Appendix H
Noise Study

Evergreen Townhomes Development

Noise Impact Study

City of Gardena, CA

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set-forth by the Federal, State and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An analysis of traffic noise impacts to and from the project site
- An analysis of construction noise impacts

1.2 Site Location and Study Area

The project site is located at 13633 Vermont Avenue, in Gardena California, as shown in Exhibit A. The site is currently zoned as General Commercial Use (C-3) in the City of Gardena General Plan. The project includes a Change of Zone to Single Family Multiple Unit Dwellings (R-4). The proposed use is single-family residential. Land uses surrounding the site include general commercial to the south and north, single-family residential uses to the west, and Vermont Avenue to the east.

1.3 Proposed Project Description

The Project proposes eighty-four (84) three story single-family buildings on an approximately 4.15-acres. As a worst-case scenario, this assessment assumes the project is built in one (1) complete phase. The site plan used for this project, provided by Denovo Planning, is shown in Exhibit B.

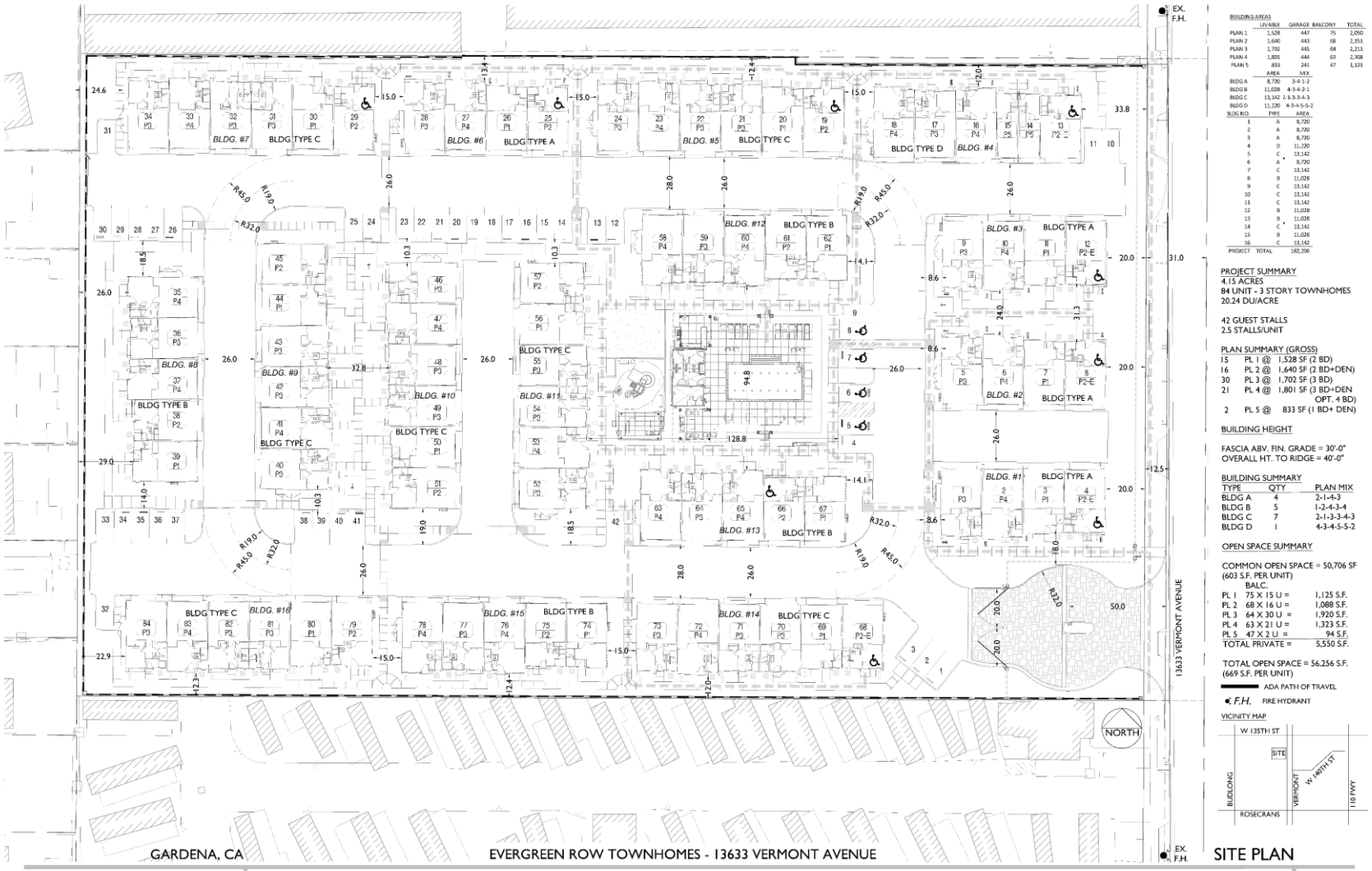
This study assesses the traffic noise to and from the project site and compares the results to the applicable City noise standards. In addition, the study reviews noise generated by construction activities.

Construction activities within the Project area will consist of on-site grading, building, paving, and architectural coating.

Exhibit A

Location Map

Exhibit B
Site Plan



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

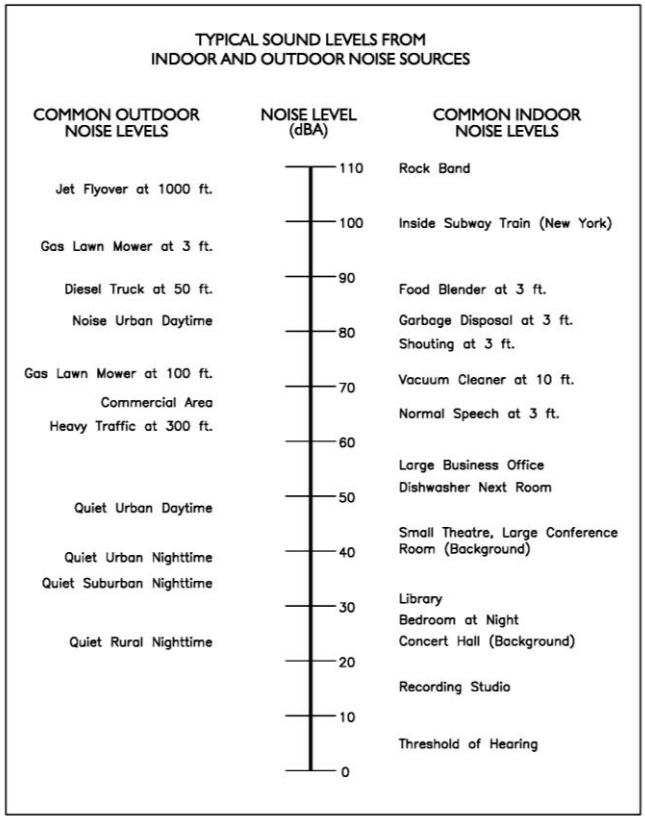
2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

Exhibit C: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines it loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measure in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a 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, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity and turbulence can further impact have far sound can travel.

3.0 Ground-Bourne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be

effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Gardena and noise regulations are addressed through the efforts of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible to regulate noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible to regulate noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers.

The federal government advocates that local jurisdiction use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan.

The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. The City of Gardena has adopted their own version of the State's Land Use Compatibility Guidelines. These are presented on Exhibit D.

Exhibit D: Land Use Compatibility Guidelines

Land Use Category	CNEL, dB						
	55	60	65	70	75	80	
Residential - Single family, multifamily, duplex	A	A	B	C	C		
Residential - Mobile homes	A	A	B	C	C		
Transient Lodging - Motels, hotels	A	A	B	B	C	C	
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	B	C	C		
Auditoriums, Concert Halls, Amphitheaters, Meeting Halls	B	B	C	C			
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	A	A	A	B	B		
Playgrounds, Neighborhood Parks	A	A	A	B	C		
Golf Courses, Riding Stables, Cemeteries	A	A	A	A	B	C	C
Office and Professional Buildings	A	A	A	B	B	C	
Commercial Retail, Banks, Restaurants, Theaters	A	A	A	A	B	B	C
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

Legend

A — NORMALLY ACCEPTABLE
Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

B — CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

C — NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Source: Taken in part from "Aircraft Noise Impact Planning Guidelines for Local Agencies," U.S. Dept. of Housing and Urban Development, TE/NA-472, November 1972.

4.3 City of Gardena Noise Regulations

The City of Gardena outlines their noise regulations and standards within the Noise Element from the General Plan and the Noise Ordinance from the Municipal Code.

City of Gardena General Plan

Applicable policies and standards governing environmental noise in the City are set forth in the General Plan Noise Element. Table N-1 of the Gardena Noise Element outlines the interior and exterior noise standards for community noise environments. According to Table N-1 residential noise limits are 45 dBA CNEL interior and 65 dBA CNEL exterior. It should be noted that if exterior levels exceed this limit, the architectural design should be such that interior noise levels are not greater than 45 dBA. The project will be compared to these noise limits.

In addition to the noise standards, the City has outlined goals, policies and implementation measures to reduce potential noise impacts and are presented below:

Goals, Policies, and Implementation Measures

Policies, goals and implementation program measures from the Noise Element that would mitigate potential impacts on noise include the following.

N Goal 1: Use noise control measures to reduce the impact from transportation noise sources.

N 1.1: Minimize noise conflicts between land uses and the circulation network, and mitigate sound levels where necessary or feasible to ensure the peace and quiet of the community.

N 1.2: Reduce unnecessary traffic volumes in residential neighborhoods by limiting through-ways and by facilitating the use of alternative routes around, rather than through, neighborhoods.

N 1.3: Promote the use of new technologies to minimize traffic noise, such as use of rubberized asphalt in road surface materials.

N1.4: Promote the use of traffic calming measures where appropriate, such as narrow roadways and on street parking, in commercial and mixed-use districts.

N1.5: Reduce noise impacts from vehicles, particularly in residential area through enforcement of speed limits on arterials and local roads.

N1.6: Require compliance with State's Vehicle Code noise standards within the City.

N1.7: Ensure the effective enforcement of City, State and Federal noise standards by all City Divisions.

N1.8: Encourage walking, biking, carpooling, use of public transit and other alternative modes of transportation to minimize vehicular use and associated traffic noise.

N1.9: Encourage, where feasible and reasonable, noise mitigation measures, such as noise barriers and realignments, in the design and construction of new roadway projects in Gardena.

N1.10: Consider noise impacts to residential neighborhoods when designating truck routes and major circulation corridors.

N1.11: Maintain bus routes that meet public transportation needs and minimize noise impacts in residential areas.

N1.12: Encourage the Public Utilities Commission and Union Pacific to minimize the level of noise produced by train movements and horns within Gardena by reducing speeds, improving vehicle system technology, and developing improved procedures for train engineer horn sounding.

N1.13: Encourage Gardena citizen participation and City involvement on committees that would influence future aircraft and railroad operations in Los Angeles County.

N1.14: Participate in the planning and impact assessment activities of the County Airport Land Use Commission and other regional or State agencies relative to any proposed expansion or change in flight patterns at the Hawthorne Municipal Airport or the Compton Airport.

N Goal 2: Incorporate noise considerations into land use planning decisions.

N2.1: Promote noise regulations that establish acceptable noise standards for various land uses throughout Gardena.

N2.2: Require noise/land use compatibility standards to guide future planning and development.

N2.3: Promote compliance with the State's noise insulation standards in the conversion of existing apartments into condominiums wherever feasible.

N2.4: Require mitigation of all significant noise impacts as a condition of project approval.

N2.5: Require proposed projects to be re-viewed for compatibility with nearby noise-sensitive land uses with the intent of reducing noise impacts.

N2.6: Require new residential developments located in proximity to existing commercial/ industrial operations to control residential interior noise levels as a condition of approval and minimize exposure of residents in the site design.

N2.7: Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into the project design.

N2.8: Require that mixed-use structures and areas be designed to prevent transfer of noise and vibration from commercial areas to residential areas.

N2.9: Encourage the creative use of site and building design techniques as a means to minimize noise impacts.

N2.10: Promote replacement of significant noise sources with non-noise-generating land uses when plans for future use of areas are developed.

N2.11: Require the County of Los Angeles, the City of Hawthorne, the City of Los Angeles, and the City of Torrance to minimize or avoid land use/noise conflicts prior to project approvals.

N Goal 3: Develop measures to control non-transportation noise impacts.

N3.1: Require compliance with a quantitative noise ordinance based on the Model Noise Ordinance developed by the (now-defunct) State of California Office of Noise Control.

N3.2: Require compliance with noise regulations. Review and update Gardena's policies and regulations affecting noise.

N3.3: Require compliance with construction hours to minimize the impacts of construction noise on adjacent land.

N3.4: Require new equipment and vehicles purchased by the City to comply with noise performance standards consistent with available noise reduction technology.

N3.5: Require City departments to observe State and Federal occupational safety and health noise standards.

City of Gardena Municipal Code

Sections 8.36.040 and 8.36.050 of the City's Noise Ordinance establish exterior and interior noise standards as it relates to that limit how loud project operation noise can be. The allowable exterior noise levels presented in Table 1, limit project operational noise at nearby land uses; and the allowable interior noise levels presented in Table 2, limit how loud project operational noise can be inside nearby residential and mixed-use structures. Subsection 8.36.040(C), states that in the event the ambient noise level exceeds the noise standard, the ambient noise level shall become the noise standard.

<Table 1 Next Page>

Table 1: Allowable Exterior Noise Level (dBA, Leq)

Type of Land Use	15-Minute Average Noise (dBA, Leq)		Maximum Noise Level (dBA, Lmax)	
	7 AM-10 PM	10 PM to 7 AM	7 AM-10 PM	10 PM to 7 AM
Residential	55	50	75	70
Residential portions of mixed use	60	50	80	70
Commercial	65	60	85	80
Industrial or manufacturing	70	70	90	90

Source: City of Gardena Municipal Code Section 8.36.040.
A. The exterior noise standards, unless otherwise specifically indicated, shall apply to all property within the City. The Land Use category refers to the affected receiver property. In the event the alleged offensive noise contains a pure tone such as a whine, screech, or hum, or contains repetitive, impulsive or impact noise such as hammering or riveting, or contains music or speech conveying informational content, each of the above noise standards shall be reduced by 5 dB.
B. No person shall operate or cause to be operated, any source of sound at any location within the incorporated City 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 from any other property, either incorporated or unincorporated, to exceed the noise standards presented in the above table.
C. In the event the ambient noise level exceeds the noise standard, the ambient noise level shall become the noise standard.

Table 2: Allowable Interior Noise Level (dBA, Leq)

Type of Land Use	15-Minute Average Noise (dBA, Leq)		Maximum Noise Level (dBA, Lmax)	
	7 AM-10 PM	10 PM to 7 AM	7 AM-10 PM	10 PM to 7 AM
Residential	45	40	65	60
Residential portions of mixed use	45	40	70	60

Source: City of Gardena Municipal Code Section 8.36.050.
A. The interior noise standards presented above, unless otherwise specifically indicated, shall apply to all residential dwellings with windows in their normal seasonal configuration, where such dwelling is the receiver of intrusive noise:
In the event the alleged offensive noise contains a pure tone such as a whine, screech, or hum, or contains repetitive, impulsive or impact noise such as hammering or riveting, or contains music or speech conveying informational content, each of the above noise standards shall be reduced by 5 dB.
B. No person shall operate or cause to be operated, any source of sound at any location within the incorporated City 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 within any residential dwelling, either incorporated or unincorporated, to exceed the noise standards of paragraph (A).
C. In the event the ambient noise level exceeds the noise standard, the ambient noise level shall become the noise standard.

Construction Noise Regulations

Per Section 8.36.080 of the City's Noise Ordinance, project construction activities are explicitly exempt from the exterior and interior noise standards presented in Sections 8.36.040 and 8.36.050. Specifically, the ordinance states that "noise associated with construction, repair, remodeling, grading or demolition of any real property are exempt from the provisions in Chapter 8.36 (City of Gardena Noise Ordinance), provided said activities do not take place between the hours of 6:00 PM and 7:00 AM on weekdays between the hours of 6:00 PM and 9:00 AM on Saturday or any time on Sunday or a Federal holiday".

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance to the City of Gardena and the CalTrans technical noise specifications. All measurements equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a wind screen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

Noise monitoring locations were selected based on the distance from Vermont Ave to the nearest sensitive on-site receptors. Short-term noise measurements were conducted near the property lines of the project site and are illustrated in Exhibit E. Appendix A includes photos, field sheet, and measured noise data. Exhibit E illustrates the location of the measurements.

5.3 Stationary Noise Modeling

SoundPLAN acoustical modeling software was utilized to model project operational noise. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site sources (air conditioner units).

The SP model assumes a total of 84 air conditioning units are operating simultaneously (worst-case scenario), when in actuality the noise will be intermittent and lower in noise level. MD utilized a reference noise level of 68 dBA at 3-feet away within the model. This noise level was utilized as it was an average noise level from a sample set of HVAC unit data. Typical HVAC noise level ranges between 62 to 77 dBA at 3 to 5 feet away from said unit.

5.4 FHWA Traffic Noise Prediction Model/SoundPlan

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes and percentages correspond to the project's traffic impact study as prepared by Kittelson & Associates Local Transportation Assessment and The City of Gardena Department of Public Works 2015 Traffic Works. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour through-out a 24-hour period

Table 3 indicates the roadway parameters and vehicle distribution utilized for this study.

Table 3: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT[1]	Existing + Project ADT[2]	Speed (MPH)	Site Conditions
Vermont Ave	Arterial	20,400	20,875	45	Soft
Vermont Ave Vehicle Distribution and Mix[3]					
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**	**Total % of Traffic Flow**
Automobiles		77.5	12.9	9.6	97.42
Medium Trucks		84.8	4.9	10.3	1.54
Heavy Trucks		86.5	2.7	10.8	0.74

Notes:
[1] Existing ADT volumes for Vermont are from the City of Gardena's Circulation element
[2] E+P estimated with a 2% growth rate factor.
[3] Vehicle distribution data is based on typical Southern California roadway vehicle percentages for Secondary Arterials

To determine the project's noise impact to the surrounding land uses, MD generated noise contours for existing ADT, and existing + project conditions. Noise contours are used to provide a characterization of sound levels experienced at a set distance from the centerline of a subject roadway. They are intended to represent a worst-case scenario and do not take into account structures, sound walls, topography, and/or other sound attenuating features which may further reduce the actual noise level. Noise contours are developed for comparative purposes and are used to demonstrate potential increases/decreases along subject roadways as a result of a project.

In addition, this assessment calculates future traffic noise levels at the project site associated with Vermont Ave. For the purpose of this evaluation MD used the existing + project to represent the future noise level to the first row of residential units with direct line of sight to Vermont Ave. The traffic noise calculation worksheet outputs are located in Appendix B.

5.5 Interior Noise Modeling

The interior noise level is the difference between the projected exterior noise level at the structure's facade and the noise reduction provided by the structure itself. Typical building construction will provide a conservative 12 dBA noise level reduction with a "windows open" condition and a very conservative 20 dBA noise level reduction with "windows closed". MD estimated the interior noise level by subtracting the building shell design from the predicted exterior noise level.

With the "windows closed" the project will require mechanical fresh air ventilation (e.g. air conditioning) to the habitable dwelling units.

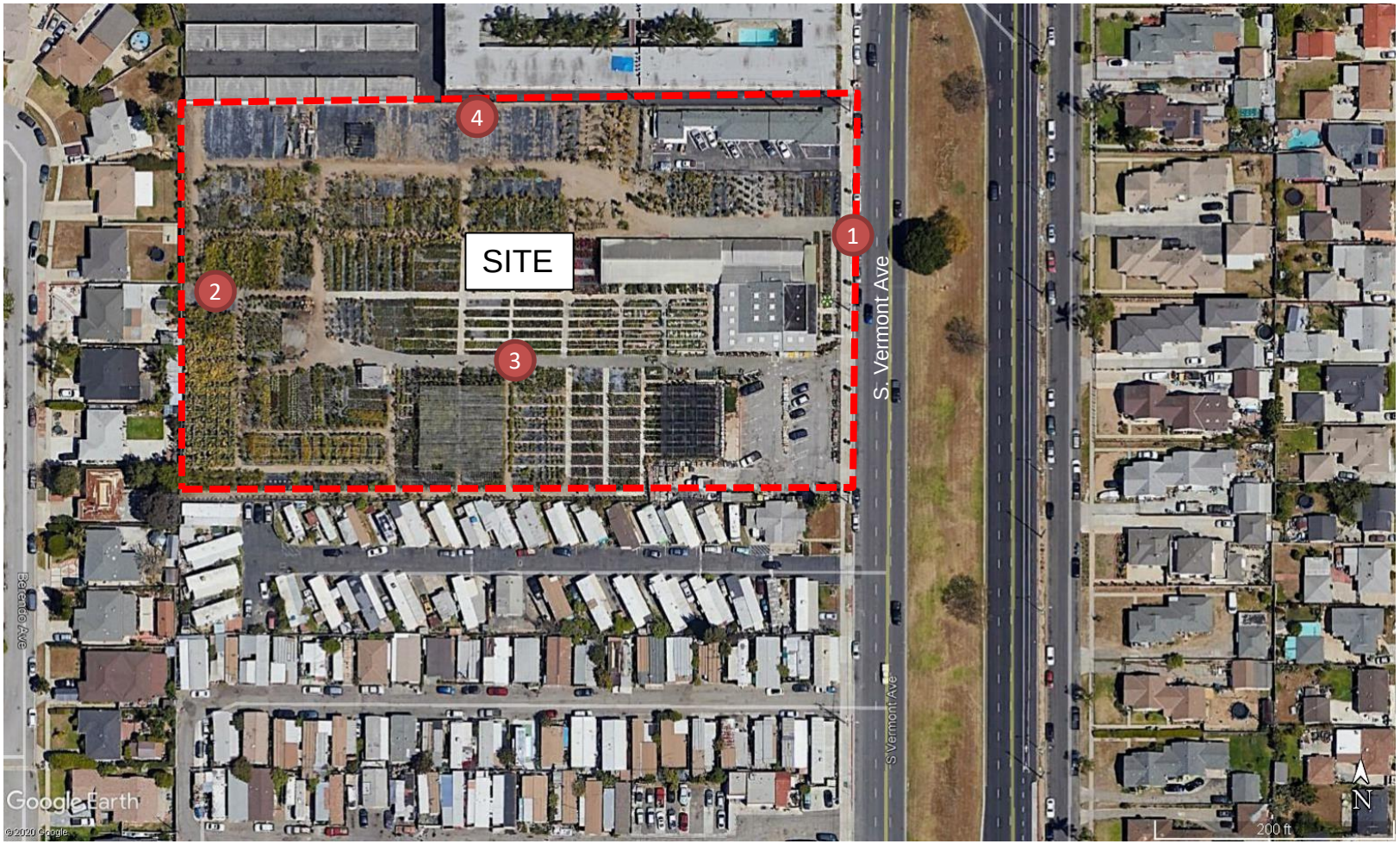
5.6 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

The project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete and building phases of construction. The construction noise calculation output worksheet is located in Appendix D. The following assumptions relevant to short-term construction noise impacts were used:

- It is estimated that construction will occur over a year to year and a half time period. Construction noise is expected to be the loudest during the grading, concrete, and building phases.

Exhibit E
Measurement Location



X = Measurement location

= boundary

6.0 Existing Noise Environment

Four (4) short term ambient noise measurements were conducted at the project site. The measurements measured the 10-min Leq, Lmin, Lmax and other statistical data (e.g. L2, L8). The noise measurements were taken to determine the existing baseline noise conditions.

6.1 Short-Term Noise Measurement Results

The results of the Short-term noise data are presented in Table 4.

Table 4: Short-Term Noise Measurement Data (dBA)[1]

Location	Date	Start Time	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
Site 1	4/30/2020	10:48 AM	63.2	76.1	46.1	71.4	68.2	64.2	57.2
Site 2	4/30/2020	10:55 AM	45.2	73.8	39.3	47.7	44.4	42.4	41.2
Site 3	4/30/2020	11:06 AM	46.1	54.6	41.6	51.9	49.1	46.1	44.8
Site 4	4/30/2020	11:18 AM	46.4	57.7	43.2	51.1	48.2	46.3	45.4

Notes:
1. Measurements were taken over a ten-minute interval. Measurement locations are indicated in Exhibit E.

Short-term noise data indicates the ambient noise levels range between 45.2 to 63.2 dBA Leq. The measured noise levels and field notes indicate that traffic noise is the main source of noise impacting the project site.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts to the project and compares the results to the City's Noise Standards. The analysis details the estimated exterior noise levels associated with traffic from adjacent roadway sources.

