



NEVADA COUNTY AIRPORT LAND USE COMMISSION

Grass Valley • Nevada City • Nevada County


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 CAROLYN WALLACE DEE – Truckee Town Council
 ANN GUERRA – Member-At-Large (Vice-Chairman)
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 VALERIE MOBERG – Nevada City City Council
 ED SCOFIELD – Nevada County Board of Supervisors

DANIEL B. LANDON, Executive Director
 Nevada County Transportation Commission
 Nevada County Airport Land Use Commission

File: 40.1.4

MEMORANDUM

TO: Nevada County Airport Land Use Commission

FROM: Daniel B. Landon, Executive Director 

SUBJECT: Request for Nevada County Airport Land Use Commission Consistency Determination, Northern Sierra Propane Project

DATE: May, 17, 2017

ACTION REQUESTED: Adopt Nevada County Airport Land Use Commission (NCALUC) Resolution 17-01 finding that the proposed Northern Sierra Propane project is consistent with the Nevada County Airport Land Use Compatibility Plan (NCALUCP).

BACKGROUND:

Project Description: Northern Sierra Propane Company, currently located at 13121 John Bauer Avenue, has submitted an application to Nevada County for a development permit for a proposed 2,000 square-foot office building, 2,016 square-foot warehouse/garage and parking for a propane business at 13145 Loma Rica Drive. The applicant also proposes two 30,000 gallon outdoor propane storage tanks. Please see the attached Nevada County Planning Department Project Description, Google maps showing the project location, and letter dated 4/10/2017 from the applicant's engineer with a letter of approval from Nevada County Fire Marshall and a site plan attached. The project is located in Compatibility Zone B2 (see attached *NCALUCP Compatibility Policy Map*).

Applicable Airport Land Use Compatibility Plan Policies: The Nevada County General Plan has been reviewed and found consistent with the NCALUCP. Therefore, under NCALUCP Policy 1.4.2(b) Nevada County Airport Land Use Commission no longer has authority under state law to require that all actions, regulations, and permits be referred to the Nevada County Airport Land Use Commission for consistency determination. Therefore, the Nevada County Airport Land Use Commission is acting in an advisory capacity when reviewing this project. This means that Nevada County is not required to adhere to the overruling process if they elect to approve this project without incorporating design changes or conditions suggested by the Nevada County Airport Land Use Commission.

NCALUCP Policy 5.2.5 (c) states that within Compatibility Zone B2, aboveground storage of more than 6,000 gallons of non-aviation flammable material is not permitted. This limit coincides with a break-point used in the uniform fire code to distinguish between different classes of tanks.

Consistency with Compatibility Zone B2 Criteria: The goal of establishing land use compatibility policies is not only to prevent the encroachment of incompatible land uses, but to also encourage the development of land uses that are both appropriate and beneficial to the surrounding community. Developing an effective airport land use compatibility plan involves not only understanding the regulatory basis for land-use restrictions and the ways in which area of an airport operates, it also requires an understanding of the surrounding communities, including the land uses there now and what is planned for the future.

The purpose of noise compatibility policies is to avoid establishment of noise sensitive land uses in the portions of the airport environs that are exposed to significant levels of aircraft noise.

Safety policy objectives are to minimize the risk of aircraft accidents to people and property on the ground near airports. The ideal application of this objective would result in no development being allowed in the airport vicinity. For most airports, however, this is clearly not a practical approach to land use compatibility planning. The question thus becomes one of deciding which land uses are acceptable and which are unacceptable in various portions of the airport environs. The resulting policies are normally portrayed in the form of a set of compatibility criteria applicable within each of the defined safety or compatibility zones.

Compared to noise, safety is in many respects a more difficult concern to address in airport land use compatibility policies. The major reason for this difference is that safety policies address uncertain events that 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 happen infrequently and the time, place, and consequences of an individual accident's occurrence cannot be predicted, the concept of risk is central to the assessment of safety compatibility. It is necessary to look beyond an individual airport in order to assemble enough data to be statistically valid. The California Airport Land Use Planning Handbook (Handbook), prepared by State of California Department of Transportation, Division of Aeronautics, includes a significant amount of information related to aircraft accident characteristics, patterns, and safety risks. Chapters 3 and 4 of the Handbook provide guidance related to the design of compatibility zones (see attached: *Safety Zone 5-Sideline Zone* and *Safety Compatibility Zone Examples-General Aviation Runways*).

A point to emphasize is that delineation of safety/compatibility zones and definition of criteria applicable within those zones are closely intertwined. The process is usually an iterative one: initial zones and criteria are drafted and then each is fine-tuned as necessary in recognition of the peculiarities of the specific airport and its environs. This process is particularly applicable when compatibility zones and criteria are formulated to take into account the combination of noise and safety compatibility concerns (see attached: *Compatibility Factors Map: Noise and Overflight*, and *Compatibility Factors Map: Safety and Airspace Protection*).

A review and comparison of the NCALUCP *Compatibility Policy Map* with the *Safety Compatibility Zone Examples-General Aviation Runways* from the Handbook, shows that NCALUCP Compatibility Zone B2 correlates with Safety Zone 5-Sideline Zone in the Handbook. Additionally, Compatibility Zone B2 is much wider than the standard example of Safety Zone 5. The NCALUCP *Compatibility Factors Map: Noise and Overflight*, shows that the width of Compatibility Zone B2 was designed to include the 60 dB Community Noise Equivalent Level (CNEL). While the standard width of Safety Zone 5 along a Medium General Aviation Runway is 750 feet, the inclusion of the 60dB CNEL increased the width of Compatibility Zone B2 to 1,250 feet.

In relating these factors to the Northern Sierra Propane application, the proposed tanks would be located over 1,100 feet south of the runway centerline, or approximately 350 feet beyond the standard limit of a Safety Zone 5-Sideline Zone. Also, due to the topography of the area the elevation of the proposed tank location is over 600 feet below the elevation of the runway.

NCALUC STAFF RECOMMENDATION:

Based on the information provided in the Northern Sierra Propane Company application and a review of the criteria used to designate NCALUCP Compatibility Zone B2, NCALUC staff recommends that this project be found “consistent” with the NCALUCP. This recommendation is based on:

- 1) The distance of the proposed tank location from the runway centerline.
- 2) The structural features of the proposed tanks and approval by the fire marshal.
- 3) The project area is approximately 600 feet lower in elevation than the airport runway.

These factors enable the NCALUC to find that the proposed land use will not create a safety hazard to people on the ground, or aircraft in flight, nor result in excessive noise exposure for the proposed use.

As required by NCALUCP Policy 3.1.9, for properties within Compatibility Zone B2, an aviation easement shall be dedicated to Nevada County as a condition for development approval.

