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# Environmental Noise Assessment Background Music Sound Levels Analysis

**ILLINGWORTH & RODKIN, INC.**  
/// Acoustics • Air Quality ///

429 E. Cotati Avenue  
Cotati, California 94931

Tel: 707-794-0400  
www.illingworthrodkin.com

Fax: 707-794-0405  
illro@illingworthrodkin.com

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December 10, 2020  
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Dave Del Dotto  
Piazza Del Dotto  
7466 St. Helena Highway  
Napa, CA 94558

c/o Daniel A. Westphal, AIA  
Principal/Architect  
O'Malley Wilson Westphal-A/E Alliance  
555 Fifth Street, Suite 200  
Santa Rosa, CA 95401

**VIA E-Mail:** [Dave@deldottovineyards.com](mailto:Dave@deldottovineyards.com); [dan@omalleywilsonwestphal.com](mailto:dan@omalleywilsonwestphal.com)

**SUBJECT: Piazza Del Dotto, Napa County, CA –  
Background Music Sound Levels**

Dear Dave:

This letter summarizes the results of the noise measurements made by Illingworth & Rodkin, Inc. to quantify the sound levels produced by outdoor speakers within the garden located north of the Piazza Del Dotto tasting room. Calculations were also completed to determine the sound levels at the nearest residential property lines.

**Napa County Noise Regulations**

Section 8.16.070 of the Napa County Noise Ordinance regulates exterior noise levels within the unincorporated area of the county.

*No person shall operate, or cause to be operated, any source of sound at any location within the unincorporated area of the county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:*

- a. *The noise standard for that land use as specified in Table 8.16.070 for a cumulative period of more than thirty minutes in any hour [equivalent to the  $L_{50}$  noise metric]; or*
- b. *The noise standard plus five dB for a cumulative period of more than fifteen minutes in any hour [equivalent to the  $L_{25}$  noise metric]; or*
- c. *The noise standard plus ten dB for a cumulative period of more than five minutes in any hour [equivalent to the  $L_{08}$  noise metric]; or*
- d. *The noise standard plus fifteen dB for a cumulative period of more than one minute in any hour [equivalent to the  $L_{02}$  noise metric];*
- e. *The noise standard plus twenty dB or the maximum measured ambient level, for any period of time [equivalent to the  $L_{max}$  noise metric].*

**Table 8.16.070: EXTERIOR NOISE LIMITS**  
**(Levels not to be exceeded more than 30 minutes in any hour)**

Receiving Land Use Category	Time Period	Noise Level (dBA) Noise Zone Classification		
		Rural	Suburban	Urban
Residential: Single and double	10 p.m. to 7 a.m.	45	45	50
	7 a.m. to 10 p.m.	50	55	60
Residential: multiple and country	10 p.m. to 7 a.m.	45	50	55
	7 a.m. to 10 p.m.	50	55	60
Commercial	10 p.m. to 7 a.m.	60		
	7 a.m. to 10 p.m.	65		
Industrial, including wineries	10 p.m. to 7 a.m.	75		
	7 a.m. to 10 p.m.	45		

If the measured ambient noise level differs from that permissible within any of the first four noise categories ( $L_{50}$ ,  $L_{25}$ ,  $L_{08}$ ,  $L_{02}$ ), the allowable noise exposure standard shall be the ambient noise level.

Another provision is included to correct the allowable noise standard for the character of the sound as follows,

*In the event the alleged offensive noise, as judged by the noise control officer, contains a steady, audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech, the standard limits set forth in Tables 8.16.060 and 8.16.070 shall be reduced by five dB, but not lower than forty-five.*

For the purposes of this analysis, a noise limit of 45 dBA  $L_{50}$  has been applied at the nearest residential properties in consideration of the daytime 50 dBA  $L_{50}$  limit established for rural residential properties and the 5 dBA penalty applied for sounds consisting primarily of music or

speech. The  $L_{50}$  noise metric is the most conservative acoustical threshold applicable to the continuous sounds produced by outdoor music.