7.1 Future Exterior Noise

The following outlines the exterior noise levels associated with the proposed project.

7.1.1 Off-site Traffic Noise Impact

The potential off-site noise impacts caused by the increase in vehicular traffic as a result of the project were calculated at a distance of 50 feet. The distance to the 55, 60, 65, and 70 dBA CNEL noise contours are also provided for reference. The noise level at 50 feet is representative of approximate distances to existing homes along the subject roadway. The noise contours were calculated for the following scenarios and conditions:

- Existing Condition: This scenario refers to the existing year traffic noise condition and is demonstrated in Table 5.

- Existing + Project Condition: This scenario refers to the existing year plus project traffic noise condition and is demonstrated in Table 5.

Existing/Existing + Project Scenario Comparison

Table 5 provides the Existing and Existing + Project noise conditions and shows the change in noise level as a result of the proposed project. As shown in Table 5, the increase in traffic noise for the Existing and Existing + Project scenario would have a nominal increase of 0.1 dBA at 50 feet from the centerline of the subject roadway.

Table 5: Noise Levels Along Roadways (dBA CNEL)

Existing Without Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Vermont Ave	Rosecrans to 135th St	69.7	48	102	221	476

Existing + Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Vermont Ave	Rosecrans to 135th St	69.8	48	104	224	483

Noise Levels as a Result of Projects

Roadway[1]	Segment	CNEL at 50 Feet dBA[2]			
		Existing Without Project	Existing With Project	Change in Noise Level	Potential Significant Impact
Vermont Ave	Rosecrans to 135th St	69.7	69.8	0.1	No

Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated from centerline of subject roadway.

7.1.2 On-Site Traffic Noise Impact

Traffic noise from the local roadway network was evaluated and compared to the City's Exterior Noise Standard. Per the City's Exterior Noise Standard (Exhibit D), residential noise limit is 60 dBA CNEL. As shown in Table 5, Existing Plus Project traffic 60 dBA CNEL noise projections from Vermont Avenue will reach up to 224 feet from the centerline of the road. Residential structures are located approximately 65 feet away from the centerline of Vermont Avenue and have a projected noise level of 69.8 dBA.

The outdoor pool area will be shielded by the architectural building layout of the project. Noise levels will be below the 60 dBA CNEL. Therefore, the impact is not significant at outdoor pool area.

7.1.3 Noise Impacts to Off-Site Receptors Due to Stationary Sources

Sensitive receptors that may be affected by project operational noise include adjacent land uses to the south and west. The worst-case stationary noise was modeled using SoundPlan acoustical modeling software. The model utilizes a reference level of 68 dBA at 3-feet from the air conditioning unit.

As conditional of approval, the project will need to demonstrate compliance to the City's noise ordinance as it relates to HVAC noise. This can be achieved by implementing an HVAC system with a noise level range between 62 to 77 dBA.

A total of four (4) receptors were modeled using the SoundPLAN noise model to evaluate the proposed project's operational impact. A receptor is denoted by a yellow dot. All yellow dots represent either an existing building, a property line, or a sensitive receptor such as an outdoor sensitive area (courtyard, patio, backyard, etc.) and can be found in Exhibit F. It should be noted that analysis was based on the original site plan illustrated in Exhibit F. The proposed modifications to the original site plan to include the addition of a pool would not result in modifications to the building locations or associated AC units and therefore the analysis would not change.

Project Operational Noise Levels

Exhibit F shows the "project only" operational noise levels at the property lines and/or sensitive receptor area and how the noise will propagate at the site. Operational noise levels at the adjacent uses are anticipated to range between 35.4 dBA to 36.4 dBA Leq (depending on the location).

The "project only" noise projections to the adjacent uses are below the City's 55 dBA residential limit, as outlined within the City's noise ordinance (see Table 1).

Project Plus Ambient Operational Noise Levels

As shown in Table 6, project plus ambient noise level projections are anticipated to range between 45.7 to 46.5 dBA Leq at receptors (R1 – R4).

Table 6: Worst-case Predicted Operational Leq Noise Level

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq)	Change in Noise Level as Result of Project
1	1	46.1	36.1	46.5	**55.0**	0.4
2	1		35.4	46.5		0.4
3	1		36.2	46.5		0.4
4	1	45.2	36.4	45.7		0.5

Notes:
[1.] Receptors 1-4 represent residential uses
[2.] Existing measured ambient condition
[3.] See Exhibit F for the operational noise level projections at said receptors.

As shown in Table 6, the project will increase the worst-case noise level by 0.4 to 0.5 dBA Leq at receptors 1-4. As discussed in Section 2.5 of this report, an increase in 1 dB is not perceptible; an increase of 3 dB is just perceptible, and an increase of 5 dB is clearly perceptible to the human ear. The project's contribution to existing noise levels would fall into the "not perceptible" acoustic characteristic.

As a conservative measure MD has compared the worst-case project daytime noise levels with the measured ambient levels. The project noise level is approximately 10 dB below the existing ambient noise level, and the total combined noise level is below both the 55 dBA daytime noise limit and the 50 dBA nighttime noise limit. Therefore, the project complies with all local noise regulations.

7.2 Interior Noise Levels

The future interior noise level was calculated for the sensitive receptor locations using a typical "windows open" and "windows closed" condition. A "windows open" condition assumes 12 dBA of noise attenuation from the exterior noise level. A "windows closed" condition" assumes 20 dBA of noise attenuation from the exterior noise level. Table 7 indicates the first and second floor interior noise levels for the project site.

<Table 7, next page>

Table 7: Future Interior Noise Levels (dBA CNEL)

Location	Roadway Noise Source	Exterior Facade Study Location	Noise Level at Building Facade[1]	Interior Noise Reduction Required to Meet Interior Noise Standard of 45 dBA CNEL	Interior Noise Level w/ Typical Residential Windows (STC≥ 25)		STC Rating for Windows Facing Subject Roadway[4]
					Window Open[2]	Windows Closed[3]	
1st Row Units Along Vermont Ave Property Line	Vermont Ave	1st Floor	69.8	24.8	57.8	49.8	28
		2nd Floor	69.6	24.6	57.6	49.6	28

Notes:
1. Noise level from Table 5 and from worksheets Appendix C.
2. A minimum of 12 dBA noise reduction is assumed with a "windows open" condition.
3. A minimum of 20 dBA noise reduction is assumed with a "windows closed" condition.
4. Indicates the required STC rating to meet the interior noise standard.

As shown in Table 7, the interior noise level will range from 57.6 to 57.8 dBA CNEL with the windows open and 49.6 to 49.8 dBA CNEL with the windows closed.

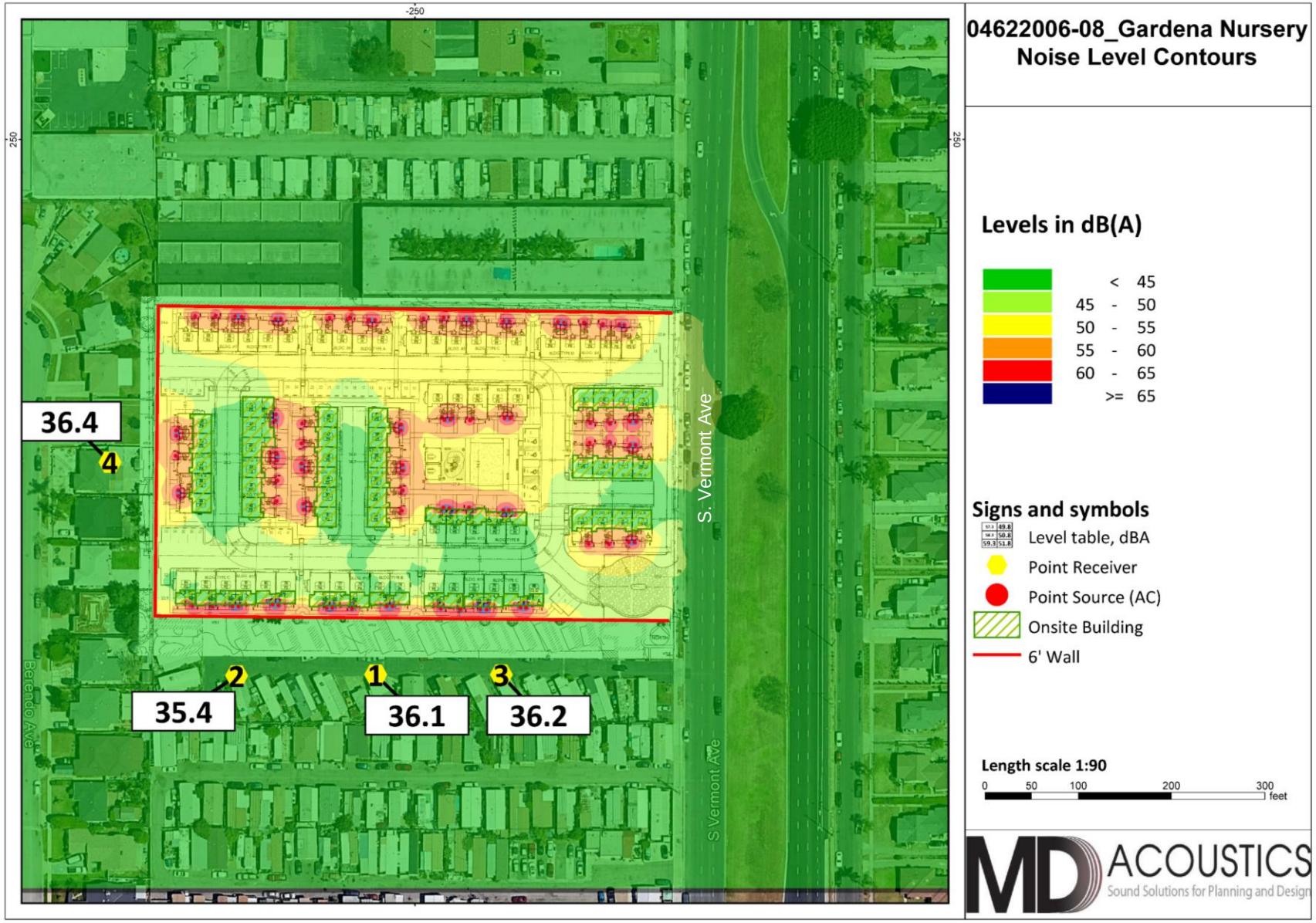
7.4 Condition for Approval

The following Conditions for Approval have been provided to assure that the project will meet all local noise ordinances.

1. To meet the City's interior 45 dBA CNEL standard a "windows closed" condition is required. The windows and sliding glass doors directly facing the Vermont Avenue will require a minimum STC rating of 28 for the 1st floor and 2nd floors. A "windows closed" condition simply means that in order to achieve a 45 dBA CNEL interior noise level, the windows must be closed and does not mean the windows must be fixed.

Exhibit F

Worst Case Operational Noise Levels



8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction. The construction noise and vibration level projections are provided in the sections below.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 8.

Table 8: Typical Construction Noise Levels[1]

Equipment Powered by Internal Combustion Engines

Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86

Impact Equipment

Type	Noise Levels (dBA) at 50 Feet
Saws	71 - 82
Vibrators	68 - 82

Notes:
[1] Referenced Noise Levels from the Environmental Protection Agency (EPA)

Construction is anticipated to occur during the permissible hours according to the City's General Plan. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City's General Plan. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. Furthermore, noise reduction measures are provided to further reduce construction noise. The construction noise impact is considered less than significant; however, construction noise level projections are provided.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels will be loudest during grading phase. A likely worst-case construction noise scenario during grading assumes the use of a grader, a dozer, an excavator, and three (3) backhoes operating at 260 feet (center of the project) from the nearest residential sensitive receptors to the west.

To ensure that construction activities do not disrupt the adjacent land uses the noise reduction measures outlined in Section 8.3 are provided.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bull dozer.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 9 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 9: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 10 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

Table 10: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

The nearest residential structures to the west are approximately 80 feet from the project. At a distance of 80 feet, a large bulldozer would yield a worst-case 0.025 PPV (in/sec) which slightly perceptible but sustainably below any risk of damage (0.5 in/sec PPV is the threshold of residential structures). The impact is less than significant, and no mitigation is required.

8.3 Construction Noise Reduction Measures

Construction operations must follow the City's General Plan and the Noise Ordinance, which states that construction, repair or excavation work performed must occur within the permissible hours. To further ensure that construction activities do not disrupt the adjacent land uses, the following measures should be taken:

1. Construction should occur during the permissible hours.

2. During construction, the contactor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.

3. The contractor should locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

4. Idling equipment should be turned off when not in use.

5. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of Gardena : Noise Element .

City of Gardena: Noise Ordinance.

Kittelson & Associates Local Transportation Assessment: June 1,2020

Caltrans Construction Vibration Manual, Konan Vibration Criteria

Appendix A:

Field Measurement Data

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

10-Minute Continuous Noise Measurement Datasheet

Project: Gardena evergreen
Site Address/Location: 13633 Vermont Ave
Date: 4/30/2020
Field Tech/Engineer: Jason Schuyler

Site Observations: Clear sky, four short term measurements were performed within 5-feet of existing north and west property line and middle of property.

General Location:
Sound Meter: NTi Audio **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-minute interval
Meteorological Con.: 78 degrees F, no wind
Site ID: ST-1 thru ST-4

Site Topo: Flat nearby buildings
Ground Type: Hard site conditions, reflective

Noise Source(s) w/ Distance:

ST1- 43' from Vermont Ave
2 -568' from Vermont Ave
3 -305' from Vermont Ave
4 -357' from Vermont Ave

Figure 1: Monitoring Locations

Figure 2: ST-1 Photo

Figure 3: ST-2 Photo

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Simi Valley, CA 93065

10-Minute Noise Measurement Datasheet - Cont.

Project: Gardena evergreen
Site Address/Location: 13633 Vermont Ave
Site ID: ST-1 thru ST-4

Figure 4: ST-3 Photo

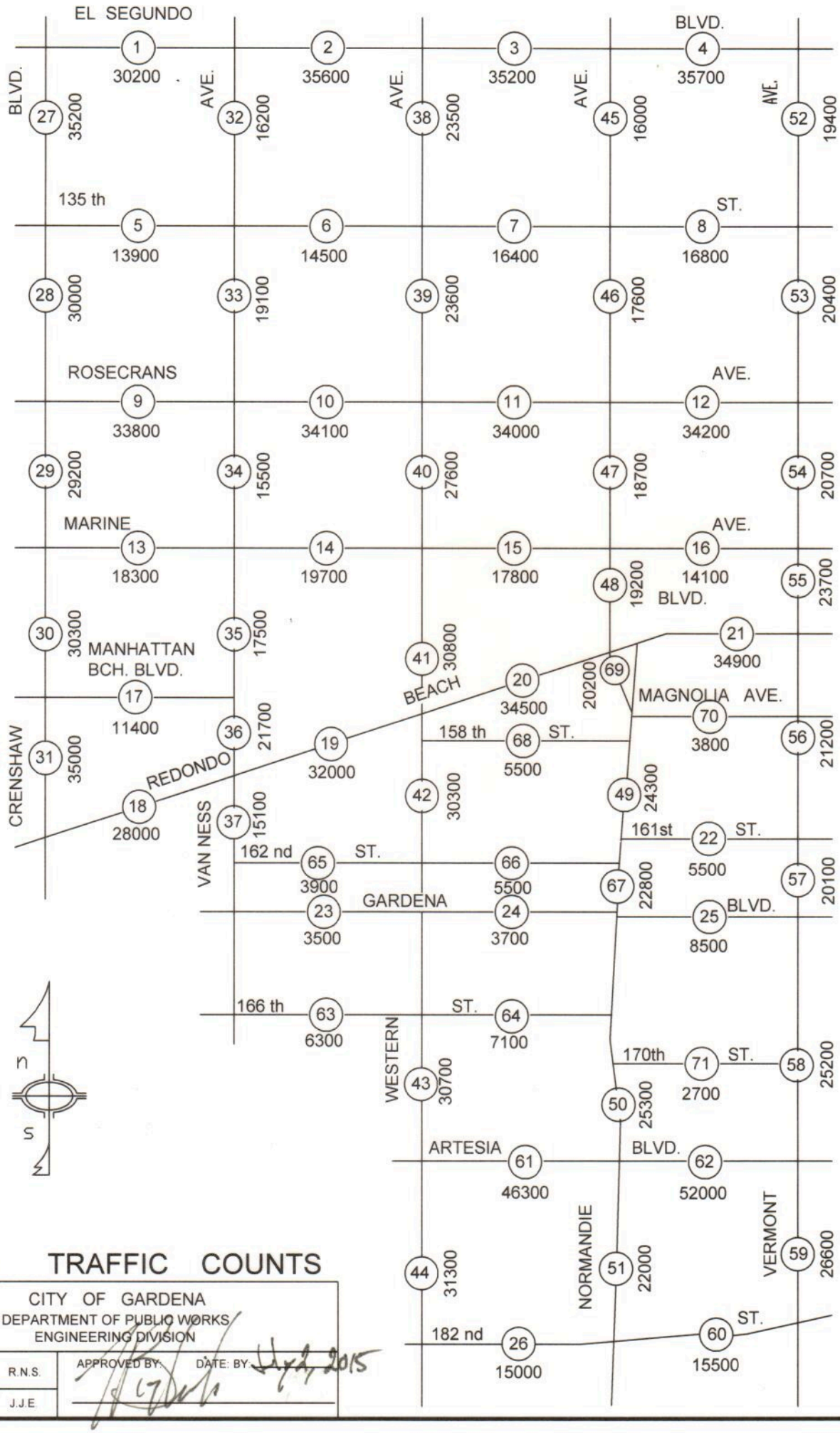
Figure 5: ST-3 Photo

Table 1:Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
1	10:48 AM	10:58 AM	63.2	76.1	46.1	71.4	68.2	64.2	57.2	48.9
2	10:55 AM	11:05 AM	45.2	73.8	39.3	47.7	44.4	42.4	41.2	40.3
3	11:06 AM	11:16 AM	46.1	54.6	41.6	51.9	49.1	46.1	44.8	42.9
4	11:18 AM	11:28 AM	46.4	57.7	43.2	51.1	48.2	46.3	45.4	44.4

Appendix B:

Traffic Data



2015 TRAFFIC COUNTS

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

DRAWN BY:	R.N.S.	APPROVED BY:	DATE: BY: 4/2, 2015
CHECKED BY:	J.J.E.		

TRIP GENERATION ESTIMATE

Project trip generation was estimated for the following three time periods:

- Weekday daily
- Weekday AM peak hour
- Weekday PM peak hour

Trips were estimated using trip generation data provided by the Institute of Transportation Engineers (ITE) and shown in Table 1. Trip generation was estimated using the multi-family housing (mid-rise) land use code, which is appropriate for townhomes of at least three stories. Note, although the proposed project would replace existing uses, the trip generation conservatively does not incorporate a credit for these existing trips.

As shown in Table 1, the proposed project is expected to generate 457 weekday daily vehicle trips, 30 weekday AM peak hour vehicle trips, and 37 weekday PM peak hour vehicle trips.

Table 1: Project Trip Generation Estimate

Trip Generation Rates								
Land Use	**Rate**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
			In	**Out**	**Total**	**In**	**Out**	**Total**
Multifamily Housing – Mid-Rise (ITE Code 221)	DU	5.44	26%	74%	0.36	61%	39%	0.44
Trip Generation Estimates								
Land Use	**Size**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
			In	**Out**	**Total**	**In**	**Out**	**Total**
Multifamily Housing – Mid-Rise (ITE Code 221)	84 DU	457	8	22	30	23	14	37

Source: Kittelson & Associates, Inc., 2020; Institute of Transportation Engineers, 2017.
Note: DU signifies dwelling units.

TRIP DISTRIBUTION AND ASSIGNMENT

For the purposes of this analysis, project trip distribution estimates were developed using the US Census OnTheMap tool, which is a web-based mapping and reporting application that shows where workers are employed and where they live, based on the Longitudinal Employer-Household Dynamics (LEHD) database. Given that the proposed project consists of residential units, the tool's work trip trends for resident workers living in the block group were utilized. According to the LEHD data, major commute destinations for resident workers in the area include downtown Los Angeles, LAX Airport, Lynwood (around St. Francis Medical Center), Torrance, downtown Long Beach, and destinations in Gardena along Vermont Avenue and Redondo Beach Boulevard. Project trip distribution estimates are shown in Figure 3.

Based on these trip distribution estimates, project trips were assigned to the study area roadways based on local travel patterns and the locations of the nearby freeway on- and off-ramps. Weekday AM/PM inbound and outbound project trip assignment are shown in Figure 4 and Figure 5. It should be noted that the project trip assignment includes U-turns since the project access point is a single right-in/right-out only driveway off Vermont Avenue. These consist of outbound U-turns at the intersection of Vermont Avenue and Rosecrans Avenue and inbound U-turns at the intersection of Vermont Avenue and 135th Street.

Appendix C:

SoundPlan Input/Output

Gardena Nursery
Octave spectra of the sources in dB(A) - Situation 2: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 1	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 2	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 3	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 4	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 5	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 6	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 7	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 8	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 9	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 10	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 11	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 12	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 13	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 14	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 15	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 16	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 17	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 18	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 19	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 20	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 21	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 22	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 23	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 24	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 25	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 26	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 27	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 28	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 29	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 30	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4

Gardena Nursery
Octave spectra of the sources in dB(A) - Situation 2: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 31	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 32	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 33	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 34	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 35	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 36	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 37	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 38	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 39	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 40	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 41	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 42	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 43	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 44	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 45	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 46	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 47	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 48	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 49	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 50	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 51	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 52	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 53	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 54	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 55	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 56	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 57	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 58	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 59	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 60	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4

Gardena Nursery
Octave spectra of the sources in dB(A) - Situation 2: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 61	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 62	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 63	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 64	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 65	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 66	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 67	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 68	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 69	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 70	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 71	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 72	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 73	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 74	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 75	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 76	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 77	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 78	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 79	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 80	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 81	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 82	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 83	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4
AC Unit 84	Point				66.5	66.5	0.0	0.0		0	100%/24h	AC 3' 65.35dBA	-2.6	18.5	41.8	51.7	56.9	63.4	61.2	54.3	43.4

Gardena Nursery
Contribution level - Situation 2: Outdoor SP

Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
Receiver Reciever 1 Fl G dB(A) Ldn 35.4 dB(A)						
AC Unit 1	Default industrial noise	Point		25.2	0.0	
AC Unit 2	Default industrial noise	Point		25.8	0.0	
AC Unit 3	Default industrial noise	Point		26.1	0.0	
AC Unit 4	Default industrial noise	Point		26.1	0.0	
AC Unit 5	Default industrial noise	Point		25.7	0.0	
AC Unit 6	Default industrial noise	Point		25.6	0.0	
AC Unit 7	Default industrial noise	Point		20.6	0.0	
AC Unit 8	Default industrial noise	Point		22.4	0.0	
AC Unit 9	Default industrial noise	Point		22.1	0.0	
AC Unit 10	Default industrial noise	Point		21.4	0.0	
AC Unit 11	Default industrial noise	Point		20.0	0.0	
AC Unit 12	Default industrial noise	Point		19.4	0.0	
AC Unit 13	Default industrial noise	Point		18.8	0.0	
AC Unit 14	Default industrial noise	Point		17.2	0.0	
AC Unit 15	Default industrial noise	Point		18.1	0.0	
AC Unit 16	Default industrial noise	Point		17.1	0.0	
AC Unit 17	Default industrial noise	Point		16.9	0.0	
AC Unit 18	Default industrial noise	Point		-3.2	0.0	
AC Unit 19	Default industrial noise	Point		-3.1	0.0	
AC Unit 20	Default industrial noise	Point		-2.2	0.0	
AC Unit 21	Default industrial noise	Point		-1.7	0.0	
AC Unit 22	Default industrial noise	Point		-1.6	0.0	
AC Unit 23	Default industrial noise	Point		1.6	0.0	
AC Unit 24	Default industrial noise	Point		2.3	0.0	
AC Unit 25	Default industrial noise	Point		-1.3	0.0	
AC Unit 26	Default industrial noise	Point		0.9	0.0	
AC Unit 27	Default industrial noise	Point		4.1	0.0	
AC Unit 28	Default industrial noise	Point		1.5	0.0	
AC Unit 29	Default industrial noise	Point		2.3	0.0	
AC Unit 30	Default industrial noise	Point		1.2	0.0	
AC Unit 31	Default industrial noise	Point		-0.3	0.0	
AC Unit 32	Default industrial noise	Point		1.0	0.0	
AC Unit 33	Default industrial noise	Point		1.0	0.0	
AC Unit 34	Default industrial noise	Point		-3.1	0.0	
AC Unit 35	Default industrial noise	Point		-1.0	0.0	
AC Unit 36	Default industrial noise	Point		-2.2	0.0	
AC Unit 37	Default industrial noise	Point		-2.2	0.0	
AC Unit 38	Default industrial noise	Point		-3.4	0.0	
AC Unit 39	Default industrial noise	Point		-4.8	0.0	
AC Unit 40	Default industrial noise	Point		-6.3	0.0	
AC Unit 41	Default industrial noise	Point		-3.4	0.0	
AC Unit 42	Default industrial noise	Point		-0.8	0.0	
AC Unit 43	Default industrial noise	Point		-1.0	0.0	
AC Unit 44	Default industrial noise	Point		0.1	0.0	

