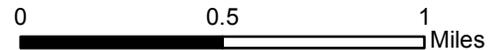


**File No. S15-0005**  
**Location Map**

Comroe Saluki Kennel  
Special Use Permit



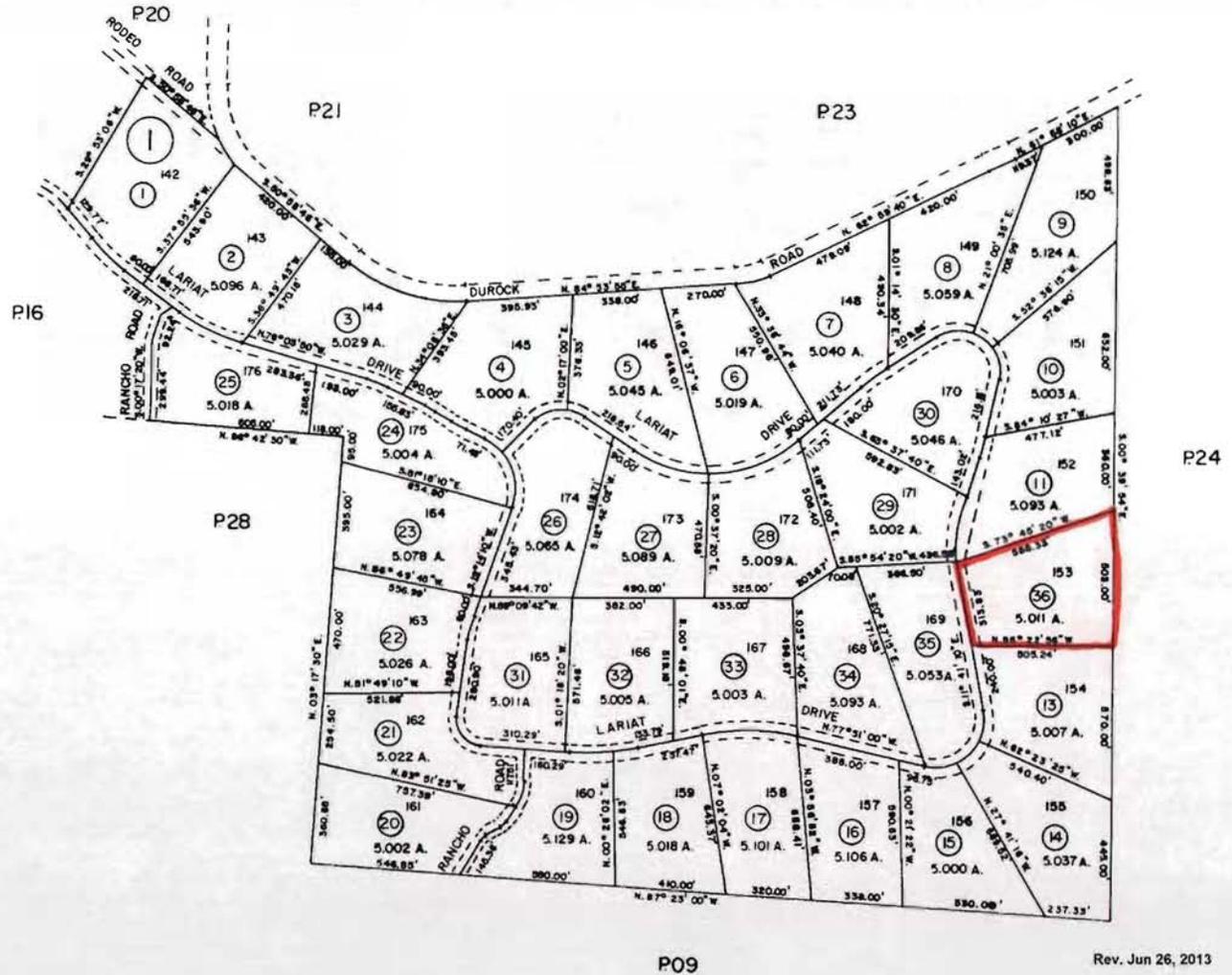
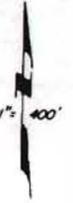
**Exhibit A**

