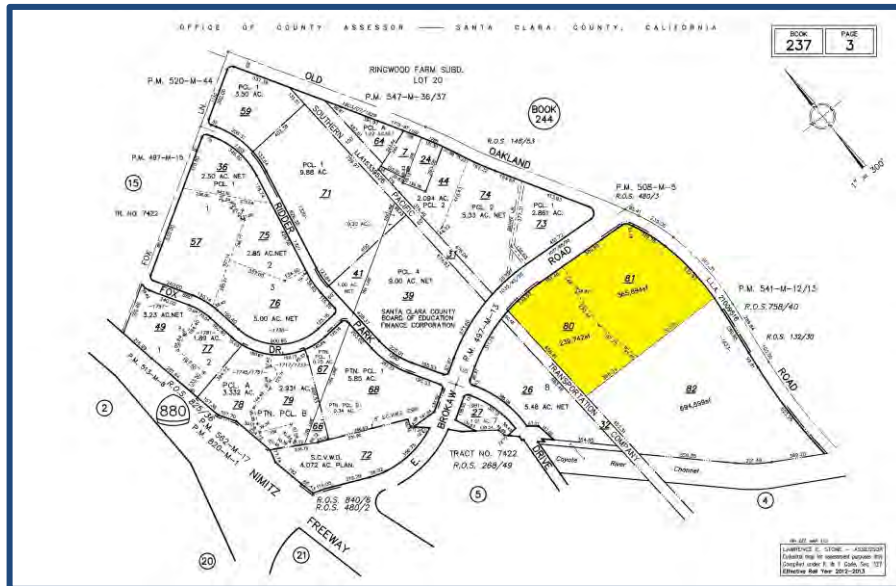
Remarks

This property consists of a single parcel of vacant industrial land located along the east side of Oakland Road in San Jose. The site has a generally rectangular shape and a corner lot configuration at the signalized intersection of Oakland Road and Calle Artis. The site has approximately 390 feet of frontage along Oakland Road and an average depth of 355 feet. The property abuts railroad tracks to the east.

The underlying site contains 4.76 acres or 207,346 square feet of gross land area and approximately 4.44 acres or 193,550 square feet of usable land area. The site is raw unimproved land with all utilities available. The property zoning and General Plan land use designation is Industrial Park.

CP Logistics Oakland, LLC purchased this property in February 2017 from Pestana 1986 Family Trust. The sale price was \$5,287,500 or \$25.50 per square foot of building area. The buyer is an investor and intends to hold the property for future development. The property sold without approvals or entitlements.

COMPARABLE SALE 3



Property Identification

Property/Sale ID	116694/428065
Property Type	Retail
Property Name	Brokaw Plaza
Address	1040 East Brokaw Road and 1633 Oakland Road
City, State Zip	San Jose, California 95131
County	Santa Clara
Latitude/Longitude	37.382037/-121.896748
Tax ID	237-03-080 and 237-03-081

Transaction Data

Sale Date	November 2014	Grantee	Brokaw Ventures II, LLC
Sale Status	Recorded	Recording Number	22768803
Grantor	Markovits & Fox, Inc.	Sale Price	\$23,000,000

Property Description

Gross Acres	13.90	Zoning Jurisdiction	(MUC)
Gross SF	605,636	Zoning Code	A(PD)
Corner/Interior	Corner	Zoning Description	Planned Development
Shape	Rectangular		
Use Designation	Mixed Use Commercial		

Indicators

\$/Gross SF	\$37.98
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Remarks

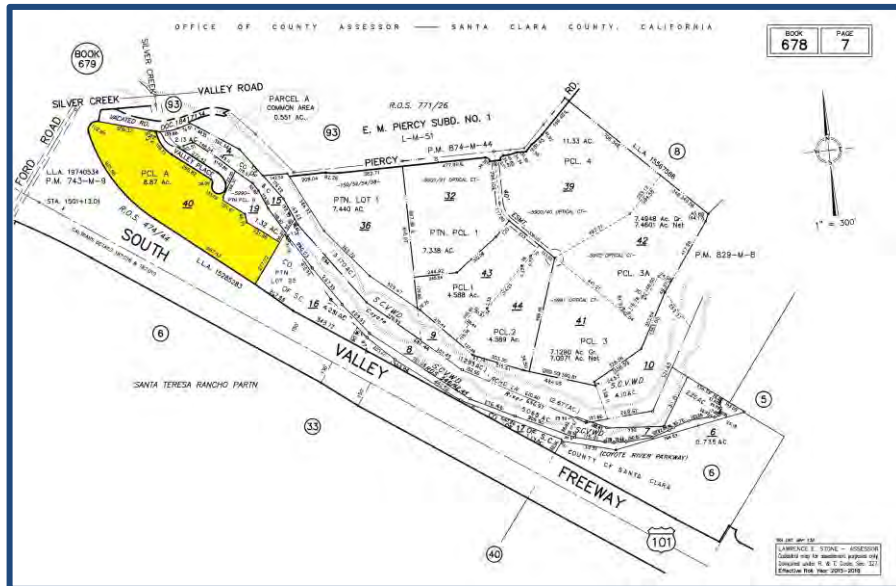
This property consists of two contiguous parcels improved with two older two-story R&D buildings located along the south side of East Brokaw Road in San Jose. The site has a rectangular shape and a corner lot configuration at the signalized intersection of East Brokaw Road and Oakland Road. The site has approximately 850 feet of frontage along East Brokaw Road (with two curb cuts) and 650 feet of frontage along Oakland Road (with one curb cut). The property abuts railroad tracks to the west.

The underlying site contains 605,636 gross square feet or 13.9 gross acres. The improvements contain approximately 130,000 square feet and were constructed circa 1998. The property is zoned Planned Development and the General Plan land use designation is Mixed Use Commercial (MUC). The Planned Development Zoning District allows for the development of up to 650 multi-family residential units and up to 150,000 square feet of commercial uses or up to 300,000 square feet of office/R&D uses on a 27.4 gross acre site. The sale property is a portion of the 27.4 acres. The larger development also included approximately 150,000 square feet of retail development, for which this property was sold.

Brokaw Ventures II, LLC purchased this property in November 2014 from Markovits & Fox, Inc. The sale price was \$23,000,000 or \$1,654,261 per acre or \$37.98 per square foot of land. The buyer plans to develop a shopping center onsite with 145,000 square feet of retail space. Subsequent to the purchase, a portion of the center was leased to Ross Stores and Sprouts Market. Additional retail space is available for lease. The buyer obtained a \$19,550,000 loan from Pacific Coast Capital Partners.

The existing buildings onsite were vacant at the time of sale. The property was previously ground leased, with the lessee constructing the buildings. However, the landlord bought out the leasehold interest so that the property could be sold for redevelopment. This property was part of a larger mixed-use development plan that included residential uses on other adjacent sites.

COMPARABLE SALE 4



Property Identification

Property/Sale ID	113994/428410
Property Type	Commercial
Address	5855 Silver Creek Valley Place
City, State Zip	San Jose, California 95138
County	Santa Clara
Latitude/Longitude	37.255486/-121.791097
Tax ID	678-07-040 (Portion)

Transaction Data

Sale Date	December 2015	Grantee	San Jose VA, LLC
Sale Status	Recorded	Recording Number	23175789
Grantor	San Gabriel Interests, LP	Sale Price	\$11,896,000

Property Description

Gross Acres	5.86	Zoning Jurisdiction	Commercial
Gross SF	255,262	Zoning Code	City of San Jose A(PD)
Corner/Interior	Interior	Zoning Description	Planned Development
Shape	Irregular		
Use Designation	CIC, Combined Industrial		

Indicators

\$/Gross SF	\$46.60
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Remarks

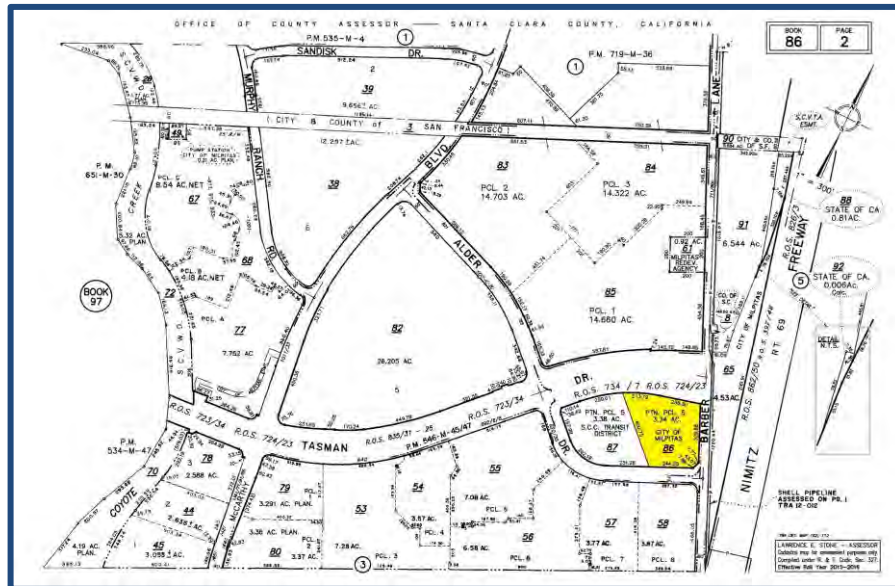
This property consists of a single parcel of vacant commercial land located on the east side of Highway 101 along the Silver Creek Valley Road freeway off-ramp in San Jose. The site has an irregular shape and a cul-de-sac lot configuration with appropriately 270 feet of frontage along Silver Creek Valley Place and 650 feet of frontage along the Highway off-ramp. The site has good visibility from and access to Highway 101. The property is mostly level and rough graded. All utilities are available at the street. The property is adjacent to the Coyote Creek Trail to the east.

The underlying site contains 255,262 gross square feet or 5.86 gross acres. The property is zoned Planned Development and the General Plan land use designation is Combined Industrial Commercial.

San Jose VA, LLC went into contract to purchase this property in December 2013 from San Gabriel Interests, LP. The property sold above the asking price of \$10,210,480 or \$40 per square foot of land. The sale price was \$11,896,000 or \$46.60 per square foot of land.

The property sold in December 2015 and was fully entitled for a 92,000 square foot VA clinic. The property was on the market approximately 90 days before going into contact. The property closed two years after going into contact because the buyer was obtaining entitlements. There were no development issues, no contamination, and nothing unusual about the property or the transaction.

COMPARABLE SALE 5



Property Identification

Property/Sale ID	112741/430708
Property Type	Mixed Use Land
Address	Northwest corner of Alder Drive and Barber Lane
City, State Zip	Milpitas, California 95035
County	Santa Clara
Latitude/Longitude	37.414222/-121.914280
Tax ID	086-02-086

Transaction Data

Sale Date	October 2016	Hospitality Group
Sale Status	Recorded	Recording Number
Grantor	Milpitas City Hall	Sale Price
Grantee	Lodging Dynamics	\$7,000,000

Property Description

Gross Acres	3.34	Zoning Jurisdiction	City of Milpitas
Gross SF	145,490	Zoning Code	MP with RE Overlay
Corner/Interior	Corner	Zoning Description	Industrial with a Recreation and Entertainment Overlay District
Shape	Irregular		
Use Designation	Industrial Park		

Indicators

\$/Gross SF	\$48.11
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Remarks

This property consists of a single parcel located in a primarily industrial and R&D area of Milpitas. The site is situated adjacent to Tasman Drive, and although it does not have access from Tasman Drive it does have very good visibility. In addition, the property is visible from Highway 880. While an industrial and R&D use is in conformity with the area, the visibility would also be considered by a potential buyer.

Due to the location near businesses as well as Levis Stadium, and the visibility, the development of a hotel in this neighborhood and location appears to be a use other than industrial/ R&D and is supported by the neighborhood. A portion of the site located at the Tasman Drive frontage is not level. This area cannot be built upon; however, it is a small area and would be used for landscaping. Otherwise, the site is level, has a corner lot configuration and is essentially fully developable.

The underlying site contains 145,490 gross square feet or 3.34 gross acres. The property is zoned Industrial with a Recreation and Entertainment Overlay and the General Plan land use designation is Industrial Park.

Lodging Dynamics Hospitality Group purchased this property in October 2016 from Milpitas City Hall. The recorded sales price was \$7,000,000 or \$48.11 per square foot of land. The buyer is a hospitality group that manages hotels around the country. The buyer intends to develop a hotel onsite. Currently there are pending plans for a 5-story, 195-unit All-Suites Hotel. The price of a hotel key is approximately \$46,667.

COMPARABLE SALE 6



Property Identification

Property/Sale ID	78403/428136
Property Type	Commercial
Property Name	Summer Winds Nursery
Address	4606 Almaden Expressway
City, State Zip	San Jose, California 95118
County	Santa Clara
Latitude/Longitude	37.261566/-121.874894
Tax ID	458-18-080

Transaction Data

Sale Date	September 2015	Grantee	Rubicon Point Partners LLC
Sale Status	Recorded	Recording Number	23093781
Grantor	Uccelli George Jr (TE) and Elisa Varni Noona (TE)	Sale Price	\$7,500,000

Property Description

Gross Acres	3.55	Zoning Jurisdiction	Commercial
Gross SF	154,769	Zoning Code	San Jose
Corner/Interior	Through Lot	Zoning Description	CN
Shape	Irregular		Commercial Neighborhood
Use Designation	Neighborhood/Community		

Indicators

\$/Gross SF	\$48.46
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Remarks

This property consists of a single parcel improved with a metal nursery building located on the eastern side of Almaden Expressway just south of the intersection with Branham Lane in San Jose. The site has a through-lot configuration with approximately 335 feet of frontage along Almaden Expressway and 85 feet of frontage along Branham Lane. The Guadalupe River abuts the eastern side of the parcel.

The underlying site contains 154,769 gross square feet or 3.55 gross acres. As a result of the riparian setbacks from the Guadalupe River, the estimated net developable area is 124,849 square feet or 2.87 acres. The improvements contain 5,050 square feet and were constructed circa 2012. The property is zoned Commercial Neighborhood, which allows redevelopment with retail, offices, or hotels. The General Plan land use designation is Neighborhood Community Commercial.

Subsequent to this sale, the buyer entitled the property for residential development. More specifically the entitlements were for a 150,000 square foot, 200 unit assisted living facility. The buyer in this transaction sold the property as entitled to the Alliance Residential company for \$12,750,000 or \$90 per gross square foot. Approvals were received through a Conditional Use Permit.

Rubicon Point Partners LLC purchased this property in September 2015 from Uccelli George Jr (TE) and Elisa Varni Noona (TE). The sale price was \$7,500,000 or \$48.46 per gross square feet of site area. The buyer is an investor who will hold the property for future redevelopment of the site.