In accordance with NCALUCP Policy 5.5.5, approval of this Consistency Determination requires a two-thirds majority approval of the NCALUC members present and voting on the matter.

attachments

**RESOLUTION 17-01
OF THE
NEVADA COUNTY AIRPORT LAND USE COMMISSION**

ADOPTING A CONSISTENCY DETERMINATION FOR THE NORTHERN SIERRA PROPANE COMPANY PROJECT

WHEREAS, the Nevada County Transportation Commission (NCTC), in its capacity as the Nevada County Airport Land Use Commission (NCALUC), has adopted the Nevada County Airport Land Use Compatibility Plan (NCALUCP); and

WHEREAS, the County of Nevada has received an application proposing approval of a development permit for the Northern Sierra Propane Company project; and

WHEREAS, the Northern Sierra Propane Company project is located within the Nevada County Airport Influence Area, and a Consistency Determination by the NCALUCP has been requested; and

WHEREAS, the Northern Sierra Propane Company project consists of 2.3 acres located at 13145 Loma Rica Drive, situated within Compatibility Zone B2 south of the Nevada County Airport, and proposes construction of a 2,000 square foot office building, a 2,016 square foot warehouse/garage, parking for the business, and installation of two 30,000 gallon propane tanks; and

WHEREAS, NCALUCP Policy 5.2.5(c) states that within Compatibility Zone B2, aboveground storage of more than 6,000 gallons of non-aviation flammable material is not permitted; and

WHEREAS, the goal of establishing land use compatibility policies is not only to prevent the encroachment of incompatible land uses, but to also encourage the development of land uses that are both appropriate and beneficial to the surrounding community; and

WHEREAS, in preparing the NCALUCP, the width of Compatibility Zone B2 was extended to include the 60 dB CNEL, which increased the width of the compatibility zone to 1,250 feet, while the standard width of a sideline zone for a medium general aviation runway is 750 feet; and

WHEREAS, the propane tanks proposed in the Northern Sierra Propane Company application will be located over 1,100 feet south of the runway centerline, or approximately 350 feet beyond the standard limit of a sideline zone, and over 600 feet below the elevation of the runway; and

WHEREAS, the Nevada County Fire Marshal's office has reviewed the permit application and stated that the application may be approved subject to the provision of a minimum of 1,500 gallons per minute fire flow, two fire hydrants to meet the fire flow requirement, and installation of the tanks meeting the requirements of NFPA 58 and the California fire code.

NOW THEREFORE BE IT RESOLVED, that in accordance with NCALUCP Policy 5.5.5, after due consideration of the factors involved in this project location, the NCALUC finds, that based on:

- 1) The distance of the proposed tank location from the runway centerline.
- 2) The structural features of the proposed tanks and conditional approval by the Nevada County Fire Marshal.

3) The project area is approximately 600 feet lower in elevation than the airport runway.

The Northern Sierra Propane Company project will not create a safety hazard to people on the ground, or to aircraft in flight, nor will it result in excessive noise exposure for the proposed use, the proposed project is determined to be consistent with the NCALUCP.

BE IT FURTHER RESOLVED, that NCALUCP Policy 3.1.9 requires that as a condition for project approval, an aviation easement must be dedicated to Nevada County as owner of the airport.

PASSED AND ADOPTED by the Nevada County Airport Land Use Commission on May 17, 2017 by the following vote:

Ayes:

Noes:

Absent:

Abstain:

Lawrence A. Jostes, Chairman
Nevada County Airport Land Use Commission

Attest: _____
Dale D. Sayles
Administrative Services Officer

**COMMUNITY DEVELOPMENT AGENCY
NEVADA COUNTY PLANNING DEPARTMENT**

950 Maidu Avenue, Suite 170
Nevada City CA 95959-8617
Fax No: (530) 265-9851

RECEIVED JAN 30 2017

SECOND DISTRIBUTION / PROJECT DESCRIPTION

DATE: January 26, 2017

TO: Department of Public Works
Federal Aviation Admin.
Airport Manager
Nevada County Consolidated Fire District

Environmental Health Department
Nev. Co. Transportation Comm.
CalTrans Aeronautics
Tyler Barrington, Principal Planner

This project is being re-distributed to you for your review and comment either because you provided "incomplete" comments during the initial distribution comment period or because information has been provided by the applicant that may impact your comments. Your comments, Mitigation measures, and/or conditions must be received, *in writing*, no later than **February 23, 2017**. In addition to sending a signed copy, please e-mail a digital copy, to the Project Planner listed below. If you need additional information to complete your review, please contact the Project Planner before the comment deadline.

PROJECT: An application to the Planning Commission for a Development Permit for a proposed 2,000 square foot office building, 2,016 square foot warehouse/garage and parking for a propane business.

APPLICANT: Northern Sierra Propane Company

OWNER: Kirk Kóslin

APN: 06-920-10

FILE NO: PLN16-0072; DVP16-8; EIS16-0002

LOCATION: 13145 Loma Rica Drive, just east of Grass Valley in the Loma Rica Drive Industrial Area.