15 FEB 24 PM 3:26

RECEIVED  
PLANNING DEPARTMENT

POR. SECS. 3, 9, 10, 11, 15, & 16, T. 9N., R. 9E., M.D.M.  
CAMERON PARK UNIT NO. 3  
C - 38

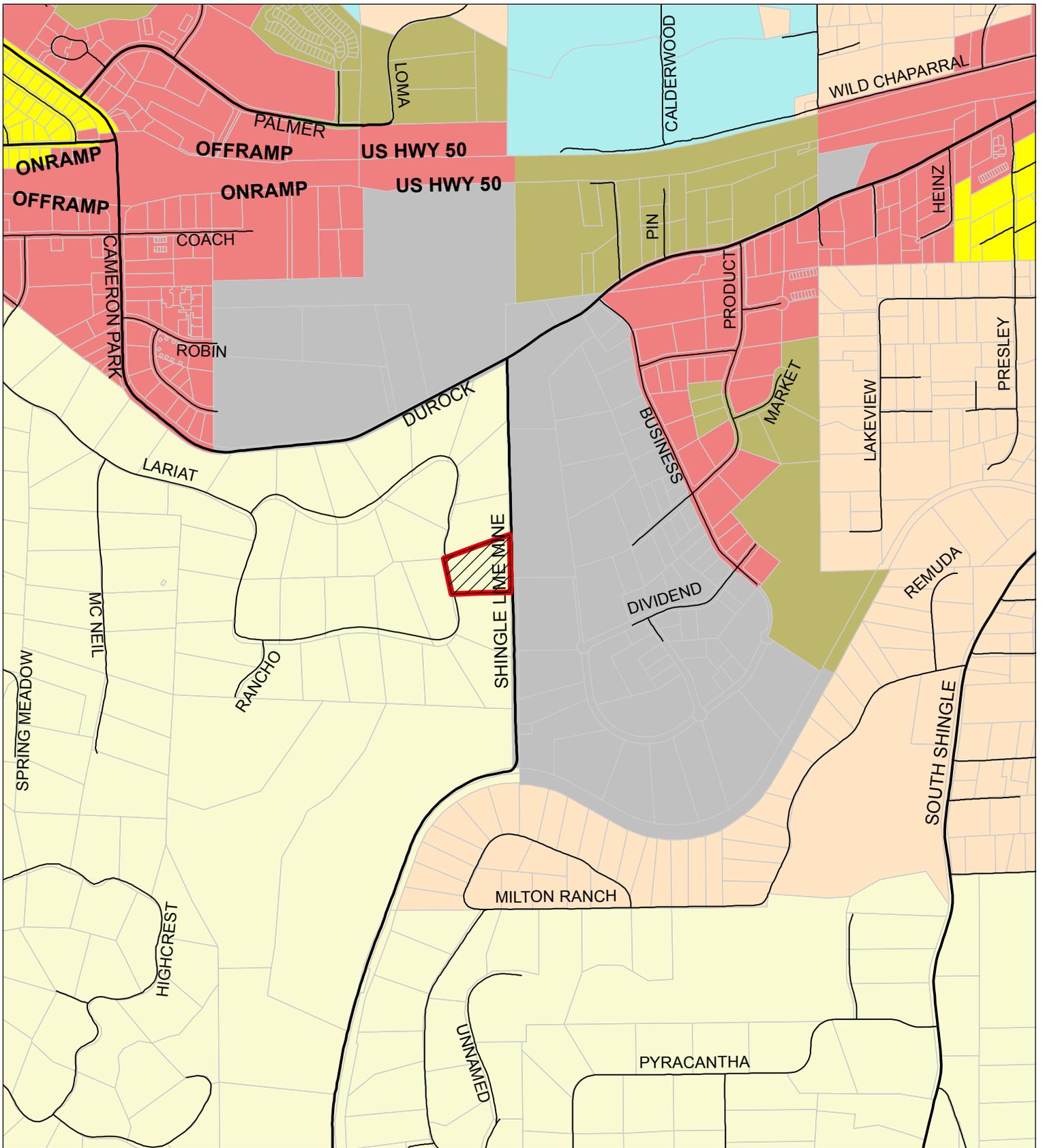
109:17



THIS MAP IS NOT A SURVEY, It is prepared by the El Dorado Co. Assessor's office for assessment purposes only.

NOTE - Assessor's Block Numbers Shown in Ellipses  
Assessor's Parcel Numbers Shown in Circles

Rev. Jun 26, 2013  
Assessor's Map Bk. 109 - Pg. 17  
County of El Dorado, California

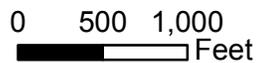


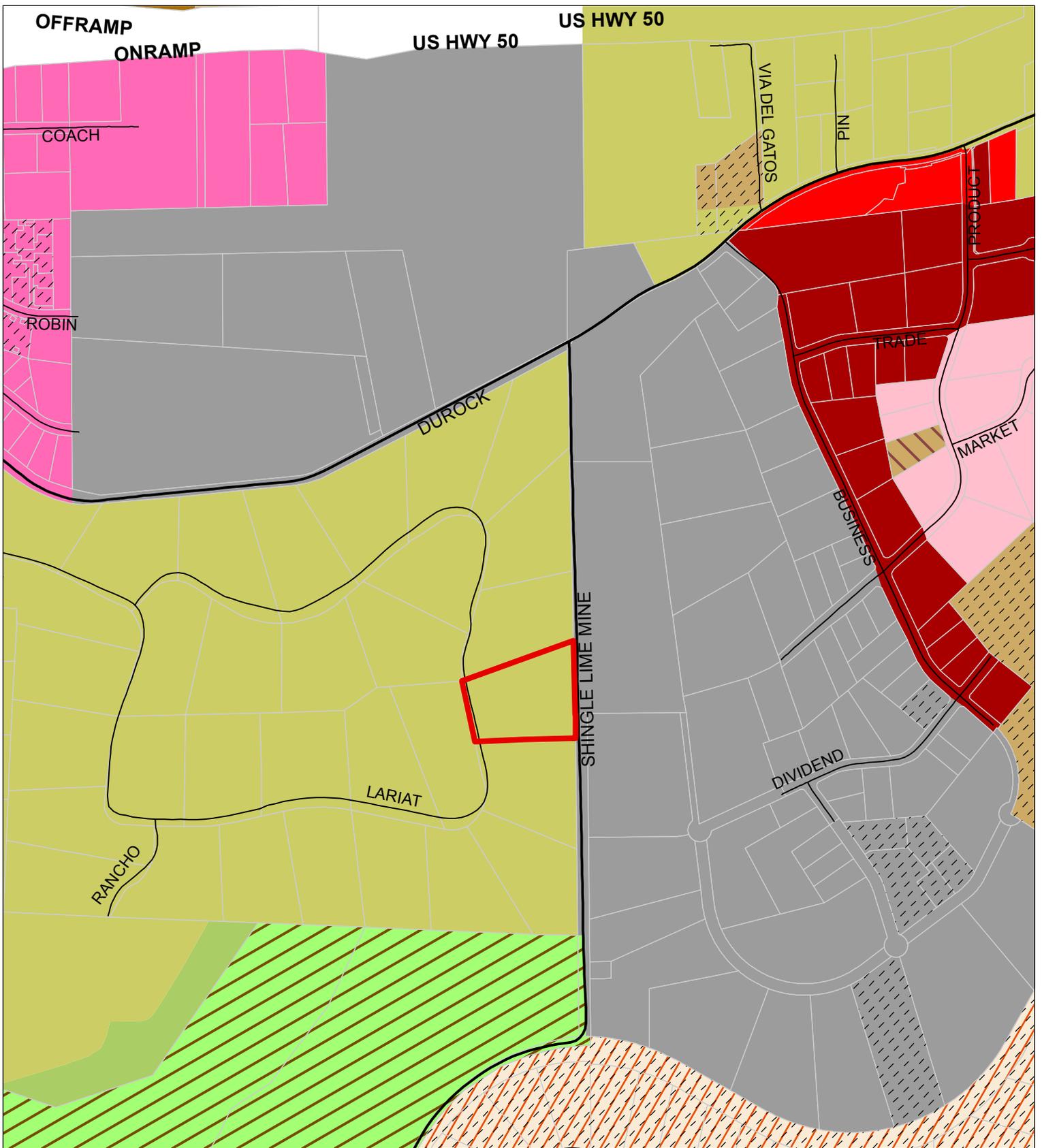
**File No. S15-0005**  
**Land Use Map**