Gardena Nursery
Contribution level - Situation 2: Outdoor SP

Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 45	Default industrial noise	Point		0.1	0.0	
AC Unit 46	Default industrial noise	Point		4.0	0.0	
AC Unit 47	Default industrial noise	Point		3.6	0.0	
AC Unit 48	Default industrial noise	Point		2.8	0.0	
AC Unit 49	Default industrial noise	Point		3.5	0.0	
AC Unit 50	Default industrial noise	Point		3.1	0.0	
AC Unit 51	Default industrial noise	Point		3.5	0.0	
AC Unit 52	Default industrial noise	Point		0.9	0.0	
AC Unit 53	Default industrial noise	Point		-0.2	0.0	
AC Unit 54	Default industrial noise	Point		3.6	0.0	
AC Unit 55	Default industrial noise	Point		4.8	0.0	
AC Unit 56	Default industrial noise	Point		5.1	0.0	
AC Unit 57	Default industrial noise	Point		5.5	0.0	
AC Unit 58	Default industrial noise	Point		4.1	0.0	
AC Unit 59	Default industrial noise	Point		3.9	0.0	
AC Unit 60	Default industrial noise	Point		3.4	0.0	
AC Unit 61	Default industrial noise	Point		-0.5	0.0	
AC Unit 62	Default industrial noise	Point		-0.6	0.0	
AC Unit 63	Default industrial noise	Point		1.4	0.0	
AC Unit 64	Default industrial noise	Point		1.1	0.0	
AC Unit 65	Default industrial noise	Point		3.4	0.0	
AC Unit 66	Default industrial noise	Point		3.5	0.0	
AC Unit 67	Default industrial noise	Point		10.5	0.0	
AC Unit 68	Default industrial noise	Point		2.2	0.0	
AC Unit 69	Default industrial noise	Point		2.1	0.0	
AC Unit 70	Default industrial noise	Point		0.4	0.0	
AC Unit 71	Default industrial noise	Point		0.3	0.0	
AC Unit 72	Default industrial noise	Point		0.0	0.0	
AC Unit 73	Default industrial noise	Point		0.8	0.0	
AC Unit 74	Default industrial noise	Point		0.4	0.0	
AC Unit 75	Default industrial noise	Point		1.5	0.0	
AC Unit 76	Default industrial noise	Point		1.6	0.0	
AC Unit 77	Default industrial noise	Point		0.3	0.0	
AC Unit 78	Default industrial noise	Point		-0.2	0.0	
AC Unit 79	Default industrial noise	Point		0.3	0.0	
AC Unit 80	Default industrial noise	Point		0.0	0.0	
AC Unit 81	Default industrial noise	Point		-0.4	0.0	
AC Unit 82	Default industrial noise	Point		-0.6	0.0	
AC Unit 83	Default industrial noise	Point		-0.7	0.0	
AC Unit 84	Default industrial noise	Point		-0.9	0.0	
Receiver Reciever 2 Fl G dB(A) Ldn 36.1 dB(A)						
AC Unit 1	Default industrial noise	Point		18.7	0.0	
AC Unit 2	Default industrial noise	Point		20.3	0.0	
AC Unit 3	Default industrial noise	Point		21.8	0.0	
AC Unit 4	Default industrial noise	Point		22.3	0.0	

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Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 5	Default industrial noise	Point		20.8	0.0	
AC Unit 6	Default industrial noise	Point		21.0	0.0	
AC Unit 7	Default industrial noise	Point		25.3	0.0	
AC Unit 8	Default industrial noise	Point		25.5	0.0	
AC Unit 9	Default industrial noise	Point		26.0	0.0	
AC Unit 10	Default industrial noise	Point		26.5	0.0	
AC Unit 11	Default industrial noise	Point		26.4	0.0	
AC Unit 12	Default industrial noise	Point		23.8	0.0	
AC Unit 13	Default industrial noise	Point		24.1	0.0	
AC Unit 14	Default industrial noise	Point		23.3	0.0	
AC Unit 15	Default industrial noise	Point		22.9	0.0	
AC Unit 16	Default industrial noise	Point		21.8	0.0	
AC Unit 17	Default industrial noise	Point		21.6	0.0	
AC Unit 18	Default industrial noise	Point		0.6	0.0	
AC Unit 19	Default industrial noise	Point		0.8	0.0	
AC Unit 20	Default industrial noise	Point		1.5	0.0	
AC Unit 21	Default industrial noise	Point		1.9	0.0	
AC Unit 22	Default industrial noise	Point		2.4	0.0	
AC Unit 23	Default industrial noise	Point		4.7	0.0	
AC Unit 24	Default industrial noise	Point		4.2	0.0	
AC Unit 25	Default industrial noise	Point		3.0	0.0	
AC Unit 26	Default industrial noise	Point		2.8	0.0	
AC Unit 27	Default industrial noise	Point		2.1	0.0	
AC Unit 28	Default industrial noise	Point		1.9	0.0	
AC Unit 29	Default industrial noise	Point		2.8	0.0	
AC Unit 30	Default industrial noise	Point		2.8	0.0	
AC Unit 31	Default industrial noise	Point		0.1	0.0	
AC Unit 32	Default industrial noise	Point		0.5	0.0	
AC Unit 33	Default industrial noise	Point		0.4	0.0	
AC Unit 34	Default industrial noise	Point		11.7	0.0	
AC Unit 35	Default industrial noise	Point		-2.9	0.0	
AC Unit 36	Default industrial noise	Point		-0.9	0.0	
AC Unit 37	Default industrial noise	Point		-1.1	0.0	
AC Unit 38	Default industrial noise	Point		0.4	0.0	
AC Unit 39	Default industrial noise	Point		-0.4	0.0	
AC Unit 40	Default industrial noise	Point		0.0	0.0	
AC Unit 41	Default industrial noise	Point		-1.8	0.0	
AC Unit 42	Default industrial noise	Point		1.9	0.0	
AC Unit 43	Default industrial noise	Point		0.8	0.0	
AC Unit 44	Default industrial noise	Point		3.0	0.0	
AC Unit 45	Default industrial noise	Point		3.0	0.0	
AC Unit 46	Default industrial noise	Point		4.0	0.0	
AC Unit 47	Default industrial noise	Point		4.0	0.0	
AC Unit 48	Default industrial noise	Point		0.8	0.0	
AC Unit 49	Default industrial noise	Point		0.4	0.0	

Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 50	Default industrial noise	Point		0.2	0.0	
AC Unit 51	Default industrial noise	Point		1.0	0.0	
AC Unit 52	Default industrial noise	Point		0.2	0.0	
AC Unit 53	Default industrial noise	Point		2.5	0.0	
AC Unit 54	Default industrial noise	Point		3.9	0.0	
AC Unit 55	Default industrial noise	Point		5.6	0.0	
AC Unit 56	Default industrial noise	Point		4.3	0.0	
AC Unit 57	Default industrial noise	Point		3.7	0.0	
AC Unit 58	Default industrial noise	Point		-0.1	0.0	
AC Unit 59	Default industrial noise	Point		-0.3	0.0	
AC Unit 60	Default industrial noise	Point		-2.5	0.0	
AC Unit 61	Default industrial noise	Point		-3.0	0.0	
AC Unit 62	Default industrial noise	Point		-3.1	0.0	
AC Unit 63	Default industrial noise	Point		-2.2	0.0	
AC Unit 64	Default industrial noise	Point		-2.2	0.0	
AC Unit 65	Default industrial noise	Point		-1.9	0.0	
AC Unit 66	Default industrial noise	Point		-1.4	0.0	
AC Unit 67	Default industrial noise	Point		1.0	0.0	
AC Unit 68	Default industrial noise	Point		0.9	0.0	
AC Unit 69	Default industrial noise	Point		2.1	0.0	
AC Unit 70	Default industrial noise	Point		2.8	0.0	
AC Unit 71	Default industrial noise	Point		2.3	0.0	
AC Unit 72	Default industrial noise	Point		2.2	0.0	
AC Unit 73	Default industrial noise	Point		2.8	0.0	
AC Unit 74	Default industrial noise	Point		2.4	0.0	
AC Unit 75	Default industrial noise	Point		1.3	0.0	
AC Unit 76	Default industrial noise	Point		1.1	0.0	
AC Unit 77	Default industrial noise	Point		0.8	0.0	
AC Unit 78	Default industrial noise	Point		1.9	0.0	
AC Unit 79	Default industrial noise	Point		2.3	0.0	
AC Unit 80	Default industrial noise	Point		2.3	0.0	
AC Unit 81	Default industrial noise	Point		2.7	0.0	
AC Unit 82	Default industrial noise	Point		0.7	0.0	
AC Unit 83	Default industrial noise	Point		-0.3	0.0	
AC Unit 84	Default industrial noise	Point		-1.1	0.0	
Receiver Reciever 3 Fl G dB(A) Ldn 36.2 dB(A)						
AC Unit 1	Default industrial noise	Point		14.6	0.0	
AC Unit 2	Default industrial noise	Point		17.6	0.0	
AC Unit 3	Default industrial noise	Point		16.7	0.0	
AC Unit 4	Default industrial noise	Point		16.8	0.0	
AC Unit 5	Default industrial noise	Point		18.7	0.0	
AC Unit 6	Default industrial noise	Point		18.8	0.0	
AC Unit 7	Default industrial noise	Point		20.0	0.0	
AC Unit 8	Default industrial noise	Point		20.8	0.0	
AC Unit 9	Default industrial noise	Point		20.7	0.0	

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Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 10	Default industrial noise	Point		20.4	0.0	
AC Unit 11	Default industrial noise	Point		20.6	0.0	
AC Unit 12	Default industrial noise	Point		23.8	0.0	
AC Unit 13	Default industrial noise	Point		25.7	0.0	
AC Unit 14	Default industrial noise	Point		26.3	0.0	
AC Unit 15	Default industrial noise	Point		26.4	0.0	
AC Unit 16	Default industrial noise	Point		26.5	0.0	
AC Unit 17	Default industrial noise	Point		26.4	0.0	
AC Unit 18	Default industrial noise	Point		3.9	0.0	
AC Unit 19	Default industrial noise	Point		4.0	0.0	
AC Unit 20	Default industrial noise	Point		2.5	0.0	
AC Unit 21	Default industrial noise	Point		2.3	0.0	
AC Unit 22	Default industrial noise	Point		2.2	0.0	
AC Unit 23	Default industrial noise	Point		4.1	0.0	
AC Unit 24	Default industrial noise	Point		5.3	0.0	
AC Unit 25	Default industrial noise	Point		3.9	0.0	
AC Unit 26	Default industrial noise	Point		1.6	0.0	
AC Unit 27	Default industrial noise	Point		-0.7	0.0	
AC Unit 28	Default industrial noise	Point		0.4	0.0	
AC Unit 29	Default industrial noise	Point		-0.4	0.0	
AC Unit 30	Default industrial noise	Point		-0.4	0.0	
AC Unit 31	Default industrial noise	Point		-0.3	0.0	
AC Unit 32	Default industrial noise	Point		-0.2	0.0	
AC Unit 33	Default industrial noise	Point		-0.2	0.0	
AC Unit 34	Default industrial noise	Point		2.9	0.0	
AC Unit 35	Default industrial noise	Point		2.7	0.0	
AC Unit 36	Default industrial noise	Point		1.6	0.0	
AC Unit 37	Default industrial noise	Point		1.7	0.0	
AC Unit 38	Default industrial noise	Point		2.2	0.0	
AC Unit 39	Default industrial noise	Point		2.4	0.0	
AC Unit 40	Default industrial noise	Point		1.0	0.0	
AC Unit 41	Default industrial noise	Point		2.7	0.0	
AC Unit 42	Default industrial noise	Point		22.0	0.0	
AC Unit 43	Default industrial noise	Point		23.7	0.0	
AC Unit 44	Default industrial noise	Point		23.2	0.0	
AC Unit 45	Default industrial noise	Point		23.1	0.0	
AC Unit 46	Default industrial noise	Point		-1.2	0.0	
AC Unit 47	Default industrial noise	Point		-1.2	0.0	
AC Unit 48	Default industrial noise	Point		-2.2	0.0	
AC Unit 49	Default industrial noise	Point		-0.8	0.0	
AC Unit 50	Default industrial noise	Point		-2.8	0.0	
AC Unit 51	Default industrial noise	Point		1.6	0.0	
AC Unit 52	Default industrial noise	Point		0.1	0.0	
AC Unit 53	Default industrial noise	Point		-1.0	0.0	
AC Unit 54	Default industrial noise	Point		1.2	0.0	

Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 55	Default industrial noise	Point		-2.6	0.0	
AC Unit 56	Default industrial noise	Point		-0.1	0.0	
AC Unit 57	Default industrial noise	Point		2.3	0.0	
AC Unit 58	Default industrial noise	Point		-2.5	0.0	
AC Unit 59	Default industrial noise	Point		-2.2	0.0	
AC Unit 60	Default industrial noise	Point		-5.2	0.0	
AC Unit 61	Default industrial noise	Point		-5.5	0.0	
AC Unit 62	Default industrial noise	Point		-5.6	0.0	
AC Unit 63	Default industrial noise	Point		-1.9	0.0	
AC Unit 64	Default industrial noise	Point		-2.4	0.0	
AC Unit 65	Default industrial noise	Point		-2.6	0.0	
AC Unit 66	Default industrial noise	Point		-2.6	0.0	
AC Unit 67	Default industrial noise	Point		0.0	0.0	
AC Unit 68	Default industrial noise	Point		0.0	0.0	
AC Unit 69	Default industrial noise	Point		-0.6	0.0	
AC Unit 70	Default industrial noise	Point		0.6	0.0	
AC Unit 71	Default industrial noise	Point		0.3	0.0	
AC Unit 72	Default industrial noise	Point		0.1	0.0	
AC Unit 73	Default industrial noise	Point		2.6	0.0	
AC Unit 74	Default industrial noise	Point		1.7	0.0	
AC Unit 75	Default industrial noise	Point		0.3	0.0	
AC Unit 76	Default industrial noise	Point		1.9	0.0	
AC Unit 77	Default industrial noise	Point		0.1	0.0	
AC Unit 78	Default industrial noise	Point		3.1	0.0	
AC Unit 79	Default industrial noise	Point		0.9	0.0	
AC Unit 80	Default industrial noise	Point		2.2	0.0	
AC Unit 81	Default industrial noise	Point		1.5	0.0	
AC Unit 82	Default industrial noise	Point		-1.9	0.0	
AC Unit 83	Default industrial noise	Point		-2.0	0.0	
AC Unit 84	Default industrial noise	Point		-1.7	0.0	
Receiver Reciever 4 Fl G dB(A) Ldn 36.4 dB(A)						
AC Unit 1	Default industrial noise	Point		10.8	0.0	
AC Unit 2	Default industrial noise	Point		2.2	0.0	
AC Unit 3	Default industrial noise	Point		1.6	0.0	
AC Unit 4	Default industrial noise	Point		1.4	0.0	
AC Unit 5	Default industrial noise	Point		0.4	0.0	
AC Unit 6	Default industrial noise	Point		0.2	0.0	
AC Unit 7	Default industrial noise	Point		-0.3	0.0	
AC Unit 8	Default industrial noise	Point		-1.5	0.0	
AC Unit 9	Default industrial noise	Point		-0.8	0.0	
AC Unit 10	Default industrial noise	Point		-3.1	0.0	
AC Unit 11	Default industrial noise	Point		-3.2	0.0	
AC Unit 12	Default industrial noise	Point		-4.5	0.0	
AC Unit 13	Default industrial noise	Point		-5.0	0.0	
AC Unit 14	Default industrial noise	Point		-4.8	0.0	

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Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 15	Default industrial noise	Point		-5.5	0.0	
AC Unit 16	Default industrial noise	Point		-6.4	0.0	
AC Unit 17	Default industrial noise	Point		-6.5	0.0	
AC Unit 18	Default industrial noise	Point		-2.2	0.0	
AC Unit 19	Default industrial noise	Point		-3.1	0.0	
AC Unit 20	Default industrial noise	Point		-1.5	0.0	
AC Unit 21	Default industrial noise	Point		0.0	0.0	
AC Unit 22	Default industrial noise	Point		-3.3	0.0	
AC Unit 23	Default industrial noise	Point		0.0	0.0	
AC Unit 24	Default industrial noise	Point		-2.4	0.0	
AC Unit 25	Default industrial noise	Point		0.0	0.0	
AC Unit 26	Default industrial noise	Point		0.0	0.0	
AC Unit 27	Default industrial noise	Point		-1.1	0.0	
AC Unit 28	Default industrial noise	Point		-0.7	0.0	
AC Unit 29	Default industrial noise	Point		-1.0	0.0	
AC Unit 30	Default industrial noise	Point		-2.5	0.0	
AC Unit 31	Default industrial noise	Point		-3.1	0.0	
AC Unit 32	Default industrial noise	Point		-3.6	0.0	
AC Unit 33	Default industrial noise	Point		-3.6	0.0	
AC Unit 34	Default industrial noise	Point		-1.4	0.0	
AC Unit 35	Default industrial noise	Point		-4.4	0.0	
AC Unit 36	Default industrial noise	Point		-4.6	0.0	
AC Unit 37	Default industrial noise	Point		-1.6	0.0	
AC Unit 38	Default industrial noise	Point		-4.6	0.0	
AC Unit 39	Default industrial noise	Point		-4.5	0.0	
AC Unit 40	Default industrial noise	Point		-4.4	0.0	
AC Unit 41	Default industrial noise	Point		-4.2	0.0	
AC Unit 42	Default industrial noise	Point		-5.8	0.0	
AC Unit 43	Default industrial noise	Point		-6.1	0.0	
AC Unit 44	Default industrial noise	Point		-6.0	0.0	
AC Unit 45	Default industrial noise	Point		-6.1	0.0	
AC Unit 46	Default industrial noise	Point		19.2	0.0	
AC Unit 47	Default industrial noise	Point		19.2	0.0	
AC Unit 48	Default industrial noise	Point		16.1	0.0	
AC Unit 49	Default industrial noise	Point		5.8	0.0	
AC Unit 50	Default industrial noise	Point		13.8	0.0	
AC Unit 51	Default industrial noise	Point		5.5	0.0	
AC Unit 52	Default industrial noise	Point		13.0	0.0	
AC Unit 53	Default industrial noise	Point		3.1	0.0	
AC Unit 54	Default industrial noise	Point		14.7	0.0	
AC Unit 55	Default industrial noise	Point		6.3	0.0	
AC Unit 56	Default industrial noise	Point		13.2	0.0	
AC Unit 57	Default industrial noise	Point		17.3	0.0	
AC Unit 58	Default industrial noise	Point		27.1	0.0	
AC Unit 59	Default industrial noise	Point		27.1	0.0	

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Source	Source group	Source ty	Tr. lane	Ldn dB(A)	A dB	
AC Unit 60	Default industrial noise	Point		27.5	0.0	
AC Unit 61	Default industrial noise	Point		27.0	0.0	
AC Unit 62	Default industrial noise	Point		26.9	0.0	
AC Unit 63	Default industrial noise	Point		22.6	0.0	
AC Unit 64	Default industrial noise	Point		23.0	0.0	
AC Unit 65	Default industrial noise	Point		22.9	0.0	
AC Unit 66	Default industrial noise	Point		22.9	0.0	
AC Unit 67	Default industrial noise	Point		22.1	0.0	
AC Unit 68	Default industrial noise	Point		22.3	0.0	
AC Unit 69	Default industrial noise	Point		20.8	0.0	
AC Unit 70	Default industrial noise	Point		20.4	0.0	
AC Unit 71	Default industrial noise	Point		14.9	0.0	
AC Unit 72	Default industrial noise	Point		14.7	0.0	
AC Unit 73	Default industrial noise	Point		2.6	0.0	
AC Unit 74	Default industrial noise	Point		2.3	0.0	
AC Unit 75	Default industrial noise	Point		-0.2	0.0	
AC Unit 76	Default industrial noise	Point		0.7	0.0	
AC Unit 77	Default industrial noise	Point		0.9	0.0	
AC Unit 78	Default industrial noise	Point		0.9	0.0	
AC Unit 79	Default industrial noise	Point		0.9	0.0	
AC Unit 80	Default industrial noise	Point		-0.9	0.0	
AC Unit 81	Default industrial noise	Point		-0.9	0.0	
AC Unit 82	Default industrial noise	Point		-2.1	0.0	
AC Unit 83	Default industrial noise	Point		-2.3	0.0	
AC Unit 84	Default industrial noise	Point		-3.1	0.0	

