IV. Environmental Impact Analysis
J. Noise

1. Introduction

This section of this Draft EIR analyzes the potential noise and vibration impacts of the Project. Included in this section is a description of the existing noise and vibration levels within the Project Site area, an estimation of the future noise and vibration levels at surrounding sensitive land uses associated with construction and operation of the Project, an analysis of the potential noise impacts, and mitigation measures to address any identified potential significant impacts, as applicable. Additionally, this section of this Draft EIR evaluates the Project's incremental contribution to potential cumulative noise and vibration impacts resulting from past, present, and probable future projects. This section summarizes the noise and vibration information provided in the Noise and Vibration Calculation Worksheets included in Appendix I of this Draft EIR.

2. Environmental Setting

Due to the technical nature of noise and vibration impacts, a brief overview of basic noise principles and descriptors is provided below.

a. Noise and Vibration Basics

(1) Noise Principles and Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as undesirable (i.e., loud, unexpected, or annoying) sound. Acoustics is defined as the physics of sound and addresses its propagation and control.[1] In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determine the sound level and characteristics of the noise perceived by the receiver.

[1] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement and reflects the way people perceive changes in sound amplitude.[2] The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of feeling pain. Pressure waves traveling through air exert a force registered by the human ear as sound.[3]

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but, rather, a broad band of frequencies varying in levels of magnitude. When all of the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.[4]

The typical human ear is not equally sensitive to the frequency range from 20 to 20,000 Hz. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements.[5] Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in Figure IV.J-1 on page IV.J-3.

---

[2] *All sound levels measured in decibel (dB), as identified in the noise calculation worksheets included in Appendix I of this Draft EIR and in this section of the Draft EIR, are relative to $2x10^{-5}$ N/m^2.*

[3] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

[4] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

[5] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

Common Outdoor Activities	Noise Level (dBA)	Common IndoorActivities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**70**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**60**	
		Large business office
Quiet urban daytime	**50**	Dishwasher in next room
Quiet urban nighttime	**40**	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast recording studio
	10	
	0	

Figure IV.J-1
Decibel Scale and Common Noise Sources

Source: State of California, Department of Transportation (Caltrans), Technical Noise Supplement, 2009

(2) Noise Exposure and Community Noise

Community noise exposure is typically measured over a period of time; a noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many unidentifiable individual contributors. Single-event noise sources, such as aircraft flyovers, sirens, etc., may cause sudden changes in background noise level.[6] However, generally, background noise levels change gradually throughout the day, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume.

These successive additions of sound to the community noise environment change the community noise level from moment to moment, requiring the noise exposure to be measured over periods of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time.[7]

L_{eq}: The equivalent sound level over a specified period of time, typically, 1 hour (L_{eq}). The L_{eq} may also be referred to as the energy-average sound level.

L_{max}: The maximum, instantaneous noise level experienced during a given period of time.

L_{min}: The minimum, instantaneous noise level experienced during a given period of time.

L_x: The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

L_{dn}: The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dBA to measured noise levels between the hours of 10:00 P.M. and 7:00 A.M. to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the time average A-weighted noise level during a 24-hour day that includes an addition of

---

[6] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

[7] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.2, September 2013.*

5 dBA to measured noise levels between the hours of 7:00 P.M. and 10:00 P.M. and an addition of 10 dBA to noise levels between the hours of 10:00 P.M. and 7:00 A.M. the next day to account for noise sensitivity in the evening and nighttime, respectively.

(3) Effects of Noise on People

Noise is generally a loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startled response); and
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep.

The World Health Organization's Guidelines for Community Noise details the adverse health effects of high noise levels, which include hearing impairment, speech intelligibility, sleep disturbance, physiological functions (e.g., hypertension and cardiovascular effects), mental illness, performance of cognitive tasks, social and behavioral effects (e.g., feelings of helplessness, aggressive behavior), and annoyance.[8]

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an

[8] *World Health Organization Team, edited by Birgitta Berglund, Thomas Lindvall, and Dietrich H. Schwela, Guidelines for Community Noise, 1999.*

important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise levels, the following relationships generally occur:[9]

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a change of 3 dBA in ambient noise levels is considered to be a barely perceivable difference;
- A change of 5 dBA in ambient noise levels is considered to be a readily perceivable difference; and
- A change of 10 dBA in ambient noise levels is subjectively heard as doubling of the perceived loudness.

These relationships between change in noise level and human hearing response occur in part because of the logarithmic nature of sound and the dB scale. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but, rather, logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3-dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and 10 sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source.[10]

(4) Noise Attenuation

When noise propagates over a distance, the noise level reduces, or attenuates, with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as "spherical spreading." The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g., air conditioner) or idling vehicle (e.g.,

---

[9] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

[10] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1.1, September 2013.*

bulldozer), is 6 dBA per doubling of distance from the noise source to the receptor over acoustically "hard" sites and 7.5 dBA per doubling of distance from the noise source to the receptor over acoustically "soft" sites.[11] Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provide an excess ground attenuation value of 1.5 dBA (per doubling distance).[12] For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source.

Roadways and highways consist of several localized noise sources on a defined path and, hence, are treated as "line" sources, which approximate the effect of several point sources.[13] Noise from a line source propagates over a cylindrical surface, often referred to as "cylindrical spreading."[14] Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.[15] Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., the line-of-sight is not fully blocked), barrier insertion loss would still occur but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall can reflect noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and

---

[11] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Sections 2.1.4.1 and 2.1.4.2, September 2013.*

[12] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Sections 2.1.4.1 and 2.1.4.2, September 2013.*

[13] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

[14] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

[15] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

receiver) to an upper range of 20 dBA with a larger barrier.[16] Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA.[17]

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels.[18] Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances. Other factors, such as air temperature, humidity, and turbulence can, under the right conditions, also have substantial effects on noise levels.[19]

(5) Vibration Fundamentals

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. 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. Since energy is lost during its transfer from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*, groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard.[20] In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources, such as rubber-tired buses and trucks, to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and certain construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment.[21] Groundborne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance from the source of the vibration.

---

[16] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Sections 2.1.4.24 and 5.1.1, September 2013.*

[17] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 7.4.2, Table 7-1, September 2013.*

[18] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.3, September 2013.*

[19] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.3, September 2013.*

[20] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 7, 2018.*

[21] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 7, 2018.*

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec) and is most frequently used to describe vibration impacts to buildings.[22] The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body.[23] Decibel notation (VdB) is commonly used to express RMS vibration velocity amplitude. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity; FTA uses a crest factor of 4.[24] The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within the building or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment.[25]

Groundborne noise specifically refers to the rumbling noise emanating from the motion of building room surfaces due to the vibration of floors and walls; it is perceptible only inside buildings.[26] The relationship between groundborne vibration and groundborne noise depends on the frequency of the vibration and the acoustical absorption characteristics of the receiving room. For typical buildings, groundborne vibration that causes low frequency noise (i.e., the vibration spectrum peak is less than 30 Hz) results in a groundborne noise level that is approximately 50 decibels lower than the velocity level. For groundborne vibration that causes mid-frequency noise (i.e., the vibration spectrum peak is between 30 and 60 Hz), the groundborne noise level will be approximately 35 to 37 decibels lower than the velocity level.[27] Therefore, for typical buildings, the groundborne noise decibel level is lower than the groundborne vibration velocity level at low frequencies.

b. Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines applicable to the Project regarding noise at the federal, State,

---

[22] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

[23] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

[24] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

[25] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 6.1, 6.2, and 6.3, 2018.*

[26] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.4, 2018.*

[27] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 6-3 and Table 6-14, 2018.*

regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Noise Control Act of 1972
- Federal Transit Administration Vibration Standards
- Occupational Safety and Health Act of 1970
- Office of Planning and Research Guidelines for Noise Compatible Land Use
- Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan
- City of Los Angeles Municipal Code
- City of Los Angeles General Plan Noise Element

(1) Federal

(a) Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA.[28] These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. Moreover, the federal noise standards are not reflective of urban environments that range by land use, density, proximity to commercial or industrial centers, etc. As such, for purposes of determining acceptable sound levels and evaluating intrusive noise sources and increases, this section utilizes the City of Los Angeles Noise Regulations, discussed below.

(b) Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from land use development projects, such as the Project. However, the FTA has adopted vibration criteria for use in evaluating vibration

[28] *U.S. Environmental Protection Agency, EPA Identifies Noise Levels Affecting Health and Welfare, April 1974.*

impacts from construction activities, as presented in its Transit Noise and Vibration Impact Assessment Manual.[29] The vibration damage criteria adopted by the FTA are shown in Table IV.J-1 on page IV.J-12.

The FTA has also adopted standards associated with human annoyance for determining the groundborne vibration and noise impacts from ground-borne noise on the following three off-site land-use categories: Vibration Category 1—High Sensitivity; Vibration Category 2—Residential; and Vibration Category 3—Institutional.[30] The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses, such as schools, churches, other institutions, and quiet offices, that do not have vibration-sensitive equipment but that still potentially involve activities that could be disturbed by vibration. The vibration thresholds associated with human annoyance for these three land-use categories are shown in Table IV.J-2 on page IV.J-12. No thresholds have been adopted or recommended for commercial or office uses.

(c) Occupational Safety and Health Act of 1970

Under the Occupational Safety and Health Act of 1970 (29 United States Code [USC] Sections 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.[31]

---

[29] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 7-5, p. 86, 2018.*

[30] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 6-1, p. 124, 2018.*

[31] *U.S. Department of Labor, Occupational Safety and Health Act, 1970.*

Table IV.J-1
Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.50
II. Engineered concrete and masonry (no plaster)	0.30
III. Non-engineered timber and masonry buildings	0.20
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.

Table IV.J-2
Groundborne Vibration and Groundborne Noise Impact Criteria for General Assessment

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Building where vibration would interfere with interior operations	65 VdB[d]	65 VdB[d]	65 VdB[d]
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime uses	75 VdB	78 VdB	83 VdB

[a] *"Frequent Events" are defined as more than 70 vibration events of the same source per day.*

[b] *"Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.*

[c] *"Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.*

[d] *This criterion limit is based on the levels that are acceptable for most moderately sensitive equipment such as optical microscopes.*

Source: FTA, Transit Noise and Vibration Impact Assessment Manual, September 2018.

(2) State

(a) Office of Planning and Research Guidelines for Noise Compatible Land Use

The State of California has not adopted Statewide standards for environmental noise, but the Governor's Office of Planning and Research (OPR) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure, as presented in Figure IV.J-2 on page IV.J-13.[32] The purpose of these guidelines is to

[32] *State of California, Governor's Office of Planning and Research, General Plan 2017 Guidelines, p. 377, 2017.*

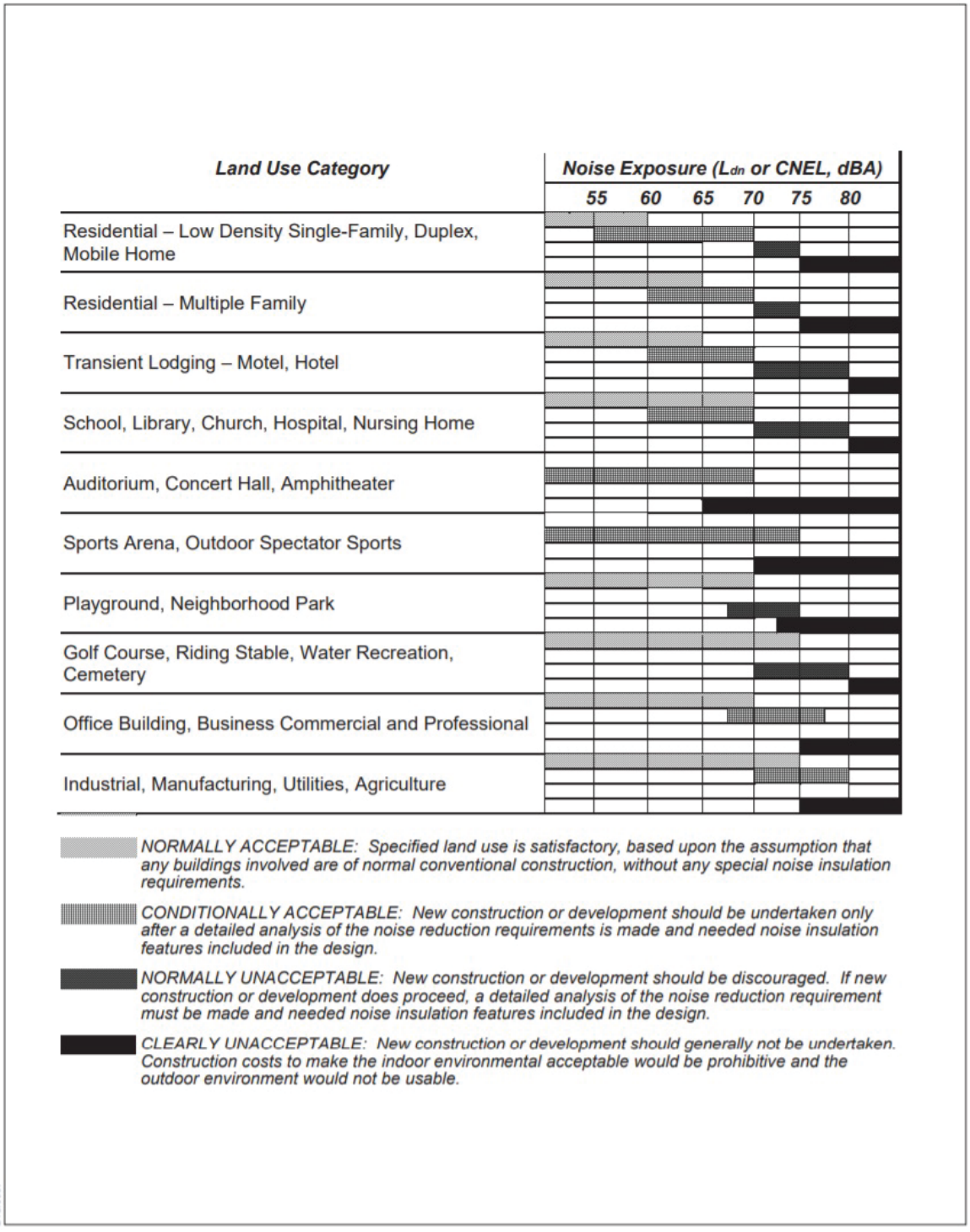


Figure IV.J-2
Guidelines for Noise Compatible Land Use

Source: State of California, General Plan Guidelines, Governor's Office of Planning and Research, 2003.

maintain acceptable noise levels in a community setting for different land use types. Noise levels are divided into four general categories, which vary in range according to land use type: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." The City of Los Angeles (City) has developed its own compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) requiring a noise element to be included in the general plan. The noise element must identify and appraise noise problems in the community and analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels. These requirements are collectively known as the California Noise Insulation Standards (Title 24 of the California Code of Regulations [CCR]). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. The standards require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards (CALGreen) Code. The CALGreen Code noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (CALGreen Code Section 5.507.4.1) or the performance method (CALGreen Code Section 5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq(1hr)}$.

(3) Regional

(a) Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan

In Los Angeles County (County) the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission (ALUC) and for coordinating the airport planning of public agencies within the County. The ALUC coordinates planning for the areas surrounding public use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public use airports and the area

surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County ALUC has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

(4) Local

(a) Los Angeles Municipal Code

The City of Los Angeles Noise Regulations are provided in Chapter XI of the Los Angeles Municipal Code (LAMC). LAMC Section 111.02 provides procedures and criteria for the measurement of the sound level of "offending" noise sources. In accordance with the LAMC, a noise source that causes a noise level increase of 5 dBA over the existing average ambient noise level as measured at an adjacent property line creates a noise violation. This standard applies to radios, television sets, air conditioning, refrigeration, heating, pumping and filtering equipment, powered equipment intended for repetitive use in residential areas, and motor vehicles driven on-site. To account for people's increased tolerance for short-duration noise events, the Noise Regulations provide a 5-dBA allowance for a noise source that causes noise lasting more than 5 but less than 15 minutes in any one-hour period, and an additional 5-dBA allowance (for a total of 10 dBA) for a noise source that causes noise lasting 5 minutes or less in any one-hour period.[33]

The LAMC provides that in cases where the actual ambient conditions are not known, the City's presumed daytime (7:00 A.M. to 10:00 P.M.) and nighttime (10:00 P.M. to 7:00 A.M.) minimum ambient noise levels as defined in LAMC Section 111.03 should be used. The presumed ambient noise levels for these areas where the actual ambient conditions are not known as set forth in the LAMC Sections 111.03 are provided in Table IV.J-3 on page IV.J-16. For example, for residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime.

LAMC Section 112.01 limits noise from amplified voice and music and prohibits the operation of such devices (e.g., radio, musical instrument, phonograph, television receiver, or other machine) or other sounds in such a manner as to disturb the peace, quiet, and comfort of neighbors. Specifically, noise from such uses or operation that is audible at a distance in excess of 150 feet from the property line of the noise source within a residential zone of the City or within 500 feet thereof is prohibited.

[33] *Los Angeles Municipal Code, Chapter XI, Article I, Section 111.02-(b).*

Table IV.J-3
City of Los Angeles Presumed Ambient Noise Levels

Zone	Daytime (7:00 A.M. to 10:00 P.M.) dBA (L_{eq})	Nighttime (10:00 P.M. to 7:00 A.M.) dBA (L_{eq})
Residential (A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5)	50	40
Commercial (P, PB, CR, C1, C1.5, C2, C4, C5, and CM)	60	55
Manufacturing (M1, MR1, and MR2)	60	55
Heavy Manufacturing (M2 and M3)	65	65

Source: LAMC Section 111.03.

LAMC Section 112.02 limits increases in noise levels from air conditioning, refrigeration, heating, pumping and filtering equipment. Such equipment may not be operated in such a manner as to create any noise which would cause the noise level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient noise level by more than 5 dB.

LAMC Section 112.05 sets a maximum noise level for construction equipment of 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone. Compliance with this standard shall not apply where compliance therewith is technically infeasible.[34]

LAMC Section 41.40 prohibits construction between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, 6:00 P.M. and 8:00 A.M. on Saturday or any national holiday, and at any time on Sunday (i.e., construction is allowed Monday through Friday between 7:00 A.M. to 9:00 P.M. and Saturdays and national holidays between 8:00 A.M. to 6:00 P.M.). In general, the City's Department of Building and Safety enforces provisions of the City's Noise Regulations relative to equipment, and the Los Angeles Police Department (LAPD) enforces provisions relative to noise generated by people.

LAMC Section 113.01 prohibits collecting or disposing of rubbish or garbage, operating any refuse disposal truck, or collecting, loading, picking up, transferring, unloading, dumping, discarding, or disposing of any rubbish or garbage, as such terms are defined in

[34] *In accordance with the City's Noise Ordinances, "technically feasible" means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.*

LAMC Section 66.00, within 200 feet of any residential building between the hours of 9:00 P.M. and 6:00 A.M. of the following day, unless a permit has been duly obtained beforehand from the Board of Police Commissioners.

LAMC Section 91.1206.14.2 prohibits interior noise levels attributable to exterior sources from exceeding 45 dBA in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the CNEL, consistent with the noise element of the local general plan.

(b) City of Los Angeles General Plan Noise Element

The Noise Element of the City's General Plan policies include the CNEL guidelines for land use compatibility as shown in Table IV.J-4 on page IV.J-18 and includes a number of goals, objectives, and policies for land use planning purposes. The overall purpose of the Noise Element is to guide policymakers in making land use determinations and in preparing noise ordinances that would limit exposure of citizens to excessive noise levels.[35] The following policies and objectives from the Noise Element apply to the Project.

Objective 2 (Non-Airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise sensitive uses.

Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

Objective 3 (Land Use Development): Reduce or eliminate noise impact associated with proposed development of land and changes in land use.

Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

Exhibit I of the Noise Element also contains guidelines for noise compatible land uses.[36] Table IV.J-4 summarizes these guidelines, which are based on OPR guidelines from 1990.

