ENVIRONMENTAL NOISE IMPACT ANALYSIS

FOR THE

8899 BEVERLY BOULEVARD PROJECT

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INTRODUCTION

This Environmental Noise Analysis has been prepared to evaluate environmental noise impacts associated with the proposed 8899 Beverly Boulevard project (proposed project). The purpose of this analysis is to evaluate the construction-related and operational noise and ground-borne vibration impacts of the project on the surrounding (off-site) areas.

SUMMARY

Construction activities associated with the proposed project would comply with the City's Noise Ordinance standards for construction. The proposed project would also comply with State standards and the City's Noise Ordinance standards for operational noise sources.

Construction and operation of the proposed project would not expose persons to or generate excessive ground-borne vibration.

Operation of the proposed project would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Construction of the proposed project would generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The short-term construction-related impact of the proposed project would be significant and unavoidable.

Cumulative construction-related and operational noise impacts would be less than significant.

PROJECT DESCRIPTION

The proposed project site is located at 8899 Beverly Boulevard and 8846 – 8908 Rosewood Avenue in the City of West Hollywood. The project site is 75,500 square feet (approximately 1.73 acres) and is comprised of 17 legal lots. Five lots are located on the north side of Beverly Boulevard between Almont Drive and Robertson Boulevard and opposite Swall Drive and La Peer Drive. The project site also includes 12 lots fronting Rosewood Avenue, on the south side of the street, between Almont Drive and Robertson Boulevard.

The project site is currently developed with a ten-level (including one basement level) commercial building originally built in 1963 (existing building). The existing building contains a total of approximately 89,630 square feet of floor area, including an approximately 3,879-square-foot restaurant in the basement, approximately 21,249 square feet of retail uses on Level 2, plus a total of approximately 64,502 square feet of office space on Levels 4 through 9. On-site parking is provided within a basement garage on Level 1 containing approximately 35 parking spaces, a second level of structured parking containing 62 parking spaces on Level 3, and a surface parking lot fronting Rosewood Avenue that is accessed through the garage and that contains approximately 134 parking spaces.[1] The project site also includes 12 lots fronting Rosewood Avenue that contain a total area of approximately 48,000 square feet and that are developed with a surface parking lot serving the existing commercial uses.

The proposed project involves the adaptive re-use of the existing building and the development of new residential uses in the area of the existing surface parking lot along Rosewood Avenue. Specifically, the existing building would be a mixed-use of 64 residential units (56 condominium units and eight affordable apartment units) and approximately 39,728 square feet of office, street front retail and restaurant space. The existing building would be expanded on the north, east and west elevations by approximately 53,401 square feet to accommodate the proposed condominium uses. In addition, the third floor of the building currently used as parking would be enclosed and converted to office space and eight affordable apartments. The project would also include new construction at the area of the existing surface parking lot (fronting Rosewood Avenue) of 17 residential units (including 13 townhomes and four affordable apartment units) totaling approximately 38,175 square feet and an approximate 4,417 square foot indoor pool house. The total new construction at the project site would total approximately 121,765 square feet. With the existing building (currently approximately 89,630 square feet), the total project square footage would be approximately 211,395 square feet.

Construction of the proposed project is expected to begin in the third quarter of 2014 and occur over a period of approximately 20 months.

BACKGROUND INFORMATION

Fundamentals of Sound and Environmental Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate

[1] Existing on-site parking is for tenants, visitors, and customers only.

noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources, such as an occasional aircraft or train passing by to virtually continuous noise sources like traffic on a major highway. Table 1 illustrates representative noise levels in the environment.

TABLE 1 - REPRESENTATIVE ENVIRONMENTAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-Over at 100 Feet	105	
	100	
Gas Lawnmower at 3 Feet	95	
	90	
	85	Food Blender at 3 Feet
Diesel Truck Traveling at 50 MPH at 50 Feet	80	Garbage Disposal at 3 Feet
Noisy Urban Area during Daytime	75	
Gas Lawnmower at 100 Feet	70	Vacuum Cleaner at 10 Feet
Commercial Area	65	Normal Speech at 3 Feet
Heavy Traffic at 300 Feet	60	
	55	Large Business Office
Quiet Urban Area during Daytime	50	Dishwasher in Next Room
	45	
Quiet Urban Area during Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime	35	
	30	Library
Quiet Rural Area during Nighttime	25	Bedroom at Night, Concert Hall (background)
	20	
	15	Broadcast/Recording Studio
	10	
	5	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source of table data: California Department of Transportation, October 1998.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people

is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq} – The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- L_{min} – The minimum instantaneous noise level experienced during a given period of time.
- L_{max} – The maximum instantaneous noise level experienced during a given period of time.
- L_{dn} – The Day-Night Level is a 24-hour average L_{eq} with a 10 dBA "penalty" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the L_{dn} is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

When evaluating changes in 24-hour community noise levels, a difference of 3 dBA is a barely perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness.

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and reflecting or shielding, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of

exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer homes and office buildings is generally more than 30 dBA.

Fundamentals of Environmental Ground-Borne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby, creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as ground-borne vibration. Ground-borne vibration is measured as peak particle velocity (PPV) in inches per second. The general human response to different levels of ground-borne vibration velocity levels is described below in Table 2. Ground-borne vibration levels that could induce potential damage to buildings are identified in Table 3.

TABLE 2 - HUMAN RESPONSE TO LEVELS OF GROUND-BORNE VIBRATION

Human Response	Maximum PPV in Inches per Second	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.1
Severe	2.0	0.4

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.

Source of table data: California Department of Transportation, 2004.

Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

Noise Analysis Methodology

The analysis of the existing and future noise environments presented in this report is based on noise level measurements, noise prediction modeling, and empirical observations. Existing ambient noise levels were measured using a Larson•Davis Model 820 sound level meter, which meets and exceeds the minimum industry performance requirements for "Type 1" standard instruments as defined in the American National Standards Institute (ANSI) S1.4. The sound level meter was programmed to measure using the "A" weighting scale and the "fast" detector response as recommended by the California Department of Transportation (Caltrans). The sound level meter was calibrated immediately prior to the first

measurement to a sound level of 114 dB with a Larson•Davis Precision Acoustic Calibrator Model CAL200 and checked again following the final measurement. Each measurement occurred over a period of 20 minutes along residential roadway segments and 15 minutes along commercial roadway segments, and the traffic volumes along the adjacent roadway segments were counted during each measurement.

