

# Exhibit C

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February 23, 2024  
45dB Project# 24014

<b>Noise Analysis of:</b> NORCAL Lockwood Airstrip APN 423-060-	<b>Requestor:</b> Heather Beach <a href="mailto:hbeach@siebel.org">hbeach@siebel.org</a> 805-242-6022	<b>Owner/Client to be Invoiced:</b> NORCAL Lockwood, LLC PO Box 5287 Redwood City, CA 94063
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45dB Acoustics, LLC (“45dB”) has reviewed the requirements for noise in Monterey County for this project. We have analyzed the noise source and have determined the suitability/compatibility of the project with applicable regulations.

- **PROJECT:** The subject of this analysis is an airstrip for small aircraft, having the shortest distance from the (eastern) property line, at Cross Road, of 374 feet. The survey drawing as received from the Client is included as the last page of this document.
- **NOISE SOURCE:** The Game Bird GB-1 small aircraft has a published noise emission level of 75 dBA (see Figure 3).
- **APPLICABLE NOISE LIMIT CRITERIA/REGULATIONS:** The Monterey County Code Chapter 10.60, specifically Section 10.060.030<sup>1</sup> stipulates that machinery of any kind shall not exceed 85 dBA at a distance of 50 feet. If the aircraft is to be operated at a distance of 2,500 feet or more from any occupied dwelling unit, this limitation does not apply. This code is reprinted in Figure 1. For this analysis, we assume the limitation does apply and here we determine the level of the aircraft at a distance of 50 feet.

Additionally, the County’s General Plan Safety Element Goal S-7 policies stipulates that new noise generators may be allowed where noise levels created by the proposed noise source are consistent with the surrounding existing land use(s). We assume that Community Noise Equivalent Level (CNEL) of up to 60 CNEL are considered Acceptable, and levels up to 70 CNEL are considered Conditionally Acceptable (see Figure 2). Day-Night Levels, Ldn or DNL, are considered equivalent to CNEL here, as they typically agree within approximately 1 dB.

<sup>1</sup>[https://library.municode.com/ca/monterey\\_county/codes/code\\_of\\_ordinances?nodeId=TIT10HESA\\_CH10.60NOC](https://library.municode.com/ca/monterey_county/codes/code_of_ordinances?nodeId=TIT10HESA_CH10.60NOC)  
[O](#)

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- **ANALYSIS:** The CFR Title 14 Volume 1 Part 36, Appendix G *Takeoff Noise Requirements for Propeller-Driven Small Airplane and Propeller-Driven Commuter Category Airplane Certification Tests on or After December 22, 1988*<sup>2</sup> sets the criteria for how sound level emission from aircraft shall be declared/presented. This standard requires noise level maximum be reported for the aircraft flying at a constant height of 50 feet above the ground before it ascends toward cruising altitude. The worst-case height the aircraft for noise propagation to neighboring properties will then be 50 feet. In other words, the declared noise level of the GB-1 is 75 dBA at 50 feet of elevation—below that altitude, the airplane’s noise propagation will be reduced due to ground attenuation; at altitudes greater than 50 feet, it will be reduced by the increase in source-receiver distance. This is to be measured with a microphone located 7mm above the ground on a metal plate.

Using SoundPLAN® outdoor noise propagation software to verify the sound level at a distance of 374 feet/114 m (which is the nearest property line for the airstrip), we adjust a line source of sound at a height of 50 feet above ground level to represent the aircraft, such that the sound level directly below the line source and 0.007m above ground level (i.e., along the centerline of the airstrip) is 75 dBA, per the GB-1 specification and CFR Title 14 Vol. 1 Part 36 Appendix G. The calculated sound level at a lateral distance of 50 feet from the center of the airstrip is 73.3 dBA. At a distance of 200 feet from the airstrip centerline, the calculated sound level becomes 67.7 dBA, The calculated sound level at a distance of 374 feet, i.e., at the nearest property line, is 63 dBA. These levels are summarized in Table 1, and are all well below the County Code limit of 85 dBA at 50 feet.