[35] *City of Los Angeles, General Plan Noise Element, pp. 1.1–2.4, Adopted February 3, 1999.*

[36] *City of Los Angeles, General Plan Noise Element, p. I-1, Adopted February 3, 1999.*

Table IV.J-4
City of Los Angeles Land Use Compatibility for Community Noise

Land Use	Community Noise Exposure CNEL (dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business, Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

Normally Acceptable: *Specified land use is satisfactory, based upon assumption 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 design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning 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: City of Los Angeles, 2006; L.A. CEQA Thresholds Guide, 2006.

c. Existing Conditions

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is in an urbanized area that is developed with a diverse mix of land uses. The predominant source of noise in the vicinity of the Project Site is vehicular traffic on adjacent roadways, particularly along Broadway and Spring Street, which have high volumes of traffic. Other ambient noise sources in the vicinity of the Project Site include trains on the Metro A Line tracks adjacent to the Project Site; commercial activities; surface parking lot activities; construction noise from developing properties in the area; and other miscellaneous noise sources associated with typical urban activities.

(1) Noise-Sensitive Receptors

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically involved at the receptor location. The *L.A. CEQA Thresholds Guide* states that noise-sensitive uses include residences, transient lodgings (hotels), schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks.[37] Similarly, the Noise Element defines noise-sensitive land uses as single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodging, and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves; and parks.[38] These uses are generally considered more sensitive to noise than commercial and industrial land uses.

Based on a review of the land uses in the vicinity of the Project Site, sixteen (16) noise receptor locations were selected to represent existing noise-sensitive uses within 500 feet of the Project Site (receptor locations R1 through R16). These locations represent areas with land uses that could qualify as noise-sensitive uses according to the definition of such uses in the *L.A. CEQA Thresholds Guide* and the General Plan Noise Element. As discussed below, noise measurements were conducted at the 16 off-site locations to establish baseline noise conditions in the vicinity of the Project Site. In addition, the measurement locations provide an adequate basis to evaluate potential noise impacts at other sensitive receptors located beyond the measurement location in the same direction from the Project Site. The noise measurement locations are shown in Figure IV.J-3 on page IV.J-20 and described in Table IV.J-5 on page IV.J-21.

(2) Ambient Noise Levels

To establish baseline noise conditions, existing ambient noise levels were measured at the selected 16 off-site receptor locations (identified as R1 to R16) that are representative of sensitive uses in the vicinity of the Project Site. The baseline noise monitoring program was conducted on April 8 and 9, 2024, using a Larson-Davis Model 870 and a Quest Technologies Model 2900 Integrating/Logging Sound Level Meters.[39] A 24-hour

---

[37] *City of Los Angeles, L.A. CEQA Thresholds Guide, p. I.1-3.*

[38] *Noise Element, City of Los Angeles General Plan, Chapter IV, p. 4-1.*

[39] *These sound meters meet the minimum industry standard performance requirements for "Type 1" (Larson-Davis Model 870) and "Type 2" (Quest Technologies Model 2900) standard instruments as defined in the American National Standard Institute (ANSI) S1.4. It also meets the requirement specified in Section 111.01(l) of the LAMC that instruments be "Type S2A" standard instruments or better. The sound meter was calibrated prior to the measurements and operated according to the manufacturer's written specifications.*



Figure IV.J-3
Noise Measurement Locations

Source: AES, 2025.

Table IV.J-5
Description of Noise Measurement Locations

Receptor Location	Description	Approximate Lateral Distance from Measurement Location to Nearest Project Site Boundary (feet)[a]	Nearest Noise-Sensitive Land Use(s)
R1	Residential use located at the southwest corner of Llewellyn St. and Rondout St., southeast of the Project Site	460	Residential
R2	Residential use located on east side of Broadway (north of College St), southwest of the Project Site	240	Residential
R3	Motel use located at the southwest corner of Broadway and Bernard St., west of the Project Site	210	Residential
R4	Los Angeles State Historic Park (southern portion), east of the Project Site	90	Park
R5	Residential use located on Cottage Homes St. (north of Broadway), northwest of the Project Site	220	Residential
R6	Religious use located on the west side of Broadway, northwest of the Project Site	110	Religious
R7	School use located at the southwest corner of Broadway and Bishop Rd., west of the Project Site	580	School
R8	Residential use located on the west side of Broadway, northwest of the Project Site	205	Residential
R9	Residential use located on Solano Avenue (north of Broadway), northwest of the Project Site	265	Residential
R10	Residential use on the north side of Broadway, north of the Project Site	95	Residential
R11	Future mixed-use development located at the northeast corner of College St. and Spring St., southeast of the Project Site	200	Residential (future)
R12	Los Angeles State Historic Park (northern portion), southeast of the Project Site	165	Park
R13	Los Angeles State Historic Park (central portion), southeast of the Project Site	615	Park
R14	School use located at the southwest corner of Hill St. and College St., southwest of the Project Site	855	School
R15	Elysian Park on the north side of Broadway (west of Solano Ave.), north of the Project Site	400[b]	Park
R16	Elysian Park on the north side of Broadway (east of Casanova St.), northeast of the Project Site	160[b]	Park

[a] *Distances are estimated using Google Earth.*

[b] *Distance from Project Site to the park trail.*

Source: Acoustical Engineering Services (AES), 2024. See Appendix I of this Draft EIR.

measurement was conducted at receptor location R8.[40] Two 15-minute measurements were conducted at each of the remaining receptor locations during daytime and nighttime hours. The daytime ambient noise levels were measured between 10:00 A.M. and 1:00 P.M., and the nighttime ambient noise levels were measured between 10:00 P.M. and 12:00 A.M. The ambient noise measurements were recorded in accordance with the City's standards, which require ambient noise to be measured over a period of at least 15 minutes.[41]

Table IV.J-6 on page IV.J-23 provides a summary of the ambient noise measurements conducted at the 16 noise receptor locations. Based on field observations, the current ambient noise at the measurement locations is dominated by local traffic and, to a lesser extent, helicopter flyovers and other typical urban noises. As indicated in Table IV.J-6, the existing daytime ambient noise levels at the off-site noise receptor locations ranged from 56.7 dBA (L_{eq}) at receptor location R4 to 69.6 dBA (L_{eq}) at receptor location R8. The measured nighttime ambient noise levels ranged from 52.5 dBA (L_{eq}) at receptor location R13 to 65.2 dBA (L_{eq}) at receptor location R8. Thus, the existing ambient noise levels at all off-site locations are above the City's presumed daytime and nighttime ambient noise levels of 50 dBA (L_{eq}) and 40 dBA (L_{eq}), respectively, for residential uses (i.e., R1, R2, R3, R5, R8, R9, R10, R11), as presented above in Table IV.J-3 on page IV.J-16. Therefore, the measured ambient noise levels have been used as the baseline for impact determinations.

In addition to the ambient noise measurements in the vicinity of the Project Site, the existing traffic noise levels (in terms of 24-hour CNEL) on local roadways in the surrounding area were calculated using the traffic volumes provided by the Traffic Assessment prepared for the Project and included in Appendix K of this Draft EIR. Twenty (20) roadway segments were selected for the existing off-site traffic noise analysis included in this section based on proximity to noise-sensitive uses along the roadway segments and potential increases in traffic volumes from the Project operation. Traffic noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) and traffic volume data from the Traffic Study prepared for the Project. The TNM calculates the hourly L_{eq} noise levels based on specific information including the hourly traffic volume, vehicle type mix, vehicle speed, and lateral distance between the noise receptor and the roadway. To calculate the 24-hour CNEL levels, the hourly L_{eq} levels were calculated during daytime hours (7:00 A.M. to 7:00 P.M.), evening hours (7:00 P.M. to 10:00 P.M.), and nighttime hours (10:00 P.M. to 7:00 A.M.). The TNM calculates the 24-hour CNEL noise levels based on specific information, including Average Daily Traffic (ADT); percentages of day, evening, and nighttime traffic volumes relative to ADT; vehicle speed; and distance between the noise receptor and the roadway. Vehicle mix/distribution information used in the noise calculations is shown in Table IV.J-7 on page IV.J-24.

---

[40] *A 24-hour measurement is typically conducted at one receptor location to obtain the pattern and validate the noise measurements at other receptor locations.*

[41] *LAMC Section 111.01.*

Table IV.J-6
Existing Ambient Noise Levels

Receptor Location	Noise-Sensitive Land Use	Measured Noise Levels, L_{eq} (dBA)		CNEL (24-hour)
		Daytime Hours (7:00 A.M.–10:00 P.M.)	Nighttime Hours (10:00 P.M.–7:00 A.M.)	
R1	Residential	58.2	56.7	61.7[a]
R2	Residential	63.5	57.6	64.2[a]
R3	Residential	64.0	58.5	64.9[a]
R4	Park	56.7	53.0	58.7[a]
R5	Residential	56.8	55.2	60.2[a]
R6	Religious	64.5	59.8	65.9[a]
R7	School	62.2	58.4	64.1[a]
R8	Residential	69.6[b]	65.2[b]	72.8
R9	Residential	62.6	55.7	62.8[a]
R10	Residential	68.7	61.6	68.8[a]
R11	Residential (future)	63.3	59.9	65.5[a]
R12	Park	60.6	54.0	60.9[a]
R13	Park	57.2	52.5	58.6[a]
R14	School	68.0	59.4	67.5[a]
R15[c]	Park	62.6	55.7	62.8[a]
R16[c]	Park	62.6	55.7	62.8[a]

[a] *Estimated based on short-term (15-minute) noise measurement based on FTA procedures.*

[b] *Levels shown for R8 represent the average for the entire daytime and nighttime periods.*

[c] *Measured ambient noise levels at receptor location R9 are also used for receptor locations R15 and R16 due to proximity to the Broadway (the primary noise source).*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-8 on page IV.J-25 provides the calculated CNEL for the analyzed local roadway segments based on existing traffic volumes. As shown therein, the existing CNEL due to surface street traffic volumes ranges from 64.4 dBA CNEL along Avenue 18 (between Pasadena Avenue and Broadway) to 73.2 dBA CNEL along Broadway (between Bishop Road and Solano Avenue). Currently, the existing traffic-related noise levels along the roadway segments of College Street, Alpine Street, Bernard Street, Bishop Street, Solano Avenue, and Avenue 18 fall within the conditionally acceptable noise levels for residential uses (i.e., between 60 and 70 dBA CNEL). The existing traffic noise levels along Broadway and Spring Street are between 70 dBA CNEL and 75 dBA CNEL, which are considered normally unacceptable for residential uses (i.e., between 70 and 75 dBA CNEL).

Table IV.J-7
Vehicle Mix for Traffic Noise Model

Vehicle Type	Percent of Average Daily Traffic (ADT)			Total Percent of ADT per Vehicle Type
	Daytime Hours (7 A.M.–7 P.M.)	Evening Hours (7 P.M.–10 P.M.)	Nighttime Hours (10 P.M.–7 A.M.)	
Automobile	77.6	9.7	9.7	97.0
Medium Truck[a]	1.6	0.2	0.2	2.0
Heavy Truck[b]	0.8	0.1	0.1	1.0
Total	80.0	10.0	10.0	100.0

[a] *Medium Truck—Trucks with 2 axles.*

[b] *Heavy Truck—Trucks with 3 or more axles.*

Source: AES, 2025. See Appendix I of this Draft EIR.

(3) Existing Ground-Borne Vibration Levels

Based on field observations, the primary source of existing ground-borne vibration in the vicinity of the Project Site is vehicular travel (e.g., standard cars, refuse trucks, delivery trucks, construction trucks, school buses, and buses) on local roadways. According to the FTA technical study "Federal Transit Administration: Transit Noise and Vibration Impacts Assessments," typical road traffic-induced vibration levels are unlikely to be perceptible by people. Specifically, the FTA study reports that "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads."[42] Trucks and buses typically generate ground-borne vibration velocity levels of around 63 VdB (at a distance of 50 feet), and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. Per the FTA, 75 VdB is the dividing line between barely perceptible (with regards to ground vibration) and distinctly perceptible.[43] Therefore, existing ground vibration in the vicinity of the Project Site is generally below the perceptible level. However, ground vibration associated with heavy trucks traveling on road surfaces with irregularities, such as speed bumps and potholes, could reach the perceptible threshold.

[42] *FTA, Transit Noise and Vibration Impact Assessment, September 2018, p. 112.*

[43] *FTA, Transit Noise and Vibration Impact Assessment, September 2018, Table 5-5.*

Table IV.J-8
Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Approximate Distance to Roadway Center Line (feet)	Calculated Traffic Noise Levels, CNEL (dBA)[a]	Noise-Sensitive Land Uses	Existing Noise Exposure Compatibility Category[b]
Broadway					
Between Arcadia St. and Cesar Chavez	Residential	35	71.8	Yes	Normally Unacceptable
Between Cesar Chavez and Ord St.	Residential	40	71.3	Yes	Normally Unacceptable
Between Cesar Ord St. and Alpine St.	Commercial	40	71.1	No	Conditionally Acceptable
Between Alpine St. and College St.	Residential	35	72.2	Yes	Normally Unacceptable
Between College St. and Bernard St.	Residential, Motel	35	72.8	Yes	Normally Unacceptable
Between Bernard St. and Bishop Rd.	School	35	72.4	Yes	Normally Unacceptable
Between Bishop Rd. and Solano Ave.	Residential	35	73.2	Yes	Normally Unacceptable
Between Solano Ave. and Avenue 18	Residential	35	72.6	Yes	Normally Unacceptable
Between Ave. 18 and Avenue 19	Motel	35	71.8	Yes	Normally Unacceptable
Spring Street					
Between Alpine St. and College St.	Residential	35	72.4	Yes	Normally Unacceptable
Between College St. and Avenue 18	Park, Motel	35	72.3	Yes	Normally Unacceptable
College Street					
Between Hill St. and Broadway	Commercial	35	68.9	No	Conditionally Acceptable
Between Broadway and Spring St.	Residential	35	68.8	Yes	Conditionally Acceptable
Alpine Street					
Between Hill St. and Broadway	Commercial	35	68.5	No	Conditionally Acceptable
Between Broadway and Spring St.	Commercial	35	68.6	No	Conditionally Acceptable
Bernard Street					
Between Hill St. and Broadway	Residential, Motel	35	64.7	Yes	Conditionally Acceptable
Bishop Road					
Between Stadium Way and Broadway	Residential, School	35	67.3	Yes	Conditionally Acceptable
Solano Avenue					
Between Amador St. and Broadway	Residential	35	67.1	Yes	Conditionally Acceptable

Table IV.J-8 (Continued)
Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Approximate Distance to Roadway Center Line (feet)	Calculated Traffic Noise Levels, CNEL (dBA)[a]	Noise-Sensitive Land Uses	Existing Noise Exposure Compatibility Category[b]
Avenue 18					
Between Pasadena Ave. and Broadway	Commercial	35	64.4	No	Normally Acceptable
Between Broadway and Albion St.	Residential	35	65.5	Yes	Conditionally Acceptable

[a] *Detailed calculation worksheets are included in Appendix I of this Draft EIR.*

[b] *Noise compatibility is based on the most stringent land use, per the City's land use compatibility guidelines as provided in Table IV.J-4 on page IV.J-18.*

Source: AES, 2025.

3. Project Impacts

a. Thresholds of Significance

(1) State CEQA Guidelines Appendix G

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to noise if it would result in the following:

Threshold (a): Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

Threshold (b): Generation of excessive groundborne vibration or groundborne noise levels; or

Threshold (c): For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

(2) 2006 L.A. CEQA Thresholds Guide

For this analysis, the Appendix G thresholds listed above are relied upon. The Department of City Planning is currently in the process of updating its significance thresholds for noise and vibration. However, this analysis conservatively utilizes factors and considerations identified in the *L.A. CEQA Thresholds Guide*, which are more conservative than the thresholds the City is currently considering, to assist in answering the Appendix G threshold questions.

The *L.A. CEQA Thresholds Guide* identifies the factors below to evaluate noise impacts:

(a) Construction Noise

A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior sound levels by 10 dBA (hourly L_{eq}) or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA (hourly L_{eq}) or more at a noise-sensitive use; or

- Construction activities of any duration would exceed the ambient noise level by 5 dBA (hourly L_{eq}) at a noise-sensitive use 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.

As discussed in Section II, Project Description, of this Draft EIR, construction of the Project would be phased, with development of the South Parcel occurring as Phase 1 and development of the North Parcel occurring as Phase 2. Phase 1 is anticipated to commence construction in 2028 and end in 2031. Phase 2 would be constructed soon after, or within a few years following completion of Phase 1, depending on market demand. For the purposes of providing a conservative analysis in the Draft EIR, Phase 2 is assumed to begin in the 2031 after completion of Phase 1 and end in 2034. Therefore, since construction activities would occur over a period longer than 10 days for all stages, the corresponding significance criteria used in the construction noise analysis presented in this section of this Draft EIR is an increase in the ambient exterior noise levels by 5 dBA (hourly L_{eq}) or more at a noise-sensitive use.

(b) Operational Noise

A project would normally have a significant impact on noise levels from operation if:

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (see Table IV.J-4 on page IV.J-18 for a description of these categories); or

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA in CNEL or greater: or

- Project-related operational on-site (i.e., non-roadway) noise sources, such as outdoor building mechanical/electrical equipment, outdoor activities, loading docks, or parking facilities, increase the ambient noise level (hourly L_{eq}) at noise-sensitive uses by 5 dBA per LAMC Section 112.01(c), Section 112.02(a), Section 112.04(b), and Section 114.02(a).3.

The significance criterion used in the noise analysis for on-site operations presented above is an increase in the ambient noise level of 5 dBA (hourly L_{eq}) at the noise-sensitive uses, in accordance with the LAMC. The LAMC does not apply to off-site traffic (i.e., vehicles traveling on public roadways). Therefore, based on the *L.A. CEQA Thresholds Guide*, the significance criterion for off-site traffic noise associated with Project operations is an increase in the ambient noise level by 3 dBA or 5 dBA in CNEL (depending on the land use category) at noise-sensitive uses. In addition, the significance criterion for composite noise levels (on-site and off-site sources) is also based on the *L.A. CEQA Thresholds Guide*, which is an increase in the ambient noise level of 3 dBA or 5 dBA in CNEL (depending on the land use

category) for the Project's composite noise (both Project-related on-site and off-site sources) at noise-sensitive uses.

(3) FTA Ground-Borne Vibration Standards and Guidelines

The City of Los Angeles currently does not have significance criteria to assess vibration impacts during construction. Thus, the FTA guidelines set forth in FTA's *Transit Noise and Vibration Impact Assessment Manual* are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. The FTA guidelines regarding construction vibration are the most current guidelines and are commonly used in evaluating vibration impacts. Based on this FTA guidance, impacts relative to ground-borne vibration associated with potential building damage would be considered significant if any of the following events were to occur:

- Project construction activities cause groundborne vibration levels to exceed 0.5 PPV at the nearest off-site reinforced concrete, steel, or timber building.
- Project construction activities cause groundborne vibration levels to exceed 0.3 PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.2 PPV at the nearest off-site non-engineered timber and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.12 PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Based on FTA guidance, construction vibration impacts associated with human annoyance would be significant if the following were to occur (applicable to frequent events; 70 or more vibration events per day):

- Project construction activities cause ground-borne vibration levels to exceed 72 VdB at off-site sensitive uses, including residential, hotel and theater uses.
- Project construction activities cause ground-borne vibration levels to exceed 75 VdB at off-site school use.

