25 April 2022

Mr. Bert Sandell
Sandell Holdings LLC
3348 Paradise Drive
Tiburon, CA 94920
Email: bertsandell@gmail.com

Subject: Acoustical Analysis of Operational Noise
Proposed Warehouse at 380 Blodgett St, Cotati, CA 94931

Dear Mr. Sandell:
This report presents an acoustical analysis of the expected levels of noise to be produced by operations at the proposed warehouse building #2 to be located at 380 Blodgett St. in Cotati of the applicable legislation regulating such noise and a comparison of the expected noise to allowable levels.

Applicable legislation

The City of Cotati regulates noise through their Municipal Code, Section 17.30.050 *Noise standards*[1]. These Standards applicable to this project state, under subsection (C):

> ***Noise Source Standards.***
> 1. *Noise Level Limitations. No use, activity, or process within the city shall generate noise in excess of the levels identified by Tables 3-3 and 3-4, as the noise is measured at the property line of a noise sensitive land use identified in Tables 3-3 and 3-4.*
>   a. *If the measured ambient noise level exceeds the applicable noise level standard in any category shown in Table 3-3, the applicable standards shall be adjusted to equal the ambient noise level.*
>   b. *If the intruding noise source is continuous and cannot reasonably be discontinued or stopped to allow measurement of the ambient noise level, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards identified in Table 3-3.*
>
> *Notwithstanding the above requirements, no person shall allow or cause the generation of any noise of a type, volume, pitch, tone, repetition, or duration that would be found to be a nuisance by a reasonable person beyond the boundaries of the property where the noise is generated.*

[1] https://www.codepublishing.com/CA/Cotati/html/Cotati17/Cotati1730.html#17.30.050

Table 3-3: Maximum Allowable Noise Level by Receiving Land Use

Noise Sensitive Land Use	Outdoor Activity Areas(1)(2)	Interior Spaces	
	dBA Ldn	dBA Ldn	dBA Leq
Residential	65	45	N.A.
Transient lodging	65	45	N.A.
Hospitals, extended care	65	45	N.A.
Theater, auditorium	(3)	45	35
Meeting facility, public or private	65	45	40
Offices	75	45	45
School, library, museum	65	45	45
Playground park	70	N.A.	N.A.

Notes:
(1) Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
(2) Where it is not possible to reduce noise in outdoor activity areas to 65 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 70 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
(3) Subject to an acoustical analysis in compliance with subsection (C)(2) of this section.

The site is currently surrounded by similar Commercial/Industrial land uses to the south, east and west and by General Industrial ones to the north, as revealed by the *City of Cotati Zoning Map*[2]. Hence, the applicable noise limits by the property boundaries are those of Office buildings, namely 75 dBA L_{dn} in outdoor areas. No land uses with higher noise sensitivity surround the site.

In addition, the Noise Element of the Cotati General Plan, adopted March 24, 2015[3] provides *Action Items* regarding the development of new projects to avoid these being exposed to excessive levels of noise. Specifically, Action N1b states:

> *Review land use and development proposals, including use permits, for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2.*
>
> *For uses along the SMART corridor, the Federal Transit Administration vibration impact criteria shall be used to evaluate the compatibility of sensitive uses using the best available information (e.g. 2005 SMART DEIR) or site-specific measurements and analyses (assuming active operations).*
>
> *Where necessary, require mitigation measures to achieve the noise standards identified in Tables N-1 and N-2 and, where applicable to minimize exposure of sensitive uses to existing or potential vibration levels to the maximum feasible extent.*

However, as the proposed operations will be of the commercial/industrial type, which can tolerate significant levels of noise, and the site is already surrounded by similar land uses, the current noise exposure at the site is not likely to interfere with the operations to be carried out by the project.