Additionally, if one would like to evaluate this against the County’s Safety Element which is on a CNEL basis, we must make assumptions on the duration of a flights event and how many would occur during day/evening/nighttime hours. (Ambient, i.e., background, noise levels when airplane noise is not present are assumed to be very quiet such that the airplane is the only sound source contributing to the CNEL.) A conservative assumption of a single flight including landing, idling, and takeoff would be 30 minutes. One 30-minute flight during daytime results in a CNEL of 47 dBA; if the flight event were 60 minutes, the CNEL becomes 49.4 dBA<sup>3</sup>. Even if there was *constantly* an aircraft noise level of 63 dBA at the nearest property line for all daytime and evening hours, the CNEL at the nearest property line 374 feet away remains below CNEL 63. Alternatively, if there were one 30-minute flight each hour for all daytime and evening hours, the CNEL remains below 60 dBA.

Nighttime noise, i.e., between 10pm and 7am, is penalized by 10 dB in the CNEL calculation. If instead an hour-long flight occurred during nighttime hours, that would not cause the CNEL to exceed 60 dBA. Two 30-minute flights would also not exceed CNEL 60.

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<sup>2</sup> Downloaded from: <https://www.govinfo.gov/app/details/CFR-2023-title14-vol1/CFR-2023-title14-vol1-part36-appG/context>

Also available at: <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-C/part-36>

<sup>3</sup> One accurate CNEL calculator online is available at: <https://www.noisemeters.com/apps/ldn-calculator/>

Simply put, there are no plausible scenarios in which this airstrip would exceed the Acceptable land use compatibility range from the Safet Element of the General Plan. We do not recommend any limitations be placed on the airstrip in terms of number of flights per day.

Per our analysis above, the Client's airstrip is anticipated to fully and easily comply with the County's Code limits for machinery noise, and it is also expected to be Compatible with the Land Use Compatibility standards for any land use category including residential and agricultural land uses for all nearby land parcels.

The conclusions and recommendations herein are based upon the information known to 45dB Acoustics, LLC ("45dB") at the time the analysis was prepared. Any significant changes to these factors will require a reevaluation of the findings of this report. Additionally, any significant future changes in site plan, designs, or other factors beyond 45dB's control may result in noise results that differ from those described by this analysis.

Please contact me with any questions.

for 45dB Acoustics, LLC:



Sarah Taubitz, Mem.INCE, ASA  
[ST@45dB.com](mailto:ST@45dB.com)

