I. NOISE AND VIBRATION

The following analysis of noise impacts is based on The Plaza at the Glen Air Quality and Noise Impact Report prepared by Terry A. Hayes Associates LLC (TAHA), dated August 2008. This report is included in its entirety as **Appendix C** of this Draft EIR.

This section evaluates noise and vibration impacts associated with the implementation of the proposed project. The noise and vibration analysis in this section assesses the following: existing noise and vibration conditions at the project site and its vicinity, as well as short-term construction and long-term operational noise and vibration impacts associated with the proposed project. Mitigation measures for potentially significant impacts are recommended, where appropriate.

EXISTING CONDITIONS

NOISE AND VIBRATION CHARACTERISTICS AND EFFECTS

Noise

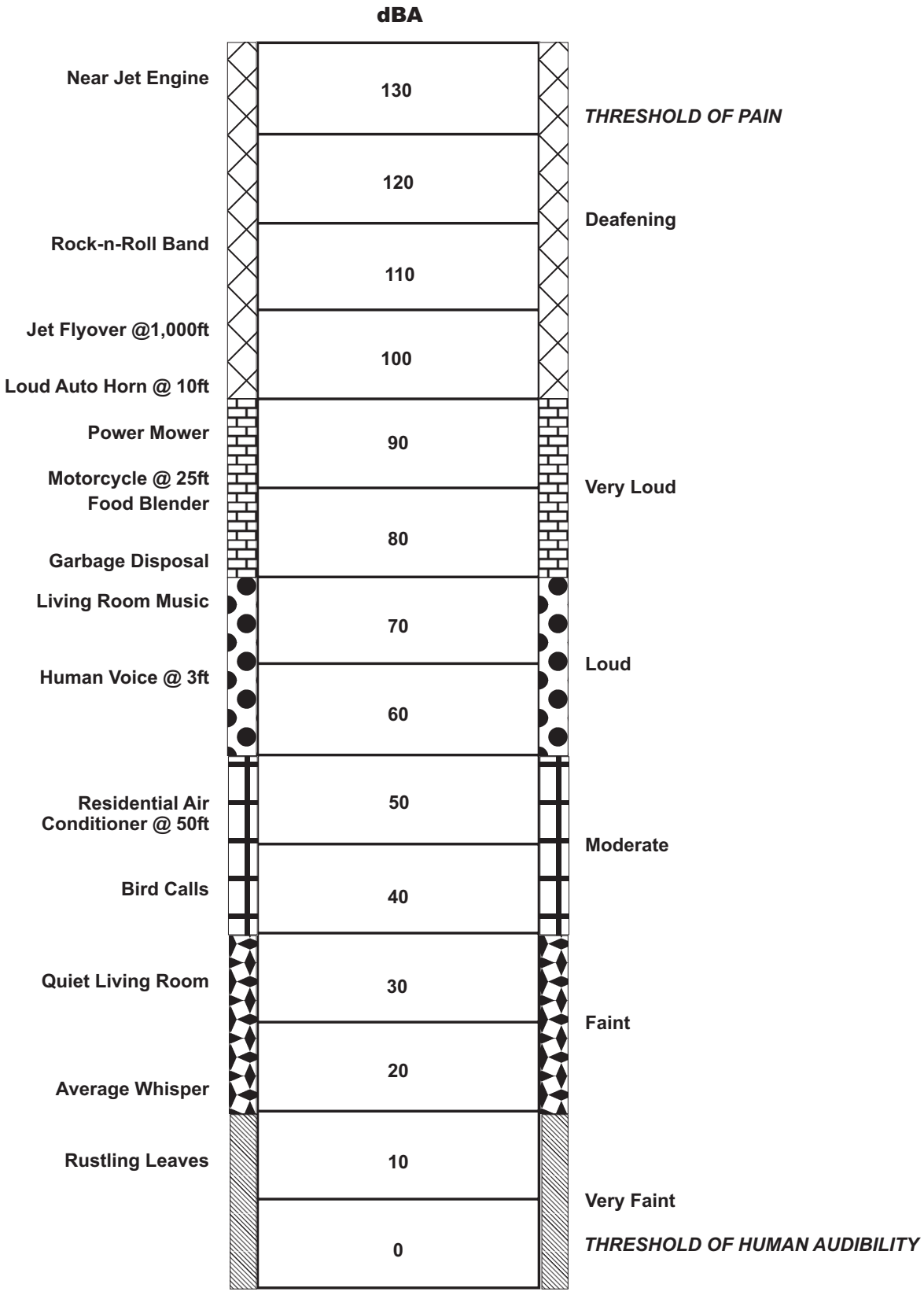
Characteristics of Sound

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 3 to 140 dBA. **Figure IV.I-1** provides examples of A-weighted noise levels from common sounds.

Noise Definitions

This noise analysis discusses sound levels in terms of Community Noise Equivalent Level (CNEL), Day-Night Sound Level (L_{dn}), Equivalent Noise Level (L_{eq}), and Maximum Noise Level (L_{max}).

Community Noise Equivalent Level. CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for noise source, distance, single-event duration, single-event occurrence, frequency, and time of day. Human reaction to sound between 7:00 PM and 10:00 PM is as if the sound were actually 5 dBA higher than if it occurred from 7:00 AM to 7:00 PM From 10:00 PM to 7:00 AM, humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, the CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 PM to 10:00 PM and 10 dBA to sound levels in the night before 7:00 AM and after 10:00 PM. Because CNEL accounts for human sensitivity to sound, the CNEL 24-hour figure is always a higher number than the actual 24-hour average.



SOURCE: James Cowan, *Handbook of Environmental Acoustics*

Figure IV.I-1

A-Weighted Decibel Scale

Day-Night Sound Level. L_{dn} is a 24-hour L_{eq} with an adjustment to reflect the greater sensitivity of most people to nighttime noise. The adjustment is a 10-dBA penalty for all sound that occurs in the nighttime hours of 10:00 PM to 7:00 AM The effect of the penalty is that in the calculation of L_{dn}, any event that occurs during the nighttime hours is equivalent to ten of the same event during the daytime hours. L_{dn} is the most common measure of total community noise over a 24-hour period and is used by the Federal Transit Administration (FTA) to evaluate residential noise impacts from proposed transit projects. For comparison purposes, the L_{dn} is normally about 0.5 dBA less than the CNEL using the same 24-hour data.

Equivalent Noise Level. L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise, which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Maximum Noise Level. L_{max} is the maximum noise level is the highest A-weighted sound level measured during a single event that occurs for a fraction of a second in which the sound level changes value. Maximum Sound Level measures the potential intrusiveness of a sound but does specify a period of time that the sound is heard.[1] Maximum noise level is also expressed in units of dBA.

Effects of Noise

Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment ranges from levels that interfere with speech and sleep (annoyance and nuisance) to 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 3 dBA. A change of at least 5 dBA would be noticeable and would likely evoke a community reaction. A 10-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 6 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. Noise generated by a line source will decrease by approximately 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of distance.[2]

[1] USEPA, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Safety Margin*, 1974.
[2] FHWA, *Technical Noise Supplement*, 1998.

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.

Applicable Regulations

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 PM and 7:00 AM the following day, since such activities can generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment or other place of residence.[4] 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 AM or after 6:00 PM on any Saturday or on a federal holiday, or at any time on any Sunday. Under certain conditions, the City may grant a waiver to allow limited construction activities to occur outside of the limits described above.

The LAMC also specifies the maximum noise level of powered equipment or powered hand tools.[5] 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.

The City of Los Angeles has published significance thresholds to be used in noise analyses.[6] The significance thresholds, which are further discussed below, include thresholds for construction and operational noise levels.

The United States Department of Housing and Urban Development (HUD) has set a goal of 45 dBA L_{dn} as a desirable maximum interior noise standard for HUD-assisted residential units.

Vibration

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. In contrast to noise, vibration is not a common environmental problem. 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.

3 Line-of-sight is an unobstructed visual path between the noise source and the noise receptor.
4 LAMC, Chapter IV, Article 1, Section 41.40, January 29, 1984 and Chapter XI, Article 2, Section 112.04, August 8, 1996.
5 LAMC, Chapter XI, Article 2, Section 112.05, August 8, 1996.
6 City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.

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, measured in inches per second, is most frequently 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. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.[7]

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) and the FTA have 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.[8] Table IV.I-1 shows FTA thresholds for vibration annoyance.

TABLE IV.I-1
FTA VIBRATION IMPACT CRITERIA

Land Use Category	Vibration Impact Level for Frequent Events (VdB)[1]	Vibration Impact Level for Occasional Events (VdB)[2]	Vibration Impact Level for Infrequent Events (VdB)[3]
Category 1: Buildings where low ambient vibration is essential for interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

1. *Frequent events are defined as more than 70 vibration events of the same source per day.*
2. *Occasional events are defined as between 30 and 70 vibration events of the same source per day.*
3. *Infrequent events are defined as fewer than 30 vibration events of the same source per day.*

Source: TAHA, 2008

Perceptible Vibration Changes

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.[9]

7 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.
8 Federal Railway Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*, October 2005.
9 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

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.