TABLE 3 - GROUND-BORNE VIBRATION DAMAGE POTENTIAL CRITERIA

Structure and Condition	Maximum PPV in Inches per Second	
	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

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.

Source of table data: California Department of Transportation, 2004.

The City of West Hollywood requires that noise impact analyses evaluate 24-hour noise levels in terms of L_{dn}. In order to do so, 24-hour roadway traffic volumes must be estimated. The Draft Transportation Study prepared for the proposed project (Gibson Transportation Consulting, 2013) identified roadway traffic volumes for the a.m. and p.m. peak traffic hours and 24-hour roadway traffic volumes for the segment of Rosewood Avenue between Almont Street and Robertson Boulevard. The existing traffic volumes identified in the Draft Transportation Study are based on actual traffic counts conducted in the vicinity of the project site. The existing traffic counts for Rosewood Avenue identified a 24-hour volume of 760 vehicle trips and a peak traffic volume of 76, which is 10% of the daily count. The peak hour volume was measured during the P.M. peak traffic hour. In order to provide 24-hour noise levels for the other study-area roadway segments, the P.M. peak traffic hour volumes were assumed to be 10% based upon the existing counts for Rosewood Avenue. The estimated 24-hour roadway noise levels at the measurement locations were then calculated using a spreadsheet noise model based upon the equations provided in the Caltrans Technical Noise Supplement (TeNS) document (2009). Peak hour noise levels were also calculated in order to confirm confirm the estimated changes in roadway noise levels and these peak hour calculations are included in Appendix B of this report.

ENVIRONMENTAL SETTING

Regulatory Setting

Applicable State Standards

Title 24, Part 2 of the California Code of Regulations codifies Sound Transmission Control requirements and establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA L_{dn} in any habitable room of a new building. Dwellings are to be designed so that interior noise levels will meet this standard for at least 10 years from the time of building permit application. This standard applies to all new multi-family units developed at the project site.

Applicable City Standards

The Safety and Noise Element of the West Hollywood General Plan 2035 identifies the noise standards that have been adopted by the City for the purpose of establishing standards for noise exposure. Based on Table 10-2 (Noise/Land Use Compatibility Matrix) of the Safety and Noise Element, new residential development is considered to be compatible with the noise environment if noise level does not exceed 60 dBA L_{dn}, provided that the buildings are constructed using conventional techniques consistent with conventional Title 24 standards. New residential uses may be constructed in areas with noise levels between 60 and 70 dBA L_{dn} after a detailed noise analysis is made and noise reduction measures are identified and included in the project design. If a new residential use is proposed in an area with noise levels between 70 and 75 dBA L_{dn}, mitigation is likely needed to meet City standards, which may include noise barriers and/or the inclusion of substantial building sound insulation. Table 10-1 (Non-Transportation Source Noise Standards Effecting Noise-Sensitive Land Uses) of the Safety and Noise Element identifies exterior noise standards for non-transportation sources affecting noise sensitive land uses of 55 dBA L_{eq} between 8:00 a.m. and 10:00 p.m., and 50 dBA L_{eq} between 10:00 p.m. and 8:00 a.m.

In adopting the West Hollywood General Plan 2035, the City also adopted the following mitigation measures for noise under the Final Program EIR for the City of West Hollywood General Plan and Climate Action Plan that apply to new development projects proposed within West Hollywood.

3.9-1 The City shall use the following thresholds and procedures for CEQA analysis of proposed projects, consistent with policies adopted within the General Plan:

- The City shall apply the noise standards specified in Table 10-1 and Table 10-2 of the Safety and Noise Element to proposed projects analyzed under CEQA.

- In addition to the foregoing, an increase in ambient noise levels is assumed to be a significant noise concern if a proposed project causes ambient noise levels to exceed the following:
  - Where the existing ambient noise level is less than 60 dB, a project-related permanent increase in ambient noise levels of 5 dB L_{dn} or greater.
  - Where the existing ambient noise level is greater than 60 dB, a project-related permanent increase in ambient noise levels of 3 dB L_{dn} or greater.
  - A project-related temporary increase in ambient noise levels of 10 dB L_{eq} or greater.

3.9-2 The City shall require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.
- Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the WHMC Noise Ordinance, or mitigate noise at sensitive land uses to below WHMC standards.
- Construction equipment should not be idled for extended periods of time in the vicinity of noise-sensitive receptors.
- Locate fixed and/or stationary equipment as far as possible from noise-sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.
- Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed of material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated STC rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.
- Music from a construction site shall not be audible at offsite locations.

3.9-5 When the City exercises discretionary review, provides financial assistance, or otherwise facilitates residential development within a mixed-use area, provide written warnings to

potential residents about noise intrusion and condition of that approval, assistance, or facilitation. The following language is provided as an example:

> "All potential buyers and/or renters of residential property within mixed-use areas in the City of West Hollywood are hereby notified that they may be subject to audible noise levels generated by business- and entertainment-related operations common to such areas, including amplified sound, music, delivery and passenger vehicles, mechanical noise, pedestrians, and other urban noise sources. Binding arbitration is required for disputes regarding noise in mixed-use buildings that require legal action."

3.9-6 The City shall require future developments to implement the following measures to reduce the potential for human annoyance and achitectural/structural damage resulting from elevated groundborne noise and vibration levels.

- Pile driving within a 50-foot radius of historic structures or sensitive land uses shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers). Specifically, geo pier style cast-in-place systems or equivalent shall be used where feasible as an alternative to impact pile driving to reduce the number and amplitude of impacts required for seating the pile.

- The preexisting condition of all designated historic buildings within a 50-foot radius of proposed construction activities shall be evaluated during a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage will be repaired back to its preexisting condition.

- Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structures. Every attempt shall be made to limit construction-generated vibration levels in accordance with Caltrans recommendations during pile driving and impact activities in the vicinity of the historic structures.