Summer Winds Garden Center was leasing and occupying the property at the time of sale with 6-months remaining on the lease-term and a 10 year option coming up for renewal. The new lease includes a mutual option to terminate the lease two years after the lease commencement date. The starting rental rate is reported at \$30,000 or \$0.19 per square foot NNN flat for three years. After that a 3% annual increase is reported.

Land Sales Comparison Analysis

When necessary, adjustments were made for differences in various elements of comparison, including property rights conveyed, financing terms, conditions of sale, expenditures made immediately after purchase, market conditions, location, and other physical characteristics. If the element in comparison is considered superior to that of the subject, we applied a negative adjustment. Conversely, a positive adjustment was applied if inferior. A summary of the elements of comparison follows.

Transaction Adjustments

Transaction adjustments include (1) real property rights conveyed, (2) financing terms, (3) conditions of sale, and (4) expenditures made immediately after purchase. These items, which are applied prior to the market conditions and property adjustments, are discussed as follows:

Real Property Rights Conveyed

Real property rights conveyed influence sale prices and must be considered when analyzing a sale comparable. With one exception, the appraised value and sale comparables all reflect the fee simple interest with no adjustments required. The leased fee interest was transferred for Comparable 7 and an adjustment was made later, under interim income.

Financing Terms

The transaction price of one property may differ from that of an identical property due to different financial arrangements. Sales involving financing terms that are not at or near market terms require adjustments for cash equivalency to reflect typical market terms. A cash equivalency procedure discounts the atypical mortgage terms to provide an indication of value at cash equivalent terms. All of the comparable sales involved typical market terms by which the sellers received cash or its equivalent and the buyers paid cash or tendered typical down payments and obtained conventional financing at market terms for the balance. Therefore, no adjustments for this category were required.

Conditions of Sale

When the conditions of sale are atypical, the result may be a price that is higher or lower than that of a normal transaction. Adjustments for conditions of sale usually reflect the motivations of either a buyer or a seller who is under duress to complete the transaction. Another more typical condition of sale involves the downward adjustment required to a comparable property's for-sale listing price, which usually reflects the upper limit of value. The sale comparables do not indicate any condition of sale adjustments were warranted for atypical conditions or for-sale listings.

Expenditures Made Immediately After Purchase

A knowledgeable buyer considers expenditures that will have to be made upon purchase of a property because these costs affect the price the buyer agrees to pay. Such expenditures may include: (1) costs to demolish and remove any portion of the improvements, (2) costs to petition for a zoning change, and/or (3) costs to remediate environmental contamination.

The relevant figure is not the actual cost incurred, but the cost that was anticipated by both the buyer and seller. Unless the sales involved expenditures anticipated upon the purchase date, no adjustments to the comparable sales are required for this element of comparison.

The parties to these transactions did not anticipate expenditures were required immediately after purchase; therefore, no adjustments were warranted.

Market Conditions Adjustment

Market conditions change over time because of inflation, deflation, fluctuations in supply and demand, or other factors. Changing market conditions may create a need for adjustment to comparable sale transactions completed during periods of dissimilar market conditions.

Discussions with market participants and a review of market data indicated overall market conditions for vacant land have been improving with recent transactions confirming this trend. As such, we applied an adjustment to each comparable based on a factor of 3% per year.

Property Adjustments

Property adjustments are usually expressed quantitatively as percentages or dollar amounts that reflect the differences in value attributable to the various characteristics of the property. In some instances, however, qualitative adjustments are used. These adjustments are based on locational and physical characteristics and are applied after transaction and market conditions adjustments.

Our reasoning for the property adjustments made to each sale comparable follows. The discussion analyzes each adjustment category deemed applicable to the subject property.

Location

Location adjustments may be required when the locational characteristics of a comparable are different from those of the subject. These characteristics can include general neighborhood characteristics, freeway accessibility, street exposure, corner- versus interior-lot location, neighboring properties, view amenities, and other factors.

The subject site is located in southeast San Jose and has very good access and visibility. We have closely examined the location of the comparables sales and that of the subject. While some areas are areas where property values are generally higher, the subject's exposure as well as the specific location of the comparable within those areas did not justify an adjustment. Thus, no adjustments were made.

Size

The size adjustment addresses variance in the physical size of the comparables and that of the subject areas. Typically, a larger parcel commands a lower price per unit than a smaller parcel. This is due to economies of scale.

The subject site consists of 8.6 acres, and is considered overall similar to Comparables 2, 3 and 4. Comparable 1 is a larger site, and an upward adjustment for size is warranted, while downward adjustment was made to Comparables 5 and 6 for their smaller size.

Shape/ Depth/ Site Utility

The subject site consists of an almost rectangular tract considered similar enough to the land sales to not warrant any adjustment for this category. However, as discussed, the subject has somewhat impacted utility due to the location within the inner safety zone of the airport and also due to the

fact that portion of the subject is located within the Capitol Expressway right-of-way and may not be developable.

Comparable 6 has impacted site utility due to riparian creek setbacks and required no adjustment in this category. The rest of the comparables were slightly downward adjusted in this category for their superior site utility.

Topography

The subject has a generally level topography. This is similar to each of the comparables analyzed in this report.

Frontage/ Visibility

The subject has excellent frontage and visibility from Capitol Expressway. Comparable one is located at the end of a cul-de-sac and had limited frontage and visibility. An upward adjustment was made. Comparable 3 also had an inferior frontage and an upward adjustment was warranted. No other adjustments were made to the rest of the comparables.

Zoning/ Development Potential

The highest and best use of sale comparables should be very similar to that of the subject property. When comparables with the same zoning as the subject are lacking or scarce, parcels with slightly different zoning, but a highest and best use similar to that of the subject may be used as comparables. These comparables may require an adjustment for differences in utility if the market supports such adjustment.

The subject site has Commercial zoning. While Comparables 1 and 2 had industrial zoning, their development potential was overall similar to the subject's. Nonetheless, a small adjustment is warranted for the subject's superior zoning.

Entitlements

Comparable 4 sold with entitlements in place and a downward adjustment is warranted. No other adjustments were made.

Interim Income

A small downward adjustment was made to comparable Sale 6 on account of interim income from a property lease. No other adjustments were warranted.

Summary of Adjustments

Presented on the following page is a summary of the adjustments made to the sale comparables. As noted earlier, these quantitative adjustments were based on our market research, best judgment, and experience in the appraisal of similar properties.

LAND SALES ADJUSTMENT GRID

	Subject	Sale # 1	Sale # 2	Sale # 3	Sale # 4	Sale # 5	Sale # 6
Sale ID		428064	434054	428065	428410	430708	428136
Date of Value & Sale	January-18	February-16	February-17	November-14	December-15	October-16	September-15
Unadjusted Sales Price		\$23,443,636	\$5,287,500	\$23,000,000	\$11,896,000	\$7,000,000	\$7,500,000
Gross Acres	8.600	16.980	4.760	13.903	5.860	3.340	3.553
Gross Square Feet	374,616	739,649	207,346	605,636	255,262	145,490	154,769
Unadjusted Sales Price per Gross Sq. Ft.		\$31.70	\$25.50	\$37.98	\$46.60	\$48.11	\$48.46
Transactional Adjustments							
Property Rights Conveyed	<i>Fee Simple</i>	<i>Fee Simple</i>	<i>Fee Simple</i>	<i>Fee Simple</i>	<i>Fee Simple</i>	<i>Fee Simple</i>	<i>Leased Fee</i>
Adjustment		-	-	-	-	-	-
Adjusted Sales Price		\$31.70	\$25.50	\$37.98	\$46.60	\$48.11	\$48.46
Financing Terms	<i>Cash to Seller</i>	<i>Cash</i>	<i>Cash</i>	<i>Conventional</i>	<i>Unknown</i>	<i>Typical</i>	<i>Conventional</i>
Adjustment		-	-	-	-	-	-
Adjusted Sales Price		\$31.70	\$25.50	\$37.98	\$46.60	\$48.11	\$48.46
Conditions of Sale	<i>Typical</i>	<i>Typical</i>	<i>Typical</i>	<i>Typical</i>	<i>Typical</i>	<i>Typical</i>	<i>None</i>
Adjustment		-	-	-	-	-	-
Adjusted Sales Price		\$31.70	\$25.50	\$37.98	\$46.60	\$48.11	\$48.46
Expenditures after Sale							
Adjustment		-	-	-	-	-	-
Adjusted Sales Price		\$31.70	\$25.50	\$37.98	\$46.60	\$48.11	\$48.46
Market Conditions Adjustments							
Elapsed Time from Date of Value		<i>1.96 years</i>	<i>0.96 years</i>	<i>3.21 years</i>	<i>2.10 years</i>	<i>1.30 years</i>	<i>2.32 years</i>
Market Trend Through	January-18	5.7%	2.7%	9.5%	6.1%	3.7%	6.8%
Analyzed Sales Price		\$33.51	\$26.19	\$41.57	\$49.46	\$49.90	\$51.74
Physical Adjustments							
Location	<i>Northwest Corner of Tully Road and Capitol Expressway San Jose, California</i>	<i>Santa Teresa/ San Ignacio San Jose, California</i>	<i>2059-2063 Oakland Road San Jose, California</i>	<i>1040 East Brokaw Road and 1633 Oakland Road San Jose, California</i>	<i>5855 Silver Creek Valley Place San Jose, California</i>	<i>Northwest corner of Alder Drive and Barber Lane Milpitas, California</i>	<i>4606 Almaden Expressway San Jose, California</i>
Adjustment		-	-	-	-	-	-
Size	8.6	16.980 acres	4.760 acres	13.903 acres	5.860 acres	3.340 acres	3.553 acres
Adjustment		10.0%	-	-	-	-10.0%	-10.0%
Shape/Depth	<i>Nearly rectangular</i>	<i>Irregular</i>	<i>Generally Rectangular</i>	<i>Rectangular</i>	<i>Irregular</i>	<i>Irregular</i>	<i>Irregular</i>
Adjustment		-	-	-	-	-	-
Site Utility	<i>Average</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Average</i>
Adjustment		-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-
Frontage	<i>Excellent</i>	<i>Very good</i>	<i>Average</i>	<i>Excellent</i>	<i>Excellent</i>	<i>Excellent</i>	<i>Very good</i>
Adjustment		-	10.0%	-	-	-	-
Topography	<i>Level</i>	<i>Generally level</i>	<i>Generally level</i>	<i>Level</i>	<i>Level de with fronting streets</i>	<i>de with fronting streets</i>	
Adjustment		-	-	-	-	-	-
Zoning	<i>CG</i>	<i>IP</i>	<i>IP</i>	<i>A(PD)</i>	<i>A(PD)</i>	<i>MP/RE</i>	<i>CN</i>
Adjustment		10.0%	10.0%	-	-	-	-
Entitlements			<i>No</i>		<i>Yes</i>		
Adjustment		-	-	-	-20.0%	-	-
Other							<i>Interim Income</i>
Adjustment		-	-	-	-	-	-10.0%
Net Physical Adjustment		15.0%	15.0%	-5.0%	-25.0%	-15.0%	-20.0%
Adjusted Sales Price per Gross Square Foot		\$38.54	\$30.12	\$39.49	\$37.10	\$42.42	\$41.39

Conclusion

From the market data available, we used eight land sales in competitive market areas which were adjusted based on pertinent elements of comparison. The following table summarizes the unadjusted and adjusted unit prices:

Land Sale Statistics

Metric	Unadjusted	Adjusted
Minimum Sales Price per Gross Square Foot	\$25.50	\$30.12
Maximum Sales Price per Gross Square Foot	\$48.46	\$42.42
Median Sales Price per Gross Square Foot	\$42.29	\$39.01
Mean Sales Price per Gross Square Foot	\$39.72	\$38.17

The comparables form an adjusted range of \$30 to \$42 per square foot of land area with an average of \$38 and a median of \$39 per square foot. They bracket the subject in terms of development potential and physical characteristics. Comparable 3 is the most comparable property, based on the small number of adjustments made.

The subject is an 8.6 acre site, with a good commercial location along a highly trafficked thoroughfare. However, portion of the subject is not developable due to its location within the Capitol Expressway right of way, while a small portion is located within the turning safety zone of the airport.

Based on the adjusted prices and the most comparable sales, a unit value for the subject property near the best comparables for the subject and near the average and median of the comparables was considered appropriate, at \$40 per square foot of land area.

At the concluded value of \$40 per square foot, the estimated market value of the subject land is estimated at \$14,980,000 (rounded), summarized as follows:

Land Value Indication				
Reasonable Adjusted Comparable Range				
8.600 acres	x	\$38.00 psf	=	\$14,235,408
8.600 acres	x	\$42.00 psf	=	\$15,733,872
Market Value Opinion				
8.600 acres	x	\$40.00 psf	=	\$14,980,000
		Multiplied by ROR :		8%
Estimated Annual Fair Market Rent				\$1,198,400

Estimate of Market Ground Rent

As discussed, most ground leases are structured and expressed as a percentage return of the land value. In the previous section, the value of the land is estimated at \$14,980,000 (rounded). The next step, therefore, is to estimate an appropriate rate of return to the land.

Rates of return in ground leases do not significantly change over time. Changes over time are reflected in the base land value. The land value also accounts for a variety of other factors related to the land. The primary factor that can impact the rate of return is the terms of the ground lease. Most ground leases include fixed percentage or CPI adjustments every 5 or 10 years. Some ground leases include revaluation clauses that resets the ground rent every 20 or 25 years based on the property's land value at that time. If the terms of the ground lease are more favorable to the tenant, the rate of return is typically near the high end of the range initially since the tenant could pay more in the form of higher rent for the favorable ground lease terms all else being equal (i.e. closer to 10%). If the terms are more favorable to the landlord, the rate of return is typically near the low-end of the range. Since revaluation clauses are not desirable from a tenant's standpoint, such clauses would put downward pressure on the rate of return. The lack of a revaluation clause would put upward pressure on the rate of return. Also, if the ground lease does not subordinate to mortgage financing, the required rate of return can decrease from 0.5 to 1.0 percentage points, since leasehold financing becomes more difficult.

Historically, ground rates of return have ranged in the 7.0%-10.0% range. Recently, the range has trended downward, with some rates extending down to 6.0%. Typically the upper range is selected for smaller sites in prime locations, or sites that are suited for fast-food restaurants. Larger sites or sites with weaker demand would warrant a rate of return at the lower end of the range. More information on the appropriate rate of return for the subject is provided in the section that follows.

Analysis of Rate of Return Comparables

In selecting a rate of return, we researched the local market for recent ground leases of land. There are only a limited number of ground leases so we expanded our search to include the entire San Francisco Bay Area. We also went back a few years. Based on our research, several rate of return comparables were found, which have been included in the table on the following page. They range between 6.5% and 8.6%.

