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October 12, 2020

Steve Rawlings
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RE: Alliance Propane and RV Storage Lot Noise Assessment – City of Murrieta

The purpose of this noise screening letter is to identify any impacts, if any, which may be created from the construction and operation of the proposed commercial development. The Project proposes to construct a 312 space Recreational Vehicle (RV) and boat storage on a 5.74-acre parcel & a propane distribution facility on a 1.15-acre parcel. Additionally, the project would construct a roughly 1,200 square foot (SF) operations building onsite.

Operations of the project would consist of daily propane delivery activities both to and from site. The Project site located on a vacant lot south of the Murrieta Valley Pony Baseball field on the east side of Adams Avenue between Fig and Elm street in the City of Murrieta. The proposed site plan is shown in Figure 1 below.

Background

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as Leq represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

Sound from a localized source (a “point” source) radiates uniformly outward as it travels away from the source. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of distance. A drop-off rate of 6 dBA per doubling of distance was used for this piece of equipment. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor and reduced to 63 dBA at 200 feet from the source.

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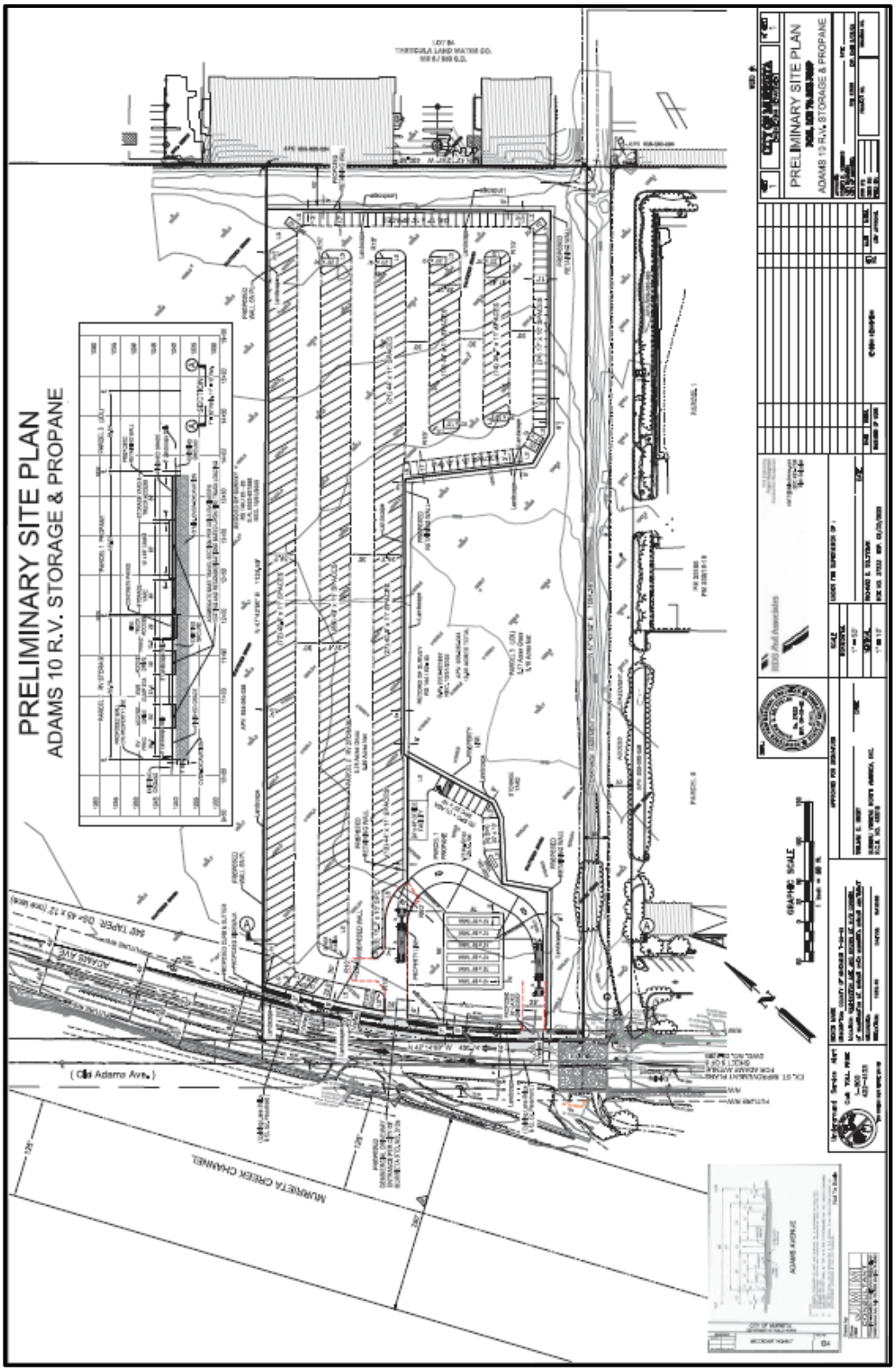
Figure 1: Proposed Project Site



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City of Murrieta Thresholds of Significance

Chapter 16.30.090 of the City's noise ordinance limits noise emitted by a designated use to receptor property. Unless otherwise provided in this chapter, the following exterior noise levels shall apply to all receptor properties within a designated noise zone as shown in Table 1.

