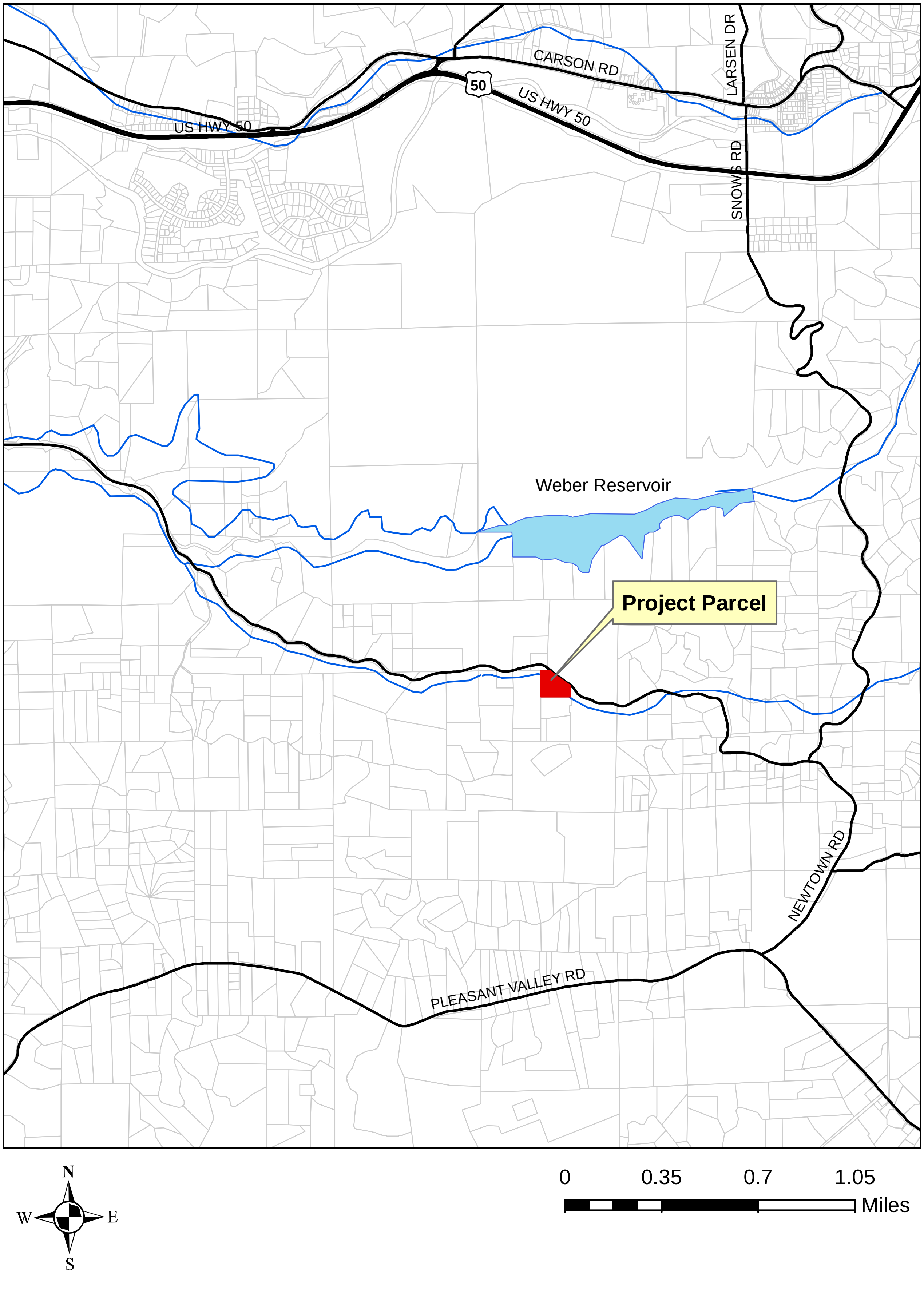
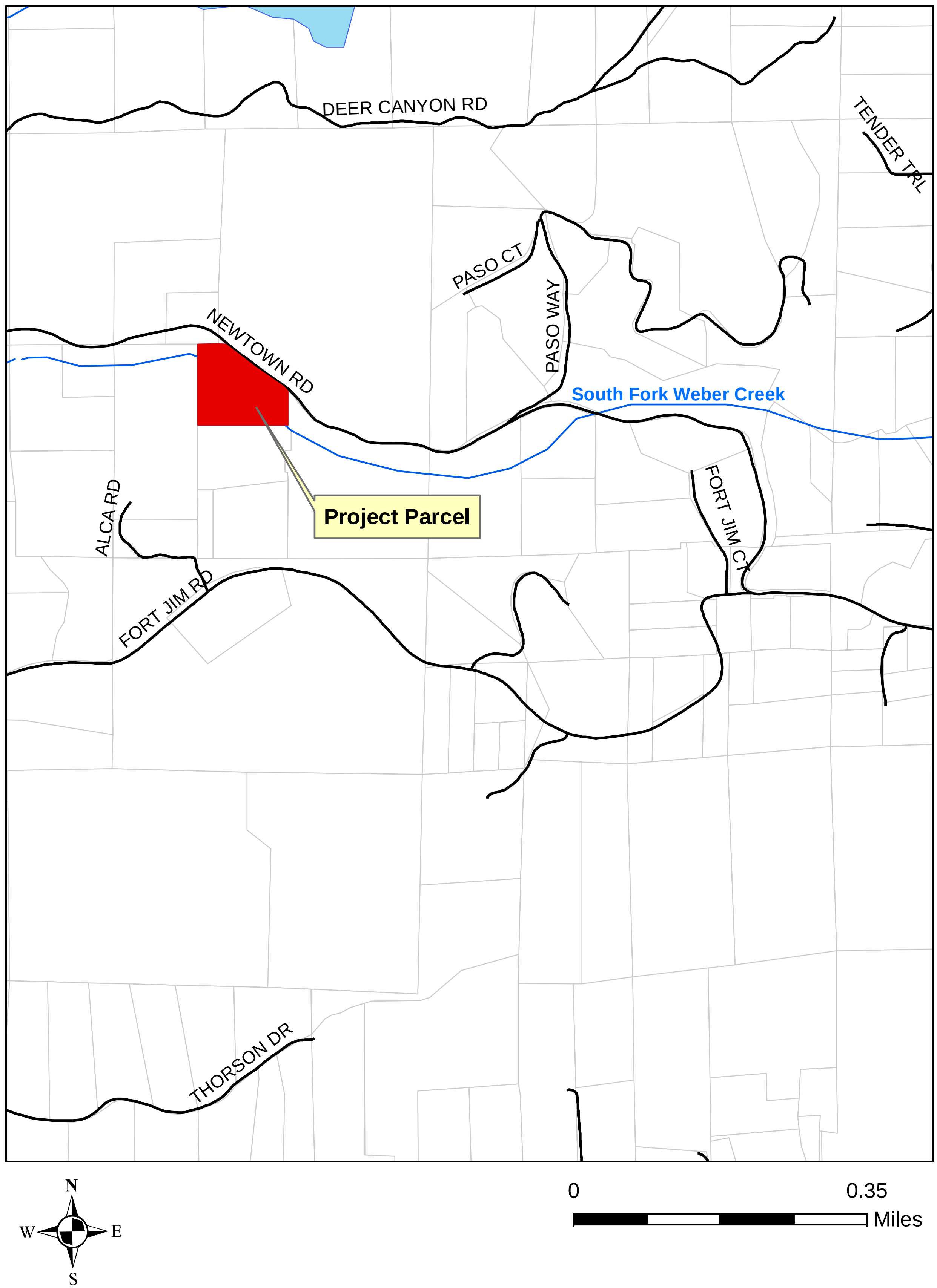