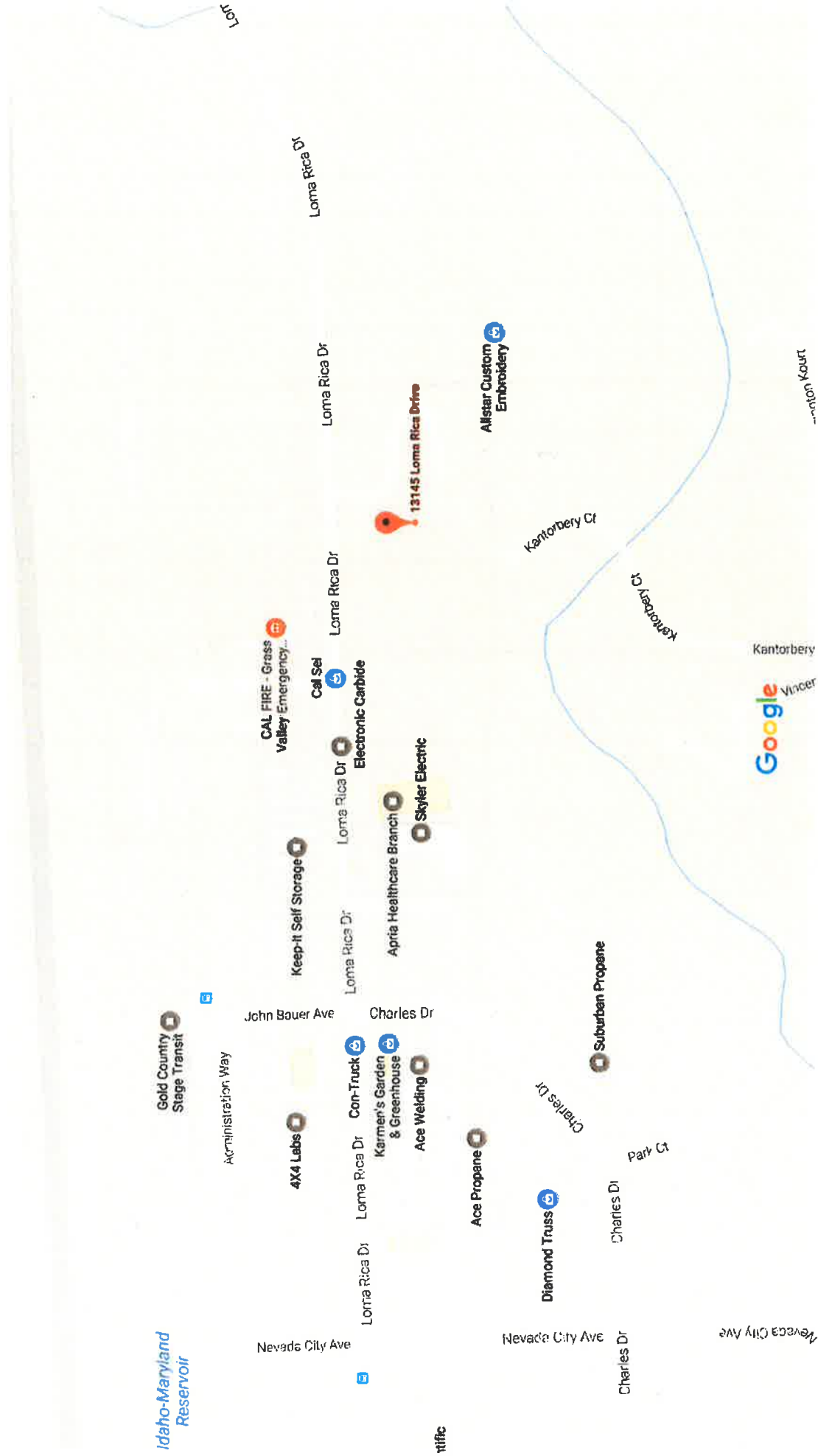
General Plan:	IND	Water:	NID
Region:	GV	Sewage:	Septic
Zoning:	M1-SP	Fire:	NCCFD
Flood Map:	0632	Schools:	GVSD/NJUHS
ZDM #:	52b	Recreation:	Grass Valley
Parcel Size:	2.3 acres	Sup. Dist.:	Heidi Hall, District I
Farmland Map Designation:	Other Land	Date Filed:	10/12/2016
Prev. File #(s):	MSP88-006, PM91-040, ZV93-015, LA93-016, OR98-113, PM99-003, FM99-001, SP99-002, DP16-001, DP13-002		

PROJECT PLANNER: JD Trebec, Associate Planner
(530) 470-2488 Email: jd.trebec@co.nevada.ca.us



13145 Loma Rica Dr

Proposed Location of Northern Sierra Propane Company



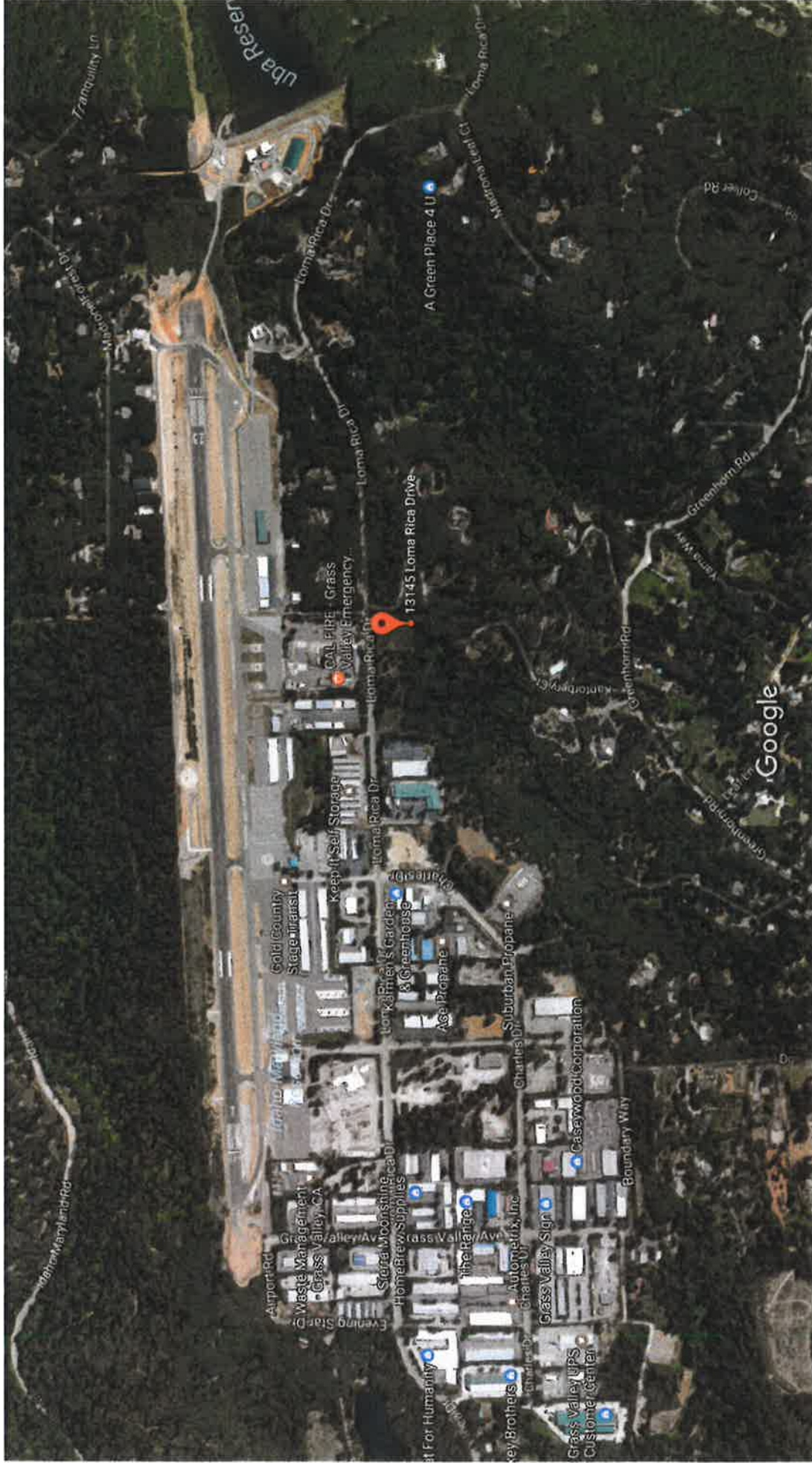
Map data ©2017 Google 200 ft





13145 Loma Rica Dr

Proposed Location for Northern Sierra Propane Company



Imagery ©2017 Google, Map data ©2017 Google 500 ft





April 10, 2017

Dan Landon
Nevada County Airport Land Use Commission
101 Providence Mine Road, Suite 102
Nevada City, CA 95959

Re: Use Permit for Northern Sierra Propane, APN 06-920-10

Dear Dan:

This letter is to make a formal request for the Nevada County Airport Land Use Commission (NCALUC) to provide the Nevada County Planning Department an advisory review and recommendations of our proposed Northern Sierra Propane project as it relates to the consistency with the Nevada County Airport Land Use Compatibility Plan (NCALUCP) adopted in September 2011.