Applicable Regulations

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

Existing Noise Environment

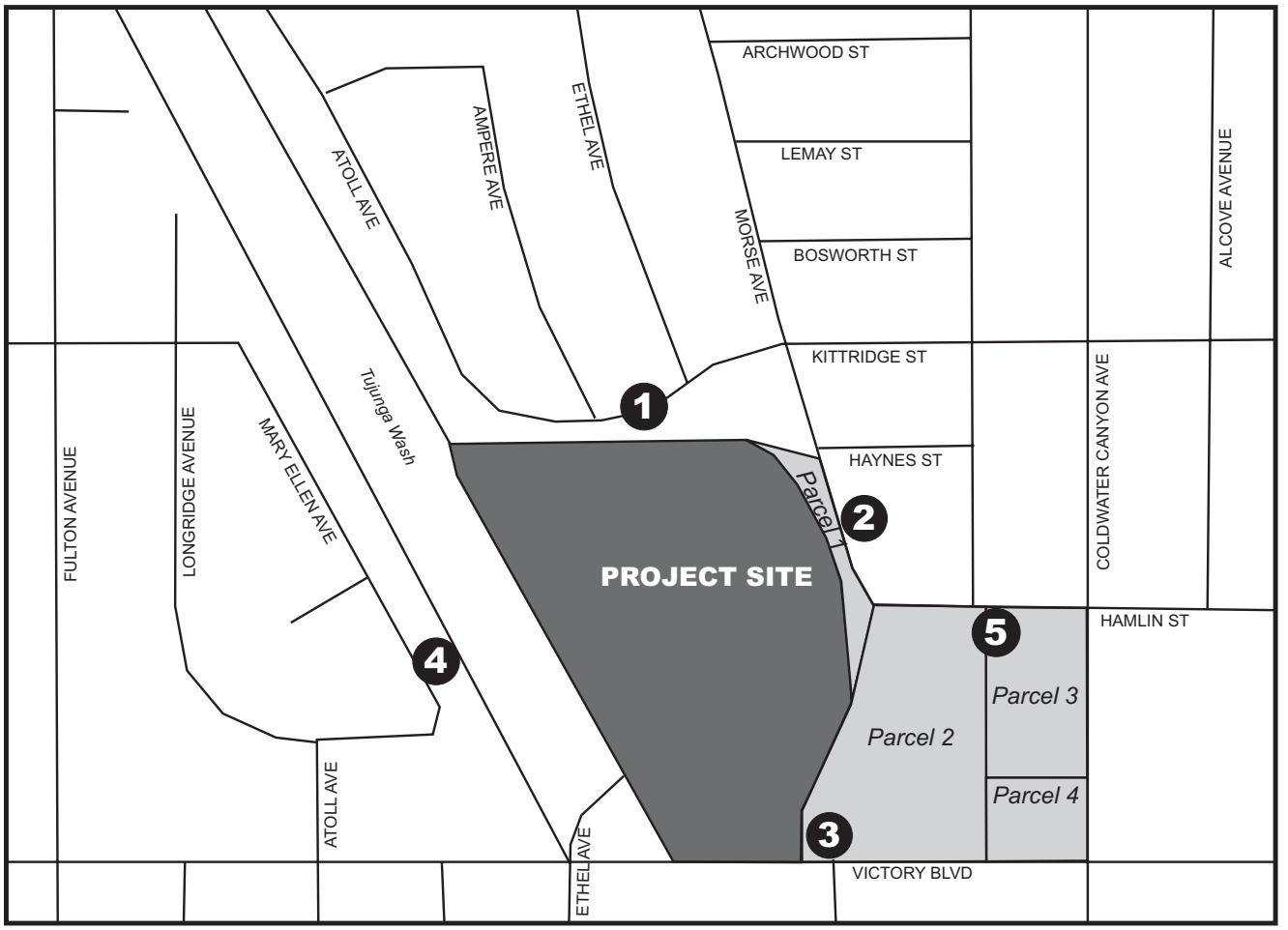
The existing noise environment of the project area is characterized by vehicular traffic and noises typical to a dense urban area (e.g., landscape maintenance equipment). Vehicular traffic is the primary source of noise in the project vicinity.

Sound measurements were taken using a Quest Q-400 Noise Dosimeter between 8:30 AM and 11:00 AM on March 26, 2008, to ascertain existing ambient daytime noise levels in the project vicinity. These readings were used to establish existing ambient noise conditions and to provide a baseline for evaluating noise impacts. Noise monitoring locations are shown in **Figure IV.I-2**. As shown in **Table IV.I-2**, existing ambient sound levels range between 55.5 and 72.9 dBA L_{eq}.

TABLE IV.I-2
EXISTING NOISE LEVELS

Location	Noise Monitoring Location	Distance to Project Site (feet)	Sound Level (dBA, L_{eq})
1	Single-Family Residence – Kittridge Street	200	55.5
2	Single-Family Residence – Morse Avenue	140	58.3
3	St. Frances School and Church – Victory Boulevard	90	72.9
4	Single-Family Residence – Mary Ellen Avenue	300	67.7
5	Summit View School – Hamlin Street	375	59.0

SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009



LEGEND:

(#) Noise Monitoring Locations

1. Single-Family Residence on Kittridge Street
2. Single-Family Residence on Morse Avenue
3. Saint Frances School and Church on Victory Boulevard
4. Single-Family Residence on Mary Ellen Avenue
5. Summit View School on Hamlin Street

N

NOT TO SCALE

SOURCE: TAHA, 2008

Figure IV.I-2
Noise Monitoring Locations

Existing Vibration Environment

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. As heavy trucks typically operate on Victory Boulevard and Coldwater Canyon Avenue, existing ground-borne vibration in the project vicinity is largely related to heavy truck traffic on the surrounding roadway network. Vibration levels from Victory Boulevard and Coldwater Canyon Avenue are not typically perceptible at the project site.

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.

Proposed Project

As shown in **Figure IV.I-2**, sensitive receptors near the project site include the following:

- Single-family residential buildings located on Kittridge Street, adjacent and to the north of the project site
- Single-family residential buildings located on Morse Avenue, adjacent and to the northeast of the project site
- St. Frances Church and School located on Victory Boulevard, adjacent and to the east of the project site
- Single-family residential buildings located on Mary Ellen Avenue, approximately 200 feet west of the project site
- Multi-family residential buildings located on Victory Boulevard, approximately 225 feet southwest of the project site
- Summit View School located on Hamlin Street, approximately 350 feet east of the project site

Add Area

As shown in **Figure IV.I-2**, sensitive receptors near the Add Area include the following:

- Single-family residential buildings located on Morse Avenue, adjacent and to the east of Parcel 1 and approximately 250 feet northwest of Parcel 3
- Single-family residential buildings located on Ethel Avenue, approximately 175 feet north of Parcel 1

- Summit View School located Hamlin Street, approximately 250 feet east of Parcel 1 and adjacent and to the north of Parcel 4

- Multi-family residential buildings located on Victory Boulevard, approximately 775 feet southwest of Parcel 1 and approximately 475 feet south of Parcel 3

- Single-family residential buildings located on Mary Ellen Avenue, approximately 900 feet west of Parcel 1, approximately 1,200 feet west of Parcel 3, and approximately 1,250 feet west of Parcel 4

- St. Frances Church and School located on Victory Boulevard, adjacent and to the west of Parcels 3 and 4

- Single-family residential buildings located on Hamlin Street, approximately 50 feet north of Parcel 3 and approximately 450 feet north of Parcel 4

- Single- and multi-family residential buildings located on Coldwater Canyon Avenue, approximately 150 feet northeast of Parcel 3 and approximately 285 feet south of Parcel 4

- Single-family residential buildings located on Goodland Avenue, approximately 710 feet east of Parcel 4

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

Vehicular Traffic

As stated earlier, vehicular traffic is the predominant noise source in the project vicinity. Using existing traffic volumes 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 mobile noise levels are shown in **Table IV.I-3**. As shown in **Table IV.I-3**, mobile noise levels in the project area range from 55.7 to 72.1 dBA CNEL. Modeled vehicle noise levels are typically lower than the noise measurements along similar roadway segments as modeled noise levels do not take into account additional noise sources (e.g., landscape maintenance equipment).