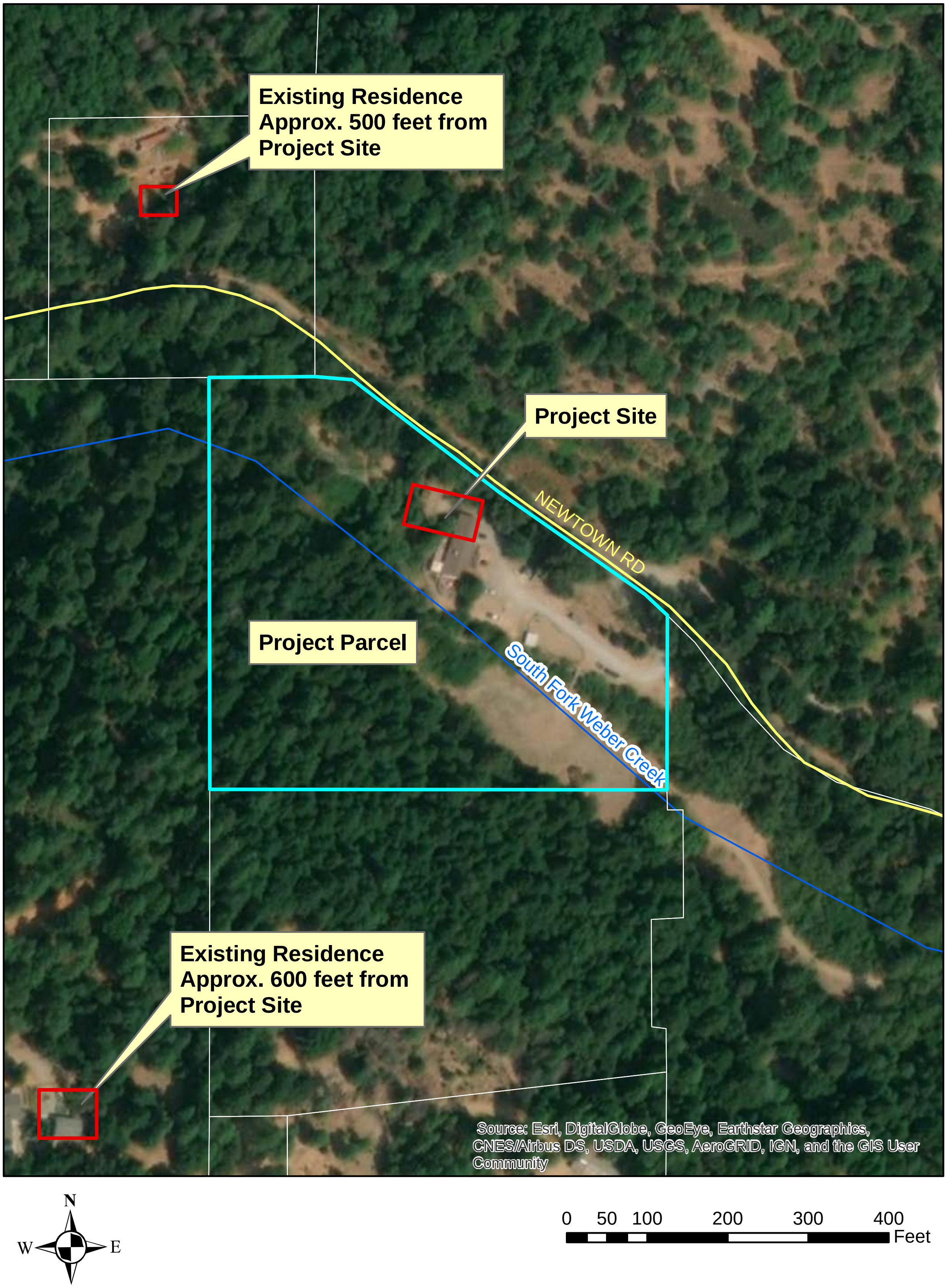
CUP19-0004
EXHIBIT A - VICINITY MAP



