Michael Baker
INTERNATIONAL

We Make a Difference

MEMO

To: Manager

ALMADEN GOLF & COUNTRY CLUB

From: Darcy Kremin, Michael Baker International
Lindsay Taylor, Michael Baker International

Date: June 15, 2017

Re: Pool Area & Upper Court Remodel Project – Noise Technical Memorandum

PURPOSE

The purpose of this technical memorandum is to evaluate potential long-term noise impacts resulting from the proposed Pool Area & Upper Court Remodel Project (the project), located in San Jose, California.

PROJECT LOCATION

The 89.76-acre Almaden Golf and Country Club is located at 6663 Hampton Drive in San Jose and is currently developed with a golf course and associated ancillary facilities. The golf grounds are generally bounded by Littman Drive on the north, Hampton Drive on the east, Leyland Park Drive on the west, and Echo Valley Drive on the south. The actual area proposed to accommodate the Pool Area & Upper Court Remodel Project is immediately bounded by Hillcrest Drive to the west and Hampton Drive to the north. Primary access to the project site is via Hampton Drive.

The project site, which includes the pool complex area, the upper tennis courts, and the service access, fronts Hillcrest Drive, a residential street. The Almaden Swim and Racquet Club, located to the north across Hampton Drive, is not associated with the subject development. The entire project vicinity is characterized by golf courses and single-family residential development.

PROJECT DESCRIPTION

The project consists of the expansion and renovation of the existing pool house building, reconstruction of a single-story structure at the pool, rehabilitation of the existing pool, redesign of the tennis courts, construction of new bocce ball courts, a new wading pool, and a Jacuzzi spa, and expansion of the secure pool deck. A generator will be installed in the pool equipment room adjacent to the pool.

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FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear de-emphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing. Therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of line sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway (FHWA 2011a).

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.

- 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 community response would be expected. An increase of 5 dBA is typically considered substantial.

- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

The equivalent noise level (L_{eq}) is the average acoustic energy content of noise for a stated period of time. The unit of measurement for the policies listed in San Jose's General Plan is the Day-Night Noise Level (L_{dn} or DNL). The DNL is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

REGULATORY SETTING

STATE OF CALIFORNIA

California Noise Control Act of 1973

California Health and Safety Code Sections 46000 through 46080, known as the California Noise Control Act, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act also finds that there is a continuous and increasing bombardment of noise in urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24, Part 2, Chapter 2-35)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA.

CITY OF SAN JOSE

City of San Jose Municipal Code (2017)

The City's Municipal Code contains a Zoning Ordinance that limits noise levels at adjacent properties. Chapter 20.30.700 states that sound pressure levels generated by any use or combination of uses on a property shall not exceed 55 dBA at any property line shared with land zoned for residential use, except upon issuance and in compliance with a Conditional Use Permit.

City of San Jose General Plan (2011)

The Noise Element is a mandatory component of the General Plan. The overall purpose of the Noise Element is to address major noise sources and to promote safe and comfortable noise levels throughout San Jose. The Noise Element contains goals, policies, and actions that seek to reduce community exposure to excessive noise levels through the establishment of noise level standards for a variety of land uses. Relevant General Plan policies include the following:

EC-1.1 Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review. Applicable standards and guidelines for land uses in San José include:

Interior Noise Levels

The City's standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL. Include appropriate site and building design, building construction and noise attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected Envision General Plan traffic volumes to ensure land use compatibility and General Plan consistency over the life of this plan.

Exterior Noise Levels

The City's acceptable exterior noise level objective is 60 dBA DNL or less for residential and most institutional land uses (Table 1). The acceptable exterior noise level objective is established for the City, except in the environs of the San José International Airport and the Downtown, as described below:

- For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 60 dBA DNL in usable outdoor activity areas, excluding balconies and residential stoops and porches facing existing roadways. Some common use areas that meet the 60 dBA DNL exterior standard will be available to all residents. Use noise attenuation techniques such as shielding by buildings and structures for outdoor common use areas. On sites subject to aircraft overflights or adjacent to elevated roadways, use noise attenuation techniques to achieve the 60 dBA DNL standard for noise from sources other than aircraft and elevated roadway segments.

