Noise Assessment For:

2000 AVENUE OF THE STARS

CITY OF LOS ANGELES

Prepared For:

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1.0 EXISTING SETTING

1.1 Project Description

The project calls for a redevelopment in the Century City Area of the City of Los Angeles. The project site is bounded by Constellation Boulevard to the north, Avenue of the Stars to the west, Garden Lane and Olympic Boulevard to the south and Century Park east to the east. A vicinity map is presented in Exhibit 1. The project proposes construction of a fifteen-story building containing 778,947 square feet (FAR) of primarily office space with restaurant, retail and cultural uses.

The site currently includes two eight story buildings at 2020 and 2040 Avenue of the Stars and the diamond shaped plaza area located between these buildings and the two buildings at 2029 and 2049 Century Park East. The buildings are primarily used as office space but also include a theater, a cinema, a health club, restaurants, and retail uses. There is also a six level below grade parking structure beneath the buildings. The two eight story buildings will be demolished as a part of the project, the plaza will be renovated and the parking structure will be modified to provide additional structural support.

This report will analyze the potential noise impacts associated with this project. Traffic volume information used in this report to project traffic noise levels was provided by Mr. Roy Nakamura at Crain & Associates in a memo dated June 14, 2002. Demolition and construction noise impacts are evaluated, as are traffic noise impacts on the project site. Noise impacts from project site activity on nearby residential areas are also discussed.

1.2 Background Information on Noise

1.2.1 Noise Criteria Background

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 2 provides examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of

the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, is not sufficiently loud to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

1.2.2 Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics will be used.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 1 hour. This 1 hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. Noises occurring during the evening time period (7 p.m. to 10 p.m.) are counted as if they were 5 dBA louder, while nighttime (10 p.m. to 7 a.m.) noises are counted if they were 10 dBA louder. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 3.

1.2.3 Noise Criteria

City of Los Angeles Noise Element

Exhibit 1 of the City of Los Angeles Noise Element presents “Guidelines for Noise Compatible Land Use”. This exhibit classifies various land uses in terms of Normally Acceptable, Conditionally Acceptable, Normally Unacceptable and Unacceptable based on their noise exposure in the Community Noise Equivalent Level (CNEL) scale.

For single family residential uses, CNEL levels from 50 to 55 dB are Acceptable, CNEL levels from 60 to 65 are Conditionally Acceptable, CNEL levels of 70 dB are Normally Unacceptable and CNEL levels exceeding 75 dB are Clearly Unacceptable.

For multi family residential uses, CNEL levels from 50 to 65 dB are Acceptable, CNEL levels from 60 to 70 dB are Conditionally Acceptable, CNEL levels of 70 to 75 dB are Normally Unacceptable and CNEL levels exceeding 75 dB are Clearly Unacceptable. For commercial uses CNEL levels from 50 to 65 dB are Acceptable, CNEL levels from 65 to 75 are Conditionally Acceptable, and CNEL levels of 75 to 80 dB are Normally Unacceptable.

For commercial uses CNEL levels from 50 to 65 dB are Acceptable, CNEL levels from 65 to 75 are Conditionally Acceptable, and CNEL levels of 75 to 80 dB are Normally Unacceptable.

A land use exposed to noise levels that are considered Normally Acceptable indicates that the land use is compatible with the noise environment and no special noise insulation is required. If new construction is exposed to a Conditionally Acceptable noise level, a noise analysis is typically required to determine noise mitigation required to reduce noise levels to a compatible level. Conventional construction will normally suffice with a fresh air supply system or air conditioning to allow windows to remain closed. A noise analysis is also required for new construction exposed to a Normally Unacceptable noise level. The analysis is required to determine mitigation measures, which may be significant, to reduce noise levels to a compatible level. In general, development is discouraged for land uses in areas this designation. Proposed development exposed to Clearly Unacceptable noise levels should generally not be undertaken.

