

APPENDIX F: NOISE IMPACT REPORT

Parker Environmental Consultants,
Noise Impact Report, 5600 Franklin Avenue Project,
5600-5616 W. Franklin Avenue and 1857-1859 N. Garfield Place,
Los Angeles, CA 90028,
August 14, 2023.

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NOISE IMPACT REPORT

5600 FRANKLIN AVENUE PROJECT 5600-5616 W. FRANKLIN AVENUE AND 1857-1859 N. GARFIELD PLACE, LOS ANGELES, CA 90028

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1. INTRODUCTION

The purpose of this report is to address the construction and operational noise impacts of the proposed 5600 Franklin Avenue Project (“Proposed Project”), located at 5600 to 5616 W. Franklin Avenue and 1857 to 1859 N. Garfield Place, Los Angeles, CA 90028 (“Project Site”) in the Hollywood Community Planning Area of the City of Los Angeles. The Proposed Project includes the demolition of an existing auto service center and multi-family residential building and the construction and operation of a new 53,919 square-foot multi-family residential project with 41 dwelling units. The Proposed Project would include five-stories above grade with one level of subterranean parking. Parking for the Proposed Project would include 57 parking stalls with driveway access from Garfield Place.

2. ENVIRONMENTAL SETTING

A. Project Location and Physical Setting

The Proposed Project is located at 5600 to 5616 W. Franklin Avenue and 1857 to 1859 N. Garfield Place in the Hollywood Community Planning Area of the City of Los Angeles. The Project Site is located on the southwest corner of Franklin Avenue and Garfield Place. The Project Site lot area is approximately 0.44 acres, and currently improved with an auto repair center and multi-family residential building with four dwelling units. Current vehicular access to the Project Site is provided by three vehicle driveways: two driveways along Franklin Avenue (one connecting to the auto service center and one connecting to the multi-family residential building) and one vehicle parking driveway along Garfield Place that connects to the auto service center.

The properties surrounding the Project Site consist of a mix of multi- and single-family residential and institutional land uses. Franklin Avenue immediately borders the Project Site to the north. North of Franklin Avenue is a single-family residential neighborhood and private high school. Garfield Place immediately borders the Project Site to the east. To the east of Garfield Place are two-story multi-family residential buildings. To the west of the Project Site are multi-family residential buildings. Immediately south of the Project Site is a vacant lot. To the south of the vacant lot are two-story multi-family residential buildings. The general location of surrounding land uses is depicted in Figure 1, Project Location Map, on page 2.

According to the Los Angeles Historic Resources Inventory, the Project Site does not contain any historic structures or scenic resources on site.¹ Additionally, SurveyLA does not flag any of the on-site structures as potentially historic resources.² Thus, there are no historic or potentially historic resources on the Project Site that are listed on the National Register, California Register, or local listing.

¹ City of Los Angeles, *Historic Places LA, Los Angeles Historic Resources Inventory*, website: <http://historicplacesla.org/map>, accessed June 2020.

² City of Los Angeles, *SurveyLA, Hollywood – Individual Resources*, November 2015, website: https://planning.lacity.org/odocument/748a0828-a6b7-436c-a9a6-d7e5c7c21d7e/Hollywood_Individual_Resources.pdf, accessed June 2020.

There is one potentially historical resource in close proximity of the Project Site: the Garfield Court Apartments, located at 1833 N Garfield Place, approximately 150 feet south of the Project Site.³ The Garfield Court Apartments appears eligible for listing in the National Register, California Register and for local listing as a Los Angeles Historical-Cultural Monument.⁴ Additionally, the Project Site is located south of the Hollywood Grove Historic Preservation Overlay Zone (HPOZ), across Franklin Avenue.⁵ The period of significance for the Hollywood Grove HPOZ is identified as 1905-1939, from the date when the first neighborhood tracts were plotted and the construction of the current built environment began (the oldest extant home was built in 1905). The period of significance ends at the beginning of World War II, when construction in the neighborhood began to decline as a result of wartime restrictions. The contributing buildings retain their historic design and features depicting the array of styles common during these decades, predominantly, Transitional Arts & Crafts, Craftsman, Colonial Revival, Tudor/English Revival, and Spanish Colonial Revival.⁶

B. Fundamentals of Sound and Environmental Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (“dBA”) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. To provide a reference for noise levels expressed in dBA, Table 1, Representative Environmental Noise Levels, describes representative noise levels that occur in the environment.