CUP19-0004
EXHIBIT B - LOCATION MAP



CUP19-0004
EXHIBIT C - SITE AERIAL PHOTO



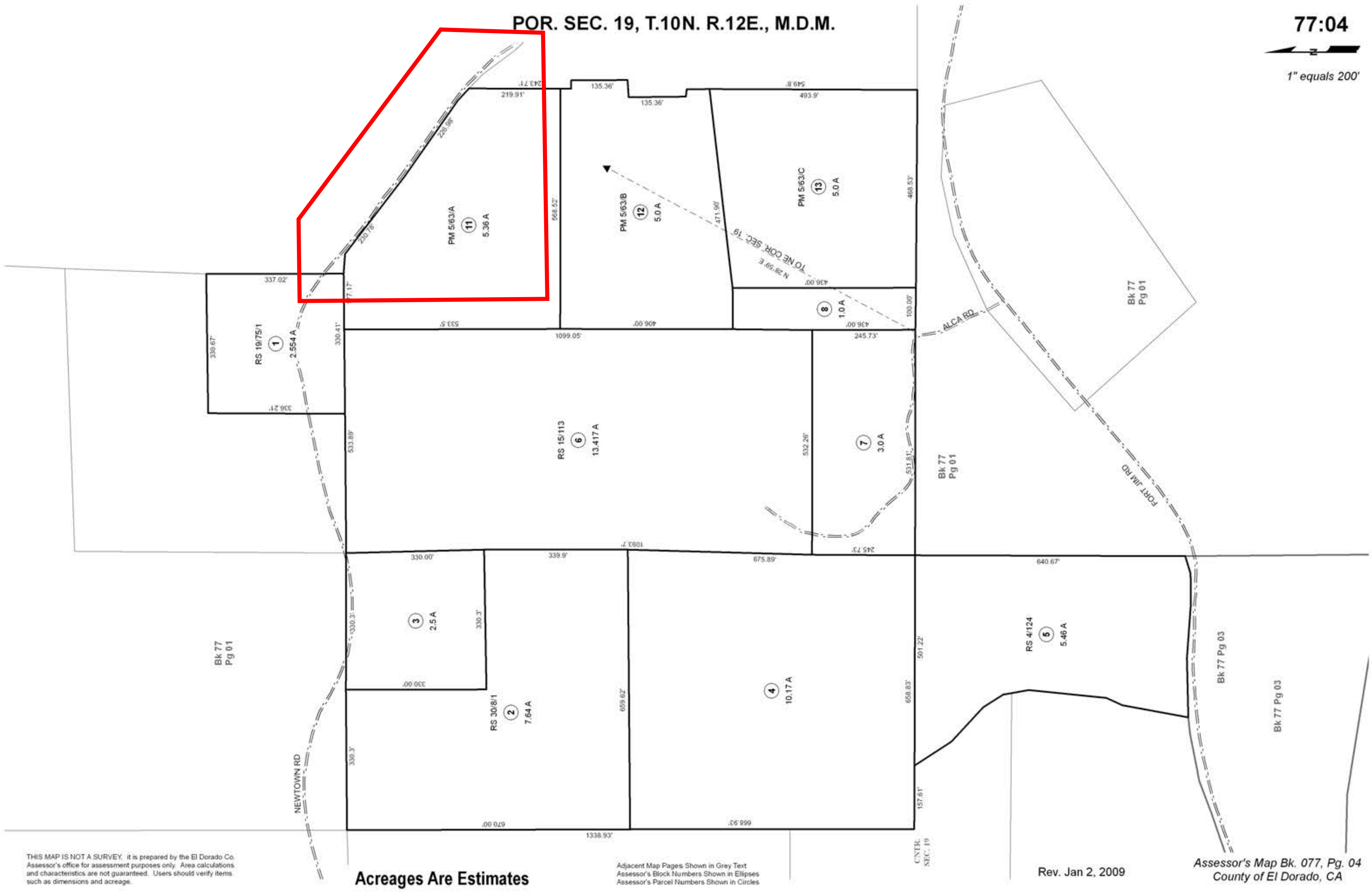
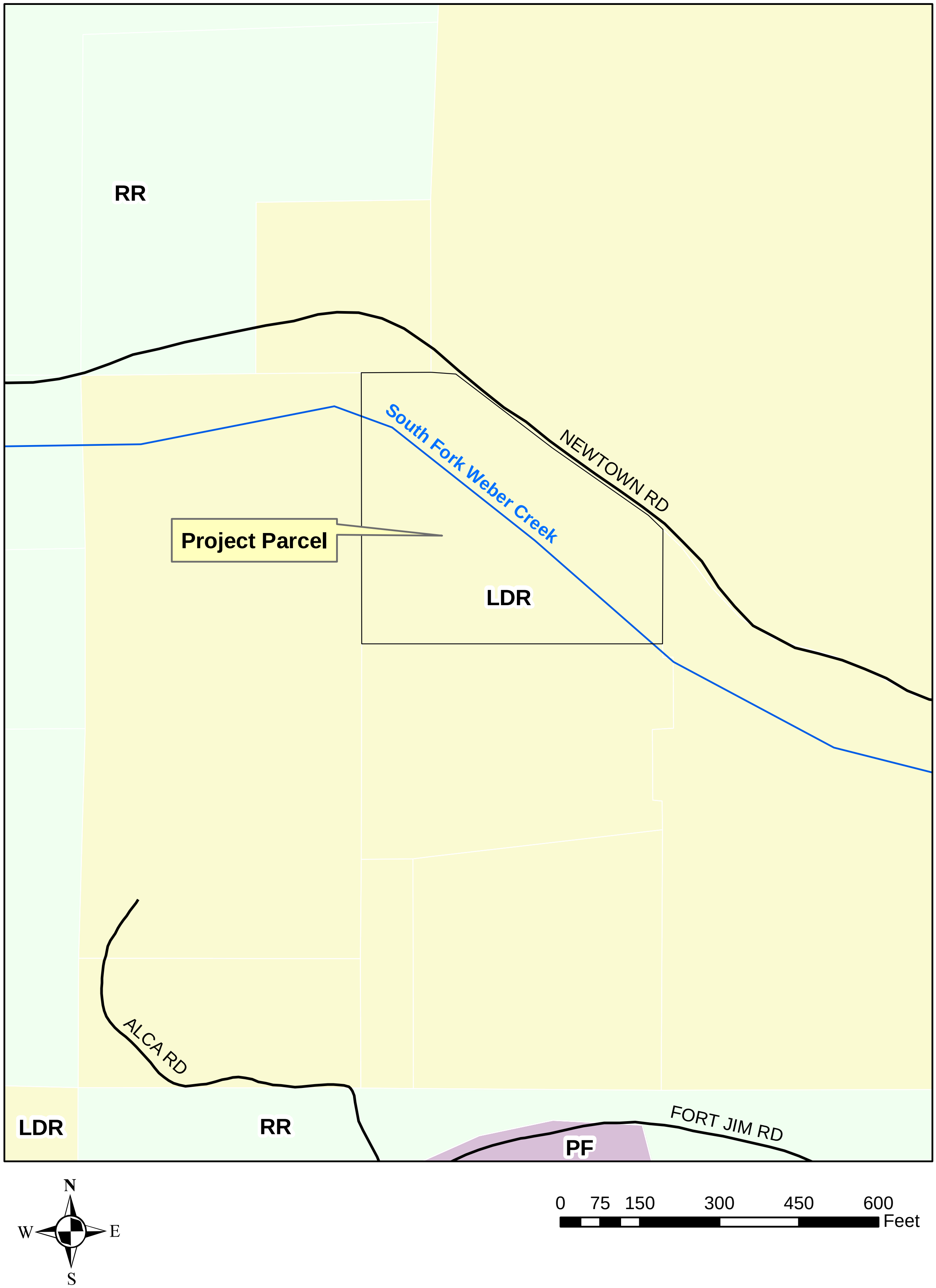


