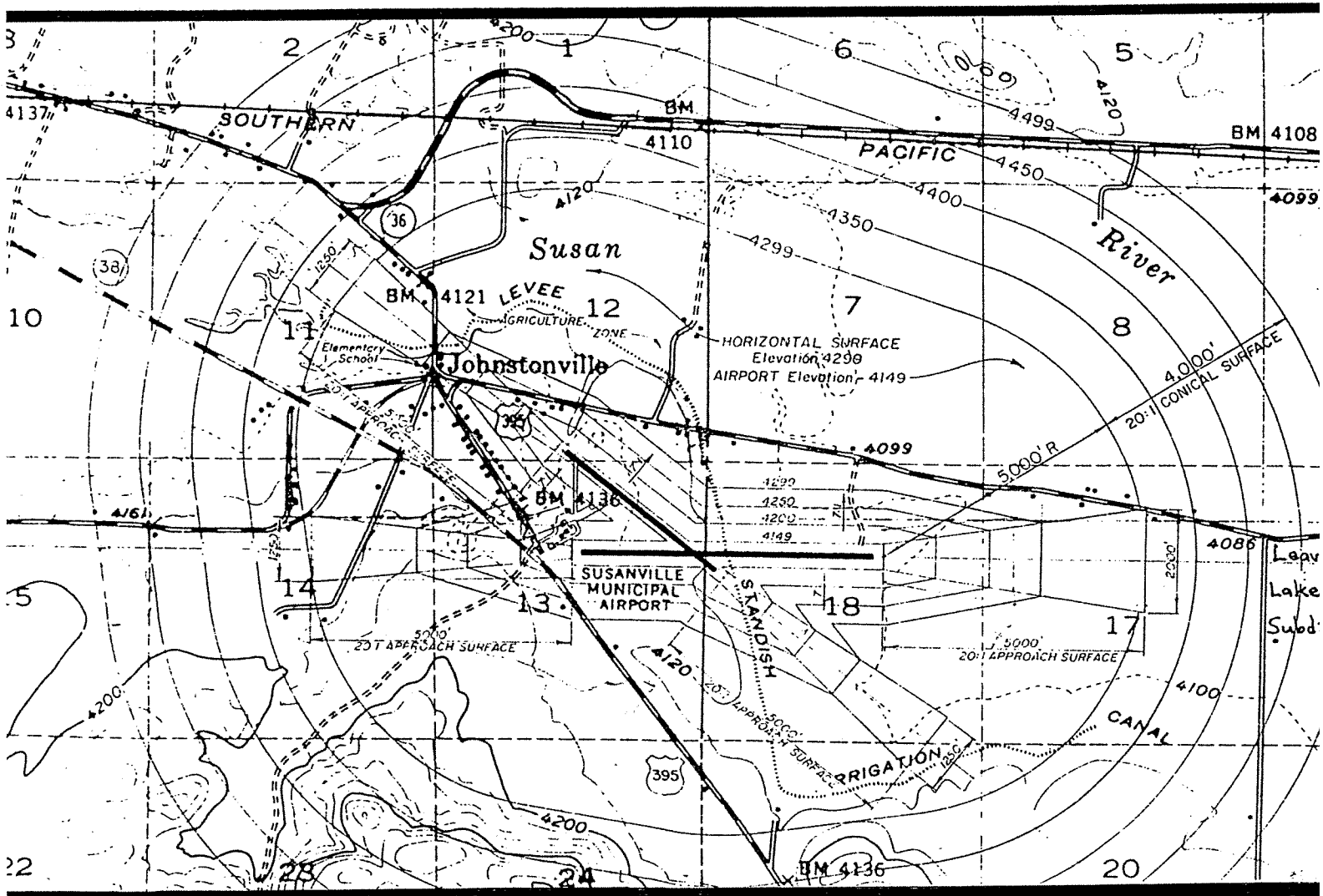


MARCH 1987

AIRPORT LAND USE PLAN

SUSANVILLE MUNICIPAL AIRPORT



LASSEN COUNTY

AIRPORT LAND USE COMMISSION

AIRPORT LAND USE COMMISSION
FOR THE
SUSANVILLE MUNICIPAL AIRPORT

ADOPTED: MARCH 26, 1987

LASSEN COUNTY
AIRPORT LAND USE COMMISSION

Commissioners:

Owen Bateson, Chairman
David Foster
Jack Jenkins
Helen Williams
Jack Siemer
Stanley Yochem
Clair Stampfli
(John Lovelady)

Proxies:

Ray Craig
Frank Cady
Ed Trent
Les Evans
Jack Pastor
Ron Shapiro
Gary Shaffer

PLANNING DEPARTMENT/ALUC STAFF

Robert K. Sorvaag, Director
Merle Anderson, Principal Author
Joseph Bertotti
Richard Simon
Nancy Summers

AIRPORT LAND USE PLAN
FOR THE
SUSANVILLE MUNICIPAL AIRPORT

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RESOLUTION ADOPTING AIRPORT LAND USE PLAN FOR THE SUSANVILLE MUNICIPAL AIRPORT

BE IT RESOLVED by the Lassen County Airport Land Use Commission (ALUC) as follows:

WHEREAS, the Lassen County ALUC was formed pursuant to Article 3.5 of the California Public Utilities Code and first convened on July 24, 1986; and

WHEREAS, it is the stated purpose of said Article 3.5 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 compatible uses.

WHEREAS, Article 3.5, Section 21675(a) of the California Public Utilities Code states, in part, that the commission [ALUC] shall formulate a comprehensive land use plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general; and

WHEREAS, commencing on September 25, 1986, the ALUC held six sessions of a public hearing in review and preparation of the draft Airport Land Use Plan for the Susanville Municipal Airport.

NOW, THEREFORE, BE IT RESOLVED, THE LASSEN COUNTY AIRPORT LAND USE COMMISSION FINDS, DETERMINES AND RESOLVES AS FOLLOWS:


1. The final draft of the Airport Land Use Plan for the Susanville Municipal Airport, as reviewed and revised on March 26, 1987, adequately complies with and fulfills the intent and provisions of Article 3.5 of the California Public Utilities Code; and
2. The Airport Land Use Plan for the Susanville Municipal Airport is hereby approved and adopted pursuant to State law and in the interest of protecting public health, safety and general welfare in the areas around said airport to the extent that these areas are not already devoted to compatible uses.