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receiver Reciever 1 Fl G dB(A) Ldn 35.4 dB(A)																													
AC Unit 1	Ldn	25.2	-54.7	-45.6	-36.5	-24.6	-27.7	-19.3	-5.3	-2.7	1.1	6.4	5.0	8.3	5.4	9.7	14.3	18.5	18.9	17.6	16.5	12.5	7.6	5.3	0.5	-6.2	-12.7	-19.7	-29.1
AC Unit 2	Ldn	25.8	-56.3	-44.8	-35.7	-23.8	-27.0	-18.5	-4.6	-2.1	1.7	7.0	5.6	8.8	5.9	10.1	15.9	18.9	19.3	18.1	17.0	13.0	8.2	6.0	1.4	-5.1	-11.3	-17.9	-26.9
AC Unit 3	Ldn	26.1	-53.5	-44.4	-35.3	-23.4	-26.6	-18.1	-4.2	-1.7	2.1	7.4	6.0	9.2	6.2	10.4	16.2	19.2	19.5	18.3	17.2	13.2	8.4	6.3	1.7	-4.6	-10.7	-17.1	-25.9
AC Unit 4	Ldn	26.1	-53.5	-44.3	-35.3	-23.3	-26.6	-18.1	-4.2	-1.7	2.1	7.4	6.0	9.2	6.2	10.4	16.2	19.2	19.6	18.3	17.2	13.2	8.4	6.3	1.7	-4.5	-10.7	-17.1	-25.9
AC Unit 5	Ldn	25.7	-54.4	-45.2	-36.2	-24.2	-27.3	-18.8	-4.8	-2.2	1.6	7.0	5.6	8.9	5.9	8.4	14.8	19.0	19.4	18.2	17.1	13.1	8.3	6.0	1.1	-5.6	-12.2	-19.0	-28.4
AC Unit 6	Ldn	25.6	-54.7	-45.5	-36.4	-24.4	-27.6	-19.1	-5.0	-2.4	1.4	6.7	5.4	8.7	5.8	8.2	14.7	18.8	19.3	18.0	17.0	13.0	8.1	5.9	0.9	-5.8	-12.6	-19.6	-29.0
AC Unit 7	Ldn	20.6	-57.3	-48.1	-39.0	-27.0	-30.2	-21.6	-7.5	-4.8	-1.0	4.4	3.1	6.4	3.5	6.0	10.6	13.6	13.8	12.5	11.3	7.1	2.1	-0.4	-5.6	-12.8	-19.9	-27.6	-37.9
AC Unit 8	Ldn	22.4	-57.6	-48.4	-39.3	-27.3	-30.4	-21.9	-7.7	-5.1	-1.2	4.2	2.9	6.2	3.4	5.9	12.6	15.6	16.0	14.7	13.5	9.4	4.4	1.9	-3.4	-10.9	-18.5	-26.8	-37.6
AC Unit 9	Ldn	22.1	-58.7	-49.5	-40.3	-28.4	-31.5	-22.9	-8.7	-6.0	-2.1	3.4	2.1	5.5	2.6	5.1	11.9	15.0	15.4	14.2	13.9	9.8	4.7	2.0	-3.5	-11.2	-19.4	-28.4	-40.4
AC Unit 10	Ldn	21.4	-59.9	-50.6	-41.4	-29.8	-32.8	-24.1	-10.0	-7.2	-3.2	2.3	1.1	4.6	1.8	4.4	9.1	12.3	14.9	15.0	13.9	9.7	4.6	1.7	-4.1	-12.4	-21.5	-31.9	-45.6
AC Unit 11	Ldn	20.0	-60.0	-50.8	-41.6	-30.0	-33.0	-24.3	-10.2	-7.4	-3.4	2.1	1.0	4.4	1.7	4.3	9.0	12.2	12.5	13.3	12.1	7.9	2.7	-0.2	-6.1	-14.5	-23.7	-34.2	-46.4
AC Unit 12	Ldn	19.4	-64.0	-54.8	-45.6	-34.4	-37.4	-28.7	-14.7	-12.0	-8.0	0.0	-0.9	2.8	0.1	2.8	7.5	11.0	11.4	12.6	12.9	8.7	3.4	0.2	-6.2	-15.3	-25.6	-37.7	-53.5
AC Unit 13	Ldn	18.8	-64.5	-55.3	-46.1	-35.0	-38.0	-29.4	-15.4	-12.6	-8.6	-3.5	-1.7	2.0	-0.6	2.1	6.9	10.4	10.7	12.0	12.3	8.1	2.8	-0.5	-7.1	-16.5	-27.3	-40.0	-56.6
AC Unit 14	Ldn	17.2	-65.0	-55.8	-46.6	-35.6	-38.6	-27.3	-13.5	-10.6	-6.4	-1.9	-2.6	1.3	-0.8	1.9	6.7	10.3	10.6	9.3	7.9	6.0	0.5	-2.9	-9.7	-19.5	-30.7	-44.0	-61.4
AC Unit 15	Ldn	18.1	-65.2	-56.0	-46.8	-35.8	-38.8	-30.1	-13.8	-10.8	-6.7	-2.1	-2.9	1.0	-1.0	1.7	6.5	10.2	10.5	11.6	10.3	7.6	2.1	-1.3	-8.2	-18.0	-29.4	-42.9	-60.6
AC Unit 16	Ldn	17.1	-66.0	-56.7	-47.5	-36.6	-39.6	-30.8	-15.1	-12.1	-7.8	-3.5	-4.3	-0.4	-1.4	1.4	6.3	10.1	10.5	9.2	7.8	7.0	1.5	-2.2	-9.4	-19.9	-32.1	-46.6	-65.7
AC Unit 17	Ldn	16.9	-66.1	-56.8	-47.6	-36.8	-39.7	-31.0	-17.8	-12.3	-8.0	-3.7	-4.5	-0.6	-1.5	1.3	6.2	10.0	10.5	9.1	7.8	5.6	-0.1	-3.9	-11.2	-21.8	-34.1	-48.9	-68.1
AC Unit 18	Ldn	-3.2	-76.7	-68.7	-60.8	-51.2	-55.2	-47.5	-34.6	-32.7	-29.4	-24.0	-24.8	-20.9	-23.1	-20.0	-14.8	-10.5	-9.6	-10.4	-11.3	-15.3	-20.5	-23.9	-30.8	-41.1	-53.2	-67.8	-87.1
AC Unit 19	Ldn	-3.1	-76.6	-68.7	-60.7	-51.1	-55.1	-47.4	-34.6	-32.6	-29.3	-23.9	-24.7	-20.8	-23.0	-19.9	-14.6	-10.4	-9.5	-10.3	-11.1	-15.1	-20.3	-23.6	-30.5	-40.7	-52.6	-67.0	-86.1
AC Unit 20	Ldn	-2.2	-75.8	-67.9	-59.9	-50.2	-54.3	-46.6	-33.7	-31.7	-28.5	-23.1	-23.9	-20.0	-22.2	-19.1	-13.8	-9.6	-8.7	-9.4	-10.2	-14.1	-19.1	-22.2	-28.7	-38.4	-49.7	-63.2	-81.1
AC Unit 21	Ldn	-1.7	-75.8	-67.8	-59.9	-50.1	-54.2	-46.5	-33.6	-31.7	-28.4	-22.6	-23.4	-19.5	-21.7	-18.6	-13.3	-9.1	-8.1	-8.9	-9.6	-13.4	-18.4	-21.3	-27.7	-37.0	-47.8	-60.8	-77.9
AC Unit 22	Ldn	-1.6	-75.5	-67.5	-59.6	-49.8	-53.9	-46.2	-33.3	-31.4	-28.1	-22.5	-23.2	-19.3	-21.6	-18.4	-13.1	-9.0	-8.0	-8.7	-9.4	-13.3	-18.2	-21.1	-27.4	-36.6	-47.3	-60.1	-77.1
AC Unit 23	Ldn	1.6	-71.4	-63.4	-55.4	-45.5	-49.6	-42.0	-29.1	-27.2	-24.0	-19.2	-21.0	-18.1	-20.3	-13.5	-8.9	-5.3	-4.8	-5.9	-6.9	-10.9	-15.8	-18.5	-24.5	-33.3	-43.3	-55.1	-70.6
AC Unit 24	Ldn	2.3	-70.1	-61.6	-53.2	-43.1	-47.1	-39.5	-26.8	-25.2	-22.4	-17.9	-20.0	-11.6	-15.1	-12.8	-8.2	-4.7	-4.3	-5.5	-6.6	-10.5	-15.4	-18.3	-24.4	-33.5	-44.0	-56.5	-72.9
AC Unit 25	Ldn	-1.3	-70.4	-61.9	-53.6	-43.6	-47.7	-40.1	-27.5	-25.9	-23.0	-18.5	-20.5	-17.8	-21.1	-18.3	-13.0	-8.8	-7.9	-8.6	-9.3	-13.1	-18.1	-20.9	-27.2	-36.4	-47.0	-59.7	-76.6
AC Unit 26	Ldn	0.9	-72.4	-64.3	-56.3	-46.5	-50.5	-42.8	-29.9	-27.9	-24.6	-19.8	-21.5	-18.6	-21.5	-18.4	-9.4	-5.7	-5.3	-6.5	-7.7	-11.9	-16.9	-19.9	-26.4	-35.9	-46.9	-60.0	-77.2
AC Unit 27	Ldn	4.1	-73.7	-65.6	-57.5	-47.8	-51.7	-44.0	-31.1	-29.1	-25.8	-20.9	-22.7	-19.8	-16.8	-12.5	-8.1	-4.5	-4.4	-6.1	-0.2	-5.2	-11.8	-17.0	-26.1	-37.9	-50.4	-64.4	-82.6
AC Unit 28	Ldn	1.5	-73.3	-65.2	-57.1	-47.3	-51.3	-43.5	-30.6	-28.6	-25.3	-20.4	-22.2	-19.3	-16.9	-12.7	-8.3	-4.7	-4.6	-6.2	-7.8	-12.6	-18.5	-22.3	-29.4	-39.4	-51.1	-65.1	-83.5
AC Unit 29	Ldn	2.3	-68.8	-60.0	-51.3	-41.2	-44.9	-37.1	-24.1	-22.4	-19.4	-14.8	-16.8	-14.2	-17.5	-12.9	-8.8	-4.3	-3.4	-5.4	-7.4	-12.3	-18.4	-22.3	-29.8	-40.7	-53.5	-68.9	-88.8
AC Unit 30	Ldn	1.2	-68.8	-59.9	-51.2	-41.1	-44.8	-36.9	-24.0	-22.2	-19.2	-14.6	-16.6	-13.9	-17.3	-15.3	-11.1	-5.9	-4.5	-6.4	-8.3	-13.1	-19.0	-22.7	-30.2	-41.1	-53.9	-69.4	-89.6
AC Unit 31	Ldn	-0.3	-69.9	-61.4	-53.0	-43.4	-47.3	-39.5	-26.5	-24.4	-21.1	-16.3	-18.0	-15.1	-18.3	-16.1	-11.9	-6.4	-6.5	-8.5	-10.3	-14.8	-20.6	-24.4	-31.9	-42.9	-55.9	-71.6	-92.1
AC Unit 32	Ldn	1.0	-68.9	-60.0	-51.1	-41.0	-44.4	-36.3	-23.2	-21.2	-18.1	-13.5	-14.3	-11.6	-15.0	-13.0	-8.8	-5.5	-5.7	-7.7	-9.7	-15.0	-21.3	-25.3	-33.3	-44.8	-58.5	-75.2	-96.9
AC Unit 33	Ldn	1.0	-69.0	-60.0	-51.2	-41.1	-44.6	-36.5	-23.3	-21.4	-18.3	-12.5	-14.4	-11.7	-15.1	-13.1	-8.9	-5.6	-5.8	-7.7	-9.8	-15.1	-21.4	-25.5	-33.4	-41.9	-57.8	-75.5	-97.6
AC Unit 34	Ldn	-3.1	-71.4	-62.9	-54.5	-45.0	-48.8	-40.9	-27.8	-25.7	-22.4	-17.5	-19.2	-16.2	-19.4	-17.2	-13.0	-9.6	-9.8	-11.7	-13.8	-18.9	-22.6	-27.0	-35.6	-48.1	-63.5	-82.4	
AC Unit 35	Ldn	-1.0	-71.7	-63.1	-54.7	-45.2	-49.0	-41.1	-28.0	-25.9	-22.6	-17.6	-19.4	-16.4	-17.0	-14.8	-10.6	-7.2	-7.4	-9.4	-11.5	-16.9	-23.2	-27.7	-36.5	-49.4	-65.2	-84.7	

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 36	Ldn	-2.2	-74.3	-65.9	-57.6	-48.2	-52.1	-44.2	-26.9	-24.8	-21.5	-16.6	-18.3	-15.4	-18.6	-16.4	-12.2	-8.8	-8.9	-10.5	-12.3	-17.3	-23.8	-28.5	-37.5	-50.7	-67.0	-87.1	
AC Unit 37	Ldn	-2.2	-74.1	-65.7	-57.4	-48.1	-51.9	-44.0	-26.9	-24.8	-21.4	-16.5	-18.2	-15.3	-18.5	-16.3	-12.1	-8.7	-8.9	-10.6	-12.4	-17.4	-23.9	-28.7	-37.8	-51.1	-67.5	-87.8	
AC Unit 38	Ldn	-3.4	-76.7	-68.4	-60.2	-50.9	-54.8	-47.0	-34.0	-31.9	-28.6	-23.8	-25.5	-22.7	-25.8	-23.3	-18.1	-9.0	-8.9	-10.6	-12.3	-17.4	-23.9	-28.6	-37.6	-50.8	-67.0	-86.9	
AC Unit 39	Ldn	-4.8	-76.6	-68.4	-60.1	-50.8	-54.7	-46.9	-33.9	-31.9	-28.6	-23.7	-25.5	-22.6	-25.8	-23.2	-18.1	-11.3	-10.8	-11.9	-13.1	-17.6	-23.7	-28.4	-37.3	-50.4	-66.5	-86.3	
AC Unit 40	Ldn	-6.3	-75.9	-67.7	-59.5	-50.1	-54.0	-46.2	-33.1	-31.1	-27.8	-23.0	-24.7	-21.8	-25.0	-22.9	-17.7	-13.4	-12.6	-13.6	-14.7	-19.2	-25.1	-29.5	-38.1	-50.6	-66.0	-84.9	
AC Unit 41	Ldn	-3.4	-71.6	-63.1	-54.7	-45.2	-49.0	-41.1	-28.0	-26.0	-22.6	-17.7	-19.4	-16.5	-19.7	-17.5	-13.3	-9.9	-10.1	-12.0	-14.1	-18.6	-24.5	-28.7	-37.1	-49.3	-64.2	-82.5	
AC Unit 42	Ldn	-0.8	-69.1	-60.2	-51.4	-41.4	-45.0	-37.1	-24.1	-22.3	-19.2	-14.6	-16.5	-13.7	-17.0	-14.9	-10.7	-7.4	-7.5	-9.4	-11.3	-16.6	-22.6	-26.5	-34.2	-45.6	-58.8	-75.6	-97.6
AC Unit 43	Ldn	-1.0	-69.4	-60.5	-51.7	-41.8	-45.4	-37.5	-24.5	-22.7	-19.6	-14.9	-16.8	-14.0	-17.2	-15.1	-10.9	-7.5	-7.7	-9.6	-11.6	-16.9	-23.4	-27.4	-35.4	-47.1	-61.2	-78.6	
AC Unit 44	Ldn	0.1	-69.6	-60.7	-51.9	-42.0	-45.6	-37.7	-24.7	-22.8	-19.7	-15.0	-16.2	-13.3	-16.6	-14.5	-10.2	-6.7	-6.7	-8.4	-9.1	-14.2	-20.8	-25.4	-33.8	-46.1	-61.0	-79.2	
AC Unit 45	Ldn	0.1	-69.7	-60.7	-51.9	-42.1	-45.7	-37.8	-24.8	-22.9	-19.7	-15.0	-16.9	-13.3	-16.5	-14.4	-10.2	-6.7	-6.7	-8.4	-9.1	-14.3	-20.9	-25.6	-34.1	-46.5	-61.5	-79.9	
AC Unit 46	Ldn	4.0	-65.1	-56.3	-47.6	-36.6	-40.2	-32.2	-18.8	-16.8	-13.6	-9.0	-11.1	-8.6	-12.1	-10.4	-6.4	-3.7	-3.9	-4.5	-5.2	-8.8	-13.3	-15.6	-20.8	-28.4	-36.8	-46.6	-59.7
AC Unit 47	Ldn	3.6	-65.3	-56.5	-47.8	-36.8	-40.4	-32.5	-19.2	-17.2	-14.1	-9.6	-11.7	-9.3	-12.8	-11.0	-6.9	-4.1	-4.2	-4.7	-5.4	-9.1	-13.6	-15.9	-21.2	-28.9	-37.5	-47.4	-60.8
AC Unit 48	Ldn	2.8	-65.9	-57.1	-48.4	-37.6	-41.2	-33.1	-19.9	-17.9	-14.8	-10.2	-12.3	-9.9	-13.4	-11.6	-7.5	-4.6	-4.7	-5.9	-6.8	-10.6	-15.4	-17.9	-23.6	-31.6	-41.2	-52.3	-67.1
AC Unit 49	Ldn	3.5	-66.1	-57.2	-48.5	-37.8	-41.3	-33.3	-20.1	-18.1	-14.9	-10.3	-12.4	-10.0	-13.5	-11.7	-7.7	-4.7	-4.8	-4.1	-4.9	-8.7	-13.5	-16.1	-13.1	-23.4	-35.2	-48.7	-65.5
AC Unit 50	Ldn	3.1	-66.5	-57.6	-48.9	-38.3	-41.8	-33.7	-20.5	-18.5	-15.3	-10.7	-12.4	-9.9	-13.4	-11.5	-7.3	-4.1	-4.0	-5.6	-6.3	-10.2	-15.2	-18.1	-24.3	-33.4	-43.7	-55.9	-71.9
AC Unit 51	Ldn	3.5	-66.9	-58.1	-49.3	-38.8	-42.3	-34.3	-21.1	-19.1	-16.0	-11.4	-13.5	-11.0	-12.1	-10.2	-6.2	-3.2	-3.3	-5.1	-6.4	-10.3	-15.3	-18.3	-24.6	-33.8	-44.5	-57.2	-74.1
AC Unit 52	Ldn	0.9	-73.9	-65.9	-57.8	-48.0	-52.0	-44.2	-31.3	-29.3	-26.1	-21.2	-23.0	-14.8	-17.7	-15.2	-10.4	-6.7	-6.1	-6.1	-6.9	-10.9	-16.0	-19.1	-25.7	-35.3	-46.3	-59.4	-76.4
AC Unit 53	Ldn	-0.2	-74.0	-66.0	-58.0	-48.1	-52.1	-44.4	-31.5	-29.5	-26.2	-21.4	-22.9	-19.0	-21.2	-18.1	-12.8	-8.6	-7.7	-6.5	-7.2	-10.6	-15.7	-18.8	-25.4	-32.9	-44.0	-57.0	-74.1
AC Unit 54	Ldn	3.6	-66.1	-57.3	-48.5	-37.8	-41.4	-33.3	-20.1	-18.0	-14.8	-10.1	-12.2	-9.7	-13.3	-10.4	-6.4	-3.5	-3.7	-4.9	-6.0	-10.0	-14.9	-17.7	-23.0	-31.9	-41.9	-53.5	-68.8
AC Unit 55	Ldn	4.8	-66.0	-57.1	-48.4	-37.6	-41.2	-33.1	-19.9	-17.8	-13.7	-9.1	-11.1	-8.5	-12.0	-9.3	-5.2	-2.3	-2.3	-3.8	-4.7	-8.6	-13.4	-16.0	-21.7	-30.4	-40.2	-51.6	-66.7
AC Unit 56	Ldn	5.1	-65.5	-56.7	-48.0	-37.1	-40.7	-32.7	-19.4	-17.4	-14.2	-9.5	-11.6	-8.2	-11.7	-9.0	-4.9	-2.0	-2.1	-3.6	-4.4	-8.2	-12.9	-15.5	-21.2	-29.5	-38.7	-49.4	-63.6
AC Unit 57	Ldn	5.5	-65.1	-56.3	-47.7	-36.7	-40.3	-32.3	-19.1	-17.2	-14.1	-9.6	-11.7	-9.3	-11.6	-9.0	-4.5	-1.5	-1.7	-2.8	-3.6	-7.4	-12.1	-14.5	-20.0	-27.9	-36.6	-46.4	-59.6
AC Unit 58	Ldn	4.1	-65.6	-56.8	-48.1	-37.2	-40.8	-32.8	-19.5	-17.6	-14.5	-10.0	-12.1	-8.5	-12.1	-10.3	-6.2	-3.3	-3.4	-4.6	-5.1	-8.8	-13.5	-15.9	-21.4	-29.3	-38.0	-48.1	-61.7
AC Unit 59	Ldn	3.9	-65.7	-56.9	-48.2	-37.3	-40.9	-32.9	-19.6	-17.7	-14.6	-10.1	-12.2	-9.8	-12.2	-10.4	-6.3	-3.4	-3.5	-4.9	-5.0	-8.9	-13.8	-16.3	-21.8	-29.9	-38.7	-49.0	-62.8
AC Unit 60	Ldn	3.4	-66.5	-57.6	-48.8	-38.1	-41.7	-33.7	-20.4	-18.4	-15.3	-10.8	-12.9	-10.4	-12.8	-11.0	-7.0	-4.0	-4.1	-4.8	-5.7	-9.7	-14.6	-17.4	-23.5	-32.2	-42.3	-54.0	-69.4
AC Unit 61	Ldn	-0.5	-69.4	-61.2	-53.0	-43.1	-47.1	-39.4	-26.4	-24.4	-21.2	-16.3	-18.1	-15.2	-18.4	-16.2	-11.9	-8.3	-7.4	-8.1	-8.7	-12.5	-17.3	-20.0	-26.0	-34.9	-45.1	-57.2	-73.3
AC Unit 62	Ldn	-0.6	-69.4	-61.1	-53.0	-43.0	-47.1	-39.4	-26.3	-24.3	-21.1	-16.2	-18.0	-15.1	-18.3	-16.2	-11.9	-8.5	-7.6	-8.3	-8.9	-12.7	-17.6	-20.3	-26.4	-35.4	-45.7	-58.0	-74.4
AC Unit 63	Ldn	1.4	-71.9	-63.5	-55.2	-45.6	-49.4	-41.6	-28.5	-26.4	-23.1	-18.2	-20.0	-17.1	-17.7	-14.0	-8.1	-4.7	-4.9	-6.5	-8.0	-12.7	-18.6	-22.7	-30.7	-42.1	-54.6	-71.2	-92.7
AC Unit 64	Ldn	1.1	-69.2	-60.2	-51.4	-41.2	-44.7	-36.6	-23.2	-21.2	-18.0	-13.4	-15.5	-13.0	-16.6	-12.4	-8.4	-5.3	-5.5	-7.5	-9.5	-14.4	-20.0	-23.7	-31.3	-42.5	-55.9	-72.2	-93.6
AC Unit 65	Ldn	3.4	-68.8	-59.9	-51.1	-41.0	-44.4	-36.3	-23.2	-21.1	-17.9	-13.3	-15.4	-12.9	-16.4	-12.3	-5.8	-2.7	-2.9	-4.9	-6.9	-11.8	-17.4	-21.1	-28.3	-39.6	-53.1	-69.5	-90.9
AC Unit 66	Ldn	3.5	-68.8	-59.9	-51.1	-41.0	-44.4	-36.3	-23.2	-21.1	-17.9	-13.3	-15.4	-12.9	-16.4	-9.8	-5.8	-2.7	-2.9	-4.9	-6.9	-11.8	-17.4	-20.4	-28.1	-39.3	-52.8	-69.2	-90.5
AC Unit 67	Ldn	10.5	-72.1	-63.8	-55.5	-45.9	-49.8	-41.9	-29.0	-27.0	-23.6	-18.8	-20.5	-17.6	-9.0	-5.9	-0.4	3.8	4.5	3.5	2.3	-2.1	-8.1	-12.6	-21.1	-33.7	-48.9	-67.3	-90.4
AC Unit 68	Ldn	2.2	-72.1	-63.8	-55.5	-45.9	-49.8	-41.9	-29.0	-27.0	-23.6	-18.8	-20.5	-17.6	-15.5	-13.3	-7.3	-3.9	-4.0	-5.6	-7.3	-11.6	-17.6	-21.8	-29.8	-40.7	-54.5	-71.2	-92.8
AC Unit 69	Ldn	2.1	-69.1	-60.1	-51.3	-41.2	-44.7	-36.5	-23.3	-21.3	-18.1	-13.5	-15.6	-13.1	-16.6	-12.4	-7.5	-4.3	-4.0	-6.0	-8.2	-13.6	-19.7	-23.8	-31.7	-43.1	-56.8	-73.5	-95.2
AC Unit 70	Ldn	0.4	-71.8	-63.5	-55.2	-45.5	-49.4	-41.5	-28.7	-26.7	-23.4	-18.5	-20.3	-17.3	-20.3	-14.0	-9.8	-6.4	-6.6	-6.6	-8.2	-13.1	-19.2	-23.5	-31.6	-43.3	-56.8	-73.2	-95.4
AC Unit 71	Ldn	0.3	-71.9	-63.6	-55.3	-45.7	-49.5	-41.6	-28.8	-26.8	-23.5	-18.6	-20.3	-17.4	-20.4	-15.5	-9.8	-6.5	-6.7	-6.9	-7.7	-12.7	-19.0	-23.5	-31.7	-43.6	-57.7	-74.9	-97.1