EXHIBIT D - ASSESSOR'S PARCEL PAGE

CUP19-0004
EXHIBIT E - GENERAL PLAN LAND USE MAP



CUP19-0004
EXHIBIT F - ZONING MAP

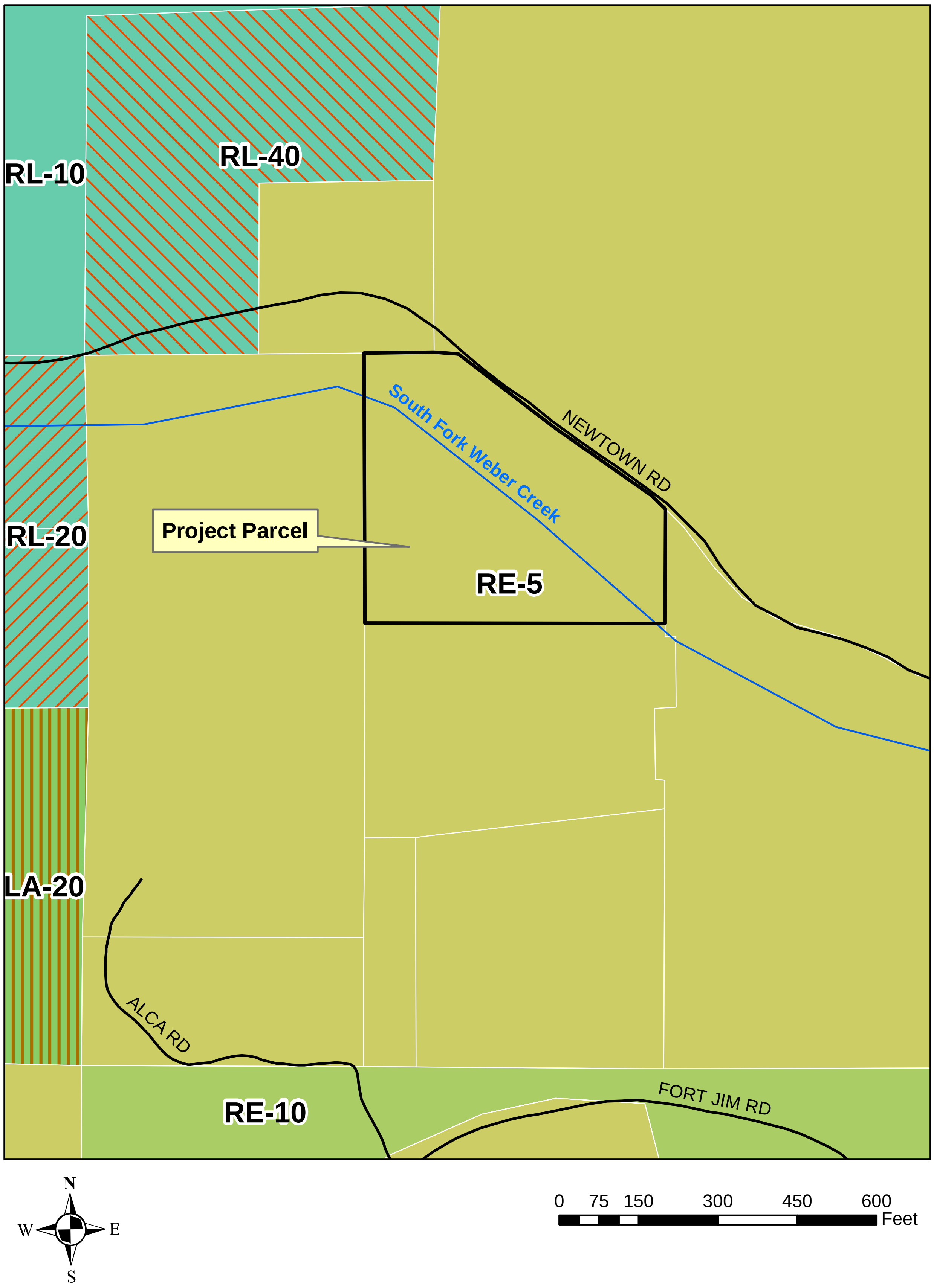


EXHIBIT G - SITE PLAN