TABLE IV.I -3 EXISTING ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL[1]	
Roadway Segment	**Estimated CNEL dBA**
Coldwater Canyon Avenue between Hamlin Street and Vanowen Street	68.1
Coldwater Canyon Avenue between Hamlin Street and Victory Boulevard	68.2
Coldwater Canyon Avenue between Victory Boulevard and Oxnard Street	67.3
Erwin Street between Fulton Avenue and Ethel Avenue	55.7
Ethel Avenue between Victory Boulevard and Oxnard Street	59.9
Fulton Avenue between Vanowen Street and Victory Boulevard	66.8
Victory Boulevard between Coldwater Canyon Avenue and Whitsett Avenue	72.1
Victory Boulevard between Woodman Avenue and Fulton Avenue	72.0

[1] The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using the California Department of Transportation Technical Noise Supplement (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.

SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009

ENVIRONMENTAL IMPACT

THRESHOLD OF SIGNIFICANCE

Construction Phase Significance Criteria

A significant construction impact would result if:

- Construction activities would exceed existing ambient noise levels by 5 dBA or more at a noise sensitive use.

Operational Phase Significant Criteria

A significant operational impact would result if:

- The proposed project causes the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the “normally unacceptable” or “clearly unacceptable” category (**Table IV.I-4**) or any 5 dBA or more increase in noise level; and/or

- The proposed project would expose new sensitive receptors to interior noise levels greater than 45 dBA.

TABLE IV.I -4
NOISE/LAND USE COMPATIBILITY CHART

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (dBA) 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	

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.

SOURCE: California Department of Health Services, 1990

Ground-borne Vibration Significance Criteria

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 FRA building damage threshold level of 0.5 inches per second PPV; and/or

- The proposed project would exceed the FTA vibration impact criteria presented in Table IV.I-1.

Construction Phase Impacts

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 annoyance to nearby residents during the approximate 30-month construction schedule. 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 numerous noise-generating equipment, such as jack-hammers, pneumatic impact equipment, saws, and tractors. Typical noise levels from various types of equipment that may be used during construction are listed in **Table IV.I-5**. The table shows noise levels at distances of 50 and 100 feet from the construction noise source.

TABLE IV.I-5
MAXIMUM NOISE LEVELS OF COMMON CONSTRUCTION MACHINES

Noise Source	Noise Level (dBA, L_{eq})[1]	
	50 Feet	100 Feet
Jackhammer	90	84
Crane	88	82
Street Paver	87	81
Backhoe	84	78
Street Compressor	81	75
Front-end Loader	80	74
Grader	87	81
Idling Haul Truck	89	83
Cement Mixer	82	76

[1] Assumes a 6-dBA drop-off rate for noise generated by a "point source" and traveling over hard surfaces. Actual measured noise levels of the equipment listed in this table were taken at distances of 10 and 30 feet from the noise source and attenuated to 50 and 100 feet.

SOURCE: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006

Whereas **Table IV.I-5** shows the noise level of each equipment, the noise levels shown in **Table IV.I-6** 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.

TABLE IV.I-6
OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level At 50 Feet (dBA)
Ground Clearing	84
Grading/Excavation	89
Foundations	78
Structural	85
Finishing	89

SOURCE: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006

As shown in **Table IV.I-6** 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 USEPA studies of construction noise), generating a noise level of 89 dBA at a reference distance of 50 feet.

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 of 89 dBA at 50 feet 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 IV.I-7**.

The noise limitation of the LAMC does not apply where compliance is technically infeasible.[10] "Technically infeasible" means that the noise standard cannot be met despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during the operation of equipment. For example, it would not be feasible to utilize a five-story sound blanket to reduce construction noise levels as hanging a sound blanket off the side of the proposed building would interfere with construction activity.

Proposed Project. As shown in **Table IV.I-7**, noise levels related to construction activity would exceed the 5-dBA significance threshold at nearby sensitive receptors. As such, the proposed project would result in a significant impact without incorporation of mitigation measures.

Add Area. As shown in **Table IV.I-7**, noise levels related to construction activity would exceed the 5-dBA significance threshold at nearby sensitive receptors. As such, construction on Parcels 1, 3 and 4 would result in a significant impact without incorporation of mitigation measures. Construction activity would not occur within Parcel 2. Thus, no noise impact is anticipated.

[10] LAMC, Chapter IX, Article 2, Section 122.05.

Proposed Project with Add Areas. As shown in **Table IV.I-7**, noise levels related to construction activity would exceed the 5-dBA significance threshold at nearby sensitive receptors. As such, the Proposed Project with Add Areas would result in a significant impact without incorporation of mitigation measures.

TABLE IV.I -7
CONSTRUCTION NOISE LEVELS - UNMITIGATED

Receptor	Distance (feet)[1]	Maximum Construction Noise Level (dBA)[2]	Existing Ambient (dBA, L_{eq})[3]	New Ambient (dBA, L_{eq})[4]	Increase[8]
Proposed Project					
Single-Family Residence–Kittridge Street	15	82.0[5]	55.5	82.0	**26.5**
Single-Family Residence–Morse Avenue	25	82.0[5]	58.3	82.0	**22.7**
St. Frances Church and School–Victory Boulevard	25	84.0[6]	72.9	84.3	**11.4**
Single-Family Residence–Mary Ellen Avenue	200	72.0[6]	67.7	73.4	**5.7**
Multi-Family Residences–Victory Boulevard	225	75.9	72.9	77.7	4.8
Summit View School–Hamlin Street	350	55.1[6,7]	59.0	60.5	1.5
Parcel 1					
St. Frances Church and School–Victory Boulevard	15	82.0[5]	58.3	82.0	**23.7**
Single-Family Residence–Morse Avenue	15	82.0[5]	58.3	82.0	**23.7**
Single-Family Residence–Ethel Avenue	175	71.1[5]	58.3	71.3	**13.0**
Summit View School–Hamlin Street	250	68.0[5]	59.0	68.5	**9.5**
Multi-Family Residence–Victory Boulevard	775	58.2[5]	72.9	73.0	0.1
Single-Family Residence–Mary Ellen Avenue	900	56.9[5]	67.7	68.0	0.3
Parcel 3					
St. Frances Church and School–Victory Boulevard	15	84.0[6]	59.0	84.0	**25.0**
Single-Family Residence–Hamlin Street	50	84.0[6]	59.0	84.0	**25.0**
Single- and Multi-Family Residence–Coldwater Canyon Avenue	150	74.5[6]	67.7	75.3	**7.6**
Single-Family Residence–Morse Avenue	250	70.0[6]	58.3	70.3	**12.0**
Multi-Family Residence–Victory Boulevard	475	54.5[6,7]	72.9	73.0	0.1
Single-Family Residence–Mary Ellen Avenue	1,200	46.4[6,7]	67.7	67.7	0.0

TABLE IV.I -7
CONSTRUCTION NOISE LEVELS - UNMITIGATED

Receptor	Distance (feet)[1]	Maximum Construction Noise Level (dBA)[2]	Existing Ambient (dBA, L_{eq})[3]	New Ambient (dBA, L_{eq})[4]	Increase[8]
Parcel 4					
St. Frances Church and School–Victory Boulevard	15	84.0[6]	72.9	84.3	**11.4**
Summit View School–Hamlin Street	25	84.0[6]	59.0	84.0	**25.0**
Multi-Family Residence–Coldwater Canyon Avenue	285	59.9[7]	67.7	68.4	0.7
Single-Family Residence–Hamlin Street	450	64.9[6]	59.0	65.9	**6.9**
Single-Family Residential–Goodland Avenue	710	56.0[7]	59.0	60.8	1.8
Single-Family Residential–Mary Ellen Avenue	1,250	51.0[7]	67.7	67.8	0.1
Proposed Project with Add Area					
Single-Family Residence–Kittridge Street	15	82.0[5]	55.5	82.0	**26.5**
Single-Family Residence–Morse Avenue	15	82.0[5]	58.3	82.0	**23.7**
St. Frances Church and School–Victory Boulevard	15	84.0[6]	58.3	84.0	**25.7**
Single-Family Residence–Hamlin Street	50	84.0[6]	59.0	84.0	**25.0**
Single-Family Residence–Mary Ellen Avenue	200	72.0[5]	67.7	73.4	**5.7**
Multi-Family Residence–Victory Boulevard	225	75.9	72.9	77.7	4.8

[1] Distance of noise source from receptor.
[2] Construction noise source's sound level at receptor location with distance and structure adjustment.
[3] As shown in **Table IV.I-2**, noise measurements were completed at various locations on the project site and the surrounding community and noise levels vary with location since noise sources frequently vary with time and noise levels vary with distance from the source.. This column represents the pre-construction activity ambient sound level at each receptor location.
[4] New sound level at receptor location during the construction period, including noise from construction activity.
[5] Includes a 7-dBA noise-reduction for an existing 8-foot wall.
[6] Includes a 5-dBA noise reduction for an existing 6-foot wall.
[7] Includes a 10-dBA noise reduction for intervening structures located between the project site and the school.
[8] Significant noise levels are listed in bold.
SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009

Vibration

Proposed Project. As shown in **Table IV.I-8**, use of heavy equipment (e.g., a bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The nearest residential structures to the project site located on Kittridge Street, would be approximately 15 feet from occasional heavy equipment activity and could experience vibration levels of 0.19 inches per second PPV. This vibration level would not exceed the 0.5 inches per second PPV

significance threshold. As such, construction-related vibration associated with the proposed project would result in a less than significant building damage impact.

