Jones Lang LaSalle
515 S Flower Street
Suite 1300
Los Angeles, CA 90071

March 6, 2017

Ms. Anne McIntosh
Interim Community Development Director
City of Manhattan Beach
1400 Highland Avenue
Manhattan Beach, CA 90266

Re: Manhattan Village Shopping Center
Interior Refresh Phase 2 After Hours Building Permit Request
Building Permit No. 17-00460

Dear Ms. McIntosh:

We have submitted our building plans for the Manhattan Village Mall Interior Refresh Phase 2, Permit No. 17-00460. The current dates scheduled for commencement of construction is May 1, 2017 and be completed by November 15, 2017. At this time, we would like to request the issuance of a permit to perform the demolition and construction activities after mall business hours. Construction work is planned from 9:00 pm – 7:30 am, Monday through Saturday.

Our contractor has identified significant risk to public safety posed by construction duration normal mall business hours, as the planned work will involve significant structural alteration and use of a large capacity crane. The use of the crane during the day will necessitate closure of a large number of shops locate within the crane swing radius, resulting in significantly business interruptions of the Manhattan Village Shopping Center.

The scope of work activities are outlined below:

- Construction of new high bay roof structure on the west side of the center court.
- Demolition of the existing roof and interior finishes
- Interior construction of new tile flooring and interior finishes at mall common areas.
- Exterior incidental exterior work to include movement of materials from exterior staging to mall interior.

The night permit will allow us to safely complete Phase 2 of the mall refresh project with no impacts to the existing retail tenants and the mall patrons.

To better understand potential impacts of noise and how we plan on mitigated them, we have attached Behrens and Associates noise assessment report dated January 11, 2017. The report notes the noise can be kept below the significant threshold with the recommended mitigation measures.

We are requesting City Council to hear or request on the March 21. 2017.

Sincerely,

Mark T. Deveau
Vice President
JLL PDS Los Angeles

Manhattan Village Shopping Center Project Phase 2 Nighttime Interior Refresh Noise Assessment Report

January 11, 2017

Prepared for:

Jones Lang LaSalle
515 S. Flower, Suite 1300
Los Angeles, CA 90071

Prepared by:

Behrens and Associates, Inc.
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1. Introduction

The purpose of this report is to provide a noise assessment of the construction activities associated with the Manhattan Village Shopping Mall project located at 3200 North Sepulveda Boulevard, Manhattan Beach, California. The construction activities assessed included lifting and setting structural beams on the existing rooftop. The assessment was performed in order to determine the noise mitigation measures required to achieve compliance with the significance thresholds described in the Manhattan Village Shopping Center Enhancement Project Environmental Impact Report (EIR) dated June 2012. This report provides the predicted unmitigated and mitigated construction noise levels, an assessment of the noise impact relative to the required noise standards and recommendations to achieve the required noise levels. See Figure 1-1 for a map of the site and surrounding areas.

Figure 1-1 Manhattan Village Shopping Center Enhancement Project Site Location

2. Noise Fundamentals

Sound is most commonly experienced by people as pressure waves passing through air. These rapid fluctuations in air pressure are processed by the human auditory system to produce the sensation of sound. The rate at which sound pressure changes occur is called the frequency. Frequency is usually measured as the number of oscillations per second or Hertz (Hz). Frequencies that can be heard by a healthy human ear range from approximately 20 Hz to 20,000 Hz. Toward the lower end of this range are low-pitched sounds, including those that might be described as a "rumble" or "boom". At the higher end of the range are high-pitched sounds that might be described as a "screech" or "hiss".

Environmental noise generally derives, in part, from a combination of distant noise sources. Such sources may include common experiences such as distant traffic, wind in trees, and distant industrial or farming activities. These distant sources create a low-level "background noise" in which no particular individual source is identifiable. Background noise is often relatively constant from moment to moment, but varies slowly from hour to hour as natural forces change or as human activity follows its daily cycle.

Superimposed on this low-level, slowly varying background noise is a succession of identifiable noisy events of relatively brief duration. These events may include the passing of single-vehicles, aircraft flyovers, screeching of brakes, and other short-term events. The presence of these short-term events causes the noise level to fluctuate. Typical indoor and outdoor A-weighted sound levels are shown in Figure 2-1.