Table 1: Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Allowed Exterior Noise Level (dB)
I	Noise-sensitive area	Anytime	45
II	Residential properties Residential properties within five hundred (500) feet of a kennel(s)	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime) 7:00 a.m. to 10:00 p.m.	45 50 70
III	Commercial properties	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime)	55 60
IV	Industrial properties	Anytime	70

No person shall operate or cause to be operated. any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by a person that causes the noise level, when measured on any other property to exceed the following exterior noise standards:

1. Standard No. 1 shall be the exterior noise level which shall not be exceeded for a cumulative period of more than thirty (30) minutes in any hour. Standard No. 1 may be the applicable noise level from Table 1 above.
2. Standard No. 2 shall be the exterior noise level which shall not be exceeded for a cumulative period of more than fifteen (15) minutes in any hour. Standard No. 2 shall be the applicable noise level from Table 1 above, plus five dB.
3. Standard No. 3 shall be the exterior noise level which shall not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Table 1 above plus ten dB.
4. Standard No. 4 shall be the exterior noise level which shall not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Table 1 above plus fifteen (15) dB.
5. Standard No. 5 shall be the exterior noise level which shall not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from Table 1 above plus twenty (20) dB.

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If the measurement location is on a boundary property between two different zoning districts, the exterior noise level utilized in subsection B of this chapter to determine the exterior standard shall be the arithmetic mean of the exterior noise levels. as specified in Table 3-6, of the subject zones.

Project Related Operational Noise

Propane Distribution Facility Noise

According to the information provided by the Project Proponent, anticipated on-site operational noise sources for this proposed project will primarily be one to two propane delivery trucks a week along with two smaller propane distribution trucks that will fill up at the site daily.

It is important to note that the following projected noise levels assume the worst-case noise environment with the propane trucks operating on site and fueling. To determine the existing noise and to assess potential noise impacts, measurements were taken at an existing propane yard in Menifee. The noise measurements were recorded on April 26, 2019 by Ldn Consulting, Inc. between 11:00 a.m. and 11:30 a.m. Noise measurements were taken using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring.

Noise levels consisted of the filling of a propane truck. During the measurements, the truck was operating. Noise measurements were taken at varying distances around the propane truck. The results of the noise level measurements are presented in Table 2. The noise measurement results are provided as an *Attachment*. Fixed or point sources radiate outward uniformly as sound travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance. Table 2 also identifies the anticipated noise levels at a common distance of 50 feet.

Table 2: Project Related Operational Noise Sources

Source	Meaurement Description	Related Sound Level Distance (Feet)	Measured Noise Level (dBA)	Noise Level at a Distance of 50-Feet (dBA)
Filling of Propane Truck	10-Feet from side of Truck	10	74.5	60.5
	25-Feet from front of Truck	25	71.3	65.3
	50-Feet from rear of Truck	50	61.1	61.1
Source: Ldn Consulting 4-26-19.				

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As can be seen in Table 2, the highest noise level at 50 Feet is 65.3 dBA. The project site is surrounded by industrial uses and the nearest residential property lines are located to the west across Washington Street and are located over 1,350 feet from the project site. Therefore, the noise levels ate the residential uses would be reduced almost 30 decibels based on the increased distances and no impacts are anticipated.

The surrounding industrial uses are located at least 50 feet from where the propane trucks will be operating. The City threshold at the industrial uses is 70 dBA (anytime). As can be seen in Table 2, the noise levels from the trucks are below 70 dBA at 50 feet and therefore no impact area anticipated. It is anticipated that at most two trucks could be onsite at the same time in any given hour. Two trucks would increase the noise 3 decibels from 65.3 dBA to 68.3 dBA.

Recreational Vehicle (RV) Storage Noise

RV storage would generate intermittent noise from vehicle arriving and departing. Similar to a parking lot, noise sources would be different from each other in kind, duration, and location. It is unlikely that existing industrial use surrounding the RV area would be exposed to regular noise in excess of normal conversational levels. A noise analysis for a proposed RV facility in the City of Wildomar included noise monitoring at existing storage facilities. Measured noise sources from vehicles arriving and departing included RV idling, air brake operation, and vehicle movements. The reference measurement results showed a noise level of 62.4 dBA Leq at 50 feet.

According to the proposed project traffic engineer, at full buildout, would generate roughly 56 from the RV storage area with a peak of 6 vehicles in an hour (Infrastructure Group, Inc., 2020). Therefore, the intermittent noise from the RV storage and use is not anticipated to exceed the industrial standard or 70 dBA. No impacts are anticipated at the nearest residential property lines located to the west across Washington Street, over 1,350 feet from the project site.

Given this, the project would be considered to generate less than significant noise impacts. If you have any questions, please do not hesitate to contact me at (760) 473-1253.

Ldn Consulting, Inc.

Jeremy Louden