I have attached a copy of the Site Plan and Architectural Plans for your use and reference. In addition, I've provided the specifications and details for the proposed 30,000-gal propane storage tanks.

The primary purpose for our request of the Commission's review is to make an advisory recommendation to the Planning Department for our Use Permit application regarding the use and location of the propane tanks in reference to Section 5.2.5(c)(2) of Chapter 2 of the NCALUCP. The Policy states that *within Zone B2, only aboveground storage of less than 6,000-gallons of nonaviation flammable materials* are allowed.

The project proposes two 30,000-gallon outdoor storage tanks per the attached specifications, which meet and exceed the requirements of NFPA 58 and the California Fire Code. The tanks are located near the south edge of the Zone B2 of the NCALUCP. The south limits of the Zone B2 are defined as 1,250-feet from the centerline of the airport runway. As shown on the attached Site Plan, the proposed tanks are located approximately 90' to 140' within the Zone B2 boundary or over 1,100 feet south of the runway in the Sideline Zone.

We understand there are three primary concerns with the tanks, which are the materials, valve locations, and tank separation. The following is information regarding these concerns:

- a) Materials of the Propane Tank: Propane tank shall be constructed of 0.600" thick SA612N carbon steel to meet or exceed Chapter 6 of the NFPA 58 and ASTM D6849-13. See attached Tank Specifications from Modern Custom Fabrication. I would also note that this tank thickness is approximately 50% thicker than the typical propane tank, which vary from about 0.280" to 0.312". This extra tank thickness provides an additional safety factor in the event of any kind of impacts.
- b) Valve locations: No service valves are located at or near the top of the tank that could be vulnerable to be hit in the event of an aircraft or parts falling from the sky. See attached Tank Detail.

- c) Tank separation: Pursuant to Table 6.4.1.1 of NFPA 58, the minimum tank separation for 30,000-gal tanks is 5.0 feet. Site Plan shows minimum 6.0 feet.

In addition, there are several other industry safety standards for propane tanks which include internal shut-off valves should a rapid escape of gas occur or when vehicles are connected to the tank. All these safety features prevent the releasing of the tanks contents that could potentially cause an explosion. Currently, there are two similar tanks within the Zone B1, two others within the Zone B2, and six others within the Loma Rica Industrial Park that have all operated for decades with no safety issues.

Lastly, I have also included a copy of the Nevada County Consolidate Fire District's approval letter dated February 16, 2017 by Fire Marshal Terry McMahan.

Due to the minimal encroachment into the Zone B2 area as outlined in the NCALUCP, the support of the Nevada County Consolidated Fire District, and the fact that the use is compatible with the surrounding zoning & industrial park, we respectfully request your review and approval of this proposed project.

Please review and circulate as needed to present to your Airport Commission Board. If you have any questions or need additional information regarding the any of the above information, please don't hesitate to call me.

Very truly yours,

NELSON ENGINEERING



Kevin J. Nelson, PE, PLS
Principal



Nevada County Consolidated Fire District

11329 McCourtney Road, Grass Valley, CA 95949

(530) 273-3158 FAX (530) 273-1780

nccfire@nccfire.com • www.nccfire.com

RECEIVED

FEB 27 2017

COMMUNITY DEVELOPMENT AGENCY

February 16, 2017

JD Trebec, Associate Planner
Nevada County Planning Department
950 Maidu Avenue, Suite 170
Nevada City, CA 95959

Re: PLN16-0072; DVP16-8; EIS16-0002

I have reviewed the Second Distribution for a Use Permit application of Northern Sierra Propane Company proposing to establish a 2,000 square foot office building, 2,016 square foot warehouse/garage and parking for a propane business at 13145 Loma Rica Drive, Grass Valley. This application also includes the installation of two 30,000-gallon propane tanks.

This application may be approved subject to the following conditions:

1. Fire flow requirement for each building is a minimum 1,500 gallons per minute. Two fire hydrants will be required to meet this flow. The fire hydrant located at the driveway entrance will meet the requirement for one of the hydrants. If there is another public fire hydrant located within 500 feet of the project and there is clear access the fire hydrant may be considered. If not an on-site fire hydrant may be required. This item needs to be coordinated with the Fire District along with the County Fire Planner.
2. The applicant shall provide in writing a letter from the Nevada Irrigation District stating the available fire flow in the area of the project. A copy of this letter shall be submitted to the Fire District for review and approval.
3. Since the fire flow requirement is 1,500 gallons per minute, an approved fully-supervised automatic smoke and/or heat detection fire alarm system is required in both buildings. The letter submitted by Kevin Nelson states that the applicant intends to install an approved automatic fire sprinkler system in both buildings. These systems shall meet the requirements of NFPA 13.
4. Installation of the large tanks shall meet the requirements of NFPA 58 and the California Fire Code.
5. Three complete sets of building plans and four complete sets of fire alarm/fire sprinkler plans shall be submitted to the Fire District for approval prior to the issuance of the Building Permit. The fire alarm or fire sprinkler system plans may be deferred for a short period of time if necessary.

6. The Fire District has adopted development fees for new construction and fees for services provided by the Department of Fire Prevention.

Fees for services provided by the Department of Fire Prevention are based on an hourly rate. Fees for service provided by the Department of Fire Prevention shall be paid at the time services are rendered.

The Fire District's approval of this application is not valid until all plan review fees have been paid.

7. All meetings and inspections require a minimum of 48-hours advance request.

The above conditions are the minimum requirements of the Nevada County Consolidated Fire District. Approval of this application is subject to the applicant agreeing to complete the above requirements at the times indicated.

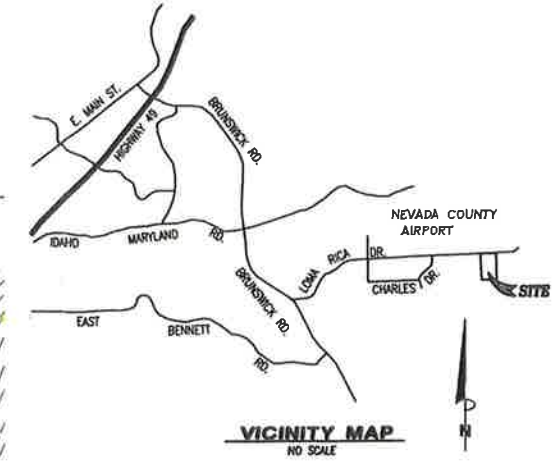
Please call me at (530) 273-3158 should you have any questions.