In assessing impacts related to noise in this section, the City will use Appendix G as the thresholds of significance. The factors identified above from the *L.A. CEQA Thresholds Guide,* and the FTA Ground-Borne Vibration Standards and Guidelines will be used where applicable and relevant to assist in analyzing the Appendix G thresholds.

b. Methodology

(1) On-Site Construction Activities

Noise impacts due to on-site construction activities associated with the Project were evaluated by calculating the construction-related noise levels at representative sensitive receptor locations and comparing these estimated construction-related noise levels to the existing ambient noise levels (i.e., noise levels without construction noise from the Project). Construction noise associated with the Project was analyzed based on the Project's potential construction equipment inventory, construction durations, and construction schedule. The construction noise model for the Project is based on construction equipment noise levels as published by the FHWA's "Roadway Construction Noise Model (FHWA 2006)."[44] These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on a typical construction site often operates under less than full power conditions, or part power. To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage.[45] These noise levels are typically associated with multiple pieces of equipment operating simultaneously. The on-site construction-related noise levels were calculated by distributing all construction equipment over the entire construction site (i.e., as an area noise source). The on-site construction noise levels were calculated using the SoundPLAN (version 8.2) computer noise prediction model.[46] SoundPLAN is widely used by acoustical engineers as a noise modeling tool for environmental noise analysis. The ambient noise levels at surrounding sensitive receptor locations were based on field measurement data (see Table IV.J-6 on page IV.J-23). Additional noise attenuation was assigned to receptor locations where line-of-site to the Project Site was interrupted by the presence of intervening structures.

(2) Off-Site Construction Haul Trucks

Off-site construction noise impacts from haul trucks associated with the Project were analyzed using the FHWA's TNM. The TNM is the current Caltrans standard computer noise model for traffic noise studies. The model allows for the input of roadways, noise receivers, and sound barriers, if applicable. The construction-related off-site truck volumes were

---

[44] *The reference noise levels for construction equipment from the FHWA are based on measurements of newer construction equipment (published in 2006), rather than the noise levels from the Environmental Protection Agency report referenced in the L.A. CEQA Thresholds Guide (published in 1971).*

[45] *Pursuant to the FHWA Roadway Construction Noise Model User's Guide, 2006, page 7, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.*

[46] *SoundPLAN GmbH, SoundPLAN version 8.2, 2020.*

obtained from the Transportation Assessment prepared for the Project, which is included in Appendix K of this Draft EIR. The TNM calculates the hourly L_{eq} noise levels generated by construction-related haul trucks. Noise impacts were determined by comparing the predicted noise level of construction-related haul trucks plus the ambient noise levels with that of the existing ambient noise levels along the Project's anticipated haul route(s).

(3) On-Site Stationary Noise Sources (Operation)

On-site stationary point-source noise impacts were evaluated by: (1) identifying the noise levels that would be generated by the Project's stationary noise sources, such as rooftop mechanical equipment, outdoor activities (e.g., use of the outdoor spaces), parking facilities, and trash compactor; (2) calculating the noise level from each noise source at surrounding sensitive receptor property line locations; and (3) comparing such noise levels to ambient noise levels to determine significance. The on-site stationary noise sources were calculated using the SoundPLAN computer noise prediction model.

(4) Off-Site Roadway Noise (Operation

As discussed above in Subsection 2, off-site roadway noise was analyzed using the FHWA TNM and traffic data from the Project's Transportation Assessment, included in Appendix K of this Draft EIR. Roadway noise levels were calculated for various roadway segments based on the intersection traffic volumes. Roadway noise conditions without the Project were calculated and compared to noise levels that would occur with implementation of the Project to determine Project-related noise impacts for operational off-site roadway noise.

(5) Construction Vibration

Ground-borne vibration impacts due to the Project's construction activities were evaluated by identifying potential vibration sources (i.e., construction equipment), estimating the vibration levels at the receptor locations, and comparing the Project's activities to the applicable vibration significance thresholds, as described below. Vibration levels were calculated based on the FTA published standard vibration velocities for various construction equipment operations and calculation procedures. In addition, vibration impacts are evaluated based on maximum peak vibration levels generated by each type of construction equipment, per FTA guidance.

(6) Operational Vibration

The primary source of vibration related to the operation of the Project would include vehicle circulation within the parking facilities and off-site vehicular trips. However, as discussed above, vehicular-induced vibration is unlikely to be perceptible by people. The

Project would also include typical commercial-grade stationary mechanical equipment, such as air-handling units (mounted at grade or roof level), that would include appropriate vibration-attenuation mounts to reduce the vibration transmission. The Project does not include land uses that would generate high levels of vibration. In addition, ground-borne vibration attenuates rapidly as a function of distance from the vibration source.

c. Project Design Features

The following Project Design Features are proposed with regard to noise and vibration:

Project Design Feature NOI-PDF-1: Outdoor mounted mechanical equipment will be enclosed or screened by the building design (e.g., a roof parapet) from view of off-site noise-sensitive receptors at the street level.

Project Design Feature NOI-PDF-2: All loading docks will be acoustically screened from offsite noise-sensitive receptors.

Project Design Feature NOI-PDF-3: Outdoor amplified sound systems, if any, will be designed so as not to exceed the maximum noise level of 75 dBA (L_{eq-1hr}) at a distance of 15 feet from the amplified speaker sound systems at Level P3 (South Parcel) and Level 1 (North and South Parcels) common outdoor spaces; 80 dBA (L_{eq-1hr}) at Level 3 (North Parcel), Level 5 (South Parcel) and Level 6 (North Parcel) common outdoor spaces; and 85 dBA (L_{eq-1hr}) at Level 15 (North Parcel), Level 22 (South Parcel) and Level 26 (South Parcel) common outdoor spaces. A qualified noise consultant will provide written documentation that the design of the system complies with these maximum noise levels.

d. Analysis of Project Impacts

Threshold (a): Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

(1) Impact Analysis

(a) Construction Noise

As discussed above, construction of the Project would be phased, with development of the South Parcel occurring as Phase 1 and development of the North Parcel occurring as Phase 2. Phase 1 is anticipated to commence construction in 2028 and end in 2031. Phase 2 would be constructed within a few years of completing Phase 1, though the exact timing is dependent on market demand. For the purposes of providing a conservative analysis in the

Draft EIR, Phase 2 is assumed to begin in the 2031 after completion of Phase 1 and end in 2034. Therefore, the criteria for determining significance used in the construction noise analysis below is the exceedance of the ambient exterior noise levels by 5 dBA (hourly L_{eq}) or more at a noise sensitive use, per the L.A. CEQA Thresholds Guide. Construction of the Project would commence with the demolition of existing structures and surface parking, followed by grading and excavation, building foundations, building construction, paving/concrete installation, and landscape installation. In accordance with LAMC requirements, construction activities generally would be permitted to occur Monday through Friday from 7:00 A.M. to 9:00 P.M. and between 8:00 A.M. and 6:00 P.M. on Saturday or national holidays, or outside of these hours if an after-hours construction permit is approved by the Los Angeles Board of Police Commissioners. Construction delivery/haul trucks would travel on approved truck routes between the Project Site and the Golden State Freeway (I-5), as follows:

- Phase 1 (South Parcel): Trucks leaving the Project Site are anticipated to exit north on Spring Street, merge onto Broadway, and merge onto the I-5 Freeway southbound. Trucks coming to the Project Site are anticipated to exit the I-5 Freeway northbound at Broadway, head south (left) onto Broadway, merge onto Spring Street, head south to the Project Site.

- Phase 2 (North Parcel): Trucks leaving the Project Site are anticipated to exit north on Broadway, head north and merge onto the I-5 Freeway southbound. Trucks coming to the Project Site are anticipated to exit the I-5 Freeway northbound at Broadway, head south (left) onto Broadway to the Project Site.

An analysis of potential impacts associated with on-site construction activities and off-site construction activities including use of haul routes and off-site improvements (e.g., traffic signals, crosswalks, etc.) is provided below.

(i) On-Site Construction Noise

Noise impacts from Project-related construction activities occurring within or adjacent to the Project Site would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receptors. Construction activities for the Project would generally include site preparation, demolition, site grading and excavation for the partial subterranean parking garage, and building construction. Each stage of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading and excavation typically require the use of earth-moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of cranes, forklifts, concrete trucks, pumps, and delivery trucks. Noise from construction equipment would

generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site. In addition, Project construction subphases would have the potential to overlap. Therefore, overlapping construction noise activities of the subphases were evaluated to determine the potential impacts. As discussed above, construction activities within the South Parcel and North Parcel would not overlap.[47]

Individual pieces of construction equipment anticipated to be used during construction of the Project could produce maximum noise levels (L_{max}) of 74 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in Table IV.J-9 on page IV.J-35. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions, or part power. To more accurately characterize noise levels during construction, the average (hourly L_{eq}) noise level associated with each construction phase was calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction phase. These noise levels are typically associated with multiple pieces of equipment operating on partial power simultaneously.

Table IV.J-10 and Table IV.J-11 on pages IV.J-36 and IV.J-37, respectively, provide the estimated construction noise levels for various construction phases at the Project's 16 off-site noise-sensitive receptor locations (R1–R16), during Phase 1 (South Parcel) and Phase 2 (North Parcel) construction, respectively. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all pieces of construction equipment were assumed to operate simultaneously and be located at the construction area nearest to the affected receptors. These assumptions represent the worst-case noise scenario because construction activities would typically be spread out throughout the Project Site, and, thus, some equipment would be farther away from the affected receptors. In addition, the noise modeling assumes that construction noise is constant, when, in fact, construction activities and associated noise levels are periodic and fluctuate based on the construction activities.

As discussed above, because construction activities would occur over a period longer than 10 days for all phases, the corresponding significance criteria used in the construction noise analysis are when the construction-related noise exceeds the ambient Leq noise level of 5 dBA at a noise-sensitive use. As indicated in Table IV.J-10, the estimated noise levels during all individual subphases of Project Phase 1 construction would be below the significance threshold at all off-site receptor locations, except for receptor location R4. The estimated Phase 1 construction-related noise levels at receptor R4 would exceed the

[47] *Subphases refer to the different types of construction activities occurring and include site preparation, demolition, grading, trenching, foundations, building construction, architectural coatings, and paving/ landscaping.*

Table IV.J-9
Construction Equipment Noise Levels

Equipment	Estimated Usage Factor[a] (%)	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	40	78
Cement and Mortar Mixer	50	80
Concrete Mixer Truck	40	79
Concrete Saw	20	90
Crane	16	81
Delivery Truck	40	74
Dozer	40	82
Drill Rig	20	84
Dump/Haul Truck	40	76
Excavator	40	81
Forklift	10	75
Generator	50	81
Grader	40	85
Paver	50	77
Pump	50	81
Roller	20	80
Rubber Tired Loader	40	79
Tractor/Loader/Backhoe	40	84
Welders	40	74

[a] *Usage factor represents the percentage of time the equipment would be operating at full speed.*
Source: FHWA Roadway Construction Noise Model User's Guide, 2006.

significance threshold by up to 10.9 dBA. As provided in Table IV.J-11 on page IV.J-37, the estimated noise levels during Project Phase 2 construction subphases would be below the significance threshold at all receptor locations, except for receptor location R12. The estimated construction-related noise levels at receptor R12 would exceed the significance threshold by up to 4.2 dBA, during construction of the individual subphases of Phase 2.

The construction subphases of the Project would have the potential to overlap during the building construction and the paving/landscape subphases. Therefore, overlapping construction noise activities were evaluated to determine the potential impacts. Construction noise impacts associated with the overlapping construction subphases are provided in Table IV.J-12 and Table IV.J-13 on pages IV.J-38 and IV.J-39, for Phase 1 and Phase 2, respectively. As indicated in Table IV.J-12, the estimated noise levels due to overlapping construction activities during Phase 1 would exceed the significance thresholds at off-site

Table IV.J-10
On-Site Construction Noise Impacts by Subphase—Phase 1 (South Parcel)

Off-Site Receptor Location	Approximate Lateral Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Construction Phases (L_{eq} (dBA))								Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Site Preparation	Demo	Grading	Trenching	Foundation	Building Construction	Architectural Coatings	Paving/ Landscaping				
R1	460	57.9	60.1	60.4	58.3	62.2	62.4	53.0	54.4	58.2	63.2	0.0	No
R2	240	58.3	60.1	60.5	58.7	61.4	62.2	52.5	54.6	63.5	68.5	0.0	No
R3	210	53.0	54.9	55.3	53.4	56.4	57.0	47.4	49.8	64.0	69.0	0.0	No
R4	90	68.4	70.4	70.8	68.7	72.2	72.6	63.1	64.7	56.7	61.7	10.9	**Yes**
R5	220	57.6	59.2	59.8	58.0	60.3	61.4	51.5	54.0	56.8	61.8	0.0	No
R6	110	64.2	66.1	66.5	64.6	67.7	68.3	58.7	60.9	64.5	69.5	0.0	No
R7	580	53.3	55.4	55.7	53.6	57.3	57.6	48.2	53.4	62.2	67.2	0.0	No
R8	1245	49.1	51.4	51.7	49.5	53.6	53.6	44.3	47.4	69.6	74.6	0.0	No
R9	1955	40.2	42.3	42.7	40.6	44.4	44.6	35.2	37.0	62.6	67.6	0.0	No
R10	2080	44.1	46.4	46.6	44.5	48.5	48.6	39.3	41.6	68.7	73.7	0.0	No
R11	200	61.7	63.8	64.1	62.1	65.9	66.1	56.7	58.0	63.3	68.3	0.0	No
R12	1780	45.2	47.4	47.7	45.6	49.6	49.7	40.4	42.9	60.6	65.6	0.0	No
R13	615	54.1	56.4	56.7	54.5	58.5	58.6	49.3	57.7	57.2	62.2	0.0	No
R14	855	36.7	38.7	39.1	37.0	40.6	40.9	31.5	33.4	68.0	73.0	0.0	No
R15	860	47.6	49.8	50.1	48.0	52.0	52.1	42.8	45.3	62.6	67.6	0.0	No
R16	2075	41.8	44.0	44.3	42.2	46.0	46.2	36.8	39.0	62.6	67.6	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-11
On-Site Construction Noise Impacts by Subphase—Phase 2 (North Parcel)

Off-Site Receptor Location	Approximate Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Construction Phases (L_{eq} (dBA))								Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Site Preparation	Grading	Well Re-Abandonment	Trenching	Foundation	Building Construction	Architectural Coatings	Paving/ Landscaping				
R1	2100	43.2	45.8	47.4	43.6	47.6	47.7	38.4	41.4	58.2	63.2	0.0	No
R2	2630	43.0	45.6	46.4	43.4	47.4	47.5	38.2	39.6	63.5	68.5	0.0	No
R3	1975	44.1	46.6	47.4	44.5	48.5	48.6	39.3	41.8	64.0	69.0	0.0	No
R4	1575	45.8	48.3	49.1	46.1	50.2	50.3	41.0	44.0	56.7	61.7	0.0	No
R5	1700	30.5	32.9	33.9	30.8	34.6	34.8	25.5	27.4	56.8	61.8	0.0	No
R6	1440	47.4	49.9	50.0	47.8	51.7	51.9	42.5	45.4	64.5	69.5	0.0	No
R7	1700	35.4	37.8	40.5	35.8	39.2	39.6	30.1	38.9	62.2	67.2	0.0	No
R8	205	59.5	61.9	61.6	59.9	63.4	63.8	54.3	60.4	69.6	74.6	0.0	No
R9	265	54.5	56.9	64.4	54.8	58.3	58.7	49.2	49.6	62.6	67.6	0.0	No
R10	95	67.8	40.1	41.2	68.2	71.3	71.9	62.3	62.5	68.7	73.7	0.0	No
R11	2280	42.9	45.4	46.1	43.3	47.3	47.4	38.1	40.5	63.3	68.3	0.0	No
R12	165	65.6	68.0	67.2	66.0	69.5	69.8	60.4	61.3	60.6	65.6	4.2	**Yes**
R13	795	51.0	53.5	54.1	51.4	55.3	55.5	46.2	52.6	57.2	62.2	0.0	No
R14	3170	38.4	41.0	41.6	38.8	42.8	42.9	33.6	34.8	68.0	73.0	0.0	No
R15	400	56.7	59.1	61.1	57.1	60.8	61.0	51.6	53.3	62.6	67.6	0.0	No
R16	160	60.6	62.9	57.4	61.0	64.1	64.7	55.1	53.7	62.6	67.6	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-12
On-Site Construction Noise Impacts—Phase 1 (South Parcel) Overlapping Construction Subphases

Off-Site Receptor Location	Approximate Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Overlapping Construction (L_{eq} (dBA))					Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Grading + Trenching	Trenching + Mat Foundation	Trenching + Building Construction	Building Construction + Architectural Coating	Building Construction + Architectural Coating + Paving/Landscaping				
R1	460	62.5	63.7	63.8	62.9	63.4	58.2	63.2	0.6	**Yes**
R2	240	62.7	63.3	63.8	62.6	63.3	63.5	68.5	0.0	No
R3	210	57.5	58.2	58.6	57.5	58.1	64.0	69.0	0.0	No
R4	90	72.0	72.0	72.2	72.8	73.2	56.7	61.7	11.5	**Yes**
R5	220	62.0	62.3	63.0	61.8	62.5	56.8	61.8	1.2	**Yes**
R6	110	68.7	69.4	69.8	68.8	69.4	64.5	69.5	0.3	**Yes**
R7	580	57.8	58.8	59.1	58.1	59.3	62.2	67.2	0.0	No
R8	1245	53.7	55.0	55.0	54.1	54.9	69.6	74.6	0.0	No
R9	1955	44.8	45.9	46.1	45.1	45.7	62.6	67.6	0.0	No
R10	2080	48.7	50.0	50.0	49.1	49.8	68.7	73.7	0.0	No
R11	200	66.2	67.4	67.6	66.6	67.1	63.3	68.3	0.0	No
R12	1780	49.8	51.1	51.1	50.2	50.9	60.6	65.6	0.0	No
R13	615	58.7	60.0	60.0	59.1	61.5	57.2	62.2	0.0	No
R14	855	41.2	42.2	42.4	41.4	42.0	68.0	73.0	0.0	No
R15	860	52.2	53.5	53.5	52.6	53.3	62.6	67.6	0.0	No
R16	2075	46.4	47.5	47.7	46.7	47.4	62.6	67.6	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-13
On-Site Construction Noise Impacts—Phase 2 (North Parcel) Overlapping Construction Subphases

Off-Site Receptor Location	Approximate Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Overlapping Construction (L_{eq} (dBA))					Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Grading + Well Re-Abandonment	Trenching + Mat Foundation	Trenching + Building Construction	Building Construction + Architectural Coating	Building Construction + Architectural Coating + Paving/Landscaping				
R1	2100	49.7	49.1	49.1	48.2	49.0	58.2	63.2	0.0	No
R2	2630	49.0	48.9	48.9	48.0	48.6	63.5	68.5	0.0	No
R3	1975	50.0	50.0	50.0	49.1	49.8	64.0	69.0	0.0	No
R4	1575	51.7	51.6	51.7	50.8	51.6	56.7	61.7	0.0	No
R5	1700	36.4	36.1	36.3	35.3	35.9	56.8	61.8	0.0	No
R6	1440	53.0	53.2	53.3	52.4	53.2	64.5	69.5	0.0	No
R7	1700	42.4	40.8	41.1	40.1	42.5	62.2	67.2	0.0	No
R8	205	64.8	65.0	65.3	64.3	65.8	69.6	74.6	0.0	No
R9	265	65.1	59.9	60.2	59.2	59.6	62.6	67.6	0.0	No
R10	95	43.7	73.0	73.4	72.4	72.8	68.7	73.7	0.0	No
R11	2280	48.8	48.8	48.8	47.9	48.6	63.3	68.3	0.0	No
R12	165	70.6	71.1	71.3	70.3	70.8	60.6	65.6	5.7	**Yes**
R13	795	56.8	56.8	56.9	56.0	57.6	57.2	62.2	0.0	No
R14	3170	44.3	44.3	44.3	43.4	43.9	68.0	73.0	0.0	No
R15	400	63.2	62.3	62.5	61.5	62.1	62.6	67.6	0.0	No
R16	160	64.0	65.8	66.2	65.2	65.5	62.6	67.6	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

receptor locations R1, R4, R5 and R6, ranging from 0.3 dBA at receptor location R6 to 11.5 dBA at receptor location R4. The estimated noise levels due to overlapping construction activities during Phase 2 would exceed the significance thresholds at off-site receptor location R12 by up to 5.7 dBA.