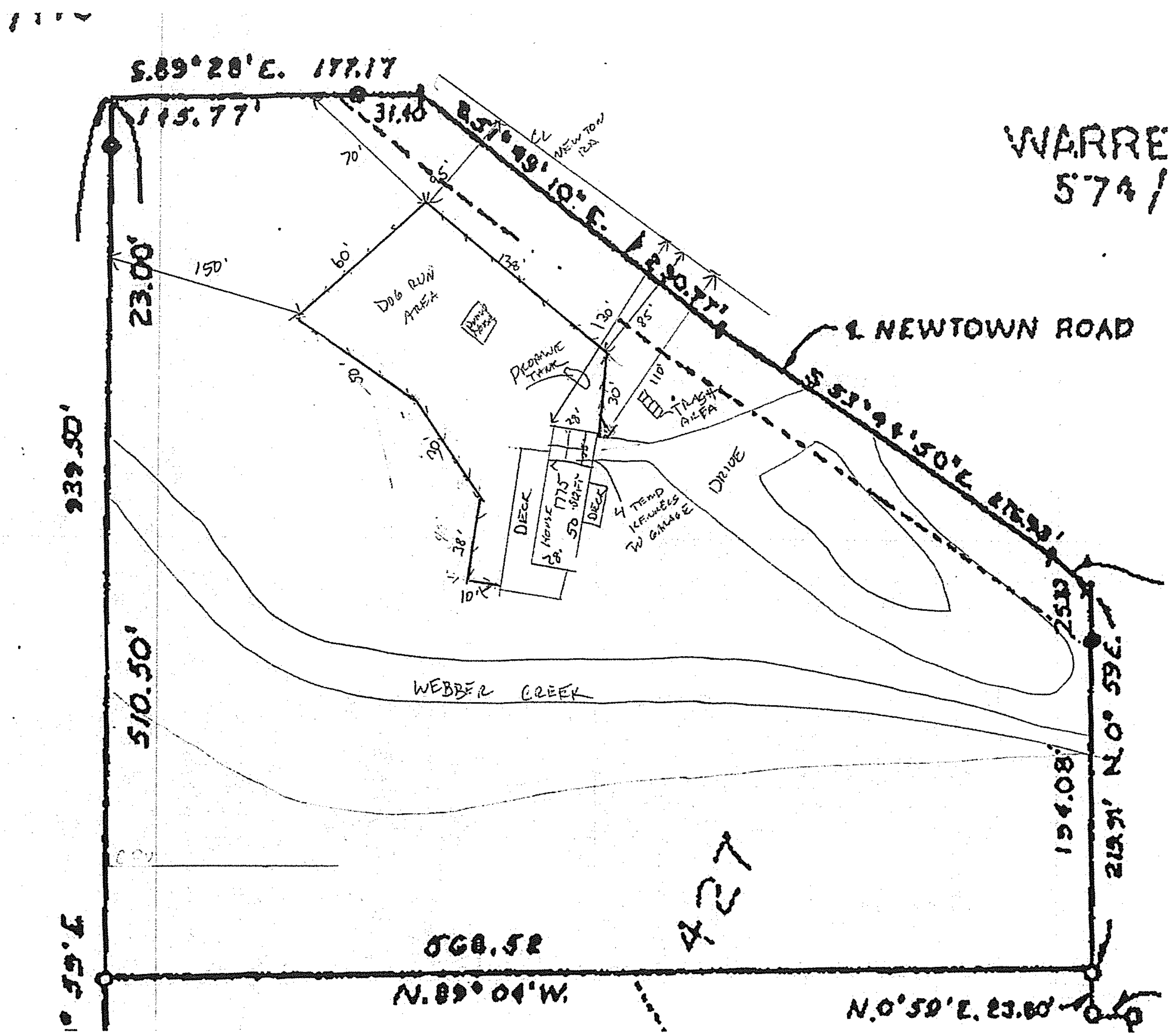


EXHIBIT H - ENVIRONMENTAL NOISE ASSESSMENT

SAXELBY ACOUSTICS
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Environmental Noise Assessment

