IV. ENVIRONMENTAL IMPACT ANALYSIS

G. NOISE

The following analysis of noise impacts is based primarily upon the *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, prepared by Terry A. Hayes Associates LLC and dated February 26, 2008. Noise calculation sheets are provided in Appendix D: Noise of this DEIR.

1. ENVIRONMENTAL CONDITIONS

a. Physical Setting

The following discussion focuses on providing noise and ground-borne vibration background information. In addition, existing noise and ground-borne conditions are characterized.

(1) Characteristics of Sound

Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The "A-weighted scale," abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately three to 140 dBA. *Figure 40: A-Weighted Decibel Scale* provides examples of A-weighted noise levels from common sounds.

(a) Noise

This noise analysis discusses sound levels in terms of Community Noise Equivalent Level (CNEL) and Equivalent Noise Level (Leq).

Community Noise Equivalent Level. CNEL is a 24-hour continuous Leq with five dBA added to noise occurring between 7:00 p.m. and 10:00 p.m. and ten dBA added to noise levels occurring between 10:00 p.m. to 7:00 a.m. The added values are used to account for added sensitivity during evening and typical nighttime sleeping hours.[1]

Equivalent Noise Level. Leq is the average noise level on an energy basis for any specific time period. The Leq, if constant over a specified time period, would contain the same sound energy as the actual sound that varies in level with time.[2]

(i) Effects of Noise

Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment range from levels that interfere with speech and sleep (annoyance and nuisance) to

[1] Cowan, James P. 1994. *Handbook of Environmental Acoustics*. Wiley, John & Sons, Inc. 6 June 2008 <http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471285846.html>.
[2] *Ibid*

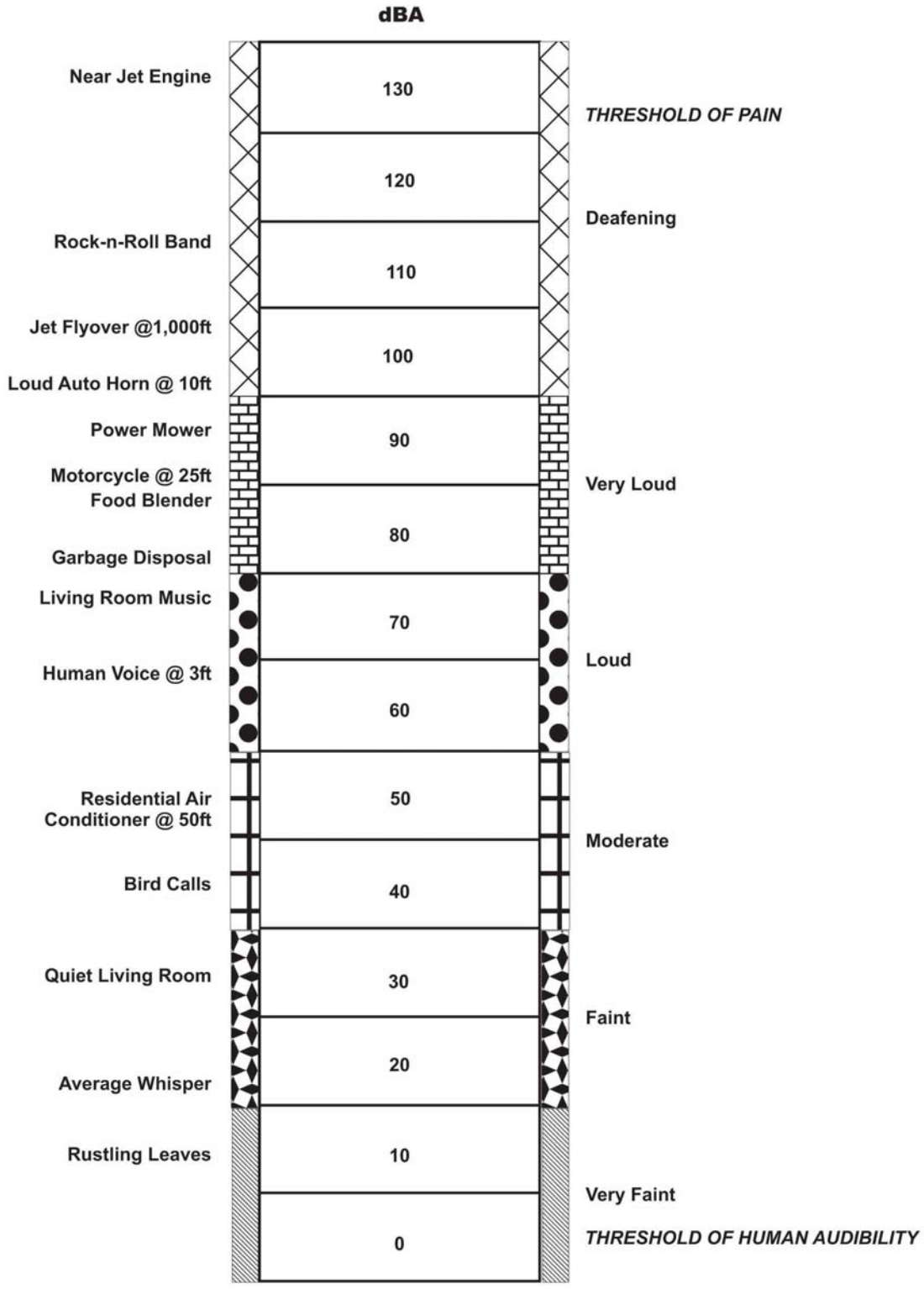


FIGURE 40
A-WEIGHTED DECIBEL SCALE

SOURCE: COWAN, JAMES P.,
HANDBOOK OF ENVIRONMENTAL ACOUSTICS

levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Audible Noise Changes

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately three dBA. A change of at least five dBA would be noticeable and would likely evoke a community reaction. A ten-dBA increase is subjectively heard as a doubling in loudness and would most certainly cause a community response.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," will decrease by approximately six dBA over hard surfaces and 7.5 dBA over soft surfaces for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on.