Noise Element policies establish a 65 CNEL standard for outdoor residential areas and a 45 CNEL standard for indoor residential areas. The noise element does not set standards for uses other than residential

City of Los Angeles Noise Ordinance

The Los Angeles Municipal Code (Chapter XI-Noise Regulation) establishes the noise standards for various noise sources generated on private property affecting neighboring properties. Parking lot noise sources are not specifically regulated by the code. The section of the code (Article 6-General Noise) is what is referred to as a "nuisance ordinance" in that it does not contain any specific noise limits that cannot be exceeded. In general, these types of ordinances are difficult to enforce because they do not define specific noise levels that are considered nuisances. The remainder of the noise ordinance does set specific restrictions for specific activities. Two of these sections relate to the project.

Section 112.02 regulates air conditioning, refrigeration, heating pumping and filtering equipment. This equipment cannot cause the noise level on any adjacent occupied property to exceed the ambient noise level by more than 5 dB.

Section 114.03 regulates loading and unloading of vehicles at loading docks. This section restricts any person to "load or unload any vehicle, or operate any dollies, carts, forklifts, or other wheeled equipment which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building" to the hours between 7:00 a.m. to 10:00 p.m.

Section 41.40 regulates construction noise. 41.40(a) of this section states:

> "No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power driven drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code."

This means that any construction activity that generates substantial noise levels must only take place between 7:00 a.m. and 9:00 p.m. The Planning Department further restricts construction to no later than 6:00 p.m. Monday through Friday. 41.40(b) further restricts all construction within 500 feet of residences to between 8:00 a.m. and 6:00 p.m. on Saturdays or National Holidays and at no time on Sundays.

1.3 Existing Traffic Noise Levels

An estimate of highway noise levels in terms of CNEL was computed for the roadways affected by project traffic. The Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978) was utilized. The CALVENO noise emission curves developed by Caltrans were used with the FHWA model. These curves better model the California vehicle mix. The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distances to the 60, 65, and 70 CNEL contours are found.

The distances to the existing 60, 65 and 70 CNEL contours for the roadways whose noise levels will be affected by project traffic are given in Table 1. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The values given in Table 1 represent existing noise levels and do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. Areas with noise barriers or structures that break line of sight from a receptor to the roadway will experience lower levels. Traffic volumes, speeds and mixes used in calculating these noise levels can be found in the appendix. Noise levels along all roadways examined in the traffic study can be found in the appendix.

Table 1
Modeled Existing Roadway Traffic Noise Levels

Roadway Segment	CNEL @ 100'†	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Constellation Boulevard				
Century Park West to Avenue of the Stars	59.3	RW	41	89
Avenue of the Stars to Century Park East	61.9	29	63	135
Olympic Boulevard				
Overland Ave. to Beverly Glen Blvd.	66.7	60	129	279
Beverly Glen Blvd. to Century Park West	66.8	61	132	285
Century Park West to Avenue of the Stars	66.5	58	126	271
Avenue of the Stars to Century Park East	66.6	60	129	277
Century Park East to Spalding Dr.	66.7	61	130	281
Galaxy Way				
Avenue of the Stars to Century Park East	53.0	RW	RW	34
Pico Boulevard				
Overland Ave. to Beverly Glen Blvd.	65.0	47	100	216
Beverly Glen Blvd. to Motor Ave.	64.8	45	96	207
Motor Ave. to Avenue of the Stars	65.8	53	113	244
Avenue of the Stars to Century Park East	64.9	46	98	212
Overland Avenue				
Olympic Blvd. to Pico Blvd.	58.8	RW	39	83
Beverly Glen Boulevard				
Olympic Blvd. to Pico Blvd.	60.3	RW	49	105
Century Park West				
Santa Monica Blvd. to Constellation Blvd.	57.8	RW	33	72
Constellation Blvd. to Olympic Blvd.	59.6	RW	43	94
Motor Avenue				
South of Pico Blvd	61.0	25	55	117
Avenue of the Stars				
Constellation Blvd. to Olympic Blvd.	63.2	35	76	163
Olympic Blvd. to Galaxy Way	62.4	31	67	145
Galaxy Way to Pico Blvd.	62.6	32	69	148
Century Park East				
Constellation Blvd. to Olympic Blvd.	62.4	31	67	144
Olympic Blvd. to Pico Blvd.	60.9	RW	53	114
Spalding Drive				
North of Olympic Blvd.	55.8	RW	RW	52