TABLE IV.I -8
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (Inches /Second)[1]	RMS at 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Impact Pile Driver	0.644	104
Sonic Pile Driver	0.170	93

[1] Fragile buildings can be exposed to ground-borne vibration levels of 0.5 inches per second PPV without experiencing structural damage.
SOURCE: Federal Transit Authority, *Transit Noise and Vibration Impact Assessment*, May 2006

The FTA vibration impact criteria for annoyance are shown in **Table IV.I-2**. Construction activity would occur during daytime hours and, as such, the Category 3 thresholds for daytime uses were utilized for the analysis. In addition, it was assumed that there would be between 30 and 70 vibration events per day of the same source. Based on these assumptions, a construction vibration annoyance impact would result if sensitive receptors would be exposed to vibration levels of 78 VdB RMS or greater. Typical heavy equipment (e.g., a large bulldozer) generates vibration levels of 87 VdB RMS at a distance of 25 feet. The nearest sensitive receptor would be at least 15 feet from construction activity. At this distance, typical construction equipment would generate vibration levels of approximately 93.7 VdB RMS. This vibration level would exceed the annoyance threshold of 78 VdB RMS and, as such, construction-related vibration would result in a significant annoyance impact without incorporation of mitigation measures.

If pile-driving activity were required, an impact pile driver would generate a vibration level of 0.644 inches per second PPV and 104 VdB RMS at a distance of 25 feet. The nearest sensitive receptor would be approximately 55 feet from occasional heavy equipment activity and could experience pile driving vibration levels of 0.20 inches per second PPV and 94 VdB RMS. This vibration level would not exceed the 0.5 inches per second PPV significance threshold but would exceed the 78 VdB RMS significance threshold. As such, pile-driving vibration activity associated with the proposed project would result in a significant impact without the incorporation of mitigation measures.

Add Area. As shown in **Table IV.I-8**, use of heavy equipment (e.g., a bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The nearest residential structures to Parcels 1, 3, and 4, would be approximately 15 feet from occasional heavy equipment activity and could experience vibration levels of 0.19 inches per second PPV. This vibration level would not exceed the 0.5 inches per second PPV significance threshold. As such, construction-related vibration associated with the Add Area would result in a less than significant building damage impact. Typical construction equipment would generate vibration levels of approximately 94 VdB RMS. This vibration level would exceed the annoyance threshold of 78 VdB RMS and, as such, construction-related vibration would result in a significant annoyance impact without incorporation of mitigation measures.

If pile-driving activity were required, an impact pile driver would generate a vibration level of 0.644 inches per second PPV and 104 VdB RMS at a distance of 25 feet. The nearest

residential structures to Parcels 1, 3, and 4 would be approximately 15 feet from occasional heavy equipment activity and could experience vibration levels of 1.4 inches per second PPV and 110 VdB RMS. This vibration level would exceed the 0.5 inches per second PPV and 78 VdB RMS significance thresholds. As such, pile-driving vibration activity associated with the Add Area would result in a significant impact without the incorporation of mitigation measures.

Construction activity would not occur within Parcel 2. Thus, no noise impact is anticipated.

Proposed Project with Add Area. As shown in **Table IV.I-8**, use of heavy equipment (e.g., a bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The nearest residential structures to the Proposed Project with Add Area would be approximately 15 feet from occasional heavy equipment activity and could experience vibration levels of 0.19 inches per second PPV. This vibration level would not exceed the 0.5 inches per second PPV significance threshold. As such, construction-related vibration associated with the Proposed Project with Add Area would result in a less than significant impact. Typical construction equipment would generate vibration levels of approximately 94 VdB RMS. This vibration level would exceed the annoyance threshold of 78 VdB RMS and, as such, construction-related vibration would result in a significant annoyance impact without incorporation of mitigation measures.

If pile-driving activity were required, an impact pile driver would generate a vibration level of 0.644 inches per second PPV and 104 VdB RMS at a distance of 25 feet. The nearest residential structures to the Proposed Project with Add Area would be approximately 15 feet from occasional heavy equipment activity and could experience vibration levels of 1.4 inches per second PPV and 110 VdB RMS. This vibration level would exceed the 0.5 inches per second PPV and 78 VdB RMS significance thresholds. As such, pile-driving vibration activity associated with the Proposed Project with Add Area would result in a significant impact without the incorporation of mitigation measures.

Operational Phase Impacts

Noise

Vehicular Noise

The predominant noise source for the proposed project is vehicular traffic. According to the traffic report prepared by Overland Traffic Consultants, Inc. in Appendix G, the proposed project would generate a net 18,763 daily vehicle trips[11]

Proposed Project. To ascertain off-site noise impacts, traffic was modeled under future year (2013) no project and with project conditions utilizing FHWA RD-77-108 noise calculation formulas. Results are summarized in **Table IV.I-9**. The greatest project-related noise increase (e.g. the difference between future with project conditions and future without project conditions.) would be 2.1 dBA CNEL and would occur along Erwin Street between Fulton Avenue and Ethel Avenue. 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 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (**Table IV.H-4**) or any 5 dBA or more increase in noise level. Therefore, the proposed project would result in a less-than-significant mobile noise impact.

[11] Overland Traffic Associates, Traffic Impact Analysis for The Plaza at the Glen Project, July 30, 2008.

TABLE IV.I-9
2008 AND 2013 ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – PROPOSED PROJECT[1]

Roadway Segment	Estimated dBA, CNEL				
	Existing (2008)	No Project (2013)	Project (2013)	Project Impact[2]	Cumulative Impact[3]
Coldwater Canyon Avenue between Hamlin Street and Vanowen Street	68.1	68.6	69.4	0.8	1.3
Coldwater Canyon Avenue between Hamlin Street and Victory Boulevard	68.2	68.7	69.5	0.8	1.3
Coldwater Canyon Avenue between Victory Boulevard and Oxnard Street	67.3	67.8	68.5	0.7	1.2
Erwin Street between Fulton Avenue and Ethel Avenue	55.7	57.0	59.1	2.1	3.4
Ethel Avenue between Victory Boulevard and Oxnard Street	59.9	61.7	63.6	1.9	3.7
Fulton Avenue between Vanowen Street and Victory Boulevard	66.8	67.4	68.1	0.7	1.3
Victory Boulevard between Coldwater Canyon Avenue and Whitsett Avenue	72.1	73.1	73.7	0.6	1.6
Victory Boulevard between Woodman Avenue and Fulton Avenue	72.0	73.0	73.4	0.4	1.4

[1] The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using the California Department of Transportation *Technical Noise Supplement* (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[2] Project Impact is calculated as the difference between future with project and future without project conditions.
[3] Cumulative Impact is calculated as the difference between existing and future with project conditions.
SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009

Add Area. As shown in **Table IV.I-10,** the greatest Parcel 1-related mobile noise increase would be 0.1 dBA CNEL and would occur along Coldwater Canyon Avenue between Victory Boulevard and Oxnard Street. Mobile noise generated by Parcel 1 would not cause the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (**Table IV.I-4**) or any 5 dBA or more increase in noise level. Therefore, Parcel 1 would result in a less-than-significant mobile noise impact.

The existing uses within Parcel 2 would not change. Thus, no mobile noise is anticipated related to Parcel 2 and no impact is anticipated.

As shown in **Table IV.I-10**, the greatest Parcel 3-related mobile noise increase would be 0.3 dBA CNEL and would occur along Coldwater Canyon Avenue between Hamlin Street and Victory Boulevard. Mobile noise generated by Parcel 3 would not cause the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (**Table IV.I-4**) or any 5 dBA or more

increase in noise level. Therefore, Parcel 3 would result in a less-than-significant mobile noise impact.