- Provide protective coverings or temporary shoring of on-site or adjacent historic features as necessary, in consultation with the Community Development Director or designee.

The City of West Hollywood has also adopted a Noise Ordinance (Title 9 Public Peace, Morals and Safety, Chapter 9.08 of the West Hollywood Municipal Code), which identifies noise standards intended to "strike a balance between normal, every day noises that are unavoidable in an urban environment and those that are so excessive and annoying to persons of ordinary sensitivity that they must be curtailed in order to protect the comfort and tranquility of all persons who live and work in the city."

Section 9.08.050(f) of the Noise Ordinance prohibits exterior construction activities between the hours of 7:00 p.m. and 8:00 a.m. on weekdays, and at any time on Saturdays, Sundays, and designated holidays. Interior construction is also prohibited during these times except for Saturdays when interior construction may occur between 8:00 a.m. and 7:00 p.m.

Additional sources of noise regulated by the Noise Ordinance that would be applicable to the proposed project are as follows:

- Section 9.08.050(a) Radios, Phonographs, etc.
- Section 9.08.050(b) Band or orchestra Rehearsals.
- Section 9.08.050(c) Engines, Motors, and Mechanical Devices Near Residential District.
- Section 9.08.050(d) Motor Vehicles.
- Section 9.08.050(e) Loading and Unloading.
- Section 9.08.050(i) Noises by Animals.
- Section 9.08.050(j) Leaf Blowers.
- Section 9.08.050(k) Loud Parties and Gatherings.

Chapter 19.20 of the Municipal Code identifies General Property Development and Use Standards. Section 19.20.090 includes the following requirements:

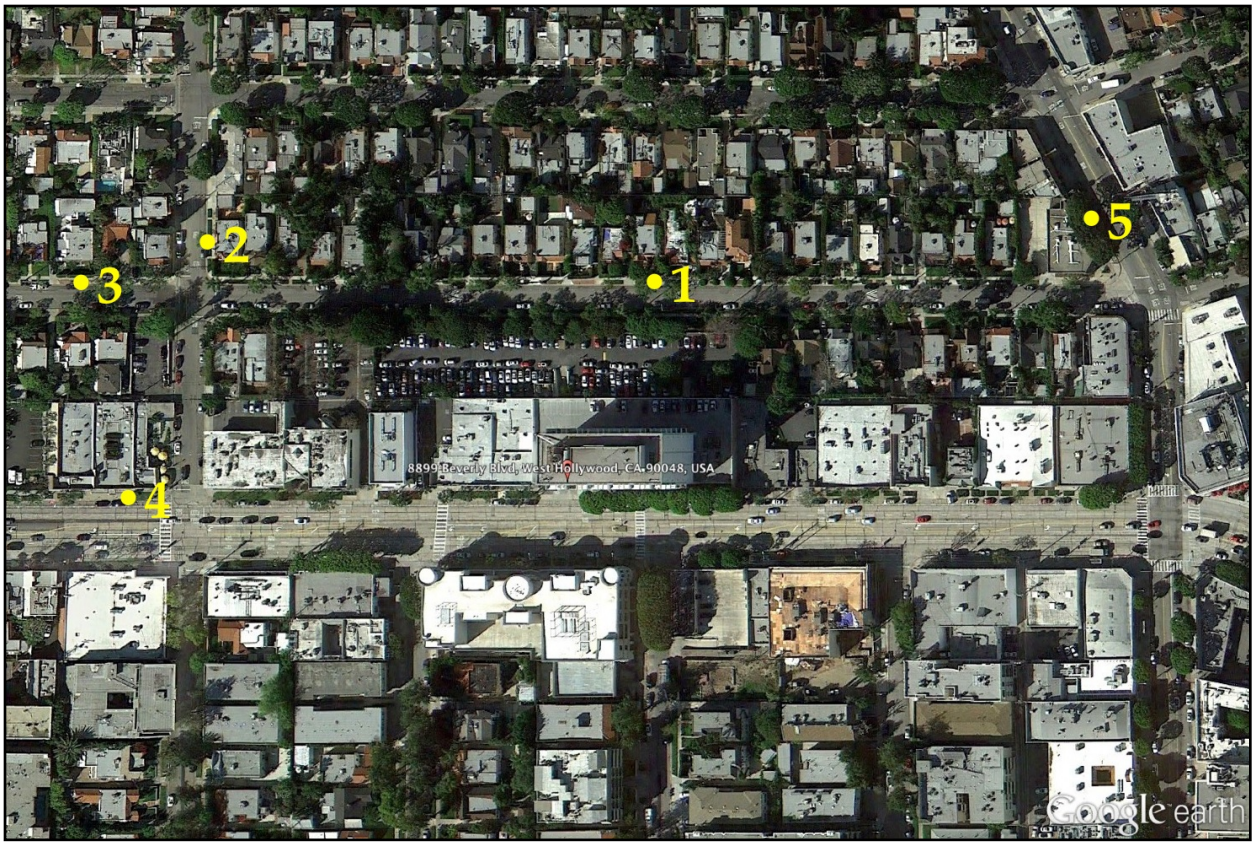
- Maximum Noise Level. Proposed development and land uses shall comply with the requirements of the city's Noise Control Ordinance in Chapter 9.08 of the Municipal Code.
- Residential Project Mitigation. Developers of residential projects adjacent to existing commercial uses shall incorporate noise mitigating construction techniques to ensure that noise from existing commercial uses is abated to acceptable levels in compliance with Chapter 9.08 of the Municipal Code.
- Commercial Project Mitigation. Developers of commercial projects adjacent to residential zoning districts or existing residential uses shall incorporate noise mitigating construction techniques to ensure that noise from the proposed commercial activities is abated to acceptable levels in compliance with Chapter 9.08 of the Municipal Code.
- Mechanical Equipment. Equipment located on the rooftop of a structure shall be enclosed or incorporate other elements to prevent adverse noise that might be heard by persons on adjacent properties.