Generally, noise is most audible when traveling by direct line-of-sight[3]. Barriers, such as walls, berms, or buildings, that break the line-of-sight between the source and the receiver greatly reduces noise levels from the source since sound can only reach the receiver by bending over the top of the barrier (diffraction). Sound barriers can reduce sound levels by up to 20 dBA. However, if a barrier is not high or long enough to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

(b) Ground-borne Vibration

(i) Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment.

(ii) Vibration Definitions

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV in inches per second is often used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal.

[3] Line-of-sight is an unobstructed visual path between the noise source and the noise receptor.

Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration[4].

(iii) Effects of Vibration

High levels of vibration may cause physical personal injury or damage to buildings. However, ground-borne vibration levels rarely affect human health. Instead, most people consider ground-borne vibration to be an annoyance that may affect concentration or disturb sleep. In addition, high levels of ground-borne vibration may damage fragile buildings or interfere with equipment that is highly sensitive to ground-borne vibration (e.g., electron microscopes).

To counter the effects of ground-borne vibration, the Federal Railway Administration (FRA) has published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 inches per second PPV without experiencing structural damage.[5]

In contrast to noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 Vdb RMS or lower, well below the threshold of perception for humans, which is around 65 Vdb RMS.[6] Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

(2) Existing Local Noise Conditions

The existing noise environment of the project area is characterized by vehicular traffic and noises typical to a dense urban area (e.g., people conversing). Vehicular traffic is the primary source of noise in the project vicinity.

(a) Ambient Noise Levels

Two sets of ambient sound readings were taken at the project site and the surrounding area using a Quest Q-400 Noise Dosimeter. Noise monitoring, for 15 minute intervals, was completed along Riverside Drive between 8:45 a.m. and 12:10 p.m. on December 5, 2006. This monitoring period represented the peak season at Westfield Fashion Square and, as such, ambient noise levels in the project vicinity were higher than the typical daily ambient noise level. Noise monitoring was also completed between 11:00 a.m. and 2:30 p.m. on August 15, 2007. This monitoring period represented the off-peak season at the Westfield Fashion Square and, as such, ambient noise levels in the project vicinity were similar to the typical daily ambient noise level.

[4] U.S. Department of Transportation, Federal Transit Administration. 1995 1st edition; 2006 2nd edition. *Transit Noise and Vibration Impact Assessment*. Washington D.C.: Author. 6 June 2008 <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>.
[5] U.S. Department of Transportation, Federal Railroad Administration. 1998 (December). *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. Washington D.C.: Parsons Transportation Group. 6 June 2008 <http://www.fra.dot.gov/downloads/RRDev/nvman.pdf >.
[6] U.S. Department of Transportation, Federal Transit Administration. 1995 1st edition; 2006 2nd edition. *Transit Noise and Vibration Impact Assessment*. Washington D.C.: Author. 6 June 2008 <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>.

These readings were used to establish existing ambient noise conditions and to provide a baseline for evaluating construction and operational noise impacts. Noise monitoring locations are shown in *Figure 41: Noise Monitoring Locations*. As shown in *Table 23: Existing Noise Measurements*, existing ambient sound levels range between 72.0 to 75.7 dBA (Leq) during the peak season and between 65.5 and 68.4 dBA (Leq) during the off-peak season.

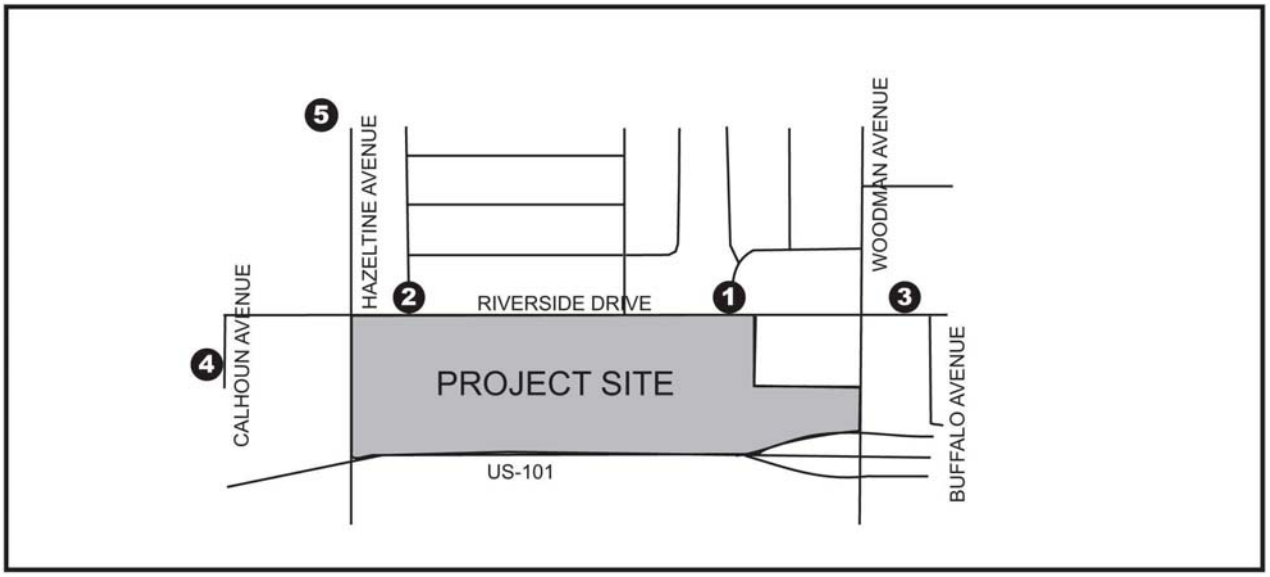
(b) Roadway Noise

As stated earlier, vehicular traffic is the predominant noise source in the project vicinity. Using existing traffic volumes (Year 2007) provided by the project traffic consultant and the Federal Highway Administration (FHWA) RD-77-108 noise calculation formulas, CNEL was calculated for various roadway segments near the project site. Existing weekday and weekend mobile noise levels are shown in *Table 24: Existing Estimated Community Noise Equivalent Level –Weekday* and *Table 25: Existing Estimated Community Noise Equivalent Level –Weekend*, respectively. As shown in *Table 24: Existing Estimated Community Noise Equivalent Level –Weekday*, weekday mobile noise levels in the project area range from 71.0 to 74.1 dBA CNEL. As shown in *Table 25: Existing Estimated Community Noise Equivalent Level –Weekend*, weekend noise levels in the project area range from 70.5 to 73.6 dBA CNEL.