- For single family residential uses, use a standard of 60 dBA DNL for exterior noise in private usable outdoor activity areas, such as backyards.

EC-1.2 Minimize the noise impacts of new development on land uses sensitive to increased noise levels by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or

- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.

EC-1.3 Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.

Table 1 shows the land use compatibility for community noise environment as shown in the San Jose General Plan Noise Element.

Table 1
Land Use Compatibility for Community Noise Environment

Land Use Category	Exterior Noise Exposure (L_{dn})					
	55	60	65	70	75	80
Residential, Hotels and Motels, Hospitals and Residential Care						
Schools, Libraries, Museums, Meeting Halls, Churches						
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
Office Buildings, Business Commercial, and Professional Offices						
Sports Arena, Outdoor Spectator Sports						
Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters						

	NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements
	CONDITIONALLY ACCEPTABLE Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design
	UNACCEPTABLE New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies

Source: San Jose 2011

Note: L_{dn} = Day/Night Noise Level. A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

NOISE-SENSITIVE RECEPTORS

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest sensitive receptors to the proposed generator are the existing residences approximately 70 feet to the west. The nearest sensitive receptor to the proposed bocce ball courts is the existing residence approximately 10 feet to the south. The nearest sensitive receptor to the proposed wading pool and Jacuzzi spa are the existing residences approximately 125 feet to the west.

EXISTING CONDITIONS

San Jose is impacted by various noise sources. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the city that generate stationary-source noise.

To quantify existing ambient noise levels in the project area, Michael Baker International conducted four short-term noise measurements on April 29, 2017 (see Appendix A). The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The 10-minute measurements were taken between 9:00 and 10:00 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 2.

Table 2
Existing Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Crowne Boulevard and Hampton Drive intersection	56.6	41.2	66.1	9:13 a.m.
2	Bose Lane and Hampton Drive intersection	55.4	43.1	67.6	9:25 a.m.
3	Hillcrest Drive between pool and tennis courts	56.3	47.6	72.2	9:36 a.m.
4	Northgate Drive next to club sign	47.1	40.0	59.9	9:49 a.m.

Source: Michael Baker International 2017; see Appendix A for noise measurement outputs.
Notes:
L_{eq} = The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{min} = The minimum A-weighted noise level during the measurement period.
L_{max} = The maximum A-weighted noise level during the measurement period.
dBA = A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

As shown in Table 2, the ambient recorded noise levels ranged from 47.1 dBA to 56.6 dBA L_{eq} near the project site. The noise most commonly in the project vicinity is produced by vehicles (cars, trucks, buses, motorcycles). Traffic moving along streets and freeways produces a sound level that remains relatively constant and is part of the city's minimum ambient noise level. Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

GENERATOR NOISE IMPACTS

Potential stationary noise sources related to long-term operations include a generator, which will be installed in the pool equipment room next to the pool. Based on specification information provided by the applicant, the generator is a Model C65 Capstone Microturbine. The project proposes to install the iCHP version of the generator, which has an acoustic emissions rating of 65 dBA at approximately 50 feet. Since the proposed generator will be in a completely enclosed building with a solid barrier, there will be 10 dBA reduction in noise levels (FHWA 2011b). Noise levels outside of the building about 50 feet from the generator are predicted to be approximately 55 dBA. The nearest sensitive receptors to the proposed generator are the existing residences approximately 70 feet to the west. Based on an attenuation rate of 6 dB for each doubling of distance, the nearest sensitive receptors will experience noise levels of 52 dBA.

Per the City's General Plan, the land use compatibility for community noise environment for residential land uses up to 60 dBA is considered "normally acceptable" (see Table 1). Since the generator is expected to reach noise levels of 52 dBA at the nearest residence, operation of the generator would not be anticipated to reach noise levels beyond the acceptable compatible land use noise levels.