Comroe Saluki Kennel  
 Special Use Permit

- Site
- Commercial
- High Density Residential
- Industrial

- Low Density Residential
- Medium Density Residential
- Multi-Family Residential
- Open Space

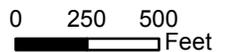




**File No. S15-0005  
Zoning Map**

Comroe Saluki Kennel  
Special Use Permit

- |                                |                                 |
|--------------------------------|---------------------------------|
| Site                           | Tourist Residential             |
| Planned Development Overlay    | Limited Multifamily Residential |
| Planned Agricultural - 20 ac.  | Multifamily Residential         |
| Professional Office Commercial | Single-Family Two-Acre          |
| Planned Commercial             | Estate Residential Five-Acre    |
| Commercial                     | Estate Residential Ten-Acre     |
| General Commercial             | Transportation Corridor         |
| Industrial                     |                                 |

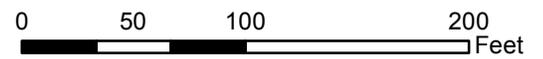




**File No. S15-0005**  
**Aerial Map**

Comroe Saluki Kennel  
Special Use Permit

 Site

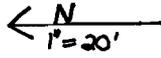


**Exhibit E**



Catherine and Charles Comroe  
3640 Lariat Dr.  
Cameron Park, CA 95682

# Barnett Business Park Zoned Light Industrial



APN# 109-171-36-100

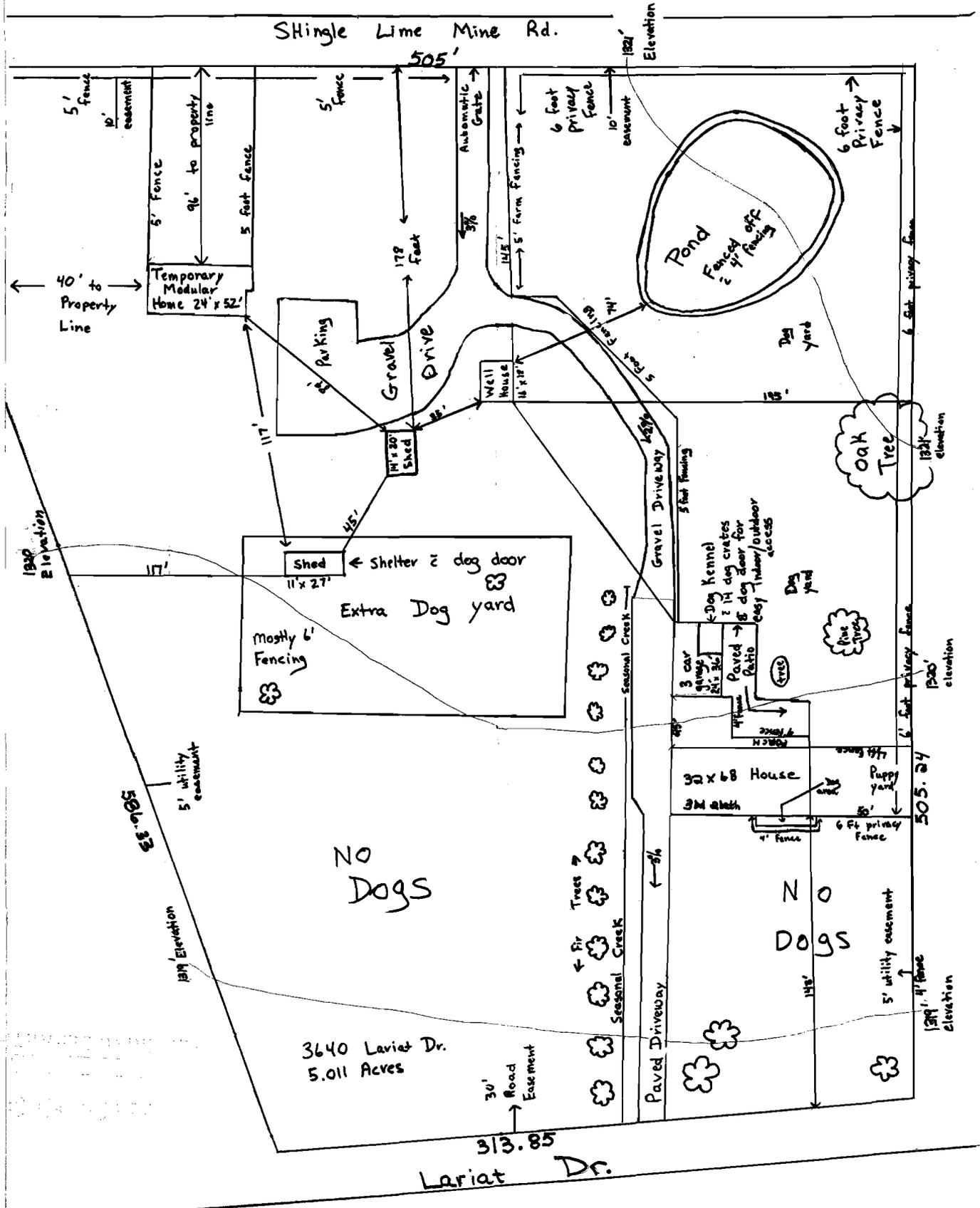
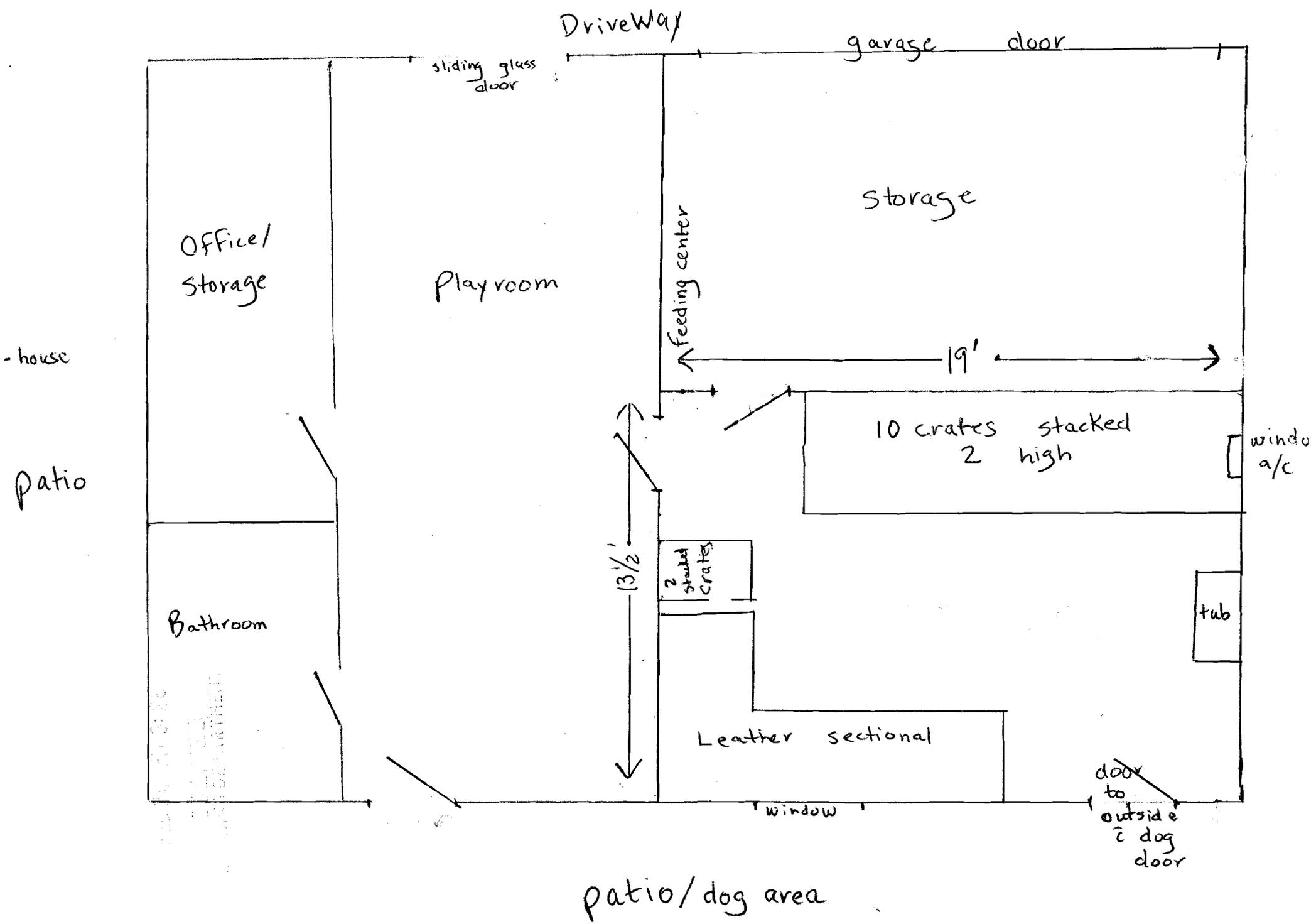


Exhibit F



# Comroe Dog Facilities Environmental Noise Assessment

El Dorado County, California

June 7, 2016  
jcb Project # 2015-114



Prepared for:

Ms. Catherine Comroe  
3640 Lariat Drive  
Cameron Park, CA 95682



Prepared by:

**j.c. brennan & associates, Inc.**



Jim Brennan, INCE  
President  
Member, Institute of Noise Control Engineering (INCE)

## INTRODUCTION

The Catherine Comroe residence is located at 3640 Lariat Drive in El Dorado County, California. The residence generally houses up to 12 Saluki dogs at any given time. The existing facility includes a kennel and a large play area on the east side of the main residence. The dogs are potentially outside between the hours of 7:00 a.m. and 9:00 p.m. The dogs are housed in a fully enclosed and air conditioned building with all doors and windows in the closed position. The dogs are put in the building every evening by 9:00 p.m.