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 72	Ldn	0.0	-71.7	-63.3	-55.0	-45.4	-49.3	-41.4	-28.6	-26.5	-23.2	-18.3	-20.1	-17.1	-20.2	-15.4	-9.7	-6.4	-6.6	-8.3	-8.6	-13.5	-19.6	-24.0	-32.1	-43.9	-58.0	-75.2	-97.5
AC Unit 73	Ldn	0.8	-72.5	-64.1	-55.8	-46.2	-50.0	-42.2	-29.1	-27.1	-23.7	-18.8	-20.6	-17.7	-16.8	-13.6	-8.6	-5.3	-5.5	-7.3	-8.9	-13.7	-19.8	-24.0	-32.3	-40.3	-57.0	-76.4	
AC Unit 74	Ldn	0.4	-72.4	-64.0	-55.7	-46.1	-50.0	-42.1	-29.0	-26.9	-23.6	-18.7	-20.4	-17.5	-20.7	-14.0	-8.9	-5.6	-5.8	-7.8	-9.5	-14.3	-20.6	-25.1	-33.5	-45.9	-60.8	-79.1	
AC Unit 75	Ldn	1.5	-72.0	-63.6	-55.2	-45.7	-49.5	-41.6	-28.5	-26.4	-23.1	-18.2	-19.9	-17.0	-15.8	-12.7	-8.5	-4.3	-4.6	-6.6	-8.6	-13.7	-20.2	-24.9	-33.6	-46.2	-61.5	-80.2	
AC Unit 76	Ldn	1.6	-72.0	-63.5	-55.1	-45.6	-49.4	-41.5	-28.4	-26.3	-23.0	-18.1	-19.8	-16.9	-15.7	-12.6	-8.3	-4.3	-4.5	-6.5	-8.6	-13.7	-20.3	-25.0	-33.7	-46.4	-61.8	-80.6	
AC Unit 77	Ldn	0.3	-71.7	-63.1	-54.7	-45.2	-49.0	-41.1	-28.0	-25.9	-22.5	-17.6	-19.3	-16.4	-19.6	-17.5	-10.8	-5.9	-5.2	-7.2	-9.4	-14.9	-21.3	-26.2	-35.2	-48.2	-64.0	-83.5	
AC Unit 78	Ldn	-0.2	-71.6	-63.1	-54.6	-45.2	-49.0	-41.1	-27.9	-25.8	-22.5	-17.6	-19.3	-16.4	-19.6	-17.4	-10.8	-7.4	-5.5	-7.6	-9.9	-15.4	-21.9	-26.8	-35.7	-48.7	-64.6	-84.1	
AC Unit 79	Ldn	0.3	-71.4	-62.7	-54.1	-44.7	-48.4	-40.5	-27.3	-25.2	-21.9	-17.0	-18.7	-15.7	-18.9	-16.8	-12.6	-5.6	-5.9	-7.9	-7.8	-13.4	-20.7	-26.3	-36.1	-49.9	-66.6	-87.2	
AC Unit 80	Ldn	0.0	-71.4	-62.7	-54.1	-44.7	-48.5	-40.6	-27.3	-25.3	-21.9	-17.0	-18.7	-15.8	-19.0	-16.8	-12.6	-5.7	-5.9	-8.0	-9.1	-14.8	-22.0	-27.6	-37.3	-51.1	-67.8	-88.6	
AC Unit 81	Ldn	-0.4	-71.6	-62.9	-54.3	-44.9	-48.6	-40.7	-27.5	-25.4	-22.1	-17.2	-18.9	-15.9	-19.1	-17.0	-12.8	-6.9	-7.1	-7.9	-8.4	-14.2	-21.7	-27.6	-37.5	-51.6	-68.9	-90.2	
AC Unit 82	Ldn	-0.6	-71.0	-62.0	-53.0	-43.2	-46.6	-38.4	-25.0	-23.0	-19.8	-15.1	-17.1	-14.5	-17.9	-16.0	-11.9	-6.5	-6.8	-8.9	-11.2	-16.9	-24.2	-30.1	-39.7	-53.6	-70.9	-92.5	
AC Unit 83	Ldn	-0.7	-71.2	-62.1	-53.2	-43.4	-46.8	-38.6	-25.3	-23.2	-20.0	-15.4	-17.4	-14.7	-18.1	-16.1	-12.0	-6.6	-6.9	-9.1	-11.4	-17.1	-24.5	-30.5	-40.3	-51.7	-71.2	-93.9	
AC Unit 84	Ldn	-0.9	-71.2	-62.1	-53.2	-43.5	-46.9	-38.7	-25.3	-23.2	-20.0	-15.4	-17.4	-14.7	-18.1	-16.2	-12.1	-8.7	-6.6	-8.8	-10.3	-16.2	-23.9	-30.3	-40.4	-51.9	-71.5	-94.3	
Receiver Reciever 2 FI G dB(A) Ldn 36.1 dB(A)																													
AC Unit 1	Ldn	18.7	-63.3	-54.1	-44.9	-33.6	-36.6	-27.9	-13.9	-11.2	-7.2	-1.7	-2.8	0.6	-2.1	0.4	5.1	8.4	12.6	11.5	11.9	9.0	3.6	0.3	-6.2	-15.5	-25.8	-37.7	-53.1
AC Unit 2	Ldn	20.3	-62.8	-51.0	-41.8	-30.3	-33.3	-24.7	-10.6	-7.8	-3.8	1.7	0.6	4.0	1.3	3.9	8.6	11.8	14.5	13.3	12.1	7.9	2.7	-0.3	-6.2	-14.7	-24.1	-34.8	-48.3
AC Unit 3	Ldn	21.8	-59.7	-50.4	-41.3	-29.5	-32.6	-23.9	-9.8	-7.0	-3.1	2.4	1.3	4.7	1.9	4.5	9.1	14.6	15.0	15.1	14.0	9.9	4.8	2.0	-3.8	-12.0	-21.0	-31.1	-44.4
AC Unit 4	Ldn	22.3	-59.5	-50.2	-41.1	-29.3	-32.3	-23.7	-9.5	-6.8	-2.8	2.7	1.5	4.9	2.1	4.7	9.3	14.7	16.5	15.3	14.2	10.1	5.0	2.2	-3.5	-11.6	-20.4	-30.4	-43.5
AC Unit 5	Ldn	20.8	-58.0	-48.7	-39.6	-27.6	-30.7	-22.0	-7.8	-5.1	-1.2	4.3	3.1	6.5	3.6	6.2	10.8	13.8	14.1	12.8	11.6	7.4	2.4	-0.2	-5.3	-13.0	-21.0	-29.5	-40.5
AC Unit 6	Ldn	21.0	-57.6	-48.4	-39.3	-27.3	-30.4	-21.8	-7.6	-4.9	-0.9	4.5	3.3	6.7	3.9	6.4	11.0	14.0	14.3	13.0	11.8	7.6	2.6	0.1	-5.2	-12.7	-20.5	-28.6	-39.4
AC Unit 7	Ldn	25.3	-54.9	-45.7	-36.7	-24.7	-27.8	-19.4	-5.4	-2.8	1.0	6.4	5.0	8.3	5.3	9.7	14.3	18.5	18.9	17.7	16.6	12.6	7.8	5.5	0.7	-6.0	-12.7	-19.7	-29.2
AC Unit 8	Ldn	25.5	-54.6	-45.4	-36.3	-24.4	-27.5	-19.1	-5.1	-2.5	1.3	6.6	5.3	8.5	5.5	9.9	14.5	18.7	19.1	17.9	16.8	12.8	8.0	5.7	0.9	-5.7	-12.2	-19.1	-28.4
AC Unit 9	Ldn	26.0	-56.1	-47.0	-38.0	-26.1	-29.3	-20.9	-7.1	-4.6	-0.9	4.3	5.9	9.1	7.9	10.4	16.1	19.1	19.5	18.2	17.1	13.1	8.3	6.2	1.7	-4.7	-10.9	-17.3	-26.2
AC Unit 10	Ldn	26.5	-53.3	-44.2	-35.1	-23.1	-26.3	-17.8	-3.9	-1.3	2.5	7.8	6.4	9.6	6.7	10.8	16.5	19.6	20.0	18.7	17.7	13.7	8.9	6.7	2.0	-4.3	-10.5	-16.9	-25.7
AC Unit 11	Ldn	26.4	-53.5	-44.3	-35.3	-23.3	-26.4	-17.9	-4.0	-1.4	2.4	7.7	6.3	9.6	6.6	9.0	16.5	19.5	19.9	18.7	17.6	13.7	8.9	6.7	1.9	-4.5	-10.7	-17.2	-26.0
AC Unit 12	Ldn	23.8	-55.7	-46.6	-37.5	-25.5	-28.6	-20.1	-6.0	-3.4	0.4	5.8	4.5	7.7	4.8	7.3	13.9	16.9	17.3	16.1	14.9	10.9	6.0	3.7	-1.4	-8.2	-15.1	-21.6	-31.3
AC Unit 13	Ldn	24.1	-56.9	-47.7	-38.6	-26.6	-29.8	-21.2	-7.1	-4.5	-0.6	4.7	3.4	6.7	3.8	6.3	13.1	17.4	17.8	16.6	15.5	11.4	6.5	4.1	-1.2	-8.4	-15.9	-23.9	-34.6
AC Unit 14	Ldn	23.3	-58.0	-48.8	-39.6	-27.7	-30.8	-22.2	-8.0	-5.3	-1.4	4.0	2.8	6.1	3.3	5.8	12.5	15.6	17.3	16.0	14.9	10.8	5.9	3.3	-2.1	-9.7	-17.6	-26.4	-37.9
AC Unit 15	Ldn	22.9	-58.3	-49.1	-40.0	-28.0	-31.1	-22.5	-8.3	-5.6	-1.7	3.7	2.5	5.9	3.0	5.5	10.2	15.3	17.1	15.8	14.7	10.6	5.6	3.0	-2.4	-10.1	-18.2	-27.2	-39.0
AC Unit 16	Ldn	21.8	-59.7	-50.4	-41.2	-29.5	-32.5	-23.8	-9.6	-6.9	-2.9	2.7	1.5	5.0	2.2	4.8	9.6	12.7	15.3	15.4	14.3	10.1	5.0	2.2	-3.6	-11.8	-20.7	-30.9	-44.4
AC Unit 17	Ldn	21.6	-59.8	-50.6	-41.4	-29.7	-32.7	-24.1	-9.9	-7.1	-3.1	2.5	1.3	4.8	2.1	4.7	9.4	12.6	15.2	15.3	14.1	10.0	4.9	2.1	-3.8	-12.1	-21.2	-31.5	-45.2
AC Unit 18	Ldn	0.6	-73.3	-65.4	-57.5	-47.4	-51.6	-44.0	-31.2	-29.3	-26.0	-20.4	-21.2	-17.3	-19.4	-16.3	-11.0	-7.0	-6.0	-6.6	-7.2	-10.8	-15.5	-17.9	-23.4	-31.6	-40.9	-51.8	-66.3
AC Unit 19	Ldn	0.8	-73.2	-65.3	-57.4	-47.3	-51.5	-43.9	-31.1	-29.2	-25.9	-20.3	-21.0	-17.1	-19.3	-16.1	-10.9	-6.8	-5.8	-6.5	-7.0	-10.7	-15.3	-17.7	-23.2	-31.3	-40.5	-51.2	-65.6
AC Unit 20	Ldn	1.5	-70.9	-62.4	-54.1	-43.6	-47.5	-39.8	-26.9	-25.2	-22.3	-18.0	-20.2	-16.4	-18.6	-15.4	-10.1	-6.1	-5.1	-5.8	-6.3	-9.8	-14.3	-16.6	-21.9	-29.7	-38.4	-48.6	-62.2
AC Unit 21	Ldn	1.9	-72.4	-64.4	-56.5	-46.3	-50.5	-42.9	-30.1	-28.2	-24.9	-19.1	-19.8	-15.9	-18.1	-15.0	-9.7	-5.7	-4.7	-5.3	-5.8	-9.3	-13.8	-16.0	-21.1	-28.8	-37.2	-47.0	-60.3
AC Unit 22	Ldn	2.4	-72.2	-64.2	-56.4	-46.1	-50.3	-42.7	-29.9	-28.0	-24.8	-19.0	-19.7	-15.9	-18.0	-14.9	-9.6	-5.6	-4.1	-4.7	-5.3	-8.8	-13.4	-15.6	-20.8	-28.5	-37.0	-46.8	-59.9

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 23	Ldn	4.7	-65.0	-56.2	-47.5	-36.4	-40.0	-31.9	-18.5	-16.5	-13.3	-8.7	-10.8	-8.3	-12.0	-10.2	-6.3	-3.7	-2.5	-3.4	-4.1	-7.8	-12.3	-14.4	-19.5	-27.0	-35.1	-44.4	-57.0
AC Unit 24	Ldn	4.2	-65.4	-56.6	-47.9	-36.9	-40.5	-32.4	-19.1	-17.0	-13.8	-9.2	-11.3	-8.8	-12.4	-10.7	-6.7	-4.0	-2.9	-4.0	-4.6	-8.2	-12.8	-15.2	-20.6	-28.5	-37.3	-47.5	-61.0
AC Unit 25	Ldn	3.0	-65.8	-57.0	-48.3	-37.4	-41.0	-32.9	-19.6	-17.5	-14.3	-9.6	-11.7	-9.2	-12.9	-11.1	-7.2	-4.4	-4.6	-6.3	-6.9	-10.5	-15.1	-17.5	-22.9	-31.0	-40.2	-50.8	-65.1
AC Unit 26	Ldn	2.8	-66.0	-57.1	-48.4	-37.6	-41.1	-33.1	-19.7	-17.7	-14.4	-9.8	-11.9	-9.4	-13.0	-11.3	-7.3	-4.5	-4.7	-6.5	-7.1	-10.7	-15.4	-17.8	-23.4	-31.6	-40.8	-51.7	-66.2
AC Unit 27	Ldn	2.1	-66.8	-57.9	-49.1	-38.5	-42.0	-33.9	-20.6	-18.5	-15.3	-10.6	-12.7	-10.2	-13.8	-12.1	-8.1	-5.2	-5.4	-6.5	-7.7	-11.5	-16.4	-19.3	-25.4	-32.4	-42.7	-55.0	-71.2
AC Unit 28	Ldn	1.9	-66.9	-58.0	-49.2	-38.7	-42.2	-34.1	-20.8	-18.7	-15.5	-10.9	-12.9	-10.5	-14.1	-12.3	-8.4	-5.4	-5.6	-6.7	-7.9	-11.7	-16.7	-19.6	-25.8	-32.9	-43.4	-55.8	-72.3
AC Unit 29	Ldn	2.8	-67.2	-58.3	-49.5	-39.0	-42.5	-34.4	-21.1	-19.1	-15.9	-11.3	-13.4	-10.9	-12.9	-11.0	-7.0	-3.9	-4.1	-6.0	-7.6	-11.9	-17.2	-20.3	-26.8	-36.1	-46.9	-59.7	-76.6
AC Unit 30	Ldn	2.8	-67.2	-58.3	-49.5	-39.0	-42.5	-34.4	-21.2	-19.1	-16.0	-11.3	-13.4	-11.0	-12.9	-11.1	-7.0	-3.9	-4.1	-6.0	-7.7	-11.9	-17.3	-20.4	-26.9	-36.3	-47.1	-60.0	-76.9
AC Unit 31	Ldn	0.1	-68.8	-60.4	-52.2	-42.3	-46.3	-38.6	-25.7	-23.7	-20.5	-15.6	-17.4	-14.5	-17.6	-15.5	-11.2	-7.9	-8.0	-6.7	-7.8	-12.0	-17.1	-20.2	-26.8	-36.4	-47.5	-60.6	-77.9
AC Unit 32	Ldn	0.5	-67.7	-58.8	-50.0	-39.6	-43.2	-35.1	-22.0	-20.1	-17.0	-12.4	-14.6	-12.0	-15.6	-13.7	-9.6	-6.5	-6.6	-8.4	-10.1	-14.0	-19.1	-22.1	-28.7	-38.3	-49.6	-63.1	-81.0
AC Unit 33	Ldn	0.4	-67.7	-58.8	-50.0	-39.7	-43.2	-35.2	-22.0	-20.1	-17.0	-12.5	-14.6	-12.1	-15.6	-13.7	-9.6	-6.5	-6.7	-8.5	-10.2	-14.1	-19.2	-22.3	-28.9	-38.6	-49.9	-63.5	-81.5
AC Unit 34	Ldn	11.7	-69.9	-61.4	-53.1	-43.4	-47.3	-39.5	-26.6	-24.6	-21.3	-16.4	-18.2	-15.3	-7.4	-4.4	0.7	5.0	5.7	4.6	3.5	-1.0	-6.9	-11.3	-19.8	-32.3	-47.3	-65.3	-87.3
AC Unit 35	Ldn	-2.9	-72.7	-64.4	-56.2	-46.6	-50.5	-42.7	-29.8	-27.8	-24.5	-19.6	-21.3	-18.4	-21.6	-19.4	-15.1	-11.0	-10.2	-9.3	-10.5	-15.0	-20.7	-24.5	-32.0	-41.9	-55.0	-70.8	-91.3
AC Unit 36	Ldn	-0.9	-73.0	-64.7	-56.5	-46.9	-47.9	-40.0	-27.0	-24.9	-21.6	-16.7	-18.5	-15.6	-18.8	-16.6	-12.4	-8.7	-8.3	-7.6	-8.9	-13.5	-19.3	-23.4	-31.1	-42.4	-55.8	-72.1	-93.3
AC Unit 37	Ldn	-1.1	-72.8	-64.6	-56.4	-46.8	-47.8	-40.0	-26.9	-24.9	-21.5	-16.7	-18.4	-15.5	-18.7	-16.5	-12.3	-8.7	-8.3	-8.2	-9.5	-13.9	-19.7	-23.7	-31.4	-42.7	-56.2	-72.6	-94.1
AC Unit 38	Ldn	0.4	-74.9	-66.8	-58.7	-49.1	-53.0	-45.3	-32.4	-30.4	-21.4	-16.5	-18.3	-15.3	-18.4	-16.0	-9.7	-6.1	-5.9	-7.4	-9.0	-13.5	-19.0	-22.9	-30.5	-41.7	-55.0	-71.1	-91.9
AC Unit 39	Ldn	-0.4	-74.8	-66.7	-58.6	-49.0	-53.0	-45.2	-32.3	-30.3	-23.8	-18.9	-20.7	-17.8	-20.7	-18.1	-11.8	-7.9	-6.4	-7.5	-8.6	-13.0	-18.6	-22.5	-30.1	-41.3	-54.6	-70.5	-91.2
AC Unit 40	Ldn	0.0	-74.7	-66.6	-58.5	-48.8	-52.8	-45.0	-32.1	-30.1	-26.9	-22.0	-23.8	-20.9	-17.0	-14.6	-10.1	-6.4	-6.2	-7.6	-9.1	-13.4	-18.9	-22.6	-29.9	-39.4	-52.2	-67.7	-87.9
AC Unit 41	Ldn	-1.8	-74.6	-66.5	-58.4	-48.8	-52.7	-45.0	-32.1	-30.1	-26.8	-22.0	-23.7	-20.8	-23.0	-19.9	-14.6	-9.1	-8.3	-8.6	-9.6	-13.1	-18.7	-22.5	-29.8	-40.3	-52.6	-67.3	-86.5
AC Unit 42	Ldn	1.9	-67.0	-58.1	-49.5	-39.0	-42.7	-34.8	-21.9	-20.1	-17.1	-12.6	-14.7	-12.1	-15.4	-13.4	-9.2	-4.7	-4.8	-6.6	-7.7	-11.7	-16.7	-17.6	-23.8	-33.0	-43.5	-55.9	-72.3
AC Unit 43	Ldn	0.8	-67.2	-58.4	-49.7	-39.3	-42.9	-35.0	-22.1	-20.3	-17.3	-12.8	-14.9	-12.2	-15.6	-13.5	-9.4	-6.2	-6.3	-8.0	-9.3	-13.1	-18.1	-21.0	-26.2	-35.6	-46.6	-59.7	-76.9
AC Unit 44	Ldn	3.0	-67.5	-58.7	-49.9	-39.6	-43.3	-35.4	-19.8	-18.0	-15.0	-10.4	-12.5	-9.8	-13.2	-11.2	-7.0	-3.8	-3.9	-5.7	-7.4	-11.6	-16.7	-19.8	-26.5	-36.2	-47.6	-61.2	-79.3
AC Unit 45	Ldn	3.0	-67.6	-58.7	-50.0	-39.7	-43.4	-35.4	-19.9	-18.1	-15.1	-10.5	-12.6	-9.9	-13.3	-11.3	-7.1	-3.9	-4.0	-5.7	-7.5	-11.8	-16.9	-20.1	-26.8	-36.6	-48.1	-61.9	-80.1
AC Unit 46	Ldn	4.0	-65.4	-56.6	-47.9	-36.9	-40.6	-32.6	-19.3	-17.4	-14.4	-9.8	-12.0	-9.5	-13.1	-11.3	-7.2	-3.1	-3.2	-4.2	-5.0	-8.6	-13.2	-15.5	-20.7	-28.5	-36.9	-46.7	-59.9
AC Unit 47	Ldn	4.0	-65.4	-56.6	-47.9	-37.0	-40.6	-32.7	-19.4	-17.5	-14.4	-9.9	-12.1	-9.6	-13.2	-11.3	-7.2	-3.1	-3.2	-4.3	-5.1	-8.8	-13.4	-15.7	-21.1	-28.9	-37.6	-47.6	-61.0
AC Unit 48	Ldn	0.8	-69.5	-61.4	-53.3	-43.3	-47.4	-39.7	-26.7	-24.8	-21.5	-16.7	-18.5	-15.6	-18.8	-16.6	-11.3	-7.3	-6.3	-6.1	-6.7	-10.4	-15.2	-17.8	-23.5	-32.0	-41.5	-52.6	-67.5
AC Unit 49	Ldn	0.4	-69.3	-61.1	-53.0	-43.0	-47.1	-39.4	-26.5	-24.6	-21.4	-16.5	-18.3	-15.4	-18.5	-16.3	-11.4	-7.3	-6.3	-7.0	-7.6	-11.3	-16.0	-18.6	-24.3	-32.7	-41.1	-52.7	-68.0
AC Unit 50	Ldn	0.2	-70.0	-61.8	-53.7	-43.7	-47.8	-40.1	-27.2	-25.2	-22.0	-17.1	-18.9	-16.0	-19.1	-16.9	-12.1	-8.0	-7.0	-6.5	-7.2	-11.0	-15.9	-18.8	-24.9	-33.9	-44.2	-56.3	-72.4
AC Unit 51	Ldn	1.0	-70.1	-61.9	-53.8	-43.8	-47.8	-40.1	-27.2	-25.2	-22.0	-17.1	-18.9	-16.0	-19.0	-16.9	-12.6	-8.6	-4.6	-5.9	-7.1	-9.7	-14.8	-17.8	-24.2	-33.7	-44.7	-57.8	-75.0
AC Unit 52	Ldn	0.2	-68.6	-60.1	-51.8	-41.9	-45.9	-38.2	-25.3	-23.4	-20.1	-15.3	-17.1	-14.2	-17.3	-15.2	-10.9	-7.6	-7.7	-6.9	-7.7	-11.7	-16.9	-20.1	-26.9	-36.7	-48.1	-61.6	-79.3
AC Unit 53	Ldn	2.5	-67.3	-58.4	-49.6	-39.2	-42.7	-34.7	-21.5	-19.5	-16.3	-11.8	-13.9	-11.4	-15.0	-13.1	-9.0	-6.0	-4.2	-4.8	-6.3	-10.3	-15.4	-18.6	-25.3	-35.0	-46.3	-59.7	-77.3
AC Unit 54	Ldn	3.9	-66.7	-57.8	-49.1	-38.5	-42.0	-34.0	-20.7	-18.8	-15.7	-10.6	-12.7	-9.0	-12.6	-10.7	-6.6	-3.3	-3.3	-4.2	-5.2	-9.2	-14.2	-17.1	-22.0	-31.1	-41.5	-53.8	-70.0
AC Unit 55	Ldn	5.6	-66.6	-57.7	-49.0	-38.3	-41.9	-33.9	-20.6	-18.7	-15.6	-9.2	-11.3	-7.9	-11.6	-8.3	-4.2	-1.2	-1.3	-3.1	-4.4	-8.2	-13.1	-15.9	-22.0	-31.0	-41.2	-53.3	-69.2
AC Unit 56	Ldn	4.3	-66.2	-57.4	-48.6	-37.9	-41.5	-33.5	-20.2	-18.3	-15.2	-10.7	-12.8	-10.3	-11.6	-9.7	-5.6	-2.7	-2.8	-4.5	-5.2	-8.9	-13.6	-16.1	-21.8	-29.8	-39.5	-50.9	-66.1
AC Unit 57	Ldn	3.7	-65.8	-57.0	-48.3	-37.5	-41.1	-33.1	-19.8	-17.9	-14.9	-10.4	-12.5	-10.0	-13.6	-11.8	-7.7	-4.8	-4.9	-6.1	-6.7	-10.2	-4.6	-8.1	-15.1	-25.3	-36.6	-48.7	-63.5
AC Unit 58	Ldn	-0.1	-72.6	-64.6	-56.6	-46.8	-50.9	-43.2	-30.2	-28.3	-25.0	-20.2	-21.9	-19.1	-21.5	-18.4	-13.1	-8.9	-8.0	-5.9	-7.1	-10.8	-15.9	-19.0	-25.5	-35.0	-46.0	-59.1	-76.3