Furthermore, the City's Municipal Code contains a Zoning Ordinance that limits noise levels at adjacent properties. Chapter 20.30.700 states that sound pressure levels generated by any use or combination of uses on a property shall not exceed 55 dBA at any property line shared with land zoned for residential use. As previously discussed, the generator is expected to reach noise levels of 52 dBA at the nearest residence, which is below the City's standard of 55 dBA.

In addition, this analysis considers the project-resultant increase of ambient noise over the noise levels without the project. As shown in Table 2, the ambient recorded noise levels on Hillcrest Drive between the existing pool and tennis courts was 56.3 dBA L_{eq}. This measurement was taken adjacent to the proposed pool equipment room housing the generator. As previously discussed, per General Plan Policy EC-1.2, a significant impact would occur if the DNL at noise sensitive receptors increases by 3 dBA. Since the generator is predicted to contribute noise levels of 52 dBA, which is less than the existing ambient noise levels, the project would not result in an increase of 3 dBA DNL over existing ambient noise levels.

BOCCE BALL COURT NOISE IMPACTS

The project includes replacing a tennis court on the south end of the project site with three bocce ball courts. The main noise source associated with bocce ball activities is people gathering and talking. Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. Crowd noise is estimated at 60 dBA at one meter (3.28 feet) away for raised normal speaking (Hayne 2006). This noise level would have a +5 dBA adjustment for the impulsiveness of the noise source, and a -3 dBA adjustment for the random orientation of the crowd members. Therefore, crowd noise would be approximately 62 dBA at one meter from the source. The nearest sensitive receptor to the proposed bocce ball courts is the existing residence approximately 10 feet to the south. Based on an attenuation rate of 6 dB for each doubling of distance, the nearest sensitive receptors will experience noise levels of approximately 54 dBA. As previously discussed, the land use compatibility for community noise environment for residential land uses up to 60 dBA is considered "normally acceptable." Since bocce ball activities are expected to reach noise levels of 54 dBA at the nearest residence, use of the bocce ball courts would not be anticipated to reach noise levels beyond the acceptable compatible land use noise levels.

Additionally, per the City's Municipal Code, sound pressure levels generated by any use or combination of uses on a property shall not exceed 55 dBA at any property line shared with land zoned for residential use. As previously discussed, the generator is expected to reach noise levels of 54 dBA at the nearest residence, which is below the City's standard of 55 dBA.

Furthermore, this analysis considers the project-resultant increase of ambient noise over the noise levels without the project. As shown in Table 2, the ambient recorded noise levels on Hillcrest Drive between the existing pool and tennis courts was 56.3 dBA L_{eq}. This measurement was taken near the site of the proposed bocce ball courts. Per General Plan Policy EC-1.2, a significant impact would occur if the DNL at noise sensitive receptors increases by 3 dBA. The predicted noise levels of bocce ball activities are 54 dBA, which is less than the existing ambient noise levels. Therefore, the project would not result in an increase of 3 dBA DNL over existing ambient noise levels.

POOL AREA UPDATE NOISE IMPACTS

The project also includes updates to the pool area, including a new wading pool, a Jacuzzi spa, and expansion of the secure pool deck. Typical pool area activity noise levels is 68.8 dBA at a distance of 20 feet (L_{dn} Consulting 2014). The nearest sensitive receptors to the wading pool and Jacuzzi spa are the existing residences approximately 125 feet to the west. Based on an attenuation rate of 6 dB for each doubling of distance, the nearest sensitive receptors will experience noise levels of approximately 53.8 dBA.

The General Plan's land use compatibility for community noise environment for residential land uses up to 60 dBA is considered "normally acceptable." Since new pool area activities are expected to reach noise levels of 53.8 dBA at the nearest residences, use of the updated pool area would not be anticipated to reach noise levels beyond the acceptable compatible land use noise levels.

Per the City's Municipal Code, sound pressure levels generated by any use or combination of uses on a property shall not exceed 55 dBA at any property line shared with land zoned for residential use. As previously discussed, the new pool activity noise level is expected to reach noise levels of 53.8 dBA at the nearest residences, which is below the City's standard of 55 dBA.