Due to the number of dogs that Ms. Comroe keeps on her property, the El Dorado County Planning Department has requested that a noise study is prepared to determine if the facility creates noise levels which may exceed the El Dorado County General Plan Noise Element noise level criteria. Figure 1 shows the project site. Figure 2 shows the project site plan.

## Fundamentals of Acoustics

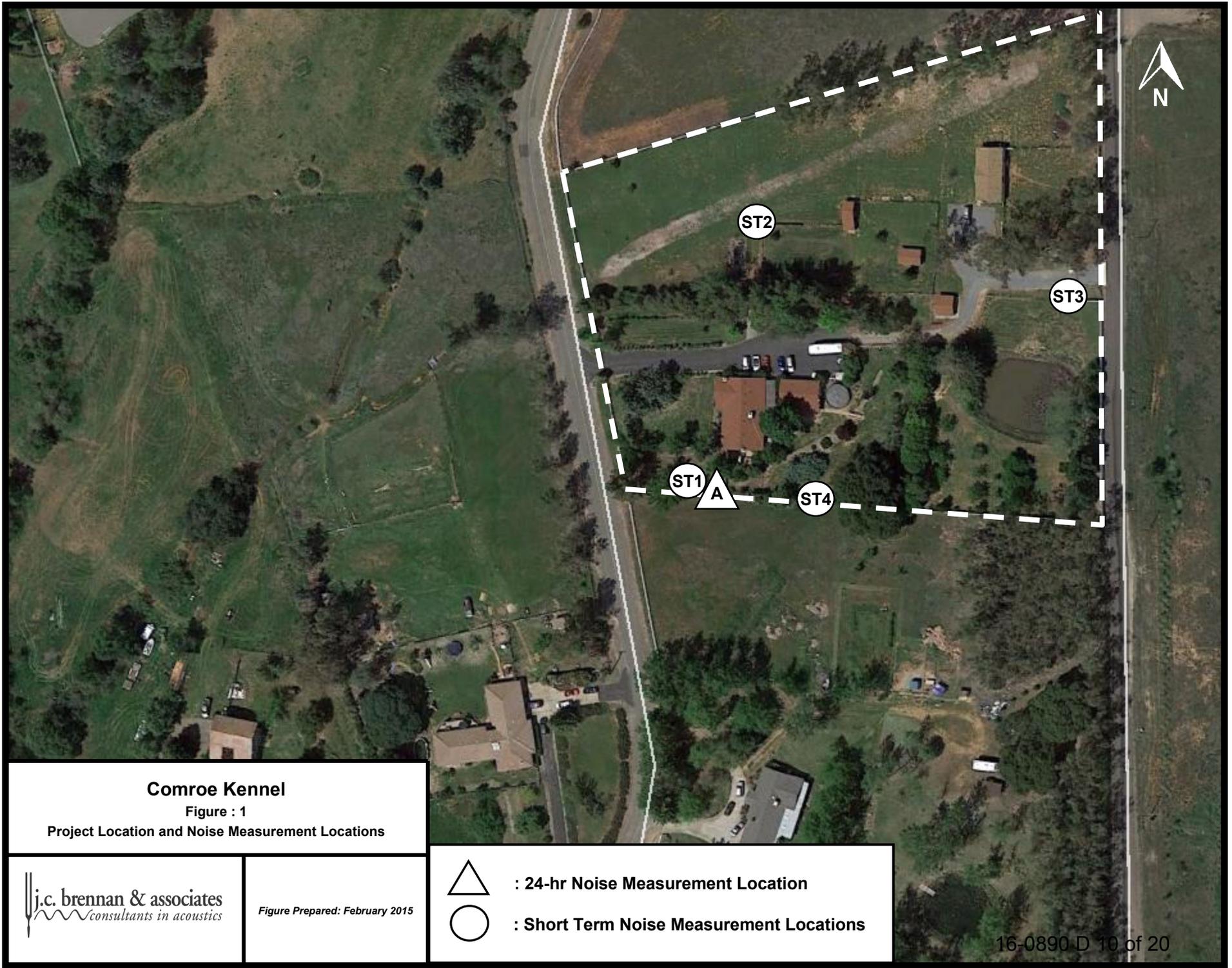
Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective. Often, someone's music is described as noise by another.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB<sup>1</sup>. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

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<sup>1</sup> For an explanation of these terms, see Appendix A: "Acoustical Terminology"