Terry McMahan
Deputy Fire Marshal

cc: Matt Furtado, Nevada County Deputy Fire Marshal

17-02-09.1 doc/1.0



- ### LEGEND
- PROPOSED 2:1 CUT SLOPES (UNLESS OTHERWISE NOTED)
 - PROPOSED 2:1 FILL SLOPES
 - FLOW LINE
 - PROPERTY LINE
 - EXIST. EDGE OF PAVEMENT
 - PROPOSED STORM DRAIN CULVERT (AS CALLED OUT)
 - EXIST. STORM DRAIN PIPE w/ SIZE
 - PROPOSED PAVEMENT AREA
 - PROPOSED 4" CONCRETE AREA
 - 30% OR GREATER SLOPE PER FINAL MAP (SUBS 8/71)
 - PROPOSED REDI-BLOCK RETAINING WALL
 - PROPOSED LANDSCAPE AREA
 - PROPOSED NATURAL/OPEN SPACE AREA
 - PROPOSED 6-foot High SOLID WALL
 - PROPOSED CURB PAINTED 'NO PARKING - FIRE LANE'
 - PROPOSED 6" CURB
 - PROPOSED TOP OF CURB ELEVATION
 - PROPOSED FINISH ASPHALT CONCRETE ELEVATION
 - EXISTING TREE TO REMAIN
 - EXISTING TREE TO BE REMOVED
 - PROPOSED PARKING POLE LIGHT (Max Ht. 15')
 - ADA PATH OF TRAVEL (Maximum Running Slope of 5.0%
Maximum Cross Slope of 2.0%)

Approximate location of Zone B2 southern boundary (1,250-feet from Centerline of Airport Runway)

PROJECT PROPOSAL:
A DEVELOPMENT PERMIT FOR A PROPANE INDUSTRIAL BUILDING AND STORAGE FACILITY

APPLICANT:
NORTHERN SIERRA PROPANE
13121 JOHN BAUER AVENUE
GRASS VALLEY, CA 95945
(530) 477-7854
CONTACT PERSON: WENDY YOUNGMAN

ENGINEERING/PLANNING:
NELSON ENGINEERING
18881 WILDFLOWER DRIVE
PENN VALLEY, CA 95946
(530) 432-4818
CONTACT PERSON: KEVIN J. NELSON, P.E.

SITE ADDRESS:
13145 LOMA RICA DR.

ASSESSOR'S PARCEL NUMBER:
06-920-10

TOTAL SITE ACREAGE:
2.29 ACRES

EXISTING & PROPOSED ZONING:
M1-SP

FIRE PROTECTION:
NEVADA COUNTY CONSOLIDATED FIRE DISTRICT

WATER:
NEVADA IRRIGATION DISTRICT

SEWER DISPOSAL:
SEPTIC

ELECTRICAL UTILITIES:
PACIFIC GAS & ELECTRIC

EARTHWORK QUANTITIES:
EXCAVATION = 6,000 CY
FILL (15% SHRINK) = 6,000 CY
EXPORT = 0 CY

SITE STATISTICS:

DESCRIPTION	SQUARE FOOTAGE	PERCENTAGE
BUILDING COVERAGE	4,016 s.f.	4.0%
PAVEMENT AREA	14,175 s.f.	14.2%
CONCRETE CURBS & WALKWAYS	3,085 s.f.	3.1%
GRAVEL AREA	11,850 s.f.	11.9%
IMPERVIOUS SUBTOTAL:	33,126 s.f.	33.2%
LANDSCAPE AREA per Sec. 1-II 4.2.7.		
INTERIOR PARKING	5,070 s.f.	5.1%
SIDE LOT BUFFER	8,200 s.f.	8.2%
STREET BUFFER	5,675 s.f.	5.7%
NATURAL AREA/OPEN SPACE per Sec. 4.2.10	47,705 s.f.	47.7%
TOTALS:	99,776 s.f.	100.0%

PARKING REQUIREMENTS:

PROPOSED:

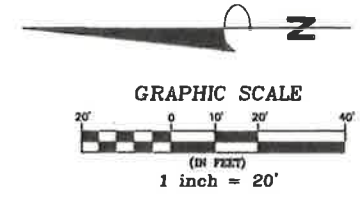
FULL SIZE PARKING STALLS	23
COMPACT PARKING STALLS	0
HANDICAP STALLS	2
TOTAL PARKING STALLS PROPOSED:	25

TREE STATISTICS:

EXISTING TREES	TREES TO BE REMOVED
PINE TREES	24
OAK TREES	41
CEDAR TREES	25
OTHER TREES	1
TOTAL TREES:	91
	11
	9
	17
	0
TOTAL TREES:	37

PERCENTAGE OF TREES SAVED = $\frac{(91-37)}{91} \times 100 = 59\%$

NOTE: MORE TREES EXIST IN "NON-DISTURBANCE" AREA, TREES NOT SURVEYED OR SHOWN ON PLAN



DESIGNED: KAN
DRAWN: KAN
CHECKED BY: KAN
DATE: January 25, 2017
PROJECT No.: 16-124
DWS. NAME: 16-124 Prelim Site Plan - Loma Rica