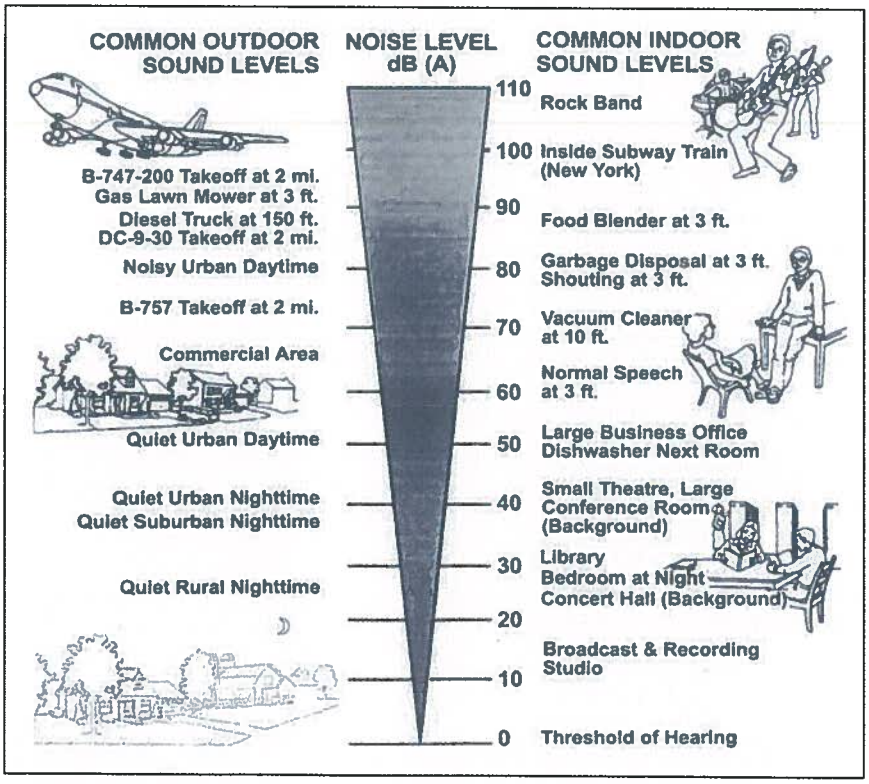


Figure 2-1 Typical Indoor and Outdoor A-Weighted Sound Levels

Detailed acoustical definitions have been provided in Appendix A -Glossary of Acoustical Terms.

3. Noise Standards

As stated in the project EIR, "The City of Manhattan Beach Municipal Code does not provide standards for construction noise, a quantitative significance threshold has been used that is based on human perceptibility to changes in noise levels (increases), with consideration of existing ambient noise conditions. As previously discussed, with respect to the community noise assessment, changes in noise levels less than 3 dBA are generally not discernible to most people, while changes greater than 5 dBA are readily noticeable and would be considered a significant increase. Based on this data, a project would normally have a significant impact on noise levels from construction if:

- Project construction-related noise would exceed the existing ambient noise levels by 5 dBA (hourly L_{eq}) or more at a noise sensitive use."

4. Manhattan Village Shopping Mall Project Noise Modeling

The noise modeling was completed with the use of three-dimensional computer noise modeling software. All models in this report were developed with SoundPLAN 7.4 software using the ISO 9613-2 standard. Noise levels are predicted based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings and barriers. SoundPLAN 7.4 software simulates light downwind conditions in all directions to ensure a conservative assessment.

4.1 Construction Activities – Phase 2 Nighttime Interior Refresh

The construction noise model was created to predict the constant, steady-state noise levels at the site and adjacent surroundings. Two scenarios of the construction activity noise models were created to demonstrate the noise impact at the receptors. In Scenario 1, the construction activities and equipment were operating on the eastern sides of their respective working areas. Scenario 2 was modeled with the construction activities and equipment located on the western side of their respective working areas. In both scenarios, a scissor lift and forklift were included at the eastern work areas. The equipment locations of each activity on the project site are shown in Figure 4-1.

Figure 4-1 Modeled Construction Activity Locations

The equipment sound power levels shown in Table 4-1 were calculated using sound pressure levels and usage factors published in the U.S. Department of Transportation Federal Highway Administration Construction Noise Handbook.