**Comroe Kennel**

Figure : 1

Project Location and Noise Measurement Locations

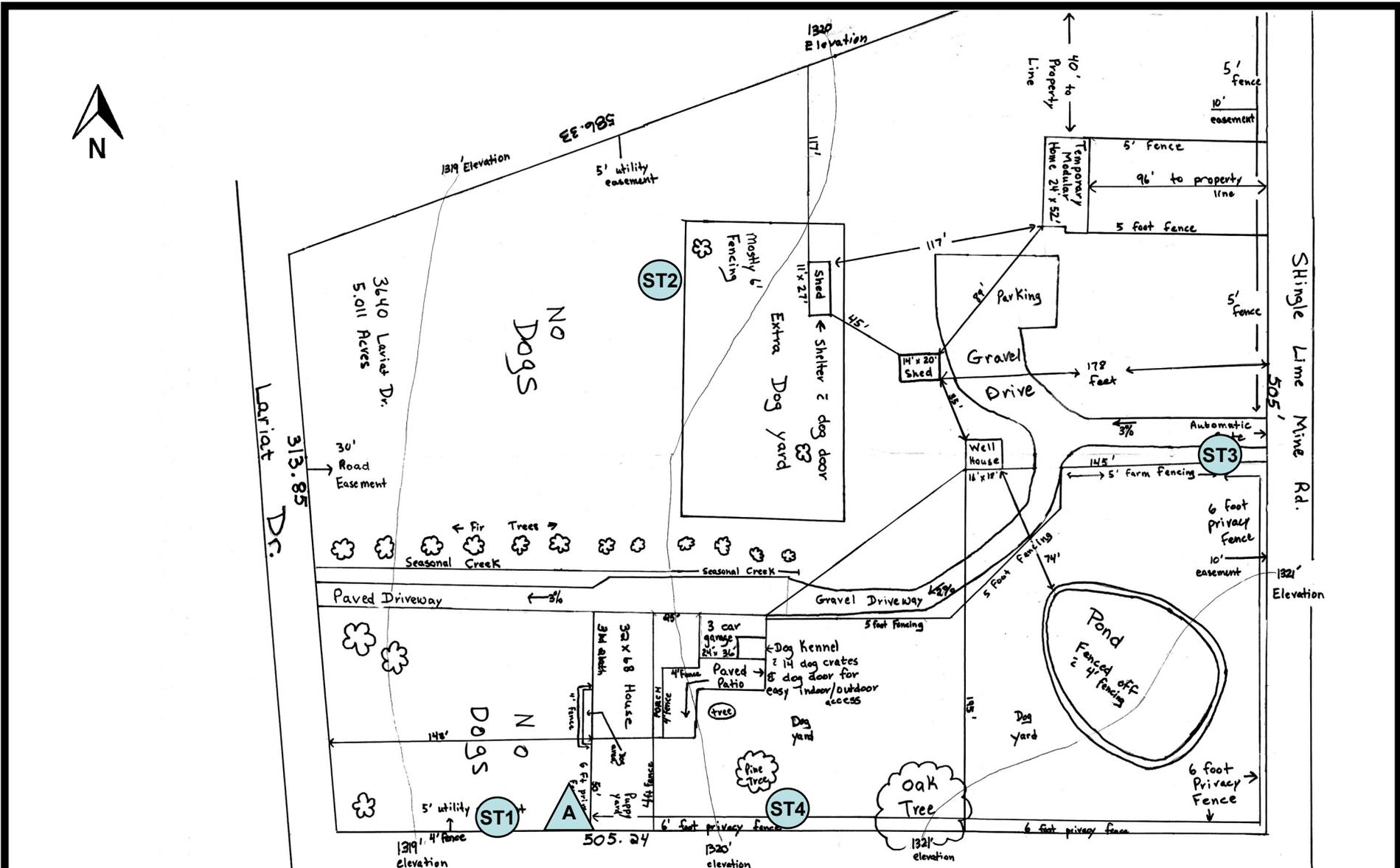


Figure Prepared: February 2015



: 24-hr Noise Measurement Location

: Short Term Noise Measurement Locations



**Comroe Kennel**

Figure : 2

Site Plan and Noise Measurement Locations



Figure Prepared: February 2015

-  : 24-hr Noise Measurement Location
-  : Short Term Noise Measurement Locations

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels.

There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The day/night average level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the maximum noise levels associated with common noise sources. Appendix A provides a summary of acoustical terms used in this report.

### **Effects of Noise on People**

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling
- 

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise

level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

<b>Table 1 Typical Noise Levels</b>		
<b>Common Outdoor Activities</b>	<b>Noise Level (dBA)</b>	<b>Common Indoor Activities</b>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. October 1998.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;

- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles, or in this case the barking dogs – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

### CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

The El Dorado County General Plan Noise Element contains performance standards for non-transportation noise sources affecting adjacent noise-sensitive land uses. Table 1 shows the El Dorado County noise level performance standards that may be applied to this project. These standards are contained in Table 6-2 of the El Dorado County General Plan and are shown in Table 2.

The noise standards in Table 2 are divided into daytime hours (7 am to 7 pm), evening hours (7 pm to 10 pm), and nighttime hours (10 pm to 7 am).

<b>Table 2 (Table 6-2 of the General Plan Noise Element) Noise Level Performance Protection Standards For Noise Sensitive Land Uses Affected by Non-Transportation Noise Sources</b>						
Noise Level Descriptor	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
	Community	Rural	Community	Rural	Community	Rural
Hourly $L_{eq}$ , dB	55	50	50	45	45	40
$L_{max}$ , dB	70	60	60	55	55	50
<ul style="list-style-type: none"> <li>• Each of the noise levels specified above shall be lowered by five dB for simple noises, noises consisting primarily of speech or music, or for recurring impulsive noises.</li> <li>• County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.</li> <li>• In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural areas the exterior noise level shall be applied at a point 100 feet away from the residence.</li> </ul>						
<i>Source: Table 6-2 of the El Dorado County General Plan Noise Element.</i>						

Based upon Table 1, and discussions with the County Planning staff, the applicable standards are those which are designated "Rural". Therefore, the evening and nighttime standards are as follows:

Daytime (7:00 a.m. - 7:00 p.m.): 50 dB Leq, 60 dB Lmax  
 Evening (7:00 p.m. – 10:00 p.m.): 45 dB Leq, 55 dB Lmax  
 Night (10:00 p.m. – 7:00 a.m.): 40 dB Leq, 50 dB Lmax