TABLE 23
EXISTING NOISE MEASUREMENTS [1]

KEY TO *FIGURE 41: NOISE MONITORING LOCATIONS*	NOISE MONITORING LOCATION	DURATION (MINUTES)	SOUND LEVEL (DBA, LEQ)			
			TIME	PEAK SEASON	TIME	OFF-PEAK SEASON
1	Multi-Family Residence on Riverside Drive	15	9:27 a.m.	75.7	11:53 a.m.	66.2
2	Multi-Family Residence on Riverside Drive	15	9:07 a.m.	72.0	12:15 p.m.	68.3
3	Notre Dame High School	15		-	11:26 a.m.	67.1
4	Single-Family Residence on Calhoun Avenue and Riverside Drive	15		-	1:30 p.m.	65.5
5	Van Nuys Sherman Oaks Park on Hazeltine Avenue	15		-	12:55 p.m.	68.4

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.



LEGEND:

Noise Monitoring Locations

1. Multi-Family Residence on Riverside Drive
2. Multi-Family Residence on Riverside Drive
3. Notre Dame High School
4. Single-Family Residence on Calhoun Avenue
5. Van Nuys Sherman Oaks Park

FIGURE 41
NOISE MONITORING LOCATIONS

SOURCE: TAHA, 2007

NORTH

TABLE 24
EXISTING ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – WEEKDAY [1][2]

ROADWAY SEGMENT	ESTIMATED CNEL DBA [3]
Riverside Drive between Van Nuys Boulevard and Hazeltine Avenue	71.2
Riverside Drive between Hazeltine Avenue and Woodman Avenue	73.3
Riverside Drive between Woodman Avenue and Sunnyslope Avenue	73.3
Woodman Avenue between Magnolia Boulevard and Riverside Drive	74.1
Woodman Avenue between US 101 Westbound Ramps and Moorpark Street	74.1
Hazeltine Avenue between Fashion Square Lane and Moorpark Street	73.1
Hazeltine Avenue between Magnolia Boulevard and Riverside Drive	73.8

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] The predicted CNELs were calculated as peak hour Leq and converted into CNEL using the California Department of Transportation Technical Supplement (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of average daily traffic and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[3] CNEL is presented at the property line of the sensitive receptor nearest to the roadway segment.

TABLE 25
EXISTING ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – WEEKEND [1][2]

ROADWAY SEGMENT	ESTIMATED CNEL DBA [3]
Riverside Drive between Van Nuys Boulevard and Hazeltine Avenue	70.5
Riverside Drive between Hazeltine Avenue and Woodman Avenue	72.7
Riverside Drive between Woodman Avenue and Sunnyslope Avenue	72.1
Woodman Avenue between Magnolia Boulevard and Riverside Drive	73.5
Woodman Avenue between US 101 Westbound Ramps and Moorpark Street	73.6
Hazeltine Avenue between Fashion Square Lane and Moorpark Street	72.3
Hazeltine Avenue between Magnolia Boulevard and Riverside Drive	73.0

[1] Source: Terry A Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] The predicted CNELs were calculated as peak hour Leq and converted into CNEL using the California Department of Transportation Technical Supplement (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of average daily traffic and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[3] CNEL is presented at the property line of the sensitive receptor nearest to the roadway segment.

(c) Ambient Vibration Levels

Similar to the environmental setting for noise, the vibration environment is dominated by traffic from nearby roadways. Heavy trucks can generate ground-borne vibrations that vary depending on vehicle type, weight, and pavement conditions. According to the Federal Transit Administration, heavy-duty vehicles do not typically generate perceptible ground-borne vibration because rubber tires and suspension systems provide vibration isolation on smooth roadways.[7] Roadways surrounding the project site are typical urban roadways and vibration is not perceptible at the project site.

[7] U.S. Department of Transportation, Federal Transit Administration. 1995 1st edition; 2006 2nd edition. *Transit Noise and Vibration Impact Assessment*. Washington D.C.: Author. 6 June 2008 <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>.

(d) Noise-Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Sensitive receptors near the project site include:

- Multi-family residences located approximately 120 feet north of the project site, across Riverside Drive
- Single-family residences located approximately 250 feet east of the project site, across Woodman Avenue
- Notre Dame High School located approximately 575 feet northeast of the project site, across Riverside Drive
- Single-family residences located approximately 700 feet west of the project site on Calhoun Avenue and Riverside Drive
- Van Nuys Sherman Oaks Park located approximately 800 feet northeast of the project site, along Hazeltine Avenue

Noise measurements at nearby sensitive receptors were taken as part of this Noise Assessment and those locations are shown on *Figure 41: Noise Monitoring Locations* and existing noise measurements at these locations are reflected on *Table 24: Existing Estimated Community Noise Equivalent Level – Weekday*.

The above sensitive receptors represent the nearest sensitive land uses with the potential to be impacted by the Proposed Project. Additional single-family and multi-family residences are located in the surrounding community, within one-quarter mile of the project site.

b. Regulatory and Policy Setting

(1) City of Los Angeles Standards and Guidelines

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise sensitive land uses. Regarding construction, the Los Angeles Municipal Code (LAMC) indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. the following day, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment or other place of residence[8]. No person, other than an

[8] Chapter IV, Article 1, Section 41.40, January 29, 1984 and Chapter XI, Article 2, Section 112.04, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.

individual home owner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 8:00 a.m. or after 6:00 p.m. on any Saturday or on a federal holiday, or at any time on any Sunday.