† From Centerline of Roadway
RW- Contour Falls Within Road Right-of-Way

Table 1 shows that Olympic Boulevard and Pico Boulevard generate the highest levels of noise in the project area with noise levels along Pico Boulevard being slightly lower than along Olympic. Noise Levels along Constellation Boulevard, Overland Boulevard, Beverly Glen Boulevard, Century Park West, Motor Avenue, Avenue of the Stars, Century Park East, and Spalding Drive are moderate. Traffic noise levels along Galaxy Way are minor.

2.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long-term impacts are further divided into impacts on surrounding land uses generated by the proposed project and those impacts that occur at the proposed project site.

2.1 Noise Impact Criteria

Off-site impacts from on-site activities, temporary and long-term, are measured against the City of Los Angeles Noise Ordinance presented previously. Any noise generated on the project site must comply with the Noise Ordinance.

Off-site impacts from traffic noise are measured against two criteria. Both criteria must be met for a significant impact to be identified. First, the traffic noise increase due to the project must be greater than 3dB on a roadway segment adjacent to a noise sensitive land use. Second the resulting future with project noise level must exceed the criteria level for the noise sensitive land use. In this case the criteria level is 65 CNEL for residential land uses.

In community noise assessment, changes in noise levels greater than 3 dB are often identified as significant, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. Note that there is no scientific evidence is available to support the use of 3 dB as the significance threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. In a community noise situation, however, noise exposures are over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB appears to be appropriate for most people.

Long-term On-Site impacts are measured against the noise level limits applied by the City of Los Angeles. The city has not established specific interior noise standards for commercial uses. Exterior noise standards are not typically applied to commercial areas. Based on the land use compatibility matrix an appropriate interior noise standard for retail uses is 55 CNEL, for general office space areas the appropriate standard is 50 CNEL and for private office areas the appropriate standard is 45 CNEL. These levels will be used to assess the noise compatibility of the project.

2.2 Temporary Impacts

2.2.1 Construction Noise

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. For the proposed project, the highest noise generating activities will include demolition of the existing buildings.

Worst-case examples of construction noise at 50 feet are presented in Exhibit 4. The peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. At 200 feet, the peak construction noise levels range from 58 to 83 dBA. At 400 feet the peak noise levels range from 52 to 77 dBA. Note that these noise levels are based upon worst-case conditions. Typically, noise levels near the site will be less. Noise measurements made by Mestre Greve Associates for other projects show that the noise levels generated by commonly used grading equipment (i.e. loaders, graders and trucks) generate noise levels that typically do not exceed the middle of the range shown in Exhibit 4.

The nearest noise sensitive use that may be impacted by construction and demolition noise is the hotel located across Avenue of the Stars from the project. The near edge of the hotel property is located approximately 160 feet from the nearest demolition activities. Outdoor noise levels generated by demolition activities could reach as high as 85 dBA in with typical maximum noise levels of approximately 72 dBA. Average outdoor noise levels during demolition would likely be approximately 67 dBA.

The high-rise structure of the hotel containing the guest rooms is located approximately 270 feet from the nearest demolition activities. Interior noise levels in the guest rooms could reach as high as 60 dBA with typical maximum noise levels of 47 dBA. Average interior demolition noise levels would likely be approximately 42 dBA.

There are multi-family residential uses located across Olympic Boulevard from the project. The near edge of this area is located approximately 215 feet from the nearest demolition activities. Outdoor noise generated by demolition activities could reach as high as 84 dBA with typical maximum noise levels of approximately 71 dBA. Average outdoor noise levels during demolition would likely be approximately 66 dBA.