Comparable 1, with the lowest rate of return, relates to a 33-year ground lease extension from Menlo Park. The remaining lease term had diminished to 22 years when the tenant approached the land owner (City of Menlo Park) to extend the lease term to 33 years, so that they could continue to use the real estate as collateral in financing negotiations. Based on lease terms, and use, we would expect a higher rate of return for the subject.

GROUND LEASE RATES OF RETURN

No.	Location	(SF) Acres	Lease Date	Annual Rent	Re-lease Term	Ground Rent/SF	Rate of Return	Tenant/Comments
1	1000 El Camino Real Menlo Park	65,545 1.50	Nov-15	\$699,500	33 yrs	\$0.89	6.5%	Office building; 33-yr extension. CPI increase every two years. every two years.
2	Hope, Villa and Evelyn Ave Mountain View	71,195 1.63	May-17	\$800,000	55 yrs	\$0.94	8.6%	City-owned land proposed for high-density mixed-use development. Annual CPI adjustment.
3	Charleston and N Shoreline Mountain View	412,863 9.48	Apr-11	\$693,610	53 yrs	\$0.14	7.0%	Google: 3% annual increase; four 10-yr options.
4	15400 Los Gatos Blvd Los Gatos	88,427 2.03	Nov-11	N/A	N/A	N/A	8.0%	Palo Alto Medical Foundation building
5	4110 N 1st Street/ Holger Way San Jose	57,543 1.32	Jan-11		25 yrs	\$0.28	8.3%	CVS Pharmacy: 10% increase in yr 16.

Comparable 2 with the highest rate of return, is a site from the downtown Mountain View submarket, targeted for very high density development. The higher rate reflects the very active interest in Mountain View real estate development at present. It also reflects the comparable's more central commercial district location. All of these are deemed superior traits. A lower rate would be justified for the subject based on its tertiary location.

Similarly, Comparables 4 and 5 had superior commercial locations that warrant a higher rate of return.

Comparable 3 is a 2011, long-term ground lease from Moffett Boulevard in Mountain View. The parcel is a 9.48-acre site owned by the City of Mountain View. The site is encumbered with a variety of easements and is also known to be contaminated. The ground rent will commence when entitlements are received, for a proposed office building. The lease is for 53 years with a 3% annual increase.

Considering the subject's size and good commercial location, a rate towards the middle of the range is indicated. In conclusion, a rate of return of 8% is considered reasonable for the subject.

Market Rent Estimate

At the concluded 8% rate of return, the market ground rent for the subject is estimated at \$1,198,400 per year, as shown below. This represents a monthly rent of \$99,833 or \$0.27 per square foot of land area.

Land Value Indication				
Reasonable Adjusted Comparable Range				
8.600 acres	x	\$39.00 psf	=	\$14,610,024
8.600 acres	x	\$42.00 psf	=	\$15,733,872
Market Value Opinion				
8.600 acres	x	\$40.00 psf	=	\$14,980,000
				Multiplied by ROR : <u>8%</u>
Estimated Annual Fair Market Rent				\$1,198,400

Cross-Check

In the following section, we have included several rent comparables that were used to derive an appropriate Fair Market Rent for the subject property. The table on the following page summarizes each of the rent comparables.

Rent Comparable Summary

Comp. No.	Date of Survey / Lease	Comp. Type	Property Name	Location		Leased Acres	Rental Rate / SF	Lease Structure
1	Pending	Lease	Ground Lease	Almaden Expressway (Confidential)	San Jose, California	13.5	\$0.34	NNN
2	May-16	Lease	Ground Lease	715 Capitol Expressway Auto Mall	San Jose, California	1.02	\$0.34	NNN
3	April-16	Lease	Summer Winds Nursery	4606 Almaden Expressway	San Jose, California	3.6	\$0.19	NNN
4	July-15	Lease	Car Wash Ground Lease	375 South Spruce Avenue	South San Francisco, California	0.4	\$0.21	NNN
5	May-15	Lease	McCarthy Ranch Ground Lease	41 Ranch Drive	Milpitas, California	0.6	\$0.30	NNN
6	December-15	Lease	Woodhams Center	4525-4545 Stevens Creek Boulevard	Santa Clara, California	1.99	\$0.64	Gross

The rent comparables selected from the available market data present an unadjusted range of \$0.19 to \$0.64 per square foot of land area. Converting the gross leases to their NNN equivalent, the range is \$0.19 to \$0.58 per square foot, NNN.

Considering the subject location, access, size, and use, we have concluded that the fair market rent of \$0.27 per square foot, estimated earlier is supported by the comparable leases.

Conclusion of Fair Market Rent

This is an initial rate, with “triple net” expense terms and a long lease term of at least 40 years. We would also expect rent increases during the term, such as annual CPI increases, or cumulative CPI increases every 5 or 10 years. We would also expect a revaluation of the rent every 10 or 20 years.

Reconciliation

Summary of Value Indications

The indicated values from the approaches used and our concluded market values for the subject property are summarized in the following table.

Value Conclusions		
Component	As Is	As Is
Value Type	Market Value	Fair Market Rent
Property Rights Appraised	Fee Simple	N/A
Effective Date of Value	January 22, 2018	January 22, 2018
Value Conclusion	\$14,980,000	\$1,198,400 per year
	\$40 psf	\$99,867 per month

Exposure Time and Marketing Periods

Based on statistical information about days on market, escrow length, and marketing times gathered through national investor surveys, sales verification, and interviews of market participants, marketing and exposure time estimates of nine to 12 months, respectively, are considered reasonable and appropriate for the subject property.

General Assumptions and Limiting Conditions

This appraisal is subject to the following limiting conditions:

1. The legal description – if furnished to us – is assumed to be correct.
2. No responsibility is assumed for legal matters, questions of survey or title, soil or subsoil conditions, engineering, availability or capacity of utilities, or other similar technical matters. The appraisal does not constitute a survey of the property appraised. All existing liens and encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management unless otherwise noted.
3. Unless otherwise noted, the appraisal will value the property as though free of contamination. Valbridge Property Advisors | Hulberg and Associates will conduct no hazardous materials or contamination inspection of any kind. It is recommended that the client hire an expert if the presence of hazardous materials or contamination poses any concern.
4. The stamps and/or consideration placed on deeds used to indicate sales are in correct relationship to the actual dollar amount of the transaction.
5. Unless otherwise noted, it is assumed there are no encroachments, zoning violations or restrictions existing in the subject property.
6. The appraiser is not required to give testimony or attendance in court by reason of this appraisal, unless previous arrangements have been made.
7. Unless expressly specified in the engagement letter, the fee for this appraisal does not include the attendance or giving of testimony by Appraiser at any court, regulatory, or other proceedings, or any conferences or other work in preparation for such proceeding. If any partner or employee of Valbridge Property Advisors | Hulberg and Associates is asked or required to appear and/or testify at any deposition, trial, or other proceeding about the preparation, conclusions or any other aspect of this assignment, client shall compensate Appraiser for the time spent by the partner or employee in appearing and/or testifying and in preparing to testify according to the Appraiser's then current hourly rate plus reimbursement of expenses.
8. The values for land and/or improvements, as contained in this report, are constituent parts of the total value reported and neither is (or are) to be used in making a summation appraisal of a combination of values created by another appraiser. Either is invalidated if so used.

9. The dates of value to which the opinions expressed in this report apply are set forth in this report. We assume no responsibility for economic or physical factors occurring at some point at a later date, which may affect the opinions stated herein. The forecasts, projections, or operating estimates contained herein are based on current market conditions and anticipated short-term supply and demand factors and are subject to change with future conditions.
10. The sketches, maps, plats and exhibits in this report are included to assist the reader in visualizing the property. The appraiser has made no survey of the property and assumed no responsibility in connection with such matters.
11. The information, estimates and opinions, which were obtained from sources outside of this office, are considered reliable. However, no liability for them can be assumed by the appraiser.
12. Possession of this report, or a copy thereof, does not carry with it the right of publication. Neither all, nor any part of the content of the report, or copy thereof (including conclusions as to property value, the identity of the appraisers, professional designations, reference to any professional appraisal organization or the firm with which the appraisers are connected), shall be disseminated to the public through advertising, public relations, news, sales, or other media without prior written consent and approval.
13. No claim is intended to be expressed for matters of expertise that would require specialized investigation or knowledge beyond that ordinarily employed by real estate appraisers. We claim no expertise in areas such as, but not limited to, legal, survey, structural, environmental, pest control, mechanical, etc.
14. This appraisal was prepared for the sole and exclusive use of the client for the function outlined herein. Any party who is not the client or intended user identified in the appraisal or engagement letter is not entitled to rely upon the contents of the appraisal without express written consent of Valbridge Property Advisors | Hulberg and Associates and Client. The Client shall not include partners, affiliates, or relatives of the party addressed herein. The appraiser assumes no obligation, liability or accountability to any third party.
15. Distribution of this report is at the sole discretion of the client, but third-parties not listed as an intended user on the face of the appraisal or the engagement letter may not rely upon the contents of the appraisal. In no event shall client give a third-party a partial copy of the appraisal report. We will make no distribution of the report without the specific direction of the client.
16. This appraisal shall be used only for the function outlined herein, unless expressly authorized by Valbridge Property Advisors | Hulberg and Associates.

17. This appraisal shall be considered in its entirety. No part thereof shall be used separately or out of context.
18. Unless otherwise noted in the body of this report, this appraisal assumes that the subject property does not fall within the areas where mandatory flood insurance is effective. Unless otherwise noted, we have not completed nor have we contracted to have completed an investigation to identify and/or quantify the presence of non-tidal wetland conditions on the subject property. Because the appraiser is not a surveyor, he or she makes no guarantees, express or implied, regarding this determination.
19. The flood maps are not site specific. We are not qualified to confirm the location of the subject property in relation to flood hazard areas based on the FEMA Flood Insurance Rate Maps or other surveying techniques. It is recommended that the client obtain a confirmation of the subject property's flood zone classification from a licensed surveyor.
20. If the appraisal is for mortgage loan purposes 1) we assume satisfactory completion of improvements if construction is not complete, 2) no consideration has been given for rent loss during rent-up unless noted in the body of this report, and 3) occupancy at levels consistent with our "Income and Expense Projection" are anticipated.
21. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures which would render it more or less valuable. No responsibility is assumed for such conditions or for engineering which may be required to discover them.
22. Our inspection included an observation of the land and improvements thereon only. It was not possible to observe conditions beneath the soil or hidden structural components within the improvements. We inspected the buildings involved, and reported damage (if any) by termites, dry rot, wet rot, or other infestations as a matter of information, and no guarantee of the amount or degree of damage (if any) is implied. Condition of heating, cooling, ventilation, electrical and plumbing equipment is considered to be commensurate with the condition of the balance of the improvements unless otherwise stated. Should the client have concerns in these areas, it is the client's responsibility to order the appropriate inspections. The appraiser does not have the skill or expertise to make such inspections and assumes no responsibility for these items.
23. This appraisal does not guarantee compliance with building code and life safety code requirements of the local jurisdiction. It is assumed that all required licenses, consents, certificates of occupancy or other legislative or administrative authority from any local, state or national governmental or private entity or organization have been or can be obtained or renewed for any use on which the value conclusion contained in this report is based unless specifically stated to the contrary.

24. When possible, we have relied upon building measurements provided by the client, owner, or associated agents of these parties. In the absence of a detailed rent roll, reliable public records, or "as-built" plans provided to us, we have relied upon our own measurements of the subject improvements. We follow typical appraisal industry methods; however, we recognize that some factors may limit our ability to obtain accurate measurements including, but not limited to, property access on the day of inspection, basements, fenced/gated areas, grade elevations, greenery/shrubbery, uneven surfaces, multiple story structures, obtuse or acute wall angles, immobile obstructions, etc. Professional building area measurements of the quality, level of detail, or accuracy of professional measurement services are beyond the scope of this appraisal assignment.
25. We have attempted to reconcile sources of data discovered or provided during the appraisal process, including assessment department data. Ultimately, the measurements that are deemed by us to be the most accurate and/or reliable are used within this report. While the measurements and any accompanying sketches are considered to be reasonably accurate and reliable, we cannot guarantee their accuracy. Should the client desire a greater level of measuring detail, they are urged to retain the measurement services of a qualified professional (space planner, architect or building engineer). We reserve the right to use an alternative source of building size and amend the analysis, narrative and concluded values (at additional cost) should this alternative measurement source reflect or reveal substantial differences with the measurements used within the report.
26. In the absence of being provided with a detailed land survey, we have used assessment department data to ascertain the physical dimensions and acreage of the property. Should a survey prove this information to be inaccurate, we reserve the right to amend this appraisal (at additional cost) if substantial differences are discovered.
27. If only preliminary plans and specifications were available for use in the preparation of this appraisal, then this appraisal is subject to a review of the final plans and specifications when available (at additional cost) and we reserve the right to amend this appraisal if substantial differences are discovered.
28. Unless otherwise stated in this report, the value conclusion is predicated on the assumption that the property is free of contamination, environmental impairment or hazardous materials. Unless otherwise stated, the existence of hazardous material was not observed by the appraiser and the appraiser has no knowledge of the existence of such materials on or in the property. The appraiser, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required for discovery. The client is urged to retain an expert in this field, if desired.

29. The Americans with Disabilities Act (“ADA”) became effective January 26, 1992. We have not made a specific compliance survey of the property to determine if it is in conformity with the various requirements of the ADA. It is possible that a compliance survey of the property, together with an analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this could have a negative effect on the value of the property. Since we have no direct evidence relating to this issue, we did not consider possible noncompliance with the requirements of ADA in developing an opinion of value.
30. This appraisal applies to the land and building improvements only. The value of trade fixtures, furnishings, and other equipment, or subsurface rights (minerals, gas, and oil) were not considered in this appraisal unless specifically stated to the contrary.
31. No changes in any federal, state or local laws, regulations or codes (including, without limitation, the Internal Revenue Code) are anticipated, unless specifically stated to the contrary.
32. Any income and expense estimates contained in the appraisal report are used only for the purpose of estimating value and do not constitute prediction of future operating results. Furthermore, it is inevitable that some assumptions will not materialize and that unanticipated events may occur that will likely affect actual performance.
33. Any estimate of insurable value, if included within the scope of work and presented herein, is based upon figures developed consistent with industry practices. However, actual local and regional construction costs may vary significantly from our estimate and individual insurance policies and underwriters have varied specifications, exclusions, and non-insurable items. As such, we strongly recommend that the Client obtain estimates from professionals experienced in establishing insurance coverage. This analysis should not be relied upon to determine insurance coverage and we make no warranties regarding the accuracy of this estimate.
34. The data gathered in the course of this assignment (except data furnished by the Client) shall remain the property of the Appraiser. The appraiser will not violate the confidential nature of the appraiser-client relationship by improperly disclosing any confidential information furnished to the appraiser. Notwithstanding the foregoing, the Appraiser is authorized by the client to disclose all or any portion of the appraisal and related appraisal data to appropriate representatives of the Appraisal Institute if such disclosure is required to enable the appraiser to comply with the Bylaws and Regulations of such Institute now or hereafter in effect.