³ *Historic Places LA, Los Angeles Historic Resources Inventory, Map View, website: <http://historicplacesla.org/map>, accessed June 2020.*

⁴ *City of Los Angeles, Historic Places LA, Los Angeles Historic Resources Inventory, “Garfield Court Apartments” website: <http://www.historicplacesla.org>, accessed June 2020.*

⁵ *City of Los Angeles, Historic Places LA, Los Angeles Historic Resources Inventory, website: <http://historicplacesla.org/map>, accessed June 2020.*

⁶ *City of Los Angeles, Hollywood Grove HPOZ Preservation Plan, March 2011, website: <https://planning.lacity.org/odocument/e50ff5c2-c550-4f2a-93f5-de73ddc5fb09/Hollywood%20Grove%20Pres%20Plan.pdf>, accessed June 2020.*

Table 1
Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 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 Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing
<i>Source: California Department of Transportation, 1998.</i>		

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq} – An L_{eq} , or equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- L_{min} – The minimum instantaneous noise level experienced during a given period of time.
- L_{max} – The maximum instantaneous noise level experienced during a given period of time.
- CNEL – The Community Noise Equivalent Level is a 24-hour average L_{eq} with a 5 dBA “weighting” during the hours of 7:00 PM to 10:00 PM and a 10 dBA “weighting” added to noise during the hours of 10:00 PM to 7:00 AM to account for noise sensitivity in the evening and

nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.7 dBA CNEL.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Community noise levels below 60 dBA CNEL are generally considered low, moderate levels are considered to be in the 60 to 70 dBA CNEL range, and high levels above 70 dBA CNEL. Examples of noise levels in urban residential or semi-commercial areas are typically 55 to 60 dBA CNEL, whereas commercial locations are typically 60 dBA CNEL. People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60 to 75 dBA CNEL) or dense urban or industrial areas (65 to 80 dBA CNEL).

It is widely accepted that in the community noise environment, the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

C. Fundamentals of Environmental Groundborne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move and creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in decibels (VdB) is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings, such as historic buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 2, Human Response to Different Levels of Groundborne Vibration.

Table 2
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Perception
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.</i>	

D. City of Los Angeles Noise Regulations

Los Angeles Municipal Code (LAMC)

The City's comprehensive noise ordinance, found in Chapter XI of the City of Los Angeles Municipal Code (LAMC), sets forth sound measurement and criteria, minimum ambient noise levels for different land use zoning classifications, sound emission levels for specific uses, hours of operation for certain uses, standards for determining when noise is deemed to be a disturbance, and legal remedies for violations.

In accordance with the LAMC, a noise level increase of five decibels over the existing average ambient noise level at an adjacent property line is considered a noise violation. This standard applies to: (1) radios, television sets, and similar devices defined in LAMC Section 112.01; (2) air conditioning, refrigeration, heating, pumping, filtering equipment defined in LAMC Section 112.02; (3) powered equipment intended for repetitive use in residential areas and other machinery, equipment, and devices defined in LAMC Section 112.04; and (4) motor vehicles driven on site as defined in LAMC Section 114.02. These standards apply regardless of the off-site land use. The City of Los Angeles has several ordinances and enforcement practices that apply to intrusive noise, which are detailed below.

SEC.41.40. Noise Due to Construction, Excavation Work—When Prohibited

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

SEC 112.05 Maximum Noise Level of Powered Equipment or Powered Hand Tools

Between the hours of 7:00 A.M. and 10:00 P.M., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

- (a) 75 dBA for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;
- (b) 75 dBA for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;
- (c) 65 dBA for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors.

Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

SEC.112.02. Air Conditioning, Refrigeration, Heating, Plumbing, Filtering Equipment

- (a) It shall be unlawful for any person, within any zone of the city, to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any noise which would cause the noise level on the premises of any other occupied property ... to exceed the ambient noise level by more than five decibels.

Ordinance No. 178,048

The City of Los Angeles Building Regulations Ordinance No. 178,048 requires a construction site notice to be posted on site that includes the job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the Site, and City telephone numbers where violations can be reported. This notice is required to be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.

SEC. 116.01. Loud, Unnecessary And Unusual Noise

Notwithstanding any other provisions of this chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following: (a) The level of noise; (b) Whether the nature of the noise is usual or unusual; (c) Whether the origin of the noise is natural or unnatural; (d) The level and intensity of the background noise, if any; (e) The proximity of the noise to residential sleeping facilities; (f) The nature and zoning of the area within which the noise emanates; (g) The density of the inhabitation of the area within which the noise emanates; (h) The time of the day and night the noise occurs; (i) The duration of the noise; (j) Whether the noise is recurrent, intermittent, or constant; and (k) Whether the noise is produced by a commercial or noncommercial activity.

Noise Element of the General Plan

California Government Code Section 65302(g) requires that a noise element be included in the General Plan of each county and city in the State. The Noise Element of the City of Los Angeles General Plan is intended to identify sources of noise and provide objectives and policies that ensure that noise from various sources do not create an unacceptable noise environment. Overall, the City's Noise Element describes the noise environment (including noise sources) in the City, addresses noise mitigation regulations, strategies, and programs as well as delineating federal, State, and City jurisdiction relative to rail, automotive, aircraft, and nuisance noise.

The City's noise standards are correlated with land use zoning classifications in order to maintain identified ambient noise levels and to limit, mitigate, or eliminate intrusive noise that exceeds the ambient noise levels within a specified zone. The City has adopted local guidelines based, in part, on the community noise compatibility guidelines established by the DHS for use in assessing the compatibility of various land use types with a range of noise levels. These guidelines are set forth in the City's General Plan Noise Element in terms of the CNEL. Thus, the noise/land use compatibility guidelines for land uses within the City of Los Angeles are based on those presented in Table 3, Community Noise Exposure Levels (CNEL), below.

In accordance with the Noise Element of the City of Los Angeles General Plan, an exterior day-night average noise exposure level below 60 dB CNEL is considered to be normally acceptable for multi-family land uses. It is recognized that such a level may not always be possible in areas of substantial traffic noise intrusion. Exterior day-night average noise exposure levels between 60 - 69 dB CNEL are considered "conditionally acceptable" for multi-family land uses "only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice." Exterior day-night average noise levels between 70 and 74 dB CNEL are considered "normally unacceptable" for multi-family housing and new construction or development should be discouraged. Exterior day-night average noise levels above 75 dB

CNEL are considered “clearly unacceptable” and it is recommended that new construction or development generally should not be undertaken.

Table 3
Community Noise Exposure Levels (CNEL)

Land Use	Normally Acceptable ^a	Conditionally Acceptable ^b	Normally Unacceptable ^c	Clearly Unacceptable ^d
Single-family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 75
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Transient Lodging – Motels, Hotels	50 - 65	60 - 70	70 - 80	above 75
Auditoriums, Concert Halls, Amphitheaters	---	50 - 70	---	above 70
Sports Arena, Outdoor Spectator Sports	---	50 - 75	---	above 75
Playgrounds, Neighborhood Parks	50 - 70	---	67 - 75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75	---	70 - 80	above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	above 75	---
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	---

^a *Normally Acceptable:* Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

^b *Conditionally Acceptable:* New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

^c *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.

^d *Clearly Unacceptable:* New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California General Plan Guidelines, October 2003 (in coordination with the California Department of Health Services); City of Los Angeles, General Plan Noise Element, adopted February 1999.