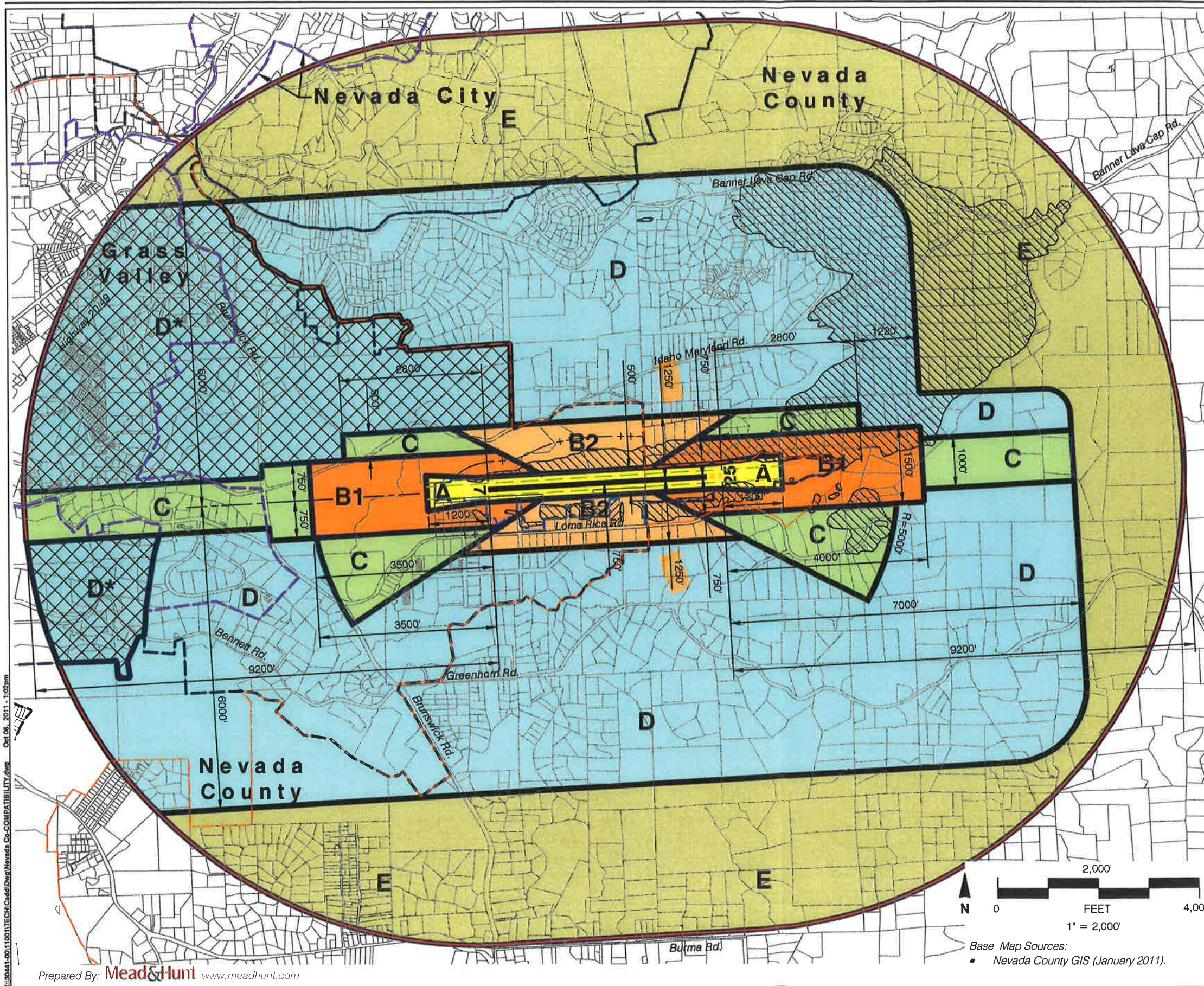
NO. REVISIONS

PRELIMINARY SITE PLAN FOR:
NORTHERN SIERRA PROPANE
A.P.N. 06-920-10
COUNTY OF NEVADA, CALIFORNIA

NELSON ENGINEERING
Civil Engineering, Surveying, & Land Planning
(530) 432-4818
www.nelsonengr.com
18881 Wildflower Drive
Penn Valley, CA 95946

PROFESSIONAL SEAL
No. 55101
Exp. 6-30-2018
KEVIN J. NELSON
CIVIL
STATE OF CALIFORNIA

1 OF 1



Legend

- Boundary Lines**
- Airport Property Line
 - Proposed Airport Property Acquisition
 - City Limits
 - Grass Valley Planning Area
 - Grass Valley Sphere of Influence
 - Nevada City Sphere of Influence
 - Existing Runway (4,350')
 - Future Runway (4,650')
 - Object Free Area
 - Airport Influence Area

Compatibility Zones¹

- Zone A - Runway Clear Zone
- Zone B1 - Inner Approach Zone
- Zone B2 - Sideline Zone
- Zone C - Inner Turning Zone & Extended Approach Zone
- Zone D - Traffic Pattern Zone
- Zone D* - Urban Overlay Zone
- Zone E - Other Airport Environs
- Height Review Overlay

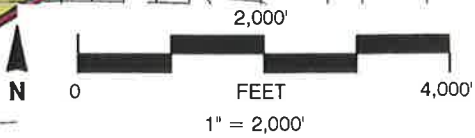
Notes

1. See Chapter 2, Table 2A, Basic Compatibility Criteria.

**Nevada County Airport
Land Use Compatibility Plan
(Adopted September 2011)**

Map 2A

Compatibility Policy Map



Base Map Sources:
• Nevada County GIS (January 2011).

X:\0441-001\TECH\Cadd\Draw\Nevada Co-COMPATIBILITY.dwg Oct 06, 2011 - 1:22pm

Prepared By: **Mead & Hunt** www.meadhunt.com

Nature of Risk

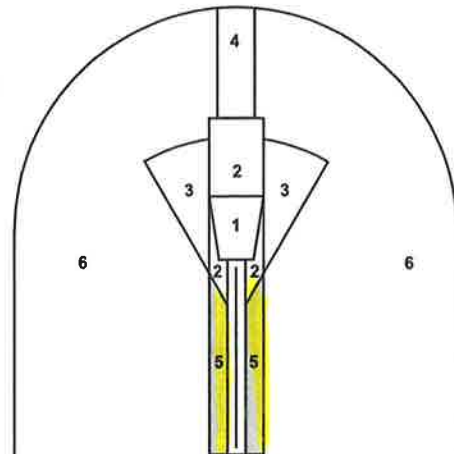
- Normal Maneuvers
 - Area not normally overflowed; primary risk is with aircraft (especially twins) losing directional control on takeoff, excessive crosswind gusts or engine torque
- Altitude
 - Runway elevation
- Common accident types
 - Arrival and Departure: Aircraft losing directional control and veering off the side of the runway
- Risk Level
 - Low to moderate
 - Percentage of near-runway accidents in this zone: 3% - 5%



INITIAL LIFT-OFF OR LANDING TOUCHDOWN

Basic Compatibility Policies

- Normally Allow
 - Uses allowed in Zone 4 (subject to height limitations for airspace protection)
 - All common aviation-related activities provided that FAA height-limit criteria are met
- Limit
 - Nonresidential uses similarly to Zone 3
- Avoid
 - Residential uses unless airport related (noise usually also a factor)
 - High-intensity nonresidential uses
- Prohibit
 - Stadiums, group recreational uses
 - Children's schools, large daycare centers, hospitals, nursing homes



Refer to Chapter 3 for dimensions.

	Maximum Residential Densities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	3x the Average number of people per gross acre
Rural	See Note A	50 – 70	150 – 210
Suburban	1 per 1 - 2 ac.	70 – 100	210 – 300
Urban	See Note B	100 – 150	300 – 450
Dense Urban	See Note B	See Note B	See Note B

Note A: Maintain current zoning if less than density criteria for suburban setting.
 Note B: Allow infill at up the average of surrounding residential area.