This analysis also considers the project-resultant increase of ambient noise over the noise levels without the project. As shown in Table 2, the ambient recorded noise levels on Hillcrest Drive near the existing pool was 56.3 dBA L_{eq}. Per General Plan Policy EC-1.2, a significant impact would occur if the DNL at noise sensitive receptors increases by 3 dBA. The predicted noise levels of new pool activities are 53.8 dBA, which is less than the existing ambient noise levels. Therefore, the project would not result in an increase of 3 dBA DNL over existing ambient noise levels.

CUMULATIVE NOISE IMPACTS

Long-term stationary noise sources associated with the proposed project at the Almaden Golf & Country Club, combined with other cumulative projects could cause local noise level increases. Noise levels associated with the proposed Project and related cumulative projects together could result in higher noise levels than considered separately. However, these noise levels would dissipate over distance. Additionally, the expected combined cumulative effect within the Project area would be reduced with adherence to the General Plan Policies and compliance with the City's noise standards. Furthermore, related cumulative projects would be required to comply with the City's noise level standards and include mitigation measures if this standard is exceeded. Therefore, cumulative noise impacts from stationary noise sources would be considered less than significant.

CONCLUSION

The proposed project will be compatible with the City's land use compatibility table, will not exceed the City's 55 dBA residential standard, and will not result in a significant increase over ambient noise levels. The noise-related impacts for operations of the proposed project are expected to be less than significant under the California Environmental Quality Act.

REFERENCES

FHWA (Federal Highway Administration). 2011a. *Effective Noise Control During Nighttime Construction*. http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

———. 2011b. *RCNM User's Guide – Appendix A: Best Practices for Calculating Estimated Shielding for Use in the RCNM*. https://www.fhwa.dot.gov/ENVIRONMENT/noise/construction_noise/rcnm/rcnm10.cfm.

Ldn Consulting. 2014. *Noise Assessment: Vista Valley County Club Pool Center.*

M.J. Hayne, et al. 2006. *Prediction of Crowd Noise.*

San Jose, City of. 2011. *City of San Jose General Plan.*

———. 2017. *City of San Jose Municipal Code.*

APPENDIX A

NOISE MEASUREMENT OUTPUTS

Summary

File Name on meter	EF_HS.032
File Name on PC	SLM_0003788_EF_HS_032.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Alameden Golf & Country Club Site 1
Start	2017-04-29 09:13:32
Stop	2017-04-29 09:23:32
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-04-29 09:09:16
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.5**	73.5	78.5
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LASeq	56.6 dB		
LASE	84.3 dB		
EAS	30.244 µPa²h		
LASpeak (max)	2017-04-29 09:22:40	85.4 dB	
LASmax	2017-04-29 09:22:40	66.1 dB	
LASmin	2017-04-29 09:15:57	41.2 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	56.6	56.6	-99.9

LCSeq	63.8 dB
LASeq	56.6 dB
LCSeq - LASeq	7.2 dB
LAIeq	58.2 dB
LAeq	56.6 dB
LAIeq - LAeq	1.6 dB

	A		
	dB	**Time Stamp**	**dB**
Leq	56.6		-99.9
LS(max)	66.1	2017/04/29 9:22:40	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	41.2	2017/04/29 9:15:57	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	85.4	2017/04/29 9:22:40	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	61.4	dB
LAS10.00	60.5	dB
LAS33.30	57.1	dB
LAS50.00	54.9	dB
LAS66.60	51.1	dB
LAS90.00	43.5	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-04-29 09:09:14	-26.6
PRMLxT1L	2017-04-21 11:23:22	-26.5
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7

Summary	
File Name on meter	EF_HS.033
File Name on PC	SLM_0003788_EF_HS_033.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement	
Description	Alameden Golf & Country Club Site 2
Start	2017-04-29 09:25:29
Stop	2017-04-29 09:35:29
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-04-29 09:09:14
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.5**	73.5	78.5
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LA_{Seq}	55.4 dB		
LASE	83.2 dB		
EAS	23.220 µPa²h		
$LA_{Speak\ (max)}$	2017-04-29 09:35:24	92.7 dB	
LAS_{max}	2017-04-29 09:30:48	67.6 dB	
LAS_{min}	2017-04-29 09:29:43	43.1 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	55.4	55.4	-99.9