Federal Transit Administration

The State CEQA Guidelines do not define the levels at which groundborne vibration or groundborne noises are considered “excessive.” Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines and recommendations by the Federal Transit Administration (FTA) to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration damage to buildings would be considered significant if the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at any building that is constructed with reinforced-concrete, steel, or timber;

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry buildings;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any historical building or building that is extremely susceptible to vibration damage.

In terms of groundborne vibration impacts associated with human annoyance, this analysis incorporates the FTA's vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are a frequent number of events per day, which would provide for the most conservative vibration analysis. A threshold level of 80 VdB is applied at residences and buildings where people normally sleep, and 83 VdB at other institutional buildings with primarily daytime use, such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

California Department of Transportation

The California Department of Transportation (Caltrans) also provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects in the Transportation and Construction Vibration Guidance Manual ("Caltrans Manual"), dated September 2013. The Caltrans Manual observes that in most cases "vibration induced by typical construction equipment does not result in adverse effects on people or structures." To assess the damage potential from groundborne vibration induced by construction equipment, a synthesis of various vibration criteria were developed. Based on Caltrans criteria, construction impacts relative to structural damage from groundborne vibration would be considered significant if the following thresholds were to occur as shown in Table 4, Vibration Damage Potential Threshold Criteria, below.

Accordingly, this analysis utilizes guidance provided in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment and the California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual. For determining impacts to structural damage, the calculations and thresholds in this analysis are taken from the Caltrans Manual because the suggested values are more conservative compared to FTA's attenuation factor, which assumes vibration would attenuate at a greater rate.⁷ Since the State CEQA Guidelines do not define the levels at which groundborne vibration or groundborne noises are considered "excessive," this analysis applies both FTA and Caltrans thresholds where it seems more applicable.

⁷ Caltrans, *Transportation and Construction Vibration Guidance Manual, Chapter 7: Vibration Prediction and Screening Assessment for Construction Equipment*, pg. 37, September 2013.

Table 4
Vibration Damage Potential Threshold Criteria

Threshold Criteria	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Structure and Condition		
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
<i>Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual, Chapter 7: Vibration Prediction and Screening Assessment for Construction Equipment, Table 19. September 2013.</i>		

E. Ambient Noise Levels

To assess the existing ambient noise conditions in the area, ambient noise measurements were taken with a Larson Davis 831C sound level meter, which conforms to industry standards set forth in ANSI S1.4-1983 (R2001) - American National Standard Specification for Sound Level Meters. Figure 2, Noise Monitoring and Sensitive Receptor Location Map, depicts the noise measurement locations fronting the adjacent residential and educational uses as the most likely sensitive receptors to experience noise level increases during construction and at the major intersections surrounding the Project Site. The detailed noise monitoring data are presented in Appendix A, Noise Monitoring Data and Calculations Worksheets, and are summarized below in Table 5, Existing Ambient Noise Levels in Project Site Vicinity. As shown in Table 5, the ambient daytime noise in the vicinity of the Project Site ranges from 61.2 to 67.7 L_{eq} . The maximum instantaneous noise level during the three daytime 15-minute recordings was 90.3 dB L_{max} at Location A, where a motorcycle passed by the noise monitor. The primary noise sources that contributed most to the measured ambient noise levels were pedestrians and vehicle traffic during the daytime hours, including the cars, motorcycles, and delivery trucks.

Table 5
Existing Ambient Daytime Noise Levels in Project Site Vicinity

ID	Location	Primary Noise Sources	Noise Level Statistics ^a		
			L_{eq}	L_{min}	L_{max}
A	On the west side of Garfield Place; southwest corner of Project Site	Light vehicle traffic, pedestrian activity	63.5	54.2	90.3
B	On the northeast corner of Franklin Avenue and St. Andrews Place; northwest of Project Site	Heavy vehicle traffic, pedestrian activity	67.7	50.9	86.5
C	On the east side of Gramercy Place; south of Franklin Avenue	Light vehicle traffic, light pedestrian activity, delivery trucks	61.2	43.6	86.9
Notes: ^a Noise measurements were taken on Thursday, February 4, 2021 at each location for a duration of 15 minutes. See Appendix A of this report for noise monitoring data sheets. Parker Environmental Consultants, 2021.					