Additionally, the concrete mat foundation pour during Phase I and Phase 2 could occur during the nighttime hours, if permitted by the Executive Director of the Board of Police Commissioners. Table IV.J-14 on page IV.J-41 provides the estimated noise levels due to the mat foundation pour at off-site receptor locations. As indicated in Table IV.J-14, the estimated noise level due to mat foundation pour would exceed the nighttime significance threshold (ambient plus 5 dBA) at receptor locations R1, R5, R6, and R11 during Phase 1. The estimated noise levels during Phase 2 nighttime mat foundation would exceed the significance threshold at receptor location R10. No significant impacts anticipated at receptor locations R4, R12, R13, R15 and R16, as these park uses and would not be occupied during the nighttime hours.

Therefore, as noted above, temporary noise impacts associated with the Project's on-site construction would be significant.

(ii) Off-Site Construction Noise

In addition to on-site construction noise sources, other noise sources may include materials delivery, concrete mixing, and haul trucks (construction trucks), as well as construction worker vehicles accessing the Project Site during construction. Typically, construction trucks generate higher noise levels than construction worker vehicles. The major noise sources associated with off-site construction trucks would be from the material delivery/concrete/haul trucks. With regard to haul routes, as described above, construction haul trucks would travel between the Project Site and I-5 Freeway via Broadway and Spring Street. The peak period (i.e., hourly truck trips) of construction with the highest number of construction trucks would occur during the mat foundation stage. During this construction stage, there would be a maximum of approximately 239 concrete trucks coming to and leaving the Project Site (equal to 479 total trips) per day. In addition, there would be up to approximately 72 haul trucks during the grading stage (total of 144 truck trips) per day. There would also be approximately 8 to 612 construction worker trips traveling to and from the Project Site on a daily basis during the various construction stages. Construction workers are expected to arrive at the Project Site before construction starts and leave when construction ends. Therefore, construction worker vehicle noise would not overlap with Project construction equipment or trucks. In addition, the noise levels generated by construction worker vehicle trips would be lower than the construction truck trips.[48]

[48] *Based on TNM noise model, a truck generates approximately 14 dBA louder than an automobile.*

Table IV.J-14
On-Site Construction Noise Impacts—Nighttime Mat Foundation

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels during Nighttime Mat Foundation, dBA (L_{eq})		Significance Criteria, dBA (L_{eq})[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))		Significant Impact Without Mitigation?
		Phase 1	Phase 2		Phase 1	Phase 2	
R1	56.7	62.2	47.6	61.7	0.5	0.0	**Yes**
R2	57.6	61.4	47.4	62.6	0.0	0.0	No
R3	58.5	56.4	48.5	63.5	0.0	0.0	No
R4	53.0	72.2	50.2	58.0	14.2	0.0	No[b]
R5	55.2	60.3	34.6	60.2	0.1	0.0	**Yes**
R6	59.8	67.7	51.7	64.8	2.9	0.0	**Yes**
R7	58.4	57.3	39.2	63.4	0.0	0.0	No
R8	65.2	53.6	63.4	70.2	0.0	0.0	No
R9	55.7	44.4	58.3	60.7	0.0	0.0	No
R10	61.6	48.5	71.3	66.6	0.0	4.7	**Yes**
R11	59.9	65.9	47.3	64.9	1.0	0.0	**Yes**
R12	54.0	49.6	69.5	59.0	0.0	10.5	No[b]
R13	52.5	58.5	55.3	57.5	1.0	0.0	No[b]
R14	59.4	40.6	42.8	64.4	0.0	0.0	No
R15	55.7	52.0	60.8	60.7	0.0	0.1	No[b]
R16	55.7	46.0	64.1	60.7	0.0	3.4	No[b]

[a] *Significance criteria are equivalent to the measured nighttime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

[b] *No significant impacts anticipated at these receptor locations, as park uses are not occupied during the nighttime hours.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-15 on page IV.J-42 provides the estimated number of construction-related truck trips, including haul/concrete/material delivery trucks, and the estimated noise levels along the anticipated truck route(s) for Project Phase 1 and Phase 2 construction. As indicated in Table IV.J-15, the hourly noise levels generated by Project construction trucks would be below the 5-dBA allowable significance threshold along the anticipated truck routes.

As discussed above, the construction stages of the Project would have the potential to overlap. Therefore, noise levels due to off-site construction trucks associated with overlapping construction stages were evaluated to determine potential impacts. Table IV.J-16 on page IV.J-43 provides the estimated number of construction-related truck trips, including haul/concrete/material delivery trucks and the estimated noise levels along the anticipated truck routes. As shown in Table IV.J-16, the hourly noise levels generated

Table IV.J-15
Off-Site Construction Truck Noise Levels

Construction Stage	Estimated Number of Construction Truck Trips per Day	Estimated Number of Construction Truck Trips per Hour[b]	Estimated Truck Noise Levels Plus Ambient Along the Project Truck Routes[a] (L_{eq} (dBA)) (Project/Project + Ambient)	
			Broadway	Spring Street
Phase 1 (South Parcel)				
Site Prep	54	9	58.9/69.1	58.0/64.4
Demo	12	2	52.4/68.8	51.5/63.6
Grading	144	24	63.2/69.8	62.3/65.8
Trenching	6	1	49.4/68.8	48.5/63.4
Mat Foundation	426	54	66.7/70.8	65.8/67.7
Building Construction	130	17	61.7/69.5	60.8/65.2
Methane Safety Design	2	1	49.4/68.8	48.5/63.4
Architectural Coating	2	1	49.4/68.8	48.5/63.4
Paving/Landscape	8	1	49.4/68.8	48.5/63.4
Phase 2 (North Parcel)				
Site Prep	60	10	59.4/69.2	--/--[c]
Grading	144	24	63.2/69.8	--/--[c]
Well Re-abandonment	6	1	49.4/68.8	--/--[c]
Trenching	6	1	49.4/68.8	--/--[c]
Mat Foundation	479	60	67.2/71.0	--/--[c]
Building Construction	84	11	59.8/69.2	--/--[c]
Methane Safety Design	2	1	49.4/68.8	--/--[c]
Architectural Coating	2	1	49.4/68.8	--/--[c]
Paving/Landscape	4	1	49.4/68.8	--/--[c]
Existing Ambient Noise Levels Along the Project Haul Routes, L_{eq} (dBA)[d]			68.7	63.3
Significance Threshold (L_{eq} (dBA))[e]			73.7	68.3
Maximum Exceedance Over Significance Threshold (L_{eq} (dBA))			0.0	0.0
Significant Impact?			No	No

[a] *Noise levels include Project-related truck trips plus ambient noise levels.*

[b] *For construction trucks, the number of hourly trips is based on an hourly average, assuming a uniform distribution of trips over an 8-hour work day. Haul truck hourly trips during demolition are based on 6 hours of hauling per day.*

[c] *No trucks on Spring Street for Phase 2 construction.*

[d] *Ambient noise levels along Broadway and Spring Street are based on measurements at nearby receptor location R10 (along Broadway) and R11 (along Spring Street), respectively.*

[e] *Significance thresholds are equivalent to the measured daytime ambient noise levels plus 5 dBA.*

Source: AES, 2025. See Construction Noise and Vibration Calculations provided in Appendix I of this Draft EIR.

Table IV.J-16
Off-Site Construction Truck Noise Levels—Overlapping Construction Stages

Overlapping Construction Stages	Estimated Number of Construction Truck Trips per Day	Estimated Number of Construction Truck Trips per Hour[b]	Estimated Truck Noise Levels Plus Ambient Along the Project Truck Routes[a] (L_{eq} (dBA)) (Project/Project + Ambient)	
			Broadway	Spring Street
Phase 1 (South Parcel)				
Grading + Trenching	150	25	63.4/69.8	62.5/65.9
Trenching + Mat Foundation	432	55	66.8/70.9	65.9/67.8
Trenching + Building Construction	136	18	62.0/69.5	61.1/65.3
Building Construction + Architectural Coating	132	18	62.0/69.5	61.1/65.3
Building Construction + Architectural Coating + Paving/Landscaping	140	19	62.2/69.6	61.3/65.4
Phase 2 (North Parcel)				
Grading + Well Re-abandonment	150	25	63.4/69.8	--/--[c]
Trenching + Mat Foundation	485	61	67.3/71.1	--/--[c]
Trenching + Building Construction	90	12	60.2/69.3	--/--[c]
Building Construction + Architectural Coating	86	12	60.2/69.3	--/--[c]
Building Construction + Architectural Coating + Paving/Landscaping	90	13	60.5/69.3	--/--[c]
Existing Ambient Noise Levels Along the Project Haul Routes, L_{eq} (dBA)[d]			68.7	63.3
Significance Threshold (L_{eq} (dBA))[e]			73.7	68.3
Maximum Exceedance Over Significance Threshold (L_{eq} (dBA))			0.0	0.0
Significant Impact?			No	No

[a] *Noise levels include Project-related truck trips plus ambient noise levels.*

[b] *For construction trucks, the number of hourly trips is based on an hourly average, assuming a uniform distribution of trips over an 8-hour work day. Haul truck hourly trips during demolition are based on 6 hours of hauling per day.*

[c] *No trucks on Spring Street for Phase 2 construction.*

[d] *Ambient noise levels along Broadway and Spring Street are based on measurements at nearby receptor location R10 (along Broadway) and R11 (along Spring Street), respectively.*

[e] *Significance thresholds are equivalent to the measured daytime ambient noise levels plus 5 dBA.*

Source: AES, 2025. See Construction Noise and Vibration Calculations provided in Appendix I of this Draft EIR.

by Project construction trucks along the anticipated haul routes along Broadway and Spring Street would be consistent with the existing daytime ambient noise levels for all construction stages, which would be below the 5-dBA significance threshold. **Therefore, temporary noise impacts from off-site construction trucks along the haul routes would be less than significant.**

As indicated above, the concrete mat foundation pour could occur during the nighttime hours, if permitted by the Executive Director of the Board of Police Commissioners. Estimated noise levels associated with concrete trucks due to the nighttime concrete mat pour are provided in Table IV.J-17 on page IV.J-45. As indicated in Table IV.J-17, the estimated noise levels due to nighttime concrete pour for the mat foundation would be above the 5-dBA significance thresholds along the anticipated truck routes. **Therefore, temporary noise impacts from off-site construction trucks along the haul routes would be potentially significant in the event of a nighttime mat pour.**

The Project would require minor off-site improvements that would generally be contained in the adjacent rights-of-way to the Project Site, including along North Broadway, Bishops Road, and Solano Avenue. Off-site improvements would include sidewalk dedications, street widenings and improvements (e.g., curb, gutter, sidewalk, and ADA improvements), planting of street trees, roadway circulation improvements, installation of street lights, and removal and installation of various connections to underground utility infrastructure, and a signalized crosswalk by the North Parcel to provide connectivity to Elysian Park.` Table IV.J-18 on page IV.J-46 provides the estimated off-site improvements construction noise levels at the 16 off-site receptor locations. As indicated in Table IV.J-18, the estimated off-site improvements construction noise levels would exceed the significance thresholds at receptor locations R4 through R7, R13 and R16. However, construction activities associated with off-site construction activities would occur over a short duration (e.g., several months). **Nonetheless, temporary noise impacts from off-site improvements construction would be significant.**

(iii) Summary of Construction Noise Impacts

As analyzed above, on-site and off-site construction activities associated with the Project would result in a temporary increase in ambient noise levels in the vicinity of the Project in excess of the 5-dBA significance threshold established by the City. **Therefore, temporary noise impacts associated with the Project's on-site and off-site construction activities would be significant.**

(b) Operational Noise

This section provides a discussion of potential operational noise impacts at nearby noise-sensitive receptors. Specific operational noise sources addressed herein are (a) on-site stationary noise sources, including outdoor-mounted mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] equipment), activities associated with the proposed common outdoor spaces (located at Level P3, Level 1, Level 3, Level 5, Level 6, Level 14, Level 22 and Level 26), parking facilities, and loading dock and trash compactors; and (b) off-site mobile (roadway traffic) noise sources.

Table IV.J-17
Off-Site Construction Truck Noise Levels—Nighttime Mat Foundation

Nighttime Construction Stages	Estimated Number of Construction Truck Trips per Day	Estimated Number of Construction Truck Trips per Hour[b]	Estimated Truck Noise Levels Plus Ambient Along the Project Truck Routes[a] (L_{eq} (dBA)) (Project/Project + Ambient)	
			Broadway	Spring Street
Phase 1 Mat Foundation	426	54	66.7/67.9	65.8/66.4
Phase 2 Mat Foundation	479	60	67.2/68.3	--/--[c]
Existing Nighttime Ambient Noise Levels Along the Project Haul Routes, L_{eq} (dBA)[d]			61.6	57.6
Significance Threshold (L_{eq} (dBA))[e]			66.6	62.6
Maximum Exceedance Over Significance Threshold (L_{eq} (dBA))			1.7	3.8
Significant Impact?			**Yes**	**Yes**

[a] *Noise levels include Project-related truck trips plus ambient noise levels.*

[b] *For construction trucks, the number of hourly trips is based on an hourly average, assuming a uniform distribution of trips over an 8-hour work day. Haul truck hourly trips during demolition are based on 6 hours of hauling per day.*

[c] *No trucks on Spring Street for Phase 2 construction.*

[d] *Ambient noise levels along Broadway and Spring Street are based on measurements at nearby receptor locations R10 (along Broadway) and R11 (along Spring Street), respectively.*

[e] *Significance thresholds are equivalent to the measured daytime ambient noise levels plus 5 dBA.*

Source: AES, 2025. See Construction Noise and Vibration Calculations provided in Appendix I of this Draft EIR.

(i) On-Site Stationary Noise Sources

Mechanical Equipment

As part of the Project, new mechanical equipment (e.g., air ventilation equipment) would be located at the roof level and/or within each of the building structures (e.g., garage exhaust fans). Although operation of this equipment would generate noise, Project-related outdoor mechanical equipment would be designed so as not to increase the existing ambient noise levels by 5 dBA in accordance with the City's Noise Regulations. Specifically, the Project would comply with LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise levels on the premises of other occupied properties by more than 5 dBA. In addition, as provided above in Project Design Feature NOI-PDF-1, all outdoor mounted mechanical equipment would be enclosed or screened from off-site noise-sensitive receptors.

Table IV.J-18
Off-Site Improvements Construction Noise Impacts

Off-Site Receptor Location	Estimated Off-Site Construction Noise Levels (L_{eq} (dBA))						Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
	Water and Sewer Laterals Improvements			3-ft Dedication	ADA Ramp	Street Light				
	Excavation	Utilities	Paving							
R1	53.6	53.6	56.7	51.6	55.1	54.1	58.2	63.2	0.0	No
R2	44.9	44.9	47.7	44.8	49.0	46.8	63.5	68.5	0.0	No
R3	61.4	61.4	64.4	56.9	63.9	63.5	64.0	69.0	0.0	No
R4	65.7	65.7	68.8	61.3	65.0	66.6	56.7	61.7	7.1	**Yes**
R5	63.0	63.0	66.0	57.4	69.4	66.9	56.8	61.8	7.6	**Yes**
R6	71.7	71.7	74.4	66.6	68.1	67.9	64.5	69.5	4.9	**Yes**
R7	54.9	54.9	57.8	63.7	75.4	53.5	62.2	67.2	8.2	**Yes**
R8	59.7	59.7	62.8	69.9	60.1	58.6	69.6	74.6	0.0	No
R9	55.6	55.6	58.6	54.5	66.5	63.2	62.6	67.6	0.0	No
R10	69.7	69.7	72.4	68.3	66.6	65.9	68.7	73.7	0.0	No
R11	52.3	52.3	55.5	50.2	54.1	53.6	63.3	68.3	0.0	No
R12	59.6	59.6	62.1	58.8	59.2	61.2	60.6	65.6	0.0	No
R13	56.9	56.9	60.0	66.4	69.7	56.2	57.2	62.2	7.5	**Yes**
R14	38.2	38.2	41.0	38.4	41.8	40.0	68.0	73.0	0.0	No
R15	56.9	56.9	60.1	57.8	58.1	58.3	62.6	67.6	0.0	No
R16	58.7	58.7	61.6	60.5	74.3	74.9	62.6	67.6	7.3	**Yes**

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide, for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance thresholds, a construction-related noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-19 on page IV.J-48 presents the estimated noise levels at the off-site receptor locations from operation of the Project mechanical equipment. As indicated in Table IV.J-19, the estimated noise levels from the mechanical equipment would range from 32.4 dBA (L_{eq}) at the uses represented by receptor location R14 to 43.7 dBA (L_{eq}) at the uses represented by receptor location R6, which would be well below the existing ambient noise levels. Further, the estimated ambient noise levels at all off-site receptor locations with the addition of the Project's mechanical equipment would be below the significance criterion of 5 dBA (L_{eq}) above ambient noise levels (based on the lowest measured ambient noise levels). **Therefore, noise impacts from mechanical equipment would be less than significant.**

Outdoor Spaces

As discussed in Section II, Project Description, of this Draft EIR, the Project would include various common and private open spaces within the Project Site. The common outdoor open space areas would be located on Level P3, Level 1, Level 3, Level 5, Level 6, Level 14, Level 22, and Level 26, which would be comprised of plazas, pool decks and terraces. Noise sources associated with outdoor uses typically include noise from people gathering and conversing. However, in accordance with recent case law, noise generated by the Project residents and their guests is not a significant impact under CEQA.[49] Therefore, noise levels associated with people gathering and conversing are not included in the noise analysis.

A potential noise source associated with outdoor uses would be the use of an outdoor sound system (e.g., music or other sounds broadcast through an outdoor mounted speaker system) at the Level 6 outdoor spaces. As set forth in Project Design Feature NOI-PDF-3, the amplified sound system used in outdoor areas would be designed so as not to exceed the maximum noise levels of 75 dBA L_{eq} at a distance of 15 feet from the amplified speaker sound system at Level P3 and Level 1, 80 dBA L_{eq} at Level 3, Level 5 and Level 6, and 85 dBA L_{eq} at Level 14, Level 22 and Level 26, thereby ensuring that the amplified sound system would not exceed the significance criteria (i.e., an increase of 5 dBA L_{eq}) at any off-site noise-sensitive receptor location.