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 59	Ldn	-0.3	-72.7	-64.6	-56.6	-46.9	-50.9	-43.3	-30.3	-28.3	-25.1	-20.2	-22.0	-19.1	-21.7	-18.5	-13.3	-9.1	-8.1	-6.0	-7.2	-10.9	-16.1	-19.2	-25.7	-35.3	-46.5	-59.7	-77.1
AC Unit 60	Ldn	-2.5	-73.9	-65.8	-57.7	-48.0	-52.0	-44.2	-31.2	-29.2	-25.9	-21.0	-22.8	-19.9	-22.5	-19.4	-14.1	-9.9	-9.0	-9.7	-10.5	-14.4	-19.6	-22.7	-29.4	-39.2	-50.7	-64.5	-82.8
AC Unit 61	Ldn	-3.0	-74.4	-66.2	-58.2	-48.4	-52.4	-44.6	-31.6	-29.6	-26.3	-21.4	-23.2	-20.3	-23.0	-19.8	-14.6	-10.3	-9.4	-10.2	-11.0	-15.0	-20.2	-23.5	-30.3	-40.4	-52.3	-66.7	-85.6
AC Unit 62	Ldn	-3.1	-74.1	-66.0	-57.9	-48.2	-52.2	-44.4	-31.3	-29.3	-26.0	-21.2	-22.9	-20.0	-23.1	-20.0	-14.7	-10.5	-9.5	-10.3	-11.2	-15.2	-20.4	-23.7	-30.6	-40.8	-52.8	-67.3	-86.4
AC Unit 63	Ldn	-2.2	-72.6	-64.2	-55.8	-46.3	-50.1	-42.2	-29.1	-27.0	-23.7	-18.8	-20.5	-17.6	-20.8	-18.7	-12.1	-8.7	-8.9	-10.3	-11.4	-15.7	-21.5	-25.6	-33.7	-45.7	-60.1	-77.9	
AC Unit 64	Ldn	-2.2	-72.8	-64.4	-56.1	-46.6	-50.4	-42.5	-29.4	-27.4	-24.0	-19.1	-20.9	-18.0	-21.2	-16.5	-12.2	-8.9	-9.0	-10.1	-11.1	-15.5	-20.2	-24.4	-32.5	-44.5	-58.9	-76.5	-99.3
AC Unit 65	Ldn	-1.9	-72.7	-64.3	-56.0	-46.4	-50.3	-42.4	-29.3	-27.3	-24.0	-19.1	-20.8	-17.9	-21.1	-16.4	-12.1	-8.8	-8.8	-9.9	-10.9	-14.3	-18.5	-22.7	-30.8	-42.8	-57.2	-74.7	-97.4
AC Unit 66	Ldn	-1.4	-72.7	-64.3	-56.0	-46.4	-50.3	-42.4	-29.3	-27.3	-23.9	-19.0	-20.8	-17.9	-21.1	-15.5	-11.2	-7.9	-7.9	-9.3	-10.8	-15.1	-19.5	-23.0	-31.0	-42.8	-57.1	-74.5	-97.0
AC Unit 67	Ldn	1.0	-70.9	-62.4	-54.1	-44.5	-48.4	-40.5	-27.6	-25.5	-22.2	-17.3	-19.1	-13.8	-17.0	-14.8	-9.1	-5.7	-4.9	-6.9	-8.5	-13.0	-18.9	-23.0	-30.9	-42.5	-56.3	-73.2	-95.1
AC Unit 68	Ldn	0.9	-71.2	-62.8	-54.5	-44.9	-48.7	-40.9	-27.9	-25.9	-22.5	-17.7	-19.4	-14.0	-17.1	-15.0	-9.2	-5.9	-5.0	-6.9	-8.4	-13.0	-18.8	-22.9	-30.9	-42.4	-56.2	-73.0	-94.9
AC Unit 69	Ldn	2.1	-69.1	-60.2	-51.3	-41.2	-44.6	-36.5	-23.2	-21.1	-17.9	-13.2	-15.3	-12.8	-16.4	-12.3	-7.2	-4.0	-4.3	-6.4	-8.5	-13.5	-19.3	-23.4	-31.1	-42.4	-54.8	-71.0	-92.5
AC Unit 70	Ldn	2.8	-69.1	-60.1	-51.3	-41.1	-44.6	-36.5	-23.2	-21.1	-17.9	-13.2	-15.3	-12.8	-16.4	-12.3	-6.4	-3.3	-3.6	-5.6	-7.7	-12.9	-18.8	-22.9	-30.7	-42.0	-55.4	-71.8	-93.0
AC Unit 71	Ldn	2.3	-71.8	-63.5	-55.2	-45.6	-49.4	-41.6	-28.6	-26.6	-23.3	-18.4	-20.1	-12.6	-16.0	-14.0	-7.5	-4.3	-4.4	-5.1	-6.7	-10.6	-16.4	-20.3	-28.1	-39.4	-52.8	-68.4	-89.6
AC Unit 72	Ldn	2.2	-71.8	-63.5	-55.2	-45.6	-49.4	-41.6	-28.6	-26.6	-23.3	-18.4	-20.1	-12.6	-16.0	-14.0	-7.5	-4.3	-4.4	-5.4	-6.9	-11.5	-17.1	-21.0	-28.6	-39.8	-53.2	-68.6	-89.8
AC Unit 73	Ldn	2.8	-69.1	-60.1	-51.3	-41.1	-44.5	-36.4	-23.0	-20.9	-17.6	-12.9	-14.9	-12.4	-16.0	-11.9	-6.5	-3.3	-3.6	-5.7	-7.8	-12.9	-18.0	-22.2	-30.1	-41.5	-55.2	-71.7	-93.1
AC Unit 74	Ldn	2.4	-69.1	-60.2	-51.3	-41.1	-44.6	-36.4	-23.0	-20.9	-17.5	-12.7	-14.7	-12.2	-13.4	-11.7	-6.9	-3.9	-4.2	-6.3	-8.4	-13.5	-19.3	-23.2	-31.0	-42.3	-55.9	-72.4	-93.9
AC Unit 75	Ldn	1.3	-69.2	-60.2	-51.4	-41.2	-44.7	-36.5	-23.2	-21.1	-17.9	-13.3	-15.3	-12.8	-16.4	-12.1	-8.1	-5.1	-5.4	-7.4	-9.5	-14.6	-20.1	-24.0	-31.6	-42.9	-56.4	-73.0	-94.5
AC Unit 76	Ldn	1.1	-69.2	-60.2	-51.4	-41.3	-44.7	-36.6	-23.3	-21.2	-17.9	-13.3	-15.4	-12.9	-16.5	-12.3	-8.3	-5.2	-5.5	-7.5	-9.5	-14.6	-20.2	-24.0	-31.7	-43.0	-56.6	-73.2	-94.8
AC Unit 77	Ldn	0.8	-70.2	-61.6	-53.3	-43.6	-47.6	-39.8	-26.8	-24.8	-21.5	-16.7	-18.4	-15.5	-18.7	-16.5	-8.7	-5.4	-5.5	-7.5	-8.6	-13.3	-19.3	-23.5	-31.5	-43.2	-57.2	-74.3	-96.4
AC Unit 78	Ldn	1.9	-70.2	-61.7	-53.3	-43.7	-47.6	-39.8	-26.8	-24.8	-21.5	-16.7	-18.4	-15.5	-18.7	-16.5	-7.6	-4.2	-4.4	-5.6	-7.6	-12.5	-18.5	-22.7	-30.9	-42.7	-56.9	-74.2	-96.5
AC Unit 79	Ldn	2.3	-69.2	-60.2	-51.2	-41.1	-44.4	-36.2	-22.8	-20.7	-17.5	-12.8	-14.8	-12.2	-15.7	-13.8	-7.3	-4.0	-4.3	-6.3	-7.0	-12.4	-19.2	-24.4	-32.8	-44.9	-59.5	-77.2	
AC Unit 80	Ldn	2.3	-69.2	-60.2	-51.2	-41.1	-44.5	-36.2	-22.9	-20.7	-17.5	-12.8	-14.8	-12.2	-15.7	-13.8	-7.3	-4.1	-4.3	-6.3	-7.0	-12.4	-19.3	-24.5	-33.0	-45.1	-59.7	-77.6	
AC Unit 81	Ldn	2.7	-69.4	-60.3	-51.3	-41.2	-44.5	-36.3	-22.8	-20.6	-17.3	-12.5	-14.5	-11.9	-15.5	-13.6	-7.2	-4.0	-4.3	-4.8	-6.2	-11.7	-18.7	-24.2	-33.1	-45.7	-60.7	-78.9	
AC Unit 82	Ldn	0.7	-70.7	-62.1	-53.6	-44.1	-47.9	-40.1	-27.0	-25.0	-21.7	-16.8	-18.5	-15.6	-18.8	-16.6	-12.4	-5.4	-5.6	-6.1	-8.2	-13.7	-20.4	-25.4	-34.2	-46.7	-61.8	-80.2	
AC Unit 83	Ldn	-0.3	-73.6	-65.2	-56.9	-47.4	-51.2	-43.4	-30.3	-28.2	-24.9	-20.0	-21.8	-18.9	-22.0	-18.1	-12.6	-6.8	-6.9	-6.7	-8.7	-13.9	-20.4	-25.3	-34.2	-47.1	-62.6	-81.4	
AC Unit 84	Ldn	-1.1	-73.6	-65.3	-57.0	-47.5	-51.3	-43.4	-30.4	-28.3	-25.0	-20.1	-21.8	-18.9	-22.1	-18.2	-13.9	-6.8	-7.0	-8.7	-10.4	-15.4	-21.5	-26.1	-34.8	-47.5	-62.9	-81.8	
Receiver Reciever 3 Fl G dB(A) Ldn 36.2 dB(A)																													
AC Unit 1	Ldn	14.6	-66.4	-57.2	-48.0	-37.2	-40.2	-31.5	-18.5	-15.5	-11.2	-7.0	-7.7	-3.8	-4.8	-2.0	2.8	6.6	6.9	5.5	8.0	5.9	0.0	-4.1	-11.9	-23.2	-36.3	-52.0	-72.3
AC Unit 2	Ldn	17.6	-66.1	-56.8	-47.6	-36.8	-39.8	-31.0	-17.8	-14.8	-8.0	-3.7	-4.5	-0.6	-1.6	1.1	6.0	9.8	10.2	11.1	9.9	6.9	1.6	-2.2	-9.5	-20.0	-32.4	-46.8	-66.1
AC Unit 3	Ldn	16.7	-65.6	-56.4	-47.2	-36.3	-39.2	-30.5	-14.6	-11.5	-7.2	-3.0	-3.7	0.2	-1.2	1.5	6.4	10.1	10.5	9.1	7.7	3.2	-2.6	-5.7	-13.1	-23.6	-35.7	-49.9	-68.3
AC Unit 4	Ldn	16.8	-65.5	-56.2	-47.0	-36.1	-39.1	-30.3	-14.3	-11.3	-7.0	-2.7	-3.4	0.4	-1.1	1.7	6.5	10.2	10.6	9.2	7.8	3.3	-2.4	-6.2	-12.9	-23.3	-35.1	-49.2	-67.3
AC Unit 5	Ldn	18.7	-64.6	-55.3	-43.6	-32.5	-35.4	-26.7	-12.9	-9.9	-5.7	-1.2	-2.0	1.9	0.0	2.7	7.5	11.2	11.6	10.3	11.3	8.3	3.0	-0.4	-7.0	-16.5	-27.4	-40.3	-57.1
AC Unit 6	Ldn	18.8	-64.5	-55.2	-46.0	-32.3	-35.2	-26.5	-12.7	-9.7	-5.5	-0.9	-1.7	2.2	0.1	2.8	7.7	11.3	11.7	10.4	11.4	8.5	3.1	-0.2	-6.8	-16.2	-27.0	-39.6	-56.2
AC Unit 7	Ldn	20.0	-63.2	-53.9	-44.8	-33.3	-33.7	-25.1	-11.0	-8.2	-4.2	1.3	0.2	3.7	1.0	3.6	8.3	11.6	14.2	12.9	11.7	7.4	2.2	-0.9	-7.0	-15.7	-24.6	-35.7	-50.2
AC Unit 8	Ldn	20.8	-63.0	-53.8	-44.6	-30.5	-33.5	-24.9	-10.7	-8.0	-4.0	1.6	0.4	3.9	1.2	3.8	8.5	11.8	14.3	14.4	13.3	9.1	3.9	0.9	-5.1	-13.7	-23.2	-34.1	-48.5
AC Unit 9	Ldn	20.7	-62.4	-53.2	-44.1	-32.4	-35.5	-24.3	-10.1	-7.4	-3.5	2.0	0.8	4.2	1.4	3.9	8.5	14.1	14.5	13.3	12.1	7.9	2.7	-0.1	-6.0	-14.2	-23.3	-33.4	-46.7

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 10	Ldn	20.4	-58.5	-49.3	-40.1	-28.2	-31.2	-22.6	-8.4	-5.6	-1.7	3.8	2.6	6.0	3.2	5.7	10.4	13.4	13.7	12.3	11.1	6.9	1.8	-0.8	-6.3	-14.0	-22.1	-31.1	-42.6
AC Unit 11	Ldn	20.6	-58.2	-49.0	-39.8	-27.9	-30.9	-22.3	-8.1	-5.4	-1.4	4.1	2.9	6.2	3.4	6.0	10.6	13.6	13.9	12.6	11.4	7.2	2.1	-0.5	-5.9	-13.5	-21.5	-30.2	-41.5
AC Unit 12	Ldn	23.8	-57.3	-48.3	-39.3	-27.4	-30.6	-22.2	-8.2	-5.7	-1.9	3.3	1.9	5.2	2.2	4.6	12.5	17.2	17.6	16.5	15.4	11.4	6.6	4.3	-0.7	-7.4	-14.3	-21.7	-31.6
AC Unit 13	Ldn	25.7	-54.3	-45.2	-36.1	-24.1	-27.3	-18.8	-4.9	-2.3	1.4	6.8	5.4	8.6	5.6	10.0	15.8	18.9	19.2	18.0	16.9	12.9	8.1	5.9	1.2	-5.4	-11.7	-18.5	-27.7
AC Unit 14	Ldn	26.3	-53.5	-44.3	-35.3	-23.3	-26.5	-18.0	-4.1	-1.6	2.2	7.5	6.1	9.4	6.4	10.6	16.4	19.4	19.8	18.6	17.5	13.5	8.7	6.6	2.0	-4.4	-10.5	-17.0	-25.8
AC Unit 15	Ldn	26.4	-53.3	-44.1	-35.1	-23.1	-26.3	-17.9	-3.9	-1.4	2.4	7.6	6.3	9.5	6.5	10.7	16.5	19.5	19.9	18.6	17.6	13.6	8.8	6.7	2.2	-4.2	-10.2	-16.6	-25.3
AC Unit 16	Ldn	26.5	-53.4	-44.3	-35.2	-23.2	-26.4	-17.9	-3.9	-1.3	2.5	7.8	6.5	9.7	6.8	10.9	15.6	19.7	20.1	18.9	17.8	13.8	9.1	6.9	2.1	-4.3	-10.6	-17.1	-26.0
AC Unit 17	Ldn	26.4	-53.6	-44.5	-35.4	-23.4	-26.5	-18.0	-4.1	-1.5	2.3	7.7	6.3	9.6	6.7	10.8	15.5	19.6	20.0	18.8	17.7	13.8	9.0	6.8	2.0	-4.5	-10.9	-17.5	-26.4
AC Unit 18	Ldn	3.9	-71.3	-63.4	-55.5	-45.1	-49.3	-41.8	-28.9	-27.1	-23.9	-18.2	-18.9	-15.0	-17.2	-14.0	-8.7	-3.6	-2.6	-3.2	-3.7	-7.2	-11.7	-13.9	-19.0	-26.5	-34.7	-44.1	-56.6
AC Unit 19	Ldn	4.0	-71.4	-63.4	-55.6	-45.1	-49.4	-41.9	-29.0	-27.1	-23.9	-18.2	-18.9	-15.0	-17.2	-14.0	-8.7	-3.6	-2.5	-3.2	-3.7	-7.2	-11.3	-13.5	-18.7	-26.3	-34.6	-44.0	-56.6
AC Unit 20	Ldn	2.5	-71.6	-63.7	-55.8	-45.5	-49.7	-42.1	-29.2	-27.4	-24.2	-18.5	-19.2	-15.3	-17.5	-14.4	-9.1	-5.2	-4.1	-4.7	-5.2	-8.7	-13.1	-15.1	-20.2	-27.6	-35.5	-45.0	-57.8
AC Unit 21	Ldn	2.3	-72.0	-64.1	-56.2	-45.9	-50.1	-42.6	-29.7	-27.8	-24.5	-18.7	-19.4	-15.6	-17.7	-14.6	-9.3	-5.4	-4.3	-4.9	-5.4	-8.9	-13.3	-15.4	-20.5	-28.0	-36.3	-45.8	-58.7
AC Unit 22	Ldn	2.2	-72.0	-64.1	-56.2	-45.9	-50.1	-42.6	-29.7	-27.8	-24.6	-18.8	-19.6	-15.7	-17.8	-14.7	-9.4	-5.5	-4.5	-5.1	-5.6	-9.0	-13.5	-15.6	-20.7	-28.2	-36.6	-46.2	-59.2
AC Unit 23	Ldn	4.1	-65.6	-56.8	-48.1	-37.2	-40.9	-32.9	-19.7	-17.8	-14.8	-10.3	-12.4	-8.6	-12.1	-10.2	-6.2	-3.2	-3.3	-4.6	-5.4	-9.1	-11.7	-14.1	-19.6	-27.1	-36.2	-46.7	-60.6
AC Unit 24	Ldn	5.3	-65.9	-57.1	-48.4	-37.6	-41.2	-33.2	-19.9	-18.0	-14.9	-10.4	-12.5	-7.8	-10.6	-8.7	-4.6	-1.7	-1.8	-3.4	-4.3	-8.0	-11.5	-14.0	-19.6	-27.7	-37.2	-48.2	-62.9
AC Unit 25	Ldn	3.9	-68.7	-60.4	-52.3	-42.2	-46.3	-38.7	-25.8	-23.9	-20.6	-15.8	-17.6	-14.7	-12.3	-10.4	-6.3	-2.9	-2.7	-4.0	-5.0	-8.8	-13.6	-16.3	-22.2	-30.6	-40.6	-52.3	-67.8
AC Unit 26	Ldn	1.6	-68.8	-60.5	-52.4	-42.4	-46.5	-38.8	-25.9	-24.0	-20.7	-15.9	-17.7	-14.8	-17.9	-13.3	-9.1	-5.6	-5.0	-6.1	-7.0	-10.6	-15.7	-18.5	-22.0	-30.9	-41.0	-52.9	-68.6
AC Unit 27	Ldn	-0.7	-69.0	-60.6	-52.4	-42.5	-46.5	-38.8	-25.8	-23.9	-20.6	-15.8	-17.5	-14.6	-17.8	-15.7	-11.4	-8.1	-7.8	-8.6	-9.3	-13.1	-18.0	-20.9	-27.2	-36.4	-44.9	-57.8	-74.8
AC Unit 28	Ldn	0.4	-69.0	-60.6	-52.4	-42.5	-46.5	-38.8	-25.8	-23.9	-20.6	-15.8	-17.5	-14.6	-17.8	-13.9	-9.7	-6.5	-6.5	-7.6	-8.6	-12.7	-17.7	-20.8	-27.2	-36.7	-47.6	-60.5	-77.6
AC Unit 29	Ldn	-0.4	-68.6	-60.2	-52.0	-42.1	-46.1	-38.4	-25.5	-23.6	-20.3	-15.5	-17.3	-14.4	-17.5	-15.3	-11.0	-7.8	-7.6	-8.4	-9.1	-12.9	-17.9	-20.7	-26.9	-36.1	-46.7	-59.3	-76.0
AC Unit 30	Ldn	-0.4	-68.6	-60.2	-52.0	-42.0	-46.1	-38.4	-25.5	-23.6	-20.3	-15.5	-17.3	-14.4	-17.5	-15.3	-11.0	-7.8	-7.6	-8.4	-9.1	-12.9	-17.8	-20.7	-26.9	-36.0	-46.6	-59.1	-75.8
AC Unit 31	Ldn	-0.3	-68.6	-60.2	-52.0	-42.0	-46.1	-38.4	-25.5	-23.6	-20.3	-15.5	-17.3	-14.4	-17.5	-15.3	-11.0	-7.8	-7.4	-8.2	-8.9	-12.7	-17.6	-20.5	-26.6	-35.7	-46.1	-58.6	-74.9
AC Unit 32	Ldn	-0.2	-68.4	-60.0	-51.8	-41.8	-45.9	-38.2	-25.3	-23.4	-20.2	-15.3	-17.1	-14.2	-17.3	-15.1	-10.8	-7.6	-7.4	-8.2	-8.9	-12.7	-17.6	-20.5	-26.6	-35.7	-46.1	-58.6	-75.1
AC Unit 33	Ldn	-0.2	-68.3	-59.9	-51.6	-41.7	-45.7	-38.0	-25.2	-23.3	-20.0	-15.2	-17.0	-14.1	-17.2	-15.0	-10.7	-7.5	-7.4	-8.2	-8.9	-12.7	-17.6	-20.5	-26.6	-35.7	-46.2	-58.6	-75.1
AC Unit 34	Ldn	2.9	-71.2	-63.1	-55.0	-45.1	-49.1	-41.4	-21.7	-19.6	-16.3	-11.5	-13.5	-10.9	-14.4	-12.6	-8.3	-4.9	-4.7	-4.7	-5.4	-9.6	-14.8	-17.9	-24.5	-34.2	-45.5	-58.8	-76.2
AC Unit 35	Ldn	2.7	-71.5	-63.4	-55.3	-45.5	-46.5	-38.8	-25.8	-23.8	-20.5	-15.6	-17.4	-14.5	-14.8	-12.8	-8.4	-4.9	-3.8	-4.9	-5.2	-9.5	-14.9	-18.2	-24.7	-34.7	-46.3	-59.9	-77.5
AC Unit 36	Ldn	1.6	-71.4	-63.2	-55.1	-42.5	-46.5	-38.7	-25.7	-23.7	-20.4	-15.6	-17.3	-14.4	-17.6	-14.3	-9.8	-6.1	-5.5	-5.2	-6.4	-10.6	-16.0	-19.4	-26.2	-36.1	-47.7	-61.4	-79.4
AC Unit 37	Ldn	1.7	-71.4	-63.2	-55.1	-45.3	-49.3	-41.6	-28.7	-26.7	-23.4	-18.6	-17.8	-14.8	-16.2	-14.0	-9.6	-5.9	-5.3	-5.1	-6.2	-10.4	-15.8	-19.2	-25.8	-35.9	-47.6	-61.5	-79.6
AC Unit 38	Ldn	2.2	-73.6	-65.6	-57.6	-47.7	-51.8	-44.0	-31.4	-24.8	-21.5	-16.7	-18.4	-15.2	-17.9	-13.9	-8.1	-4.5	-4.3	-5.4	-6.4	-10.5	-15.7	-18.9	-25.5	-35.2	-46.4	-59.6	-76.8
AC Unit 39	Ldn	2.4	-73.0	-65.0	-57.0	-47.2	-51.2	-43.5	-30.7	-24.6	-21.3	-14.7	-16.4	-13.4	-16.3	-13.8	-8.0	-4.5	-4.2	-5.4	-6.3	-10.4	-15.6	-18.8	-25.2	-35.0	-46.1	-59.2	-76.3
AC Unit 40	Ldn	1.0	-72.6	-64.6	-56.6	-46.7	-50.7	-43.0	-30.2	-28.2	-24.9	-20.1	-21.9	-19.0	-16.1	-13.9	-9.4	-5.8	-5.4	-6.6	-7.7	-11.8	-16.8	-19.7	-26.1	-35.3	-46.0	-58.5	-75.1
AC Unit 41	Ldn	2.7	-72.5	-64.5	-56.5	-46.5	-50.6	-42.9	-30.1	-28.1	-24.9	-12.1	-14.1	-11.5	-14.8	-12.7	-8.3	-4.8	-3.8	-5.0	-6.1	-10.1	-15.1	-18.1	-24.5	-33.8	-44.5	-57.0	-73.4
AC Unit 42	Ldn	22.0	-61.7	-52.4	-43.2	-31.3	-34.2	-25.4	-10.5	-7.6	-3.4	1.6	0.8	4.6	2.8	5.8	10.9	14.5	15.3	14.5	13.7	9.9	8.1	5.6	0.1	-7.9	-16.7	-26.7	-40.0
AC Unit 43	Ldn	23.7	-62.1	-52.8	-43.6	-31.9	-32.7	-23.9	-9.7	-6.7	-2.4	2.2	1.5	5.4	4.2	7.3	12.5	16.3	17.2	16.4	15.6	11.8	7.0	5.4	-0.3	-7.7	-16.9	-27.4	-41.4
AC Unit 44	Ldn	23.2	-62.6	-53.3	-44.1	-30.3	-33.2	-24.4	-10.5	-7.4	-3.1	1.4	0.7	4.6	3.7	6.8	12.0	15.9	16.7	15.9	15.2	11.4	6.6	4.0	-1.7	-10.0	-19.3	-30.1	-44.3
AC Unit 45	Ldn	23.1	-62.7	-53.4	-44.2	-30.5	-33.4	-24.6	-10.7	-7.6	-3.3	1.2	0.4	4.3	3.6	6.6	11.9	15.7	16.6	15.8	15.1	11.3	6.4	3.8	-1.9	-10.3	-19.6	-30.5	-44.9