Table 4-1. Construction Activity Equipment Sound Power Level

Equipment	Location	Quantity	Individual Component Sound Power Level (dBA)	Usage Factor (%)
Mobile Crane	Ground Level	1	114.7	16
Ingersoll-Rand DXL1200 Air Compressor	Ground Level	2	119.2	40
Portable Air Compressor	Rooftop	4	111.6	40
Pneumatic Tools	Rooftop	Includes multiple tools	118.1	50
Scissor Lift	Ground Level	1	108.0	20
Forklift	Ground Level	1	104.8	40

4.2 Noise Sensitive Receptor Locations

The receptors evaluated include receptors R2 and R3 as identified in the EIR. The locations of the receptors are shown in Figure 4-2.

Figure 4-2. Noise Sensitive Receptor Locations

4.3 Unmitigated Noise Modeling Results and Assessment

The results of the unmitigated noise modeling at the eastern and western equipment locations are presented in Table 4-2. The calculated noise levels represent only the contribution of the construction activities and do not include ambient noise. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other human activity, or environmental factors.

Table 4-2. Unmitigated Noise Modeling Results

Location	Scenario 1: Calculated Noise Levels for Eastern Equipment Location (dBA)	Scenario 2: Calculated Noise Levels for Western Equipment Location (dBA)	Significance Threshold (dBA)
R2	69.8	56.4	55.0
R3	53.8	56.6	69.0

Our analysis shows that the calculated noise levels for the construction activities without any mitigation will exceed the significance threshold at R2 for Scenario 1 by 14.8 dBA. For Scenario 2, Receptor 2 exceeds the significance threshold by 1.4 dBA.

Noise mitigation is therefore required to further reduce noise levels at receptor R2 for both Scenarios. Receptor 3 complies with the significance threshold for both scenarios.

The results of the noise modeling are also shown visually in Figure 4-3 and Figure 4-4 as noise contour maps.

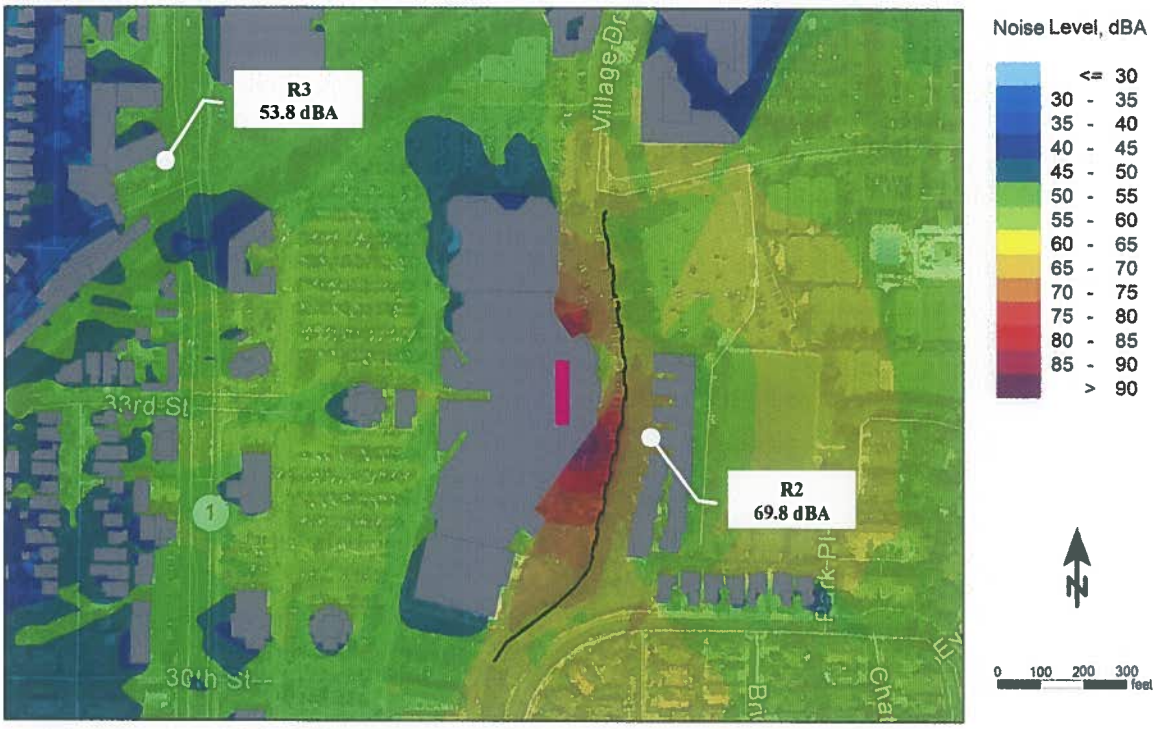


Figure 4-3. Scenario 1- Unmitigated Construction Activity Noise Map (dBA)