Table IV.J-20 on page IV.J-49 presents the estimated noise levels at the off-site sensitive receptors resulting from the potential use of outdoor amplification systems with areas. As presented in Table IV.J-20, the estimated noise levels from the outdoor spaces would range from 30.5 dBA (L_{eq}) at the uses represented by receptor location R14 to 62.5 dBA (L_{eq}) at the uses represented by receptor location R10. The estimated ambient noise levels with the addition of the noise levels generated by the Project's outdoor spaces

[49] *California Assembly Bill No. 1307, Approved by Governor September 07, 2023.*

Table IV.J-19
Estimated Noise Levels from Mechanical Equipment

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Mechanical Equipment, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria, dBA (L_{eq})[a]	Exceedance over Significance Criteria	Significant Impact?
R1	56.7	38.6	56.8	61.7	0.0	No
R2	57.6	35.8	57.6	62.6	0.0	No
R3	58.5	42.6	58.6	63.5	0.0	No
R4	53.0	35.3	53.1	58.0	0.0	No
R5	55.2	41.1	55.4	60.2	0.0	No
R6	59.8	43.7	59.9	64.8	0.0	No
R7	58.4	32.5	58.4	63.4	0.0	No
R8	65.2	41.8	65.2	70.2	0.0	No
R9	55.7	41.5	55.9	60.7	0.0	No
R10	61.6	40.2	61.6	66.6	0.0	No
R11	59.9	39.7	59.9	64.9	0.0	No
R12	54.0	38.8	54.1	59.0	0.0	No
R13	52.5	36.6	52.6	57.5	0.0	No
R14	59.4	32.4	59.4	64.4	0.0	No
R15	55.7	42.9	55.9	60.7	0.0	No
R16	55.7	37.1	55.8	60.7	0.0	No

[a] *Significance criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

would be below the significance criteria of 5 dBA (L_{eq}) above ambient noise levels (based on the lowest measured ambient noise level) at all off-site receptor locations. **As such, noise impacts from the use of outdoor amplification within the outdoor spaces would be less than significant.**

Parking Facilities

As discussed in Section II, Project Description, of this Draft EIR, the Project would provide 1,477 vehicular parking spaces within partial subterranean garages in the South Parcel and North Parcel. The partially subterranean parking levels would be fully enclosed or screened on all sides, except for the entrance/exit at Level 1 (North Parcel) and Level P3 (South Parcel). Sources of noise within the parking facilities would primarily include vehicular

Table IV.J-20
Estimated Noise Levels from Outdoor Spaces

Receptor Location	Existing Ambient Noise Levels (dBA (L_{eq}))	Estimated Noise Levels from Outdoor Spaces (dBA (L_{eq}))	Ambient + Project Noise Levels (dBA (L_{eq}))	Significance Criteria[a]	Exceedance Over Significance Criteria	Significant Impact?
R1	56.7	55.1	59.0	61.7	0.0	No
R2	57.6	42.3	57.7	62.6	0.0	No
R3	58.5	45.5	58.7	63.5	0.0	No
R4	53.0	54.2	56.7	58.0	0.0	No
R5	55.2	43.4	55.5	60.2	0.0	No
R6	59.8	52.4	60.5	64.8	0.0	No
R7	58.4	46.3	58.7	63.4	0.0	No
R8	65.2	46.0	65.3	70.2	0.0	No
R9	55.7	49.5	56.6	60.7	0.0	No
R10	61.6	62.5	65.1	66.6	0.0	No
R11	59.9	58.5	62.3	64.9	0.0	No
R12	54.0	46.9	54.8	59.0	0.0	No
R13	52.5	45.9	53.4	57.5	0.0	No
R14	59.4	30.5	59.4	64.4	0.0	No
R15	55.7	45.6	56.1	60.7	0.0	No
R16	55.7	47.7	56.3	60.7	0.0	No

[a] *Significance criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2025, See Appendix I of this Draft EIR.

movements and engine noise, doors opening and closing, and intermittent car alarms. Noise levels within the parking facilities would fluctuate with the amount of automobile and human activity. Table IV.J-21 on page IV.J-50 presents the estimated noise levels from the parking garages at the off-site receptor locations. As presented in Table IV.J-20, the estimated noise levels from the parking facilities would range from 13.0 dBA (L_{eq}) at the uses represented by receptor location R7 to 44.0 dBA (L_{eq}) at the uses represented by receptor location R10. As indicated in Table IV.J-21, the estimated ambient noise levels with the addition of the noise levels generated by the Project parking facilities would be below the significance criteria of 5 dBA (L_{eq}) above the ambient noise levels (based on the lowest measured ambient). **Therefore, noise impacts from the parking facilities would be less than significant.**

Table IV.J-21
Estimated Noise Levels from Parking Facilities

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Parking Facilities, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria[a]	Exceedance Over Significance Criteria	Significant Impact?
R1	56.7	19.5	56.7	61.7	0.0	No
R2	57.6	31.3	57.6	62.6	0.0	No
R3	58.5	23.7	58.5	63.5	0.0	No
R4	53.0	24.1	53.0	58.0	0.0	No
R5	55.2	15.6	55.2	60.2	0.0	No
R6	59.8	22.1	59.8	64.8	0.0	No
R7	58.4	13.0	58.4	63.4	0.0	No
R8	65.2	31.1	65.2	70.2	0.0	No
R9	55.7	31.5	55.7	60.7	0.0	No
R10	61.6	44.0	61.7	66.6	0.0	No
R11	59.9	32.9	59.9	64.9	0.0	No
R12	54.0	24.4	54.0	59.0	0.0	No
R13	52.5	15.7	52.5	57.5	0.0	No
R14	59.4	14.4	59.4	64.4	0.0	No
R15	55.7	32.1	55.7	60.7	0.0	No
R16	55.7	30.4	55.7	60.7	0.0	No

[a] *Significance criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

Loading Dock and Trash Collection Areas

The Project loading docks, and trash compactors would be located at the Level P3 of the South Parcel and at the Level 1 of the North Parcel. Noise sources associated with the loading dock and trash collection area would include delivery/trash collection trucks and operation of the trash compactor. Based on measured noise levels from typical loading dock facilities and trash compactors, delivery/trash collection trucks and trash compactors could generate noise levels of approximately 71 dBA (L_{eq}) and 66 dBA (L_{eq}), respectively, at a distance of 50 feet.[50] The trash compactors would be located inside an enclosed space, which would be effectively shielded to the off-site sensitive receptors. Table IV.J-22 on page IV.J-51 presents the estimated noise levels at the off-site sensitive receptors resulting

[50] *RK Engineering Group, Inc., Wal-Mart/Sam's Club Reference Noise Level Study, 2003.*

Table IV.J-22
Estimated Noise Levels from Loading Dock and Trash Compactors

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Loading Dock and Trash Compactors Operation, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria[a]	Exceedance Over Significance Criteria	Significant Impact?
R1	56.7	45.1	57.0	61.7	0.0	No
R2	57.6	17.3	57.6	62.6	0.0	No
R3	58.5	19.6	58.5	63.5	0.0	No
R4	53.0	39.0	53.2	58.0	0.0	No
R5	55.2	17.1	55.2	60.2	0.0	No
R6	59.8	20.1	59.8	64.8	0.0	No
R7	58.4	30.4	58.4	63.4	0.0	No
R8	65.2	38.9	65.2	70.2	0.0	No
R9	55.7	32.0	55.7	60.7	0.0	No
R10	61.6	60.5	64.1	66.6	0.0	No
R11	59.9	34.0	59.9	64.9	0.0	No
R12	54.0	28.6	54.0	59.0	0.0	No
R13	52.5	29.6	52.5	57.5	0.0	No
R14	59.4	0.0	59.4	64.4	0.0	No
R15	55.7	29.1	55.7	60.7	0.0	No
R16	55.7	32.9	55.7	60.7	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels, whichever is lower (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2025. See Appendix I of this Draft EIR.

from the loading activities and operation of the trash compactor. As presented in Table IV.J-22, the estimated noise levels from the loading and trash compactors would range from 0.0 dBA (L_{eq}) at the uses represented by receptor location R14 to 60.5 dBA (L_{eq}) at the uses represented by receptor location R10. The estimated ambient noise levels with the addition of the noise levels generated by the Project's loading activities and trash compactors would be below the significance criterion of 5 dBA (L_{eq}) above ambient noise levels (based on the lowest measured ambient) at all off-site receptor locations. **Therefore, noise impacts from loading dock and trash compactor operations would be less than significant.**

Summary of On-Site Stationary Noise Sources

As analyzed above, Project on-site stationary noise sources would not result in an increase in ambient noise levels in the vicinity of the Project in excess of the 5-dBA significance criteria established by the City. **Therefore, noise impacts associated with the Project's on-site stationary noise sources would be less than significant.**

(ii) Off-Site Mobile Noise Sources

Future Plus Project

Future roadway noise levels were calculated along 20 roadway segments in the vicinity of the Project Site. The roadway noise levels were calculated using the traffic data provided in the Traffic Assessment prepared for the Project, which is included in Appendix K of this Draft EIR. As discussed in the Supplemental Transportation Assessment, the Project is expected to generate a net increase of 426 and 390 vehicle trips during the morning and afternoon peak hour, respectively. As such, Project-related traffic would increase the existing traffic volumes along the roadway segments in the study area when compared with Future Without Project conditions. This increase in roadway traffic was analyzed to determine if any traffic-related noise impacts would result from the operation of the Project.

Table IV.J-23 on page IV.J-53 provides a summary of the roadway noise impact analysis. The calculated CNEL levels are conservative as the noise levels experienced along the roadways do not account for the presence of any existing physical sound barriers or intervening structures. As shown in Table IV.J-23, the Project would result in a maximum increase of up to 0.2 dBA (CNEL) in traffic noise along the roadway segment of Broadway (between College Street and Bernard Street). At other analyzed roadway segments, the increase in traffic-related noise levels would be 0.1 dBA or lower. The increase in traffic noise levels along analyzed roadway segments would be considered negligible and below the 3-dBA CNEL significance criterion, which is applicable to noise levels that fall within the normally unacceptable land use category (i.e., between 70 and 75 dBA CNEL); and below the 5-dBA CNEL significance criterion, which is applicable to noise levels that fall within the conditionally acceptable land use category (i.e., between 60 and 70 dBA CNEL). **Therefore, traffic noise impacts under Future Plus Project conditions would be less than significant.**

Table IV.J-23
Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Future Without Project	Future Plus Project		
Broadway					
Between Arcadia St. and Cesar Chavez	Residential	73.2	73.3	0.1	No
Between Cesar Chavez and Ord St.	Residential	72.7	72.9	0.2	No
Between Cesar Ord St. and Alpine St.	Commercial	72.4	72.6	0.2	No
Between Alpine St. and College St.	Residential	73.4	73.6	0.2	No
Between College St. and Bernard St.	Residential, Motel	73.7	74.0	0.3	No
Between Bernard St. and Bishop Rd.	School	73.4	73.6	0.2	No
Between Bishop Rd. and Solano Ave.	Residential	74.2	74.3	0.1	No
Between Solano Ave. and Avenue 18	Residential	73.6	73.7	0.1	No
Between Ave. 18 and Avenue 19	Motel	73.0	73.1	0.1	No
Spring Street					
Between Alpine St. and College St.	Residential	73.8	73.9	0.1	No
Between College St. and Avenue 18	Park, Motel	73.7	73.8	0.1	No
College Street					
Between Hill St. and Broadway	Commercial	70.8	71.0	0.2	No
Between Broadway and Spring St.	Residential	70.8	70.9	0.1	No
Alpine Street					
Between Hill St. and Broadway	Commercial	69.7	69.8	0.1	No
Between Broadway and Spring St.	Commercial	69.5	69.5	0.0	No
Bernard Street					
Between Hill St. and Broadway	Residential, Motel	65.4	65.4	0.0	No
Bishop Road					
Between Stadium Way and Broadway	Residential, School	68.6	68.7	0.1	No

Table IV.J-23 (Continued)
Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Future Without Project	Future Plus Project		
Solano Avenue					
Between Amador St. and Broadway	Residential	68.0	68.2	0.2	No
Avenue 18					
Between Pasadena Ave. and Broadway	Commercial	64.9	64.9	0.0	No
Between Broadway and Albion St.	Residential	66.1	66.1	0.0	No

[a] *See Off-Site Traffic Noise Calculations for Future No Project Conditions and Future Plus Project Conditions provided in Appendix I of this Draft EIR.*

Source: AES, 2025.

Existing Plus Project

The analysis of traffic noise impacts provided above was based on the incremental increase in traffic noise levels attributable to the Project as compared to Future Without Project conditions. An additional analysis was performed to determine the potential noise impacts based on the increase in noise levels due to Project-related traffic compared with the existing baseline traffic noise conditions.

As shown in Table IV.J-24 on page IV.J-56, when compared with existing conditions, the Project would result in a maximum increase of up to 0.3 dBA (CNEL) in traffic noise along the roadway segment of Broadway (between Cesar Chavez and Alpine Street, and between College Street and Bishop Road) and the roadway segment of College Street (between Hill Street and Broadway). At other analyzed roadway segments, the increase in traffic-related noise levels would be 0.2 dBA or lower. The increase in traffic noise levels along analyzed roadway segments would be considered negligible and below the 3-dBA CNEL significance criterion, which is applicable to noise levels that fall within the normally unacceptable land use category (i.e., between 70 and 75 dBA CNEL); and below the 5-dBA CNEL significance criterion, which is applicable to noise levels that fall within the conditionally acceptable land use category (i.e., between 60 and 70 dBA CNEL). **Therefore, traffic noise impacts under Existing Plus Project conditions would be less than significant.**

Summary of Off-Site Mobile Noise Sources

As analyzed above, Project off-site mobile noise sources would not result in an increase in ambient noise levels in the vicinity of the Project in excess of the 5-dBA significance criteria established by the City. **Therefore, noise impacts associated with the Project's off-site mobile noise sources would be less than significant.**

(iii) Composite Noise Level Impacts from Project Operations

In addition to considering the potential noise impacts to the Project neighboring noise-sensitive receptors from each specific on-site and off-site noise source (e.g., mechanical equipment, outdoor areas, loading dock and trash compactors, parking facilities, and off-site traffic), an evaluation of potential composite noise level increases (i.e., noise levels from all on-site noise sources combined) at the analyzed sensitive receptor locations was also performed. This evaluation of composite noise levels from all on-site Project-related noise sources, evaluated using the CNEL noise metric, was conducted to determine the contributions at the noise-sensitive receptor locations in the vicinity of the Project Site.

Table IV.J-25 on page IV.J-58 presents the estimated composite noise levels in terms of CNEL at the 16 off-site sensitive receptor locations from the Project-related noise sources. As indicated in Table IV.J-25, the Project would potentially result in an increase in composite noise levels ranging from 0.3 dBA at the uses represented by receptor locations R8 and R14

Table IV.J-24
Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Existing	Existing Plus Project		
Broadway					
Between Arcadia St. and Cesar Chavez	Residential	71.8	72.0	0.2	No
Between Cesar Chavez and Ord St.	Residential	71.3	71.6	0.3	No
Between Cesar Ord St. and Alpine St.	Commercial	71.1	71.4	0.3	No
Between Alpine St. and College St.	Residential	72.2	72.4	0.2	No
Between College St. and Bernard St.	Residential, Motel	72.8	73.1	0.3	No
Between Bernard St. and Bishop Rd.	School	72.4	72.7	0.3	No
Between Bishop Rd. and Solano Ave.	Residential	73.2	73.4	0.2	No
Between Solano Ave. and Avenue 18	Residential	72.6	72.7	0.1	No
Between Ave. 18 and Avenue 19	Motel	71.8	72.0	0.2	No
Spring Street					
Between Alpine St. and College St.	Residential	72.4	72.5	0.1	No
Between College St. and Avenue 18	Park, Motel	72.3	72.4	0.1	No
College Street					
Between Hill St. and Broadway	Commercial	68.9	69.2	0.3	No
Between Broadway and Spring St.	Residential	68.8	68.9	0.1	No
Alpine Street					
Between Hill St. and Broadway	Commercial	68.5	68.6	0.1	No
Between Broadway and Spring St.	Commercial	68.6	68.6	0.0	No
Bernard Street					
Between Hill St. and Broadway	Residential, Motel	64.7	64.7	0.0	No
Bishop Road					
Between Stadium Way and Broadway	Residential, School	67.3	67.4	0.1	No

Table IV.J-24 (Continued)
Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Existing	Existing Plus Project		
Solano Avenue					
Between Amador St. and Broadway	Residential	67.1	67.3	0.2	No
Avenue 18					
Between Pasadena Ave. and Broadway	Commercial	64.4	64.4	0.0	No
Between Broadway and Albion St.	Residential	65.5	65.5	0.0	No

[a] *See Off-Site Traffic Noise Calculations for Future No Project Conditions and Future Plus Project Conditions provided in Appendix I of this Draft EIR.*

Source: AES, 2025.

Table IV.J-25
Composite Noise Impacts

Receptor Location	Existing Ambient Noise Levels (CNEL (dBA))	Calculated Project-Related Noise Sources (CNEL (dBA))					Project Composite Noise Levels (CNEL (dBA))	Ambient Plus Project Composite Noise Levels (CNEL (dBA))	Increase in Noise Levels due to Project (CNEL (dBA))	Significance Threshold[a] (CNEL (dBA))	Significant Impact?
		Traffic	Mechan-ical	Outdoor Spaces	Parking	Loading & Trash Compactor					
R1	61.7	48.6	45.3	59.2	26.2	42.3	59.8	63.9	2.2	66.7	No
R2	64.2	60.8	42.1	42.3	33.4	15.0	60.9	65.9	1.7	69.2	No
R3	64.9	60.8	49.3	49.6	30.4	17.1	61.4	66.5	1.6	69.9	No
R4	58.7	45.7	42.0	58.3	30.8	36.2	58.6	61.7	3.0	63.7	No
R5	60.2	49.9	47.8	47.5	22.3	14.8	53.3	61.0	0.8	65.2	No
R6	65.9	59.0	50.4	56.5	28.8	17.6	61.3	67.2	1.3	70.9	No
R7	64.1	57.6	39.2	50.4	19.7	27.6	58.4	65.1	1.0	69.1	No
R8	72.8	59.9	48.5	50.1	37.8	36.1	60.7	73.1	0.3	75.8	No
R9	62.8	47.2	48.2	53.6	38.2	29.2	55.5	63.5	0.7	67.8	No
R10	68.8	56.3	46.9	66.6	50.7	57.7	67.6	71.2	2.4	71.8	No
R11	65.5	56.3	43.0	58.0	39.6	31.2	60.3	66.7	1.2	70.5	No
R12	60.9	45.1	45.5	51.0	31.1	25.8	52.9	61.5	0.6	65.9	No
R13	58.6	44.5	43.3	50.0	22.4	26.8	51.8	59.4	0.8	63.6	No
R14	67.5	55.9	39.1	34.6	21.1	6.3	56.0	67.8	0.3	72.5	No
R15	62.8	46.6	49.6	49.7	38.8	26.3	53.8	63.3	0.5	67.8	No
R16	62.8	50.7	43.8	51.8	37.1	30.1	54.8	63.4	0.6	67.8	No

[a] *Significance thresholds are equivalent to the existing ambient noise levels plus 3 dBA if the estimated noise levels (ambient plus Project) fall within the "normally unacceptable" or "clearly unacceptable" land use categories or ambient noise levels plus 5 dBA if the estimated noise levels fall within the "normally acceptable" or "conditionally acceptable" land use categories, per the City of Los Angeles Noise Element and the L.A. CEQA Thresholds Guide. If the estimated noise levels exceed those significance thresholds, a potentially significant noise impact is identified.*

Source: AES, 2025. See Operations Noise Calculations provided in Appendix I of this Draft EIR.

to 3.0 dBA at the uses represented by receptor location R4. The composite noise level from Project operation at off-site receptor locations R8 and R10 would be below the 3-dBA significance criterion as the Ambient Plus Project Composite noise level falls within the normally unacceptable (70 to 75 CNEL) range for residential land use categories. In addition, the composite noise levels from Project operation at off-site receptor locations R1 through R7, R9, and R11 through R16 would be below the 5-dBA significance criterion as the ambient plus Project composite noise levels fall within the normally and conditionally acceptable (less than 70 CNEL) range for the residential land use categories. As such, composite noise level impacts due to Project operations would be less than significant.

Based on the above, Project operations would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the City's general plan or noise ordinance, or applicable standards of other agencies. Therefore, the Project's operational noise impacts from on- and off-site sources would be less than significant.

(2) Mitigation Measures

(a) On-Site Construction Noise

As analyzed above, construction of the Project would have the potential to result in significant noise impacts at sensitive receptor locations from on-site construction activities. Therefore, the following mitigation measure is provided to reduce construction-related noise impacts:

Mitigation Measure NOI-MM-1: A temporary and impermeable sound barrier shall be erected at the locations listed below, during Phase 1 (South Parcel) construction. At plan check, building plans shall include documentation (including the sound barrier locations and heights) prepared by a noise consultant verifying compliance with this measure.

Phase 1 (South Parcel)

- Along the southeastern property line of the South Parcel between the construction areas and the residential uses (receptor location R1) and the park use (receptor location R4), located east of the Project Site. The temporary sound barrier shall be designed to provide a minimum 3-dBA and 12-dBA noise reduction at the ground level of receptor locations R1 and R4, respectively.
- Along the northwestern property line of the South Parcel between the construction areas and residential use (receptor location R5) and religious use (receptor location R6) along Broadway, north of the Project Site. The temporary sound barrier shall be designed to provide a minimum 3-dBA noise reduction at the ground level of receptor locations R5 and R6.

(b) Off-Site Construction Noise

Noise impacts from off-site construction truck traffic would be less than significant during the typical daytime construction. However, off-site construction truck during the nighttime concrete pour for the mat foundation would be significant along Broadway and Spring Street. There are no feasible mitigation measures that could be implemented to reduce this short-term impact (few days during the mat foundation phase) because conventional mitigation measures, such as providing temporary noise barrier walls to reduce the off-site construction truck traffic noise impacts, would not be practical as the barriers would obstruct the access and visibility to the properties along the anticipated haul routes.