Existing Noise Levels

The project site is located along a heavily trafficked segment of Beverly Boulevard within an urbanized area consisting of residential, retail, and commercial uses. The primary sources of noise at the project site include traffic along Beverly Boulevard and Rosewood Avenue, vehicle activities within the project site, human activity (e.g., people talking), landscape maintenance at the project site and adjacent properties, and occasional aircraft overflights.

Existing daytime noise levels were measured at five locations on October 3, 2013. The measurement locations are illustrated in Figure 1 and each of these is described as follows:

FIGURE 1 - NOISE LEVEL MEASUREMENT LOCATIONS



- Location 1 - Northern side of Rosewood Avenue between Almont Avenue and Robertson Boulevard: The nearest residential uses to the project site are located along Rosewood Avenue. Noise levels were measured within the public right-of-way directly across from the project site in front of the home at 8859 Rosewood Avenue. The primary sources of noise at this location were traffic on Rosewood Avenue, HVAC equipment on the roof of the existing building at the project site, parking activities

(doors opening and closing, alarm chirps) within the project site and along Rosewood Avenue, and people talking. A total of 26 vehicles travelled along this segment of Rosewood Avenue during the 20-minute noise level measurement period. Noise levels at this location would also be representative of the existing home adjacent to the eastern border of the project site.

- Location 2 - Almont Avenue north of Rosewood Avenue: Residential uses are located along Almont Avenue north of Rosewood Avenue. Noise levels were measured within the public right-of-way near the home at the northeast corner of this intersection. The primary sources of noise at this location were traffic along Almont Avenue, Rosewood Avenue, Beverly Boulevard, and people talking. A total of 29 vehicles travelled along this segment of Almont Avenue during the 20-minute noise level measurement period.

- Location 3 - Rosewood Avenue west of Almont Avenue: Residential uses are located along Rosewood Avenue west of Almont Avenue. Noise levels were measured within the public right-of-way in front of the home at 9011 Rosewood Avenue. The primary sources of noise at this location were traffic along Rosewood Avenue, Almont Avenue, Doheney Drive, people talking, and an aircraft overflight. A total of 23 vehicles travelled along this segment of Rosewood avenue during the 20-minute noise level measurement period.

- Location 4 - Beverly Boulevard west of Almont Drive: Beverly Boulevard is a commercial corridor and commercial uses are located along this roadway segment. Noise levels were measured along the northern side of this roadway within the public right-of-way in front of an art store. The primary sources of noise at this location were traffic on Beverly Boulevard and people talking. A total of 451 vehicles travelled along this segment of Beverly Boulevard during the 15-minute noise level measurement period.

- Location 5 - Robertson Boulevard north of Rosewood Avenue: Robertson Boulevard is a commercial corridor and commercial uses are located along this roadway segment. Noise levels were measured along the western side of this roadway within the public right-of-way in front of an optical store. The primary sources of noise at this location were traffic on Robertson Boulevard, parking activities (doors opening and closing, alarm chirps) and people talking. A total of 235 vehicles travelled along this segment of Robertson Boulevard during the 15-minute noise level measurement period.

The daytime noise levels measured at each of the locations are identified in Table 4. The estimated 24-hour and peak traffic hour noise levels at the receptors along the study area roadway segments are presented in Table 5.

TABLE 4 - EXISTING DAYTIME NOISE LEVELS

Noise Measurement Location	Primary Noise Sources	Noise Level Statistics		
		L_{eq}	L_{max}	L_{min}
1. Rosewood Ave. between Almont Ave. and Robertson Bl.	Traffic on Rosewood Ave., HVAC equipment, parking activities (doors opening and closing, alarm chirps), people talking.	60.4	79.2	54.9
2. Almont Ave. north of Rosewood Ave.	Traffic along Almont Ave., Rosewood Ave., Beverly Bl., people talking.	53.4	68.1	47.0
3. Rosewood Ave. west of Almont Ave.	Traffic along Rosewood Ave., Almont Ave., Doheney Dr., people talking, aircraft overflight.	67.3	83.1	47.7
4. Beverly Bl. west of Almont Ave.	Traffic on Beverly Bl. and people talking.	73.0	84.0	55.7
5. Robertson Bl. north of Rosewood Ave.	Traffic on Robertson Bl., parking activities, people talking.	61.0	83.8	52.9

Noise level measurement results are provided in Appendix A.

TABLE 5 - EXISTING ROADWAY NOISE LEVELS AT LOCATIONS OFF SITE

Roadway	Roadway Segment	Land Use	24-Hour L_{dn}
Rosewood Avenue	Almont Avenue to Robertson Boulevard	Residential	55.3
	west of Almont Avenue	Residential	53.2
Almont Avenue	north of Rosewood Avenue	Residential	54.5
Beverly Boulevard	west of Almont Avenue	Commercial	70.0
Robertson Boulevard	north of Rosewood Avenue	Commercial	67.2

Calculation data and results are provided in Appendix B.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G to the State CEQA Guidelines, a project could have a potentially significant impact associated with noise if any of the following were to occur:

(a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;

(b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

(d) A substantial temporary or periodic increase in ambient noise levels in the project above levels existing without the project;

(e) Exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport; or

(f) Exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

According to the Initial Study prepared for the proposed project, no significant impacts associated with airport noise are anticipated to occur as a result of the proposed project. No airport or private airstrip exists within two miles of the project site. As such, the project site is not located within any airport land use plan and would not be exposed to severe noise levels from airport or aircraft-related activities. Therefore, no further evaluation of these potential impacts is provided in this report.

Applicable Noise Standards

The noise standards adopted by the City are discussed previously in this report. These standards would apply to the new residential use that would be constructed within the project site.

Ground-Borne Vibration

The State CEQA Guidelines do not define the levels at which ground-borne vibration or ground-borne noise are considered "excessive." In addition, the City of West Hollywood has not adopted any thresholds for ground-borne vibration impacts. However, Caltrans has adopted the vibration standards identified previously in Tables 2 and 3 to evaluate potential impacts related to construction activities. This analysis utilizes the Caltrans thresholds to evaluate the construction-related and operational impacts of the proposed project.