### Figure 1: County of Monterey municipal code §10.60.030 (reprinted)

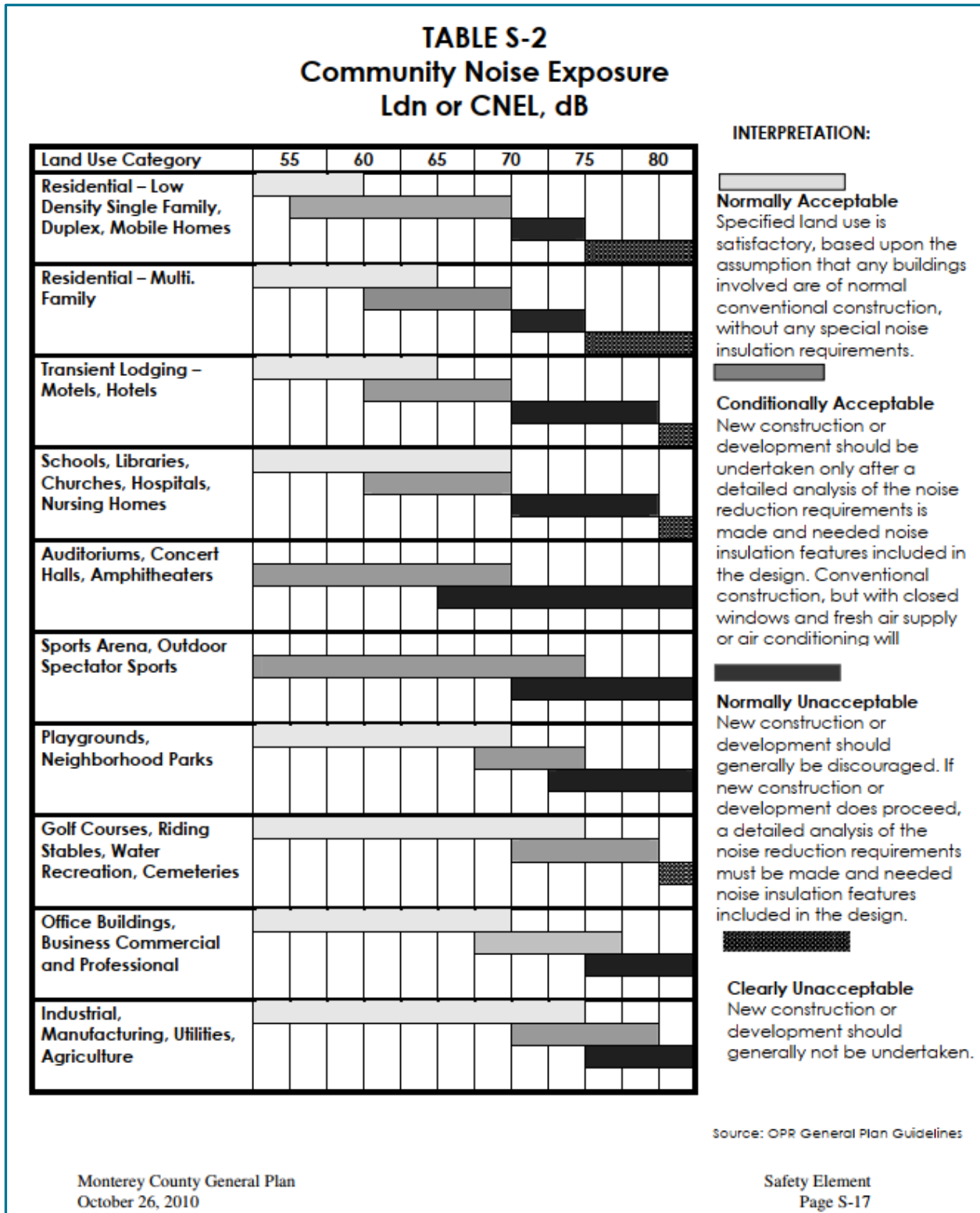
**10.60.030 - Operation of noise-producing devices restricted.** 🔗 🖨️ 📄 📧 📄

At any time of the day, it is prohibited within the unincorporated area of the County of Monterey to operate, assist in operating, allow, or cause to be operated any machine, mechanism, device, or contrivance which produces a noise level that exceeds eighty-five (85) dBA measured fifty (50) feet therefrom. The prohibition in this Section shall not apply to aircraft nor to any such machine, mechanism, device or contrivance that is operated in excess of two thousand five hundred (2,500) feet from any occupied dwelling unit.

(Ord. 2450 § 3, 1978)

(Ord. No. 5250, § 5, 12-16-2014; Ord. No. 5315, § 1, 7-23-2019)

Figure 2: County Safety Element Community Noise Exposure (reprinted)



**Figure 3: Game Bird GB-1 Handbook Section 5.7 (reprinted)**

<b>5.7 Noise</b>	
To comply with FAA regulations, the noise level has been determined in accordance with Part 36, Subpart F and Appendix G, Amdt. 36-30.	
the 14CFR 36 Noise Limit for 2200lbs MTOW is 78.7 dB(A).	
The noise level of the GB1 is 75.0 dB(A).	
No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into, or out of any airport.	
Page date: April 8 <sup>th</sup> , 2020	5-14

**Table 1: GB-1 Aircraft calculated noise levels**

<b>Measurement Location</b>	<b>Sound Pressure Level (dBA rel 20 <math>\mu</math>Pa)</b>
<b>50 feet directly below aircraft (per 14CFR 36) on airstrip centerline</b>	75 dBA (matching the GB-1 handbook noise specification)
<b>50 feet from aircraft centerline (i.e., 70.7 feet from aircraft)</b>	73.3 dBA
<b>200 feet from aircraft centerline</b>	67.7 dBA