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 46	Ldn	-1.2	-72.2	-64.1	-56.2	-46.4	-50.5	-42.9	-29.9	-28.0	-24.7	-19.9	-21.7	-18.8	-21.3	-18.1	-12.9	-8.7	-7.7	-8.4	-9.1	-12.9	-17.8	-20.6	-26.8	-35.8	-46.3	-58.8	-75.4
AC Unit 47	Ldn	-1.2	-72.7	-64.7	-56.8	-47.0	-51.1	-43.5	-30.5	-28.6	-25.3	-20.5	-22.3	-19.2	-21.4	-18.3	-13.0	-8.8	-7.9	-8.6	-8.6	-12.5	-17.5	-20.5	-26.8	-36.1	-46.7	-59.4	-76.1
AC Unit 48	Ldn	-2.2	-73.7	-65.7	-57.6	-47.9	-51.9	-44.2	-31.1	-29.1	-25.9	-21.0	-22.8	-19.9	-22.2	-19.1	-13.8	-9.6	-8.7	-9.4	-10.2	-14.1	-19.1	-20.7	-26.8	-35.6	-47.3	-61.3	-79.6
AC Unit 49	Ldn	-0.8	-73.3	-65.2	-57.1	-47.4	-51.4	-43.6	-30.6	-28.6	-25.3	-20.5	-22.2	-19.3	-22.4	-16.5	-11.7	-7.8	-7.2	-8.3	-9.1	-13.0	-18.2	-21.5	-28.3	-38.2	-49.7	-63.5	-81.6
AC Unit 50	Ldn	-2.8	-73.7	-65.6	-57.5	-47.8	-51.7	-44.0	-30.9	-28.9	-25.6	-20.8	-22.5	-19.6	-22.8	-19.7	-14.4	-10.2	-9.2	-10.0	-10.8	-14.8	-20.0	-21.6	-28.6	-38.8	-50.2	-65.0	-84.1
AC Unit 51	Ldn	1.6	-74.1	-65.9	-57.8	-48.1	-52.1	-44.3	-31.2	-29.2	-21.3	-16.4	-18.1	-15.2	-18.4	-16.0	-9.5	-4.6	-4.4	-6.0	-7.5	-12.0	-17.6	-21.4	-28.7	-39.5	-52.0	-67.3	-87.0
AC Unit 52	Ldn	0.1	-72.1	-63.9	-55.6	-46.0	-49.9	-39.3	-26.2	-24.1	-20.8	-15.9	-17.7	-14.8	-18.0	-15.9	-11.6	-6.9	-6.6	-7.5	-8.4	-12.5	-17.9	-21.6	-28.9	-39.7	-52.7	-68.3	-89.0
AC Unit 53	Ldn	-1.0	-72.0	-63.7	-55.5	-45.8	-49.7	-41.0	-27.9	-25.9	-22.6	-17.7	-19.4	-16.3	-19.3	-16.9	-12.3	-8.6	-7.8	-8.6	-9.5	-12.4	-17.8	-21.4	-28.4	-39.2	-52.2	-67.9	-88.4
AC Unit 54	Ldn	1.2	-71.5	-63.2	-55.0	-45.3	-46.1	-38.3	-25.2	-23.2	-19.9	-15.0	-15.4	-12.5	-15.7	-13.6	-9.3	-6.0	-5.7	-6.9	-7.8	-11.8	-17.1	-20.5	-27.6	-38.0	-50.3	-65.2	-84.7
AC Unit 55	Ldn	-2.6	-71.3	-63.1	-54.9	-45.2	-49.1	-41.3	-28.3	-26.3	-23.0	-18.1	-19.8	-16.9	-20.2	-18.0	-13.8	-10.3	-9.4	-10.2	-11.0	-15.0	-20.1	-23.4	-30.3	-39.2	-51.3	-65.9	-85.0
AC Unit 56	Ldn	-0.1	-70.7	-62.5	-54.4	-44.6	-48.6	-40.9	-27.9	-25.9	-21.4	-16.5	-18.3	-15.4	-18.6	-16.1	-11.5	-7.7	-6.7	-7.5	-8.3	-12.3	-17.5	-20.3	-27.2	-37.3	-49.1	-63.2	-81.8
AC Unit 57	Ldn	2.3	-67.4	-58.4	-49.6	-39.2	-42.7	-34.7	-21.5	-19.2	-16.1	-11.5	-13.6	-11.0	-14.4	-12.4	-8.1	-4.7	-4.6	-6.1	-7.5	-11.2	-16.4	-19.6	-26.4	-36.2	-47.7	-61.4	-79.4
AC Unit 58	Ldn	-2.5	-76.0	-67.9	-59.8	-50.3	-54.3	-46.5	-33.5	-31.6	-28.3	-23.4	-25.2	-22.2	-24.5	-21.3	-16.1	-11.8	-11.0	-8.0	-8.4	-13.4	-18.7	-23.2	-31.3	-42.9	-56.9	-73.8	-95.7
AC Unit 59	Ldn	-2.2	-76.6	-68.5	-60.4	-50.9	-54.9	-47.1	-34.2	-32.2	-28.9	-24.1	-25.8	-22.3	-24.5	-21.4	-16.2	-11.9	-11.0	-8.0	-7.5	-12.7	-18.3	-23.1	-31.3	-43.1	-57.1	-74.2	-96.2
AC Unit 60	Ldn	-5.3	-76.3	-68.1	-60.0	-50.5	-54.4	-46.6	-33.5	-31.5	-28.2	-23.4	-25.1	-22.2	-25.1	-22.0	-16.7	-12.4	-11.6	-12.5	-13.5	-17.8	-23.4	-27.4	-35.3	-46.9	-61.0	-78.3	
AC Unit 61	Ldn	-5.5	-76.6	-68.4	-60.2	-50.8	-54.7	-46.9	-33.8	-31.7	-28.5	-23.6	-25.3	-22.5	-25.3	-22.2	-17.0	-12.7	-11.8	-12.8	-13.8	-18.1	-23.8	-27.9	-36.0	-47.8	-62.2	-79.8	
AC Unit 62	Ldn	-5.6	-76.6	-68.4	-60.2	-50.7	-54.7	-46.8	-33.7	-31.7	-28.4	-23.6	-25.3	-22.4	-25.4	-22.3	-17.1	-12.7	-11.9	-12.9	-13.9	-18.2	-24.0	-28.1	-36.2	-48.1	-60.6	-78.5	
AC Unit 63	Ldn	-1.9	-73.8	-65.4	-57.0	-47.6	-51.3	-43.4	-30.2	-28.1	-24.8	-19.9	-21.6	-18.7	-21.9	-19.8	-12.4	-9.1	-7.4	-9.4	-11.3	-16.4	-22.4	-27.5	-36.8	-50.3	-66.8	-87.3	
AC Unit 64	Ldn	-2.4	-72.6	-64.1	-55.7	-46.3	-50.0	-42.1	-28.9	-26.8	-23.4	-18.5	-20.2	-17.3	-20.6	-18.4	-11.8	-8.4	-8.7	-10.7	-12.8	-17.4	-23.5	-28.1	-37.0	-50.0	-65.9	-85.7	
AC Unit 65	Ldn	-2.6	-72.8	-64.4	-56.0	-46.5	-50.3	-42.4	-29.2	-27.1	-23.7	-18.8	-20.5	-17.6	-20.9	-18.7	-12.1	-8.8	-9.0	-11.0	-12.6	-17.1	-23.1	-27.6	-36.3	-49.0	-64.7	-84.0	
AC Unit 66	Ldn	-2.6	-72.9	-64.4	-56.0	-46.6	-50.4	-42.5	-29.2	-27.2	-23.8	-18.9	-20.6	-17.7	-21.0	-18.8	-12.2	-8.8	-9.0	-11.0	-12.5	-16.9	-22.9	-27.4	-36.0	-48.7	-64.3	-83.5	
AC Unit 67	Ldn	0.0	-72.8	-64.4	-56.0	-46.5	-50.3	-42.5	-29.4	-27.4	-24.0	-19.2	-20.9	-18.0	-18.3	-16.2	-10.1	-5.9	-6.1	-7.9	-9.7	-14.5	-20.5	-24.9	-33.5	-46.0	-61.2	-80.0	
AC Unit 68	Ldn	0.0	-72.8	-64.3	-56.0	-46.5	-50.3	-42.4	-29.4	-27.4	-24.0	-19.1	-20.9	-18.0	-18.3	-16.2	-10.2	-5.9	-6.1	-7.9	-9.7	-14.5	-20.4	-24.8	-33.3	-45.8	-60.9	-79.6	
AC Unit 69	Ldn	-0.6	-72.4	-64.0	-55.7	-46.1	-50.0	-42.1	-29.1	-27.1	-23.7	-18.9	-20.6	-17.7	-18.1	-14.5	-10.2	-6.8	-7.0	-8.7	-10.1	-14.7	-20.6	-24.9	-33.1	-45.1	-59.5	-77.1	
AC Unit 70	Ldn	0.6	-70.5	-61.9	-53.5	-43.9	-47.8	-40.0	-27.0	-25.0	-21.7	-16.9	-18.6	-15.7	-18.9	-14.3	-9.1	-5.8	-5.9	-6.9	-9.0	-13.8	-19.7	-23.9	-32.1	-44.0	-58.4	-75.8	-98.4
AC Unit 71	Ldn	0.3	-70.3	-61.8	-53.4	-43.8	-47.7	-39.9	-26.9	-24.9	-21.6	-16.8	-18.5	-15.6	-18.8	-16.6	-10.0	-6.6	-5.8	-7.0	-9.0	-13.6	-19.4	-23.5	-31.6	-43.3	-57.5	-74.7	-97.0
AC Unit 72	Ldn	0.1	-70.3	-61.7	-53.3	-43.7	-47.6	-39.9	-26.9	-24.9	-21.6	-16.7	-18.5	-15.6	-18.7	-16.6	-10.0	-6.6	-6.8	-7.0	-9.1	-13.8	-19.7	-23.9	-31.9	-43.5	-57.5	-74.5	-96.6
AC Unit 73	Ldn	2.6	-70.1	-61.5	-53.2	-43.5	-47.5	-39.7	-26.7	-24.8	-21.5	-16.6	-18.4	-13.4	-15.6	-12.1	-7.2	-3.8	-4.0	-4.8	-6.8	-11.6	-17.6	-21.7	-29.8	-41.6	-55.5	-72.3	-94.0
AC Unit 74	Ldn	1.7	-70.0	-61.5	-53.1	-43.5	-47.4	-39.6	-26.7	-24.7	-21.5	-16.6	-18.3	-15.4	-14.9	-12.0	-7.8	-4.5	-4.7	-6.6	-8.5	-13.1	-18.6	-22.0	-29.9	-41.4	-55.1	-71.7	-93.3
AC Unit 75	Ldn	0.3	-70.0	-61.4	-53.1	-43.4	-47.4	-39.6	-26.7	-24.7	-21.4	-16.6	-18.3	-15.4	-18.6	-14.1	-9.8	-6.4	-6.6	-7.0	-8.8	-13.3	-18.9	-22.1	-29.8	-41.2	-54.7	-71.2	-92.7
AC Unit 76	Ldn	1.9	-69.9	-61.4	-53.0	-43.3	-47.3	-39.5	-26.6	-24.6	-21.4	-16.5	-18.3	-15.4	-18.5	-11.9	-7.7	-4.5	-4.7	-5.6	-7.5	-12.2	-17.9	-21.3	-29.1	-40.5	-54.1	-70.7	-92.2
AC Unit 77	Ldn	0.1	-69.9	-61.3	-52.9	-43.3	-47.2	-39.5	-26.6	-24.6	-21.3	-16.5	-18.2	-15.3	-18.5	-14.0	-9.7	-6.4	-6.5	-8.4	-10.0	-13.0	-18.7	-22.5	-29.9	-41.3	-54.7	-71.0	-92.2
AC Unit 78	Ldn	3.1	-68.5	-59.5	-50.5	-40.3	-43.6	-35.4	-21.9	-19.7	-16.3	-11.5	-13.5	-10.9	-14.5	-10.3	-6.4	-3.3	-3.6	-5.7	-6.9	-12.1	-18.5	-22.5	-30.2	-41.4	-54.8	-71.1	-92.2
AC Unit 79	Ldn	0.9	-69.8	-61.2	-52.8	-43.1	-47.0	-39.3	-26.4	-24.5	-21.2	-16.4	-18.1	-15.2	-18.4	-13.9	-9.6	-5.2	-5.3	-7.3	-8.4	-13.0	-18.8	-22.7	-30.5	-41.8	-55.4	-71.7	-93.0
AC Unit 80	Ldn	2.2	-69.0	-60.0	-51.2	-41.0	-44.5	-36.4	-23.1	-21.0	-17.7	-13.0	-15.1	-12.6	-16.2	-14.5	-8.2	-3.7	-4.0	-6.0	-8.1	-13.2	-19.0	-23.0	-30.8	-42.1	-55.6	-71.9	-93.1
AC Unit 81	Ldn	1.5	-69.0	-60.1	-51.2	-41.1	-44.5	-36.3	-23.0	-20.8	-17.4	-12.6	-14.6	-12.0	-15.6	-13.9	-7.7	-4.7	-5.1	-7.2	-9.3	-14.4	-20.0	-23.8	-31.4	-42.6	-56.1	-72.5	-93.9

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 82	Ldn	-1.9	-72.7	-64.4	-56.2	-46.6	-50.4	-42.6	-29.6	-27.6	-24.3	-19.4	-21.1	-18.2	-21.4	-19.2	-12.3	-9.0	-8.5	-9.4	-10.4	-14.6	-20.2	-24.0	-31.7	-43.0	-56.5	-73.0	-94.6
AC Unit 83	Ldn	-2.0	-72.8	-64.5	-56.2	-46.6	-50.5	-42.7	-29.7	-27.6	-24.3	-19.4	-21.2	-18.3	-21.4	-19.3	-12.4	-9.0	-8.6	-9.5	-10.5	-14.8	-20.4	-23.4	-31.2	-42.6	-56.4	-73.2	-95.0
AC Unit 84	Ldn	-1.7	-72.8	-64.5	-56.3	-46.7	-50.5	-42.7	-29.7	-27.7	-24.4	-19.5	-21.2	-18.3	-21.4	-19.3	-12.4	-9.1	-8.7	-9.6	-9.2	-13.4	-19.1	-22.4	-30.2	-41.8	-55.6	-72.6	-94.7
Receiver Reciever 4 Fl G dB(A) Ldn 36.4 dB(A)																													
AC Unit 1	Ldn	10.8	-70.1	-61.6	-53.3	-42.5	-46.4	-38.7	-25.5	-23.8	-20.9	-16.6	-18.8	-15.1	-17.4	-14.2	-8.9	-5.0	-4.0	-4.5	8.2	4.2	-0.8	-3.6	-9.6	-18.2	-27.8	-38.7	-52.9
AC Unit 2	Ldn	2.2	-70.4	-62.0	-53.6	-42.9	-46.9	-39.2	-26.1	-24.5	-21.6	-17.2	-19.5	-15.7	-18.0	-14.8	-9.5	-5.6	-4.5	-5.1	-5.6	-9.1	-13.5	-15.7	-20.8	-28.3	-36.7	-46.3	-59.3
AC Unit 3	Ldn	1.6	-70.8	-62.4	-54.0	-43.4	-47.3	-39.6	-26.6	-24.9	-22.0	-17.6	-19.8	-16.3	-18.5	-15.4	-10.1	-6.1	-5.1	-5.7	-6.2	-9.7	-14.2	-16.5	-21.7	-29.5	-38.2	-48.2	-61.8
AC Unit 4	Ldn	1.4	-71.0	-62.6	-54.2	-43.7	-47.7	-40.0	-27.0	-25.4	-22.6	-18.2	-20.4	-16.5	-18.7	-15.6	-10.3	-6.3	-5.2	-5.9	-6.4	-9.9	-14.5	-16.7	-22.0	-29.9	-38.7	-48.9	-62.6
AC Unit 5	Ldn	0.4	-71.8	-63.3	-55.0	-44.7	-48.6	-40.9	-28.0	-26.4	-23.6	-19.2	-21.4	-17.5	-19.7	-16.6	-11.3	-7.2	-6.2	-6.9	-7.4	-11.1	-15.7	-18.2	-23.8	-32.1	-41.5	-52.5	-67.3
AC Unit 6	Ldn	0.2	-71.7	-63.3	-55.0	-44.7	-48.6	-41.0	-28.1	-26.4	-23.6	-19.2	-21.5	-17.7	-19.9	-16.8	-11.5	-7.4	-6.4	-7.0	-7.6	-11.3	-16.0	-18.5	-24.1	-32.5	-42.0	-53.2	-68.2
AC Unit 7	Ldn	-0.3	-72.5	-64.0	-55.7	-45.6	-49.5	-41.8	-28.9	-27.2	-24.3	-19.9	-22.2	-19.2	-21.3	-18.2	-12.9	-7.6	-6.6	-7.4	-8.1	-12.0	-17.1	-20.1	-26.4	-35.8	-46.5	-59.3	-76.1
AC Unit 8	Ldn	-1.5	-72.8	-64.4	-56.0	-46.0	-50.0	-42.3	-29.5	-27.9	-25.1	-20.7	-22.9	-19.3	-21.6	-18.4	-13.1	-9.0	-8.0	-8.7	-9.4	-13.2	-18.2	-21.1	-27.3	-36.6	-47.3	-60.1	-77.0
AC Unit 9	Ldn	-0.8	-75.4	-67.4	-59.4	-49.7	-53.7	-46.0	-33.1	-31.1	-27.9	-23.0	-23.8	-19.9	-22.0	-18.9	-13.7	-9.4	-8.5	-6.8	-7.6	-11.5	-16.5	-19.6	-26.1	-35.7	-46.9	-60.3	-78.1
AC Unit 10	Ldn	-3.1	-77.2	-69.1	-61.1	-51.4	-55.4	-47.6	-34.7	-32.7	-29.4	-23.9	-24.6	-20.8	-23.0	-19.9	-14.6	-10.3	-9.4	-10.2	-11.1	-15.0	-20.2	-23.5	-30.4	-40.5	-52.4	-66.9	-85.8
AC Unit 11	Ldn	-3.2	-77.3	-69.2	-61.2	-51.5	-55.5	-47.7	-34.8	-32.8	-29.5	-24.0	-24.8	-20.9	-23.1	-20.0	-14.7	-10.5	-9.6	-10.4	-11.2	-15.2	-20.5	-23.8	-30.7	-40.9	-53.0	-67.6	-86.8
AC Unit 12	Ldn	-4.5	-77.9	-69.8	-61.7	-52.1	-56.1	-48.3	-35.3	-33.3	-30.0	-25.2	-26.0	-22.1	-24.3	-21.2	-16.0	-11.7	-10.8	-11.7	-12.6	-16.8	-22.3	-26.0	-33.5	-44.6	-57.8	-74.0	-95.2
AC Unit 13	Ldn	-5.0	-78.6	-70.5	-62.3	-52.8	-56.7	-49.0	-36.0	-34.0	-30.7	-25.6	-26.4	-22.5	-24.8	-21.6	-16.4	-12.1	-11.3	-12.2	-13.1	-17.4	-23.0	-26.9	-34.6	-46.0	-59.8	-76.6	-98.6
AC Unit 14	Ldn	-4.8	-78.7	-70.5	-62.3	-52.9	-56.8	-49.0	-36.0	-34.0	-30.7	-25.9	-26.8	-22.9	-25.2	-22.1	-16.8	-12.5	-11.7	-12.6	-11.6	-15.2	-21.2	-25.4	-33.7	-45.7	-60.3	-78.2	
AC Unit 15	Ldn	-5.5	-78.6	-70.5	-62.3	-52.8	-56.8	-48.9	-36.0	-34.0	-30.7	-25.8	-27.0	-23.1	-25.3	-22.2	-17.0	-12.7	-11.8	-12.8	-13.8	-16.6	-22.5	-26.7	-35.0	-47.1	-61.7	-79.6	
AC Unit 16	Ldn	-6.4	-79.5	-71.3	-63.1	-53.8	-57.7	-49.9	-36.9	-34.9	-31.6	-26.8	-27.6	-23.7	-26.0	-22.9	-17.7	-13.3	-12.5	-13.5	-14.7	-19.1	-25.0	-29.4	-37.8	-50.3	-65.5	-84.3	
AC Unit 17	Ldn	-6.5	-79.5	-71.3	-63.1	-53.8	-57.7	-49.8	-36.9	-34.9	-31.6	-26.7	-27.7	-23.8	-26.1	-23.0	-17.8	-13.4	-12.7	-13.7	-14.8	-19.2	-25.2	-29.6	-38.1	-50.7	-66.1	-85.1	
AC Unit 18	Ldn	-2.2	-71.9	-63.5	-55.1	-45.6	-49.4	-41.5	-28.6	-26.5	-23.2	-18.3	-20.0	-17.1	-20.2	-18.1	-13.8	-8.7	-8.5	-10.1	-11.1	-15.5	-21.2	-25.3	-33.3	-45.2	-52.9	-73.6	-98.9
AC Unit 19	Ldn	-3.1	-76.9	-68.7	-60.5	-51.0	-54.9	-47.1	-34.2	-32.2	-28.9	-24.0	-25.8	-22.9	-25.0	-21.9	-16.7	-9.9	-9.1	-10.0	-11.1	-15.4	-21.0	-25.1	-33.0	-44.8	-52.5	-73.0	-98.0
AC Unit 20	Ldn	-1.5	-71.8	-63.5	-55.2	-45.6	-49.4	-41.6	-28.7	-26.7	-23.3	-18.5	-20.2	-17.3	-20.3	-18.2	-13.9	-8.1	-8.1	-9.0	-10.0	-14.2	-18.5	-22.3	-29.9	-41.0	-54.4	-70.7	-92.0
AC Unit 21	Ldn	0.0	-71.9	-63.6	-55.4	-45.7	-49.6	-41.7	-28.9	-26.9	-23.6	-18.7	-20.5	-16.4	-18.4	-15.9	-11.1	-7.3	-6.4	-7.3	-8.3	-12.4	-17.9	-21.6	-29.0	-39.8	-52.8	-68.4	-88.9
AC Unit 22	Ldn	-3.3	-72.2	-64.0	-55.8	-46.1	-50.0	-42.2	-29.1	-27.1	-23.8	-18.9	-20.7	-17.8	-21.0	-18.8	-14.6	-11.0	-10.1	-10.9	-11.8	-15.9	-21.2	-24.7	-31.9	-42.5	-55.1	-70.4	-90.5
AC Unit 23	Ldn	0.0	-74.4	-66.4	-58.3	-48.5	-52.5	-44.8	-31.9	-29.9	-22.6	-17.7	-19.5	-16.5	-19.2	-16.6	-11.8	-7.8	-6.9	-7.7	-7.4	-10.9	-16.4	-19.9	-26.9	-37.2	-49.2	-63.5	-82.1
AC Unit 24	Ldn	-2.4	-74.3	-66.2	-58.2	-48.4	-52.4	-44.6	-31.7	-29.7	-26.4	-21.6	-23.4	-20.2	-22.4	-19.3	-14.0	-9.8	-8.9	-9.6	-10.4	-14.3	-19.4	-22.6	-29.2	-39.0	-50.5	-64.0	-82.3
AC Unit 25	Ldn	0.0	-74.0	-66.0	-57.9	-48.1	-52.1	-44.4	-31.6	-29.6	-26.3	-21.5	-23.2	-20.1	-19.4	-15.6	-10.9	-7.1	-6.7	-6.9	-8.1	-12.4	-17.9	-21.3	-28.2	-38.3	-50.0	-63.9	-82.2
AC Unit 26	Ldn	0.0	-74.1	-66.0	-57.9	-48.2	-52.2	-44.4	-31.6	-29.6	-26.4	-21.5	-23.3	-20.1	-19.4	-15.6	-10.9	-7.1	-6.7	-6.9	-8.1	-12.4	-17.9	-21.3	-27.8	-38.0	-49.8	-63.8	-82.1
AC Unit 27	Ldn	-1.1	-75.1	-67.0	-59.0	-49.2	-53.2	-45.5	-32.6	-30.6	-27.3	-22.5	-24.1	-18.4	-20.9	-17.8	-12.6	-8.3	-7.4	-8.2	-9.1	-13.1	-18.4	-21.7	-28.5	-38.5	-49.6	-63.9	-82.2
AC Unit 28	Ldn	-0.7	-75.0	-67.0	-58.9	-49.2	-53.1	-45.4	-32.5	-30.5	-27.2	-22.4	-24.1	-18.5	-21.0	-17.8	-12.6	-8.3	-7.0	-7.9	-8.3	-12.4	-17.8	-21.3	-28.3	-38.5	-49.6	-64.0	-82.3
AC Unit 29	Ldn	-1.0	-72.4	-64.2	-56.0	-46.3	-50.2	-42.4	-29.3	-27.3	-24.0	-19.1	-20.9	-18.0	-18.5	-16.4	-12.1	-8.5	-7.3	-8.6	-9.0	-13.3	-19.0	-22.9	-30.6	-30.2	-45.0	-63.1	-86.1
AC Unit 30	Ldn	-2.5	-72.3	-64.0	-55.8	-46.2	-50.0	-42.2	-29.2	-27.1	-23.8	-19.0	-20.7	-17.8	-21.0	-18.8	-14.6	-11.1	-8.9	-10.0	-10.0	-14.4	-19.6	-23.7	-31.5	-30.5	-45.5	-63.8	-87.1
AC Unit 31	Ldn	-3.1	-71.9	-63.6	-55.3	-45.7	-49.5	-41.7	-28.8	-26.8	-23.5	-18.6	-20.3	-17.4	-20.5	-18.3	-14.1	-10.7	-10.5	-11.5	-10.6	-15.2	-21.0	-24.9	-32.7	-44.1	-47.2	-66.0	-90.2
AC Unit 32	Ldn	-3.6	-71.9	-63.5	-55.2	-45.6	-49.4	-41.6	-28.6	-26.5	-23.2	-18.3	-20.1	-17.1	-20.2	-18.1	-13.8	-10.4	-10.6	-12.4	-13.4	-15.7	-21.9	-26.5	-34.7	-46.7	-49.3	-69.4	-95.2