LC_{Seq}	66.8 dB
LA_{Seq}	55.4 dB
LCS_{eq} - LAS_{eq}	11.4 dB
LAI_{eq}	59.0 dB
LA_{eq}	55.4 dB
LAI_{eq} - LA_{eq}	3.6 dB

	A		
	dB	**Time Stamp**	**dB**
L_{eq}	55.4		-99.9
$L_{S(max)}$	67.6	2017/04/29 9:30:48	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	43.1	2017/04/29 9:29:43	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	92.7	2017/04/29 9:35:24	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	60.8	dB
LAS10.00	59.1	dB
LAS33.30	54.8	dB
LAS50.00	52.0	dB
LAS66.60	49.1	dB
LAS90.00	46.4	dB

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-04-29 09:09:14	-26.6
PRMLxT1L	2017-04-21 11:23:22	-26.5
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7

Summary

File Name on meter	EF_HS.034
File Name on PC	SLM_0003788_EF_HS_034.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Alameden Golf & Country Club Site 3
Start	2017-04-29 09:36:51
Stop	2017-04-29 09:46:51
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-04-29 09:09:14
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.5**	73.5	78.5
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LASeq	56.3 dB		
LASE	84.1 dB		
EAS	28.591 µPa²h		
LASpeak (max)	2017-04-29 09:46:00	86.6 dB	
LASmax	2017-04-29 09:46:39	72.2 dB	
LASmin	2017-04-29 09:44:18	47.6 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LASpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	56.3	56.3	-99.9

LCSeq	68.7 dB		
LASeq	56.3 dB		
LCSeq - LASeq	12.4 dB		
LAIeq	58.5 dB		
LAeq	56.3 dB		
LAIeq - LAeq	2.2 dB		

	A		
	dB	**Time Stamp**	**dB**
Leq	56.3		-99.9
LS(max)	72.2	2017/04/29 9:46:39	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	47.6	2017/04/29 9:44:18	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	86.6	2017/04/29 9:46:00	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	63.1	dB
LAS10.00	59.9	dB
LAS33.30	52.0	dB
LAS50.00	49.4	dB
LAS66.60	48.8	dB
LAS90.00	48.2	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-04-29 09:09:14	-26.6
PRMLxT1L	2017-04-21 11:23:22	-26.5
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7

Summary

File Name on meter	EF_HS.035
File Name on PC	SLM_0003788_EF_HS_035.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Alameden Golf & Country Club Site 4
Start	2017-04-29 09:49:58
Stop	2017-04-29 09:59:58
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-04-29 09:09:14
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.5**	73.5	78.5
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LASeq	47.1 dB		
LASE	74.9 dB		
EAS	3.432 µPa²h		
LASpeak (max)	2017-04-29 09:50:03	80.6 dB	
LASmax	2017-04-29 09:57:48	59.9 dB	
LASmin	2017-04-29 09:59:00	40.0 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	47.1	47.1	-99.9

LCSeq	58.9 dB
LASeq	47.1 dB
LCSeq - LASeq	11.8 dB
LAIeq	50.1 dB
LAeq	47.1 dB
LAIeq - LAeq	3.0 dB

	A		
	dB	**Time Stamp**	**dB**
Leq	47.1		-99.9
LS(max)	59.9	2017/04/29 9:57:48	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	40.0	2017/04/29 9:59:00	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	80.6	2017/04/29 9:50:03	-99.9