The LAMC also specifies the maximum noise level of powered equipment.[9] Any powered equipment that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

The City of Los Angeles has published the L.A. CEQA Thresholds Guide (2006), which includes significance thresholds for construction and operational noise. For construction noise, the significance thresholds apply if activity occurs within 500 feet of a noise sensitive use or between the hours identified in the Noise Ordinance. For operational noise, the significance thresholds apply if the Proposed Project introduces a stationary noise source likely to be audible beyond the property line of the project site or if the project includes 75 or more dwelling units, 100,000 square feet or greater of nonresidential development, or has the potential to generate 1,000 or more average daily vehicle trips.

(2) Vibration Guidelines

There are no adopted City standards for ground-borne vibration.

2. THRESHOLDS OF SIGNIFICANCE

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise sensitive land uses.

Construction Noise

A significant construction noise impact would result if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a sensitive receptor;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a sensitive receptor; or

[9]Chapter XI, Article 2, Section 112.05, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.

- Construction activities would exceed the ambient noise level by 5 dBA at a noise receptor between the hours of 9:00 p.m. and 7:00 a.m., Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Operational Noise

A significant operational noise impact would result if:

- Project-related mobile noise causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (*Table 26: Land Use Compatibility for Community Noise Environments*), or any 5 dBA or greater noise increase.

- Stationary noise sources increase ambient noise levels by 5 dBA or greater.

TABLE 26
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS [1]

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (DBA, CNEL)					
	55	60	65	70	75	80
Residential - Low Density Single-Family, Duplex, Mobile Homes						
Residential - Multi-Family						
Transient Lodging - Motels Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						

TABLE 26
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS [1]

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (DBA, CNEL)					
	55	60	65	70	75	80
Normally Acceptable Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.						
Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditionally will normally suffice.						
Normally Unacceptable New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
Clearly Unacceptable New construction or development should generally not be undertaken.						

[1] Source: California Office of Noise Control, Department of Health Services

Ground-borne Vibration

There are no adopted State or City of Los Angeles ground-borne vibration standards. Based on federal guidelines, the Proposed Project would result in a significant construction or operational vibration impact if:

- The Proposed Project would expose buildings to the Federal Railway Administration building damage threshold level of 0.5 inches per second PPV.

3. ENVIRONMENTAL IMPACTS

a. Relevant Project Characteristics

The Proposed Project would involve the construction and operation of approximately 280,000 GLSF of retail and restaurant uses, as well as associated parking facilities (including both surface lots and multi-level structures). The proposed retail expansion (two-levels of shopping plus one subterranean parking level) and the main six-level parking structure (one-level at grade plus five-levels above grade) will be constructed primarily in the space between the existing shopping center (located immediately adjacent to the Riverside Drive frontage) and the Ventura (US 101) Freeway that is currently occupied by a portion of the existing mall parking structure and surface parking. A second four-level parking structure (one-level at grade plus three-levels above grade) will be constructed on the eastern portion of the project site (adjacent to Woodman Avenue) on an area currently developed with surface parking. The new parking structures would be designed

with openings between the parking levels. Also, two new loading docks will be constructed along the south side of the new mall buildings. One existing loading dock, currently along Riverside Drive at the proposed tunnel entrance, would be relocated south the mall structure.

The Proposed Project would involve the construction and operation of a typical retail shopping mall. The Proposed Project would not include any unusual sources of noise relative to an urban area or unusual project characteristics during its operation phase. During the construction phase, the Proposed Project would utilize sonic pile driving equipment to construct some of the proposed structures (i.e., the six-level parking structure). The Proposed Project includes a request to extend the length of its allowable hours of operation from 7:00 a.m. - 11:00 p.m. to permit hours between 5:30 a.m. - 12 midnight in order to facilitate mall operations.

The analysis assumes that the following Project Design Features are supported by the Proposed Project:

- The Proposed Project would include certain features to reduce exposure of sensitive receptors to operational noise. For example, mechanical equipment would be enclosed or located on roofs, and mechanical equipment noise would not increase ambient noise levels by 5 dBA or more at the nearest sensitive receptor. In addition, the new loading docks would be located behind mall structures and away from sensitive receptors. As a result, activity associated with the new loading docks would not increase ambient noise levels by 5 dBA or more at the nearest sensitive receptors (e.g. residences on Riverside Drive).

The analysis assumes that the Proposed Project will be constructed and operated in accordance with all applicable codes, regulations and standard practices, including the following:

- The City of Los Angeles Noise Ordinance has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise sensitive land uses. Regarding construction, the LAMC indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. the following day, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment or other place of residence.[10] No person, other than an individual home owner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 8:00 a.m. or after 6:00 p.m. on any Saturday or on a federal holiday, or at any time on any Sunday.

- The LAMC also specifies the maximum noise level of powered equipment or powered hand tools.[11] Any powered equipment or hand tool that produces a maximum noise

[10] Chapter IV, Article 1, Section 41.40, January 29, 1984 and Chapter XI, Article 2, Section 112.04, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.
[11] Chapter XI, Article 2, Section 112.05, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.

level exceeding 75 dBA at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

b. Project Impacts

An Initial Study (IS) was prepared for the Proposed Project. Based on the IS, potential impacts for a number of environmental issues were determined to be less than significant. The scope of the following analysis focuses only on those impacts that were determined through the Notice of Preparation (NOP) and IS process to have a potential significant environmental effect. Issues related to Noise that were determined to be less than significant, and are not addressed further, include: airport noise and railroad noise. An explanation supporting this conclusion is provided in Section VI: Other Environmental Considerations: A-Effects Not Found To Be Significant.

(1) Construction (Short-Term) Noise

Construction of the Proposed Project would result in temporary increases in ambient noise levels in the project area on an intermittent basis. The increase in noise would likely result in a temporary annoyance to nearby residents during the construction activity. Noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers.

Construction activities require the use of noise-generating equipment, such as jackhammers, pneumatic impact equipment, saws, and tractors. Typical noise levels from various types of equipment that may be used during construction are listed in *Table 27: Maximum Noise Levels of Common Construction Machines*. The table shows noise levels at distances of 50 and 100 feet from the construction noise source.