35. You and Valbridge Property Advisors | Hulberg and Associates both agree that any dispute over matters in excess of \$5,000 will be submitted for resolution by arbitration. This includes fee disputes and any claim of malpractice. The arbitrator shall be mutually selected. If Valbridge Property Advisors | Hulberg and Associates and the client cannot agree on the arbitrator, the presiding head of the Local County Mediation & Arbitration panel shall select the arbitrator. Such arbitration shall be binding and final. In agreeing to arbitration, we both acknowledge that, by agreeing to binding arbitration, each of us is giving up the right to have the dispute decided in a court of law before a judge or jury. In the event that the client, or any other party, makes a claim against Hulberg and Associates or any of its employees in connections with or in any way relating to this assignment, the maximum damages recoverable by such claimant shall be the amount actually received by Valbridge Property Advisors | Hulberg and Associates for this assignment, and under no circumstances shall any claim for consequential damages be made.
36. Valbridge Property Advisors | Hulberg and Associates shall have no obligation, liability, or accountability to any third party. Any party who is not the "client" or intended user identified on the face of the appraisal or in the engagement letter is not entitled to rely upon the contents of the appraisal without the express written consent of Valbridge Property Advisors | Hulberg and Associates. "Client" shall not include partners, affiliates, or relatives of the party named in the engagement letter. Client shall hold Valbridge Property Advisors | Hulberg and Associates and its employees harmless in the event of any lawsuit brought by any third party, lender, partner, or part-owner in any form of ownership or any other party as a result of this assignment. The client also agrees that in case of lawsuit arising from or in any way involving these appraisal services, client will hold Valbridge Property Advisors | Hulberg and Associates harmless from and against any liability, loss, cost, or expense incurred or suffered by Valbridge Property Advisors | Hulberg and Associates in such action, regardless of its outcome.
37. The Valbridge Property Advisors office responsible for the preparation of this report is independently owned and operated by Hulberg and Associates. Neither Valbridge Property Advisors, Inc., nor any of its affiliates has been engaged to provide this report. Valbridge Property Advisors, Inc. does not provide valuation services, and has taken no part in the preparation of this report.
38. If any claim is filed against any of Valbridge Property Advisors, Inc., a Florida Corporation, its affiliates, officers or employees, or the firm providing this report, in connection with, or in any way arising out of, or relating to, this report, or the engagement of the firm providing this report, then (1) under no circumstances shall such claimant be entitled to consequential, special or other damages, except only for direct compensatory damages, and (2) the maximum amount of such compensatory damages recoverable by such claimant shall be the amount actually received by the firm engaged to provide this report.

39. This report and any associated work files may be subject to evaluation by Valbridge Property Advisors, Inc., or its affiliates, for quality control purposes.
40. Acceptance and/or use of this appraisal report constitutes acceptance of the foregoing general assumptions and limiting conditions.

Certification – Maria Aji, PhD

I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. The undersigned has not performed services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
8. My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
9. Maria Aji, PhD has personally inspected the subject property.
10. No one provided significant real property appraisal assistance to the person signing this certification, unless otherwise noted.
11. The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
12. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
13. As of the date of this report, the undersigned has completed the Standards and Ethics Education Requirement for Candidates/Practicing Affiliates of the Appraisal Institute.

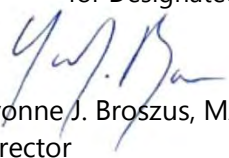


Maria Aji, PhD
Senior Appraiser
California Certified License #AG027130

Certification – Yvonne J. Broszus, MAI

I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. The undersigned has performed services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
8. My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
9. Yvonne J. Broszus, MAI did not personally inspect the subject property.
10. No one provided significant real property appraisal assistance to the person signing this certification, unless otherwise noted.
11. The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
12. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
13. As of the date of this report, the undersigned has completed the continuing education program for Designated Members of the Appraisal Institute.



Yvonne J. Broszus, MAI
Director
California Certified License #AG019587

Addenda

Preliminary Title Report

Glossary

Qualifications

- Maria Aji, PhD – Senior Appraiser
- Yvonne J. Broszus, MAI - Director

Information on Valbridge Property Advisors

Office Locations

Preliminary Title Report

APN: 491-05-020
Order Number: NCS-227645-02
Page Number: 1
NWC Capitol/Tully



First American Title Company
National Commercial Services
1737 North First Street, Suite 500
San Jose, CA 95112

Glenn Frizzell
County of Santa Clara
101 Skyport Drive
San Jose, CA 95112
Phone: (408)573-2409

Escrow Officer: Carol M. Herrera
Phone: (408)451-7829
Email: cmherrera@firstam.com
Title Officer: Mike D. Hickey
Phone: (408)451-7905

Buyer: County of Santa Clara
Property: Vacant Land, San Jose, CA

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception below or not excluded from coverage pursuant to the joined Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the policy, Limitations on Covered Risks applicable to the CLIA and ALIA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

First American Title Insurance Company

Order Number: 613727676-92

Page Number: 2

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

First American Title Insurance Company

Order Number: NCS-727678-00
Page Number: 3

Dated as of April 20, 2015 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

County of Santa Clara of the State of California

The estate or interest in the land hereinafter described or referred to covered by this Report is:

Fee Simple

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2015-2016, a lien not yet due or payable.
2. General and special taxes and assessments for the fiscal year 2014-2015 are exempt. If the exempt status is terminated an additional tax may be levied. A.P. No.: 491-05-020.
3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.
4. Rights of the public in and to that portion of the land lying within Swift Avenue.
5. An easement for a single line of towers for the transmission of electrical energy and incidental purposes, recorded November 14, 1927 in Book 358, Page 317 of Official Records.
In Favor of: Pacific Gas and Electric Company
Affects: As described therein

The terms and provisions contained in the document entitled "Consent to Common Use Agreement" recorded June 24, 1966 in Book 7422, Page 489 of Official Records. By and between Pacific Gas and Electric Company and the County of Santa Clara.

A quitclaim to the County of Santa Clara recorded August 08, 1969 in Book 8632, Page 708 of Official Records.

First American Title Insurance Company

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6. An easement for a single line of towers for the transmission of electrical energy and telegraph wires and incidental purposes, recorded January 11, 1928 in Book 368, Page 439 of Official Records.

In Favor of: Pacific Gas and Electric Company
Affects: As described therein

The terms and provisions contained in the document entitled "Consent to Common Use Agreement" recorded June 24, 1966 in Book 7422, Page 489 of Official Records. By and between Pacific Gas and Electric Company and the County of Santa Clara.

A quitclaim to the County of Santa Clara recorded August 08, 1969 in Book 8632, Page 708 of Official Records.

7. An easement for cross arms and wires and incidental purposes, recorded October 23, 1946 in Book 1384, Page 272 of Official Records.

In Favor of: Pacific Telephone and Telegraph Company
Affects: As described therein

8. The effect of a map purporting to show the land and other property, filed May 23, 2006 in Book 801, Pages 1 through 37 of Record of Surveys.

9. Rights of parties in possession.

First American Title Insurance Company

Order Number: NCS 727576 SC
Page Number: 9**INFORMATIONAL NOTES**

1. The property covered by this report is vacant land.
2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

None
3. This preliminary report/commitment was prepared based upon an application for a policy of title insurance that identified land by street address or assessor's parcel number only. It is the responsibility of the applicant to determine whether the land referred to herein is in fact the land that is to be described in the policy or policies to be issued.
4. Should this report be used to facilitate your transaction, we must be provided with the following prior to the issuance of the policy:
 - A. WITH RESPECT TO A CORPORATION:
 1. A certificate of good standing of recent date issued by the Secretary of State of the corporation's state of domicile;
 2. A certificate copy of a resolution of the Board of Directors authorizing the contemplated transaction and designating which corporate officers shall have the power to execute on behalf of the corporation;
 3. Requirements which the Company may impose following its review of the above material and other information which the Company may require;
 - B. WITH RESPECT TO A CALIFORNIA LIMITED PARTNERSHIP:
 1. A certified copy of the certificate of limited partnership (form LP-1) and any amendments thereto (form LP-2) to be recorded in the public records;
 2. A full copy of the partnership agreement and any amendments;
 3. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;
 4. Requirements which the Company may impose following its review of the above material and other information which the Company may require;
 - C. WITH RESPECT TO A FOREIGN LIMITED PARTNERSHIP:
 1. A certified copy of the application for registration, foreign limited partnership (form LP-5) and any amendments thereto (form LP-6) to be recorded in the public records;
 2. A full copy of the partnership agreement and any amendment;
 3. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;
 4. Requirements which the Company may impose following its review of the above material and other information which the Company may require;
 - D. WITH RESPECT TO A GENERAL PARTNERSHIP:
 1. A certified copy of a statement of partnership authority pursuant to Section 16303 of the California Corporation Code (form GP-1), executed by at least two partners, and a certified copy

First American Title Insurance Company

Order Number: WCS-727676-52

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- of any amendments to such statement (form GP 7), to be recorded in the public records;
 - 2. A full copy of the partnership agreement and any amendments;
 - 3. Requirements which the Company may impose following its review of the above material required herein and other information which the Company may require.
- E. WITH RESPECT TO A LIMITED LIABILITY COMPANY:
- 1. A copy of its operating agreement and any amendments thereto;
 - 2. If it is a California limited liability company, a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) to be recorded in the public records;
 - 3. If it is a foreign limited liability company, a certified copy of its application for registration (LLC-5) to be recorded in the public records;
 - 4. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, such document or instrument must be executed in accordance with one of the following, as appropriate:
 - (i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such documents must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;
 - (ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.
 - 5. Requirements which the Company may impose following its review of the above material and other information which the Company may require.
- F. WITH RESPECT TO A TRUST:
- 1. A certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company.
 - 2. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.
 - 3. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require.
- G. WITH RESPECT TO INDIVIDUALS:
- 1. A statement of information.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

First American Title Insurance Company

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LEGAL DESCRIPTION

Real property in the City of San Jose, County of Santa Clara, State of California, described as follows:

PARCELS D, E AND G, AS SHOWN ON THAT RECORD OF SURVEY FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA ON JULY 23, 1971, IN BOOK 286 OF MAPS, PAGE 50 AND AS AMENDED FILED ON AUGUST 01, 1972, IN BOOK 305 OF MAPS, PAGE 36.

MPN: 491-05-020

First American Title Insurance Company

Order Number: NCS 727676-ED
Page Number: 8**NOTICE I**

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwriter title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

NOTICE II

As of January 1, 1991, if the transaction which is the subject of this report will be a sale, you as a party to the transaction, may have certain tax reporting and withholding obligations pursuant to the state law referred to below:

In accordance with Sections 18662 and 18668 of the Revenue and Taxation Code, a buyer may be required to withhold an amount equal to three and one third percent of the sales price in the case of the disposition of California real property interest by either:

1. A seller who is an individual with a last known street address outside of California or when the disbursement instructions authorize the proceeds be sent to a financial intermediary of the seller, OR
2. A corporate seller which has no permanent place of business in California.

The buyer may become subject to penalty for failure to withhold an amount equal to the greater of .10 percent of the amount required to be withheld or five hundred dollars (\$500).

However, notwithstanding any other provision included in the California statutes referenced above, no buyer will be required to withhold any amount or be subject to penalty for failure to withhold if:

1. The sales price of the California real property conveyed does not exceed one hundred thousand dollars (\$100,000), OR
2. The seller executes a written certificate, under the penalty of perjury, certifying that the seller is a resident of California, or if a corporation, has a permanent place of business in California, OR
3. The seller, who is an individual, executes a written certificate, under the penalty of perjury, that the California real property being conveyed is the seller's principal residence (as defined in Section 1034 of the Internal Revenue Code).

The seller is subject to penalty for knowingly filing a fraudulent certificate for the purpose of avoiding the withholding requirement.

The California statutes referenced above include provisions which authorize the Franchise Tax Board to grant reduced withholding and waivers from withholding on a case by case basis.

The parties to this transaction should seek an attorney's, accountant's, or other tax specialist's opinion concerning the effect of this law on this transaction and should not act on any statements made or omitted by the escrow or closing officer.

The Seller May Request a Waiver by Contacting:
Franchise Tax Board
Withhold at Source Unit
P.O. Box 651
Sacramento, CA 95832-0651
(916) 845-4930

First American Title Insurance Company

Privacy Policy

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

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CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (02-03-10)
EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
 - (a) building; (d) improvements on the Land;
 - (b) zoning; (e) land division; and
 - (c) land use; (f) environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8 a., 14, 15, 16, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
 - (a) that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
 - (b) that are known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
 - (c) that result in no loss to You; or
 - (d) that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8 e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
 - (a) to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
 - (b) in streets, alleys, or waterways that touch the Land.
 This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows: For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

<u>Your Deductible Amount</u>	<u>Our Maximum Dollar Limit of Liability</u>
Covered Risk 16: 1% of Policy Amount or \$2,500.00 (whichever is less)	\$10,000.00
Covered Risk 18: 1% of Policy Amount or \$5,000.00 (whichever is less)	\$25,000.00
Covered Risk 19: 1% of Policy Amount or \$5,000.00 (whichever is less)	\$25,000.00
Covered Risk 21: 1% of Policy Amount or \$2,500.00 (whichever is less)	\$5,000.00

ALTA RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)
EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
 - (a) and use
 - (b) improvements on the land
 - (c) and division
 - (d) environmental protection

This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date. This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.