Permanent Increase in Ambient Noise Levels

As discussed previously in this analysis report, the City of West Hollywood has determined that an increase in ambient noise levels is assumed to be a significant noise concern if a proposed project causes ambient noise levels to exceed the following:

- Where the existing ambient noise level is less than 60 dB, a project-related permanent increase in ambient noise levels of 5 dB L_{dn} or greater.
- Where the existing ambient noise level is greater than 60 dB, a project-related permanent increase in ambient noise levels of 3 dB L_{dn} or greater.

Temporary or Periodic Increase in Ambient Noise Levels

As discussed previously in this analysis report, the City of West Hollywood has determined that a significant impact would occur if construction would increase the ambient noise levels by 10 dBA or more at any off-site noise-sensitive location.

PROJECT IMPACTS AND MITIGATION MEASURES

Applicable Noise Standards

Threshold: Would the proposed project expose persons to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies.

Impact: Construction activities associated with the proposed project would comply with the City's Noise Ordinance standards for construction. The proposed project would also comply with State standards and the City's Noise Ordinance standards for operational noise sources. The impact of the proposed project would be less than significant.

Impact Analysis

Construction-Related Impacts

Demolition of interior portions of the existing building and construction activities associated with the proposed project would require the use of heavy equipment for building modification, excavation, and building construction. Noise from smaller power tools, generators, and other sources of noise would also be associated with construction of the proposed project. During each stage of development, there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of the activity.

Construction activities would be restricted to the hours of 8:00 a.m. and 7:00 p.m. Monday through Friday (excluding designated holidays) in accordance with Section 9.08.050(f) of the City's Noise Ordinance. Interior construction may also occur between 8:00 a.m. and 7:00 p.m. on Saturdays. The project applicant is not requesting any exemptions from the Noise Ordinance restrictions. Therefore, construction activities would comply with the City's Noise Ordinance standards for construction and the impact of the project would be less than significant.

Operational Impacts

Future noise levels at the project site would continue to be dominated by vehicular traffic on Beverly Boulevard and Rosewood Avenue. As shown in Table 10 later in this report, future noise levels along Rosewood Avenue are expected to average approximately 56 dBA L_{dn}, which is well below the City's basic 60 dBA L_{dn} standard for residential uses. Future noise levels along Beverly Boulevard in the vicinity

of the project site are expected to average just over 70 dBA L_{dn}. This noise level is based upon ground-level sound level measurements conducted within the roadway right-of-way near the roadway edge. Noise levels at the residential units of which all would be above ground level would be slightly lower. Table 3.9-8 of the Final Program EIR for the City of West Hollywood General Plan and Climate Action Plan indicates that future roadway noise levels along this roadway segment in 2035 are not expected to be greater that existing noise levels.

As discussed previously, the exterior-to-interior reduction of newer residential buildings is generally more than 30 dBA. This is based on the situation in which new buildings must comply with CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, which requires substantial building insulation and also reduces exterior to interior noise levels. Assuming a 30 dBA exterior to interior noise reduction for new residential uses would provide an interior noise level of less than 45 dBA L_{dn}, which is the state's interior standard for residential uses. Balconies that are six feet or less in depth are not considered to be exterior living environments that are subject to exterior noise standards, so no design features are required to reduce exterior noise levels in these areas of the project. The proposed project would also be subject to all applicable standards of the City's Noise Ordinance for operational noise sources.

The HVAC system that would be installed on the rooftop of the existing building would typically result in noise levels that average between 40 and 50 dBA L_{eq} at 50 feet from the equipment. L_{dn}s for constant noise sources are about 6 dBA greater than 24-hour L_{eq} measurements. As such, the HVAC equipment associated with the proposed project could generate noise levels that average from 46 to 56 dBA L_{dn} at 50 feet from the source when the equipment is operating continuously over a 24-hour period. However, the City requires all new rooftop HVAC to be enclosed or incorporate other elements to prevent adverse noise that might be heard by persons on adjacent properties.

Based on this information, the proposed project would comply with State standards and the City's Noise Ordinance standards for operational noise sources, and the impact of the project would be less than significant.

Ground-borne Vibration

Threshold: Would the proposed project expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

Impact: Construction and operation of the proposed project would not expose persons to or generate excessive ground-borne vibration. The impacts of the proposed project would be less than significant.

Impact Analysis

Construction-Related Impacts

Construction activities that would occur at the project site have the potential to generate low levels of ground-borne vibration. According to the Final Geotechnical Exploration and Recommendations report prepared for the proposed project, any new support piles required for the proposed uses would be drilled and cast in place and not driven into the ground.[2]

The buildings adjacent to the project site consist of residential structures and commercial buildings of more modern steel and concrete construction. No historic structures are located in close proximity to the project site. Based on the criteria identified previously in Table 3, a significant structural ground-borne vibration impact could occur if the adjacent residential buildings are exposed to vibration levels of 0.3 inches per second PPV, or if the adjacent commercial buildings are exposed to vibration levels of 0.5 inches per second PPV. The potential for nearby residents and commercial workers and students to be annoyed by ground-borne vibration would be significant if vibration levels reach 0.10 inches per second PPV.

Table 6 identifies various vibration velocity levels for the types of construction equipment that would operate at the project site during construction. Based on the information presented in Table 6, vibration levels could reach as high as approximately 0.089 inches per second PPV within 25 feet of the an operating large bulldozer or caisson drill. The maximum vibration level of 0.089 inches per second PPV would be below the thresholds of significance for both potential building damage and human annoyance. Therefore, the potential impacts associated with construction vibration would be less than significant.

TABLE 6 - VIBRATION LEVELS FOR TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Reference PPV at 25 Feet
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source of table data: Jones & Stokes, 2004.

Operational Impacts

The proposed project does not include uses that are expected to generate measurable levels of ground-borne vibration during operation of the proposed project. Therefore, the greatest regular source of project-related ground-borne vibration would be from local trucks making deliveries to the project site and larger

[2] Golder Associates, 2013.

garbage trucks picking-up project-related refuse material. The vibration levels associated with these trucks would be less than the levels associated with large construction equipment. Therefore, the operational impacts associated with ground-borne vibration would be less than significant at nearby sensitive uses.

Permanent Increase in Ambient Noise Levels

Threshold: Would the proposed project generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact: Operation of the proposed project would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The impact of the proposed project would be less than significant.