The multi-family residential buildings are located approximately 290 feet from the nearest demolition activities. Interior noise levels could reach as high as 60 dBA with typical maximum noise levels of 47 dBA. Average interior demolition noise levels would likely be approximately 42 dBA

Construction and demolition activities will generate substantial noise levels at the residences adjacent to the project. This is a potentially significant impact. Construction hours will be limited by the City of Los Angeles Municipal Ordinance which designates the hours of the day where construction activities are appropriate and the noise generated by these activities are acceptable. Section 41.40. of Chapter IV (Public Welfare) of the City of Los Angeles Municipal Code prohibits noise generating construction activities that may disturb nearby hotel occupants

or residents before 7:00 a.m. or after 9:00 p.m. Monday through Friday. The Planning Department further restricts construction to no later than 6:00 p.m. Monday through Friday. All construction activity within 500 feet of residences or hotels is restricted before 8:00 a.m. or after 6:00 p.m. on Saturday or any national holiday, and at anytime on Sunday. Construction and demolition activities for the project shall only occur during the hours not prohibited. Notwithstanding compliance with these restrictions, the construction and demolition required for the project would result in a potentially significant noise impact.

Trucks used to haul debris from the project site during demolition will increase traffic noise levels along the haul route. Trucks will approach the project site from the Santa Monica (I-10) Freeway exiting onto Overland Boulevard, turning right onto Pico and then left onto Avenue of the Stars. Leaving the project, the trucks will continue north on Avenue of the Stars, turn right onto Constellation, right onto Century Park east, right onto Pico and left onto Overland to the Santa Monica Freeway. Up to 41 truck round trips per day will be required to haul debris away from the site. This will result in 82 additional trucks on the haul route roads.

The greatest increase in traffic noise will occur along the roadway segment with the lowest existing traffic volume and currently generating the lowest levels of noise. Based on information received from the traffic engineer for the project the roadway segment with the lowest existing traffic volume is Century Park East north of Pico Boulevard. This roadway has an existing average daily traffic volume of 14,200 and a posted speed of 35 miles per hour. The additional trucks on this roadway will result in a 0.3 dB increase in the traffic noise CNEL levels along the roadway segment. This increase is not significant. Increases along all other roadway segments on the haul route will be less than 0.3 dB. Therefore, demolition of the project will not result in a significant noise impact.

2.3 Long Term Off-Site Impacts

This section examines noise impacts from the proposed project on the surrounding land uses. Specifically traffic noise increases due to the project are examined as well as potential noise impacts from activities on the project site.

2.3.1 Traffic Noise

Table 2 shows traffic noise CNEL level changes on the roadways in the vicinity of the project whose noise levels will be affected by the project. Column 1 lists the roadway segments. Columns 2 and 3 show the increase in future noise levels over existing levels along the roadways listed. Column 2 shows the increase without the project and Column 3 shows the increase with the project. The last column of Table 2 shows the change in future noise levels due to the project. The proposed project generates less traffic than the existing uses currently on the project site. Therefore, the project will results in a slight decrease in traffic noise levels on roadways in the vicinity of the project. The negative numbers in the last column of Table 2 show the amount the traffic noise levels will be reduced with the project.

The noise level increases were calculated using traffic volume data presented in the previously referenced traffic data prepared for the project. The traffic volumes used are presented in the appendix.

Table 2
Traffic Noise Level CNEL Increases (dB)