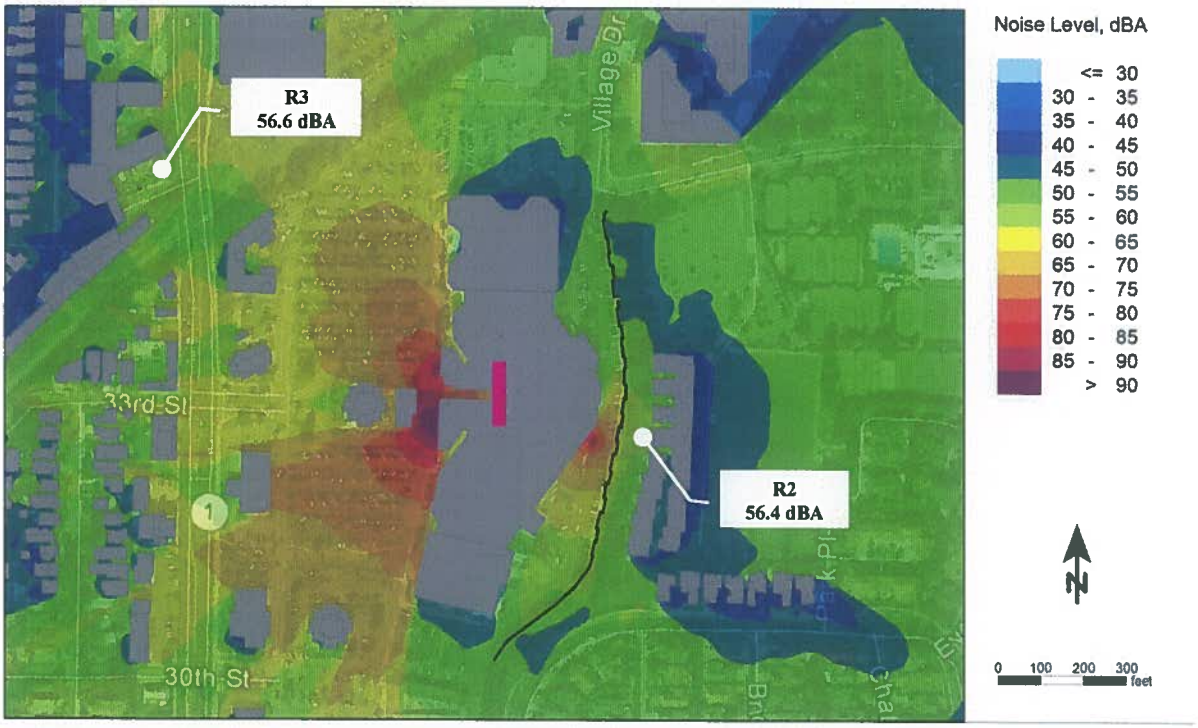


Figure 4-4. Scenario 2- Unmitigated Construction Activity Noise Map (dBA)

4.4 Mitigation Recommendations

The following mitigation measures are recommended at the construction site:

- Ground level equipment such as cranes and air compressors shall be located on the west side of the existing mall building. Only the scissor lift and forklift shall be located on the east side of the mall building.
- Where possible, impact tools such as hammers should be fitted with rubber heads to reduce the impulsive noise associated with metal-on-metal contact.
- 368 linear feet of E88 acoustical barrier panels (8-ft high) with a Sound Transmission Class (STC) rating of at least 25 should be placed on the north, east and south sides of the rooftop work area with no opening or gaps in the wall.
- 480 linear feet of acoustical barrier panels (16-ft high) with a Sound Transmission Class (STC) rating of at least 25 should be placed on the east side of the eastern work area.

Figure 4-5 below shows the layout of the proposed acoustical panels and recommended location of the ground level equipment.