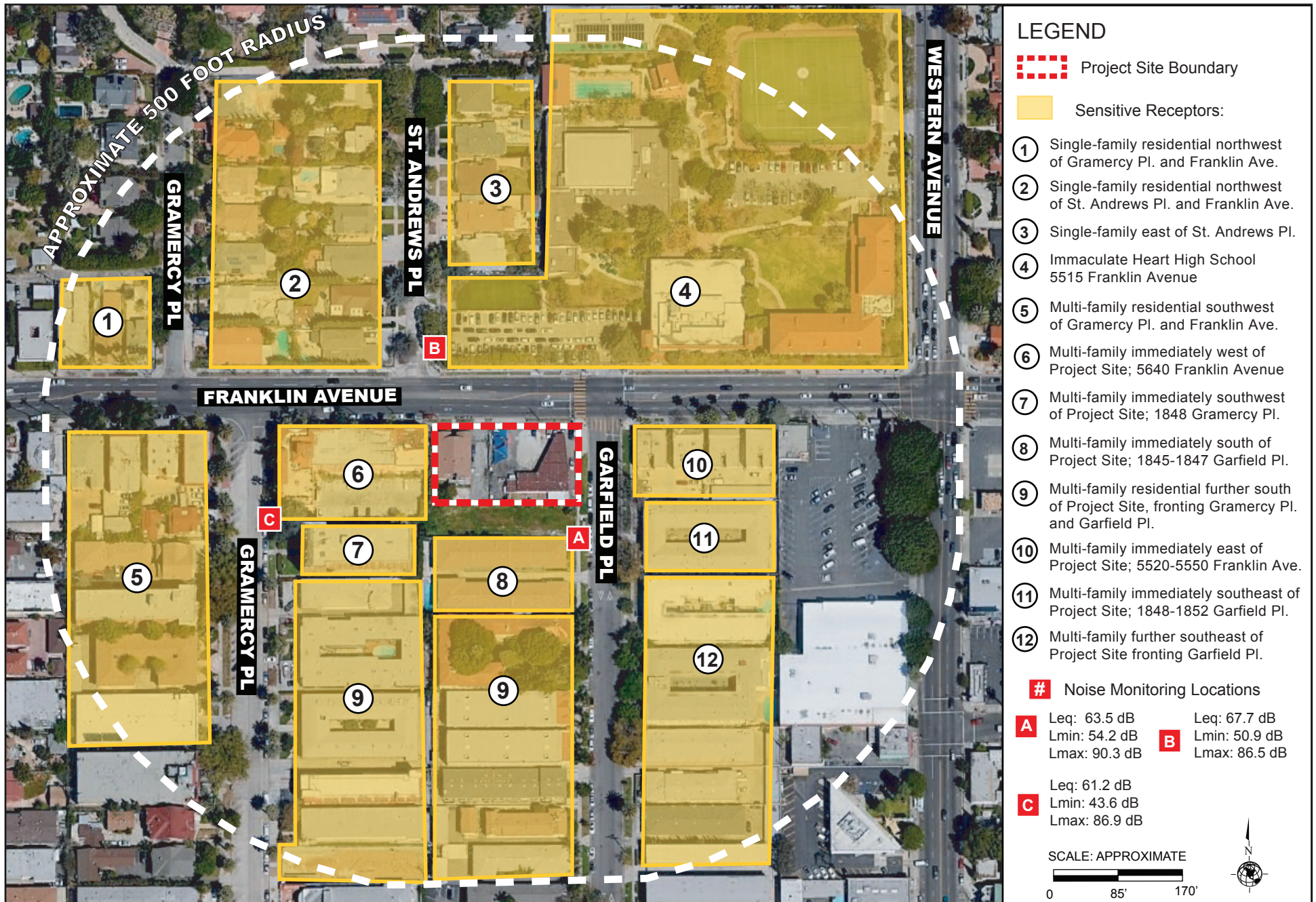
F. Sensitive Receptors

Several noise sensitive land uses are located in the vicinity of the Proposed Project. For purposes of assessing noise impacts on sensitive populations, the sensitive receptors in close proximity (within 500 feet) to the Project Site were identified. Table 6, below, provides a summary of the sensitive receptors by address and land use and their respective proximity to the Project Site.

The locations of these land uses relative to the Project Site are depicted in Figure 2, Noise Monitoring and Sensitive Receptor Location Map. In terms of assessing construction-generated vibration impacts, there are no buildings that are directly abutting the Project Site's property line that would be potentially susceptible to structural vibration impacts from the construction activities proposed for the Project.

Table 6
Summary of Noise Sensitive Land Uses Within 500 Feet of the Project Site

ID	Address	Land Use / Description	Distance to Project Site
1	5651-5659 W. Franklin Avenue	Single-family residential northwest of Gramercy Place and Franklin Avenue	380 ft.
2	1900-1936 N. Gramercy Place; 1901-1937 N. St. Andrews Place	Single-family residential northwest of St. Andrews Place and Franklin Avenue	100 ft.
3	1916-1936 N. St. Andrews Place	Single-family residential east of St. Andrews Place	200 ft.
4	5515 W. Franklin Avenue	Immaculate Heart High School	130 ft.
5	5648-5672 W. Franklin Avenue; 1831-1861 N. Gramercy Place	Multi-family residential southwest of Gramercy Place and Franklin Avenue	285 ft.
6	5620-5640 W. Franklin Avenue	Multi-family residential immediately west of Project Site	5 ft.
7	1848 N. Gramercy Place	Multi-family residential immediately southwest of Project Site	45 ft.
8	1845-1847 N. Garfield Place	Multi-family residential immediately south of Project Site	50 ft.
9	1806-1840 N. Gramercy Place; 1805-1939 N. Garfield Place	Multi-family residential further south of Project Site, fronting Gramercy Place and Garfield Place	100 ft.
10	5520-5550 W. Franklin Avenue	Multi-family residential immediately east of Project Site	70 ft.
11	1848-1852 N. Garfield Place	Multi-family residential immediately southeast of Project Site	85 ft.