TABLE 27
MAXIMUM NOISE LEVELS OF COMMON CONSTRUCTION MACHINES [1]

NOISE SOURCE	NOISE LEVEL (DBA, LEQ) [2]	
	50 FEET	100 FEET
Front Loader	80	74
Cranes (moveable)	82	76
Jackhammers	90	84
Generators	77	71
Concrete Pumps	83	77
Back Hoe	84	78
Pile Driving (Peaks)	101	95
Scraper/Grader	87	81
Paver	87	81

[1] Source: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.
[2] Assumes a 6-dBA drop-off rate for noise generated by a "point source" and traveling over hard surfaces.

Whereas *Table 27: Maximum Noise Levels of Common Construction Machines* shows the noise level of each equipment, the noise levels shown in *Table 28: Outdoor Construction Noise Levels* take into account the likelihood that more than one piece of construction equipment would be in operation at the same time and lists the typical overall noise levels that would be expected for each phase of construction. These noise levels are based on surveys conducted by the USEPA in the early 1970s. Since 1970, regulations have been enforced to improve noise generated by certain types of construction equipment to meet worker noise exposure standards. However, many older pieces of equipment are still in use. Thus, the construction phase noise levels indicated in *Table 28: Outdoor Construction Noise Levels* represent worst-case conditions. As the table shows, the highest noise levels are expected to occur during the grading/excavation and finishing phases of construction. The noise source is assumed to be active for 40 percent of the eight-hour workday (consistent with the USEPA studies of construction noise), generating a noise level of 89 dBA at a reference distance of 50 feet.

TABLE 28
OUTDOOR CONSTRUCTION NOISE LEVELS [1]

CONSTRUCTION PHASE	NOISE LEVEL AT 50 FEET (DBA)
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89
[1] Source: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006..	

The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. The estimated construction noise levels at sensitive receptors are shown in *Table 29: Construction Noise Impact-Unmitigated*. Noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. As shown in *Table 29: Construction Noise Impact-Unmitigated*, noise generated by construction activity would exceed the 5-dBA incremental increase significance threshold at residential land uses along Riverside Drive during the peak and off-peak season at Westfield Fashion Square. It is important to note that construction activity would occur intermittently during the day and would not occur within noise-sensitive hours (10:00 p.m. to 7:00 a.m.). Regardless, the Proposed Project would result in a significant construction impact without implementation of mitigation measures.

TABLE 29
CONSTRUCTION NOISE IMPACT – UNMITIGATED [1]

KEY TO *FIGURE 41: NOISE MONITORING LOCATIONS*	DISTANCE (FEET) [2]	MAXIMUM CONSTRUCTION NOISE LEVEL (DBA, LEQ) [3]	EXISTING AMBIENT (DBA, LEQ) [4]	NEW AMBIENT (DBA, LEQ) [5]	INCREASE	IMPACT
OFF-PEAK SEASON AT WESTFIELD FASHION SQUARE						
#1 Multi-Family Residence on Riverside Drive	120	81.4	66.2	81.5	15.3	Yes
#2 Multi-Family Residence on Riverside Drive	120	81.4	68.3	81.6	13.3	Yes
#3 Notre Dame High School	575	67.8	67.1	70.5	3.4	No
#4 Single-Family Residence on Calhoun Avenue	750	65.5	65.5	68.5	3.0	No
#5 Van Nuys Sherman Oaks Park on Hazeltine Avenue	800	65	68.4	70.0	1.6	No
PEAK SEASON AT WESTFIELD FASHION SQUARE						
#1 Multi-Family Residence on Riverside Drive	120	81.4	69.3	81.7	12.4	Yes
#2 Multi-Family Residence on Riverside Drive	120	81.4	70.3	81.7	11.4	Yes

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] Distance of noise source from receptor.
[3] Construction noise source's sound level at receptor location, with distance and building adjustment.
[4] Pre-construction activity ambient sound level at receptor location.
[5] New sound level at receptor location during the construction period, including noise from construction activity.

The Proposed Project would utilize sonic pile driving to construct the six-level parking structure. Pile driving would potentially generate a noise level of 101 dBA Leq. The nearest sensitive receptor would be approximately 400 feet north of pile driving activity. The ambient noise level at this sensitive receptor is approximately 66.2 dBA Leq. At 400 feet, sonic pile driving would generate a maximum noise level of approximately 83 dBA Leq. This noise level would be reduced by 5 dBA to 78 dBA Leq by intervening structures that block the line-of-site between pile driving and the sensitive receptor. When added to the existing ambient noise level, pile driving activity would increase the ambient noise level by approximately 12.1 dBA. This would exceed the 5-dBA Leq incremental increase significance threshold and, as such, pile driving would result in a significant impact without implementation of mitigation measures.

In addition to on-site construction noise, haul trucks would require access to the project site during construction activity. Trucks would likely travel along Riverside Drive to reach the project site. As a result, residential land uses along Riverside Drive would potentially experience increased noise levels from haul trucks. Adding ten truck trips per hour along Riverside Drive would increase the CNEL by approximately 0.2 dBA. This increase would be less than the 3-dBA CNEL incremental increase significance threshold and, as such, haul truck noise would result in a less than significant impact.

Additional sensitive receptors are located north, east, and west of the project site. These sensitive receptors would also experience increases in ambient noise levels due to construction activity. However, these increases would be less than those presented for the multi-family residences along Riverside Drive due to distance and building attenuation (the multi-family residences along Riverside Drive would act as a noise barrier to the residential buildings behind them).

(2) Operational (Long-Term) Noise

The predominant operational noise source for the Proposed Project is vehicular traffic. According to the traffic report prepared by Linscott, Law & Greenspan, Engineers, the Proposed Project would generate 4,964 net weekday daily vehicle trips and 6,252 net weekend daily vehicle trips[12].

To ascertain off-site noise impacts, traffic was modeled under future year (2012) no project and with project conditions utilizing FHWA RD-77-108 noise calculation formulas. Results of the weekday analysis are summarized in *Table 30: Existing and Future Estimated Community Noise Equivalent Level – Weekday*. The greatest project-related noise increase would be 0.4 dBA CNEL and would occur along Riverside Drive between Hazeltine and Woodman Avenues. Weekday roadway noise levels attributed to the Proposed Project would increase by less than 3 dBA CNEL at all analyzed segments.