Roadway Segment	Future (2005) Increase Over Existing CNEL		Change In Future Noise Level With Project
	No Project	With Project	
Constellation Boulevard			
Century Park West to Avenue of the Stars	2.0	1.8	-0.2
Avenue of the Stars to Century Park East	-0.1	-0.4	-0.4
Olympic Boulevard			
Overland Ave. to Beverly Glen Blvd.	0.7	0.6	-0.1
Beverly Glen Blvd. to Century Park West	0.8	0.7	-0.1
Century Park West to Avenue of the Stars	0.5	0.5	0.0
Avenue of the Stars to Century Park East	0.4	0.4	-0.1
Century Park East to Spalding Dr.	0.3	0.2	0.0
Galaxy Way			
Avenue of the Stars to Century Park East	-0.1	-0.1	0.0
Pico Boulevard			
Overland Ave. to Patricia Ave.	0.3	0.2	-0.1
Patricia Ave. to Beverly Glen Blvd.	0.2	0.1	-0.1
Beverly Glen Blvd. to Motor Ave.	0.5	0.4	-0.1
Motor Ave. to Avenue of the Stars	0.2	0.1	-0.1
Avenue of the Stars to Century Park East	0.5	0.4	0.0
Overland Avenue			
Olympic Blvd. to Pico Blvd.	0.9	0.9	0.0
Beverly Glen Boulevard			
Olympic Blvd. to Pico Blvd.	0.2	0.1	0.0
Century Park West			
Santa Monica Blvd. to Constellation Blvd.	2.0	1.9	-0.1
Constellation Blvd. to Olympic Blvd.	2.1	1.9	-0.1
Motor Avenue			
South of Pico Blvd	0.7	0.6	-0.1
Avenue of the Stars			
Constellation Blvd. to Olympic Blvd.	1.1	1.0	-0.1
Olympic Blvd. to Galaxy Way	1.4	1.4	-0.1
Galaxy Way to Pico Blvd.	1.1	1.0	-0.1
Century Park East			
Constellation Blvd. to Olympic Blvd.	0.7	0.6	-0.1
Olympic Blvd. to Pico Blvd.	1.0	0.8	-0.2
Spalding Drive			
North of Olympic Blvd.	0.7	0.7	0.0

Note: Difference between increase in existing noise levels with and without the project may not subtract exactly to change in future noise level with project due to rounding.

Table 2 shows that the traffic noise CNEL increase over existing conditions as high as 2.1 dB are projected to occur without the project along Century Park West between Constellation and Olympic. This increase is due to growth in the project area not associated with the project. This increase is not substantial and will not be noticed by observers in the area. With the project, the

increase along this roadway segment is 1.9 dBA. This is 0.2 dB lower than the projected increases over existing conditions without the project.

The greatest increase with the project over existing conditions is 1.9 dB along Century Park West between Santa Monica and Olympic. This increase is not substantial. Future noise levels will be lower by as much as 0.4 dB or unchanged with the project compared to the no project conditions. Because the project actually results in lower traffic noise levels in the future it will not result in a significant off site traffic noise impact.

For reference Table 3 presents the distances to the future (2005) 60, 65 and 70 CNEL contours for the roadways in the vicinity of the proposed project site. This is the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. Areas with noise barriers or structures that break line of sight from a receptor to the roadway will experience lower levels. The traffic data used to calculate these noise levels is presented in the appendix.

Table 3
Future (2005) With Project Traffic Noise Levels

Roadway Segment	CNEL @ 100'†	Distance To CNEL Contour† (feet) 70CNEL	65 CNEL	60 CNEL
Constellation Boulevard				
Century Park West to Avenue of the Stars	61.1	25	55	118
Avenue of the Stars to Century Park East	61.5	27	59	126
Olympic Boulevard				
Overland Ave. to Beverly Glen Blvd.	67.3	66	142	306
Beverly Glen Blvd. to Century Park West	67.6	69	148	320
Century Park West to Avenue of the Stars	67.0	63	136	293
Avenue of the Stars to Century Park East	67.0	63	136	294
Century Park East to Spalding Dr.	67.0	63	135	291
Galaxy Way				
Avenue of the Stars to Century Park East	52.9	RW	RW	34
Pico Boulevard				
Overland Ave. to Patricia Ave.	65.2	48	104	224
Patricia Ave. to Beverly Glen Blvd.	65.4	50	107	230
Beverly Glen Blvd. to Motor Ave.	65.1	47	102	220
Motor Ave. to Avenue of the Stars	66.0	54	116	250
Avenue of the Stars to Century Park East	65.3	49	105	226
Overland Avenue				
Olympic Blvd. to Pico Blvd.	59.7	RW	44	95
Beverly Glen Boulevard				
Olympic Blvd. to Pico Blvd.	60.5	RW	50	107
Century Park West				
Santa Monica Blvd. to Constellation Blvd.	59.7	RW	45	96
Constellation Blvd. to Olympic Blvd.	61.5	27	58	126
Motor Avenue				
South of Pico Blvd	61.6	28	60	129
Avenue of the Stars				
Constellation Blvd. to Olympic Blvd.	64.2	41	88	190
Olympic Blvd. to Galaxy Way	63.8	39	83	179
Galaxy Way to Pico Blvd.	63.5	37	80	172
Century Park East				
Constellation Blvd. to Olympic Blvd.	63.0	34	73	157
Olympic Blvd. to Pico Blvd.	61.6	28	60	129
Spalding Drive				
North of Olympic Blvd.	56.5	RW	27	58