12	1806-1840 N. Garfield Place	Multi-family residential further southeast of Project Site, fronting Garfield Place.	130 ft.
<i>Source: Parker Environmental Consultants, 2020.</i>			



3. ENVIRONMENTAL IMPACTS

A. Thresholds of Significance

In accordance with Appendix G to the state *CEQA Guidelines*, the Proposed Project would have a significant impact on noise if it would cause any of the following conditions to occur:

- (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;
- (b) Generation of excessive groundborne vibration or groundborne noise levels;
- (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.

B. Regulatory Compliance Measures

In furtherance of complying with the provisions set forth in LAMC Section 112.05, above, the Applicant will incorporate the following features into the construction work plans:

- (a) Demolition and construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- (b) The project contractor shall use power construction equipment with noise shielding and muffling devices.
- (c) The project contractor will erect a temporary noise-attenuating sound barrier along the perimeter of the Project Site.
- (d) During any jackhammering and structural framing, the project contractor shall utilize temporary portable acoustic barriers, partitions, or acoustic blankets to effectively block the line-of-sight between noise producing equipment and the adjacent residential land uses for purposes of ensuring noise levels at the adjacent residential land uses does not exceed 75 dBA Leq.

C. Project Impacts

- a) **Would the project 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?**

Less Than Significant Impact. The determination of a significant impact is based on if a project would generate excess noise that would cause the ambient noise environment to exceed noise level standards set forth in the City of Los Angeles General Plan Noise Element (Noise Element) and the City of Los Angeles Noise Ordinance (Noise Ordinance). A significant impact may also occur if the Proposed Project were to

result in a substantial temporary or periodic increase or a substantial permanent increase in existing ambient noise levels without the Proposed Project.