FIGURE 4F
Safety Zone 5 – Sideline Zone

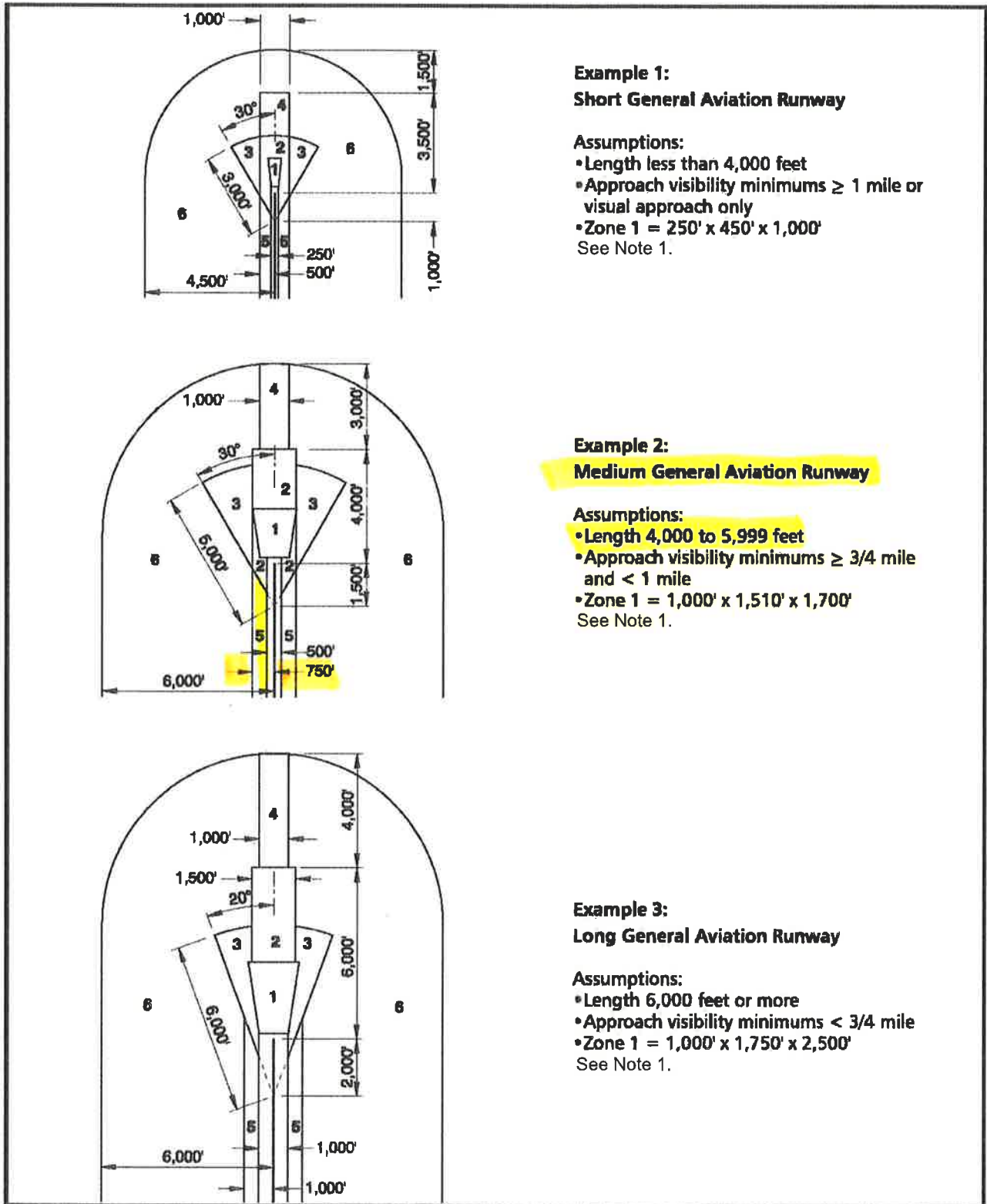
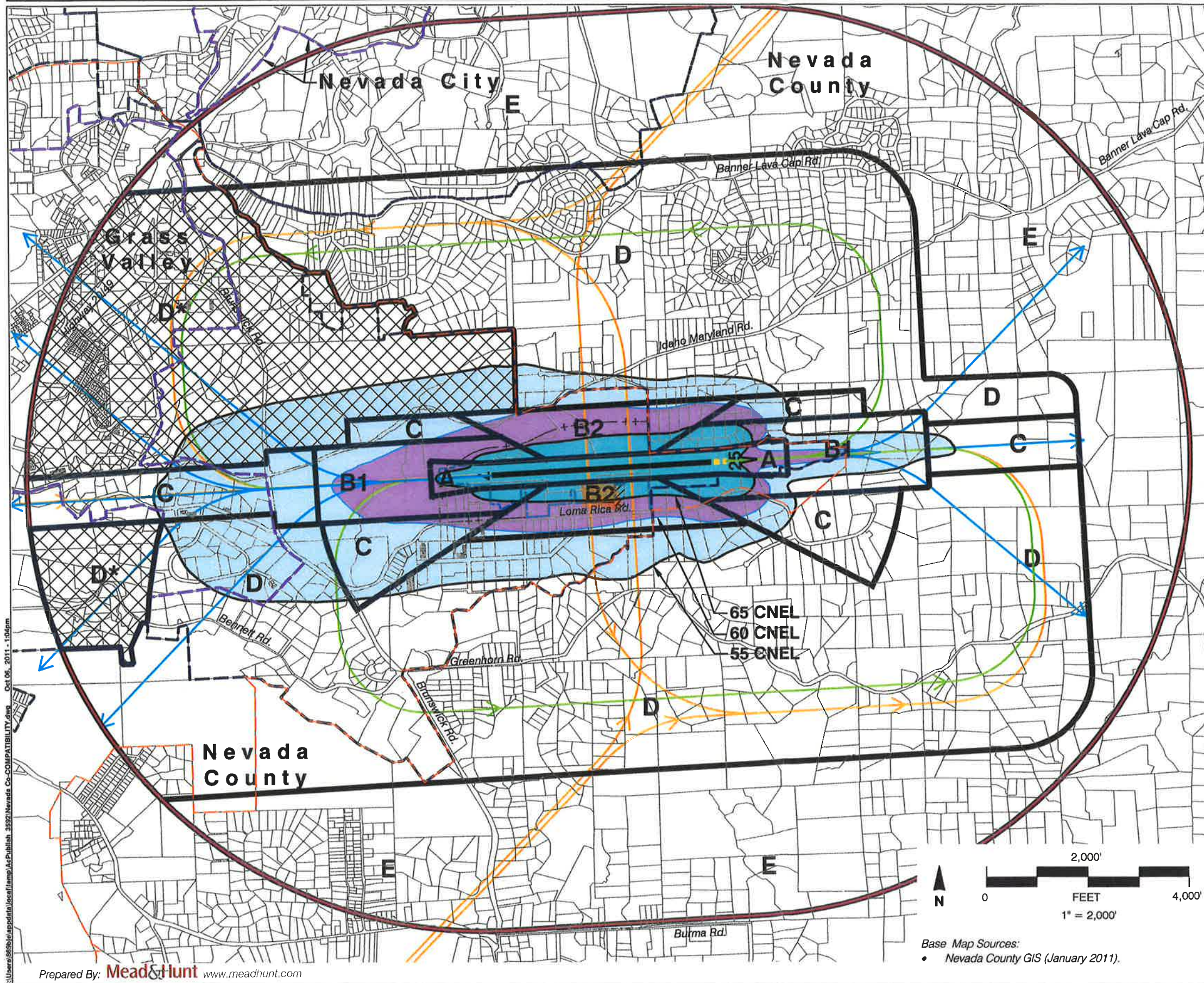


FIGURE 3A

Safety Compatibility Zone Examples – General Aviation Runways



Legend

Boundary Lines

- Airport Property Line
- Proposed Airport Property Acquisition
- City Limits
- Grass Valley Planning Area
- Grass Valley Sphere of Influence
- Nevada City Sphere of Influence
- Existing Runway (4,350')
- Future Runway (4,650')
- Airport Influence Area