Construction of the Project would have the potential to result in significant temporary noise impacts associated with off-site improvements. Therefore, the following mitigation measure is provided to reduce off-site construction-related noise impacts.

Mitigation Measure NOI-MM-2: A temporary and impermeable sound barrier shall be erected at the locations listed below during off-site construction. At plan check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

- During the off-site water and sewer laterals improvements construction along Broadway—Provide a temporary moveable noise barrier between the construction equipment and receptor locations R4, R5 and R6. The temporary noise barrier shall be designed, located, installed, and implemented to provide a minimum 8-dBA, 5-dBA, and 5-dBA noise reduction at receptor locations R4, R5, and R6, respectively.
- During the off-site 3-foot street dedication construction along Broadway—Provide a temporary moveable noise barrier between the construction equipment and the park uses to the east (represented by receptor location R13). The temporary noise barrier shall be designed, located, installed, and implemented to provide a minimum 5-dBA at receptor location R13.
- During the off-site ADA Ramp improvements construction along Broadway—Provide a temporary movable noise barrier between the construction equipment and receptor locations R4, R5, R7, R13 and R16. The temporary noise barrier shall be designed to provide a minimum 4-dBA, 8-dBA, 9-dBA, 8-dBA, and 7-dBA noise reduction at the receptor locations R4, R5, R7, R13 and R16, respectively.
- During the off-site streetlight construction along Broadway—Provide a temporary movable noise barrier between the construction equipment and receptor locations R4, R5 and R16. The temporary noise barrier shall be designed to provide a minimum 5-dBA, 6-dBA,

and 8-dBA noise reduction at receptor locations R4, R5 and R16, respectively.

(c) Operational Noise

Noise impacts associated with on-site noise sources and off-site traffic were determined to be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

(a) On-Site Construction Noise

Implementation of Mitigation Measure NOI-MM-1 provided above would reduce the Project's construction noise levels to the extent feasible. Specifically, implementation of Mitigation Measure NOI-MM-1 (installation of temporary sound barriers) would reduce the noise generated by on-site construction activities at the off-site sensitive uses by a minimum of 3 dBA, 12 dBA, 3 dBA, and 3 dBA at receptor locations R1, R4, R5, and R6, respectively. As presented in Table IV.J-26 on page IV.J-62, the estimated construction-related noise levels at the uses represented by off-site sensitive receptor locations R1, R4, R5, and R6 would be reduced to below a level of significance with implementation of Mitigation Measure NOI-MM-1.

However, due to the slope at the North Parcel, it would not be feasible to install a temporary construction noise barrier tall enough or placed near the equipment on the slope that is effective to provide noise reductions. To be effective, the temporary noise barrier would need to be minimum 35 feet tall, which would not be feasible as it would require a deep foundation with extensive structural engineering components and construction activities to erect, which would result in additional noise and vibration generation and other secondary impacts. As shown in Table IV.J-27 on page IV.J-63, there are no other feasible mitigation measures that could be implemented to reduce the temporary noise impacts from on-site construction during Phase 2 at receptor location R12. **Therefore, construction noise impacts associated with on-site noise sources would remain significant and unavoidable.** It should be noted that the estimated construction noise levels at receptor location R12, ranging from 60.4 dBA L_{eq} during paving/landscaping phase to 71.3 dBA L_{eq} during overlapping construction phases, would be similar to the existing traffic noise levels as measured along Broadway (i.e., 69.6 dBA L_{eq} as measured at receptor location R10). In addition, the North Parcel construction noise levels at the Los Angeles State Historic Park (receptor location R12) would be further reduced at the interior of the park. That is, construction noise levels would be perceived by the human ear to be lower than the significance criterion of 5 dBA L_{eq} at a distance of approximately 200 feet south of the park property line.

Table IV.J-26
On-Site Construction Noise Impacts—Phase 1 (South Parcel) Overlapping Subphases With Mitigation Measures

Off-Site Receptor Location	Minimum Noise Reduction Provided by Mitigation Measures[b] (dBA)	Estimated Construction Noise Levels by Overlapping Construction (L_{eq} (dBA))					Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Grading + Trenching	Trenching + Mat Foundation	Trenching + Building Construction	Building Construction + Architectural Coating	Building Construction + Architectural Coating + Paving/Landscaping				
R1	3	59.5	60.7	60.8	59.9	60.4	58.2	63.2	0.0	No
R2	0	62.7	63.3	63.8	62.6	63.3	63.5	68.5	0.0	No
R3	0	57.5	58.2	58.6	57.5	58.1	64.0	69.0	0.0	No
R4	12	60.0	60.0	60.2	60.8	61.2	56.7	61.7	0.0	No
R5	3	59.0	59.3	60.0	58.8	59.5	56.8	61.8	0.0	No
R6	3	65.7	66.4	66.8	65.8	66.4	64.5	69.5	0.0	No
R7	0	57.8	58.8	59.1	58.1	59.3	62.2	67.2	0.0	No
R8	0	53.7	55.0	55.0	54.1	54.9	69.6	74.6	0.0	No
R9	0	44.8	45.9	46.1	45.1	45.7	62.6	67.6	0.0	No
R10	0	48.7	50.0	50.0	49.1	49.8	68.7	73.7	0.0	No
R11	0	66.2	67.4	67.6	66.6	67.1	63.3	68.3	0.0	No
R12	0	49.8	51.1	51.1	50.2	50.9	60.6	65.6	0.0	No
R13	0	58.7	60.0	60.0	59.1	61.5	57.2	62.2	0.0	No
R14	0	41.2	42.2	42.4	41.4	42.0	68.0	73.0	0.0	No
R15	0	52.2	53.5	53.5	52.6	53.3	62.6	67.6	0.0	No
R16	0	46.4	47.5	47.7	46.7	47.4	62.6	67.6	0.0	No

[a] Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.

[b] Noise reduction provided by temporary noise barrier along the Project boundaries.

Source: AES, 2025. See Appendix I of this Draft EIR.

Table IV.J-27
On-Site Construction Noise Impacts—Phase 2 (North Parcel) Overlapping Subphases With Mitigation Measures

Off-Site Receptor Location	Minimum Noise Reduction Provided by Mitigation Measures[b] (dBA)	Estimated Construction Noise Levels by Overlapping Construction (L_{eq} (dBA))					Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Significant Impact Without Mitigation?
		Grading + Well Re-Abandonment	Trenching + Mat Foundation	Trenching + Building Construction	Building Construction + Architectural Coating	Building Construction + Architectural Coating + Paving/Landscaping				
R1	3	47.8	49.1	49.1	48.2	48.6	58.2	63.2	0.0	No
R2	0	47.6	48.9	48.9	48.0	48.2	63.5	68.5	0.0	No
R3	0	48.7	50.0	50.0	49.1	49.4	64.0	69.0	0.0	No
R4	12	49.4	49.7	49.8	50.5	50.8	56.7	61.7	0.0	No
R5	3	35.0	36.1	36.3	35.3	35.5	56.8	61.8	0.0	No
R6	3	52.0	53.2	53.3	52.4	52.8	64.5	69.5	0.0	No
R7	0	39.9	40.8	41.1	40.1	42.3	62.2	67.2	0.0	No
R8	0	64.0	65.0	65.3	64.3	65.4	69.6	74.6	0.0	No
R9	0	59.0	59.9	60.2	59.2	59.2	62.6	67.6	0.0	No
R10	0	68.2	73.0	73.4	72.4	72.4	68.7	73.7	0.0	No
R11	0	47.5	48.8	48.8	47.9	48.2	63.3	68.3	0.0	No
R12	0	70.1	71.1	71.3	70.3	70.4	60.6	65.6	5.7	**Yes**
R13	0	55.6	56.8	56.9	56.0	57.3	57.2	62.2	0.0	No
R14	0	43.0	44.3	44.3	43.4	43.5	68.0	73.0	0.0	No
R15	0	61.2	62.3	62.5	61.5	61.7	62.6	67.6	0.0	No
R16	0	65.1	65.8	66.2	65.2	65.0	62.6	67.6	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

[b] *Noise reduction provided by temporary noise barrier along the Project boundaries.*

Source: AES, 2025. See Appendix I of this Draft EIR.

As discussed above, the concrete mat foundation pour during Phase I and Phase 2 could occur during the nighttime hours, if permitted by the Executive Director of the Board of Police Commissioners. As indicated in Table IV.J 14, above, the estimated noise level due to the mat foundation pour would exceed the nighttime significance threshold (ambient plus 5 dBA) at receptor locations R1, R5, R6, and R11 during Phase 1 and at receptor location R10 during Phase 2. With implementation of Mitigation Measure NOI-MM-1, impacts would be reduced to less than significant levels at receptor locations R1, R5, and R6. However, impacts at receptor locations R10 and R11 would be significant and unavoidable.

(b) Off-Site Construction Noise

Noise impacts from off-site construction truck traffic would be less than significant during the typical daytime construction. However, off-site construction truck during the nighttime concrete pour for the mat foundation would be significant along Broadway and Spring Street. There are no feasible mitigation measures that could be implemented to reduce this short-term impact (few days during the mat foundation phase) because conventional mitigation measures, such as providing temporary noise barrier walls to reduce the off-site construction truck traffic noise impacts, would not be practical as the barriers would obstruct the access and visibility to the properties along the anticipated haul routes. **As such, noise impacts from off-site construction (concrete trucks during mat foundation phase) would be significant and unavoidable.**

In addition, noise impacts from off-site construction would be potentially significant. Temporary noise barriers, as specified in Mitigation Measure NOI-MM-2, would provide up to a maximum 9 dBA noise reduction at the off-site receptor locations. As provided in Table IV.J-28 on page IV.J-65, the estimated construction noise levels would be reduced to less than significant at all off-site sensitive receptor locations. **Therefore, the Project's construction noise impact associated with off-site construction would be less than significant.**

(c) Operational Noise

Noise impacts associated with on-site noise sources and off-site traffic were determined to be less than significant without mitigation. **Therefore, no mitigation measures were required or included, and the impacts would be less than significant.**

Table IV.J-28
Off-Site Improvements Construction Noise Impacts With Mitigation Measures

Off-Site Receptor Location	Minimum Noise Reduction Provided by Mitigation Measures[b] (dBA)						Estimated Construction Noise Levels (L_{eq} (dBA))						Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria with Mitigation (L_{eq} (dBA))	Significant Impact With Mitigation?
	Water and Sewer Laterals Improvements			3-ft Dedication	ADA Ramp	Street Light	Water Main Improvements			3-ft Dedication	ADA Ramp	Street Light				
	Excavation	Utilities	Paving				Excavation	Utilities	Paving							
R1	0	0	0	0	0	0	53.6	53.6	56.7	51.6	55.1	54.1	58.2	63.2	0.0	No
R2	0	0	0	0	0	0	44.9	44.9	47.7	44.8	49.0	46.8	63.5	68.5	0.0	No
R3	0	0	0	0	0	0	61.4	61.4	64.4	56.9	63.9	63.5	64.0	69.0	0.0	No
R4	8	8	8	0	4	5	57.7	57.7	60.8	61.3	61.0	61.6	56.7	61.7	0.0	No
R5	5	5	5	0	8	6	58.0	58.0	61.0	57.4	61.4	60.9	56.8	61.8	0.0	No
R6	5	5	5	0	0	0	66.7	66.7	69.4	66.6	68.1	67.9	64.5	69.5	0.0	No
R7	0	0	0	0	9	0	54.9	54.9	57.8	63.7	66.4	53.5	62.2	67.2	0.0	No
R8	0	0	0	0	0	0	59.7	59.7	62.8	69.9	60.1	58.6	69.6	74.6	0.0	No
R9	0	0	0	0	0	0	55.6	55.6	58.6	54.5	66.5	63.2	62.6	67.6	0.0	No
R10	0	0	0	0	0	0	69.7	69.7	72.4	68.3	66.6	65.9	68.7	73.7	0.0	No
R11	0	0	0	0	0	0	52.3	52.3	55.5	50.2	54.1	53.6	63.3	68.3	0.0	No
R12	0	0	0	0	0	0	59.6	59.6	62.1	58.8	59.2	61.2	60.6	65.6	0.0	No
R13	0	0	0	5	8	0	56.9	56.9	60.0	61.4	61.7	56.2	57.2	62.2	0.0	No
R14	0	0	0	0	0	0	38.2	38.2	41.0	38.4	41.8	40.0	68.0	73.0	0.0	No
R15	0	0	0	0	0	0	56.9	56.9	60.1	57.8	58.1	58.3	62.6	67.6	0.0	No
R16	0	0	0	0	7	8	58.7	58.7	61.6	60.5	67.3	66.9	62.6	67.6	0.0	No

[a] Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.J-6 on page IV.J-23) plus 5 dBA, per the L.A. CEQA Thresholds Guide, for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance thresholds, a construction-related noise impact is identified.

[b] Noise reduction provided by temporary noise barrier along the Project boundaries.

Source: AES, 2025. See Appendix I of this Draft EIR.

Threshold (b): Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?

(1) Impact Analysis

(a) *Construction*

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies, depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels to low rumbling sounds and perceptible vibration at moderate levels. However, ground-borne vibrations from construction activities rarely reach levels that damage structures.

(i) Building Damage Impacts from On-Site Construction

With regard to potential building damage, the Project would generate ground-borne construction vibration during building demolition and site excavation/grading activities when heavy construction equipment, such as large bulldozers, drill rigs, and loaded trucks, would be used. The FTA has published standard vibration velocities for various construction equipment operations. Table IV.J-29 on page IV.J-67 provides the estimated ground vibration velocity levels (in terms of inch per second PPV) at the nearest off-site structures to the Project Site and nearby historic structures. The Project would not utilize impact pile driving methods. Installation of piles for shoring and foundation would utilize drilling methods to minimize vibration generation.

As discussed in Section IV.C, Cultural Resources, of this Draft EIR, there are historical resources identified in the vicinity and within the Project Site, including the Zanja Madre and 15 properties located along Broadway and Spring Street. The assessment of construction vibration provided above for potential building damage due to on-site construction compares the estimated vibration levels generated during construction of the Project to the 0.12 PPV significance criterion for buildings extremely susceptible to vibration damage (generally applicable to the historic structures). Other vibration significance criteria include the 0.2 PPV significance criterion for non-engineered timber and masonry buildings (applicable to older single-story residential buildings), the 0.3 PPV significance criterion for engineered concrete and masonry buildings (applicable to the single-story commercial buildings), and the 0.5 PPV significance criterion for reinforced-concrete, steel or timber buildings (applicable the newly constructed multi-story residential and commercial buildings). As discussed in Section IV.C, Cultural Resources, of this Draft EIR, the Capitol Milling Company property, located at 1231 Spring Street, is a historic building that has recently undergone substantive renovation and

Table IV.J-29
Construction Vibration Impacts—Building Damage

Nearest On- and Off-Site Building Structure[a]	Estimated Vibration Velocity Levels at the Outside of and Adjacent to the Nearest Off-Site Structures from the Project Construction Equipment (inch/second (PPV))[b]					Significance Criteria (PPV)	Significant Impact?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	0.089	0.089	0.076	0.035	0.003	—	—
Single-family residential building to the North	0.013	0.013	0.011	0.005	0.000	0.2[c]	No
Commercial building to the South	0.068	0.068	0.058	0.027	0.002	0.5[e]	No
Multi-Family residential building to the East	0.001	0.001	0.001	0.000	0.000	0.5[e]	No
Commercial building to the West	0.244	0.244	0.208	0.096	0.008	0.3[d]	No
1253 Bishop Rd. (historic)	0.013	0.013	0.011	0.005	0.000	0.12[f]	No
957 Broadway (historic)	0.003	0.003	0.002	0.001	0.000	0.12[f]	No
969 N Broadway (historic)	0.003	0.003	0.002	0.001	0.000	0.12[f]	No
989 N Broadway (historic)	0.004	0.004	0.003	0.002	0.000	0.12[f]	No
993 N Broadway (historic)	0.004	0.004	0.003	0.002	0.000	0.12[f]	No
1001 N Broadway (historic)	0.013	0.013	0.011	0.005	0.000	0.12[f]	No
1031 N Broadway (historic)	0.017	0.017	0.015	0.007	0.001	0.12[f]	No
1041 N Broadway (historic)	0.011	0.011	0.010	0.004	0.000	0.12[f]	No
1045 N Broadway (historic)	0.013	0.013	0.011	0.005	0.000	0.12[f]	No
1327 N Broadway (historic)	0.016	0.016	0.013	0.006	0.001	0.12[f]	No
1231 Spring (historic)[g]	0.244	0.244	0.208	0.096	0.008	0.12[f]	**Yes**
East of Hill Street Chinatown District (historic)	0.002	0.002	0.002	0.001	0.000	0.12[f]	No
Elysian Park (historic)	0.013	0.013	0.011	0.005	0.000	0.12[f]	No
Buena Vista Street Viaduct (N Broadway Bridge) (historic)	0.044	0.044	0.038	0.017	0.002	0.12[f]	No

[a] *Represents nearby off-site building structures located nearest to the Project Site to the north, south, east, and west.*

[b] *Vibration level calculated based on FTA reference vibration level at 25 foot distance.*

[c] *FTA criterion for non-engineered timber and masonry building buildings.*

[d] *FTA criterion for engineered concrete and masonry buildings.*

[e] *FTA criteria for reinforced-concrete, steel or timber buildings.*

[f] *FTA criterion for buildings extremely susceptible to vibration damage.*

[g] *The estimated vibration levels are at the small unreinforced masonry building adjacent to the Project Site.*

Source: FTA, 2006; AES, 2025. See Appendix I of this Draft EIR.

although it is a historic structure, it is not considered a structure that would be sensitive to vibration. However, there is a small unreinforced masonry building (believed to have been

used for storage at some point) located on the boundary of the Capitol Milling Company property, adjacent to the southwesterly corner of the Project Site that is assumed to be vibration sensitive.

As indicated in Table IV.J-29 on page IV.J-67, the estimated vibration levels from the construction equipment would be well below the 0.12 PPV building damage significance criterion for the off-site historic structures, except for the small building at 1231 Spring Street. The estimated vibration velocity levels at the 1231 Spring Street building (up to 0.244 PPV) from construction equipment would exceed the significance criteria of 0.12 PPV building damage significance criteria. The estimated vibration levels at the other off-site buildings would be below both the 0.2 PPV, 0.3 PPV and 0.5 PPV building damage significance criteria.

With respect to the Zanja Madre, Mitigation Measures CUL-MM-1 in Section IV.C, Cultural Resources, of this Draft EIR provides for protections for the Zanja Madre as a cultural resource. Specifically, Mitigation Measure CUL-MM-1 requires the Project to retain a qualified historic preservation professional to prepare and implement a written Cultural Resources Monitoring and Treatment Plan (CRMTP) for the Zanja Madre. The CRMTP includes protocols for construction monitoring as well as interpretive measures that enhance the history of the Zanja Madre. Relative to the existing portion of the Zanja Madre exposed at grade within the Metro A Line property generally across from Bishops Road near the narrowest portion of the Project Site, this portion of the Zanja Madre would be located approximately 35 feet from potential construction activities. With this distance, the maximum ground-borne vibration would be 0.05 PPV, which would be below Caltrans' most stringent criteria of 0.08 PPV for its "Extremely fragile historic buildings, ruins, ancient monuments" category. As such, vibration impacts to this segment of the Zanja Madre would be less than significant. There are also potential unexposed Zanja Madre segments that have not been fully identified, which could be exposed to the on-site construction vibration levels. Specifically, unexposed Zanja Madre segments that are located within 30 feet of heavy construction equipment (e.g., large bulldozer, bore drill rig), could be exposed to vibration levels above the most stringent 0.08 PPV significance criteria and result in significant impacts.

Based on the above, vibration impacts during construction of the Project associated with building damage would be significant.