Construction-related noise impacts upon adjacent land uses would be significant if, as indicated in LAMC Section 112.05, noise from construction equipment within 500 feet of a residential zone exceeds 75 dBA at a distance of 50 feet from the noise source. However, the above noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment.

For operational noise impacts, a project would normally have a substantial permanent increase in ambient noise levels from Proposed Project operations if the Current Project causes the ambient noise level measured at the property line of affected uses that are shown in Table 3, Community Noise Exposure Levels (CNEL), to increase by 3 dBA in CNEL to or within the “normally unacceptable” or “clearly unacceptable” category, or any 5 dBA or greater noise increase. Thus, a significant impact would occur if noise levels associated with operation of the Proposed Project would increase the ambient noise levels by 3 dBA CNEL at homes where the resulting noise level would be at least 70 dBA CNEL. In addition, any long-term increase of 5 dBA CNEL or more is considered to cause a significant impact. Generally, in order to achieve a 3 dBA CNEL increase in ambient noise from traffic, the volume on any given roadway would need to double. In addition to analyzing potential impacts in terms of CNEL, the analysis also addresses increases in on-site noise sources per the provisions of the LAMC, which establishes a L_{eq} standard of 5 dBA over ambient conditions as constituting a LAMC violation.

Construction Noise

Construction of the proposed 41-unit residential project would require the use of heavy equipment for demolition, grading, the installation of utilities, paving, building construction, and architectural coatings. Such activities would generate noise levels capable of impacting adjacent land uses. During each construction phase there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of each activity. The U.S. Environmental Protection Agency (EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. The data pertaining to the types of construction equipment and activities that are likely to occur during Project construction at distances of 50 feet to 200 feet from the noise source (i.e., reference distance) are presented in Table 7, Typical Outdoor Construction Noise Levels. Representative. Noise levels of the types of construction equipment used in the Proposed Project’s building development are depicted in Table 8, Noise Range of Selected Construction Equipment.⁸

⁸ Based on the construction equipment identified in the CalEEMod worksheets for the air quality models prepared for the Proposed Project.

Table 7
Typical Outdoor Construction Noise Levels

Construction Phase	Noise Levels at 50 Feet with Mufflers (dBA Leq)	Noise Levels at 60 Feet with Mufflers (dBA Leq)	Noise Levels at 100 Feet with Mufflers (dBA Leq)	Noise Levels at 200 Feet with Mufflers (dBA Leq)
Ground Clearing	82	80	76	70
Excavation, Grading	86	84	80	74
Foundations	77	75	71	65
Structural	83	81	77	71
Finishing	86	84	80	74
<i>Source: United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.</i>				

The noise levels shown in Table 7 represent composite noise levels associated with typical construction activities, which take into account both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction. Construction noise during the heavier initial periods of construction could be expected to be as high as 86 dBA Leq when measured at a reference distance of 50 feet from the center of construction activity. These noise levels would diminish with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 86 dBA Leq measured at 50 feet from the noise source to the receptor would reduce to 80 dBA Leq at 100 feet from the source to the receptor, and reduce by another 6 dBA Leq to 74 dBA Leq at 200 feet from the source to the receptor.

Table 8
Noise Data for Selected Construction Equipment

Construction Phases	Construction Equipment	Estimated Usage Factor %	Actual Measures Noise Level at 50 Feet (dBA L_{max})
Demolition/Clearing	Concrete/Industrial Saws (1)	20	90
	Rubber Tired Dozer (1)	40	82
	Tractor/Loader/Backhoe (2)	40	78
Grading	Excavator (1)	40	78
	Grader (1)	40	85
	Tractor/Loader/Backhoe (2)	40	78
Building Construction	Cement and Mortar Mixers (1)	40	79
	Forklifts (2)	20	75
	Generator Sets (1)	50	81
	Pavers (1)	50	77
	Rollers (1)	20	80
Architectural Coating	Tractor/Loader/Backhoe (2)	40	78
	Aerial Lifts (2)	20	75
	Air Compressors (4)	40	78
<i>Source: FHWA, Roadway Construction Noise Model, Construction Noise Prediction, (at Table 1 CA/T Equipment noise emissions and acoustical usage factors database, January 2006.</i>			