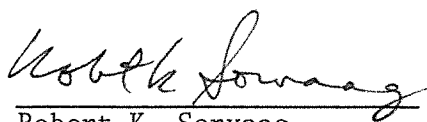
The foregoing resolution was passed and adopted at a regular meeting of the Airport Land Use Commission of Lassen County, State of California, held on the 26th day of March, 1987, by the following vote:

AYES: Commissioners Clair Stampfli, Jack Siemer, Owen Bateson, Stanley Yochem,
Helen Williams, Proxy Frank Cady

NOES: None

ABSENT: Commissioners David Foster, Jack Jenkins


Owen Bateson, Chairman
Lassen County Airport Land
Use Commission

ATTEST: 
Robert K. Sorvaag,
Executive Secretary

1. INTRODUCTION

Article 3.5 of the California Public Utilities Code, which sets forth policies for Airport Land Use Commissions and airport land use planning in general, states that the purpose of the article 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.

In order to achieve the purposes of Article 3.5, the Legislature mandated that counties having airports served by scheduled airlines or operated for the general public shall establish an Airport Land Use Commission.

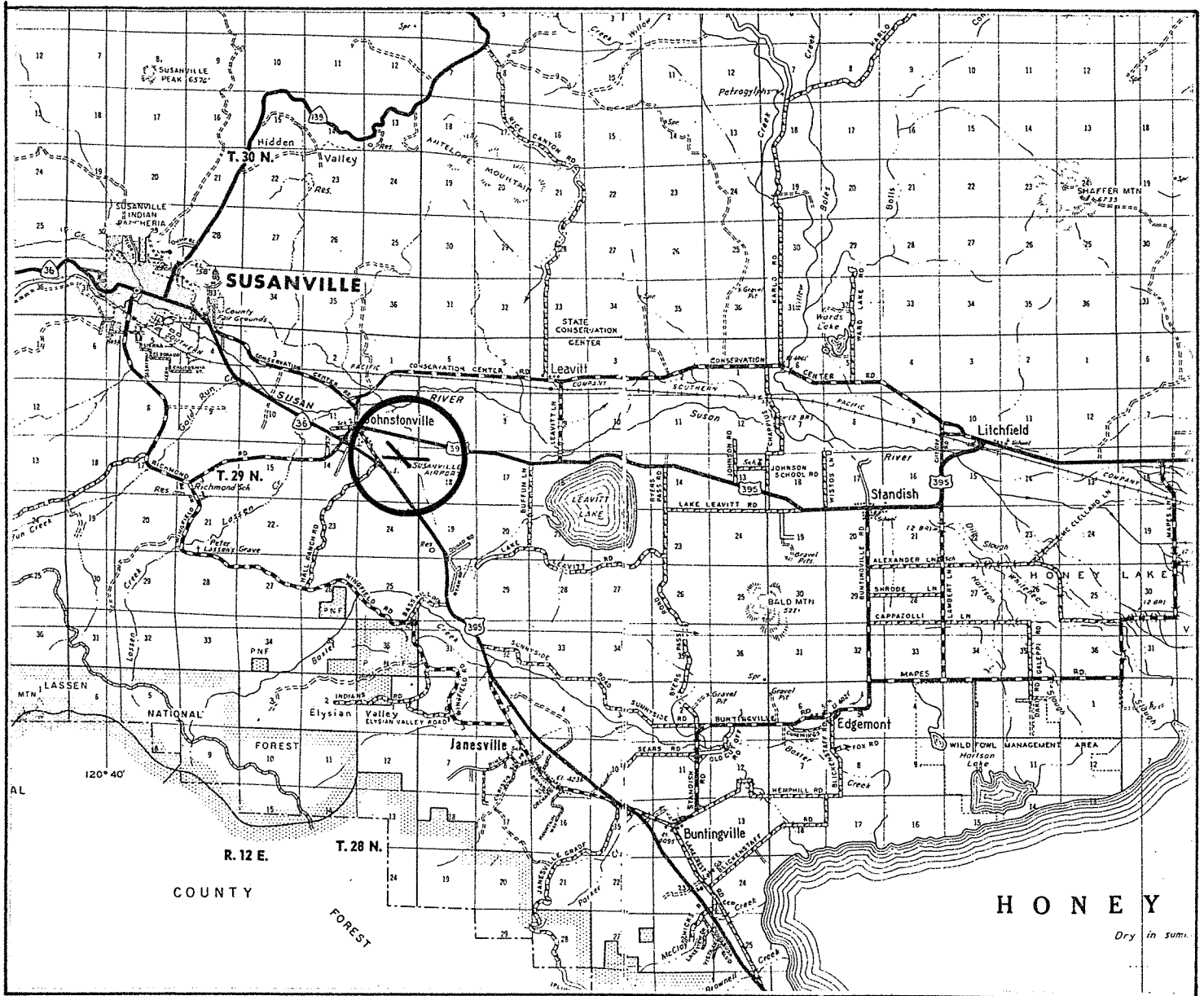
On April 8, 1986, the Lassen County Board of Supervisors directed that an Airport Land Use Commission (ALUC) be formed for the County of Lassen. It was also directed that the County Planning Department serve as staff to the ALUC.

The Lassen County ALUC held its first regular meeting on July 24, 1986, after selection of members in accordance with the Public Utilities Code.

Along with specifying how ALUC's would be formed, Article 3.5 set forth the powers and duties of ALUC's. Among these powers and duties is the duty to prepare and adopt an airport land use plan pursuant to Section 21675 of Article 3.5. Section 21675(a) reads as follows:

The commission shall formulate a comprehensive land use plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The commission plan shall include a long-range master plan that reflects the anticipated growth of the airport during at least the next 20 years. In formulating a land use plan, the commission may develop height restrictions on buildings, may specify use of land, and may determine building standards, including soundproofing adjacent to airports, within the planning area. The comprehensive land use plan shall not be amended more than once in any calendar year.

At its meeting on July 24, 1986, the Lassen County ALUC prioritized the development of airport land use plans for the airports in Lassen County. The Susanville Municipal Airport was recognized as having the highest priority. A review of the Airport's Master Plan was scheduled for August 28, 1986, and the Public Hearing for preparation of the Susanville Municipal Airport Land Use Plan was opened on September 25, 1986.



SUSANVILLE MUNICIPAL AIRPORT
VICINITY MAP

FIG. 1

2. GOAL AND OBJECTIVES

The overall goal, as adopted by the ALUC, for preparation of the Susanville Municipal Airport Land Use Plan is:

Goal:

To provide for the orderly growth of the Susanville Municipal Airport and the area surrounding the airport within the identified planning boundary, and to safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general.

The principal objectives of the Land Use Plan are:

Objectives:

1. To provide the County of Lassen with comprehensive land use policies designed to protect the viability and growth-potential of the airport, and to contribute to the safe and efficient use of the airport by ensuring compatible land uses in the vicinity of the airport.
2. To include a long-range master plan for the airport that reflects the anticipated growth of the airport during the next 20 years.