2. The right to take the land by condemning it, unless:
 - (a) a notice of exercising the right appears in the public records on the Policy Date

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- (b) the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
 - (a) that are created, allowed, or agreed to by you;
 - (b) that are known to you, but not to us, on the Policy Date – unless they appeared in the public records;
 - (c) that result in no loss to you;
 - (d) that first affect your title after the Policy Date – this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks.
 4. Failure to pay value for your title;
 5. Lack of a right:
 - (a) to any land outside the area specifically described and referred to in Item 3 of Schedule A OR
 - (b) in streets, alleys, or waterways that touch your land.
 This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

2006 AITA LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching to or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - a. a fraudulent conveyance or fraudulent transfer, or
 - b. a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Expanded Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

First American Title Insurance Company

Order Number: NCS-777676-SC
Page Number: 12

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any easels, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims hereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

**2006 ALTA OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to:
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defectus liens, circumstances, adverse claims, or other matters:
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not known to the Company, not recorded in the Public Records as of Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or anti-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage is:
 - a. a fraudulent conveyance or fraudulent transfer, or
 - b. a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the exceptions from coverage in a Standard Coverage policy will also include the following exceptions from coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

First American Title Insurance Company

Order Number: NCS 727676 SC

Page Number: 13

1. (a) taxes or assessments that are not shown as existing liens by the records or any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records;
2. Any facts, rights, interests, or claims that are not shown by the public records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land;
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records;
4. Any encroachment, easement, violation, variation, or adverse circumstance affecting the title that would be discovered by an accurate and complete land survey of the Land and not shown by the Public Records;
5. (a) Unpatented mining claims, (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records;
6. Any lien or right to a lien for services, labor or material not shown by the public records;

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (07-26-10)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not known to the Company, not recorded in the Public Records as of Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth in lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has knowledge that the vested shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage is
 - a. a fraudulent conveyance or fraudulent transfer, or
 - b. a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.

First American Title Insurance Company

VESTING DEED

4527271

Recorded in reply to: 1690238 6/21/19 1690238 6/21/19

When recorded mail to:

County: Council
 19 West Main Street
 San Jose, California
 Attention: L. S. Jackson

Recorded at the request of
 City Title Insurances Co.
 MAY 29 10:56 AM
 PAUL J. TERRY, Recorder
 Santa Clara County, Official Seal

CHART DEED
(CORPORATION)

CITY TITLE INSURANCE COMPANY
 a corporation organized under the laws of the State of California

hereby GRANT to

COUNTY OF SANTA CLARA OF THE STATE OF CALIFORNIA

all interest herein contained in the City of San Jose
 County of Santa Clara State of California, to-wit: as follows:

ALL OF LOTS 68 and 69, and portions of Lots 66 and 67, as shown upon that certain Map entitled, "MAP OF THE SUBDIVISION OF THE MILLIKEN TRACT", which Map was filed for record in the office of the Recorder of the County of Santa Clara, State of California, on February 16, 1988 in Book "C" of Maps, page 37, and more particularly described as follows:

BEGINNING at a point in the corner line of Split Lane at the Easternmost corner of that certain parcel of land described in the Deed from Glen Vereker, et ux, to Arthur L. Wickersham, et ux, dated January 13, 1949 and recorded January 21, 1949 in Book 1135 of Official Records, page 288, Santa Clara County Records; thence, bearing S. 50° E., along the said center line of Split Lane, 345.00 feet to the Easternmost corner of Lot 69, as said Lot is shown upon the Map above referred to, running thence N. 85° 34' 30" E., along the Northwestern line of said Lot 69 for a distance of 186.24 feet to the Northeast corner thereof; thence S. 49° 31' E., along the Northwestern line of Lots 67, 68, 69 and 66 of said subdivision, 1262.12 feet to the Northeast corner of that certain 3.00 acre tract of land described in the Deed from Lucile M. C. et ux, to Reid's Millivie Airport, Inc., a corporation, dated January 27, 1942 and recorded February 10, 1942 in Book 1004 of Official Records, page 136, Santa Clara County Records; thence thence S. 42° 08' E., along the Northwestern line of the said 3.00 acre tract, 1178.82 feet to the Westernmost corner of that certain parcel of land described in the Deed from Glen Vereker, et ux, to William B. Carroll, et ux, dated August 20, 1947 and recorded August 23, 1947 in Book 1500 of Official Records, page 568, Santa Clara County Records; running thence N. 93° E., along the Northwestern line of the land so described in the Deed to said Carroll, et ux, 74.07 feet to the Northeast corner thereof; thence S. 45° 09' E., along the Northwestern line of the land so described in the Deed to said Carroll, et ux, 37.16 feet to the intersection thereof with the prolongation Southeasterly of the Northwestern line of the land so described in the Deed to said Wickersham, et ux; running thence N. 23° E., along said prolongation line and along the Northwestern line of the land so described in the Deed to said Wickersham, et ux, 217.42 feet to the Northeast corner thereof; running thence S. 49° 31' E., along the Northwestern line of the land so described in the Deed to said Wickersham, et ux, 217.42 feet to the point of beginning.

Page 6288 of 220

Subject to: Covenants, conditions, restrictions, easements, rights-of-way and reservations, now of record,
WITHOUT WARRANTY, EXPRESS OR IMPLIED.

THE WITNESS WHEREOF, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its duly authorized officers.

Dated: November 26, 1963 CITY TITLE INSURANCE COMPANY

By: *[Signature]*
Vice President

By: *[Signature]*
Assistant Secretary

STATE OF CALIFORNIA
County of Santa Clara
On November 26, 1963

I, *[Signature]* T. C. Harlin, do hereby certify that the foregoing is a true and correct copy of the original as the same appears on the records of the County and State, personally appeared

[Signature] T. C. Harlin, Vice President
[Signature] A. D. Carey, Assistant Secretary

Witness to me to be the Assistant Secretary of the corporation that caused the within instrument and to me to be the person who executed the within instrument on behalf of the corporation which words and acknowledged to me the said corporation executed the same.

(SEAL) M. GRACOLICE
NOTARY PUBLIC
Santa Clara County, Calif.

My commission expires 9-13-65

CITY TITLE INSURANCE COMPANY
Code Area 40-381 Bill No. 489-15-012 & 489-15-013
CY Application No. 178377

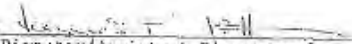
Reid Hillview Airport
Home Mutual Savings & Loan Assn.
(Guardian Capitol Co. Inc.)
Parcel #1511-15-12-13
Escrow # 240593

lot 0288 sec 221

CERTIFICATE OF ACCEPTANCE
(Government Code Section 27281)

This is to certify that the interest in real property conveyed by the within and foregoing deed or grant to the COUNTY OF SANTA CLARA, State of California, is hereby accepted by the undersigned officer on behalf of the Board of Supervisors of the County of Santa Clara pursuant to authority conferred by resolution of the Board of Supervisors of the County of Santa Clara adopted on January 2, 1962, and the grantee consents to recordation thereof by its duly authorized officer.

IN WITNESS WHEREOF, I have hereunto set my hand
this 20 day of November, 1963

By: 
Director/Assistant Director of
Public Works of the County of
Santa Clara

JRK:web
Revision of 1/4/62

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EXCEPTIONS

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Set his hand and seal the day and year first above written.
 in
 Frank E. Barrante (1644)
 1915

Signed, sealed and delivered in the presence of -
 Frank Barrante being unable to write, made his mark in my presence, and I wrote
 his name at his request and in his presence.

H. V. Grossman

(Witness to signature by mark of Frank Barrante)

H. V. Grossman
 Deane Carroll

STATE OF CALIFORNIA)
 COUNTY OF SANTA CLARA) s. On this 27th day of July A. D. 1915 before me,
 H. V. Grossman a Notary Public in and for the
 said County of Santa Clara, residing therein, duly commissioned and sworn, personally
 appeared Frank Barrante, unmarried, known to me to be the person whose name is
 subscribed to the within instrument and acknowledged that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my of-
 ficial seal, at my office in the said County of Santa Clara, the day and year in
 this certificate first above written.

(NOTARIAL SEAL) H. V. Grossman Notary Public in and for the County
 of Santa Clara, State of California
 FILES NO. P-14612

Filed for record at the request of Frank Barrante May 14 1917 at 45 min
 past 1 o'clock P. M.

FRY S. WILKINSON
 Dep. C. Tully Deputy Recorder

Compared by *[Signature]* and *[Signature]*
 SPECIAL AGENT IN CHARGE OF THE RECORDS DEPARTMENT OF THE COUNTY OF SANTA CLARA

MARY JONES BY AL TO PACIFIC GAS & ELECTRIC CO
 211-120
 ORIGINAL

DEEMED GRANT OF RIGHT OF WAY
 FOR ELECTRIC TRANSMISSION LINE

THIS AGREEMENT made by and between Mary Jones and Clifford G. Jones,
 hereinafter called the "grantor" and Pacific Gas and Electric Company, a corporation
 duly organized and existing under and by virtue of the laws of the State of California,
 hereinafter called the "grantee"

WITNESSETH that the grantor, for a valuable consideration paid by
 said grantee, the receipt whereof by the grantor is hereby solemnly acknowledged, has
 hereunto sold and conveyed, his successors and assigns, the right to erect, construct,
 reconstruct, replace, repair, maintain and use, for the transmission and distribution
 of electricity a single line of towers, and appurtenant rights and appurtenances
 hereunto, all wires which the grantor may from time to time deem to be reasonably
 required for these purposes, and telephone and telegraph wires for the private use
 of the grantor, and all necessary and proper poles, arms, braces, crosspieces, struts,
 lugs, and other appliances and fittings for use in connection with said towers
 and wires, and also a right of way along the same, extending across the following
 described lands of the grantor which are situate in the County of Santa Clara, State

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of California, to wit:

Lot 49 on show map that certain map entitled, "Map of the Sub-division of the Pittsburg Tract," recorded in the office of the County Recorder of Santa Clara County, State of California, in Book "C" of Maps, at page 56.

The aforesaid tracts to be conveyed hereinafter shall be located on said premises along that certain line which crosses said premises and is described as follows, to wit:

Beginning at a point on the northwesterly boundary line of said lot 48 located by a false iron pipe in ground from which a 2" x 2" stake marking the intersection of the northwesterly boundary line of said lot 49 with the northwesterly boundary line of said lot 49 on show map said day, bears north 47 degrees 47 minutes east 55.0 feet distant and running thence south 37 degrees 20 minutes east 333.0 feet; thence south 85 degrees 23 minutes east, 430.0 feet, more or less, to a point on the northwesterly boundary line of said lot 49.

Said grantee for the consideration aforesaid, does further grant unto said grantee, its successors and assigns, the right, easement or servitude of using said right of way for any and all purposes connected with the erection, construction, reconstruction, replacement, repair, and maintenance, and use, for the purposes aforesaid, of such towers, poles and appurtenant structures; and also the right of ingress to and egress from said right of way by a practicable route or routes across the aforesaid lands of said grantor.

The grantee hereby agrees that all transmission wires to be suspended on said towers of the grantee shall be supported at least thirty (30) feet, and all telephone and telegraph wires at least twenty five (25) feet, above the average natural surface of the ground at the lowest part of each respective line.

In exercising the right of ingress and egress hereby granted, the grantee shall, whenever practicable, use existing roads or paths, and shall repair any damage which may be caused by the use thereof.

The grantee will indemnify the grantor and their successors in estate against any and all loss and damage which may be incurred by the exercise of said right of ingress and egress, or by any wrongful or negligent act or omission of the grantee or of its agents or employees in the course of their employment.

The grantee, in the exercise and enjoyment of the rights hereby granted, shall avoid unreasonable interferences with such use by the grantor and their successors in estate of the aforesaid right of way for mining and agricultural purposes as is not inconsistent with the grantor's full enjoyment of the rights hereby granted; provided, however, that the grantor and their successors in estate shall not erect or construct, or permit to be erected or constructed, any building or other structure, or drill or operate any water, or oil well, within twenty (20) feet of the above described line.

The grantee shall have the right to erect, maintain and use gates in all fences which are drawn or shall hereafter exist on said right of way, and to trim, and/or to cut and clear away, any trees and brush wherever, in its judgment, the same shall be necessary, for the convenient and safe exercise of the rights hereby granted; provided, however, that all trees which the grantee is hereby authorized to cut or remove, if suitable for either timber or wood, shall continue

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is to the property of the grantor, but all logs, logs, brush and refuse wood and limbs
shall be burned or removed by the grantor.

IN WITNESS WHEREOF, the grantor has executed these presents this third
day of December 1927

Mary Jones
Clifford Q. Jones

Signed in the presence of Earl J. Sporn witness
Correct as to inscription PAGE 10/23/27

STATE OF CALIFORNIA)
CITY AND COUNTY OF SAN FRANCISCO)
On this 21st day of December A. D. 1927 before me, Katherine
Hollahan, Notary Public in and for the City and County of San Francisco, State of
California, reading therein, fully authenticated and sworn, personally appeared
Earl J. Sporn known to me to be the same person whose name is subscribed to the within
instrument, as a witness therein, who, being by me duly sworn, deposed and said,
that he resides in the City and County of San Francisco, State of California, that
he was present and saw Mary Jones and Clifford Q. Jones, (personally known to him
to be the persons described in and who executed the said instrument, as a parties
thereof) sign and execute the same; and that the said Mary Jones and the said
Clifford Q. Jones duly acknowledged in the presence of said affiant that they executed
the same, and that he, the said affiant, thereupon, and at their request, subscribed
his name as a witness thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official
seal, at my office in the City and County of San Francisco, State of California, the
day and year in this certificate first above written.

[NOTARIAL SEAL] Katherine Hollahan Notary Public in and for the
City and County of San Francisco, State of California
My commission expires January 20, 1930

FILED NO P-56518

Filed for record at the request of American Railway Express Co.
Nov 21 1927 at 10:58 am past 1 o'clock P. M.