† From Centerline of Roadway
RW-Contour falls within roadway right-of-way

Table 3 shows that Olympic Boulevard and Pico Boulevard will continue to generate the highest levels of noise in the project area with noise levels along Pico Boulevard continuing to be slightly lower than along Olympic. Noise Levels along Constellation Boulevard, Overland Boulevard, Beverly Glen Boulevard, Century Park West, Motor Avenue, Avenue of the Stars,

Century Park East, and Spalding Drive will continue to be moderate. Traffic noise levels along Galaxy Way will remain minor.

2.3.2 On-Site Activities

There are no on-site activities proposed that would be expected to generate extreme levels of noise. The nearest noise sensitive uses are located across major roadways. A hotel is located across Avenue of the Stars and there are multi-family residences located across Olympic Boulevard. Noise levels generated by typical activities on a project of this type are not expected to be significantly greater than the noise generated by the roadways. In any case, noise generated by any activity on the project site will need to comply with the City's Noise Ordinance (Municipal Code Chapter XI). By complying with the Noise Ordinance the project will not result in a significant noise impact due to on-site activities. There is no reason to expect that noise generated by activities on the project site will not comply with the Noise Ordinance.

2.4 Long Term On-Site Impacts

Noise generated by traffic on Constellation Boulevard, Avenue of the Stars and Olympic Boulevard will impact the proposed project. Future year 2015 traffic volumes and speeds were generated in consultation with the traffic engineer for the project. A 1% per year growth factor was applied to the 2005 no project traffic volumes to predict 2015 no project traffic volumes and the difference between the 2005 no project and with project traffic volumes was added to the total to generate the 2015 with project traffic volumes. These volumes were used to predict the noise levels at the proposed buildings. The traffic volume data is presented in the appendix.

An estimate of highway noise levels in terms of CNEL was computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The CALVENO noise emission curves developed by Caltrans were used with the FHWA model. These curves represent how much noise composite vehicles generate at different speeds better model the California vehicle mix than those in the FHWA model. The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used.

The proposed building is located approximately 70 feet from the centerline of Constellation Boulevard, 110 feet from the centerline of Avenue of the Stars and 170 feet from the centerline of Olympic Boulevard. Exterior traffic noise levels at the building face will be approximately 64 CNEL along Constellation Boulevard, 64 CNEL along Avenue of the Stars, and 64 CNEL along Olympic Boulevard.

Commercial buildings achieve at least 20 dBA of outdoor to indoor noise reduction with windows closed. The windows closed assumption requires that adequate ventilation be provided. Note that the windows do not need to be sealed shut but closeable at the occupants discretion. Air conditioning typically used for commercial buildings provides adequate ventilation.

Interior traffic noise levels for the project will be less than 45 CNEL and therefore, be below the interior noise criteria applicable to the proposed project. The project will not be significantly impacted by traffic noise.