## **Existing Noise Environment**

Figure 1 shows the project site and residential receptors located in the project vicinity.

A noise monitoring survey was conducted on Friday, December 6, 2019 to quantify the sound levels produced by speakers in the garden and ambient daytime noise levels at the closest noise sensitive (residential) uses. The measurements were made using a Larson-Davis Laboratories (LDL) precision Type 1 sound level meter fitted with a ½-inch pre-polarized condenser microphone and windscreen. The sound level meter was calibrated before and after the measurements with an LDL acoustical calibrator. During the measurement period, the weather was overcast with no measurable precipitation.

Measurements were made at a distance of 5 feet from various speakers while background music was played. The level of the background music varied slightly depending on the space resulting in sound levels that ranged from 58 to 63 dBA  $L_{50}$ . The typical level of background music was 61 dBA  $L_{50}$ , and the maximum measured level of 63 dBA  $L_{50}$  was characterized by an employee as “louder than normal”. The distribution of the speakers around the garden was sufficient in that the sound levels did not measurably increase in areas where multiple speakers were present. Even at these sound levels, the background music was inaudible at the nearest residential property lines to the east and north of the tasting room building.

A 10-minute noise measurement was also made to document typical daytime noise levels at the nearest residences to the east and north. The noise measurement was made near the northernmost boundary of the project site approximately 65 feet south of the center of Yount Mill Road and 650 feet east from the center of State Route 29 (SR 29). Noise levels measured at this site were primarily the result of distant traffic along SR 29 and local intermittent traffic on Yount Mill Road. The average and median noise levels at this location were 52 dBA  $L_{eq}$  and 51 dBA  $L_{50}$ , respectively.

## **Analysis**

Figure 1 shows the Jones parcel (APN 031-120-027) that borders the project site to the northeast. Figure 2 shows the areas where background music is proposed. Background music would only be played during the daytime through speakers at the tasting room garden, grotto, veranda, and terrace. The nearest garden speaker to this residential property would be located approximately 60 feet from the common property line. The nearest grotto, veranda, or terrace speakers to this residential property would be located approximately 110 feet from the common property line. At a distance of 60 feet, the typical noise level produced by the speaker (61 dBA  $L_{50}$ ) would be reduced to 40 dBA  $L_{50}$  assuming hemispherical spreading losses and no additional attenuation from intervening structures. At 110 feet, the typical noise level produced by the speaker would be

34 dBA L<sub>50</sub> or less. The calculated noise levels would meet the 45 dBA L<sub>50</sub> noise limit established by Napa County.

The Jones residence is located approximately 300 feet from the tasting room building and approximately 400 feet from the grotto, veranda, and terrace. At these distance, the sound levels from background music would be 25 dBA L<sub>50</sub> or less and inaudible above other ambient sources of noise in the project vicinity.

The nearest residential property to the north, along Yount Mill Road, is located over 450 feet from the nearest speakers proposed within the tasting room garden. At a distance of 450 feet, background music sound levels are calculated to be 22 dBA L<sub>50</sub> or less. The calculated noise level is 23 dBA below the 45 dBA L<sub>50</sub> noise limit established by Napa County and about 29 dBA below ambient traffic noise levels. Noise levels produced by background music in the grotto, veranda, and terrace would be less. As observed during the noise survey, background music played at typical levels would not be audible above other ambient noise sources in the areas. Similarly, noise levels would be inaudible at distant receptors to the west and southwest because of the greater distances separating the noise source and receptors and the proximity of these receptors to SR 29.



This completes our letter report. If you have any questions, or if we can be of further assistance, please do not hesitate to call.