## EXISTING BACKGROUND AND DOG PLAY AREA NOISE LEVELS

### Short-term Noise Level Measurements and Observations

j.c. brennan & associates, Inc. conducted short-term noise level measurements and observations of the dogs in the play area on February 16, 2015. The short-term noise level measurements were conducted while eight dogs were in the play area at four separate locations, between the hours of 3:00 p.m. and 5:00 p.m. During this time, the dogs were active and played with each other as well as retrieved balls. The noise measurement locations are shown on Figure 1. The noise measurements and observations indicated that the dogs were very calm, and did not bark when the nearest neighbor's dogs were barking. The measured noise levels were in the low to mid 40 dBA Leq range and maximum noise levels ranged between 55 dBA and 69 dBA. The primary noise source was traffic on Highway 50. Maximum noise levels were due primarily to traffic and the neighbor's barking dogs. One of the reasons that the neighbor's dogs were barking was due to the fact that they had views of people passing by, and the Comroe dogs were located behind a 6-foot tall vinyl fence and did not have a view of passers-by. Table 3 shows the results of the short-term noise level measurements which were conducted at the Comroe location.

Site	Location	Time	Duration	Noise Levels		Notes
				Leq	Lmax	
1	SW Corner of Dog Yard	3:20 pm	20 min.	44.2 dB	59.1 dB	Hwy 50 - Primary Source at 40 dB Leq. Maximums from Neighbor Dogs - 59 dB
		3:45 pm	20 min	44.2 dB	54.3 dB	Hwy - Primary Source at 50 - 40 dB Leq. Maximum from Comroe Dogs - 50 dB
2	North Center of Dog Yard	3:55 pm	10 min	46.6 dB	60.9 dB	Hwy 50 - Primary Source at 45 dB Leq. Maximum from Aircraft Overflight - 60 dB
3	East Side	4:10 pm	10 min	47.9 dB	69.4 dB	Hwy 50 - Primary Noise Source at 45 dB Leq. Maximum level from Car on Shingle Lime Mine Rd Passby at 69 dB.
4	South Center of Property Line	4:25 pm	15 min	44.2 dB	57.5 dB	Hwy 50 - 41 dB Leq. Maximum noise level of 57 dB from Car on Lariat Drive.

## Continuous 24-Hour Noise Level Data

As a means of quantifying overall background noise levels in the vicinity of the project site, j.c. brennan & associates, Inc., staff conducted continuous hourly noise level measurements at the west edge of the outdoor play area, on February 16<sup>th</sup> and 17<sup>th</sup>, 2015. The noise monitoring site was located so that there was a clear view of the outdoor play area, as well as Lariat Road and the nearest neighbor to the southwest. During the noise measurements, there were 8 dogs at the existing facility (See Figure 1 for the noise measurement location).

Equipment used for the noise measurements included Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters. The meters were calibrated before and after use with an LDL CAL200 acoustical calibrator to ensure the accuracy of the measurements.

A summary of the continuous noise level measurement results is provided in Table 4. Figure 3 graphically shows the results of the 24-hour noise level measurements.

<p align="center"><b>Table 4</b>  <b>Summary of Continuous Measured Noise Levels at the Project Site</b>  <b>February 16-17, 2015</b></p>					
Average Daytime Noise Levels, (7:00 am – 7:00 pm)		Average Evening Noise Levels, (7:00 pm – 10:00 pm)		Average Nighttime Noise Levels, (10:00 pm – 7:00 am)	
Leq	Lmax	Leq	Lmax	Leq	Lmax
Site A					
49 dB	67 dB	46 dB	57 dB	44 dB	54 dB
Source: j.c. brennan & associates, Inc. - 2015					

The measured continuous hourly noise levels at Site A include all noise sources, including those associated with the Comroe Dog Kennel, Highway 50, local roadway traffic and neighborhood dogs. Based upon the observations and short-term noise level measurements previously described, the background hourly Leq noise levels are dominated by other noise sources in the vicinity of the project. Therefore, it is a conservative estimate to assume that the hourly Leq values due to the Comroe Kennel are a minimum of 3 dB less than the measured noise levels. In fact, the measured nighttime noise levels do not include any noise associated with the Kennel, since they are located inside of a building during those hours. In addition, the observations at the site indicate that maximum noise levels are due to other noise sources such as aircraft overflights, roadway traffic and neighborhood dogs.

Figure 3 indicates that noise levels increase considerably at during the 6:00 a.m. to 8:00 a.m. hours, and continue until the 7:00 p.m. hour. This is when traffic is heaviest along U.S. 50. Based upon the noise level measurements and the field observations, the Comroe Dog Kennel will result in hourly noise levels of less than 43 dB Leq, and 50 dB Lmax. The Comroe Dog