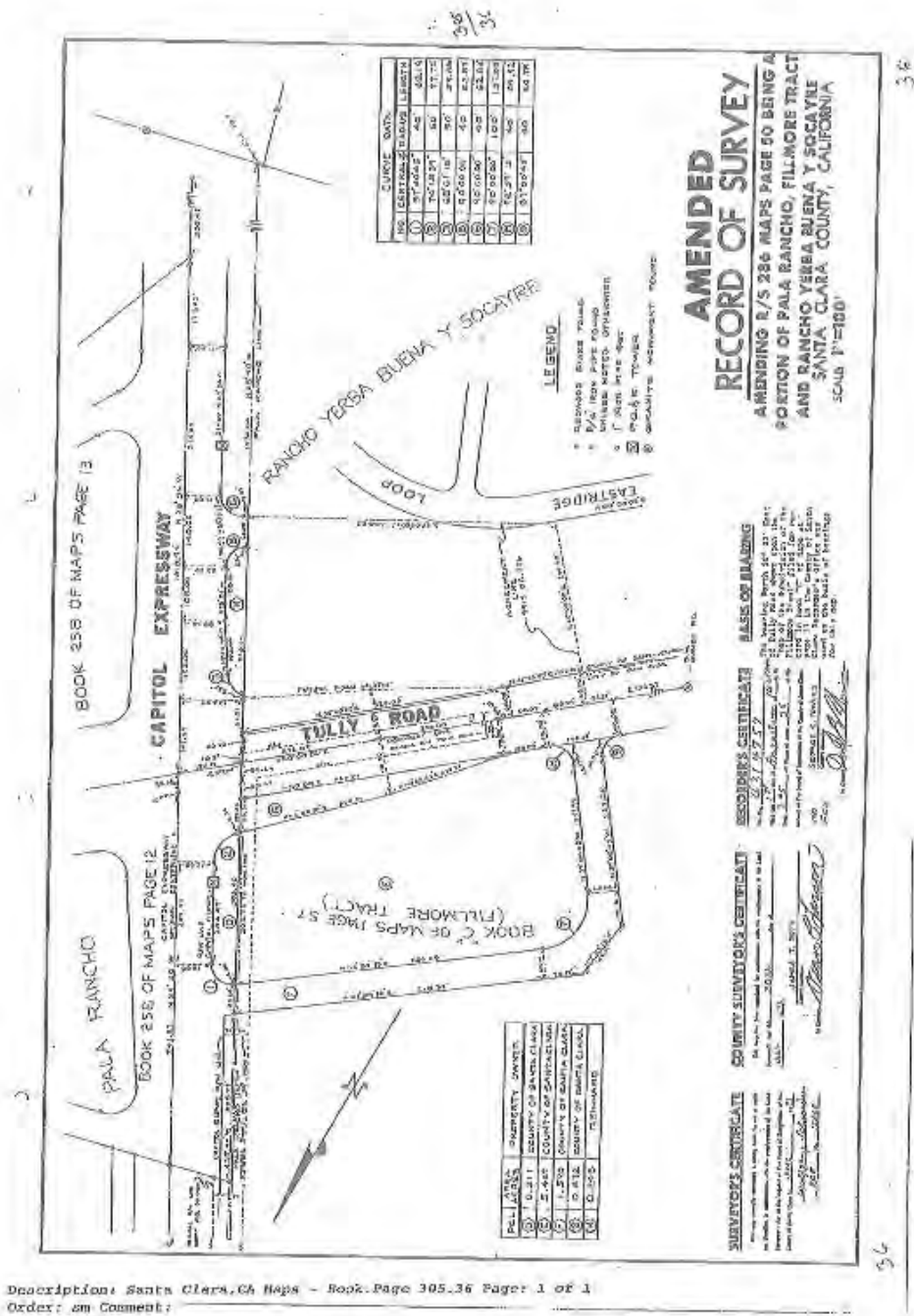
HAT E. JAMESBY RECORDER
Paul A. Cox Deputy Recorder

Witnessed by [Signature] and [Signature]
[Illegible text]

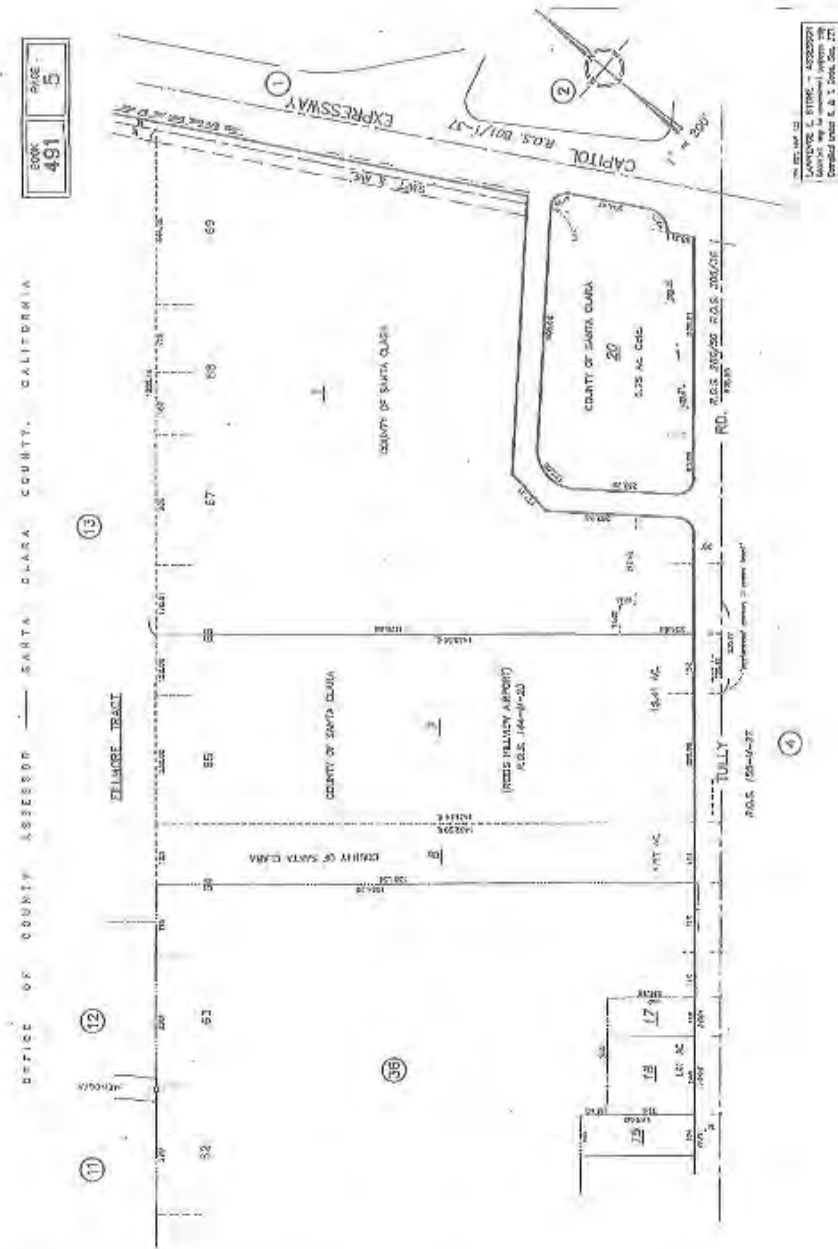
J. P. CARROLL DE BK TO SIMONET S. REPARANT BY SA

FROM ALL SET BY THESE INSTRUMENTS that the Chattel Mortgage dated the 24th
day of June A. D. 1919 made and executed by J. P. Carroll and Marie F. Carroll, his
wife, mortgagee, to Margaret E. McFeght, and Frances H. Schellenbeger, mortgagees,
and recorded in the office of the Deputy Recorder of the County of Santa Clara, State
of California, in Book 67 of Chattel Mortgages, at page 269 on the 17th day of September
1919 together with the debt thereby secured, is fully paid, satisfied and discharged.
IN WITNESS WHEREOF, we have hereunto set our hands and seals the 1st day

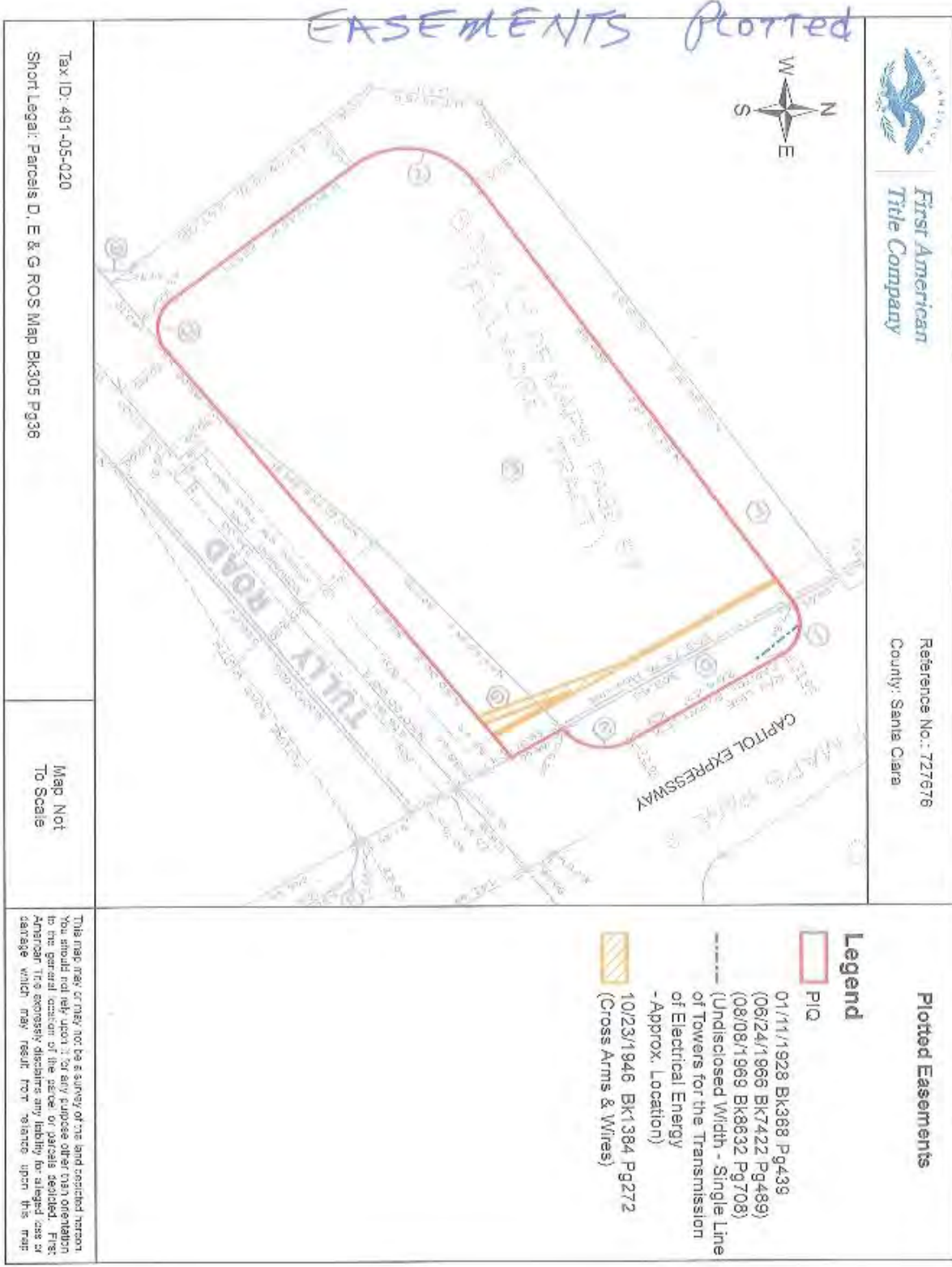
LEGAL DESCRIPTION



MAP



Description: Santa Clara, CA Addendum Map 491.5 Page: 1 of 1
Order: SA Comment:



Glossary

Definitions are taken from The Dictionary of Real Estate Appraisal, 6th Edition (Dictionary), the Uniform Standards of Professional Appraisal Practice (USPAP), and Building Owners and Managers Association International (BOMA).

Absolute Net Lease

A lease in which the tenant pays all expenses including structural maintenance, building reserves, and management; often a long-term lease to a credit tenant. (Dictionary)

Amortization

The process of retiring a debt or recovering a capital investment, typically through scheduled, systematic repayment of the principal; a program of periodic contributions to a sinking fund or debt retirement fund. (Dictionary)

As Is Market Value

The estimate of the market value of real property in its current physical condition, use, and zoning as of the appraisal date. (Dictionary)

Base Rent

The minimum rent stipulated in a lease. (Dictionary)

Base Year

The year on which escalation clauses in a lease are based. (Dictionary)

Building Common Area

In office buildings, the areas of the building that provide services to building tenants but which are not included in the office area or store area of any specific tenant. These areas may include, but shall not be limited to, main and auxiliary lobbies, atrium spaces at the level of the finished floor, concierge areas or security desks, conference rooms, lounges or vending areas, food service facilities, health or fitness centers, daycare facilities, locker or shower facilities, mail rooms, fire control rooms, fully enclosed courtyards outside the exterior walls, and building core and service areas such as fully enclosed mechanical or equipment rooms. Specifically excluded from building common area are floor common areas, parking space, portions of loading docks outside the building line, and major vertical penetrations. (BOMA)

Building Rentable Area

The sum of all floor rentable areas. Floor rentable area is the result of subtracting from the gross measured area of a floor the major vertical penetrations on that same floor. It is generally fixed for the life of the building and is rarely affected by changes in corridor size or configuration. (BOMA)

Certificate of Occupancy (COO)

A formal written acknowledgment by an appropriate unit of local government that a new construction or renovation project is at the stage where it meets applicable health and safety codes and is ready for commercial or residential occupancy. (Dictionary)

Common Area Maintenance (CAM)

The expense of operating and maintaining common areas; may or may not include management charges and usually does not include capital expenditures on tenant improvements or other improvements to the property. (Dictionary)

The amount of money charged to tenants for their shares of maintaining a [shopping] center's common area. The charge that a tenant pays for shared services and facilities such as electricity, security, and maintenance of parking lots. Items charged to common area maintenance may include cleaning services, parking lot sweeping and maintenance, snow removal, security and upkeep. (ICSC – International Council of Shopping Centers, 4th Ed.)

Condominium

A multiunit structure, or a unit within such a structure, with a condominium form of ownership. (Dictionary)

Conservation Easement

An interest in real estate restricting future land use to preservation, conservation, wildlife habitat, or some combination of those uses. A conservation easement may permit farming, timber harvesting, or other uses of a rural nature as well as some types of conservation-oriented development to continue, subject to the easement. (Dictionary)

Contributory Value

A type of value that reflects the amount a property or component of a property contributes to the value of another asset or to the property as a whole.

The change in the value of a property as a whole, whether positive or negative, resulting from the addition or deletion of a property component. Also called deprival value in some countries. (Dictionary)

Debt Coverage Ratio (DCR)

The ratio of net operating income to annual debt service (DCR = NOI/Im), which measures the relative ability of a property to meet its debt service out of net operating income; also called *debt service coverage ratio (DSCR)*. A larger *DCR* typically indicates a greater ability for a property to withstand a reduction of income, providing an improved safety margin for a lender. (Dictionary)

Deed Restriction

A provision written into a deed that limits the use of land. Deed restrictions usually remain in effect when title passes to subsequent owners. (Dictionary)

Depreciation

- 1) In appraisal, a loss in property value from any cause; the difference between the cost of an improvement on the effective date of the appraisal and the market value of the improvement on the same date.
- 2) In accounting, an allocation of the original cost of an asset, amortizing the cost over the asset's life; calculated using a variety of standard techniques. (Dictionary)

Disposition Value

The most probable price that a specified interest in property should bring under the following conditions:

- Consummation of a sale within a specified time, which is shorter than the typical exposure time for such a property in that market.
- The property is subjected to market conditions prevailing as of the date of valuation;
- Both the buyer and seller are acting prudently and knowledgeably;
- The seller is under compulsion to sell;
- The buyer is typically motivated;
- Both parties are acting in what they consider to be their best interests;
- An adequate marketing effort will be made during the exposure time;
- Payment will be made in cash in U.S. dollars (or the local currency) or in terms of financial arrangements comparable thereto; and
- The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (Dictionary)

Easement

The right to use another's land for a stated purpose. (Dictionary)

EIFS

Exterior Insulation Finishing System. This is a type of exterior wall cladding system. Sometimes referred to as dry-vit.