(ii) Human Annoyance Impacts from On-Site Construction

Table IV.J-30 on page IV.J-69 provides the estimated vibration levels at the off-site sensitive uses due to construction equipment operation and compares the estimated vibration levels to the specified significance criteria for human annoyance. Per FTA guidance, the significance criteria for human annoyance are 72 VdB for residential uses

Table IV.J-30
Construction Vibration Impacts—Human Annoyance

Off-Site Receptor Location	Estimated Vibration Velocity Levels at the Off-Site Sensitive Uses Due to On-Site Construction Equipment Operation[a] (VdB)					Significance Criteria (VdB)	Significant Impact?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	87	87	86	79	58	—	—
R1	49.1	49.1	48.1	41.1	20.1	72	No
R2	57.5	57.5	56.5	49.5	28.5	72	No
R3	59.3	59.3	58.3	51.3	30.3	72	No
R4	70.3	70.3	69.3	62.3	41.3	—[b]	No
R5	58.7	58.7	57.7	50.7	29.7	72	No
R6	67.7	67.7	66.7	59.7	38.7	75	No
R7	46.0	46.0	45.0	38.0	35.1	75	No
R8	59.6	59.6	58.6	51.6	41.3	72	No
R9	56.2	56.2	55.2	48.2	27.2	72	No
R10	69.6	69.6	68.6	61.6	40.6	72	No
R11	59.9	59.9	58.9	51.9	30.9	72	No
R12	62.4	62.4	61.4	54.4	33.4	—[b]	No
R13	45.3	45.3	44.3	37.3	16.3	—[b]	No
R14	41.0	41.0	40.0	33.0	12.0	75	No
R15	50.9	50.9	49.9	42.9	21.9	—[b]	No
R16	62.8	62.8	61.8	54.8	33.8	—[b]	No

[a] *Vibration levels calculated based on FTA reference vibration level at 25 distance.*

[b] *No applicable significance criteria for outdoor uses.*

Source: FTA, 2018; AES, 2025. See Appendix I of this Draft EIR.

including receptor locations R1 to R3, R5, R8 to R11 and 75 VdB for institutional uses (school and religious uses) including receptor locations R6, R7 and R14, assuming there are a minimum of 70 vibration events occurring during a typical construction day. As indicated in Table IV.J-30, the estimated ground-borne vibration levels from construction equipment would range from 41.0 VdB at receptor location R14 to 70.3 VdB at receptor location R4, which would be below the significance criteria of 72 VdB (at residential uses) and 75 VdB (at school and religious uses) for human annoyance at all off-site sensitive receptor locations. **Therefore, vibration impacts associated with human annoyance from on-site construction activities would be less than significant.**

(iii) Building Damage and Human Annoyance Impacts from Off-Site Construction

As described above, construction delivery/haul trucks would travel between the Project Site and I-5 via Broadway and Spring Street. Heavy-duty construction trucks would generate ground-borne vibration as they travel along the Project's anticipated haul route(s). Thus, an analysis of potential vibration impacts using the building damage and human annoyance criteria for ground-borne vibration along the anticipated local haul routes was conducted.

Regarding building damage, based on FTA data, the vibration generated by a typical heavy-duty truck would be approximately 63 VdB (0.00566 PPV) at a distance of 50 feet from the truck.[51] According to the FTA "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads." Nonetheless, there are existing buildings along the Project's anticipated haul route that are situated approximately 20 feet from the right-of-way and would be exposed to ground-borne vibration levels of approximately 0.022 PPV, as provided in the noise calculation worksheets included in Appendix I of this Draft EIR. This estimated vibration generated by construction trucks traveling along the anticipated haul route(s) would be well below the most stringent building damage criteria of 0.12 PPV for buildings extremely susceptible to vibration. **Therefore, vibration impacts (pursuant to the significance criteria for building damage) from off-site construction activities (i.e., construction trucks traveling on public roadways) would be less than significant**.

As discussed above, per FTA guidance, the significance criteria for human annoyance are 72 VdB for sensitive uses, including residential and hotel uses. It should be noted that buses and trucks rarely create vibration that exceeds 70 VdB at 50 feet from the receptor unless there are bumps in the road.[52] The estimated vibration levels generated by construction trucks traveling along the anticipated haul route were assumed to be within 24 feet of the sensitive use (i.e., motel uses) located at 1824 Broadway (between Avenue 18 and Avenue 19). As indicated in the noise calculation worksheets included in Appendix I of this Draft EIR, the temporary vibration levels could reach approximately 72.6 VdB periodically as trucks pass the sensitive receptors along Broadway at 24 feet. Therefore, the motel uses along the anticipated haul route (Broadway) would be exposed to ground-borne vibration levels up to 72.6 VdB, which would exceed the 72-VdB significance criteria from the construction trucks. **As such, potential vibration impacts with respect to human annoyance that would result from temporary and intermittent off-site vibration from construction trucks traveling along the anticipated haul route(s) would be significant.**

---

[51] *FTA, Transit Noise and Vibration Impact Assessment, Figure 5-4, September 2018.*

[52] *FTA, Transit Noise and Vibration Impact Assessment, p. 13, September 2018.*

The Project also includes off-site construction, including: (a) water and sewer laterals/connections along Broadway; (b) 3-foot dedication along Broadway; (c) modification or construction of new ADA ramps; and (d) six new street lights along Broadway Vibration levels generated by the off-site improvements would be below the building damage significance criteria at all off-site building structures. In addition, the estimated vibration levels due to off-site construction equipment would be up to 71.1 VdB at sensitive receptor locations along Broadway, which would be below the 72-VdB significance criteria with respect to human annoyance. **Therefore, temporary vibration impacts from off-site improvements construction would be less than significant for both building damage and human annoyance.**

(iv) Summary of Construction Vibration Impacts

As discussed above, the estimated vibration levels from on-site construction equipment would be below the 0.12 PPV building damage significance criterion for the off-site historic structures, except for the small building at 1231 Spring Street. The estimated vibration levels at the other off-site buildings would be below both the 0.2 PPV, 0.3 PPV and 0.5 PPV building damage significance criteria. In addition, there are also potential unexposed Zanja Madre segments that have not been fully identified, which could be exposed to the on-site construction vibration levels. Specifically, unexposed Zanja Madre segments that are located within 30 feet of heavy construction equipment (e.g., large bulldozer, bore drill rig), could be exposed to vibration levels above the most stringent 0.08 PPV significance criteria and result in significant impacts. **Therefore, vibration impacts from on-site construction activities pursuant to the significance criteria for building damage would be significant.**

Regarding the human annoyance significance criteria, the estimated vibration levels from on-site construction equipment would be below the human annoyance significance criterion at all of-site receptor locations. **Therefore, vibration impacts from on-site construction activities pursuant to the significance criteria for human annoyance would less than significant.**

Vibration impacts associated with temporary and intermittent vibration forces from off-site construction activities (i.e., construction trucks traveling along the anticipated truck routes) would be less than significant with respect to building damage. **However, vibration impacts from off-site construction activities would be significant with respect to the significance criteria for human annoyance along the anticipated truck route, including Broadway and Spring Street.**

Vibration impacts associated with temporary and intermittent vibration from off-site improvements construction would be less than significant with respect to the significance criteria for both building damage and human annoyance.

(b) Operation Vibration Impacts

Sources of vibration related to operation of the Project would include vehicle circulation, delivery trucks, and building mechanical equipment. As discussed above, it is unusual for vibration from sources, such as rubber-tired buses and trucks to be perceptible, even in locations close to major roads. As such, vehicular-induced vibration, including vehicle circulation within the surface and above-grade parking facilities, would not generate perceptible vibration levels at off-site sensitive uses. Building mechanical equipment installed as part of the Project would include typical commercial-grade stationary mechanical equipment, such as air-condenser units (mounted at the roof level), that would include vibration-attenuation mounts to reduce vibration transmission to ensure that vibration would not be perceptible at the off-site sensitive receptors. **As such, operation of the Project would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. Therefore, vibration impacts associated with operation of the Project would be less than significant.**

(2) Mitigation Measures

(a*) Construction Vibration*

As discussed above, the estimated vibration levels from on-site construction equipment would exceed the building damage significance criteria at the building at 1231 Spring Street and the potential off-site segments of the Zanja Madre. In addition, as discussed in Section IV.C, Cultural Resources, of this Draft EIR, the retaining wall and guardrail at the northernmost portion of the North Parcel is assumed to be historic due to the connection to the Buena Vista Street Viaduct (historic structure). Although the retaining wall is assumed to not be vibration sensitive, due to its status as a component of a major piece of transportation infrastructure, mitigation is provided because it is likely associated with or a part of a historical resource and vibration. Therefore, the following mitigation measures are provided to reduce potential construction-related vibration impacts related to the single-story building at 1231 Spring Street, the retaining wall and guardrail, and the potential off-site segments of the Zanja Madre.

Mitigation Measure NOI-MM-3:

Phase 1 (South Parcel)

- Prior to the start of construction, the Applicant shall retain the services of a qualified structural engineer to visit the single-story storage building located at 1231 Spring Street (historic structure), to inspect and document (video and/or photographic) the apparent physical condition of the buildings' readily-visible features (i.e., any cracks at the exterior of the noted buildings). In addition, the structural engineer shall survey the existing foundations and other

structural aspects of the building and provide a shoring design to protect the building from potential damage.

- Prior to construction, the Applicant shall retain the services of a qualified acoustical engineer to review proposed construction equipment and develop and implement a vibration monitoring program capable of recording and documenting the construction-related ground vibration levels at the single-story building at 1231 Spring Street during the demolition, shoring, and excavation phases, as described below. In the event that consent is not provided from the property owner, the vibration monitoring shall be made at the Project Site's property line. The vibration monitoring at the Project Site's property line would provide a more conservative reading, because the monitoring equipment would be closer to the construction equipment.

  a) The vibration monitoring system shall measure (in vertical and horizontal directions) and continuously store the peak particle velocity (PPV) in inch/second. The system shall also be programmed for two preset velocity levels: a warning level of 0.10 inch/second (PPV) and a regulatory level of 0.12 inch/ second (PPV). The system shall also provide real-time alert when the vibration levels exceed the two preset levels.

  b) The vibration monitoring program shall be submitted to the Department of Building and Safety, prior to initiating any construction activities.

  c) In the event the warning level (i.e., 0.10 inch/second [PPV]) is triggered, the contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level, including but not limited to staggering concurrent activities (if doing so would not pose a safety risk to personnel or damage risk to buildings) and utilizing lower vibratory techniques.

  d) In the event the regulatory level (i.e., 0.12 inch/second [PPV]) is triggered, the contractor shall halt the construction activities in the vicinity of the building and visually inspect the building for any damage. Results of the inspection must be logged. The contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level. Construction activities may then restart once the vibration level is re-measured and below the warning level.

  e) At the conclusion of vibration-causing construction, the qualified structural engineer shall issue a follow-up letter describing damage, if any, to the single-story building at 1231 Spring Street and recommendations for repair, as may be necessary.

Phase 2 (North Parcel)

- Prior to the start of construction, the Applicant shall retain the services of a qualified structural engineer to visit the retaining wall and guardrail, to inspect and document (video and/or photographic) the apparent physical condition of the retaining wall and guardrail readily-visible features (i.e., any cracks). In addition, the structural engineer shall survey the existing foundations and other structural aspects of the retaining wall and provide a shoring design to protect the building from potential damage.
- Prior to construction, the Applicant shall retain the services of a qualified acoustical engineer to review proposed construction equipment and develop and implement a vibration monitoring program capable of recording and documenting the construction-related ground vibration levels at property line adjacent to the retaining wall during the demolition, shoring, and excavation phases, as described below.
    a) The vibration monitoring system shall measure (in vertical and horizontal directions) and continuously store the peak particle velocity (PPV) in inch/second. The system shall also be programmed for two preset velocity levels: a warning level of 0.10 inch/second (PPV) and a regulatory level of 0.12 inch/ second (PPV). The system shall also provide real-time alert when the vibration levels exceed the two preset levels.
    b) The vibration monitoring program shall be submitted to the Department of Building and Safety, prior to initiating any construction activities.
    c) In the event the warning level (i.e., 0.10 inch/second [PPV]) is triggered, the contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level, including but not limited to staggering concurrent activities (if doing so would not pose a safety risk to personnel or damage risk to buildings) and utilizing lower vibratory techniques.
    d) In the event the regulatory level (i.e., 0.12 inch/second [PPV]) is triggered, the contractor shall halt the construction activities in the vicinity of the building and visually inspect the building for any damage. Results of the inspection must be logged. The contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level. Construction activities may then restart once the vibration level is re-measured and below the warning level.
    e) At the conclusion of vibration-causing construction, the qualified structural engineer shall issue a follow-up letter describing damage, if any, to the retaining wall and guardrail and recommendations for repair, as may be necessary.

Mitigation Measure NOI-MM-4: In the event any off-site Zanja Madre segments are identified and exposed adjacent to the Project Site during construction, the following buffer zone shall be provided:

- The use of large construction (i.e., large bulldoze, caisson drill rig, and/or loaded trucks) shall be a minimum of 28 feet from any exposed off-site Zanja Madre segments.
- The use of jackhammer shall be a minimum of 13 feet from any exposed off-site Zanja Madre segments.
- The use of a small bulldozer shall be a minimum of 2 feet from any exposed off-site Zanja Madre segments.

Mitigation measures considered to reduce vibration impacts from off-site construction equipment and trucks with respect to human annoyance included the installation of a wave barrier, which is typically a trench, or a thin wall made of sheet piles installed in the ground (essentially a subterranean sound barrier to reduce noise). However, wave barriers must be very deep and long to be effective and are not considered cost effective for temporary applications, such as construction. In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate ground-borne vibration from the excavation equipment. Furthermore, it would not be technically feasible to install a wave barrier along the public roadways for the off-site construction vibration impacts, as it is within the public right-of-way, over which the Applicant does not have control. Thus, it is concluded that there are no technically feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from off-site construction traffic associated with human annoyance to a less-than-significant level.

(b) Operation Vibration Impacts

As discussed above, operation of the Project would not result in a significant vibration impact during operation. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

(a) Construction Vibration

Vibration impacts associated with off-site construction would be less than significant without mitigation regarding building damage. With implementation of Mitigation Measure NOI-MM-3, potential building damage impacts to the off-site structures, the single-story storage building at 1231 Spring Street (within the Capitol Milling Company property) and the retaining wall and guardrail (abutment to the Buena Vista Street Viaduct bridge) would be reduced to a less-than-significant level. With implementation of Mitigation Measure NOI-MM-4, potential structural damage impacts to potential adjacent off-site unexposed Zanja Madre segments would be reduced to a less-than-significant level. **Therefore, the**

Project's vibration impacts from on-site construction activities with respect to building damage would be less than significant.

As described above, there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from off-site construction with regard to human annoyance to a less-than-significant level. **Therefore, the Project's vibration impacts from off-site construction activities with respect to human annoyance would be significant and unavoidable**.

(b) Operation Vibration

Vibration impacts associated with Project operation were determined to be less than significant without mitigation. **Therefore, no mitigation measures were required or included, and the impact level remains less than significant**.

Threshold (c): For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As evaluated in the Initial Study, included as Appendix A of this Draft EIR, the Project Site would not expose people residing or working in the project area to excessive airport-related noise levels. The nearest airport is the Hollywood Burbank Airport located approximately 11 miles northwest of the Project Site. **Since the Project would not be located within the vicinity of a private airstrip, an airport land use plan, or within 2 miles of a public airport or public use airport, impacts with respect to Threshold (c) would not occur. No further analysis is required.**

e. Project Impacts with Long-Term Buildout

While Project buildout is anticipated as early as 2034, the Applicant is seeking a Development Agreement with a term of 20 years, which could extend the full buildout year to approximately 2047. The Mitigation Monitoring Program (MMP) would be implemented throughout the term of the Development Agreement. The MMP would provide for the implementation of all applicable Project design features and mitigation measures associated with any development activities during and beyond the term of the Development Agreement. Additionally, with the exception of potential mobile noise impacts, a later buildout date would not affect the impacts or significance conclusions presented above as such impacts are not dependent upon buildout year. With regard to Project-related mobile noise impacts, with an extended buildout year, the noise levels under Future without Project conditions would increase as a result of ambient traffic growth occurring through 2045. Thus, the Project's

contribution to increases in ambient noise levels would be diluted, and overall Project operational impacts related to mobile noise would be expected to be slightly reduced.

f. Cumulative Impacts

(1) Impact Analysis

The Project, together with the related projects and future growth, could contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to the distance between each related project and their stationary noise sources, as well as the cumulative traffic that these projects would add to the surrounding roadway network.

(a) Construction Noise

(i) On-Site Construction Noise

As indicated in Section II, Environmental Setting, of this Draft EIR, 25 related projects have been identified in the vicinity of the Project Site. Noise from construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site, based on the *L.A. CEQA Thresholds Guide* screening criteria. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. While the majority of the related projects are located a substantial distance (greater than 1,000 feet) from the Project Site, there are ten related projects within 1,000 feet of the Project Site. A description of the potential cumulative impacts of these projects is provided below:

- Related Project No. 1 is a condominium development located at 1101 Main Street, approximately 460 feet east of the Project Site. However, construction of Related Project No. 1 is complete. Therefore, Related Project No. 1 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 5 (College Station Mixed-Use) is a mixed-use development located at 129 College Street, approximately 200 feet southeast of the Project Site. There are noise sensitive receptors located within 500 feet of Related Project No. 2 and the Project Site, as represented by receptor locations R1 and R4. As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor locations R1 and R4 would exceed the significance criteria by up to 0.6 dBA and 11.5 dBA, respectively before mitigation. The estimated construction noise levels from the Project at receptor locations R1 and R4 would be reduced to a less than significant level with implementation of Mitigation Measure NOI-MM-1. However, since Related Project No. 5 is across from both receptor locations R1 and R4, there is a potential for cumulative construction noise impacts to occur at

the uses represented by receptor locations R1 and R4 in the event Project construction occurs concurrently with construction of Related Project No. 5, as the cumulative construction noise from both projects could exceed the 5 dBA significance threshold.

- Related Project No. 7 is a mixed-use development located at 1201 North Broadway, approximately 80 feet west of the Project Site. There are noise sensitive receptors located between Related Project No. 7 and the Project Site, as represented by receptor location R7. As analyzed above in Subsection 2.c.(2) (see Table IV.J-18 on page IV.J-46), the estimated Project-related off-site construction noise levels at the uses represented by receptor location R7 would exceed the significance criteria by 8.2 dBA before mitigation. The estimated construction noise levels from the Project at receptor location R7 would be reduced to a less than significant level with implementation of Mitigation Measure NOI-MM-2. However, since Related Project No. 7 is located across from receptor location R7, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor location R7 in the event Project construction occurs concurrently with construction of Related Project No. 7, as the cumulative construction noise from both projects could exceed the 5 dBA significance threshold.

- Related Project No. 11 is a mixed-use development located at 942 North Broadway, located adjacent to the Project Site to the south. There are noise sensitive receptors located between Related Project No. 11 and the Project Site, as represented by receptor location R2. As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor location R2 would be below the significance criteria by 4.7 dBA. However, since Related Project No. 1 is located adjacent to receptor location R2, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor location R2 in the event Project construction occurs concurrently with construction of Related Project No. 11.

- Related Project No. 13 is a commercial office development located at 843 North Spring Street, located approximately 535 feet south of the Project Site. However, construction of Related Project No. 1 is complete. Therefore, Related Project No. 13 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 17 (Pagoda Hotel) is a hotel development located at 995 North Broadway, located approximately 210 feet west of the Project Site. There are noise sensitive receptors located near the Related Project No. 17 and the Project Site, as represented by receptor location R5. As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor location R5 would exceed the significance criteria by 1.2 dBA before mitigation. The estimated construction noise levels from the Project at receptor location R5 would be reduced to a less than significant level with implementation of Mitigation Measure

NOI-MM-1. However, since Related Project No. 17 is located adjacent to receptor R5, there is a potential for cumulative construction noise impacts to occur in the event Project construction occurs concurrently with construction of Related Project No. 17.