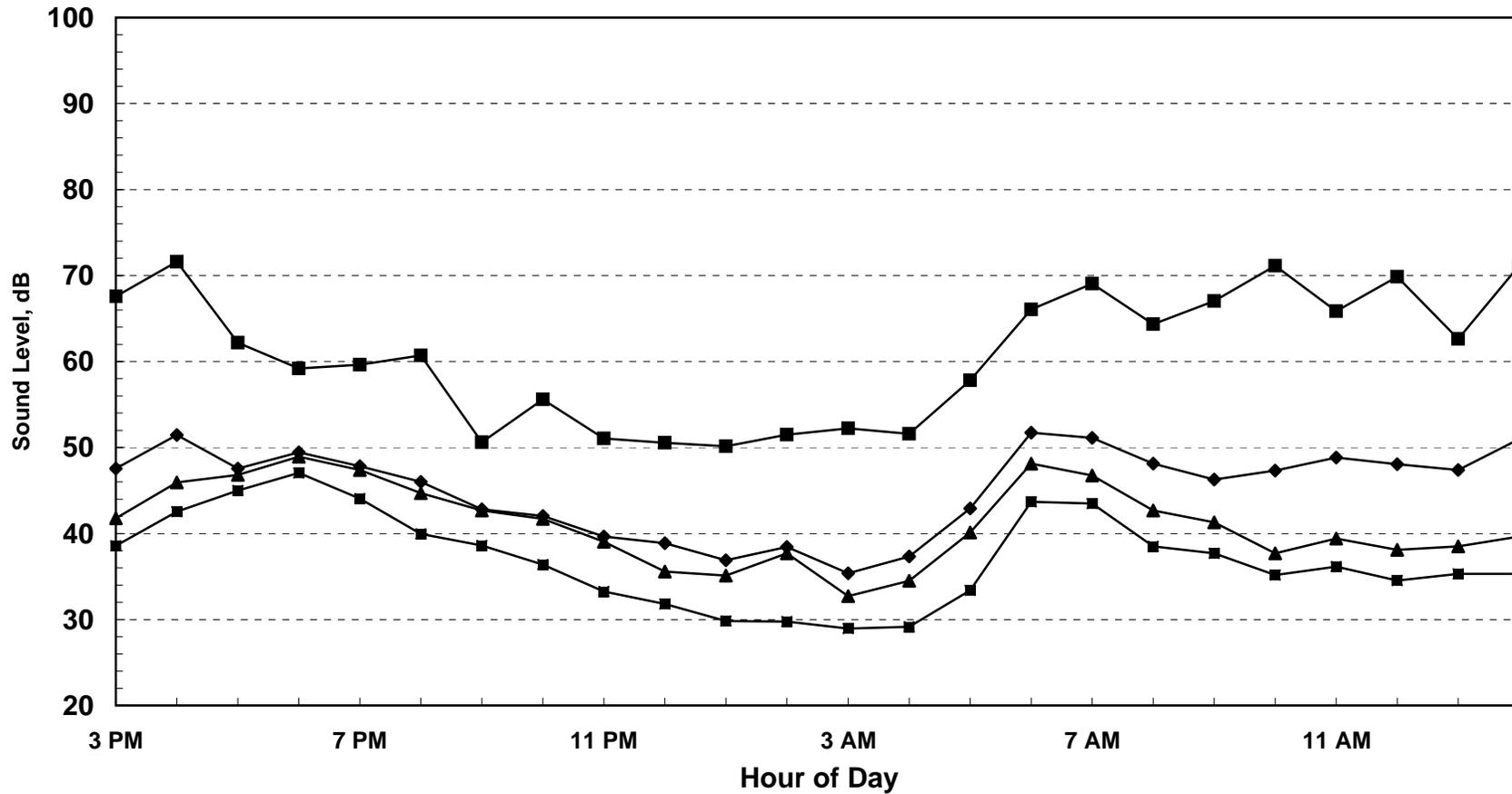
Kennel will comply with the El Dorado County General Plan Noise Element daytime and evening noise level criteria. The dogs are housed during the nighttime hours and are not expected to be a source of noise in the project area.

## **CONCLUSIONS AND MITIGATION MEASURES**

Based upon the noise measurement data and the analysis of noise levels associated with the existing kennel facility, the following conclusions have been determined.

- 1. Existing noise levels associated with dogs comply with the El Dorado County General Plan Noise Element criteria;**
- 2. The total number of dogs should not exceed 12;**
- 3. Dogs should continue to be housed in the enclosed kennel between the hours of 9:00 p.m. and 7:00 a.m.;**

Figure 3  
 Comroe Kennel  
 Continuous 24 Hr Monitoring - Site A  
 Monday February 16 - Tuesday February 17, 2015



CNEL = 52 dB

◆ Leq    ■ Lmax    ▲ L50    ■ L90



## Appendix A

### Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>L(n)</b>	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one hour period.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.
<b>Impulsive</b>	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
<b>Simple Tone</b>	Any sound which can be judged as audible as a single pitch or set of single pitches.



**Appendix B**

**Comroe Kennel**

**Continuous 24 Hr Monitoring - Site A**

**Monday February 16 - Tuesday February 17, 2015**

Hour	Leq	Lmax	L50	L90
15:00	48	68	42	39
16:00	51	72	46	43
17:00	48	62	47	45
18:00	49	59	49	47
19:00	48	60	47	44
20:00	46	61	45	40
21:00	43	51	43	39
22:00	42	56	42	36
23:00	40	51	39	33
0:00	39	51	36	32
1:00	37	50	35	30
2:00	38	51	38	30
3:00	35	52	33	29
4:00	37	52	34	29
5:00	43	58	40	33
6:00	52	66	48	44
7:00	51	69	47	43
8:00	48	64	43	38
9:00	46	67	41	38
10:00	47	71	38	35
11:00	49	66	39	36
12:00	48	70	38	35
13:00	47	63	38	35
14:00	51	71	40	35

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	51	46	49	48	43	46	52	35	44
Lmax (Maximum)	72	59	67	61	51	57	66	50	54
L50 (Median)	49	38	42	47	43	45	48	33	38
L90 (Background)	47	35	39	44	39	41	44	29	33

Computed CNEL, dB	52
% Daytime Energy	74%
% Evening Energy	9%
% Nighttime Energy	17%