TABLE 30
EXISTING AND FUTURE ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – WEEKDAY [1][2]

ROADWAY SEGMENT	ESTIMATED CNEL DBA [3]				
	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)	PROJECT IMPACT	CUMULATIVE IMPACT
Riverside Drive between Woodman Avenue and Hazeltine Avenue	73.3	73.9	74.3	0.4	1.0
Riverside Drive between Hazeltine Avenue and Van Nuys Boulevard	71.2	71.7	71.9	0.2	0.7
Riverside Drive between Woodman Avenue and Sunnyslope Avenue	73.3	74.2	74.2	0.0	0.9
Woodman Avenue between Magnolia Boulevard and Riverside Drive	74.1	74.5	74.6	0.1	0.5
Woodman Avenue between US 101 Westbound Ramps and Moorpark Street	74.1	74.7	74.7	0.0	06
Hazeltine Avenue between Fashion Square Lane and Moorpark Street	73.1	73.6	73.7	0.1	0.6
Hazeltine Avenue between Magnolia Boulevard and Riverside Drive	73.8	74.3	74.5	0.2	0.7

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] The predicted CNELs were calculated as peak hour Leq and converted into CNEL using the California Department of Transportation Technical Supplement (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of average daily traffic and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[3] CNEL is presented at the property line of the sensitive receptor nearest to the roadway segment.

[12] Linscott, Law & Greenspan, Engineers. 2008 (August 5). *Traffic Impact, Parking, and Site Access Study for the Westfield Fashion Square Expansion Project*. Pasadena, CA: Author. [See Appendix I of this Draft EIR]

Results of the weekend analysis are summarized in *Table 31: Existing and Future Estimated Community Noise Equivalent Level – Weekend*. The greatest project-related noise increase would be 0.5 dBA CNEL and would also occur along Riverside Drive between Hazeltine and Woodman Avenues. Weekend roadway noise levels attributed to the Proposed Project would increase by less than 3 dBA CNEL at all analyzed segments.

Mobile noise generated by the Proposed Project would not cause the ambient noise level measured at the property line of the affected uses to increase by three decibels CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (*Table 26: Land Use Compatibility for Community Noise Environments*) or any five- decibel or more increase in noise level. The Proposed Project would result in a less than significant mobile noise impact.

TABLE 31
EXISTING AND FUTURE ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – WEEKEND [1][2]

ROADWAY SEGMENT	ESTIMATED CNEL DBA [3]				
	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)	PROJECT IMPACT	CUMULATIVE IMPACT
Riverside Drive between Woodman Avenue and Hazeltine Avenue	72.7	73.3	73.8	0.5	1.1
Riverside Drive between Hazeltine Avenue and Van Nuys Boulevard	70.5	71.2	71.5	0.3	0.1
Riverside Drive between Woodman Avenue and Sunnyslope Avenue	72.1	72.9	73.1	0.2	0.1
Woodman Avenue between Magnolia Boulevard and Riverside Drive	73.5	74.1	74.2	0.1	0.7
Woodman Avenue between US 101 Westbound Ramps and Moorpark Street	73.6	74.3	74.4	0.1	0.8
Hazeltine Avenue between Fashion Square Lane and Moorpark Street	72.3	72.8	73.0	0.2	0.7
Hazeltine Avenue between Magnolia Boulevard and Riverside Drive	73.0	73.6	73.8	0.2	0.8

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] The predicted CNELs were calculated as peak hour Leq and converted into CNEL using the California Department of Transportation Technical Supplement (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of average daily traffic and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[3] CNEL is presented at the property line of the sensitive receptor nearest to the roadway segment.

(a) Roof-Top and Mechanical Equipment

Potential stationary noise sources related to the long-term operations of the Proposed Project includes mechanical equipment (e.g., parking structure air vents and heating, ventilation, and air conditioning (HVAC) equipment.) Mechanical equipment would be designed so as to be located within an enclosure or confined to the rooftop of the proposed structure. In addition, mechanical equipment would be screened from view as necessary to comply with the City of Los Angeles Noise Ordinance requirements for both daytime (50 dBA) and nighttime (40 dBA) noise levels at residential land uses. Operation of mechanical equipment would not be anticipated to increase ambient noise levels by 5 dBA or more. Stationary noise would result in a less than significant impact with mitigation construction screen.

(b) Parking Facilities

Project-related parking would include a subterranean parking structure under the proposed shopping mall, a six-level parking structure south of the existing Macy's parking structure, and a four-level parking structure located off of Woodman Avenue at the eastern end of the project site. Noise generated by activity associated with the subterranean parking structure would not exceed an increase of 5 dBA (and therefore would not be audible) at locations off the project site and would not increase ambient noise levels.

The four-level parking structure would be located off of Woodman Avenue at the eastern end of the project site. This area is currently utilized for surface parking. The nearest sensitive receptors to the parking structure would be located approximately 250 feet east of the project site. Noise sources associated with the parking structure include vehicle movement, slamming doors, and car alarms. Parking activity typically generates a noise level of 63 dBA Leq at 50 feet, including rooftop noise.[13] Based on distance attenuation, the parking-related noise levels would be approximately 52.5 dBA Leq. Mobile-source related noise levels are approximately 73.2 dBA along Woodman Avenue, North of Highway 101. When added to this noise level, parking-related noise would increase the ambient noise level by less than 0.1 dBA. This level is less than the 5-dBA significance threshold, which would result in a less than significant impact.

The Proposed Project would include a six-level parking structure located south of the existing Macy's parking lot. This parking structure would be located approximately 300 feet south of the nearest sensitive receptor (i.e. residences on Riverside Drive). As shown in *Table 23: Existing Noise Measurements*, the monitored noise levels along the portion of Riverside Drive in front of the residential land uses are 66.2 and 68.3 dBA Leq. Adding parking-related noise (i.e., 63 dBA Leq) to the existing noise level along Riverside Drive would increase the existing noise levels by less than 0.1 dBA. This is less than the 5-dBA significance threshold and, as such, parking activity noise would not significantly impact sensitive receptors north of the project site.