- Related Project No. 18 is a hotel development located at 1009-1015 North Broadway, located approximately 80 feet west of the Project Site. There are noise sensitive receptors located near Related Project No. 18 and the Project Site, along the north side of Bernard Street (near the Project receptor location R3). As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor location R3 would be below the significance criteria by 10.1 dBA. However, since Related Project No. 18 is located across from the residential uses on the north side of Bernard Street (near receptor R3), there is a potential for cumulative construction noise impacts to occur in the event Project construction occurs concurrently with construction of Related Project No. 18.

- Related Project No. 23 is a commercial office development located at 130 West College Street, located approximately 580 feet southeast of the Project Site. There are noise sensitive receptors located within 500 feet of Related Project No. 23 and the Project Site, as represented by receptor location R11. As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor location R11 would be below the significance criteria by 0.7 dBA. However, since Related Project No. 23 is across from receptor location R11, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor location R11 in the event Project construction occurs concurrently with construction of Related Project No. 5.

- Related Project No. 24 (Los Angeles State Historic Park Pedestrian Bridge) is located across the Project Site to the east. The proposed pedestrian bridge would provide access to the Los Angeles State Historic Park from Broadway. Currently, there is no dedicated funding or design of the proposed pedestrian bridge connection. To represent a conservative analysis, it is assumed that the proposed pedestrian bridge would be located near one of the sensitive receptor located on Broadway (i.e., receptor location R7). As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 on page IV.J-38), the estimated Project-related construction noise levels at the uses represented by receptor location R7 would be below the significance criteria by 7.9 dBA. However, since Related Project No. 24 is assumed to be located near the receptor location R7, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor location R7 in the event Project construction occurs concurrently with construction of Related Project No. 7.

- Related Project No. 25 (Los Angeles Aerial Rapid Transit, LA ART) is located across along Alameda Street, adjacent to the Project Site to the east, and would cross over the Project Site near Bishop Road. There are noise sensitive receptors

located within 500 feet of Related Project No. 25 and the Project Site, as represented by receptor locations R4, R7, R11 and R13. As analyzed above in Subsection 2.c.(2) (see Table IV.J-12 and Table IV.J-18 on pages IV.J-38 amd IV.J-46), the estimated Project-related construction noise levels at the uses represented by receptor locations R4 and R7 would exceed the significance threshold by up to 11.5 dBA and 8.2 dBA, respectively, before mitigation. The estimated construction noise levels from the Project at receptor locations R4 and R7 would be reduced to a less than significant level with implementation of Mitigation Measure NOI-MM-1. However, since Related Project No. 25 (including the LA ART stations) is located near receptor locations R4, R7, R11 and R13, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor locations R4, R7, R11 and R13 in the event Project construction occurs concurrently with construction of Related Project No. 25, as the cumulative construction noise from both projects could exceed the 5 dBA significance threshold.

Construction-related noise levels from the related projects would be intermittent and temporary and it is anticipated that, as with the Project, the related projects would comply with the construction hours and other relevant provisions set forth in the LAMC. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Based on the above, there would be potential cumulative noise impacts at the nearby sensitive uses (e.g., residential uses) located in proximity to the Project Site and Related Project Nos. 5, 7, 11, 17, 18, 23, 24 and 25, in the event of concurrent construction activities. **As such, cumulative noise impacts from on-site construction would be significant and unavoidable, and the Project's contribution would be cumulatively considerable.**

(ii) Off-Site Construction Noise

In addition to the cumulative impacts of on-site construction activities, off-site construction haul trucks would have a potential to result in cumulative impacts if the trucks for the related projects and the Project were to utilize the same haul route. As analyzed above in Subsection 2.c.(2) (see Table IV.J-17 on page IV.J-45), the Project's estimated off-site construction noise levels would exceed the significance criteria along the anticipated truck routes, including Broadway and Spring Street during the nighttime mat foundation phase. While not likely, due to the short duration of this phase, any concurrent activity by related projects that would result in an additional number of trucks would incrementally increase the noise levels, therefore contributing to cumulative impacts. In particular, there are related projects located along Broadway (including Related Project Nos. 7, 11, 17, and 18), and along Spring Street (including Related Project Nos. 5, 23, 24, and 25) that could contribute to off-site construction noise impacts. Therefore, it is conservatively concluded that cumulative noise due to construction truck traffic from the Project and other related projects during the nighttime mat foundation phase has the potential to increase the ambient noise

levels along the truck route by 5 dBA. During the daytime hours, it is estimated that cumulative off-site construction noise impacts could occur (i.e., increase the ambient by 5 dBA or more) if the total number of trucks from the Project and related projects were to add up to 180 and 64 truck trips per hour along Broadway and Spring Street, respectively.[53] As indicated above, Related Project Nos. 7, 11, 17, and 18 are located near Broadway and Related Project Nos. 5, 23, 24, and 25 are located near along Spring Street, which could contribute to off-site construction noise impacts. Related Project No. 7 is anticipated to generate up to 125 truck trips per day (approximately 21 truck trips per hour). There is no available information on construction-related truck trips for Related Project Nos. 11, 17 and 18. However, based on the proposed development, Related Project No. 11 (211,725 square feet), Related Project No. 17 (112,000 square feet), and Related Project No. 18 (334,900 square feet) could generate up to 125 truck trips per hour. Therefore, the cumulative truck trips from the Project and the Related Project Nos. 7, 11, 17 and 18 could be up to 206 truck trips per hour, which would exceed the 180 truck trips threshold for Broadway.[54] The Related Project No. 5 is anticipated to generate up to 240 truck trips per day (approximately 40 truck trips per hour). When added to the Project 54 truck trips per hour would result in 94 truck trips per hour along Spring Street, which would exceed the 64 truck trips threshold. Therefore, the Project and the related projects could result in cumulative off-site construction noise impacts.

In addition, as analyzed above (see Table IV.J-18 on page IV.J-46), the estimated Project-related off-site construction noise levels would exceed the significance criteria at receptor locations R4, R5, R6, R7, R13, and R16, from 4.9 dBA to 8.2 dBA. The estimated off-site construction noise levels from the Project at these receptor locations would be reduced to a less than significant level with implementation of Mitigation Measure NOI-MM-2. As indicated above, Related Project Nos. 5, 7, 17, 24, and 25 are located near receptor locations R4, R5, R7, and R13, which could contribute to the cumulative construction noise impacts. **As such, cumulative noise impacts from off-site construction would be significant and unavoidable, and the Project's contribution would be cumulatively considerable.**

(iii) Summary of Cumulative Construction Noise Impacts

As discussed above, on-site and off-site construction activities from the Project and related projects have the potential to result in generation of noise levels in excess of

---

[53] *It is estimated that with 180 truck trips, the cumulative noise level along Broadway would be 73.7 dBA (72.0 dBA from construction traffic plus 68.7 dBA ambient), which is 5.0 dBA above the ambient noise level. With 64 truck trips, the cumulative noise level along Spring Street would be 68.3 dBA (66.6 dBA from construction traffic plus 63.3 dBA ambient), which is 5.0 dBA above the ambient noise level.*

[54] *Truck trips for the Related Projects are estimated based in the ratio of proposed developments of Related Projects to the Related Project No. 7, which equal to approximately 40 truck trips, 25 truck trips, and 60 truck trips for Related Project No. 11, Related Project No. 17, and Related Project No. 18, respectively.*

standards established by the City. **Therefore, cumulative noise impacts from on-site and off-site construction activities would be significant and unavoidable, and the Project's contribution would be cumulatively considerable.**

(b) Operational Noise

The Project Site and surrounding area have been developed with uses that have previously generated, and will continue to generate, noise from a number of community noise sources, including mechanical equipment (e.g., HVAC systems), outdoor activity areas, and vehicle travel. Similar to the Project (under both development scenarios), each of the related projects that have been identified in the vicinity of the Project Site would also generate stationary-source and mobile-source noise due to ongoing day-to-day operations. All related projects are of a residential, retail, commercial, or institutional nature, and these uses are not typically associated with excessive exterior noise levels. However, each project would produce traffic volumes that are capable of generating roadway noise impacts. The potential cumulative noise impacts associated with on-site and off-site noise sources are addressed below.

(i) On-Site Stationary Noise Sources

Due to provisions set forth in the LAMC that limit stationary source noise from items, such as rooftop mechanical equipment, noise levels would be less than significant at the property line for each related project. In addition, as discussed above, noise impacts associated with operations within the Project Site would be less than significant. **Therefore, based on the distance of the related projects from the Project Site and the operational noise levels associated with the Project, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant**.

(ii) Off-Site Mobile Noise Sources

The Project and related projects in the area would produce traffic volumes (off-site mobile sources) that would generate roadway noise. Cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from "Existing" conditions to "Cumulative Future Plus Project" conditions to the applicable significance criteria. Cumulative Future Plus Project conditions include traffic volumes from future ambient growth, related projects, and the Project. The calculated traffic noise levels under "Existing" and "Cumulative Future Plus Project" conditions are presented in Table IV.J-31 on page IV.J-83. As shown therein, cumulative traffic volumes would result in an increase ranging from 0.5 dBA (CNEL) along the roadway segments of Avenue 18 (between Pasadena Avenue and Broadway) to 2.1 dBA (CNEL) along the roadway segment of Spring Street (between Alpine Street and Avenue 18). The increase in traffic noise levels along analyzed roadway segments would be below the 3-dBA CNEL significance criterion,

Table IV.J-31
Cumulative Roadway Traffic Noise Impacts

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Existing Conditions	Future Cumulative Plus Project		
Broadway					
Between Arcadia St. and Cesar Chavez	Residential	71.8	73.3	1.5	No
Between Cesar Chavez and Ord St.	Residential	71.3	72.9	1.6	No
Between Cesar Ord St. and Alpine St.	Commercial	71.1	72.6	1.5	No
Between Alpine St. and College St.	Residential	72.2	73.6	1.4	No
Between College St. and Bernard St.	Residential, Motel	72.8	74.0	1.2	No
Between Bernard St. and Bishop Rd.	School	72.4	73.6	1.2	No
Between Bishop Rd. and Solano Ave.	Residential	73.2	74.3	1.1	No
Between Solano Ave. and Avenue 18	Residential	72.6	73.7	1.1	No
Between Ave. 18 and Avenue 19	Motel	71.8	73.1	1.3	No
Spring Street					
Between Alpine St. and College St.	Residential	72.4	73.9	1.5	No
Between College St. and Avenue 18	Park, Motel	72.3	73.8	1.5	No
College Street					
Between Hill St. and Broadway	Commercial	68.9	71.0	2.1	No
Between Broadway and Spring St.	Residential	68.8	70.9	2.1	No
Alpine Street					
Between Hill St. and Broadway	Commercial	68.5	69.8	1.3	No
Between Broadway and Spring St.	Commercial	68.6	69.5	0.9	No
Bernard Street					
Between Hill St. and Broadway	Residential, Motel	64.7	65.4	0.7	No

Table IV.J-31 (Continued)
Cumulative Roadway Traffic Noise Impacts

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels[a] (CNEL (dBA))		Increase in Noise Levels due to Project (CNEL (dBA))	Significant Impact?
		Existing Conditions	Future Cumulative Plus Project		
Bishop Road					
Between Stadium Way and Broadway	Residential, School	67.3	68.7	1.4	No
Solano Avenue					
Between Amador St. and Broadway	Residential	67.1	68.2	1.1	No
Avenue 18					
Between Pasadena Ave. and Broadway	Commercial	64.4	64.9	0.5	No
Between Broadway and Albion St.	Residential	65.5	66.1	0.6	No

[a] *See Off-Site Traffic Noise Calculations for Future No Project Conditions and Future Plus Project Conditions provided in Appendix I of this Draft EIR.*

Source: AES, 2025.

which is applicable to noise levels that fall within the normally unacceptable land use category (i.e., between 70 and 75 dBA CNEL); and below the 5-dBA CNEL significance criterion, which is applicable to noise levels that fall within the conditionally acceptable land use category (i.e., between 60 and 70 dBA CNEL). **Therefore, cumulative noise impacts due to off-site mobile noise sources associated with the Project, future growth, and related projects would be less than significant.**

(iii) Summary of Cumulative Operational Noise Impacts

As discussed above, the Project and related projects would not result in the exposure of persons to or generation of noise levels in excess of the significance criteria established by the City or in a substantial permanent increase in ambient noise levels in the vicinity of the Project Site above levels existing without the Project and the related projects. **Therefore, cumulative operational noise impacts from on-site and off-site sources would be less than significant.**

(c) Construction Vibration

(i) On-Site Construction Vibration

As previously discussed, ground-borne vibration decreases rapidly with distance. Potential vibration impacts due to construction activities are generally limited to buildings/structures that are located in proximity to the construction site (i.e., within 15 feet as related to building damage and 80 feet as related to human annoyance at residential uses). As indicated above, the closest related project, Related Project No. 11, is located adjacent to the Project Site. As analyzed above, vibration impacts associated with building damage from the Project construction would be less than significant. In addition, construction for both the Project and the related projects would be required to comply with the LAMC Section 91.3307, which required protections for adjacent property from damage during construction work. **Therefore, the Project would not contribute to a cumulative construction vibration impact with respect to building damage associated with on-site construction and the cumulative impact would be less than significant.**

As discussed above, potential vibration impacts associated with Project-related on-site construction activities would be less than significant with respect to human annoyance at all off-site receptor locations. The Project on-site construction would not contribute to the cumulative construction vibration impacts, as vibration impact is based on the peak vibration level generated by individual construction equipment, e.g., drill rig and large bulldozer. **Therefore, potential cumulative construction vibration impact with respect to human annoyance associated with on-site construction would be less than significant.**

(ii) Off-Site Construction Vibration

As previously discussed, based on FTA data, the vibration generated by a typical heavy truck would be approximately 63 VdB (0.00566 PPV) at a distance of 50 feet from the truck.[55] In addition, according to the FTA "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads." As discussed above, there are existing buildings that are approximately 20 feet from the right-of-way of the anticipated truck route(s) for the Project (i.e., Broadway and Spring Street). These buildings are anticipated to be exposed to ground-borne vibration levels of approximately 0.022 PPV. Trucks from the related projects are expected to generate similar ground-borne vibration levels. Therefore, the vibration levels generated from off-site construction trucks associated with the Project and other related projects along the anticipated truck route(s) would be below the most stringent building damage significance criterion of 0.12 PPV for buildings extremely susceptible to vibration. As discussed above, potential vibration impacts associated with Project-related off-site improvements construction activities would be less than significant with respect to building damage. Therefore, Project off-site improvements construction would not contribute to the cumulative construction vibration impacts, as vibration impact is based on the peak vibration level generated by individual construction equipment. **Therefore, potential cumulative vibration impacts with respect to building damage from off-site construction would be less than significant.**

As discussed above, potential vibration impacts associated with Project-related off-site improvements construction activities would be less than significant with respect to human annoyance at all off-site receptor locations. Construction of the Project's off-site improvements construction would not contribute to the cumulative construction vibration impacts, as vibration impact is based on the peak vibration level generated by individual construction equipment. However, as discussed above, potential vibration impacts associated with temporary and intermittent vibration from project-related construction trucks traveling along the anticipated truck route (i.e., Broadway) would be significant with respect to human annoyance. As related projects would be anticipated to use similar trucks as the Project, it is anticipated that construction trucks would generate similar vibration levels along the anticipated truck route(s), i.e., Broadway and Spring Street. As analyzed above, there are residential and motel uses along the anticipated truck routes, which would exceed 72 VdB as the trucks pass by within 24 feet of the sensitive receptors. There are related projects located along Broadway (including Related Project Nos. 7, 11, 17, and 18), and along Spring Street (including Related Project Nos. 5, 23, 24, and 25) which could utilize the same truck routes (i.e., Broadway and Spring Street). **Therefore, to the extent that other related projects use the same haul route as the Project, potential cumulative vibration impacts with respect to human annoyance associated with temporary and intermittent vibration from haul trucks traveling along the designated haul route (i.e., Broadway**

[55] *FTA, Transit Noise and Vibration Impact Assessment, September 2018, Figure 5-4.*

between Avenue 18 and Avenue 19) would be significant and unavoidable, and the Project's contribution would be cumulatively considerable along the designated haul route.

(iii) Summary of Cumulative Construction Vibration Impacts

As discussed above, due to the rapid attenuation characteristics of ground-borne vibration and given the distance of the nearest related project to the Project Site, there is no potential for a cumulative construction vibration impact with respect to building damage associated with ground-borne vibration from on-site sources. In addition, potential cumulative vibration impacts with respect to building damage from off-site construction would be less than significant. **Therefore, on-site and off-site construction activities associated with the Project and related projects would not generate excessive ground-borne vibration levels with respect to building damage**.

Cumulative construction vibration impacts from on-site construction activities pursuant to the significance criteria for human annoyance would be less significant in the event concurrent construction of the Project and the related projects were to occur. However, to the extent that other related projects use the same haul route(s) as the Project, potential cumulative human annoyance impacts associated with temporary and intermittent vibration from haul trucks traveling along the designated haul route(s) would be significant. **Therefore, on-site construction activities would not generate excessive ground-borne vibration levels with respect to human annoyance that would result in cumulative vibration impacts. However, cumulative vibration impacts with respect to human annoyance associated with off-site construction activities would be significant and unavoidable, and the Project's contribution would be cumulatively considerable along the designated haul route.**

(d) Operational Vibration

Vibration levels from project operation are generally limited to building mechanical equipment and vehicle circulation and would be limited to the immediate vicinity of the project sites. The related projects (mixed-use and commercial developments) would generate similar vibration levels as the Project. Since ground-borne vibration decreases rapidly with distance, operation of the related projects would not contribute to cumulative vibration impacts due to the distance between the Project and the related projects. As analyzed above, the Project operation would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. **Therefore, based on the distance of the related projects from the Project Site and the operational vibration levels associated with the Project, cumulative vibration impacts associated with operation of the Project and related projects would be less than significant**.

g. Mitigation Measures

(1) Construction Noise

As analyzed above, there would be potential cumulative noise impacts at the nearby sensitive uses (e.g., residential uses) located in proximity to the Project Site and Related Project Nos. 5, 7, 11, 17, 18, 23, 24 and 25, in the event of concurrent construction activities. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures (e.g., providing temporary noise barriers) for each individual related project. However, even with these mitigation measures, cumulative noise impacts would continue to occur, and there are no other physical mitigation measures that would be feasible. As such, cumulative on-site noise impacts from on-site construction would be significant and unavoidable.

As analyzed above, cumulative noise impacts associated with off-site construction trucks from the Project and other related projects could occur. Conventional mitigation measures, such as providing temporary noise barrier walls to reduce the off-site construction truck traffic noise impacts, would not be feasible as the barriers would obstruct the access and visibility to the properties along the anticipated truck routes. There are no other feasible mitigation measures to reduce the temporary significant noise impacts associated with the cumulative off-site construction trucks.

(a) Operational Noise

As discussed above, operation of the Project and related projects would not result in a significant noise impact during operation. Therefore, no mitigation measures are required.

(b) Construction Vibration

Cumulative vibration impacts with respect to building damage associated with on-site and off-site construction activities would be less than significant. Therefore, no mitigation measures are required.

However, vibration levels from off-site construction would exceed the significance criteria for human annoyance at vibration sensitive receptors along the anticipated construction routes. There are no feasible mitigation measures to reduce the potential vibration human annoyance impacts. Therefore, cumulative vibration impacts from off-site construction with respect to human annoyance would remain significant and unavoidable.

(c) Operational Vibration

Cumulative vibration impacts associated with operation of the Project and related projects would be less than significant. Therefore, no mitigation measures are required.

(2) Level of Significance After Mitigation

(a) Construction Noise

Cumulative construction noise impacts associated with on-site noise sources and off-site construction traffic would remain significant and unavoidable.

(b) Operational Noise

Cumulative impacts related to operational noise were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(c) Construction Vibration

Cumulative vibration impacts with respect to building damage from on-site and off-site construction activities were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

However, with respect to human annoyance, cumulative vibration impacts from off-site construction would be significant and unavoidable.

(d) Operational Vibration

Cumulative impacts related to operational vibration were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.