[2] http://www.cotaticity.org/UserFiles/Servers/Server_9669113/File/ZoningMap.pdf
[3] http://www.cotaticity.org/UserFiles/Servers/Server_9669113/File/CotatiGeneralPlan.pdf

Predicted operational noise levels by the project boundaries

Based on the operational information provided and the results of measurements conducted at a similar facility, we have made predictions of expected levels of noise resulting from those operations. The operations will consist of the arrival of individual containers by small local delivery trucks and by larger Tractor/Trailer trucks which are capable of handling three containers at one time. After arrival, the trucks park in designated areas and turn their engines off. Propane-gas powered forklifts then remove and replace containers off/onto the trucks and store them inside the warehouse for long-term storage or temporarily outside. After the loading/unloading of the trucks takes place, they start their engines, idle for a few seconds and then leave the facility.

Measurements of the noise produced by these operations were conducted at a facility similar to the one proposed located in the city of Benicia. Based on the result of these measurements and on the expected frequency of operations at the Cotati facility, predictions were made of the expected future level of noise by the nearest receiving land uses to the project. The approximate center points of the middle and rear yards were used as the reference locations from which the distances to the nearest property lines were calculated, as those areas are where most of the activities are expected to take place. Please see Figure 1 below for a graphical description of the expected activity areas and of the distances to the nearest property lines.

The expected levels of noise at the three points studied located at approximately 225 feet and 258 feet to the north, and 391 feet to the south are 33 L_{dn}, 32 L_{dn},, and 29L_{dn} respectively. See table below for the list of locations, distances, and predicted L_{dn} values. These levels are significantly lower than the 75 dBA L_{dn} in outdoor areas allowed by the Municipal Code for Office land uses and even the 65 L_{dn} allowed for Residential and other noise-sensitive land uses. This is due to the very brief duration of noise-producing events such as trucks entering and then parking, forklifts moving containers for very short distances which were observed to last between 10 and 15 seconds, and for the modest number of operations that are expected to take place on a given day. Please see the worksheet in Figure 2 for a summary of the assumptions made, observed noise elves produced by each equipment at short distances and resulting noise levels at the three property line points studied.

Location of Receiver	**Receiver Distance**	**Predicted L_{dn} Values**
Commercial A	225 ft	33 L_{dn}
Commercial B	258 ft	32 L_{dn}
Commercial C	391 ft	29 L_{dn}

Conclusions

Based on the results from the measurements conducted at a similar facility, the expected volume of operations at the future facility and the distances to the property lines, the predicted operational noise to be produced by the proposed facility is expected to fully comply with current City of Cotati legislation requirements.

Please do not hesitate to contact me if you have any questions.