Impact Analysis

As discussed in the Draft Transportation Study prepared for the proposed project, the proposed project would generate 129 fewer daily trips, 48 fewer a.m. peak hour trips, and 37 fewer p.m. peak hour trips than the existing uses at the project site.[3] As a result, a slight reduction in roadway traffic volumes would occur on must roadways leading to the project site. There would, however be a slight redistribution of local traffic volumes as residents of the proposed townhomes access their properties from Rosewood Avenue.

The expected changes in existing noise levels along the study-area roadway segments in the local vicinity are identified in Table 7. As shown, the traffic generated by the proposed project would increase local noise levels by a maximum of 0.4 dBA L_{dn}, which would be imperceptible to most people and would not exceed the applicable thresholds of significance for the affected existing land uses. The maximum increase would occur along Rosewood Avenue between Almont Avenue and Robertson Boulevard. The maximum increase along any other roadway segment would be 0.1 dBA L_{dn}.

The proposed project would also result in new activity within the project site. However, the project site is currently active and noise levels occur as a result of parking activities, landscape maintenance, and people talking. The proposed residential uses along Rosewood Avenue would involve parking activities, landscape maintenance, and people talking. No substantive change in these ambient noise levels is expected with the project and the resulting change in noise levels in the existing Rosewood Avenue Neighborhood is expected to be the 0.4 dBA L_{dn} increase associated with new vehicle trips.

Therefore, operation of the proposed project would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The impact of the proposed project would be less than significant.

[3] Gibson Transportation Consulting, Inc., 2013.

TABLE 7 - PROJECT ROADWAY NOISE IMPACTS

Roadway	Roadway Segment	Noise Levels in dBA L_{dn}				Significant Impact?
		Existing Traffic Volumes	Existing + Project Traffic	Increase	Significance Threshold	
Rosewood Ave.	Almont to Robertson	55.3	55.7	0.4	5.0	No
	west of Almont Ave.	53.2	53.3	0.1	5.0	No
Almont Ave.	north of Rosewood Ave.	54.5	54.5	0.0	5.0	No
Beverly Bl.	west of Almont Ave.	70.0	70.0	0.0	5.0	No
Robertson Bl.	north of Rosewood Ave.	67.2	67.2	0.0	5.0	No

For locations where the resulting noise level would exceed 60 dBA at sensitive uses, the significance threshold established by the City of West Hollywood is a 3.0 dBA increase. For all other locations, the significance threshold is 5.0 dBA.

Calculation data and results are provided in Appendix B.

Temporary Increase in Ambient Noise Levels

Threshold: Would the proposed project generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact: Construction of the proposed project would generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The short-term construction-related impact of the proposed project would be significant and unavoidable.

Impact Analysis

As discussed previously, project demolition, excavation, and construction activities would generate short-term increases in noise levels at the project site. One of the loudest potential noise sources at construction sites is pile driving to provide support for new structures. According to the Final Geotechnical Exploration and Recommendations report prepared for the proposed project, any new support piles required for the proposed uses would be drilled and cast in place and not driven into the ground.[4]

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. The data for the types of equipment that are expected to be used at the project site are presented in Table 8. As shown, construction equipment used for the proposed project could produce maximum noise levels of 73 to 90 dBA L_{max} at a distance of 50 feet from the source.

The Federal Highway Administration has also compiled data regarding the noise generating characteristics of typical construction activities. These data, which represent composite construction

[4] Golder Associates, 2013.

noise, are presented in Table 9. As with noise generated by individual construction equipment, these noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance.

TABLE 8 - TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	L_{max} Noise Limit at 50 Feet
Earthmoving	
Backhoe	80
Bulldozer	85
Dump Truck	84
Front End Loader	80
Scraper	85
Tractor	84
Materials Handling	
Concrete Mixer Truck	85
Concrete Pump Truck	82
Crane	85
Impact Equipment	
Compactor	80
Jackhammer	85
Pneumatic Tools	85
Other Equipment	
Compressors	80
Concrete Saws	90
Gradall Forklift	85
Pickup Truck	55
Vacuum Street Sweeper	80
Welder/Torch	73

Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.

Source of table data: Federal Highway Administration, 2006.

As shown in Table 9, daytime composite construction noise levels associated with the proposed project could range from 77 to 86 dBA L_{eq} at a distance of 50 from the construction activities. As shown previously in Table 4, existing ambient daytime noise levels in the residential area along Rosewood Avenue average around 60 dBA L_{eq}. Construction activities associated with the proposed project would increase daytime noise levels at the nearby residential uses by more than 10 dBA. This would be a significant temporary or periodic increase in noise levels.

TABLE 9 - TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	L_{eq} Noise Levels at 50 Feet with Mufflers
Excavation/Grading	86
Foundations	77
Structural	83
Finishing	86

Source of table data: City of Los Angeles, 2006.

Mitigation Measures

The following mitigation measures are based upon the measures adopted by the City of West Hollywood for all new development projects, but have been modified to directly relate to the proposed project.

1. The project construction contractors shall ensure that equipment is properly maintained per the manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).

2. The project construction contractors shall shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.

3. The project construction contractors shall ensure that construction equipment does not idle for extended periods of time.

4. The project construction contractors shall locate fixed and/or stationary equipment as far as possible from noise-sensitive receptors (e.g., generators, compressors, cement mixers).

5. If feasible, the project construction contractors shall install a 12-foot high temporary barrier along the northern, eastern, and western property lines. The acoustical barrier shall be constructed of material having a minimum surface weight of two pounds per square foot or greater, and a demonstrated Sound Transmission Class rating of 25 or greater as defined by American Society for Testing and Materials Test Method E90. The barrier shall be required during the excavation and parking structure construction phases of development.

6. The project construction contractors shall ensure that music is not audible at offsite locations.

7. Two weeks prior to the commencement of construction at the project site, notification shall be provided to the owners and tenants of residential properties located along Rosewood Avenue between Almont Avenue and Robertson Boulevard disclosing the planned construction schedule, including the various types of activities and equipment that would be occurring throughout the duration of the construction period. This notification shall also provide a contact name and phone number for residents to call for construction noise related complaints. All reasonable concerns shall be rectified within 24 hours of receipt.