Kelli's Love for Labs Kennel

El Dorado County, California

April 25, 2019

Project # 190404

Prepared for:

Kelli Dragony
4660 Newton Road
Placerville, CA 95667

Prepared by:

Saxelby Acoustics LLC

Luke Saxelby, INCE Bd. Cert.
Principal Consultant
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INTRODUCTION

Saxelby Acoustics was retained by Kelli's Love for Labs to perform a noise study for a kennel license for the purpose of operating a breeding program. The project site consists of an indoor kennel located inside the garage/residence of the existing home, and an outdoor dog run, located adjacent to the residence. The project facilities would be permitted to accommodate up to 10 dogs at any time. The project is currently operating with 10 dogs. The project site is located on a 5.3-acre parcel at 4660 Newton Road in El Dorado County, California.

This analysis is based off of noise measurements of existing operations representing 10 dogs. The existing noise measurement data indicated that typical noise levels at the edge of the outdoor dog run were 51 dBA L_{eq} and 74 dBA L_{max} due to dog activity in the dog run.

Figure 1 shows an aerial photo of the project site and existing facilities.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

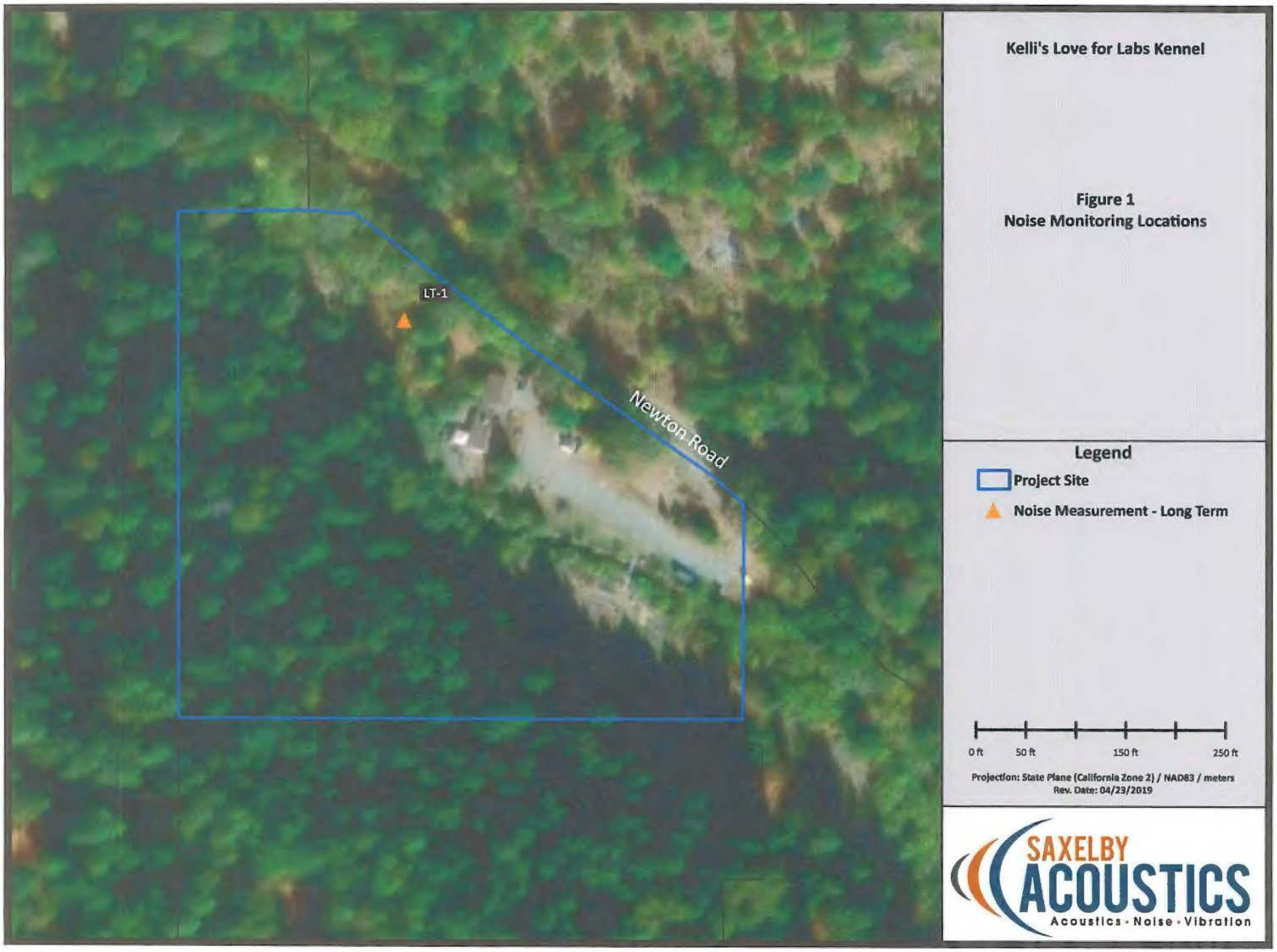
Fundamentals of Acoustics

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 from person to person.

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. 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.

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.


LT-1
Newton Road
Kelli's Love for Labs Kennel
Figure 1
Noise Monitoring Locations
Legend
Project Site
Noise Measurement - Long Term
0 ft
50 ft
150 ft
250 ft
Projection: State Plane (California Zone 2) / NAD83 / meters
Rev. Date: 04/23/2019
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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 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. The Community Equivalent Noise Level (CNEL) is similar to L_{dn}, but also includes an evening (7:00 a.m. to 7:00 p.m.) with a +5 dB penalty applied to noise occurring during this timeframe.