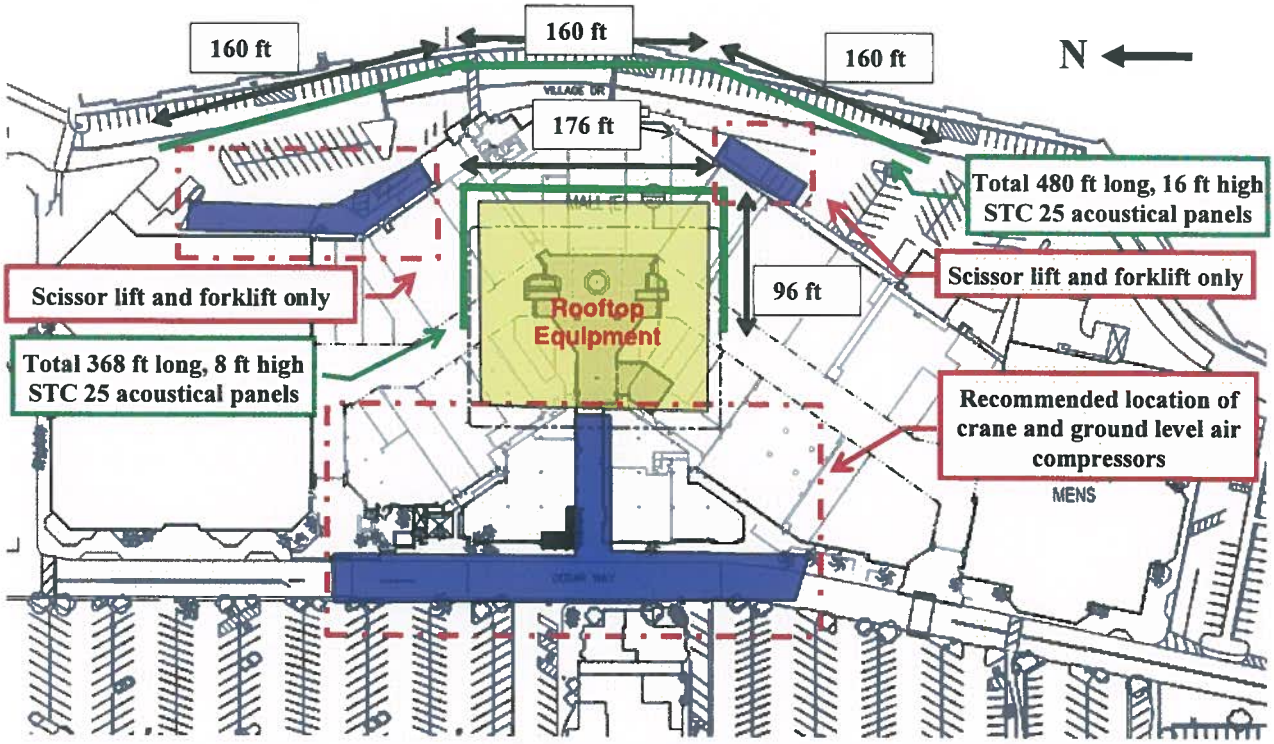


Figure 4-5. Mitigation Layout

4.5 Mitigated Noise Modeling Results and Assessment

The results of the mitigated noise modeling are presented in Table 4-3. The calculated noise levels represent only the contribution of the construction activities and do not include ambient noise. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other human activity, or environmental factors.

Scenario 3 models the noise emissions when implementing the mitigation methods described in Section 4.4.

Table 4-3. Mitigated Noise Modeling Results

Location	Scenario 3: Mitigation (dBA)	Significance Threshold (dBA)
R2	54.5	55.0
R3	56.6	69.0

Our analysis shows that the calculated noise levels comply with the significance thresholds by at least 0.5 dBA. The recommended mitigation is therefore required to achieve compliance with the significance thresholds.

The results of the noise modeling are also shown visually in Figure 4-6 as a noise contour map.