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 33	Ldn	-3.6	-71.9	-63.5	-55.2	-45.6	-49.4	-41.5	-28.6	-26.5	-23.2	-18.3	-20.0	-17.1	-20.2	-18.1	-13.8	-10.4	-10.6	-12.5	-13.6	-15.7	-22.0	-26.6	-35.0	-47.1	-49.8	-70.1	-96.1
AC Unit 34	Ldn	-1.4	-72.5	-64.0	-55.5	-46.1	-49.9	-42.0	-28.9	-26.8	-23.4	-18.5	-20.2	-17.3	-20.4	-18.3	-10.6	-7.2	-7.5	-9.6	-11.9	-17.4	-24.3	-29.7	-39.3	-53.0	-69.7	-87.8	
AC Unit 35	Ldn	-4.4	-72.7	-64.1	-55.7	-46.3	-50.1	-42.2	-29.0	-26.9	-23.5	-18.6	-20.3	-17.4	-20.6	-18.4	-14.2	-10.8	-11.0	-13.1	-15.4	-20.8	-27.1	-32.1	-41.5	-55.2	-72.2	-93.3	
AC Unit 36	Ldn	-4.6	-72.9	-64.3	-55.9	-46.6	-50.3	-42.4	-29.1	-27.0	-23.7	-18.8	-20.5	-17.6	-20.7	-18.6	-14.4	-11.0	-11.2	-13.3	-15.6	-21.3	-27.8	-32.9	-42.6	-56.7	-74.2	-89.6	
AC Unit 37	Ldn	-1.6	-72.9	-64.3	-55.8	-46.5	-50.3	-42.3	-29.2	-27.1	-23.7	-18.8	-20.5	-17.6	-20.7	-18.6	-10.7	-7.4	-7.7	-9.9	-12.3	-18.2	-25.4	-31.3	-41.7	-56.4	-74.5	-95.9	
AC Unit 38	Ldn	-4.6	-72.8	-64.3	-55.8	-46.5	-50.2	-42.3	-29.2	-27.1	-23.7	-18.8	-20.5	-17.6	-20.7	-18.6	-14.3	-10.9	-11.2	-13.3	-15.6	-21.3	-27.9	-33.1	-42.7	-57.0	-74.6	-94.2	
AC Unit 39	Ldn	-4.5	-72.8	-64.2	-55.8	-46.4	-50.2	-42.3	-29.1	-27.0	-23.6	-18.7	-20.4	-17.5	-20.6	-18.5	-14.3	-10.9	-11.1	-13.2	-15.5	-21.2	-27.7	-32.8	-42.5	-56.6	-74.1	-93.5	
AC Unit 40	Ldn	-4.4	-72.6	-64.1	-55.6	-46.3	-50.0	-42.1	-29.0	-26.9	-23.5	-18.6	-20.3	-17.4	-20.5	-18.4	-14.2	-10.7	-11.0	-13.1	-15.3	-20.7	-27.0	-32.0	-41.3	-55.0	-72.0	-85.8	
AC Unit 41	Ldn	-4.2	-72.4	-63.9	-55.5	-46.1	-49.8	-41.9	-28.9	-26.8	-23.4	-18.5	-20.2	-17.3	-20.4	-18.3	-14.0	-10.6	-10.8	-12.9	-15.1	-20.2	-26.4	-31.2	-40.2	-53.6	-70.0	-90.4	
AC Unit 42	Ldn	-5.8	-74.0	-65.5	-57.1	-47.8	-51.5	-43.6	-30.4	-28.3	-25.0	-20.1	-21.8	-18.9	-22.1	-20.0	-15.8	-12.4	-12.6	-14.6	-15.9	-20.5	-26.7	-31.5	-40.6	-52.3	-69.0	-89.9	
AC Unit 43	Ldn	-6.1	-74.2	-65.8	-57.3	-48.0	-51.8	-43.9	-30.6	-28.5	-25.2	-20.3	-22.0	-19.1	-22.3	-20.2	-16.0	-12.6	-12.9	-15.0	-16.3	-21.0	-27.4	-32.3	-41.7	-55.6	-72.6	-93.9	
AC Unit 44	Ldn	-6.0	-74.7	-66.2	-57.8	-48.6	-52.3	-44.4	-31.1	-29.1	-25.7	-20.8	-22.6	-19.7	-22.9	-20.8	-16.6	-13.2	-13.5	-15.5	-13.4	-18.7	-25.6	-31.0	-40.8	-55.2	-73.0	-95.2	
AC Unit 45	Ldn	-6.1	-74.8	-66.3	-57.9	-48.6	-52.4	-44.5	-31.2	-29.1	-25.8	-20.9	-22.6	-19.7	-22.9	-20.8	-16.6	-13.2	-13.5	-15.6	-13.5	-18.8	-25.8	-31.3	-41.1	-55.5	-73.5	-95.9	
AC Unit 46	Ldn	19.2	-67.7	-59.4	-51.2	-40.9	-45.1	-37.6	-24.6	-22.8	-17.1	-12.3	-6.7	-3.0	-0.5	2.6	7.8	12.1	13.0	12.2	11.4	7.5	2.4	-0.8	-7.4	-17.1	-28.3	-41.6	-58.7
AC Unit 47	Ldn	19.2	-67.9	-59.6	-51.5	-41.2	-45.4	-37.9	-25.0	-23.1	-20.0	-15.2	-7.2	-3.4	-0.6	2.5	7.8	12.0	12.9	12.1	11.3	7.4	2.3	-0.9	-7.5	-17.2	-28.0	-41.5	-58.6
AC Unit 48	Ldn	16.1	-67.5	-59.2	-51.1	-38.2	-42.3	-34.8	-21.9	-20.1	-16.9	-12.1	-12.0	-8.7	-11.9	-9.8	4.9	9.1	10.0	9.2	8.4	4.4	-0.8	-4.1	-10.8	-19.3	-31.1	-44.5	-60.5
AC Unit 49	Ldn	5.8	-67.5	-59.2	-51.1	-38.2	-42.3	-34.8	-21.9	-20.1	-16.9	-12.2	-12.0	-9.2	-12.4	-10.2	-4.7	-1.3	-0.9	-2.1	-2.9	-6.6	-11.3	-13.9	-19.6	-25.0	-35.8	-47.2	-61.5
AC Unit 50	Ldn	13.8	-68.6	-60.5	-52.4	-42.2	-46.4	-35.5	-22.6	-20.8	-17.6	-12.8	-14.6	-11.8	-15.0	-12.4	-6.7	7.1	8.0	7.1	6.3	2.2	-3.2	-6.6	-13.6	-22.0	-33.8	-46.5	-61.4
AC Unit 51	Ldn	5.5	-68.7	-60.5	-52.5	-42.3	-46.5	-37.6	-24.6	-22.7	-19.5	-14.7	-16.5	-11.7	-14.7	-12.1	-5.6	-1.6	-1.0	-2.0	-2.7	-6.2	-11.1	-13.8	-11.8	-19.8	-31.9	-45.5	-61.6
AC Unit 52	Ldn	13.0	-70.7	-62.6	-54.7	-44.4	-48.6	-41.2	-28.3	-26.5	-23.3	-14.1	-13.9	-10.7	-13.5	-11.0	-6.2	6.4	7.2	6.3	5.4	1.2	-4.3	-7.9	-15.0	-24.7	-34.8	-45.1	-58.2
AC Unit 53	Ldn	3.1	-70.6	-62.6	-54.7	-44.3	-48.6	-41.1	-28.2	-26.4	-23.3	-18.5	-19.3	-15.4	-17.6	-14.4	-9.1	-5.2	-4.2	-4.8	-3.7	-6.6	-11.2	-13.6	-18.9	-26.7	-35.2	-44.9	-57.8
AC Unit 54	Ldn	14.7	-68.7	-60.5	-52.5	-42.1	-46.3	-38.9	-26.0	-20.9	-17.7	-11.4	-13.2	-9.6	-12.5	-9.4	3.0	7.2	8.1	7.2	8.3	4.1	-1.3	-4.9	-12.1	-22.3	-33.1	-44.0	-57.1
AC Unit 55	Ldn	6.3	-68.7	-60.5	-52.5	-42.1	-46.3	-38.9	-26.0	-20.8	-17.7	-11.4	-13.2	-9.6	-12.5	-9.4	-4.6	-1.0	-0.4	-1.4	-2.1	-5.7	-10.4	-12.9	-13.2	-22.9	-33.3	-44.0	-57.0
AC Unit 56	Ldn	13.2	-68.9	-60.7	-52.7	-42.3	-46.6	-39.1	-26.2	-21.0	-17.9	-11.6	-13.4	-10.5	-13.3	-10.8	-6.0	-2.4	8.3	7.4	6.6	2.6	-2.7	-6.1	-12.9	-22.7	-32.8	-44.0	-57.3
AC Unit 57	Ldn	17.3	-68.9	-60.7	-52.7	-42.3	-46.6	-39.1	-26.2	-24.4	-21.3	-13.0	-14.8	-10.4	-13.3	0.8	6.0	10.1	11.1	10.3	9.5	5.7	0.7	-2.3	-8.7	-18.0	-28.6	-40.8	-56.0
AC Unit 58	Ldn	27.1	-56.1	-46.9	-36.0	-23.9	-26.9	-18.2	-4.0	-1.2	2.9	8.5	7.4	10.9	8.3	11.0	15.8	19.0	20.6	19.6	19.4	15.6	10.9	8.7	3.7	-3.3	-10.6	-18.4	-28.6
AC Unit 59	Ldn	27.1	-55.8	-46.6	-35.8	-23.7	-26.7	-18.0	-3.8	-1.0	3.1	8.7	7.6	11.1	8.4	11.1	16.0	19.1	20.7	19.7	18.8	15.6	11.0	8.8	3.8	-3.2	-10.4	-18.2	-28.0
AC Unit 60	Ldn	27.5	-55.0	-45.8	-36.6	-24.6	-27.6	-17.5	-3.3	-0.6	3.4	9.0	7.9	11.3	8.6	11.3	16.1	20.3	20.9	19.8	18.9	15.8	11.1	8.9	4.0	-2.9	-10.0	-17.2	-26.4
AC Unit 61	Ldn	27.0	-55.6	-46.4	-37.3	-23.6	-26.6	-18.0	-3.8	-1.0	3.0	8.6	7.5	11.0	8.3	11.0	15.8	19.0	20.7	19.6	18.7	14.9	10.9	8.7	3.8	-3.3	-10.5	-18.2	-27.7
AC Unit 62	Ldn	26.9	-55.8	-46.6	-37.5	-23.8	-26.8	-18.2	-4.0	-1.2	2.8	8.4	7.3	10.8	8.1	10.8	15.7	18.8	20.5	19.5	18.6	15.4	10.8	8.5	3.6	-3.5	-10.8	-18.5	-28.2
AC Unit 63	Ldn	22.6	-62.3	-53.0	-43.7	-32.0	-34.9	-26.1	-11.8	-8.8	-4.6	0.4	-0.4	3.5	1.6	6.9	11.9	15.5	16.3	15.3	14.3	10.3	5.3	2.6	-3.2	-11.4	-20.5	-30.9	-44.6
AC Unit 64	Ldn	23.0	-62.6	-53.3	-44.1	-32.4	-35.3	-26.5	-12.3	-9.3	-5.0	-0.4	-1.1	2.8	1.5	6.9	12.0	15.8	16.7	15.8	15.0	11.1	6.2	3.6	-2.1	-10.4	-19.7	-30.3	-44.4
AC Unit 65	Ldn	22.9	-63.0	-53.7	-44.4	-32.9	-35.8	-27.0	-13.0	-10.0	-5.7	-1.1	-1.9	2.0	1.2	4.3	11.8	15.7	16.6	15.8	15.1	11.3	6.5	3.8	-1.9	-10.2	-19.6	-30.6	-45.1
AC Unit 66	Ldn	22.9	-63.2	-53.8	-44.6	-33.1	-35.9	-27.1	-13.2	-10.2	-5.9	-1.4	-2.1	1.8	1.1	4.2	11.7	15.6	16.5	15.8	15.0	11.3	6.4	3.8	-1.9	-10.3	-19.8	-30.8	-45.5
AC Unit 67	Ldn	22.1	-63.9	-54.6	-45.3	-33.9	-36.8	-28.0	-14.5	-11.4	-7.1	-2.7	-3.4	0.5	0.2	3.4	8.6	15.0	15.9	15.2	14.5	10.7	5.9	3.2	-2.7	-11.4	-21.2	-32.9	-48.3
AC Unit 68	Ldn	22.3	-64.0	-54.7	-45.4	-34.1	-37.0	-28.1	-14.7	-11.6	-7.3	-2.9	-3.7	0.2	0.1	3.2	8.9	15.1	16.1	15.3	14.6	10.8	5.9	3.2	-2.8	-11.6	-21.5	-33.3	-48.9

Gardena Nursery
Contribution spectra - Situation 2: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
AC Unit 69	Ldn	20.8	-65.1	-55.8	-46.5	-35.5	-38.3	-29.5	-16.5	-13.5	-9.2	-4.8	-5.6	-1.7	-1.3	1.8	7.1	13.7	14.6	13.9	13.1	9.3	4.3	1.4	-5.0	-14.2	-24.8	-37.9	-55.1
AC Unit 70	Ldn	20.4	-65.6	-56.3	-47.0	-36.0	-38.9	-30.0	-17.2	-14.2	-9.9	-5.6	-6.3	-2.4	-1.9	1.3	6.6	13.2	14.1	13.7	12.9	8.9	3.8	0.7	-5.3	-15.1	-26.3	-40.0	-57.9
AC Unit 71	Ldn	14.9	-67.7	-58.7	-49.8	-39.4	-42.8	-34.6	-21.2	-19.0	-15.6	-10.8	-12.7	-10.1	-13.7	-12.0	-7.1	-2.8	10.1	9.2	8.4	4.4	-0.8	-4.1	-9.5	-19.8	-31.9	-46.4	-65.5
AC Unit 72	Ldn	14.7	-67.8	-58.8	-49.9	-39.5	-42.9	-34.7	-21.4	-19.2	-15.8	-11.0	-12.9	-10.4	-14.0	-12.3	-8.4	-3.4	9.9	9.1	8.2	4.2	-1.0	-4.3	-11.2	-19.6	-32.0	-46.9	-66.3
AC Unit 73	Ldn	2.6	-69.1	-60.4	-51.8	-42.0	-45.9	-38.1	-25.2	-23.3	-20.1	-15.3	-17.1	-14.2	-15.6	-13.5	-9.3	-5.0	-2.5	-4.5	-6.6	-11.8	-17.9	-21.9	-29.6	-27.7	-41.9	-59.8	-83.0
AC Unit 74	Ldn	2.3	-69.5	-60.8	-52.3	-42.5	-46.4	-38.7	-25.7	-23.8	-20.5	-15.7	-17.5	-14.6	-15.8	-13.7	-9.4	-6.1	-2.6	-4.6	-6.7	-12.1	-18.3	-22.7	-30.7	-29.1	-44.2	-62.6	-86.5
AC Unit 75	Ldn	-0.2	-69.9	-61.2	-52.7	-43.1	-47.0	-39.2	-26.2	-24.2	-20.9	-16.1	-17.8	-14.9	-18.1	-16.0	-11.7	-8.4	-5.9	-7.3	-9.3	-14.5	-20.3	-24.4	-32.3	-30.6	-45.3	-64.7	-89.6
AC Unit 76	Ldn	0.7	-70.0	-61.4	-52.9	-43.2	-47.1	-39.3	-26.3	-24.3	-21.1	-16.2	-17.9	-15.0	-16.5	-14.3	-10.1	-6.7	-5.0	-7.0	-8.6	-13.9	-20.0	-24.2	-32.3	-31.0	-45.9	-65.5	-90.6
AC Unit 77	Ldn	0.9	-70.5	-61.8	-53.2	-43.7	-47.5	-39.7	-26.7	-24.7	-21.4	-16.5	-18.3	-15.4	-16.3	-14.2	-9.9	-5.4	-5.6	-6.3	-8.5	-14.0	-20.2	-25.2	-33.9	-36.9	-52.2	-73.0	-99.3
AC Unit 78	Ldn	0.9	-70.6	-61.8	-53.3	-43.8	-47.6	-39.8	-26.7	-24.8	-21.5	-16.6	-18.3	-15.4	-16.3	-14.2	-9.9	-5.3	-5.6	-6.3	-8.5	-13.6	-20.4	-25.3	-34.1	-37.3	-54.0	-74.5	
AC Unit 79	Ldn	0.9	-71.2	-62.4	-53.9	-44.4	-48.2	-40.4	-27.3	-25.3	-22.0	-17.1	-18.9	-15.9	-16.2	-14.0	-9.8	-5.0	-5.2	-7.4	-8.6	-13.4	-20.7	-26.3	-36.1	-49.9	-66.5	-86.6	
AC Unit 80	Ldn	-0.9	-71.2	-62.4	-53.9	-44.4	-48.2	-40.4	-27.3	-25.3	-22.0	-17.1	-18.9	-16.0	-19.2	-17.1	-12.8	-6.9	-7.2	-9.3	-10.0	-14.3	-21.1	-26.8	-36.6	-50.5	-67.1	-87.4	
AC Unit 81	Ldn	-0.9	-71.5	-62.7	-54.1	-44.7	-48.5	-40.6	-27.5	-25.5	-22.2	-17.3	-19.1	-16.2	-19.4	-17.3	-13.0	-6.9	-7.1	-9.3	-10.1	-13.5	-21.1	-27.0	-37.3	-51.7	-69.0	-90.0	
AC Unit 82	Ldn	-2.1	-71.7	-62.9	-54.3	-44.9	-48.7	-40.8	-27.7	-25.7	-22.4	-17.5	-19.3	-16.4	-19.6	-17.5	-13.2	-8.1	-8.4	-10.5	-12.8	-15.2	-22.9	-28.6	-38.7	-53.1	-70.7	-92.5	
AC Unit 83	Ldn	-2.3	-71.9	-63.1	-54.5	-45.1	-48.9	-41.0	-27.9	-25.8	-22.6	-17.7	-19.4	-16.5	-19.7	-17.6	-13.4	-8.2	-8.5	-10.7	-13.0	-17.1	-24.6	-30.2	-40.0	-54.5	-72.4	-94.6	
AC Unit 84	Ldn	-3.1	-72.4	-63.8	-55.3	-46.0	-49.7	-41.8	-28.5	-26.4	-23.1	-18.2	-19.9	-17.0	-20.2	-18.1	-13.8	-10.5	-8.8	-11.0	-13.4	-17.3	-22.9	-29.0	-39.4	-54.4	-72.6	-95.2	

Appendix D:

Construction Noise Modeling Output

Activity	L_{eq} at 260 feet dBA	L_{Max} at 260 feet dBA
Grading	70	71
Building Construction	67	69
Paving	69	72

Equipment Summary	Reference (dBA) 50 ft Lmax
Rock Drills	96
Jack Hammers	82
Pneumatic Tools	85
Pavers	80
Dozers	85
Scrappers	87
Haul Trucks	88
Cranes	82
Portable Generators	80
Rollers	80
Tractors	80
Front-End Loaders	86
Hydraulic Excavators	86
Graders	86
Air Compressors	86
Trucks	86

Grading

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Grader	86	1	40	260	0.5	0	68.1	64.1	2582567.21
2	Dozer	85	1	40	260	0.5	0	67.1	63.1	2051406.05
3	Excavator	86	1	40	260	0.5	0	68.1	64.1	2582567.21
4	Tractor/Backhoe	80	3	40	260	0.5	0	66.9	62.9	1946134.66
							Lmax*	**71**	**Leq**	**70**
							Lw	**102**	**Lw**	**101**

Source: MD Acoustics, July 2020.
1- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**70**	**69**	**68**	**67**	**66**	**65**	**64**	**63**	**62**	**61**	**60**	**59**	**58**	**57**	**56**	**55**
60	18.3	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
70	21.3	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
80	24.4	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
90	27.4	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
100	30.5	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
110	33.5	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
120	36.6	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
130	39.6	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
140	42.7	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
150	45.7	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
160	48.8	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
170	51.8	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
180	54.9	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
190	57.9	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
200	61.0	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
210	64.0	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
220	67.1	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
230	70.1	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
240	73.1	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
250	76.2	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
260	79.2	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
270	82.3	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
280	85.3	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
290	88.4	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
300	91.4	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
310	94.5	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
320	97.5	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
330	100.6	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
340	103.6	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
350	106.7	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
360	109.7	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
370	112.8	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33

Building Construction

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements

No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Cranes	82	1	40	260	0.5	0	64.1	60.1	1028138.52
2	Forklift/Tractor	80	3	40	260	0.5	0	66.9	62.9	1946134.66
3	Generator	80	1	40	260	0.5	0	62.1	58.1	648711.553
4	Tractor/Backhoe	80	3	40	260	0.5	0	66.9	62.9	1946134.66
							Lmax*	**69**	**Leq**	**67**
							Lw	**100**	**Lw**	**99**

Source: MD Acoustics, July 2020.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**67**	**66**	**65**	**64**	**63**	**62**	**61**	**60**	**59**	**58**	**57**	**56**	**55**	**54**	**53**	**52**
60	18.3	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
70	21.3	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
80	24.4	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
90	27.4	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
100	30.5	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
110	33.5	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
120	36.6	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
130	39.6	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
140	42.7	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
150	45.7	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
160	48.8	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
170	51.8	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
180	54.9	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
190	57.9	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
200	61.0	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
210	64.0	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
220	67.1	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
230	70.1	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
240	73.1	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
250	76.2	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
260	79.2	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
270	82.3	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
280	85.3	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
290	88.4	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
300	91.4	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
310	94.5	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
320	97.5	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
330	100.6	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
340	103.6	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
350	106.7	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
360	109.7	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
370	112.8	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31

Paving

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Pavers	86	2	40	260	0.5	0	71.1	67.1	5165134.42
2	Rollers	80	2	40	260	0.5	0	65.1	61.1	1297423.11
3	Paving Equipment	80	2	40	260	0.5	0	65.1	61.1	1297423.11
							Lmax*	**72**	**Leq**	**69**
							Lw	**104**	**Lw**	**101**

Source: MD Acoustics, July 2020

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**69**	**68**	**67**	**66**	**65**	**64**	**63**	**62**	**61**	**60**	**59**	**58**	**57**	**56**	**55**	**54**
60	18.3	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
70	21.3	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
80	24.4	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
90	27.4	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
100	30.5	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
110	33.5	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
120	36.6	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
130	39.6	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
140	42.7	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
150	45.7	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
160	48.8	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
170	51.8	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
180	54.9	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
190	57.9	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
200	61.0	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
210	64.0	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
220	67.1	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
230	70.1	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
240	73.1	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
250	76.2	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
260	79.2	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
270	82.3	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
280	85.3	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
290	88.4	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
300	91.4	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
310	94.5	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
320	97.5	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
330	100.6	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
340	103.6	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
350	106.7	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
360	109.7	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
370	112.8	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32

VIBRATION LEVEL IMPACT

Project:	Evergreen Townhomes	Date: 5/5/20
Source:	Large Bulldozer	
Scenario:	Unmitigated	
Location:	Project Site	
Address:		

PPV = PPVref(25/D)^n (in/sec)

DATA INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN BLUE
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	80.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.025**	IN/SEC	OUTPUT IN RED