Very truly yours

WILSON, IHRIG

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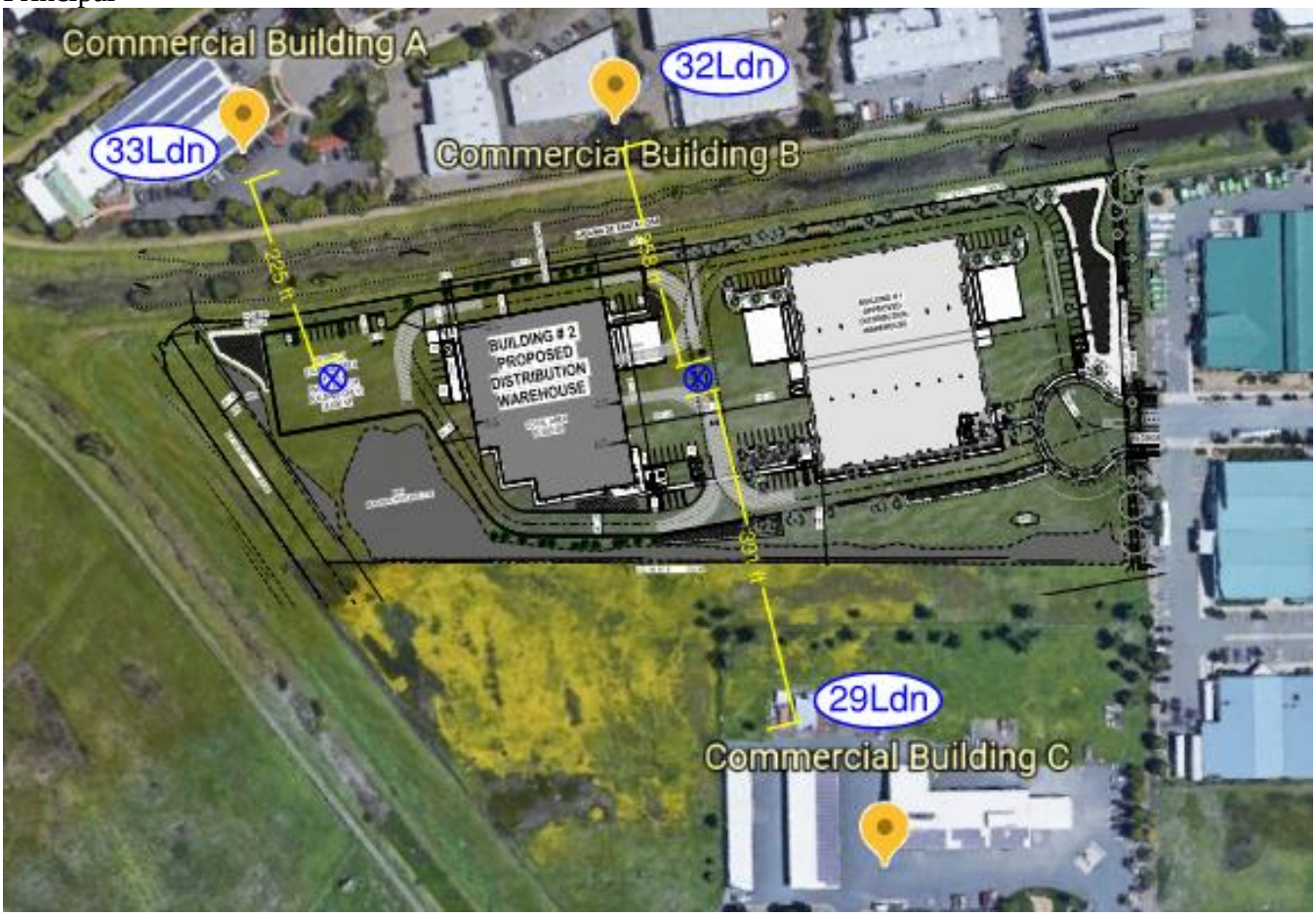

Figure 1: Approximate distances to nearest property lines from center of yards where most operations are expected to take place

# of Employees at any one time =	12			
# Hours in operation =	10	7 am - 5pm		
Delivery hours =	7 am - 5pm			
# of LOCAL delivery trucks =	6			
# of trips/day/truck =	14			
# of Tractor/Trailers/day=	5			
# of forklift events/day =	39			
	Leq	**Distance**		
Tractor/Trailer idle noise level=	69.3 dBA	20 ft.		
Tractor/Trailer idle event duration=	15 sec.			
Tractor/Trailer accel noise level=	80.0 dBA	20 ft.		
Tractor/Trailer accel event duration=	7 sec.			
# of Tractor/Trailers events/day =	5			
	Leq	**Distance**		
Local delivery truck idle noise level =	69.0 dBA	20 ft.		
Local delivery truck idle event duration =	15 sec.			
Local delivery truck accel noise level =	77.4 dBA	20 ft.		
Local delivery truck accel event duration =	10 sec.			
# of delivery truck events/day =	6			
	Leq	**Distance**		
Forklift noise level (w/backup alarm on) =	77.2 dBA	10 ft.		
Forklift event duration =	30 sec.			
# of forklift events/day =	39			
Daytime Leq due to ALL sources at a reference distance of		20 ft =	**56.4 dBA**	
Nighttime Leq due to ALL sources at reference distance =			**0.0 dBA**	
Ldn due to ALL sources at reference distance =			**54 Ldn**	
Predicted Ldn at receiver distance of	225 ft =	**33 Ldn**	Commercial A	
Predicted Ldn at receiver distance of	258 ft =	**32 Ldn**	Commercial B	
Predicted Ldn at receiver distance of	391 ft =	**29 Ldn**	Commercial c	

Figure 2: Operational assumptions and resulting noise levels at the three nearest property line points studied.