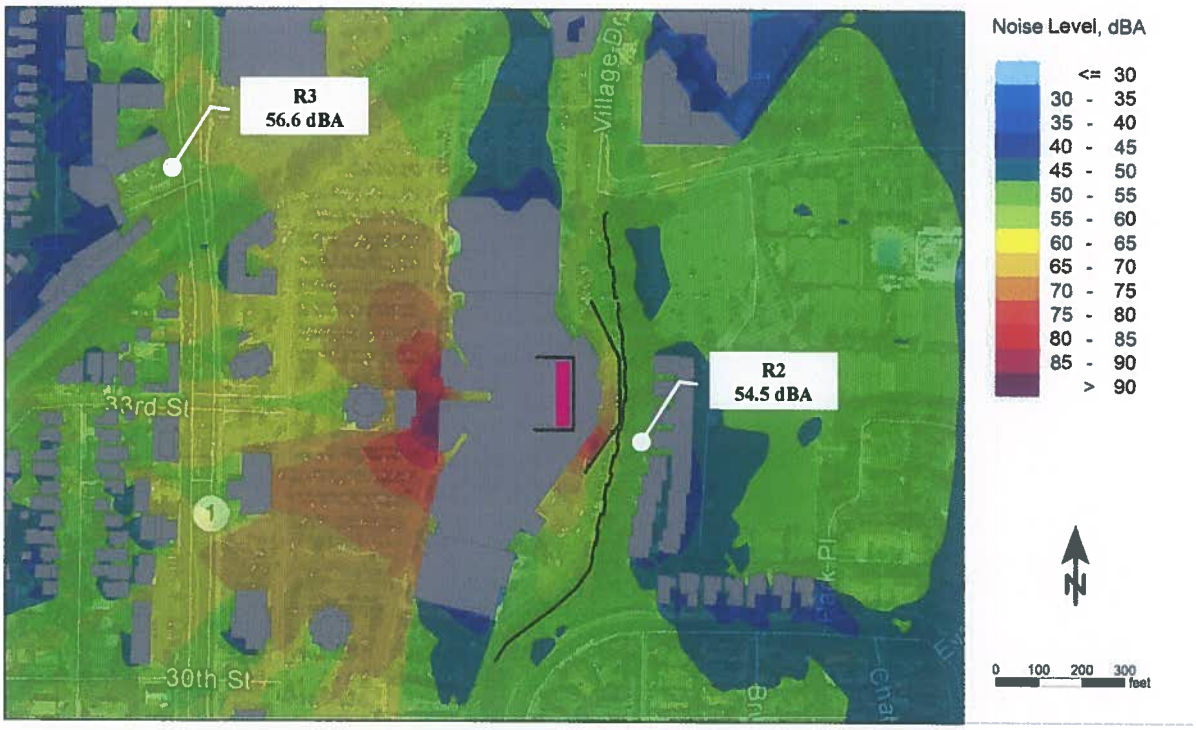
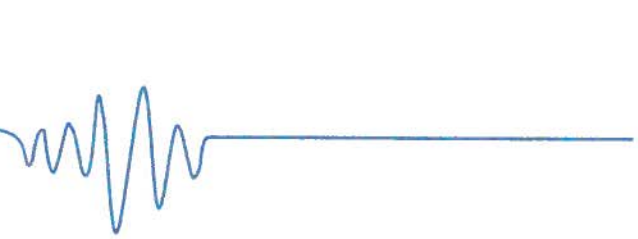


Figure 4-6. Scenario 3- Mitigated Construction Activity Noise Map (dBA)

5. Conclusion

Based on the predicted construction noise levels at the Manhattan Village Shopping Mall project site, the calculated noise levels of the construction operations without mitigation will exceed the significance threshold at R2 by up to 14.8 dBA.

With the implementation of the mitigation measures described in this report and modeled in Scenario 3, the construction noise levels will comply with the stated significance thresholds at all receptors by at least 0.5 dBA. The mitigation measures require the ground level air compressors and crane to be located on the west side of the existing mall building in addition to installing acoustical barrier panels on north, south and east sides of the rooftop work area. A 16-ft high wall is also required on the eastern boundary to reduce noise levels due to the scissor lift and forklift.



Appendix A - Glossary of Acoustical Terms

Ambient Noise
The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources both near and far.

Average Sound Level
See Equivalent-Continuous Sound Level

A-Weighted Sound Level, dB(A)
The sound level obtained by use of A-weighting. Weighting systems were developed to measure sound ina way that more closely mimics the ear's natural sensitivity relative to frequency so that the instrument is less sensitive to noise at frequencies where the human ear is less sensitive and more sensitive at frequencies where the human ear is more sensitive.

C-Weighted Sound Level, dBC
The sound level obtained by use of C-weighting. Follows the frequency sensitivity of the human ear at very high noise levels. The C-weighting scale is quite flat and therefore includes much more of the low-frequency range of sounds than the A and B scales. In some jurisdictions, C-weighted sound limits are used to limit the low-frequency content of noise sources.