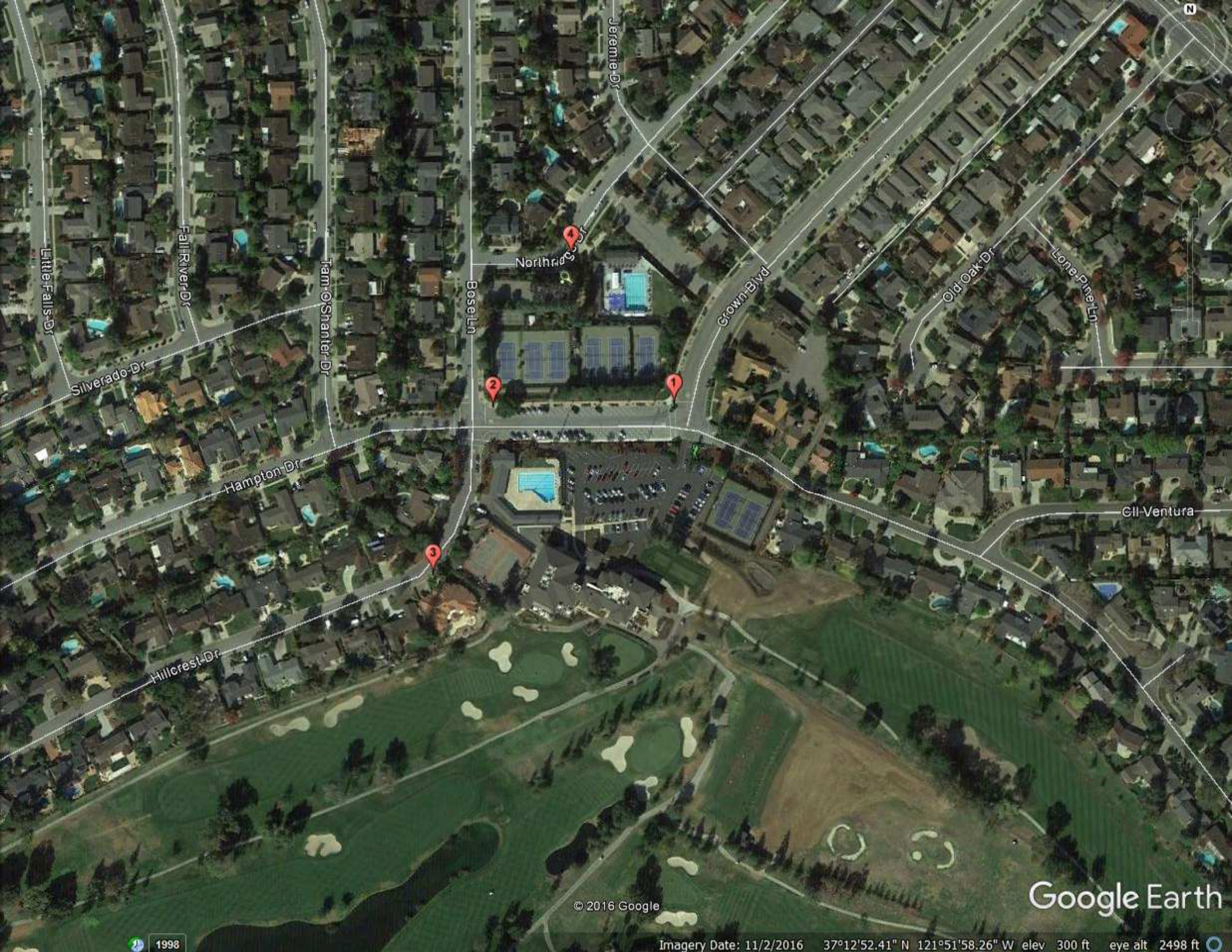
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	52.3	dB
LAS10.00	50.3	dB
LAS33.30	45.5	dB
LAS50.00	44.3	dB
LAS66.60	43.3	dB
LAS90.00	42.0	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-04-29 09:09:14	-26.6
PRMLxT1L	2017-04-21 11:23:22	-26.5
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7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Little Falls Dr
Fall River Dr
Tam O Shanter Dr
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Cll Ventura
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Imagery Date: 11/2/2016 37°12'52.41" N 121°51'58.26" W elev 300 ft eye alt 2498 ft