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

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--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. September, 2013.

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.

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 – 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.

EXISTING AMBIENT NOISE LEVELS

The existing noise environment in the project area is typical of a fairly quiet rural environment. Existing noise sources include occasional aircraft overflights, occasional vehicle traffic, normal residential noise, and nature sounds (birds, bugs, wind, etc.).

To quantify the existing ambient noise environment on the project site, Saxelby Acoustics conducted a continuous noise measurement survey. The noise measurement location is shown on **Figure 1**. The noise measurement locations are shown on **Figure 1**. A summary of the noise level measurement survey is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meter was programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured.

The average value, denoted L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

			Average Measured Hourly Noise Levels, dBA						
				Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm – 7:00 am)		
Site	Location	Date	L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
Continuous 24-hour Noise Measurement Site									
1	4660 Newton Rd. East dog run boundary fence.	April 17th – 18th, 2018	54	51	45	69	47	45	62
Source: Saxelby Acoustics – 2019.									

REGULATORY CONTEXT

The El Dorado County Code section 130.37 establishes noise level performance standards for noise sensitive land uses affected by non-transportation noise sources. **Table 3** shows the County standards.

TABLE 3: NOISE LEVEL PERFORMANCE STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION SOURCES

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 Centers	Rural Regions	Community / Rural Centers	Rural Regions	Community / Rural Centers	Rural Regions
Hourly L_{eq}, dBA	55	55	50	45	45	40
Maximum Level (L_{max}), dBA	70	60	60	55	55	50

1. Each of the noise levels specified above shall be lowered by 5 dBA for simple tone noises, noises consisting primarily of unamplified speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses, such as caretaker dwellings.
2. The Director can impose noise level standards which are up to 5 dBA less than those specified above, based upon a determination of existing low ambient noise levels in the vicinity of the project site.
3. The exterior noise level standard shall be applied as follows:
   a. In Community Regions, at the property line of the receiving property;
   b. In Rural Centers and Regions, at a point 100 feet away from a sensitive receptor or, if the sensitive receptor is within the Platted Lands Overlay (-PL) where the underlying land use designation is consistent with Community Region densities, at the property line of the receiving property or 100 feet away from the sensitive receptor, whichever is less; or
   c. In all areas, at the boundary of a recorded noise easement between affected properties.

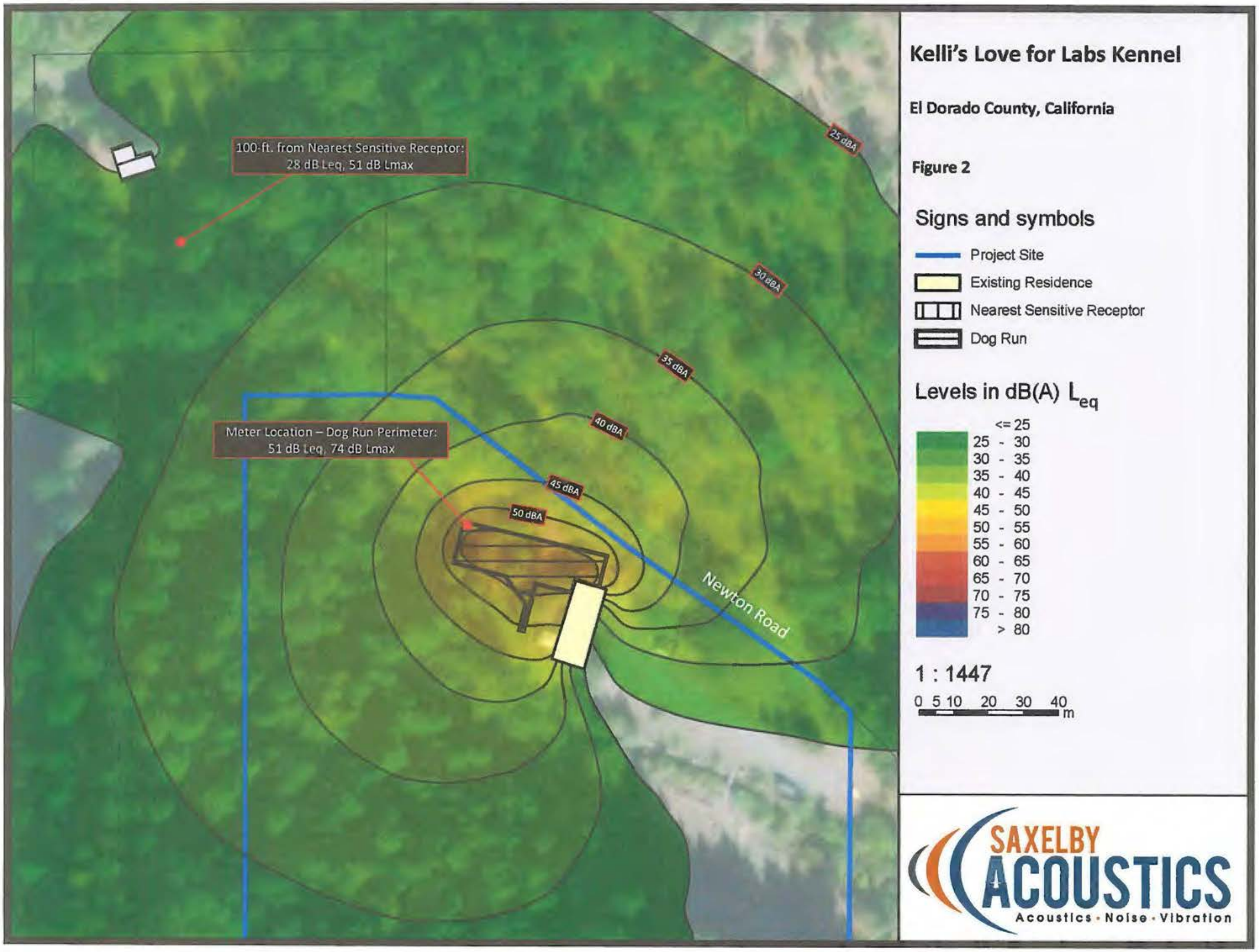
It is anticipated that the dogs will be allowed use of the dog run during daytime hours only. Because the project would include recurring impulsive noises from dogs barking, the standards shown in **Table 3** would be lowered by 5 dBA. Therefore, the target noise level would be 50 dBA L_{eq} and 55 dBA L_{max} during daytime hours (7:00 a.m. – 7:00 p.m.).