Community Noise Equivalent Level (CNEL)
A 24-hour A-weighted average sound level which takes into account the fact that a given level of noise may be more or less tolerable depending on when it occurs. The CNEL measure of noise exposure weights average hourly noise levels by 5 dB for the evening hours (between 7:00 pm and 10:00 pm), and 10 dB between 10:00 pm and 7:00 am, then combines the results with the daytime levels to produce the final CNEL value. It is measured in decibels, dB.

Day-Night Average Sound Level (Ldn)
A measure of noise exposure level that is similar to CNEL except that there is no weighting applied to the evening hours of 7:00 pm to 10:00 pm. It is measured in decibels, dB.

Daytime Average Sound Level
The time-averaged A-weighted sound level measured between the hours of 7:00 am to 7:00 pm. It is measured in decibels, dB.

Decay Rate
The time taken for the sound pressure level at a given frequency to decrease in a room. It is measured in decibels per second, dB/s.

Decibel (dB)
The basic unit of measurement for sound level.

Direct Sound
Sound that reaches a given location in a direct line from the source without any reflections.

Divergence
The spreading of sound waves from a source in a free field, resulting in a reduction in sound pressure level with increasing distance from the source.

Energy Basis
This refers to the procedure of summing or averaging sound pressure levels on the basis of their squared pressures. This method involves the conversion of decibels to pressures, then performing the necessary arithmetic calculations, and finally changing the pressure back to decibels.

Equivalent-Continuous Sound Level (Leq)
The average sound level measured over a specified time period. It is a single-number measure of time-varying noise over a specified time period. It is the level of a steady sound that, in a stated time period and at a stated location, has the same A-Weighted sound energy as the time-varying sound. For example, a person who experiences an Leq of 60 dB(A) for a period of 10 minutes standing next to a busy street is exposed to the same amount of sound energy as if he had experienced a constant noise level of 60 dB(A) for 10 minutes rather than the time-varying traffic noise level. It is measured in decibels, dB.

Fast Response
A setting on the sound level meter that determines how sound levels are averaged over time. A fast sound level is always more strongly influenced by recent sounds, and less influenced by sounds occurring in the distant past, than the corresponding slow sound level. For the same non-steady sound, the maximum fast sound level is generally greater than the corresponding maximum slow sound level. Fast response is typically used to measure impact sound levels.

Field Impact Insulation Class (FIIC)
A single number rating similar to the impact insulation class except that the impact sound pressure levels are measured in the field.

Field Sound Transmission Class (FSTC)
A single number rating similar to sound transmission class except that the transmission loss values used to derive this class are measured in the field.

Flanking Sound Transmission
The transmission of sound from a room in which a source is located to an adjacent receiving room by paths other than through the common partition. Also, the diffraction of noise around the ends of a barrier.

Frequency
The number of oscillations per second of a sound wave

Hourly Average Sound Level (HNL)
The equivalent-continuous sound level, Leq, over a 1-hour time period.

Impact Insulation Class (IIC)
A single number rating used to compare the effectiveness of floor/ceiling assemblies in providing reduction of impact-generated sound such as the sound of a person's walking across the upstairs floor.

Impact Noise
The noise that results when two objects collide.

Impulse Noise
Noise of a transient nature due to the sudden impulse of pressure like that created by a gunshot or balloon bursting.

Insertion Loss
The decrease in sound power level measured at the location of the receiver when an element (e.g., a noise barrier) is inserted in the transmission path between the sound source and the receiver.

Inverse Square Law
A rule by which the sound intensity varies inversely with the square of the distance from the source. This results in a 6dB decrease in sound pressure level for each doubling of distance from the source.

L_n Sound Level

Time-varying noise environments may be expressed in terms of the noise level that is exceeded for a certain percentage of the total measurement time. These statistical noise levels are denoted L_n, where n is the percent of time. For example, the L_{50} is the noise level exceeded for 50% of the time. For a 1-hour measurement period, the L_{50} would be the noise level exceeded for a cumulative period of 30 minutes in that hour.

Masking
The process by which the threshold of hearing for one sound is raised by the presence of another sound.

Maximum Sound Level (Lmax)
The greatest sound level measured on a sound level meter during a designated time interval or event.