Implementation of mitigation measures 1 though 7 would reduce the impacts associated with temporary construction activities. The acoustical barrier required under mitigation measure 5 would reduce construction-related noise levels by at least 25 dBA, which would reduce the impact during excavation and parking structure construction to less than significant levels. However, construction of the proposed subterranean parking structure is expected to affect most of the northern portion of the project site and it is not known if there would be adequate room to erect a temporary barrier within the perimeter of the project site. The homes to the immediate east of the project site are located only about four feet from the property boundary. Also, the temporary barrier would need to be removed prior to construction of the buildings proposed along Rosewood Avenue. Construction of these buildings would increase daytime noise levels at nearby homes by at lease 10 dBA L_{eq} during various times. This is a significant and unavoidable impact associated with short-term project-related construction activities.

CUMULATIVE IMPACTS

Development of the proposed project in conjunction with other related projects would result in an increase in construction-related and traffic-related noise as well as on-site stationary noise sources in the already urbanized City of West Hollywood, City of Beverly Hills, and City of Los Angeles areas. The Draft Transportation Study prepared for the proposed project identifies 11 related projects within the an approximate 2-mile radius of the proposed project site.[5] Of these projects, 10 are located within the City of West Hollywood and two are in the City of Beverly Hills.

Construction-Related Cumulative Impacts

The project applicant has no control over the timing or sequencing of the related projects that have been identified within the proposed project study area. Therefore, any quantitative analysis that assumes multiple, concurrent construction projects would be entirely speculative. Construction-period noise and ground-borne vibration for the proposed project and each related project (that has not yet been built) would be localized. The nearest related project is a new hotel project located at 623 La Peer Drive north of Melrose Avenue (related project location number 1). Another project that is a similar distance from the site is a residential/condominium project located at 432 N. Oakhurst Drive in Beverly Hills (related project location number 12). All of the related projects are located far enough away that construction activities at their locations would have no noise effect and no ground-borne vibration effect on the sensitive residential uses in Rosewood Avenue area adjacent to the project site.

Therefore, the proposed project would not contribute to significant short-term cumulative construction-related noise impacts in the immediate vicinity of the project site.

[5] Gibson Transportation Consulting, Inc., 2013.

Operational Cumulative Noise Impacts

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed project and related projects within the study area. Therefore, cumulative traffic-generated noise impacts have been assessed based on the difference between existing roadway noise levels and future noise levels with the proposed project and cumulative development. The noise levels associated with existing traffic volumes and future year 2015 traffic volumes with the proposed project are identified in Table 10. As shown, the traffic generated by the proposed project and cumulative development would increase local noise levels by a maximum of 0.8 dBA L_{dn}, which is inaudible/imperceptible to most people and would not exceed the City of West Hollywood thresholds of significance. Therefore, this cumulative impact would be less than significant.

TABLE 10 - YEAR 2015 CUMULATIVE ROADWAY NOISE IMPACTS

Roadway	Roadway Segment	Noise Levels in dBA L_{dn}				Significant Impact?
		Existing Traffic Volumes	Year 2015 + Project Traffic	Increase	Significance Threshold	
Rosewood Ave.	Almont to Robertson	55.3	55.8	0.5	5.0	No
	west of Almont Ave.	53.2	53.3	0.1	5.0	No
Almont Ave.	north of Rosewood Ave.	54.5	54.5	0.0	5.0	No
Beverly Bl.	west of Almont Ave.	70.0	70.4	0.4	5.0	No
Robertson Bl.	north of Rosewood Ave.	67.2	68.0	0.8	5.0	No

For locations where the resulting noise level would exceed 60 dBA at sensitive uses, the significance threshold established by the City of West Hollywood is a 3.0 dBA increase. For all other locations, the significance threshold is 5.0 dBA.

Calculation data and results are provided in Appendix B.

With respect to stationary operational noise sources, none of the other related projects are located in close proximity to the project site. These related projects would not increase stationary operational noise sources in the immediate vicinity of the project site. Likewise, the operational activities at the proposed project site would not increase stationary operational noise levels in the vicinity of the related project sites. Therefore, cumulative impacts associated with stationary and on site operational noise sources would not be significant.

UNAVOIDABLE SIGNIFICANT IMPACTS

The short-term construction-related noise impact of the project would be significant and unavoidable.

REFERENCES

California Natural Resources Agency. 2013. *2013 California Environmental Quality Act (CEQA) Statute and Guidelines*. Association of Environmental Professionals.

Gibson Transportation Consulting, Inc. September 2013. *Draft Transportation Study for the 8899 Beverly Boulevard Project, West Hollywood, California*.

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Jones & Stokes. June 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*. Sacramento, California: California Department of Transportation, Noise Vibration, and Hazardous Waste Management Office. West Hollywood, City of. September 6, 2011. *City of West Hollywood Climate Action Plan*.

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U.S. Department of Transportation, Federal Highway Administration. 2006. *FHWA Roadway Construction Noise Manual User's Guide*. Report No. FHWA-HEP-05-054. Cambridge, Massachusetts: John Volpe National Transportation Systems Center, Acoustics Facility.

APPENDIX A -
NOISE LEVEL MEASUREMENT DATA

C:\LARDAV\SLMUTIL\03OCT_10.bin Interval Data

Site	Location	Meas Number	Date	Time	Duration	Leq	Lmax
1	Rosewood: Almont/Robertson	0	03Oct 13	11:44:15	1200.0	56.6	74.8
2	Almont north of Rosewood	0	03Oct 13	12:11:09	1200.0	55.3	71.5
3	Rosewood west of Almont	0	03Oct 13	12:33:37	1200.0	54.6	70.7
4	Beverly west of Almont	0	03Oct 13	13:00:44	900.0	70.6	89.5
5	Robertson n of Rosewood	0	03Oct 13	13:24:25	900.0	67.7	74.3

APPENDIX B -
NOISE LEVEL CALCULATION DATA

Roadway and Highway Traffic Noise Levels

Project Name: 8899 Beverly Boulevard Project

Background Information

Model Description: Caltrans Technical Noise Supplement (November 2009) methodologies.
Analysis Scenarios: Existing and Future Traffic Volumes.
Source of Traffic Volumes: Gibson Transportation Consulting, September 2013.