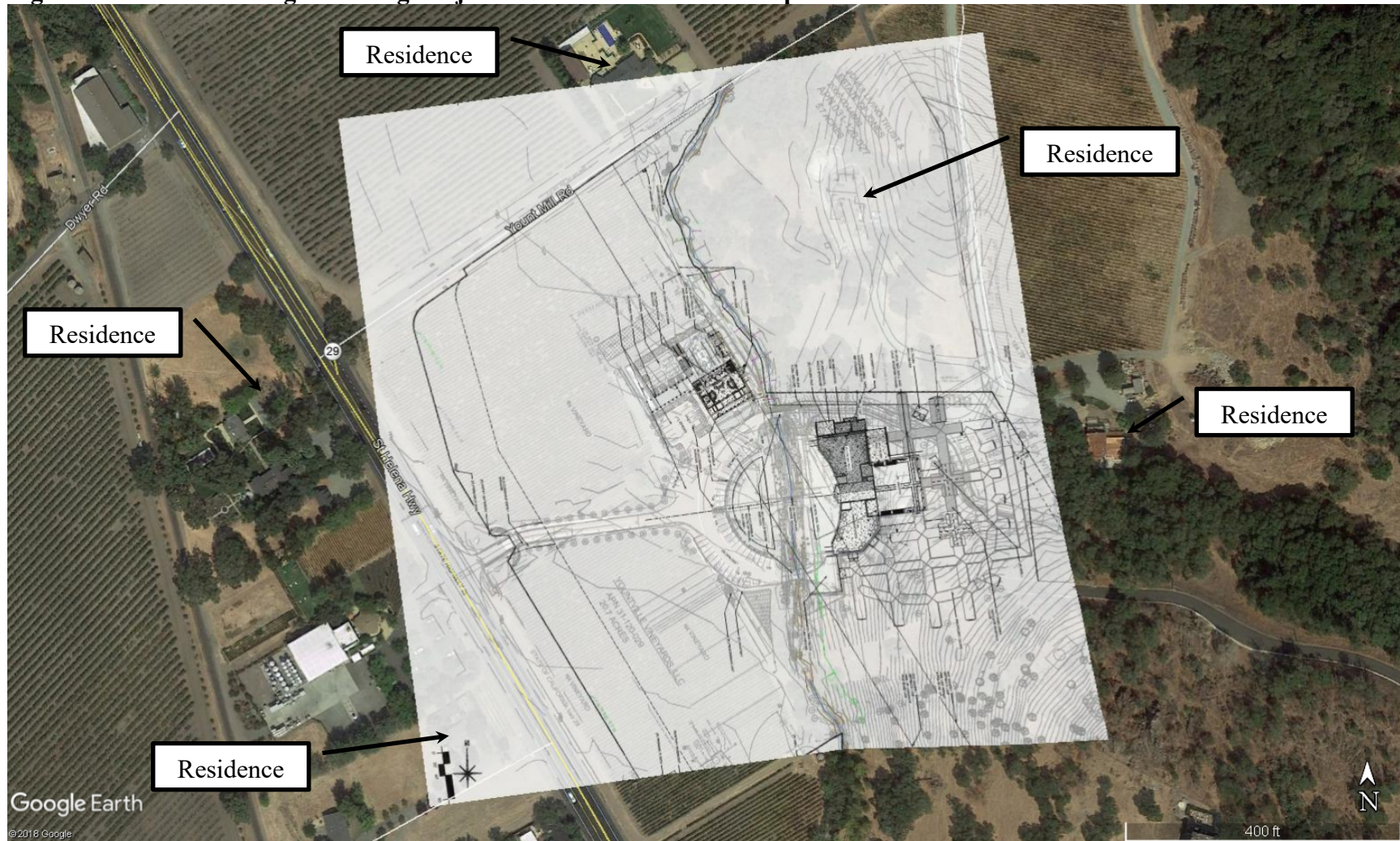
Sincerely yours,

A handwritten signature in blue ink, appearing to read "Michael S. Thill".

Michael S. Thill  
Principal Consultant  
***ILLINGWORTH & RODKIN, INC.***

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**Figure 1      Aerial Image Showing Project Site and Residential Receptors**



Source: Google Earth, 2019 and O'Malley Wilson Westphal, Inc., Piazza Del Dotto Architectural Site Plan, April 2018.



**Figure 2 Site Plan Showing Locations of Background Music**