NC Curves (Noise Criterion Curves)
A system for rating the noisiness of an occupied indoor space. An actual octave-band spectrum is compared with a set of standard NC curves to determine the NC level of the space.

Noise Isolation Class (NIC)
A single number rating derived from the measured values of noise reduction between two enclosed spaces that are connected by one or more partitions. Unlike STC or NNIC, this rating is not adjusted or normalized to a measured or standard reverberation time.

Noise Reduction
The difference in sound pressure level between any two points.

Noise Reduction Coefficient (NRC)
A single number rating of the sound absorption properties of a material. It is the average of the sound absorption coefficients at 250, 500, 1000, and 2000 Hz, rounded to the nearest multiple of 0.05.

Normalized Noise Isolation Class (NNIC)
A single number rating similar to the noise isolation class except that the measured noise reduction values are normalized to a reverberation time of 0.5 seconds.

Octave
The frequency interval between two sounds whose frequency ratio is 2. For example, the frequency interval between 500 Hz and 1,000 Hz is one octave.

Octave-Band Sound Level
For an octave frequency band, the sound pressure level of the sound contained within that band.

One-Third Octave
The frequency interval between two sounds whose frequency ratio is 2^(1/3). For example, the frequency interval between 200 Hz and 250 Hz is one-third octave.

One-Third-Octave-Band Sound Level
For a one-third-octave frequency band, the sound pressure level of the sound contained within that band.

Outdoor-Indoor Transmission Class (OITC)
A single number rating used to compare the sound insulation properties of building façade elements. This rating is designed to correlate with subjective impressions of the ability of façade elements to reduce the overall loudness of ground and air transportation noise.

Peak Sound Level (Lpk)
The maximum instantaneous sound level during a stated time period or event.

Pink Noise
Noise that has approximately equal intensities at each octave or one-third-octave band.

Point Source
A source that radiates sound as if from a single point.

RC Curves (Room Criterion Curves)
A system for rating the noisiness of an occupied indoor space. An actual octave-band spectrum is compared with a set of standard RC curves to determine the RC level of the space.

Real-Time Analyzer (RTA)
An instrument for the determination of a sound spectrum.

Receiver
A person (or persons) or equipment which is affected by noise.

Reflected Sound
Sound that persists in an enclosed space as a result of repeated reflections or scattering. It does not include sound that travels directly from the source without reflections.

Reverberation
The persistence of a sound in an enclosed or partially enclosed space after the source of the sound has stopped, due to the repeated reflection of the sound waves.

Room Absorption
The total absorption within a room due to all objects, surfaces and air absorption within the room. It is measured in Sabins or metric Sabins.

Slow Response
A setting on the sound level meter that determines how measured sound levels are averaged over time. A slow sound level is more influenced by sounds occurring in the distant past that the corresponding fast sound level.

Sound
A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.

Sound Absorption Coefficient
A measure of the sound-absorptive property of a material.

Sound Insulation
The capacity of a structure or element to prevent sound from reaching a receiver room either by absorption or reflection.

Sound Level Meter (SLM)
An instrument used for the measurement of sound level, with a standard frequency-weighting and standard exponentially weighted time averaging.

Sound Power Level
A physical measure of the amount of power a sound source radiates into the surrounding air. It is measured in decibels.

Sound Pressure Level
A physical measure of the magnitude of a sound. It is related to the sound's energy. The terms sound pressure level and sound level are often used interchangeably.

Sound Transmission Class (STC)
A single number rating used to compare the sound insulation properties of walls, floors, ceilings, windows, or doors. This rating is designed to correlate with subjective impressions of the ability of building elements to reduce the overall loudness of speech, radio, television, and similar noise sources in offices and buildings.

Source Room
A room that contains a noise source or sources

Spectrum
The spectrum of a sound wave is a description of its resolution into components, each of different frequency and usually different amplitude.

Tapping Machine
A device used in rating different floor constructions against impacts. It produces a series of impacts on the floor under test, 10 times per second.

Tone
A sound with a distinct pitch

Transmission Loss (TL)
A property of a material or structure describing its ability to reduce the transmission of sound at a particular frequency from one space to another. The higher the TL value the more effective the material or structure is in reducing sound between two spaces. It is measured in decibels.

White Noise
Noise that has approximately equal intensities at all frequencies.

Windscreen
A porous covering for a microphone, designed to reduce the noise generated by the passage of wind over the microphone.