Compatibility Zones¹

- Zone A - Runway Clear Zone
- Zone B1 - Inner Approach Zone
- Zone B2 - Sideline Zone
- Zone C - Inner Turning Zone & Extended Approach Zone
- Zone D - Traffic Pattern Zone
- Zone D* - Urban Overlay Zone
- Zone E - Other Airport Environs

Calculated Noise Contours

- 55 dB CNEL
- 60 dB CNEL
- 65 dB CNEL

60,000 Annual Operations
(164 Average Annual Day)

Calculated Flight Tracks³

- Arrival
- Departure
- Touch-n-Go

- Notes**
- See Chapter 2, Table 2B, Compatibility Zone Delineation.
 - Source: Mead & Hunt, Inc., using Integrated Noise Model (INM) 7.0b (April 2011). Contours represent average daily noise exposure for 60,000 annual operations on future runway. Contours modeled using USGS terrain data. Terrain results in shorter contours to west and wider contours near center of airport.
 - Flight tracks represent general arrival and departure routes.
 - Prevailing winds out of the west. Runway 25 is designated calm wind runway.
 - Departures on Runway 7 and arrivals on Runway 25 not recommended at night due to severe runway gradient (rising from west to east). Fire attack aircraft typically land on Runway 7.
 - Aircraft departing Runway 25 advised to climb to 3,800' MSL (648' above airport elevation) before turning (source: Airport management).

**Nevada County Airport
Land Use Compatibility Plan
(Adopted September 2011)**

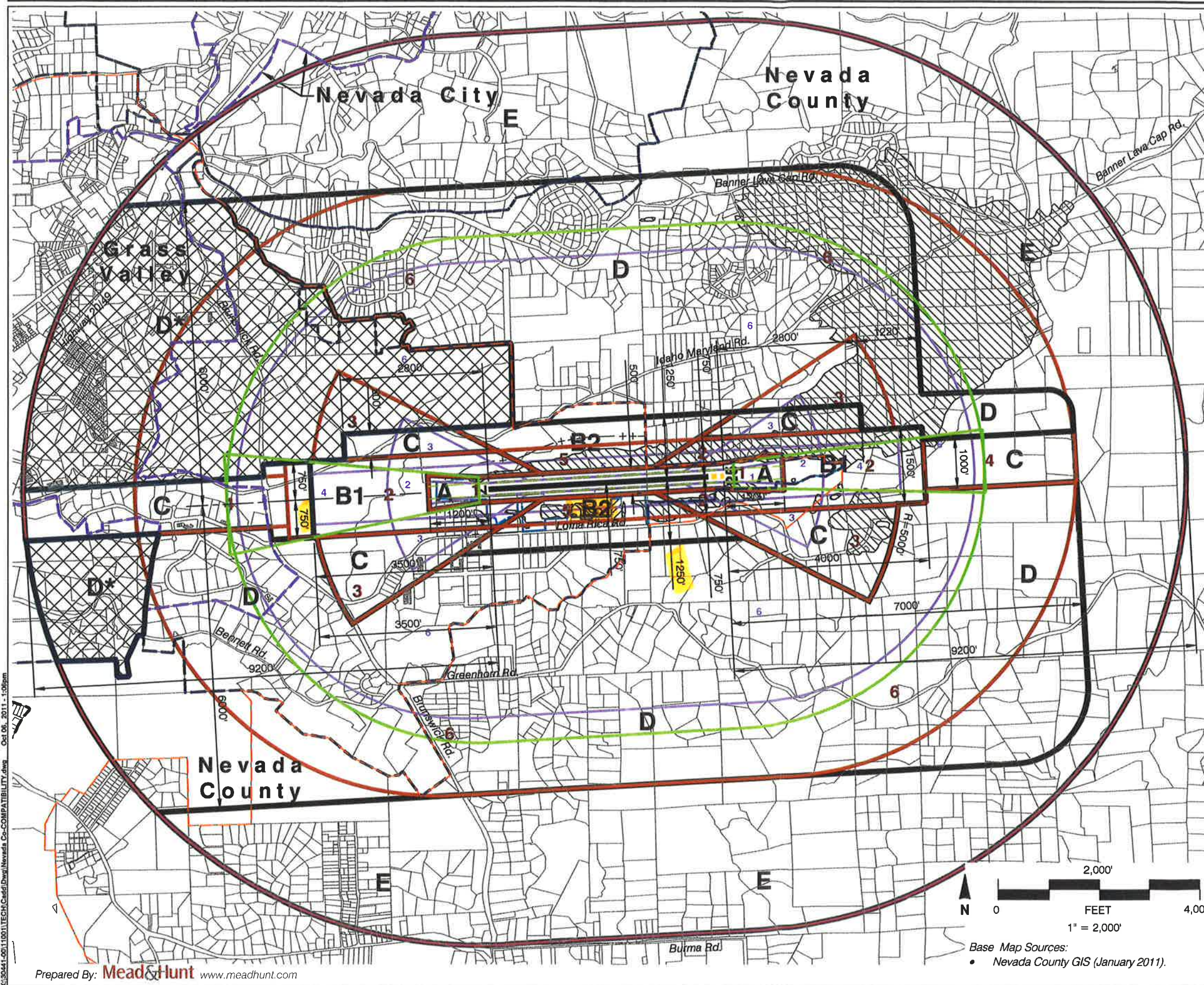
Exhibit 3-5

**Compatibility Factors Map:
Noise and Overflight**

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Prepared By: **Mead & Hunt** www.meadhunt.com

Base Map Sources:
• Nevada County GIS (January 2011).



Legend

Boundary Lines

- Airport Property Line
- Proposed Airport Property Acquisition
- City Limits
- Grass Valley Planning Area
- Grass Valley Sphere of Influence
- Nevada City Sphere of Influence
- Existing Runway (4,350')
- Future Runway (4,650')
- Airport Influence Area

Compatibility Zones¹

- Zone A - Runway Clear Zone
- Zone B1 - Inner Approach Zone
- Zone B2 - Sideline Zone
- Zone C - Inner Turning Zone & Extended Approach Zone
- Zone D - Traffic Pattern Zone
- Zone D* - Urban Overlay Zone
- Zone E - Other Airport Environs

Compatibility Factors

- Safety Zones (short general aviation runway)²
- Safety Zones (medium general aviation runway)²
- Part 77 Surface (approach and horizontal)
- Part 77 Surface Penetration³

Notes

1. See Chapter 2, Table 2B, Compatibility Zone Delineation.
2. Source: California Airport Land Use Planning Handbook (January 2002).
3. Source: Part 77 Surface penetration (100' added to ground level in wooded area), Nevada County Airport Airspace Plan (April 2009).

**Nevada County Airport
Land Use Compatibility Plan
(Adopted September 2011)**

Exhibit 3-6

**Compatibility Factors Map:
Safety and Airspace Protection**

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