Effective Date

- 1) The date on which the appraisal or review opinion applies. (SVP)
- 2) In a lease document, the date upon which the lease goes into effect. (Dictionary)

Effective Gross Income (EGI)

The anticipated income from all operations of the real estate after an allowance is made for vacancy and collection losses and an addition is made for any other income. (Dictionary)

Effective Rent

Total base rent, or minimum rent stipulated in a lease, over the specified lease term minus rent concessions; the rent that is effectively paid by a tenant net of financial concessions provided by a landlord. (TIs). (Dictionary)

EPDM

Ethylene Propylene Diene Monomer Rubber. A type of synthetic rubber typically used for roof coverings. (Dictionary)

Escalation Clause

A clause in an agreement that provides for the adjustment of a price or rent based on some event or index. e.g., a provision to increase rent if operating expenses increase; also called *escalator clause*, *expense recovery clause* or *stop clause*. (Dictionary)

Estoppel Certificate

A signed statement by a party (such as a tenant or a mortgagee) certifying, for another's benefit, that certain facts are correct, such as that a lease exists, that there are no defaults, and that rent is paid to a certain date. (Black's) In real estate, a buyer of rental property typically requests estoppel certificates from existing tenants. Sometimes referred to as an *estoppel letter*. (Dictionary)

Excess Land

Land that is not needed to serve or support the existing use. The highest and best use of the excess land may or may not be the same as the highest and best use of the improved parcel. Excess land has the potential to be sold separately and is valued separately. (Dictionary)

Excess Rent

The amount by which contract rent exceeds market rent at the time of the appraisal; created by a lease favorable to the landlord (lessor) and may reflect unusual management, unknowledgeable or unusually motivated parties, a lease execution in an earlier, stronger rental market, or an agreement of the parties. (Dictionary)

Expense Stop

A clause in a lease that limits the landlord's expense obligation, which results in the lessee paying operating expenses above a stated level or amount. (Dictionary)

Exposure Time

- 1) The time a property remains on the market.
- 2) The estimated length of time that the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; Comment: Exposure time is a retrospective opinion based on an analysis of past events assuming a competitive and open market. (Dictionary)

Extraordinary Assumption

An assumption, directly related to a specific assignment, as of the effective date of the assignment results, which, if found to be false, could alter the appraiser's opinions or conclusions. Comment: Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property such as market conditions or trends; or about the integrity of data used in an analysis. (USPAP, 2016-2017 ed.)

Fee Simple Estate

Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat. (Dictionary)

Floor Common Area

In an office building, the areas on a floor such as washrooms, janitorial closets, electrical rooms, telephone rooms, mechanical rooms, elevator lobbies, and public corridors which are available primarily for the use of tenants on that floor. (BOMA)

Full Service (Gross) Lease

A lease in which the landlord receives stipulated rent and is obligated to pay all of the property's operating and fixed expenses; also called a *full service lease*. (Dictionary)

Furniture, Fixtures, and Equipment (FF&E)

Business trade fixtures and personal property, exclusive of inventory. (Dictionary)

Going-Concern Value

An outdated label for the market value of all the tangible and intangible assets of an established and operating business with an indefinite life, as if sold in aggregate; more accurately termed the *market value of the going concern* or *market value of the total assets of the business*. (Dictionary)

Gross Building Area (GBA)

- 1) Total floor area of a building, excluding unenclosed areas, measured from the exterior of the walls of the above-grade area. This includes mezzanines and basements if and when typically included in the market area of the type of property involved.
- 2) Gross leasable area plus all common areas.
- 3) For residential space, the total area of all floor levels measured from the exterior of the walls and including the superstructure and substructure basement; typically does not include garage space. (Dictionary)

Gross Measured Area

The total area of a building enclosed by the dominant portion (the portion of the inside finished surface of the permanent outer building wall which is 50 percent or more of the vertical floor-to-ceiling dimension, at the given point being measured as one moves horizontally along the wall), excluding parking areas and loading docks (or portions of same) outside the building line. It is generally not used for leasing purposes and is calculated on a floor by floor basis. (BOMA)

Gross Up Method

A method of calculating variable operating expenses in income-producing properties when less than 100% occupancy is assumed. Expenses reimbursed based on the amount of occupied space, rather than on the total building area, are described as "grossed up." (Dictionary)

Gross Retail Sellout

The sum of the separate and distinct market value opinions for each of the units in a condominium, subdivision development, or portfolio of properties, as of the date of valuation. The aggregate of retail values does not represent the value of all the units as though sold together in a single transaction; it is simply the total of the individual market value conclusions. Also called the *aggregate of the retail values*, *aggregate retail selling price* or *sum of the retail values*. (Dictionary)

Ground Lease

A lease that grants the right to use and occupy land. Improvements made by the ground lessee typically revert to the ground lessor at the end of the lease term. (Dictionary)

Ground Rent

The rent paid for the right to use and occupy land according to the terms of a ground lease; the portion of the total rent allocated to the underlying land. (Dictionary)

HVAC

Heating, ventilation, air conditioning (HVAC) system. A unit that regulates the temperature and distribution of heat and fresh air throughout a building. (Dictionary)

Highest and Best Use

- 1) The reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.
- 2) The use of an asset that maximizes its potential and that is possible, legally permissible, and financially feasible. The highest and best use may be for continuation of an asset's existing use or for some alternative use. This is determined by the use that a market participant would have in mind for the asset when formulating the price that it would be willing to bid. (IVS)
- 3) [The] highest and most profitable use for which the property is adaptable and needed or likely to be needed in the reasonably near future. (Uniform Appraisal Standards for Federal Land Acquisitions) (Dictionary)

Hypothetical Condition

- 1) A condition that is presumed to be true when it is known to be false. (SVP – Standards of Valuation Practice, effective January 1, 2015)
- 2) A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis. Comment: Hypothetical conditions are contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis. (USPAP, 2016-2017 ed.) (Dictionary)

Industrial Gross Lease

A type of modified gross lease of an industrial property in which the landlord and tenant share expenses. The landlord receives stipulated rent and is obligated to pay certain operating expenses, often structural maintenance, insurance and real property taxes, as specified in the lease. There are significant regional and local differences in the use of this term. (Dictionary)

Insurable Value

A type of value for insurance purposes. (Typically this includes replacement cost less basement excavation, foundation, underground piping and architect's fees.) (Dictionary)

Investment Value

The value of a property to a particular investor or class of investors based on the investor's specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market. (Dictionary)

Just Compensation

In condemnation, the amount of loss for which a property owner is compensated when his or her property is taken. Just compensation should put the owner in as good a position pecuniarily as he or she would have been if the property had not been taken. (Dictionary)

Leased Fee Interest

The ownership interest held by the lessor, which includes the right to receive the contract rent specified in the lease plus the reversionary right when the lease expires. (Dictionary)

Leasehold Interest

The right held by the lessee to use and occupy real estate for a stated term and under the conditions specified in the lease. (Dictionary)

Lessee (Tenant)

One who has the right to occupancy and use of the property of another for a period of time according to a lease agreement. (Dictionary)

Lessor (Landlord)

One who conveys the rights of occupancy and use to others under a lease agreement. (Dictionary)

Liquidation Value

The most probable price that a specified interest in property should bring under the following conditions:

- Consummation of a sale within a short time period.
- The property is subjected to market conditions prevailing as of the date of valuation.
- Both the buyer and seller are acting prudently and knowledgeably.
- The seller is under extreme compulsion to sell.
- The buyer is typically motivated.
- Both parties are acting in what they consider to be their best interests.
- A normal marketing effort is not possible due to the brief exposure time.
- Payment will be made in cash in U.S. dollars (or the local currency) or in terms of financial arrangements comparable thereto.
- The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (Dictionary)

Loan to Value Ratio (LTV)

The ratio between a mortgage loan and the value of the property pledged as security, usually expressed as a percentage. (Dictionary)

Major Vertical Penetrations

Stairs, elevator shafts, flues, pipe shafts, vertical ducts, and the like, and their enclosing walls. Atria, lightwells and similar penetrations above the finished floor are included in this definition. Not included, however, are vertical penetrations built for the private use of a tenant occupying office areas on more than one floor. Structural columns, openings for vertical electric cable or telephone distribution, and openings for plumbing lines are not considered to be major vertical penetrations. (BOMA)

Market Rent

The most probable rent that a property should bring in a competitive and open market reflecting the conditions and restrictions of a specified lease agreement, including the rental adjustment and revaluation, permitted uses, use restrictions, expense obligations; term, concessions, renewal and purchase options and tenant improvements (TIs). (Dictionary)

Market Value

The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their own best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

(Dictionary)

Marketing Time

An opinion of the amount of time it might take to sell a real or personal property interest at the concluded market value level during the period immediately after the effective date of an appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of an appraisal. (Advisory

Opinion 7 of the Appraisal Standards Board of the Appraisal Foundation and Statement on Appraisal Standards No. 6, "Reasonable Exposure Time in Real Property and Personal Property Market Value Opinions" address the determination of reasonable exposure and marketing time.) (Dictionary)

Master Lease

A lease in which the fee owner leases a part or the entire property to a single entity (the master lease) in return for a stipulated rent. The master lessee then leases the property to multiple tenants. (Dictionary)

Modified Gross Lease

A lease in which the landlord receives stipulated rent and is obligated to pay some, but not all, of the property's operating and fixed expenses. Since assignment of expenses varies among modified gross leases, expense responsibility must always be specified. In some markets, a modified gross lease may be called a *double net lease*, *net net lease*, *partial net lease*, or *semi-gross lease*. (Dictionary)

Operating Expense Ratio

The ratio of total operating expenses to effective gross income (TOE/EGI); the complement of the net income ratio, i.e., $OER = 1 - NIR$ (Dictionary)

Option

A legal contract, typically purchased for a stated consideration, that permits but does not require the holder of the option (known as the *optionee*) to buy, sell, or lease real estate for a stipulated period of time in accordance with specified terms; a unilateral right to exercise a privilege. (Dictionary)

Partial Interest

Divided or undivided rights in real estate that represent less than the whole, i.e., a fractional interest such as a tenancy in common, easement, or life interest. (Dictionary)

Pass Through

A tenant's portion of operating expenses that may be composed of common area maintenance (CAM), real property taxes, property insurance, and any other expenses determined in the lease agreement to be paid by the tenant. (Dictionary)

Potential Gross Income (PGI)

The total income attributable to property at full occupancy before vacancy and operating expenses are deducted. (Dictionary)

Prospective Future Value Upon Completion

A prospective market value may be appropriate for the valuation of a property interest related to a credit decision for a proposed development or renovation project. According to USPAP, an appraisal with a prospective market value reflects an effective date that is subsequent to the date of the appraisal report. ... The prospective market value –as completed- reflects the property's market value as of the time that development is expected to be complete. (Dictionary)

Prospective Future Value Upon Stabilization

A prospective market value may be appropriate for the valuation of a property interest related to a credit decision for a proposed development or renovation project. According to USPAP, an appraisal with a prospective market value reflects an effective date that is subsequent to the date of the appraisal report ...The prospective market value – as stabilized – reflects the property's market value as of the time the property is projected to achieve stabilized occupancy. For an income-producing property, stabilized occupancy is the occupancy level that a property is expected to achieve after the property is exposed to the market for lease over a reasonable period of time and at comparable terms and conditions to other similar properties. (Dictionary)

Replacement Cost

The estimated cost to construct, at current prices as of a specific date, a substitute for a building or other improvements, using modern materials and current standards, design, and layout. (Dictionary)

Reproduction Cost

The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all of the deficiencies, superadequacies, and obsolescence of the subject building. (Dictionary)

Retrospective Value Opinion

A value opinion effective as of a specified historical date. The term *retrospective* does not define a type of value. Instead, it identifies a value opinion as being effective at some specific prior date. Value as of a historical date is frequently sought in connection with property tax appeals, damage models, lease renegotiation, deficiency judgments, estate tax, and condemnation. Inclusion of

the type of value with this term is appropriate, e.g., "retrospective market value opinion." (Dictionary)

Sandwich Leasehold Estate

The interest held by the sandwich leaseholder when the property is subleased to another party; a type of leasehold estate. (Dictionary)

Sublease

An agreement in which the lessee in a prior lease conveys the right of use and occupancy of a property to another, the sublessee, for a specific period of time, which may or may not be coterminous with the underlying lease term. (Dictionary)

Subordination

A contractual arrangement in which a party with a claim to certain assets agrees to make his or her claim junior, or subordinate, to the claims of another party. (Dictionary)

Surplus Land

Land that is not currently needed to support the existing use but cannot be separated from the property and sold off for another use. Surplus land does not have an independent highest and best use and may or may not contribute value to the improved parcel. (Dictionary)

Triple Net (Net Net Net) Lease

An alternative term for a type of net lease. In some markets, a net net net lease is defined as a lease in which the tenant assumes all expenses (fixed and variable) of operating a property except that the landlord is responsible for structural maintenance, building reserves, and management; also called *NNN lease, net net net lease, or fully net lease*. (Dictionary)

(The market definition of a triple net lease varies; in some cases tenants pay for items such as roof repairs, parking lot repairs, and other similar items.)

Usable Area

The measured area of an office area, store area, or building common area on a floor. The total of all the usable areas for a floor shall equal floor usable area of that same floor. (BOMA)

Value-in-Use

The value of a property assuming a specific use, which may or may not be the property's highest and best use on the effective date of the appraisal. Value in use may or may not be equal to market value but is different conceptually. (Dictionary)

Qualifications

Qualifications of Maria Aji, PhD Senior Appraiser

Valbridge Property Advisors | Northern California



Independent Valuations for a Variable World

State Certifications

Certified General
State of California

Education

Ph.D.
Urban and Regional Planning
University of Southern California,
Los Angeles, CA,

Master of Community Planning
University of Cincinnati

Diploma in Economics
National University of Greece
Athens, Greece

Certificate in International
Marketing and Export Techniques
Organization for the Promotion of
Exports
Athens, Greece

Contact Details

408-279-1520 ext. 7120 (p)
408-279-3428 (f)
maji@valbridge.com (e)

Valbridge Property Advisors |
Northern California
55 S. Market Street
Suite 1210
San Jose, CA 95113

www.valbridge.com

Experience

Senior Appraiser

Valbridge Property Advisors | Northern California
(2015-Present)

Appraiser

Valbridge Property Advisors | Northern California
(2013-2014)

Hulberg & Associates, Inc. (2001-2013)
(joined to create Valbridge in 2013)
San Jose, CA

Associate Appraiser

The Property Sciences Group, Inc. (1998-2001)
San Jose, CA

Researcher

Nanyang Technological University, Business School
(1994-1995)
Singapore

Market Research Director

Grubb & Ellis Company (1993-1994)
San Jose, CA

Economic/Planning Consultant

Gruen Gruen & Associates (1992-1993)
San Francisco, CA

Research Associate

Practical Research for Planning, Inc., Pasadena, CA
(1991-1992)
Pasadena, CA

Appraisal/valuation and consulting assignments include: professional/ medical offices, shopping centers, mixed-use projects, gas stations, oil-changing facilities, vacant land, single family homes, apartments, condominiums, vacant land, light industrial, manufacturing, and research and development buildings, condominiums, warehouses, industrial parks, mini-storage facilities, vacant land, and special purpose properties.