EVALUATION OF PROJECT NOISE EXPOSURE

Saxelby Acoustics prepared noise contour graphics showing average (L_{eq}) noise contours for the proposed kennel and dog run locations. Noise contours were prepared using the SoundPLAN noise prediction model. Inputs to the model included noise measurement data from the existing dog run, existing buildings, topography, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation. Noise levels are predicted at the property line of the receiving property or 100 feet away from the sensitive receptor, whichever is less, according to the requirements of El Dorado County for rural receptors.

Figure 2 shows the average (L_{eq}) noise contours for the proposed facilities.

Noise levels are shown in **Table 4** for the noise sensitive receptor nearest to the project site.


Kelli's Love for Labs Kennel
El Dorado County, California
Figure 2
Signs and symbols
Project Site
Existing Residence
Nearest Sensitive Receptor
Dog Run
Levels in dB(A) Leq
<= 25
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
> 80
1 : 1447
0 5 10 20 30 40 m
100-ft. from Nearest Sensitive Receptor: 28 dB Leq, 51 dB Lmax
Meter Location – Dog Run Perimeter: 51 dB Leq, 74 dB Lmax
25 dBA
30 dBA
35 dBA
40 dBA
45 dBA
50 dBA
Newton Road
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Based upon the SoundPLAN noise modeling **Table 4** shows the predicted project noise levels at the nearest noise-sensitive receptor to the project site.

TABLE 4: PROJECT NOISE LEVELS AT THE NEAREST SENSITIVE RECEPTOR

Location	Predicted Noise Levels		Daytime Noise Standard		Complies with Standards?
	L_{eq}	L_{max}	L_{eq}	L_{max}	
Nearest Sensitive Receptor – 100 ft. from 4660 Newton Road	28 dBA	51 dBA	50 dBA	55 dBA	Yes

As shown in **Table 4**, the project noise levels are predicted to comply with the County General Plan Noise Element Standards. This conclusion is based upon the following assumptions for project-generated noise:

- Access to the Dog Run will be limited to daytime hours (07:00 a.m. – 07:00 p.m.).

Conclusions

The proposed project is predicted to comply with the El Dorado County exterior noise standards assuming the following project noise limits:

- Access to the outdoor dog run should be limited to daytime hours only (07:00 a.m. – 07:00 p.m.).

Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	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.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	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.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	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.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

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Appendix B1: Continuous Noise Monitoring Results

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, April 17, 2019	10:00	50	66	46	44
Wednesday, April 17, 2019	11:00	52	70	45	44
Wednesday, April 17, 2019	12:00	52	70	45	44
Wednesday, April 17, 2019	13:00	49	67	45	44
Wednesday, April 17, 2019	14:00	49	66	45	44
Wednesday, April 17, 2019	15:00	50	70	46	44
Wednesday, April 17, 2019	16:00	51	67	46	44
Wednesday, April 17, 2019	17:00	53	74	46	45
Wednesday, April 17, 2019	18:00	54	73	46	45
Wednesday, April 17, 2019	19:00	51	72	46	45
Wednesday, April 17, 2019	20:00	48	67	45	44
Wednesday, April 17, 2019	21:00	47	68	45	44
Wednesday, April 17, 2019	22:00	48	73	45	44
Wednesday, April 17, 2019	23:00	46	64	45	44
Thursday, April 18, 2019	0:00	46	62	45	44
Thursday, April 18, 2019	1:00	45	54	45	44
Thursday, April 18, 2019	2:00	45	56	45	44
Thursday, April 18, 2019	3:00	45	56	45	44
Thursday, April 18, 2019	4:00	46	65	45	44
Thursday, April 18, 2019	5:00	47	60	45	44
Thursday, April 18, 2019	6:00	50	67	45	44
Thursday, April 18, 2019	7:00	52	73	46	44
Thursday, April 18, 2019	8:00	50	68	46	44
Thursday, April 18, 2019	9:00	50	66	46	44

Statistics	Leq	Lmax	L50	L90
Day Average	51	69	45	44
Night Average	47	62	45	44
Day Low	47	66	45	44
Day High	54	74	46	45
Night Low	45	54	45	44
Night High	50	73	45	44
Ldn	54	Day %		82
CNEL	54	Night %		18

Site: LT-1
Project: Kelli's Love for Labs Kennel
Meter: LDL 820-2
Location: 4660 Newton Road, east dog run boundary
Calibrator: B&K 4230
Coordinates: 38.708364°, -121.689445°