TABLE IV.I-10
ADD AREA MOBILE NOISE INCREMENTAL INCREASE[1]

Roadway Segment	Estimated dBA, CNEL[2]			
	Parcel 1	Parcel 3	Parcel 4	Project with Add Area
Coldwater Canyon Avenue between Hamlin Street and Vanowen Street	0.0	0.2	0.0	0.9
Coldwater Canyon Avenue between Hamlin Street and Victory Boulevard	0.0	0.3	0.1	0.9
Coldwater Canyon Avenue between Victory Boulevard and Oxnard Street	0.1	0.2	0.1	0.8
Erwin Street between Fulton Avenue and Ethel Avenue	0.0	0.0	0.0	2.5
Ethel Avenue between Victory Boulevard and Oxnard Street	0.0	0.0	0.0	2.2
Fulton Avenue between Vanowen Street and Victory Boulevard	0.0	0.0	0.1	0.7
Victory Boulevard between Coldwater Canyon Avenue and Whitsett Avenue	0.0	0.1	0.0	0.7
Victory Boulevard between Woodman Avenue and Fulton Avenue	0.0	0.0	0.0	0.5

[1] The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using the California Department of Transportation *Technical Noise Supplement* (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a nighttime penalty correction. The peak hour traffic was assumed to be ten percent of the average daily traffic.
[2] Add area noise increases were calculated as the difference between future with add area and future no project.
SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009

As shown in **Table IV.I-10**, the greatest Parcel 4-related mobile noise increase would be 0.1 dBA CNEL and would occur along Fulton Avenue between Vanowen Street and Victory Boulevard. Mobile noise generated by Parcel 4 would not cause the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (**Table IV.I-4**) or any 5 dBA or more increase in noise level. Therefore, Parcel 4 would result in a less-than-significant mobile noise impact.

Proposed Project with Add Area. As shown in **Table IV.I-10**, the greatest Proposed Project with Add Area-related mobile noise increase would be 2.5 dBA CNEL and would occur along Erwin Street between Fulton Avenue and Ethel Avenue. Mobile noise generated by the Proposed Project with Add Area would not cause the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (**Table IV.I-4**) or any 5 dBA or more increase in noise level. Therefore, the Proposed Project with Add Area would result in a less-than-significant mobile noise impact.

Mechanical Equipment Noise

Proposed Project. Mechanical equipment (e.g., parking structure air vents and HVAC 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 (65 dBA) and nighttime (60 dBA) operation at the property line. Operation of mechanical equipment would not be anticipated to increase ambient noise levels by 5 dBA, and would result in a less-than-significant impact.

Add Area. Mechanical equipment would be designed, located, and screened similar to the proposed project and would comply with the City's noise ordinance requirements. Operation of mechanical equipment for the Add Area would not be anticipated to increase ambient noise levels by 5 dBA, and would result in a less-than-significant impact.

Proposed Project with Add Area. Mechanical equipment would be designed, located, and screened similar to the proposed project and would comply with the City's noise ordinance requirements. Operation of mechanical equipment for the Proposed Project with the Add Area would not be anticipated to increase ambient noise levels by 5 dBA, and would result in a less-than-significant impact.

Transit Plaza

Proposed Project. Included in the design of the proposed project is the creation of a transit center along the northeast corner of Ethel Avenue and Victory Boulevard. The Transit Center is proposed partially on a newly constructed bridge over the Tujunga Wash in a park-like setting. Connections from the Transit Center to the project site would be made through a gasoline-powered trolley. The trolley would generate a noise level of approximately 60 dBA as a result of engine noise and bells. Operation of a trolley system would be restricted to commercial areas of the project site and would not approach 50 feet of off-site sensitive receptors. The ambient noise level at the nearest sensitive receptors on Mary Ellen Avenue and Victory Boulevard are 58.3 and 72.9 dBA, respectively. The resulting trolley-associated noise increase would be 3.9 and 0.2 dBA, respectively. Trolley-associated noise would not be anticipated to ambient increase noise levels at sensitive receptors by more than 5 dBA. As such, operational trolley-related noise would result in a less-than-significant impact.

Add Area. Operation of the trolley system would be restricted to the project site and would not be anticipated to increase Add Area only ambient noise levels by 5 dBA. Therefore a less-than-significant impact is anticipated.

Parking Noise

Proposed Project. The proposed project would include subterranean parking. Subterranean parking would be enclosed on all sides and noise generated by this facility would be inaudible at sensitive receivers. Access ramps to subterranean parking would potentially expose off-site sensitive receptors to unacceptable levels of noise. An automobile traveling at 25 miles per hour generates a noise level of approximately 60 dBA L_{eq}. As shown in **Tables IV.H-9** and **IV.H-10**, mobile noise levels along Victory Boulevard at Coldwater Canyon Avenue would be approximately 73.1 dBA. When the parking noise level is added to the ambient noise level, the ambient noise level increase at sensitive receptors along Victory Boulevard would be less than 1 dBA and would not be audible.

Passenger automobiles would also travel along the eastern and northern portions of the project site to access subterranean parking. Automobiles passing the St. Frances Church and School would generate a noise level of 60 dBA L_{eq}. The School is separated from the project site by an existing approximately six-foot wall, which would reduce automobile noise levels at the school

by 5 dBA. The resulting automobile noise level at the School would be 55 dBA L_{eq}. Typical building construction results in an exterior-to-interior noise reduction of 24 dBA. Based on this noise reduction, the interior noise level at the School would be 31 dBA L_{eq}. This noise level would not exceed the 45 dBA L_{eq} significance criteria and would result in a less-than-significant impact.

The automobile access located on the northern portion of the project site would be separated from sensitive receptors by intervening buildings, including the proposed hotel, retail/restaurant buildings, and residential structures. These proposed buildings would act as a noise barrier. The effect of this barrier would decrease automobile access noise level at sensitive receptors located to the north of the project site by at least 25 dBA. Automobile travel would be located approximately 100 feet from the nearest sensitive receptor, which has an ambient noise level of 55.1 dBA L_{eq}. Based on distance attenuation and the barrier created by new buildings, automobile -related noise at the nearest sensitive receptor would be approximately 35 dBA L_{eq}. When automobile noise is added to the existing ambient noise level, the 15-minute L_{eq} ambient noise level increase would be be less than 0.1 dBA. This incremental increase would be less than the 5 dBA significance threshold and would result in a less-than-significant impact.

Add Area Parcels 1, 3, and 4 could likely include subterranean and surface parking. Similar to the proposed project, subterranean parking could be enclosed on all sides and inaudible at sensitive receivers. Access ramps to subterranean parking would potentially expose off-site sensitive receptors to unacceptable levels of noise. An automobile traveling at 25 miles per hour generates a noise level of approximately 60 dBA L_{eq}. As shown in **Tables IV.I-8** and **IV.I-9** mobile noise levels along Coldwater Canyon Avenue at Hamlin Street would be approximately 68.7 dBA. When the parking noise level is added to the ambient noise level, the ambient noise level increase at sensitive receptors along Morse Avenue would be less than 1 dBA. As such, parking structure activity would not be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more. In addition, the majority of project parking would be located internal to the project site and away from sensitive receptors. Access ramp and surface parking activity would not be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more. Thus, Add Area parking noise would result in a less-than-significant impact.

The existing uses within Parcel 2 would not change. Thus, no new parking noise source would be placed in Parcel 2, and no impact is anticipated.

Proposed Project with Add Area. Access ramps to parking structures and surface lot parking activity along Coldwater Canyon Avenue, Hamlin Street, and Victory Boulevard would potentially expose off-site sensitive receptors to unacceptable levels of noise. An automobile traveling at 25 miles per hour generates a noise level of approximately 60 dBA L_{eq}. As shown in **Tables IV.I-8** and **IV.I-9** mobile noise levels along Coldwater Canyon Avenue, Hamlin Street, and Victory Boulevard would be approximately 68.7, 68.6, and 73.1 dBA, respectively. When the parking noise level is added to the ambient noise level, the ambient noise level increase at sensitive receptors along Coldwater Canyon Avenue and Victory Boulevard would be less than 1 dBA and would not be audible. In addition, the majority of project parking would be located internal to the project site and away from sensitive receptors. Access ramp and parking structure activity would not be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more. Thus, parking noise for the Proposed Project with Add Area would result in a less-than-significant impact.

Loading Activity and Delivery Truck Noise

Proposed Project. The proposed project would include three loading docks for delivery trucks. All loading docks would have gates that would be closed once delivery trucks have entered the leading areas. These gates would act as a noise barrier and would substantially reduce loading dock noise. The greatest loading dock-related noise levels would be related to truck access and back-up alarms. Trucks accessing the project site would be a combination of heavy- and medium-duty trucks with noise levels ranging from 71 to 79 dBA L_{eq} at 50 feet.[12] Back-up safety alarms would generate a single event noise level of approximately 79 dBA at 50 feet.[13]

The truck access located on the northern portion of the project site would be separated from sensitive receptors by intervening buildings, including the proposed hotel, retail/restaurant buildings, and residential structures. These proposed buildings would act as a noise barrier. The effect of this barrier would decrease truck access noise level at sensitive receptors located to the north of the project site by at least 25 dBA. Truck travel would be located approximately 100 feet from the nearest sensitive receptor, which has an ambient noise level of 55.1 dBA L_{eq}. Based on distance attenuation and the barrier created by new buildings, truck-related noise at the nearest sensitive receptor would be approximately 51 dBA L_{eq}. When truck noise is added to the existing ambient noise level, the 15-minute L_{eq} ambient noise level increase would be 1.4 dBA. This incremental increase would be less than the 5 dBA significance threshold. Truck access noise associated with the northern loading dock would result in a less-than-significant impact.