The Proposed Project would increase vehicle access to the project site. The current vehicular traffic on Riverside Drive, Hazeltine Avenue, Woodman Avenue and the nearby Ventura Freeway (US 101) generates the majority of the ambient noise in the project area. Under the Proposed Project access scheme, vehicles would enter/exit the new parking structure at a new signalized driveway with direct access to the structure. This access would be located at the existing driveway between Macy's and Woodman Avenue. There will be a dual turn lane for westbound traffic as well as a dedicated right-turn lane for eastbound traffic. The driveway will consist of three outbound lanes and two inbound lanes. Five cars occupying each access lane and traveling at 25 miles per hour would produce a cumulative noise level of 67.0 dBA Leq at 50 feet. The nearest sensitive receptor to the new access point is located 75 feet to the north. Based on distance attenuation and the existing ambient noise level at the nearest sensitive receptor, the resulting noise level would be 68.1 dBA Leq. This would be an increase of 1.9 dBA. This level is less than the 5-dBA significance threshold, which would result in a less than significant impact with mitigation incorporated.

[13] Terry A. Hayes Associates, LLC. 2008 (February 26). *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*. Culver City, CA: Author. [See Appendix D of this Draft EIR]

The Proposed Project would change the hours of operation from 7:00 a.m. to 11:00 p.m. to 5:30 a.m. to 12:00 a.m. According to the traffic analysis, the shared parking demand at 6:00 a.m. and 12:00 a.m. would be 110 and 32 vehicles, respectively. A doubling of traffic volumes is typically needed to audibly increase ambient noise levels. The extended hours of operation would not double traffic volumes along any roadway segment. The increase in ambient noise levels would be less than the 5-dBA significance threshold, which would result in a less than significant parking and circulation impact.

(c) Loading Docks and Truck Access Areas

Two existing loading docks are located along Riverside Drive. These loading docks would continue to operate between the same hours and under their existing parameters (approximately two large trucks operating simultaneously on a daily basis). The Proposed Project would include construction of two new loading docks on the south side of the property to accommodate expanded retail and restaurant uses. These loading docks would be shielded from sensitive receptors by mall structures. The structures would act as a noise barrier and would prevent increased ambient noise levels by more than 5 dBA from the proposed loading docks at off-site sensitive receptors. The Proposed Project would not result in additional noise sources due to the operation of the loading docks. Operational noise levels would not change substantially along the Riverside Drive frontage. The Proposed Project would result in a less than significant operational noise impact due to loading dock operations.

(3) Vibration

(a) Construction

As shown in *Table 32: Vibration Velocities for Construction Equipment*, use of heavy equipment (e.g., a sonic pile driver) generates vibration levels of 0.170 inches per second PPV at a distance of 25 feet. The nearest structure to the pile driving activity would be approximately 50 feet east of the project site and could experience vibration levels of 0.06 inches per second PPV. Vibration levels would not exceed the potential building damage thresholds of 0.5 inches per second PPV. Construction activity associated with the Proposed Project would comply with the standards established in the Noise Ordinance. Construction activity would be prohibited between the hours of 9:00 p.m. and 7:00 a.m. on weekdays, or between the hours of 6:00 p.m. and 8:00 a.m. on Saturday, Sunday, or public holiday. As such, construction-related vibration associated with the Proposed Project would result in a less than significant impact.

TABLE 32
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT [1]

EQUIPMENT	PPV AT 25 FEET (INCHES/SECOND) [2]
Sonic Pile Driver	0.170
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076

[1] Source: Federal Transit Authority, Transit Noise and Vibration Impact Assessment, April 1995.
[2] Fragile buildings can be exposed to ground-borne vibration levels of 0.5 inches per second PPV without experiencing structural damage.

(b) Operational

The Proposed Project would not include significant stationary sources of ground-borne vibration, such as heavy equipment operations. Operational ground-borne vibration in the project vicinity would be generated by vehicular travel on the local roadways. However, similar to existing conditions, traffic-related vibration levels would not be perceptible by sensitive receptors. Thus, operational vibration would result in a less than significant impact.

(4) Consistency with Applicable Plans and Policies

Consistency with applicable plans and policies, including land use and design policies which indirectly address noise, is discussed in detail in Section IV: Environmental Impact Analysis: F-Land Use, Planning and Urban Decay, of this EIR.

(5) Cumulative Impacts

Due to the distance between the Proposed Project and the nearest related project, approximately 1,000 feet north of the site, no cumulative noise impacts are anticipated.
When calculating future traffic impacts, the traffic study took 17 related projects into consideration. Thus, the future traffic results without and with the Proposed Project already account for the cumulative impacts from these other projects. Accordingly, the noise impacts are generated directly from the traffic analysis results, the future without project and future with project noise impacts described in this report already reflect cumulative impacts.

Table 30: Existing and Future Estimated Community Noise Equivalent Level – Weekday and *Table 31: Existing and Future Estimated Community Noise Equivalent Level – Weekend* present the cumulative increase in future traffic noise levels at various intersections (i.e., 2010 "No Project" conditions plus Proposed Project traffic) for the weekday and weekend conditions, respectively. Regarding weekdays, the maximum cumulative roadway noise increase would be would be 1.0 dBA CNEL and would occur along Riverside Drive between Woodman and Hazeltine Avenues. As such, cumulative weekday roadway noise levels would not exceed the 3-dBA threshold and would not result in a perceptible change in noise level. The Proposed Project would not result in a cumulatively considerable impact with respect to roadway noise.

Regarding weekends, the maximum cumulative roadway noise increase would be 1.1 dBA CNEL and would occur along Riverside Drive between Woodman Avenue and Van Nuys Boulevard. As such, cumulative weekend roadway noise levels would not exceed the 3-dBA threshold and would not result in a perceptible change in noise level. The Proposed Project would not result in a cumulatively considerable impact with respect to roadway noise and thus, mobile noise would result in a less than significant impact.