3. PLANNING BOUNDARIES

On September 24, 1986, during a Public Hearing, the ALUC established the planning boundary of the Susanville Municipal Airport to be the area beneath and within the outer parameter of the FAA Conical Surface as depicted in the Airport Master Plan, sheet 3 of 5. The ALUC recognized that this planning area may be subject to amendment as warranted during the process of preparing and refining the Land Use Plan.

4. DESCRIPTION: SUSANVILLE MUNICIPAL AIRPORT

A. Existing Facility

The Susanville Municipal Airport is located on the southeast side of the community of Johnstonville, approximately four miles southeast of the City of Susanville. It occupies approximately 122 acres of land. The airport, which is owned by the City of Susanville, is located on and surrounded by unincorporated land.

The 1980 Master Plan Report for the Susanville Municipal Airport includes the following description of airport facilities:

The existing airport occupies approximately 122 acres of land. Current facilities consist of a paved and lighted runway (Runway 11-29), 75 feet wide by 3,700 feet long. There is also a graded dirt runway with a 7-25 orientation. The existing dirt runway is approximately 2,500 feet long. There also exists at the airport a series of hangars, all of which are privately owned, and an administration building. A general aviation tiedown apron and taxiways leading from the apron to the runway also exist. There is a helipad on the airport for helicopter operations.

Improvements to runway 11-29 were initiated in FY 86-87 to upgrade the runway to Basic Utility Stage II requirements. This entailed resurfacing the runway, extending the runway to a length of 4,050 feet, acquisition of 4.25 acres of land for improvements, plus 8 acres for aviation easements on the clear zone.

B. Master Plan

A Master Plan for the Susanville Municipal Airport was adopted on March 3, 1981. In the Master Plan, forecasts were made for future needs and plans were adopted to meet those needs.

In forecasting the aviation demands that may be placed on the Susanville Airport in the future, the Master Plan used a 6% annual growth forecast, but also recommended that space be reserved for development of facilities to accommodate an increase of at least 100% above the forecast level of operations. The Master Plan recommends that facilities at the airport should provide the capability for the following:

- Storage for 112 based aircraft
- Runway capacity to handle 90,000 operations per year
- Tiedown facilities for a minimum of 25 transient aircraft
- Reservation of land for 100% increase in based aircraft and transient aircraft
- Necessary taxiways
- Navigation facilities, roads, parking lots and fixed base operators to support the projected based and transient aircraft
- Air taxi and small commuter airline service

An Airport Layout Plan was prepared and included as Sheet No. 1 of the Master Plan. In the Master Plan, runway 7-25 was adopted as the future major runway. Runway 7-25 is proposed to be 5,600 feet long and 100 feet wide to meet the standards of the Federal Aviation Administration for a General

Utility Runway at the altitude and normal maximum temperatures prevailing in Susanville. The length would accommodate all single-engine aircraft and most light twin-engine aircraft with reciprocating engines. It would also accommodate some of the lighter turbo-jet aircraft such as the Cessna Citation. The 100-foot width is recommended because of the occasional gusty wind and crosswind conditions at the airport.

The Master Plan proposes to maintain operation of Runway 11-29 since this runway provides good crosswind performance and increases the wind coverage to 96.9%. As stated above, this runway has been improved to a length of 4050 feet.

The Airport Master Plan addresses runway clear zone requirements, including requirements for the proposed expansion of Runway 7-25. Clear zones for Runway 25 should be those required for non-precision instrument, assuming the ultimate installation of VOR/DME* navigational aids. These clear zones are 500 feet wide at the inner edge, 800 feet at the outer edge, and 1,000 feet long, with 20:1 approach slope. The clear zone for Runway 7 should be 500 feet wide at the inner edge, 650 feet wide at the outer edge, and 1,000 feet long, with 20:1 approach slope. The clear zone for Runways 11 and 29 should be standard VFR* clear zones, 250 feet wide at the inner surface, 450 feet wide at the outer surface, and 1,000 feet long, with 20:1 approach slopes.

The ALUC has expressed concern that the Master Plan does not adequately examine and project long-range development plans for expansion of the airport. By limiting the airport land use plan to the mid-range growth projections of the Master Plan (i.e. ten to twenty years from 1980), the ALUC feels that the feasibility of the airport to develop to its full potential in the future may be constricted. For example, expansion of the airport to a larger than utility airport and/or the installation of more sophisticated landing instrumentation would necessitate expansion of a runway and corresponding clear zones and approach zones. Encroachment of incompatible land uses due, in part, to failure to consider long-range goals could deter or preclude such long-range improvements and expansion.

The ALUC has decided to keep its land use plan consistent with the Airport Master Plan as adopted by the City of Susanville in 1981. At the same time, the ALUC is urging the City to update its Master Plan to evaluate long-term growth projections and possible development needs. When long-range plans are formulated in a revised Master Plan, the ALUC will be able to consider appropriate corresponding airport land use policies.

Policy:

That the Airport Land Use Commission encourages the City of Susanville to evaluate long-range growth and development needs for the Susanville Municipal Airport, and that the Master Plan be amended to incorporate long-range development plans reflective of the airport's maximum growth potential.

*VOR (Very-high frequency omnirange)
DME (Distance Measuring Equipment)
VFR (Visual Flight Rules)

5. LAND USE COMPATIBILITY

General Discussion

Areas near airports are exposed to various levels of accident potential depending on the type of aircraft using the airport, the frequency of aircraft overflights, and local weather conditions. Historically, the risk of being killed or injured on the ground near an airport is quite small.

While many airports in the state have not experienced a serious aircraft accident resulting in major property damage or loss of life, this fortunate situation does not alter the basic accident probabilities. Perhaps the most difficult ALUC planning responsibility is the determination of land use measures around airports that are appropriate to the level of risk involved and the potential for injury or property damage should an accident occur. ALUCs have established a variety of safety zones around airports and land use controls within these safety zones to minimize the impact of a crash.

The purpose for establishing land use restrictions in safety zones is to minimize the number of people exposed to aircraft crash hazards. The two principal methods for reducing the risk of injury and property damage on the ground are: (1) limit the number of persons in an area, and (2) limit the area covered by structures occupied by people so that there is a higher chance of aircraft landing (in a controlled situation) or crashing (in an uncontrolled situation) on vacant land. There are few practical methods available for permitting increased population in safety zones without increasing safety risks. Each additional person in a safety zone becomes subject to a certain crash hazard risk by virtue of being located in the safety zone.

It must be remembered that an aircraft crash is a high consequence event. This is why a number of safety studies do not attempt to estimate accident probabilities in specific areas, but rather address the acceptability of different land use, densities and lot coverage restrictions assuming a crash did occur.

The primary method of addressing land use compatibility in the vicinity of the Susanville Municipal Airport shall be through the delineation of safety zones and the establishment of land use criteria within those zones. The safety zones identified in this Plan are formulated primarily through use of the Master Plan's depiction of FAA clear zone and "imaginary" approach surfaces that extend outward from the airport's existing and proposed runways.