The proposed project would increase the number of heavy- and medium-duty trucks traveling along the eastern portion of the project site. These trucks would be located within 15 feet of the St. Frances Church and School and an associated outdoor lunch area. The lunch area is not utilized as a learning environment and lunch activity is compatible with occasional truck noise.

Low levels of noise are essential for a successful learning environment and truck noise may increase interior noise levels at the St. Frances Church and School. The School is not under Los Angeles Unified School District (LAUSD) jurisdiction but LAUSD noise impact criteria are appropriate for analyzing general school noise impacts. LAUSD has indicated that an interior noise level of 45 dBA L_{eq} is appropriate for schools.

Heavy-duty trucks passing the St. Frances Church and School would generate a noise level of 79 dBA L_{eq}. The School is separated from the project site by an existing approximately six-foot wall, which would reduce truck noise levels at the school by 5 dBA. The resulting truck noise level at the School would be 74 dBA L_{eq}. Typical building construction results in an exterior-to-interior noise reduction of 24 dBA. Based on this noise reduction, the interior noise level at the School would be 50 dBA L_{eq}. This noise level would exceed the 45 dBA L_{eq} significance criteria and would result in a significant impact without implementation of mitigation. As discussed below, mitigation would reduce this impact to less than significant.

[12] California Department of Transportation, *Technical Noise Supplement*, October 1998.

[13] The back-up safety alarm noise level was based on regulations set forth b the Occupational Safety and Health Administration.

Heavy- and medium-duty trucks would generate an L_{max} of 85 dBA at 50 feet.[14] The L_{max} is an instantaneous noise level that is dependent on truck vicinity to sensitive receptors and not on the number of trucks. Trucks would travel on the project site more frequently than under existing conditions but the trucks would not be located closer to the St. Frances Church and School. The existing L_{max} noise levels would not increase as a result of the proposed project and the impact would be less than significant.

New sensitive receptors located on the eastern portion of project site would potentially be exposed to high noise levels from project-related commercial activity. Specifically, proposed residential units on the eastern portion of the project site may be exposed to delivery truck noise. However, if the residential units are constructed such that delivery truck activity access is in direct line-of-sight, retail noise would potentially result in unacceptable noise levels at residential units. Therefore, mitigation is proposed to reduce potentially significant delivery truck-related noise.

Add Area. Parcel 1 could include a four-story, 36-unit residential project. Residential buildings of this size do not typically include loading docks. Thus, noise from loading dock activity and truck noise is not anticipated and no impact is anticipated.

The existing uses within Parcel 2 are not anticipated to change and Parcel 2 would therefore not include new loading dock or delivery truck-related noise. Thus, noise from loading activity and delivery trucks is not anticipated in Parcel 2, and no impact is anticipated.

Parcel 3 could include a 21,000-square-foot shopping center and a 112,000-square-foot office building. Noise from loading dock and delivery truck activity would only be anticipated from the retail shopping center. Given the orientation of the project site, the delivery truck access to the loading dock would likely be located in the southern section of Parcel 3 with truck access along Coldwater Canyon Avenue. Based on this assumption, the nearest residential land use to delivery truck activity would be located approximately 175 feet from the loading dock. The ambient noise level at this sensitive receptor is 59.0 dBA Leq. A heavy-duty truck typically generates a noise level of approximately 79 dBA Leq at 50 feet. For purposes of this analysis, it was assumed that up to two heavy-duty trucks would approach the loading dock simultaneously. This would result in a noise level of 82.0 dBA Leq at 50 feet. When loading dock noise is added to the existing ambient noise level, the resulting noise level would be 82.0 Leq. Delivery truck noise would be anticipated to increase ambient noise levels at sensitive receptors by 5 dBA or more, and would result in a significant impact without the incorporation of mitigation measures.

Parcel 4 could include a 36,000-square-foot shopping center, 56,000-square-foot office building, and 143 units of multi-family housing. Noise from loading dock and delivery truck activity would only be anticipated from the retail shopping center. The loading dock would be designed similar to the proposed project loading dock. As such, loading activity noise would not be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more, and would result in a less-than-significant impact.
The nearest sensitive receptor to delivery truck activity would be located approximately 50 feet from the loading dock. The ambient noise level at this sensitive receptor is 72.9 dBA L_{eq}. A heavy-duty truck typically generates a noise level of approximately 79 dBA L_{eq} at 50 feet. For purposes of this analysis, it was assumed that up to two heavy-duty trucks would approach the loading dock simultaneously. This would result in a noise level of 82.0 dBA L_{eq} at 50 feet.

[14] The L_{max} noise level was obtained from the *Handbook of Environmental Acoustics* by James P. Cowan (1994).

When loading dock noise is added to the existing ambient noise level, the resulting noise level would be 82.5 dBA L_{eq}. Delivery truck noise would be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more, and would result in a significant impact without the incorporation of mitigation measures.

Proposed Project with Add Area. The Proposed Project with Add Area would include three unloading areas for delivery trucks on the project site, as well as unloading areas in Add Area Parcels 3 and 4. Similar to the proposed project, one unloading area could be located along the southeastern portion of the project site and one loading area would be located along the northwestern portion of the project site. All loading docks would be internal to the buildings and would have doors to screen them once the delivery truck has entered. Internal circulation noise, including noise generated at the loading areas would be inaudible at all nearby sensitive receptors. As such, loading activity noise would not be anticipated to incrementally increase ambient noise levels at sensitive receptors by 5 dBA or more, and would result in a less-than-significant impact.

Currently, a five-foot grade difference exists along the northern portion of the project site, adjacent to the single-family residences along Kittridge Avenue where the northwestern loading area would be located. In addition, a ten-foot wall is located along the property line, adjacent to the loading area, and along where the delivery trucks would access the loading areas would be constructed. The nearest residential land use to delivery truck access would be located approximately 15 feet from the proposed main loading dock. The ambient noise level at this sensitive receptor is 55.1 dBA. A heavy-duty truck typically generates a noise level of approximately 79 dBA L_{eq} at 50 feet. For purposes of this analysis, it was assumed that up to two heavy-duty trucks would approach the loading dock simultaneously. This would result in a noise level of 82.0 dBA L_{eq} at 50 feet. When truck access noise is attenuated with the five-foot grade and ten-foot wall and added to the existing ambient noise level, the resulting noise level would be 72.0 dBA L_{eq}. The noise level increase over existing conditions would exceed 5 dBA at sensitive receptors, adjacent to the proposed project, Parcel 3, and Parcel 4, and would result in a significant impact without the incorporation of mitigation measures.

New sensitive receptors located on the eastern portion of project site would potentially be exposed to high noise levels from project-related commercial activity. Specifically, proposed residential units on the eastern portion of the project site may be exposed to delivery truck noise. However, if the residential units are constructed such that delivery truck activity access is in direct line-of-sight, retail noise would potentially result in unacceptable noise levels at residential units. Therefore, mitigation is proposed to reduce potentially significant delivery truck-related noise.

Land Use/Noise Compatibility

Proposed Project. The proposed project would include the construction of new residential uses on the project site. It is important that new residential land uses are located in noise compatible environments. Five levels of residential units would be developed over the proposed retail and office uses along the west, north, and east perimeter of the project site. The monitored ambient noise level along these perimeter areas of the project site ranged from 55.5 to 67.7 dBA L_{eq}. Typical building construction (e.g. single-paned windows) provides a minimum noise reduction of approximately 24 dBA with windows closed.[15] As such, residential uses within the project site would potentially be exposed to interior noise levels of 41.7 dBA L_{eq}. This noise level would be

[15] FHWA, *Insulation of Buildings Against Highway Noise*, August 1, 1977.

less than the 45 dBA interior noise level significance threshold. As such, proposed project land use/noise compatibility would result in a less-than-significant impact.

Add Area. Parcel 1 could include construction of a four-story condominium with 39 units developed over the existing uses. It is important that new residential land uses are located in noise compatible environments. The monitored ambient noise level adjacent to Parcel 1 is 58.3 dBA L_{eq}. Typical building construction provides a minimum noise reduction of approximately 24 dBA with windows closed. Residential uses at Parcel 1 would potentially be exposed to interior noise levels of 32.3 dBA L_{eq}. This noise level would be less than the 45-dBA interior noise level significance threshold. As such, Parcel 1 land use/noise compatibility would result in a less-than-significant impact.

The existing uses within Parcel 2 would not change and no impact is anticipated.

There are no residential units planned for Parcel 3 and no impact is anticipated.