Qualifications of Yvonne J. Broszus, MAI

Director

Valbridge Property Advisors | Northern California



Independent Valuations for a Variable World

State Certifications

Certified General
State of California

Education

Bachelor of Science,
Marketing
Santa Clara University

Contact Details

408-279-1520 ext. 7135 (p)
408-279-3428 (f)
ybroszus@valbridge.com (e)

Valbridge Property Advisors |
Northern California
55 South Market, Suite 1210
San Jose, CA 95113

www.valbridge.com

Membership/Affiliations

Member: Appraisal Institute MAI Designation
Chairman: AI Fall Conference Committee (2006)
AI Spring Litigation Conference (2017)

Committee Member: AI Spring Litigation Conference (2014-current)
AI Silicon Valley Subchapter (2006-07)
AI Fall Conference (2004, 2005)

Award: AI Claudia B. Carleton Leadership Award

Appraisal Institute & Related Courses

Continuing education courses taken through the Appraisal Institute and other real estate organizations.

Experience

Director

Valbridge Property Advisors | Northern California (2013-Present)

Vice President

Hulberg & Associates, Inc. (1988-2013)
(joined to create Valbridge in 2013)

Appraisal/valuation and consulting assignments include: retail buildings (community, specialty, neighborhood and strip), office buildings (professional and medical/dental), vacant and agricultural land, warehouses, manufacturing, light industrial, research and development, apartments, single-family, condominiums, subdivisions, mobile home parks, auto dealerships, service stations, worship facilities, truck stops, food processing and cold storage facilities, fixed base operators at airports, and other special purpose properties.

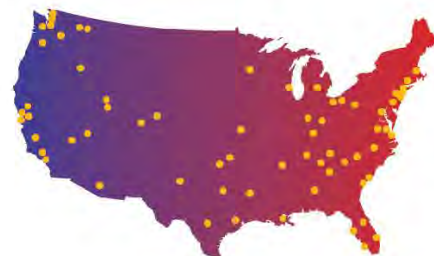
Ms. Broszus has provided valuation services in a wide variety of complex civil litigation cases involving real estate. These matters have included condemnation issues, contract disputes, bankruptcy/creditors matters, and environmental lawsuits, among other issues. She also specializes in property tax appeals, having helped clients recover millions of dollars in property tax refunds.

Qualified as an expert witness, Ms. Broszus has testified in state and federal courts, major arbitrations, and at Assessment Appeal Board hearings. She is a highly experienced forensic appraiser.



Company Information on Valbridge Property Advisors

- Valbridge is the largest national commercial real estate valuation and advisory services firm in North America:
 - Total number of MAIs (200 on staff)
 - Total number of office locations (68 across the U.S.)
 - Total number of staff (675 strong)
- Valbridge covers the U.S. from coast to coast.
- Valbridge services all property types, including special-purpose properties.
- Valbridge provides independent valuation services. We are not owned by a brokerage firm or investment company.
- Every Valbridge office is led by a senior managing director who holds the MAI designation of the Appraisal Institute.
- Valbridge is owned by our local office leaders.
- Valbridge welcomes single-property assignments as well as portfolio, multi-market and other bulk-property engagements.





ALABAMA

4732 Woodmere Boulevard
Montgomery, AL 36106
334.277.5077

ARIZONA

6061 E. Grant Road
Suite 121
Tucson, AZ 85712
520.321.0000

CALIFORNIA

4915 Calloway Drive
Suite 101
Bakersfield, CA 93312
661.587.1010

1370 N. Brea Boulevard
Suite 255
Fullerton, CA 92835
714.449.0852

2813 Coffee Road
Suite E-2
Modesto, CA 95355
209.569.0450

99 S. Lake Avenue
Suite 21
Pasadena, CA 91101
626.744.0428

3353 Bradshaw Road
Suite 213
Sacramento, CA 95827
916.361.2509

55 South Market Street
Suite 1210
San Jose, CA 95113
408.279.1520

3160 Crow Canyon Place
Suite 245
San Ramon, CA 94583
925.327.1660

COLORADO

7445 E. Peakview Avenue
Centennial, CO 80111
303.443.9600

23272 Two Rivers Road
Unit 101
Basalt, CO 81621
970.340.1016

1099 Main Avenue
Suite 311
Durango, CO 81301

CONNECTICUT

6 Central Row
Third Floor
Hartford, CT 06103-2701
860.246.4606

17 Covewood Drive
Norwalk, CT 06853
203.286.6520

FLORIDA

2240 Venetian Court
Naples, FL 34109
239.514.4646

FLORIDA (cont'd.)

8200 NW 41st Street
Suite 200
Doral, FL 33166
305.639.8029

603 Hillcrest Street
Orlando, FL 32803
407.839.3626

1100 16th Street N
St. Petersburg, FL 33705
727.894.1800

2711 Poinsettia Avenue
West Palm Beach, FL 33407
561.833.5331

GEORGIA

2675 Paces Ferry Road
Suite 145
Atlanta, GA 30339
678.644.4853

IDAHO

1459 Tyrell Lane
Suite B
Boise, ID 83706
208.336.1097

1875 N. Lakewood Drive
Suite 100
Coeur d'Alene, ID 83814
208.292.2965

ILLINOIS

566 W. Lake Street
Suite 240
Chicago, IL 60661
312.288.8687

INDIANA

820 Fort Wayne Avenue
Indianapolis, IN 46204
317.687.2747

KANSAS

10990 Quivira Road
Suite 100
Overland Park, KS 66210
913.451.1451

KENTUCKY

900 Wessex Place
Suite 306
Louisville, KY 40222
502.585.3651

LOUISIANA

512 North Causeway Boulevard
Metairie, LA 70001
504.207.7730

MARYLAND

11100 Dovedale Court
Marriottsville, MD 21104
443.333.5522

MASSACHUSETTS

260 Bear Hill Road
Suite 106
Waltham MA 02451
781.790.5645

MICHIGAN

1420 Washington Blvd.
Suite 301
Detroit, MI 48226
313.986.3313

2127 University Park Drive
Suite 390
Okemos, MI 48864
517.336.0001

MINNESOTA

222 South 9th Street
Suite 825
Minneapolis, MN 55402
612.253.0650

MISSOURI

10990 Quivira Road
Suite 100
Overland Park, KS 66210
913.451.1451

NEVADA

3034 S. Durango Drive
Suite 100
Las Vegas, NV 89117
702.242.9369

NEW JERSEY

2740 Route 10 West, Suite 204
Morris Plains, NJ 07950
973.970.9333

3500 Route 9 South, Suite 202
Howell, NJ 07731
732.807.3113

NEW YORK

424 West 33rd Street
Suite 630
New York, NY 10001
212.268.1113

NORTH CAROLINA

412 E. Chatham Street
Cary, NC 27511
919.859.2666

4530 Park Road, Suite 100
Charlotte, NC 28209
704.376.5400

OHIO

1655 W. Market Street
Suite 130
Akron, OH 44313
330.899.9900

8291 Beechmont Ave.,
Suite B
Cincinnati, OH 45255
513.785.0820

1422 Euclid Avenue
Suite 1070
Cleveland, OH 44115
216.367.9690

OKLAHOMA

6525 N. Meridian Avenue
Suite 309
Oklahoma City, OK 73116
405.603.1553

6666 South Sheridan Road
Suite 104
Tulsa, OK 74133
918.712.9992

PENNSYLVANIA

150 S. Warner Road
Suite 440
King of Prussia, PA 19406
215.545.1900

4701 Baptist Road
Suite 304
Pittsburgh, PA 15227
412.881.6080

SOUTH CAROLINA

610 N. Main Street
Greenville, SC 29601
864.233.6277

920 Bay Street
Suite 26
Beaufort, SC 29902
843.342.2302

1250 Fairmont Avenue
Mt. Pleasant, SC 29464
843.881.1266

TENNESSEE

112 Westwood Place
Suite 300
Brentwood, TN 37027
615.369.0670

701 Broad Street
Suite 209
Chattanooga, TN 37402
423.285.8435

213 Fox Road
Knoxville, TN 37922
865.522.2424

6750 Poplar Avenue
Suite 706
Memphis, TN 38138
901.753.6977

TEXAS

High Point Center
12225 Greenville Avenue
Suite 490
Dallas, TX 75243
214.446.1611

974 Campbell Road
Suite 204
Houston, TX 77024
713.467.5858

2731 81st Street
Lubbock, TX 79423
806.744.1188

111 Soledad
Suite 800
San Antonio, TX 78205
210.227.6229

UTAH

260 South 2500 West
Suite 301
Pleasant Grove, UT 84062
801.492.9328

1100 East 6600 South
Suite 201
Salt Lake City, UT 84121
801.262.3388

20 North Main
Suite 304
St. George, UT 84770
435.773.6300

VIRGINIA

656 Independence Parkway
Suite 220
Chesapeake, VA 23320
757.410.1222

7400 Beaufort Springs Drive
Suite 300
Richmond, VA 23225
804.672.4473

5107 Center Street
Unit 2B
Williamsburg, VA 23188
757.345.0010

WASHINGTON

18728 Bothell Way, NE
Suite B
Bothell, WA 98011
425.450.0040

2927 Colby Avenue
Suite 100
Everett, WA 98201
425.258.2611

419 Berkeley Avenue
Suite A
Fircrest, WA 98466
253.274.0099

8378 W. Grandridge Boulevard
Suite 110-D
Kennewick, WA 99336
509.221.1540

506 Second Avenue
Suite 1001
Seattle, WA 98104
206.209.3016

324 N. Mullan Road
Spokane Valley, WA 99206
509.747.0999

WISCONSIN

12660 W. North Avenue
Brookfield, WI 53005
262.782.7990

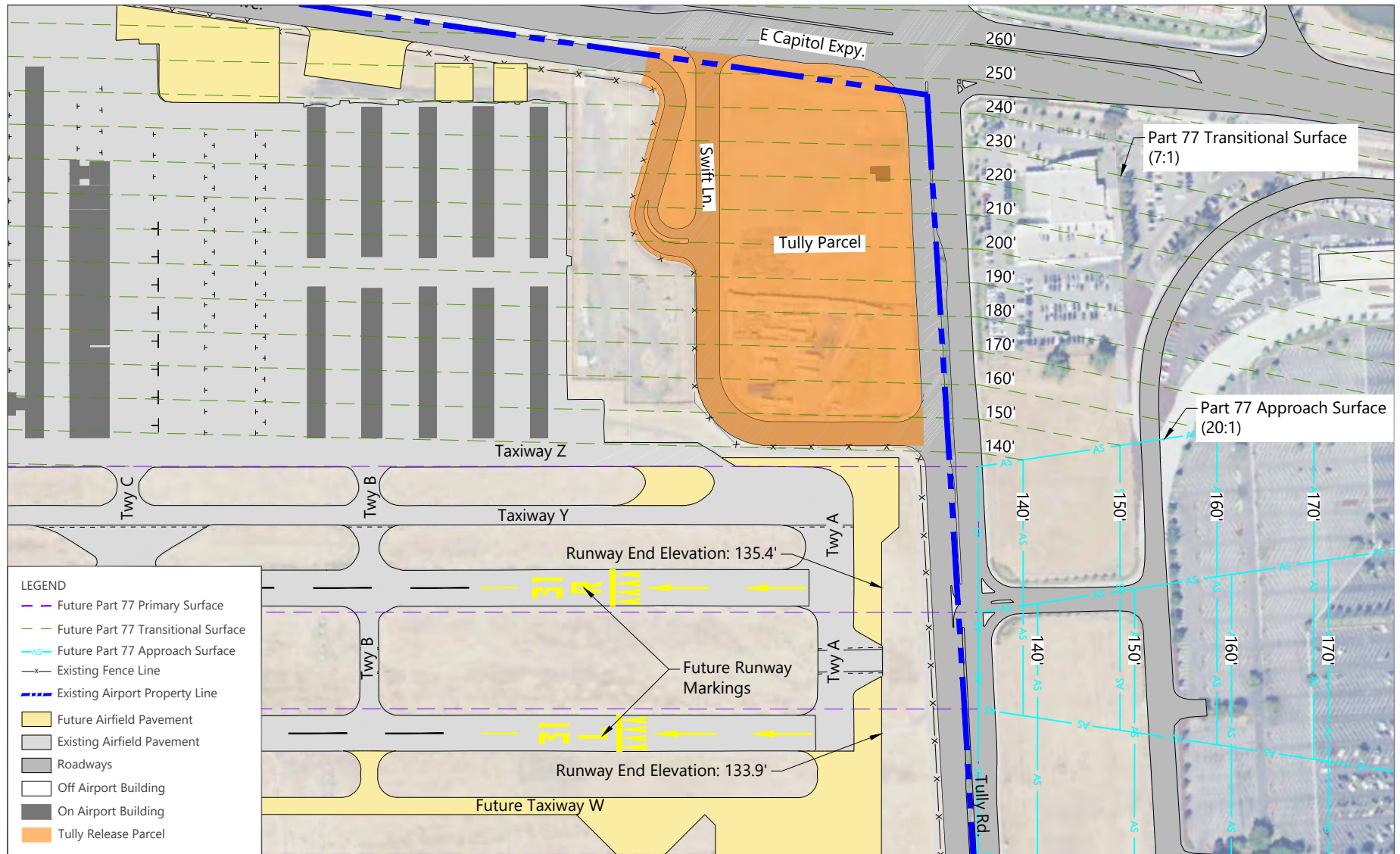
CORPORATE OFFICE

2240 Venetian Court
Naples, FL 34109

239-325-8234 phone
239-325-8358 fax

valbridge.com

Exhibit K



SOURCE: MEAD & HUNT, INC., AIRPORT LAYOUT PLAN, JULY 2008; THE COUNTY OF SANTA CLARA, PARCEL INFORMATION, AUGUST 2019

EXHIBIT



RHV TULLY PARCEL PART 77 SURFACES