The three primary airport safety areas are:

- Clear Zone Safety Areas
- Approach Zone Safety Areas
- Overflight Safety Area

The safety areas designated in this airport land use plan are indicated on Figure 2 and are addressed in detail below.

A. Clear Zone Safety Areas

Clear Zones are the trapezoidal (fan-shaped) areas which lie on the ground underneath the imaginary runway approach surfaces and include all of the area out to a point where the approach surface reaches 50 feet above ground level. The Clear Zones indicated in this airport land use plan are consistent with the Master Plan.

Clear zones are the most restrictive areas in the vicinity of an airport since they are subject to the greatest danger. Clear zones should be kept essentially clear. Undeveloped land is the best use. No residential use can be allowed. Agriculture which does not attract birds is compatible unless it includes structures. Park and recreational uses are satisfactory if they don't attract large groups of people. Transportation facilities are not a serious problem as long as height restrictions are heeded. Power lines are a serious danger. Wherever possible, the clear zone should be free of any construction or obstacle and should be minimally used by people.

The federal government requires that airport owners have an "adequate property interest" in the clear zone area in order that the requirements of FAR Part 77 can be met and the area protected from future encroachments. Adequate property interest may be in the form of ownership in fee simple (the most preferred) or lease (provided it is long term) or any other demonstration of legal ability to prevent future obstructions in the runway clear zone.

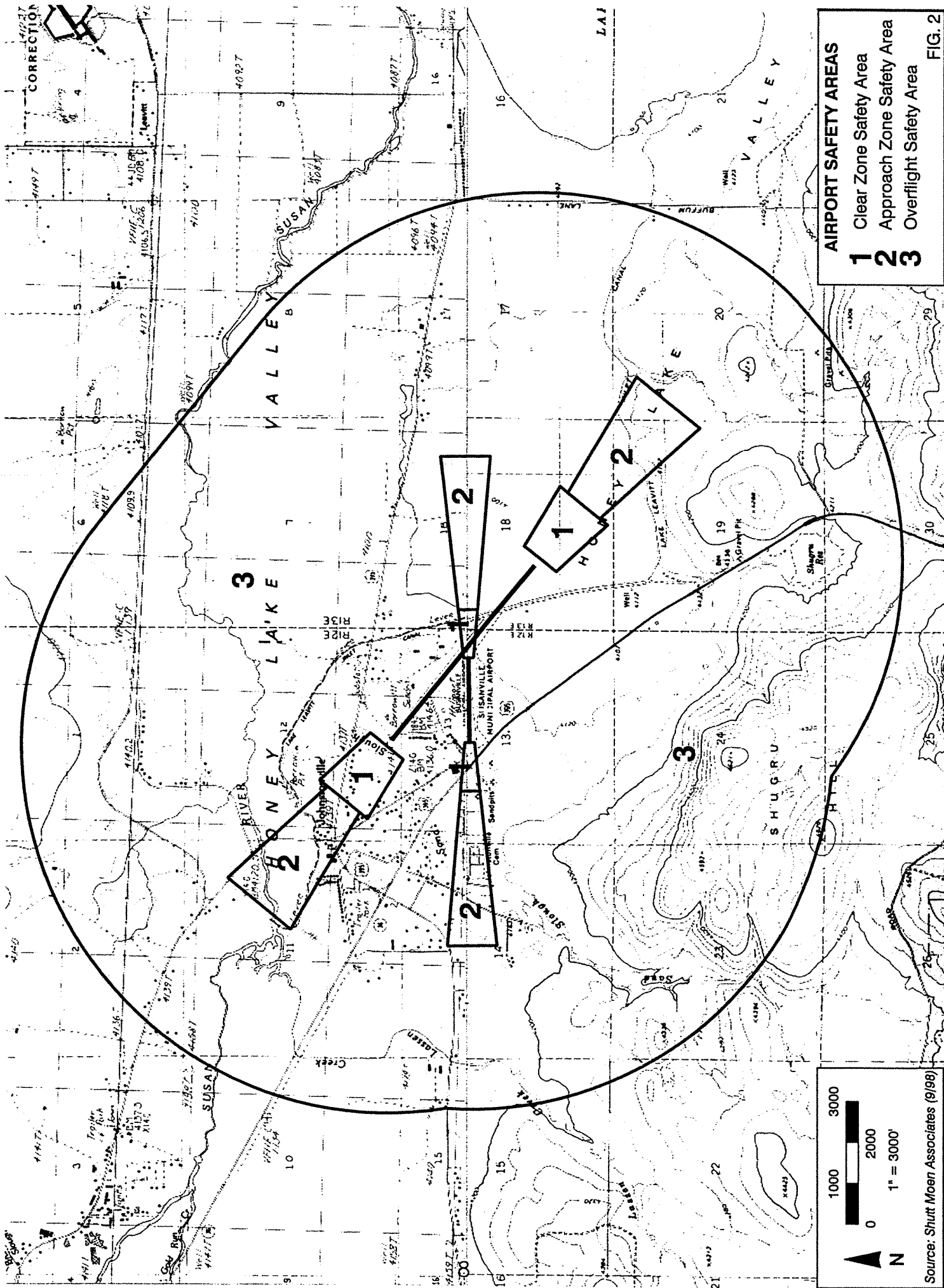
Policies:

The Clear Zone Safety Areas for the Susanville Airport Land Use Plan are indicated on Figure 2 as Safety Area 1. Land Use Guidelines are set forth in Table 1.

B. Approach Zone Safety Areas

The approach zone safety areas in this airport land use plan are consistent with the FAA Part 77 approach surfaces indicated in the Master Plan.

To assure public safety, uses in the approach safety zone should not attract large groups of people. Residential uses should be prohibited or strictly limited if possible. Where residential development is inevitable or already in place, low density is preferred with multi-family development, retirement homes or other residential institutions being excluded. Commercial uses are generally compatible except that retail establishments such as restaurants or concentrated retail areas which attract people should be avoided. No hotels or motels should be allowed. Offices and services are generally compatible except hospitals and rest homes. Industrial uses can be compatible, although they must be "carefully" reviewed for potential operation hazards, electrical interference, high intensity lighting, bird attractions, smoke, glare, or other interferences. Recreational uses can be acceptable on a conditional basis, excepting public assembly and other high intensity uses. Resource production, including agriculture, is generally compatible. In the case of recreational development and aggregate extraction, ponds may attract birds which could pose a safety hazard.



Policies

The Approach Zone Safety Areas for the Susanville Airport Land Use Plan are indicated on Figure 2 as Safety Area 2. Land Use Guidelines are set forth in Table 1.