Parcel 4 could include construction of 143 units of multi-family housing. It is important that new residential land uses are located in noise compatible environments. The monitored ambient noise level adjacent to Parcel 4 is 59.0 dBA L_{eq}. Typical building construction provides a minimum noise reduction of approximately 24 dBA with windows closed. As such, residential uses at Parcel 4 would potentially be exposed to interior noise levels of 33.0 dBA L_{eq}. This noise level would be less than the 45-dBA interior noise level significance threshold. As such, Parcel 4 land use/noise compatibility would result in a less-than-significant impact.

Proposed Project with Add Area. The Proposed Project with Add Area could include construction of approximately 332 units of housing. It is important that new residential land uses are located in noise compatible environments. The monitored ambient noise level ranges from 55.5 to 67.7 dBA. Typical building construction provides a minimum noise reduction of approximately 24 dBA with windows closed. As such, residential uses would potentially be exposed to interior noise levels of 41.7 dBA L_{eq}. This noise level would be less than the 45-dBA interior noise level significance threshold. As such, the Proposed Project with Add Area land use/noise compatibility would not result in a significant impact.

Vibration

Proposed Project. 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 and internal access streets. In addition, there would be vibration from garbage trucks emptying dumpsters. 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.

Add Area. Operational ground-borne vibration impacts would be similar to the proposed project and would result in a less-than-significant impact.
The existing uses within Parcel 2 would remain. Thus, operational vibration impacts are not anticipated.

Proposed Project with Add Area. Operational ground-borne vibration impacts would be similar to the proposed project and would result in a less-than-significant impact.

MITIGATION MEASURES

CONSTRUCTION PHASE

IV.I-1 All construction equipment shall be equipped with residential-grade mufflers and other suitable noise attenuation devices.

IV.I-2 A temporary six-foot solid wall (e.g., wood) shall be constructed on the project site and/or add areas where there is no existing wall such that the line-of-sight is blocked from construction activity to the residential and student receptors on Kittridge Street, Morse Avenue, Hamlin Street, Mary Ellen Avenue, Victory Boulevard, and Coldwater Canyon Avenue.

IV.I-3 All residential units and site occupants located within 500 feet of the construction site shall be sent a notice regarding the construction schedule of the proposed project. A sign, legible at a 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.

IV.I-4 The construction contractor shall establish a "noise disturbance coordinator". The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would 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 posted at the construction site shall list the telephone number for the disturbance coordinator.

IV.I-5 Should pile driving be required within 30 feet of any sensitive receptor, the construction contractor shall utilize sonic pile driving or caisson drilling in place of impact pile driving.

OPERATIONAL PHASE

IV.I-6 Prior to issuance of a building permit, an exterior to interior analysis shall be conducted in conformance with the California Building Code, Section 1207 to ensure that interior noise levels are at or below the 45 dBA CNEL.

IV.I-7 Based on the City noise ordinance for garbage collection, truck deliveries to the project site and add areas shall be scheduled between the hours of 6:00 AM and 9:00 PM.

IV.I-8 Loading dock gates shall be closed during all loading/unloading activity.

IV.I-9 The Applicant shall coordinate with the St. Frances Church and School to install double-paned glass on west and south facing windows with a direct line-of-sight to the project site prior to the issuance of Certificate of Occupancy.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

CONSTRUCTION PHASE NOISE IMPACTS

Proposed Project. Mitigation Measure **IV.I-1** would reduce construction noise levels by 18 to 25 dBA, and Mitigation Measure **IV.I-3** would reduce construction noise levels by approximately 5 dBA during ground-level construction. The other mitigation measures would assist in attenuating construction noise levels. With implementation of Mitigation Measures **IV.I-1** through **IV.I-5**, construction noise levels at single-family buildings on Kittridge Street, Morse and Mary Ellen Avenues, and St. Frances School and Church would be reduced by at least 38 dBA during ground-level construction. The mitigated construction-related noise levels are shown in **Table IV.I-11**. As shown in **Table IV.I-11**, the highest project-related construction noise levels with mitigation incorporated would increase at the single-family residences along Kittridge Street and Morse Avenue by 9.1 and 6.7 dBA L_{eq}, respectively. Construction-related noise levels would exceed the 5-dBA significance threshold at nearby sensitive receptors for storied construction. As such, the proposed project would result in a significant impact.

Add Area. The mitigation measures for Parcel 1 would be similar to the proposed project. As shown in **Table IV.I-11**, mitigated construction activity for Parcel 1 would potentially increase ambient noise levels at the single-family residences along Morse Avenue and St. Frances Church and School by approximately 6.7 dBA L_{eq}. As such, the mitigated construction-related noise levels would exceed the 5-dBA significance threshold at nearby sensitive receptors. Therefore, Parcel 1 would result in significant impact.

The existing uses within Parcel 2 would not change and, as such, no impact is anticipated.

The mitigation measures for Parcel 3 would be similar to the proposed project. As shown in **Table IV.I-11**, mitigated construction activity for Parcel 3 would potentially increase ambient noise levels at the single-family residences along Hamlin Street and St. Frances Church and School by approximately 7.8 dBA L_{eq}. As such, the mitigated construction-related noise levels would exceed the 5-dBA significance threshold at nearby sensitive receptors. Therefore, Parcel 3 could result in significant impact.

The mitigation measures for Parcel 4 would be similar to the proposed project. As shown in **Table IV.I-11**, mitigated construction activity for Parcel 4 would potentially increase ambient noise levels at Summit View School along Hamlin Street by approximately 7.8 dBA L_{eq}. As such, the mitigated construction-related noise levels would exceed the 5-dBA significance threshold. Therefore, Parcel 4 could result in significant impact.

TABLE IV.I-11
CONSTRUCTION NOISE LEVELS - MITIGATED

Receptor	Distance (feet)[1]	Maximum Construction Noise Level (dBA)[2]	Existing Ambient (dBA, L_{eq})[3]	New Ambient (dBA, L_{eq})[4]	Increase[8]
Proposed Project					
Single-Family Residence–Kittridge Street	15	64.0[5]	55.5	64.6	**9.1**
Single-Family Residence–Morse Avenue	25	64.0[5]	58.3	65.0	**6.7**
St. Frances Church and School–Victory Boulevard	25	66.0[6]	72.9	73.7	0.8
Single-Family Residence–Mary Ellen Avenue	200	54.0[6]	67.7	67.9	0.2
Multi-Family Residences–Victory Boulevard	225	75.9	72.9	73.0	0.1
Summit View School–Hamlin Street	350	37.1[6,7]	59.0	59.0	0.0
Add Area					
Parcel 1					
St. Frances Church and School–Victory Boulevard	15	64.0[5]	58.3	65.0	**6.7**
Single-Family Residence–Morse Avenue	15	64.0[5]	58.3	65.0	**6.7**
Single-Family Residence–Ethel Avenue	175	53.1[5]	58.3	59.4	1.1
Summit View School–Hamlin Street	250	50.0[5]	59.0	59.5	0.5
Multi-Family Residence–Victory Boulevard	775	40.2[5]	72.9	72.9	0.0
Single-Family Residence–Mary Ellen Avenue	900	38.9[5]	67.7	67.7	0.0
Parcel 3					
St. Frances Church and School–Victory Boulevard	15	66.0[6]	59.0	66.8	**7.8**
Single-Family Residence–Hamlin Street	50	66.0[6]	59.0	66.8	**7.8**
Single- and Multi-Family Residence–Coldwater Canyon Avenue	150	56.5[6]	67.7	68.0	0.3
Single-Family Residence–Morse Avenue	250	52.0[6]	58.3	59.2	0.9
Multi-Family Residence–Victory Boulevard	475	36.5[6,7]	72.9	72.9	0.0
Single-Family Residence–Mary Ellen Avenue	1,200	28.4[6,7]	67.7	67.7	0.0

TABLE IV.I-11
CONSTRUCTION NOISE LEVELS - MITIGATED

Receptor	Distance (feet)[1]	Maximum Construction Noise Level (dBA)[2]	Existing Ambient (dBA, L_{eq})[3]	New Ambient (dBA, L_{eq})[4]	Increase[8]
Parcel 4					
St. Frances Church and School–Victory Boulevard	15	66.0[6]	72.9	73.7	0.8
Summit View School–Hamlin Street	25	66.0[6]	59.0	66.8	**7.8**
Multi-Family Residence–Coldwater Canyon Avenue	285	41.9[7]	67.7	67.7	0.0
Single-Family Residence–Hamlin Street	450	46.9[6]	59.0	59.3	0.3
Single-Family Residential–Goodland Avenue	710	38.0[7]	59.0	59.0	0.0
Single-Family Residential–Mary Ellen Avenue	1,250	33.0[7]	67.7	67.7	0.0
Proposed Project with Add Area					
Single-Family Residence–Kittridge Street	15	64.0[5]	55.5	64.6	**9.1**
Single-Family Residence–Morse Avenue	15	64.0[5]	58.3	65.0	**6.7**
St. Frances Church and School–Victory Boulevard	15	66.0[6]	58.3	66.7	**8.4**
Single-Family Residence–Hamlin Street	50	66.0[6]	59.0	66.8	**7.8**
Single-Family Residence–Mary Ellen Avenue	200	54.0[5]	67.7	67.9	0.2
Multi-Family Residence–Victory Boulevard	225	57.9	72.9	73.0	0.1

[1] Distance of noise source from receptor.
[2] Construction noise source's sound level at receptor location with distance and structure adjustment.
[3] Pre-construction activity ambient sound level at receptor location.
[4] New sound level at receptor location during the construction period, including noise from construction activity.
[5] Includes a 7-dBA noise-reduction for existing 8-foot wall.
[6] Includes a 5-dBA noise reduction for existing 6-foot wall.
[7] Includes a 10-dBA noise reduction for intervening structures located between the project site and the school.
[8] Significant noise levels are listed in bold.