3.0 MITIGATION MEASURES

3.1 Temporary Impacts

Compliance with the limited construction hours specified by the City of Los Angeles Municipal Ordinance will mitigate some construction noise impacts. Section 41.40. of Chapter IV (Public Welfare) of the City of Los Angeles Municipal Code prohibits noise generating construction activities that may disturb nearby hotel occupants or residents before 7:00 a.m. or after 9:00 p.m. Monday through Friday. The Planning Department further restricts construction to no later than 6:00 p.m. Monday through Friday. All construction activity within 500 feet of residences or hotels is restricted before 8:00 a.m. or after 6:00 p.m. on Saturday or any national holiday, and at anytime on Sunday. Construction and demolition activities for the project shall only occur during the hours not prohibited. However, notwithstanding compliance with these restrictions, the Project construction and demolition would result in a potentially significant noise impact.

3.2 Long Term Off-Site Impacts

Any on site activities will have to comply with the City of Los Angeles Municipal Code Noise Regulations (Chapter XI). There are no proposed uses that are expected to exceed the ordinance and therefore the project is not expected to result in a significant noise impact. No mitigation is required.

3.3 Long Term On-Site Impacts

No significant long-term on-site noise impacts are anticipated and no mitigation is required.

4.0 UNAVOIDABLE NOISE IMPACTS

There are no unavoidable significant noise impacts associated with the project.

APPENDIX

Traffic Volumes
Traffic Mixes

Table A-1
Existing and 2005 Traffic Data Used For Noise Modeling

Roadway Segment			Speed (mph)	Average Daily Traffic Volume Existing	2005 No Project	2005 w/Project
Constellation Boulevard						
Century Park West	to	Avenue of the Stars	35	9,810	15,710	14,880
Avenue of the Stars	to	Century Park East	35	18,180	17,960	16,470
Olympic Boulevard						
Overland Ave.	to	Beverly Glen Blvd.	35	54,170	63,250	62,380
Beverly Glen Blvd.	to	Century Park West	35	56,000	67,400	66,400
Century Park West	to	Avenue of the Stars	35	52,000	58,730	58,240
Avenue of the Stars	to	Century Park East	35	53,630	59,410	58,540
Century Park East	to	Spalding Dr.	35	54,720	58,340	57,730
Galaxy Way						
Avenue of the Stars	to	Century Park East	35	2,340	2,270	2,270
Pico Boulevard						
Overland Ave.	to	Patricia Ave.	35	36,970	39,540	38,930
Patricia Ave.	to	Beverly Glen Blvd.	36	36,970	38,520	37,860
Beverly Glen Blvd.	to	Motor Ave.	35	34,740	38,540	38,020
Motor Ave.	to	Avenue of the Stars	35	44,340	46,850	45,890
Avenue of the Stars	to	Century Park East	35	35,850	39,830	39,380
Overland Avenue						
Olympic Blvd.	to	Pico Blvd.	25	17,250	21,270	21,030
Beverly Glen Boulevard						
Olympic Blvd.	to	Pico Blvd.	35	12,510	13,070	12,930
Century Park West						
Santa Monica Blvd.	to	Constellation Blvd.	35	7,050	11,270	10,950
Constellation Blvd.	to	Olympic Blvd.	35	10,530	16,940	16,430
Motor Avenue						
South	of	Pico Blvd	30	19,640	22,950	22,520
Avenue of the Stars						
Constellation Blvd.	to	Olympic Blvd.	35	24,140	31,330	30,340
Olympic Blvd.	to	Galaxy Way	35	20,340	28,390	27,810
Galaxy Way	to	Pico Blvd.	35	21,000	26,750	26,210
Century Park East						
Constellation Blvd.	to	Olympic Blvd.	35	20,020	23,540	22,960
Olympic Blvd.	to	Pico Blvd.	35	14,160	17,690	16,970
Spalding Drive						
North	of	Olympic Blvd.	25	8,560	10,160	10,160

Table A-2
2015 Traffic Data Used For Noise Modeling

Road	ADT	Speed	CNEL @ 15m
Constellation	18,059	35	66.4
Ave. of the Stars	34,038	35	69.3
Olympic	64,566	35	72..0

Table A-3
Traffic Mixes Used For Noise Modeling

	Day	Eve	Night
Auto	75.51%	12.57%	9.34%
Medium Truck	1.56%	0.09%	0.19%
Heavy Truck	0.64%	0.02%	0.08%