C. Overflight Safety Areas

The Overflight Zone is the relatively large area where aircraft maneuver to enter or leave the traffic pattern and is usually defined by the FAA Part 77 horizontal surface. The Lassen County ALUC, however, has adopted an Overflight Zone which takes in all land beneath the horizontal and conical surfaces as defined by FAA Part 77. This overflight zone is depicted on Figure 2.

Land use compatibility within the overflight zone for general aviation airports is more difficult to define than clear zones and approach zones. Hazards are low compared to areas closer to runways. However, there is a measurable accident potential in airport traffic pattern areas. Midair collisions are more prevalent in this area. Large assemblages of people should not be located beneath the airport traffic pattern because of the potential for injury if there was a crash. Specific types of land uses that are discouraged or that have been suggested for relocation outside airport traffic patterns are: schools and hospitals; spectator sports arenas; auditoriums; amphitheaters.

Table 1 sets forth the land use guidelines of this Plan for the Overflight Safety Areas. The principal concept is that most normal uses can be allowed, but high density residential, retail commercial uses which would attract large groups of people should be considered on an individual basis to ensure compatibility with airport flight patterns. For example, a high density residential subdivision directly under the extended center line of the approach zone would be unacceptable, but such a use in another location within the Overflight zone could, as far as airport issues are concerned, be determined to be acceptable.

Policies:

The Overflight Safety Area for the Susanville Airport Land Use Plan is indicated on Figure 2 as Safety Area 3. Land Use Guidelines are set forth in Table 1.

TABLE ONE

LAND USE COMPATIBILITY GUIDELINES

Policy:

It is a policy of the Airport Land Use Plan for the Susanville Municipal Airport that the following guidelines be applied in the planning, zoning and project review of land use within the recognized airport safety areas. The functions of the guidelines are to identify uses which are acceptable or unacceptable and to describe certain criteria under which certain uses might be acceptable.

It should be noted that consideration of the land uses addressed herein, as well as similar land uses that have not been specifically addressed, should be guided by a commitment to the overall purpose of airport land use policies:

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.

TABLE ONE, PART ONE
CLEAR ZONE SAFETY AREAS

The following land use guidelines shall be applied to the Clear Zone Safety Areas depicted on Figure 2 as Safety Area 1.

GENERAL GUIDELINES

Clear zones should be kept essentially clear. Development must be carefully restricted. No structures are allowed. ALUC recommends that airport owners obtain property and/or development rights for clear zone areas.

LAND USE GUIDELINES

<u>Residential</u>	No
<u>Commercial/Retail</u>	No
<u>Industrial/Manufacturing</u>	No
<u>Transportation</u>	
Highways, streets	Yes (1)
Auto Parking Lots	No
<u>Communications, Utilities</u>	Yes (2)(3)
<u>Public and Quasi-Public Services</u>	No
<u>Outdoor Recreation</u>	No
<u>Resource Production, Extraction, and Open Space</u>	
Agriculture	Yes (3)
Forestry Activities and Related Services	No
Mining Activities	No
Open Space uses (e.g. grazing)	Yes

- (1) Highways and streets with moving traffic are considered compatible. Intersections which would result in a relatively high density of standing traffic in clear zones are discouraged.
- (2) No above-grade transmission lines.
- (3) No structures permitted.

TABLE ONE, PART TWO
APPROACH ZONE SAFETY AREAS

The following land use guidelines shall be applied to the Approach Zone Safety Areas depicted on Figure 2 as Safety Area 2.

LAND USE GUIDELINES

<u>Subdivisions</u>	Yes (1)(3)
<u>Residential</u>	
Single Family	Yes (1)(2)(3)
Multiple Family	No
Mobile Home Parks	No
Hotels, Motels	No
<u>Commercial/Retail</u>	
General Retail, Merchandise	Yes (2)(3)
Wholesale Trade	Yes (3)
Building materials, Retail	Yes (3)
Restaurants, Bars	No
Small-scale repair	Yes (3)
Professional offices	Yes (2)(3)
<u>Industrial/Manufacturing</u>	
Chemical, Petroleum,	
Rubber and Plastics	No
Miscellaneous Manufacturing	Yes (3)
Warehousing, Storage of non-flammables	Yes (3)
<u>Transportation</u>	Yes
<u>Communications, Utilities</u>	Yes (3)
<u>Public and Quasi-Public Services</u>	
Cemeteries	Yes (3)
Other Public and Quasi-Public	
Services and Facilities (e.g. schools, hospitals)	No
<u>Outdoor Recreation Facilities</u>	
Playgrounds, Neighborhood Parks	No
Spectator Sports, arenas	No
Auditoriums, Amphitheaters	No
Motocross	Yes (3)
Riding Stables	No
<u>Resource Production, Extraction and Open Space</u>	Yes (3)

TABLE ONE, PART TWO
APPROACH ZONE SAFETY AREAS
(Continued from previous page)

- (1) Density of residential use shall not exceed one dwelling unit per 2.5 acres.
- (2) Not within 2000 feet from the Clear Zone.
- (3) Projects must be reviewed on individual basis. Threshold for review of "large concentrations" is on the order of 10 people per acre for non-residential uses. Industrial projects must be reviewed to preclude smoke, electronic interference, lights and/or glare which may constitute operation hazards to aircraft. A finding, supported by facts in the record, must be made for any project approval stating: Approval of the project is consistent with the need to protect public health, safety, and welfare by ensuring the orderly expansion of the airport and the adoption of land use measures that minimize the public's exposure to substantial noise and safety hazards within areas around public airports.

TABLE ONE, PART THREE
OVERFLIGHT ZONE SAFETY AREAS

The following land use guidelines shall be applied to the Overflight Safety Area depicted on Figure 2 as Safety Area 3.

LAND USE GUIDELINES

Residential

Single Family	Yes
Multiple Family	Yes (1)
Mobile Home Parks	Yes (1)
Hotels, Motels	Yes (1)

<u>Commercial/Retail</u>	Yes (1)
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Industrial/Manufacturing

Warehousing, Storage of non-flammables	Yes
All others	Yes (1)

<u>Transportation</u>	Yes
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<u>Communications, Utilities</u>	Yes
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Public and Quasi-Public Services

Cemeteries	Yes
Schools, Hospitals	Yes (1)
Other Public and Quasi-Public Services and Facilities	Yes (1)

<u>Outdoor Recreation Facilities</u>	Yes (1)
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<u>Resource Production, Extraction and Open Space</u>	Yes
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<u>Subdivisions</u>	Yes (1)
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- (1) Projects must be reviewed on individual basis. A finding, supported by facts in the record, must be made for any project approval stating: Approval of the project is consistent with the need to protect public health, safety, and welfare by ensuring the orderly expansion of the airport and the adoption of land use measures that minimize the public's exposure to substantial noise and safety hazards within areas around public airports.