Existing Traffic Volumes

Analysis Location	Land Use	Measured dBA Leq	Measurement Duration Minutes	Measurement Duration Traffic Volume	Measurement Hour Traffic Volume	Traffic Study Peak Hour Volume	ADT Volume	% Day	% Eve	% Night	Peak Hour dBA Leq	24-Hour dBA Ldn
Rosewood Avenue - Almont to Robertson	Residential	56.6	20	26	78	76	760	85.66%	9.21%	5.13%	56.5	55.3
Rosewood Ave. west of Almont Ave.	Residential	54.6	20	23	69	67	670	85.66%	9.21%	5.13%	54.5	53.2
Almont Ave. north of Rosewood Ave.	Residential	55.3	20	29	87	95	950	85.66%	9.21%	5.13%	55.7	54.5
Beverly Bl. west of Almont Ave.	Commercial	70.6	15	451	1,804	2,093	20,930	85.66%	9.21%	5.13%	71.2	70.0
Robertson Bl. north of Rosewood Ave.	Commercial	67.7	15	235	940	1,111	11,110	85.66%	9.21%	5.13%	68.4	67.2

Existing + Project Noise Traffic Impacts

Analysis Location	Land Use	Existing ADT Volume	Existing 24-Hour CNEL	Project ADT Volume	Existing + Project ADT	Existing + Project 24-Hour CNEL	Project Change
Rosewood Avenue - Almont to Robertson	Residential	760	55.3	76	836	55.7	0.4
Rosewood Ave. west of Almont Ave.	Residential	670	53.2	10	680	53.3	0.1
Almont Ave. north of Rosewood Ave.	Residential	950	54.5	0	950	54.5	0.0
Beverly Bl. west of Almont Ave.	Commercial	20,930	70.0	-190	20,740	70.0	-0.0
Robertson Bl. north of Rosewood Ave.	Commercial	11,110	67.2	-10	11,100	67.2	-0.0

Year 2015 + Project Cumulative Traffic Noise Impacts

Analysis Location	Land Use	Existing ADT Volume	Existing 24-Hour CNEL	Future + Project Peak Volume	Future + Project ADT	Future + Project 24-Hour CNEL	Future Change
Rosewood Avenue - Almont to Robertson	Residential	760	55.3		851	55.8	0.5
Rosewood Ave. west of Almont Ave.	Residential	670	53.2	68	680	53.3	0.1
Almont Ave. north of Rosewood Ave.	Residential	950	54.5	96	960	54.5	0.0
Beverly Bl. west of Almont Ave.	Commercial	20,930	70.0	2,268	22,680	70.4	0.3
Robertson Bl. north of Rosewood Ave.	Commercial	11,110	67.2	1,338	13,380	68.0	0.8

Note: Project and Cumulative Change and Contribution numbers may not appear to add correctly due to rounding in the spreadsheet model.

Roadway and Highway Traffic Noise Levels

Project Name: 8899 Beverly Boulevard Project

Background Information

Model Description: Caltrans Technical Noise Supplement (November 2009) methodologies.
Analysis Scenarios: Existing and Future Traffic Volumes.
Source of Traffic Volumes: Gibson Transportation Consulting, September 2013.

Existing Traffic Volumes

Analysis Location	Land Use	Measured dBA L_{eq}	Measurement Duration Minutes	Measurement Duration Traffic Volume	Measurement Hour Traffic Volume	Traffic Study AM Peak Hour Volume	Traffic Study PM Peak Hour Volume	Barrier Attenuation dBA	AM Peak Hour dBA L_{eq}	PM Peak Hour dBA L_{eq}
Almont Ave. north of Rosewood Ave.	Residential	55.3	20	29	87	82	95	0	55.0	55.7
Rosewood Ave. west of Almont Ave.	Residential	54.6	20	23	69	34	67	0	51.5	54.5
Beverly Bl. west of Almont Ave.	Commercial	70.6	15	451	1,804	2,159	2,093	0	71.4	71.2
Robertson Bl. north of Rosewood Ave.	Commercial	67.7	15	235	940	1,150	1,111	0	68.6	68.4

Existing + Project Traffic Volumes

Analysis Location	Land Use	Measured dBA L_{eq}	Measurement Duration Minutes	Measurement Duration Traffic Volume	Measurement Hour Traffic Volume	Traffic Study AM Peak Hour Volume	Traffic Study PM Peak Hour Volume	Barrier Attenuation dBA	AM Peak Hour dBA L_{eq}	PM Peak Hour dBA L_{eq}
Almont Ave. north of Rosewood Ave.	Residential	55.3	20	29	87	82	95	0	55.0	55.7
Rosewood Ave. west of Almont Ave.	Residential	54.6	20	23	69	35	68	0	51.7	54.5
Beverly Bl. west of Almont Ave.	Commercial	70.6	15	451	1,804	2,134	2,074	0	71.3	71.2
Robertson Bl. north of Rosewood Ave.	Commercial	67.7	15	235	940	1,149	1,110	0	68.6	68.4

Future + Project Traffic Volumes (2015)

Analysis Location	Land Use	Measured dBA L_{eq}	Measurement Duration Minutes	Measurement Duration Traffic Volume	Measurement Hour Traffic Volume	Traffic Study AM Peak Hour Volume	Traffic Study PM Peak Hour Volume	Barrier Attenuation dBA	AM Peak Hour dBA L_{eq}	PM Peak Hour dBA L_{eq}
Almont Ave. north of Rosewood Ave.	Residential	55.3	20	29	87	83	96	0	55.1	55.7
Rosewood Ave. west of Almont Ave.	Residential	54.6	20	23	69	35	68	0	51.7	54.5
Beverly Bl. west of Almont Ave.	Commercial	70.6	15	451	1,804	2,312	2,268	0	71.7	71.6
Robertson Bl. north of Rosewood Ave.	Commercial	67.7	15	235	940	1,347	1,338	0	69.3	69.2