**LEGEND**

- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- 3" PVC RISER, CAPPED
- 3" PVC RISER, WITH VALVE
- WATER METER
- GAS VALVE
- PHONE PEDESTAL, BOX, VAULT, OR LOCKER
- PHONE MANHOLE
- TRAFFIC PEDESTAL, BOX, VAULT, OR LOCKER
- TRAFFIC SIGNAL POLE
- TV PEDESTAL, BOX, VAULT, OR LOCKER
- UTILITY BOX, VAULT, OR LOCKER
- MAIL BOX
- STORM DRAIN MANHOLE
- DRAIN INLET
- SEWER MANHOLE
- CLEANOUT
- SIGN
- BILLBOARD / SIGNAGE
- BOLLARD
- LAMP POST
- ELECTRIC PEDESTAL, BOX, VAULT, OR LOCKER
- PVC PIPE UTILITY STUB / RISER
- OVERHEAD UTILITY LINE
- GREEN PAINT/FLAG: POSSIBLE SEWER/STORM UTILITY
- BLUE PAINT/FLAG: POSSIBLE WATER UTILITY
- YELLOW PAINT/FLAG: POSSIBLE GAS UTILITY
- RED PAINT/FLAG: POSSIBLE ELECTRIC UTILITY
- ORANGE PAINT/FLAG: POSSIBLE PHONE UTILITY
- ORANGE PAINT/FLAG: POSSIBLE TV UTILITY
- WALL (BLOCK, STACKED, MASONRY, ROCK, ETC)
- FENCES
- EDGE OF PAVEMENT
- CONCRETE
- PAVERS, TILE OR BRICK
- UTILITY POLE (SEE GENERAL NOTE 2)
- POWER POLE (SEE GENERAL NOTE 2)
- JOINT POLE (SEE GENERAL NOTE 2)
- GUY WIRE
- BENCHMARK
- LO • LIVE OAK (SEE GENERAL NOTE 1)
- WO • WHITE OAK (SEE GENERAL NOTE 1)
- PI • PINE (SEE GENERAL NOTE 1)
- TR • TREE (SEE GENERAL NOTE 1)
- FF FINISH FLOOR
- FS FINISH SURFACE
- CMP CORRUGATED METAL PIPE
- HDPE PLASTIC PIPE
- G:xxxx'+ GROUND SPOT GRADE
- AC:xxxx'+ ASPHALT SPOT GRADE
- TC:xxxx'+ TOP OF CURB SPOT GRADE
- CONC:xxxx'+ CONCRETE SPOT GRADE
- TW:xxxx'+ TOP OF WALL SPOT GRADE

**AERIAL TOPOGRAPHY**

THIS MAP REPRESENTS A TOPOGRAPHIC SURVEY, PERFORMED BY DAKOS LAND SURVEYS IN OCTOBER 2023, OF SITE CONDITIONS IN AND AROUND AN EXISTING TURF AIR STRIP. SAID SURVEY IS SHOWN HEREON IN COLOR WITH A COLOR ORTHOPHOTO OVERLAY.

AN AERIAL TOPOGRAPHIC SURVEY AND BOUNDARY RETRACEMENT SURVEY PERFORMED BY OTHERS IN JANUARY 2023 IS SHOWN HEREON IN FADED GRAY AND IS INCLUDED FOR GENERAL INFORMATION.