6. REFERRAL AREAS

Referral areas are portions of the airport land use planning area which warrant case-by-case review of particular development projects due to significant noise and safety concerns. The use of the term "referral" shall herein mean the referral by the County of Lassen (e.g. Planning Commission, Board of Supervisors) of proposed development projects and applications to the ALUC or its designated staff for review concerning the project's consistency with the airport land use plan's goals, objectives and policies.

A. Referral Area A

Referral Area A, depicted in Figure 3, includes all clear zone and approach zone safety areas designated in this plan, along with the area beneath the FAA Transitional Surface indicated in the airport master plan.

All development proposals, including building permits, use permits, rezoning and subdivision applications shall be reviewed for compliance with this airport land use plan. The Land Use Compatibility Guidelines, as well as general provisions to promote public safety and discourage incompatible land uses shall be considered as review criteria.

B. Referral Area B

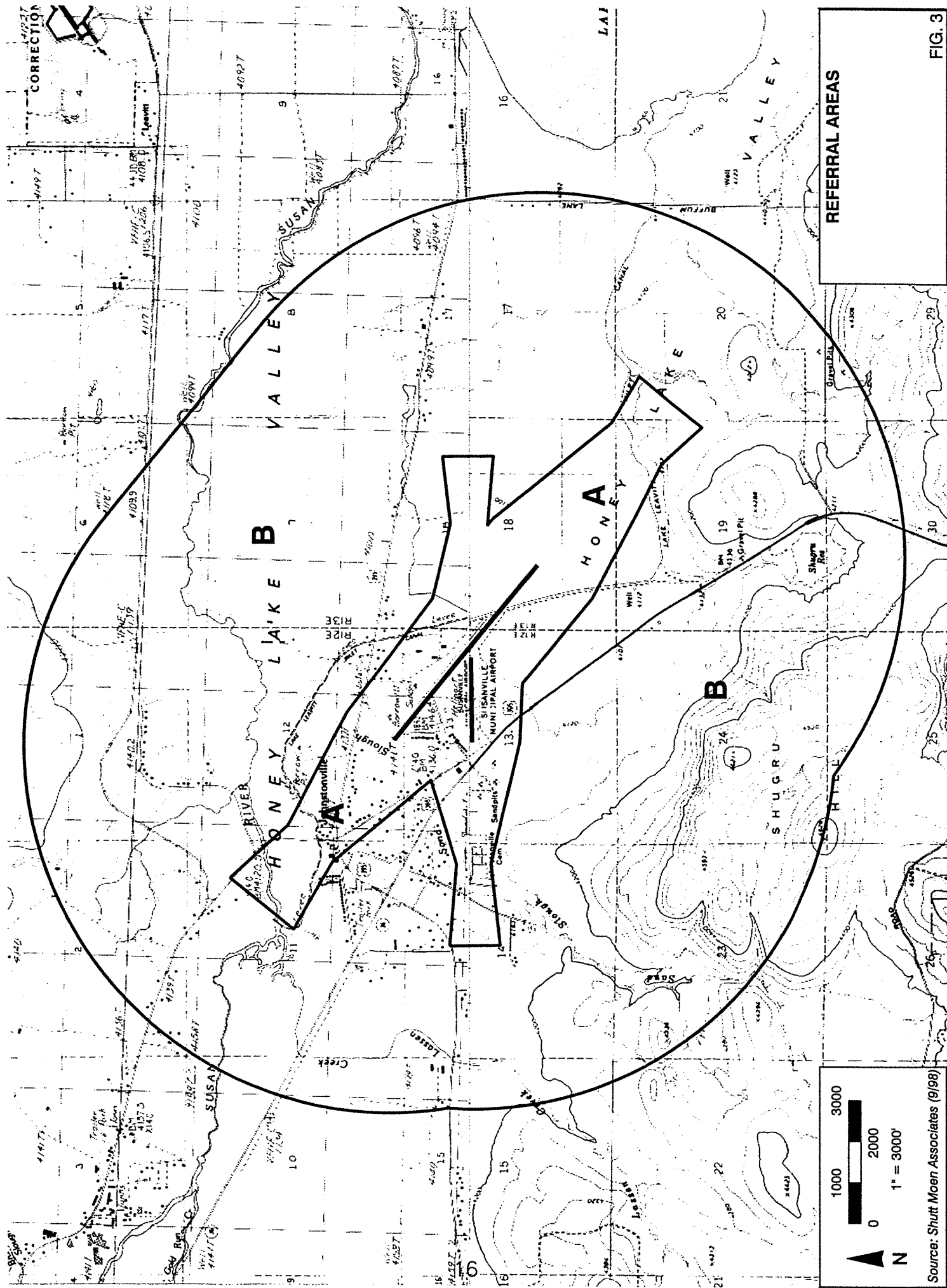
Referral Area B, depicted in Figure 3, includes the remainder of the airport land use planning area outside Referral Area A.

Use permit, rezoning and subdivision proposals shall be reviewed for compliance with this plan. Individual building permits are not required to be referred to the ALUC or its staff, provided that the use of the proposed structures are consistent with the land use compatibility guidelines of this plan.

C. Referral Review Process

The Executive Secretary of the ALUC will develop an administrative review process to be reviewed and adopted by the commission. The administrative review process will establish procedures and review criteria for the timely and effective review by the ALUC or its designated staff of proposed development within the identified referral areas. The process shall coordinate ALUC referral procedures with the project application procedures of the Lassen County Board of Supervisors, Planning Commission and Environmental Review Officer. Whenever possible, referral shall be made to the ALUC before or during review of proposed projects under the provisions of the California Environmental Quality Act. Recommendations by the ALUC in response to a referral shall consider the following questions:

- a) Is the project consistent with the airport land use plan?
- b) Does the project have the potential of creating or increasing a significant environmental impact, including but not limited to, impacts on the public safety of inhabitants within the vicinity of the airport, and/or impacts on the safe and efficient use of the airport?



Source: Shutt Moen Associates (9/98)

FIG. 3

REV: 4/04

7. NOISE COMPATIBILITY

General Discussion

One of the most important elements of all ALUC plans is the selection of land use compatibility standards for noise planning. Major factors influencing general aviation airport noise contours include the number of operations, types of aircraft using or projected to use the airport, and the capability of the airport to handle night time operations (i.e., whether or not the runways are lighted).

The Susanville Municipal Airport Master Plan, Figure No. 1 (see Figure 4), contains noise impact contours for that airport. These projections were based on typical noise impacts for small general aviation airports. The contours reflect the proposed expansion of the Susanville Airport assuming 100,000 operations per year with 64,000 operations on the extended and improved Runway 7-25 and 36,000 on Runway 11-29.