SOURCE: TAHA, *The Plaza at the Glen Air Quality and Noise Impact Report*, February 2009

Proposed Project with Add Area. When noise levels from construction activity associated with the proposed project overlaps with Add Areas 1, 3, and 4, mitigated construction-related noise levels would exceed the 5-dBA significance threshold at nearby sensitive receptors. As shown in **Table IV.I-11**, mitigated construction activity for the Proposed Project with Add Area would potentially increase ambient noise levels at the single-family residences along Kittridge and Hamlin Streets, Morse Avenue, and St. Frances Church and School by approximately 9.1, 7.8, 6.7 and 8.4 dBA L_{eq}, respectively. As such, the proposed project with the Add Area would result in a significant impact.

CONSTRUCTION PHASE VIBRATION IMPACTS

As shown in **Table IV.I-12**, implementation of Mitigation Measure IV.I-6 would reduce pile driving vibration levels within 30 feet of sensitive receptors to a maximum of 0.490 inches per second PPV. This vibration level would not exceed the 0.5 inches per second PPV significance threshold. As such, construction-related vibration associated with the proposed project would result in a less-than-significant building damage impact.

Implementation of Mitigation Measure IV.I-6 would also reduce vibration annoyance from pile driving. Pile driving vibration levels within 30 feet of sensitive receptors would be approximately 100 VdB RMS. This vibration level would exceed the 78 VdB RMS significance threshold. As such, construction-related vibration associated with the proposed project would result in a significant and unavoidable annoyance impact.

TABLE IV.I -12
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

	Vibration at 30 Feet		Vibration at 15 to 30 feet	
Equipment	**PPV (Inches/Second)**	**RMS (VdB)**	**PPV (Inches/Second)**	**RMS (VdB)**
Impact Pile Driver	0.490	102	Not Allowed with Mitigation Measure IV.H-6	
Sonic Pile Driver	0.129	91	0.366	100

SOURCE: Federal Transit Authority, *Transit Noise and Vibration Impact Assessment*, May 2006

OPERATIONAL PHASE NOISE IMPACTS

Mitigation Measure IV.I-6 would ensure that new sensitive receptors would not be exposed to significant on-site noise levels. As such, project operations would result in a less-than-significant noise impact.

Mitigation Measures IV.I-7 though IV.I-9 would control and reduce project-related loading dock and truck noise. Specifically, Mitigation Measure IV.I-9 would reduce truck noise at the St. Frances Church and School by 6 dBA. The mitigated interior noise level at the School would be 44 dBA L_{eq}. This noise level would not exceed the 45 dBA L_{eq} significance criteria and truck noise would result in a less-than-significant impact at the School.

As stated above, loading dock activity and truck noise would result in a significant impact for Parcels 3 and 4. Detailed site plans have not been developed for Parcels 3 and 4 and, as such, detailed mitigation measures cannot be recommended. Further environmental analysis will be required before approval is obtained to construct Parcels 3 and 4, and noise mitigation may be recommended at that time. However, based on the above analysis, loading dock activity and truck noise would result in a significant and unavoidable impact for Parcels 3 and 4.

OPERATIONAL PHASE VIBRATION IMPACTS

Operational ground-borne vibration impacts for the proposed project and Add Area would be less-than-significant.

CUMULATIVE IMPACTS

Proposed Project. The nearest related projects to the project site would be a mixed-use development located at 13115 Victory Boulevard and a condominium project located at 13148 Victory Boulevard. These projects would be approximately 300 to 700 feet west of the project site. Construction activities associated with these related projects and the proposed project would potentially overlap and each would generate noise at sensitive receptors. The proposed project would result in a significant construction noise impact and, as such, the proposed project combined with related projects would also result in a significant impact. Therefore, the proposed project would result in a cumulative considerable construction noise impact.

When calculating future traffic impacts, the traffic consultant took 91 additional projects into consideration. Thus, the future traffic results without and with the proposed project already account for the cumulative impacts from these other projects. Since 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 IV.I-9 presents the cumulative increase in future traffic noise levels at various intersections (i.e., 2013 "No Project "conditions plus proposed project traffic) for daily traffic conditions. The maximum cumulative roadway noise increase would be 3.7 dBA CNEL and would occur along Ethel Avenue, between Victory Boulevard and Oxnard Street. Cumulative roadway noise levels would exceed the 3-dBA-threshold increment but the estimated cumulative noise level of 63.3 dBA CNEL would remain within the "conditionally acceptable" noise range (55 dBA to 70 dBA) for a residential area. The increase in cumulative noise would not change from conditionally acceptable to "normally unacceptable" or "clearly unacceptable" noise level. Therefore, the proposed project would not result in a cumulatively considerable impact with respect to roadway noise.

The predominant vibration source near the project site is heavy trucks traveling on Victory Boulevard and Coldwater Canyon Avenue. 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 Victory Boulevard and Coldwater Canyon Avenue. As such, the proposed project would not add to a cumulative vibration impact.

Add Area. The maximum cumulative roadway noise increase for Parcel 1 would be 1.8 dBA CNEL and would occur along Ethel Avenue, between Victory Boulevard and Oxnard Street. Cumulative roadway noise levels for Parcel 1 would not exceed the 3-dBA-threshold increment and would not result in a perceptible change in noise level. Therefore, Parcel 1 would not result in a cumulatively considerable impact with respect to roadway noise.

The predominant vibration source near Parcel 1 is heavy trucks traveling on Victory Boulevard and Coldwater Canyon Avenue. Neither Parcel 1 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 Victory Boulevard and Coldwater Canyon Avenue. As such, Parcel 1 would not add to a cumulative vibration impact.

The existing uses within Parcel 2 would not change and, as such, cumulative impacts are not anticipated.

The maximum cumulative roadway noise increase for Parcel 3 would be 1.8 dBA CNEL and would occur along Ethel Avenue, between Victory Boulevard and Oxnard Street. Cumulative

roadway noise levels for Parcel 3 would not exceed the 3-dBA threshold increment and would not result in a perceptible change in noise level. Therefore, Parcel 3 would not result in a cumulatively considerable impact with respect to roadway noise.

The predominant vibration source near Parcel 3 is heavy trucks traveling on Victory Boulevard and Coldwater Canyon Avenue. Neither Parcel 3 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 Victory Boulevard and Coldwater Canyon Avenue. As such, Parcel 3 would not add to a cumulative vibration impact.

The maximum cumulative roadway noise increase for Parcel 4 would be 1.8 dBA CNEL and would occur along Ethel Avenue, between Victory Boulevard and Oxnard Street. Cumulative roadway noise levels for Parcel 4 would not exceed the 3-dBA threshold increment and would not result in a perceptible change in noise level. Therefore, Parcel 4 would not result in a cumulatively considerable impact with respect to roadway noise.

The predominant vibration source near Parcel 4 is heavy trucks traveling on Victory Boulevard and Coldwater Canyon Avenue. Neither Parcel 4 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 Victory Boulevard and Coldwater Canyon Avenue. As such, Parcel 4 would not add to a cumulative vibration impact.

Proposed Project with Add Area. The maximum cumulative roadway noise increase for the Proposed Project with Add Areas would be 4.0 dBA CNEL and would occur along Ethel Avenue, between Victory Boulevard and Oxnard Street. Cumulative roadway noise levels for the Proposed Project with Add Area would exceed the 3-dBA threshold increment but would not change from conditionally acceptable to “normally unacceptable” or “clearly unacceptable” noise level. Therefore, the Proposed Project with Add Area would not result in a cumulatively considerable impact with respect to roadway noise.

The predominant vibration source near the Proposed Project with Add Area is heavy trucks traveling on Victory Boulevard and Coldwater Canyon Avenue. Neither the Proposed Project with Add Area 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 Victory Boulevard and Coldwater Canyon Avenue. As such, the Proposed Project with Add Area would not add to a cumulative vibration impact.