**GENERAL NOTES:**

- 1) TREE SIZES AND SPECIES ARE APPROXIMATE AND SHOULD BE VERIFIED AND/OR DETERMINED BY A CERTIFIED ARBORIST.
- 2) UTILITIES SHOWN ON THIS MAP ARE ON BASED VISIBLE IMPROVEMENTS AND CLEARLY DEFINED PAINT MARKINGS MADE BY OTHERS EXISTING AT THE TIME OF THE FIELD SURVEY. APPARENT TYPES AND SIZES OF UTILITIES MAY BE INDICATED BUT MUST BE VERIFIED BY THE APPROPRIATE UTILITY COMPANY. OTHER UTILITY SERVICES MAY EXIST THAT ARE NOT SHOWN.
- 3) EASEMENTS, OFFERS, LICENSES, RIGHTS, RESTRICTIONS AND/OR INTERESTS AFFECTING THIS PROPERTY MAY EXIST BUT MAY NOT BE SHOWN ON THIS MAP.
- 4) PARCEL LINES SHOWN HEREON DO NOT INDICATE OR IMPLY PARCEL LEGALITY. ADDITIONAL TITLE RESEARCH AND CERTIFICATE OF COMPLIANCE APPLICATION TO THE LOCAL GOVERNING AGENCY MAY BE REQUIRED FOR DETERMINATION.

**BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS SURVEY IS GRID NORTH, CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE 4, BASED ON SURVEYED TIES TO THE TOPOGRAPHIC SURVEY BY OTHERS DATED JANUARY 24, 2023.

**BASIS OF ELEVATIONS**

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS BASED ON SURVEYED TIES TO THE TOPOGRAPHIC SURVEY BY OTHERS DATED JANUARY 24, 2023. THE LOCAL REFERENCE POINT IS THE SPIKE ON THE WEST SIDE OF THE RUNWAY HAVING AN ELEVATION OF 990.40' SHOWN HEREON.

**TOPOGRAPHIC SURVEY**

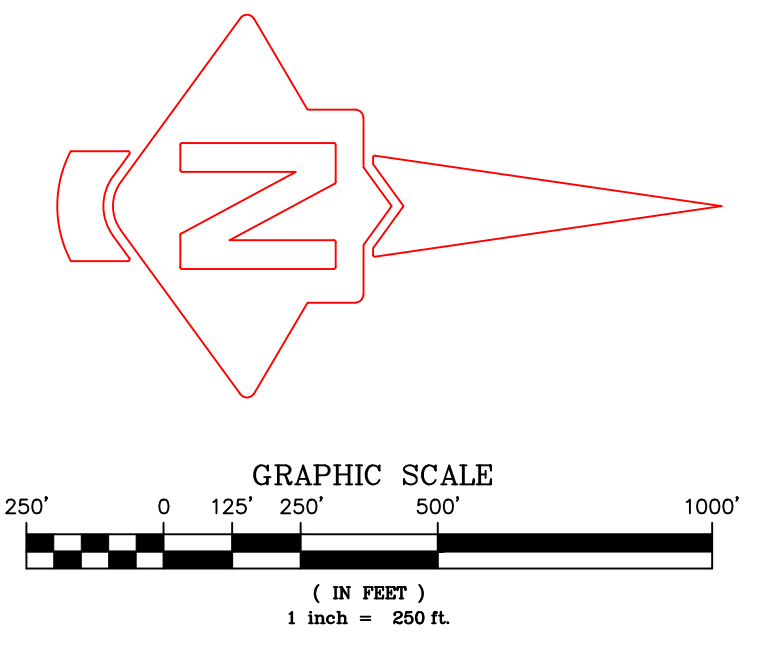
Site: Lockwood-Jolon Rd & Cross Rd

Requested By: NORCAL Lockwood, LLC

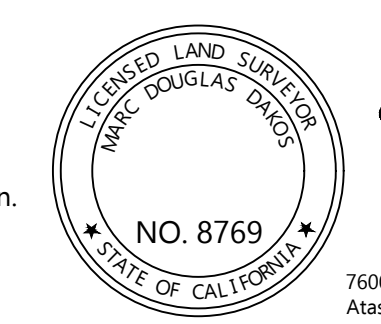
PORTIONS SECTION 5, T23S R8E, MOUNT DIABLO MERIDIAN, COUNTY OF MONTEREY, STATE OF CALIFORNIA

APN: 423-041-004      Drafter: Project: Job: Sheet:  
DATE: OCTOBER 31, 2023; 12-05-23      JD      23-110      23-110      1 of 1

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This map correctly represents a topographic survey performed by me or under my direction.  
*Marc Dakos* 11-07-23  
Marc D. Dakos, LS 8769 (Date)



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