(It should be noted here, as it is in the Environmental Assessment section of the Master Plan, that if Runway 7-25 is not expanded as proposed, all additional traffic would use Runway 11-29. The noise contours of this runway would consequently expand.)

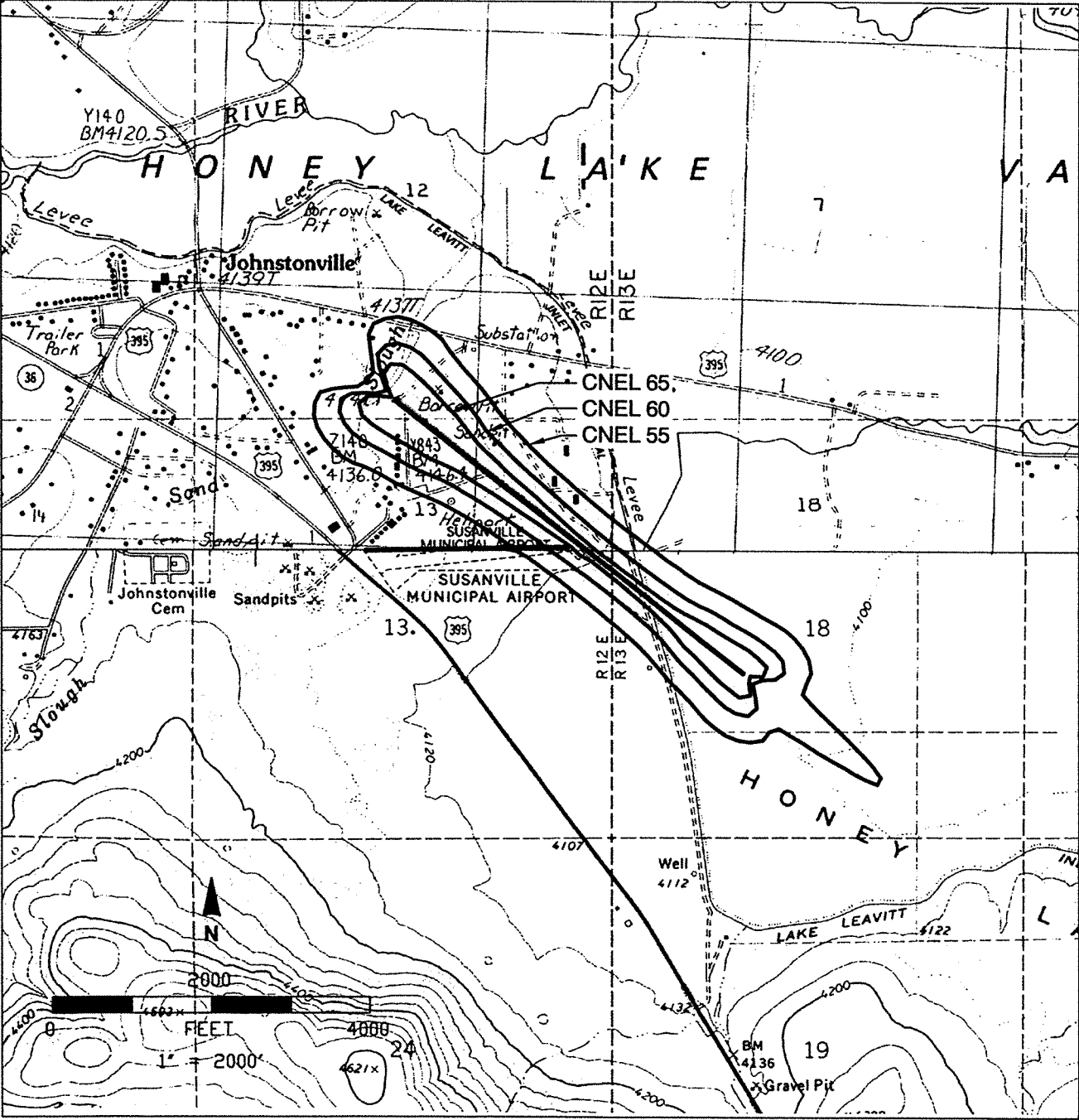
The noise levels of the contours outlined in the Master Plan are expressed in "NEF" values (Noise Exposure Forecast), rather than CNEL (Community Noise Equivalent Levels) which is the contemporary standard noise impact descriptor for planning purposes in California. The engineering firm of Reinard W. Brandley, which prepared the airport master plan in 1980, has suggested that the NEF contours can be effectively converted to CNEL values by "adding 35" to the NEF values. By this method, the Master Plan's 30 NEF contour translates to 65 CNEL and 25 NEF becomes 60 CNEL. These values have been noted on Figure 4.

State airport noise standards have been established in the California Administration Code, Title 21, Sections 5000 et. seq. The standard for residential areas is now 65 CNEL. For some general aviation airports, the 65 CNEL impact boundary may be totally contained within the airport property.

In the projected noise impact contours for the Susanville Airport, the 65 CNEL contour is limited to the immediate vicinity of Runway 7-25. Affected property will be either: airport property; within the Clear Zones; or proposed for Industrial zoning in the Draft Johnstonville Area Plan. Therefore, no residential development should encroach upon the 65 CNEL contour in conflict with the State's Administrative Code.

Title 21, Section 5014 of the California Administrative Code indicates that for the purpose of determining whether an airport is in compliance with State law, the following land uses are deemed compatible within the noise impact boundary:

- agricultural
- all airport property
- all industrial property
- all commercial property



- zoned open space
- high rise apartments where an interior noise level of 45 CNEL can be maintained in all habitable rooms
- dwelling units existing as of December 1, 1972 which have been noise insulated to provide an acceptable indoor environment
- property subject to an aviation easement for noise

These standards, written for the specific purpose of administering the airport noise regulation law, should not be confused with prudent land use planning standards.

Title 25, Section 28 of the California Administrative Code, requires acoustical analysis for new residential structures located within an airport CNEL contour of 60 dB showing that the structure has been designed to limit intruding noise to allowable levels.

The history of noise complaints around general aviation airports suggests that some land use measures are required under the traffic pattern and within the 55 CNEL contour. Preferred measures are those that restrict residential use within the traffic pattern. Land use restrictions may include prohibiting residential development underneath the traffic pattern or limiting development to low density uses. Other measures that have been recommended where aircraft are below 500 feet and in the general overflight area include requirements for noise easements and notification of prospective property owners.

Policies

1. The following land uses should not be permitted within the boundary of the 60 CNEL contour of the Susanville Municipal Airport: all residential uses; schools; hospitals; convalescent homes; other in-patient health care facilities; public or quasi-public uses which would entail meetings; churches; other uses similar to those identified above which involve group activities sensitive to noise interference.
2. When feasible, the 55 CNEL contour should be projected for the Susanville Airport and the ALUC should consider appropriate policy amendments to maximize compatibility between airport noise and surrounding land uses.
3. If Runway 7-25 is not improved as proposed by 1995, noise impacts related to the increased use of Runway 11-29 should be examined by the ALUC and appropriate land use policies considered.