The predominant vibration source near the project site is heavy trucks traveling on the local roadways. Neither the project nor related projects would substantially increase heavy-duty vehicle traffic near the project site and would not cause a substantial increase in heavy-duty

trucks on local roadways. As such, the Proposed Project would not add to a cumulative vibration impact.

4. MITIGATION PROGRAM

MM N-1: The City of Los Angeles Noise Ordinance has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise sensitive land uses. Regarding construction, the LAMC indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. the following day, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment or other place of residence.[14] No person, other than an individual home owner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 8:00 a.m. or after 6:00 p.m. on any Saturday or on a federal holiday, or at any time on any Sunday.

The LAMC also specifies the maximum noise level of powered equipment or powered hand tools.[15] Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

MM N-2: The Proposed Project will include certain features to reduce exposure of sensitive receptors to operational noise. For example, mechanical equipment would be enclosed or located on roofs, and mechanical equipment noise would not increase ambient noise levels by more than 5 dBA at off-site locations. In addition, the new loading docks would be located behind mall structures and away from sensitive receptors. As a result, activity associated with the new loading docks would not increase ambient noise levels by 5 dBA or more at the nearest sensitive receptors (e.g. residences on Riverside Drive).

MM N-3: All construction equipment shall be equipped with mufflers and other suitable noise attenuation devices.

MM N-4: Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment).

[14] Chapter IV, Article 1, Section 41.40, January 29, 1984 and Chapter XI, Article 2, Section 112.04, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.
[15] Chapter XI, Article 2, Section 112.05, August 8, 1996. Los Angeles, City of. 2007 (as amended). *Official City of Los Angeles Municipal Code, Sixth Edition* (LAMC). Cincinnati, OH: American Legal Publishing Corp. 6 June 2008 <http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:lamc_ca>.

MM N-5: Equipment staging areas shall be located on the southern portion of the project site, as far as possible from multi-family residences on.

MM N-6: During phase 2 parking structure construction and phase 3 demolition and excavation of the tunnel area, temporary sound barriers (not to exceed a maximum height of ten feet) capable of achieving sound attenuation of at least 10 dBA (e.g., sound attenuation blanket) shall be constructed, such that the line-of-sight is blocked from active construction areas to residential land uses on Riverside Drive.

MM N-7: Construction workers shall be required to park at designated locations and shall be prohibited from parking on nearby residential streets.

MM N-8: Pile drivers shall be shrouded with acoustically absorptive shields capable of reducing noise by at least 9 dBA at all times during pile driving operations.

MM N-9: Pile driving activity shall be scheduled for times that have the least impact on adjacent sensitive receptors.

MM N-10: Consistent with previous Conditions of Approval, all residential units located within 2,000 feet of the construction site shall be sent a notice regarding the construction schedule of the Proposed Project. A sign, legible at a minimum distance of 50 feet, shall also be posted at the construction site. All notices and signs shall indicate the dates and duration of construction activities, as well as provide a telephone number where residents can inquire about the construction process and register complaints.

MM N-11: A "noise disturbance coordinator" shall be established. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 500 feet of the construction site and all signs, legible at a distance of 50 feet, posted at the construction site shall list the telephone number for the disturbance coordinator.

5. SIGNIFICANT PROJECT IMPACTS AFTER MITIGATION

a. Construction

Mitigation Measure N-3 would reduce construction noise levels by 3 dBA, and Mitigation Measure N-6 would reduce construction noise levels by approximately 10 dBA. The noise disturbance coordinator (Mitigation Measure N-11) would ensure that noise complaints would be resolved. The other Mitigation Measures (N-4, N-5, and N-10) would assist in attenuating construction noise levels. Should pile driving be necessary, Mitigation Measures N-8 and N-9 would reduce pile driving noise by at least 9 dBA. The resulting incremental increase in ambient

noise levels due to pile driving at the nearest sensitive receptor would be 4.6 dBA. *Table 33: Construction Noise Impact-Mitigated*, displays the construction noise impacts taking into consideration the 15 dBA of noise reduction from Mitigation Measures N-3 and N-6. As shown on *Table 33: Construction Noise Impact-Mitigated*, the construction noise level increase with mitigation at the multi-family residences on Riverside Drive would be less than 5 dBA. As such, construction noise would result in a less than significant impact with mitigation incorporated.

TABLE 33
CONSTRUCTION NOISE IMPACT – MITIGATED [1]

KEY TO *FIGURE 41: NOISE MONITORING LOCATIONS*	DISTANCE (FEET) [2]	MAXIMUM CONSTRUCTION NOISE LEVEL (DBA, LEQ) [3]	EXISTING AMBIENT (DBA, LEQ) [4]	NEW AMBIENT (DBA, LEQ) [5]	INCREASE	IMPACT
OFF-PEAK SEASON AT WESTFIELD FASHION SQUARE						
#1 Multi-Family Residence on Riverside Drive	120	69.4	66.2	71.1	4.9	No
#2 Multi-Family Residence on Riverside Drive	120	69.4	68.3	71.9	3.6	No
#3 Notre Dame High School	575	64.8	67.1	69.1	2.0	No
#4 Single-Family Residence on Calhoun Avenue	750	62.5	65.5	67.3	1.8	No
#5 Van Nuys Sherman Oaks Park on Hazeltine Avenue	800	61.9	68.4	69.3	0.9	No
PEAK SEASON AT WESTFIELD FASHION SQUARE						
#1 Multi-Family Residence on Riverside Drive	120	69.4	69.3	72.4	3.1	No
#2 Multi-Family Residence on Riverside Drive	120	69.4	70.3	72.9	2.6	No

[1] Source: Terry A. Hayes Associates LLC, Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report, February 26, 2008.
[2] Distance of noise source from receptor.
[3] Construction noise source's sound level at receptor location, with distance and building adjustment.
[4] Pre-construction activity ambient sound level at receptor location.
[5] New sound level at receptor location during the construction period, including noise from construction activity.

b. Operational

The project-related operational noise would result in a less than significant impact and no mitigation is necessary.

c. Vibration

The project-related operational ground-borne vibration would result in a less than significant impact.