8. HEIGHT RESTRICTIONS

General Discussion

All ALUC plans contain recommendations for limiting the height of structures near airports. These recommendations have a twofold purpose. The first, stemming from the ALUC's statutory duty to protect the public's safety and welfare, is to ensure that pilots operating aircraft near airports have a safe environment in which to fly. Limiting the height of structures near airports will also protect the safety of persons occupying these structures on the ground. The second purpose for ALUC height recommendations is to ensure that neither the operating capability of the airport during VFR and IFR* weather nor the usable runway length is adversely affected by obstructions in the surrounding airspace. By carefully controlling the height of buildings near airports, the public's investment in these airports can be protected.

Federal Aviation Regulations Part 77 has been adopted by all ALUCs to define height limits around airports. In addition, several cities and counties in the state have incorporated the obstruction standards in Part 77 directly into their local zoning ordinances. Part 77 of the Federal Aviation Regulations--Objects Affecting Navigable Airspace--contains three major elements of importance to ALUCs:

- Notice Requirements (Subpart B)
- Obstruction Standards (Subpart C)
- Aeronautical Studies (Subpart D)

The principal purpose behind Part 77 is to provide standards for determining "obstructions" in the navigable airspace. These standards are applied to existing and proposed man-made objects, objects of natural growth, and terrain. An obstruction is determined to be a "hazard" to air navigation if a subsequent Aeronautical Study performed by the FAA indicates that there would be a substantial adverse effect on aircraft operations.

It is important to note that Part 77 obstruction standards--which are used by all ALUCs as height limits--are used by the FAA in a quite different manner. These standards identify elevations above which air safety may be a problem subject to further review on a case-by-case basis. If a determination is made, after such an aeronautical study, indicating a hazard to air navigation, the FAA's authority ceases at this point. It is then up to local zoning agencies to enforce the FAA recommendations and relieve the safety problem. While it is important to understand that the obstruction standards are in fact review standards, it is equally important to recognize that these standards provide a reasonable and defensible balance between the needs of the airspace users and the rights of property owners beneath the flight patterns. In this regard, the use of Part 77 obstruction standards as recommended height limits is appropriate.

Depictions of imaginary surfaces in ALUC plans should show the permissible height of objects and structures at different locations within the approach, horizontal, conical, and transitional surfaces. Elevations for these imaginary surfaces should be given in feet Above

*Visual Flight Rules and Instrumental Flight Rules

Mean Sea Level (AMSL) since penetrations of the imaginary surfaces are determined by adding the height of the proposed structure above the ground to the elevation of the project site above mean sea level. The official elevation reference for the Susanville Municipal Airport is 4152 feet.

The Lassen County Code, Chapter 18.132, entitled "Airport Approaches," includes zoning regulations for height restrictions in the horizontal zones, conical zones, transition zones and runway approach zones of the Susanville Municipal Airport as set forth in Lassen County Zoning Map No. 15. This map was approved by the California Aeronautics Board on August 23, 1967, and does not include the improvements as proposed in the Airport Master Plan.

Projects that exceed the ALUC recommended height limits need to be reviewed on a case-by-case basis to determine the specific effects on airport operations and air safety. The FAA is the principal agency having the required expertise to make judgments on these matters after all comments have been considered. If the ALUC height recommendations are penetrated, ALUCs should concentrate on providing valid aeronautical concerns to the FAA. These concerns can then be evaluated.

Part 77 sets forth requirements that the FAA Administrator be notified of certain proposed construction or "alterations" in the airport vicinity. These notices are filed on FAA Form 7460-1 and provide information that allows the FAA to determine the impact of a structure on airspace operations and FAA navigational aids. Projects that do not exceed the obstruction standards are simply acknowledged, while those that do are subject to a more detailed aeronautical study.

Several ALUCs in California receive Notices of Proposed Construction or Alteration at the same time they are submitted to the FAA. This allows ALUCs to have early notification of proposed structures whose height may pose a problem for airport operations.

Aeronautical studies are performed by the FAA to determine whether a specific proposal is a "hazard to air navigation." The FAA not only reviews the effect of the height of buildings on the safety of flight, but also the electromagnetic effect of buildings on existing or planned FAA navigational facilities (it would be very expensive to relocate an airport Instrument Landing System, radar, or radio facility because of interference with the signals from these navigational aids).

In certain instances a tall structure may also require a permit from the State Division of Aeronautics. A permit is required under existing law if a structure is more than 500 feet above the ground or if it is within one (1) mile of an airport and is determined to be a hazard by the FAA (Sections 21656 and 21659 of the Public Utilities Code).

The marking and lighting of obstructions is another means of ensuring compatibility between tall structures and aircraft operations. The purpose for marking and lighting obstructions is to identify tall structures in the path of aircraft so that pilots may see and avoid

these structures. The FAA usually recommends marking and lighting if a structure is over 200 feet tall; however, the FAA cannot require the sponsor to actually install the necessary equipment. ALUC plans should indicate the need for marking and lighting of any structure over 200 feet tall or where otherwise recommended by the FAA. Marking and lighting should also be recommended for any development within the airport traffic pattern that is significantly higher than existing structures. Marking and lighting would normally be conducted in accordance with FAA Advisory Circular AC 70/7460-1F, "Obstruction Marking and Lighting."

Policies

1. Restrict the development of new incompatible land uses within airport height restriction areas as defined by Federal Aviation Regulations, Part 77 surfaces and this airport land use plan.
2. Any structure within or outside of the airport planning boundary which is determined to be a "hazard" by the FAA shall be recognized as not in conformance with the ALUC plan.
3. The ALUC shall review specific projects within the airport area of influence which may pose an intrusion into navigable air space by exceeding recommended height limits.
4. The ALUC shall request that the FAA notify Lassen County ALUC staff of proposed projects that exceed obstruction standards in FAR, Part 77, and that will require an Aeronautical Study. ALUC staff will respond to FAA requests for comments on an Aeronautical Study with specific aeronautical objections when appropriate.
5. The ALUC recommends that the County of Lassen and the City of Susanville adopt requirements for marking and lighting of structures over 200 feet tall and where otherwise recommended by FAA Advisory Circular AC 70/7460-1F, "Obstruction Marking and Lighting."
6. Lassen County Code Chapter 18.132, regarding "Airport Approaches," should be reviewed and amended as appropriate for the Susanville Municipal Airport to ensure the purpose of the regulations included therein and consistency with the airport land use plan.