It should be noted that not all construction noise equipment would be utilized concurrently during each phase and the location and spacing of heavy construction equipment and machinery would vary over the course of construction. Mobile equipment moves around the construction site with power applied in cyclic fashion (bulldozers, loaders), or to and from the site (trucks). Because the precise numbers and locations of equipment operating at the same time are not known, this analysis follows the recommended procedures contained in the Federal Transit Administrations Transit Noise and Vibration Impact Assessment Manual for a quantitative construction noise assessment. Pursuant to these procedures, the noise levels for the two loudest pieces of construction equipment were calculated from the center of the Project Site and the respective distance to each sensitive receptor.

As shown in Table 9, Estimated Exterior Construction Noise at Nearest Sensitive Receptors Without Mitigation, the ambient exterior noise levels without mitigation would range from 47.5 dBA to 78.2 dBA. As such, unmitigated construction noise levels would exceed 75 dBA at a distance of 50 feet from the Project Site (in conflict with LAMC 112.05) and would exceed ambient noise levels by more than 5-dBA threshold at Sensitive Receptor Nos. 4, 6, 7, 8, 10, 11, and 12. As such, a substantial temporary or periodic increase in exterior ambient noise levels could occur for six of the 12 identified sensitive receptors. Therefore, the Proposed Project would incorporate mitigation measures N-1 to N-4 to further attenuate construction noise to the maximum extent feasible.

As noted below, temporary noise barrier be installed along the property lines to block the line-of-sight between the noise sources and surrounding sensitive receptors. The construction of a temporary $\frac{3}{4}$ inch plywood noise barrier would be capable of attenuating the noise level by approximately 15 dBA. Additionally, noise control efforts to limit the construction activities to permissible hours of construction, incorporate noise shielding devices and sound mufflers, echo barriers, and operate machinery in a manner that reduces noise levels (i.e., not operating several pieces of equipment simultaneously if possible) would be effective in reducing noise impacts. Localized and portable sound enclosures would be used, as necessary, to significantly reduce noise from these types of equipment. Products such as Echo Barrier Outdoor noise barriers/absorbers can provide a 10 to 20 dBA noise reduction or more if the barrier is doubled up. Pursuant to LAMC Chapter IV, Article 1, Section 41.40, exterior demolition and construction activities that generate noise are prohibited between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, and between 6:00 P.M. and 8:00 A.M. on Saturday and federal holidays. Demolition and construction are prohibited on Sundays. The construction activities associated with the Proposed Project would comply with these LAMC requirements. Mitigation Measure N-1 would further restrict the permissible hours of construction to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday.

Further, the Applicant would be required to post informational signage providing contact information to report complaints regarding excessive noise (refer to Mitigation Measure N-5, below). Additionally, the Applicant would be required to provide courtesy notifications to adjacent business owners and residences a minimum of two weeks prior to commencement of construction (refer to Mitigation Measure N-6 below). The City of Los Angeles Building Regulations Ordinance No. 178,048 requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any

discretionary approval for the Project Site, and City telephone numbers where violations can be reported. The notice is required to be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public. With implementation of Mitigation Measures N-5 and N-6 and regulatory compliance measures, affected residents and business owners would be provided advanced notice of potential noise impacts and opportunities to comment on construction noise.

Table 9
Estimated Exterior Construction Noise at Nearest Sensitive Receptors Without Mitigation

ID ^a	Ambient Noise (dBA L _{eq}) ^b	Noise Level Impact (dBA L _{eq}) by Phase ^c				Construction Noise Threshold (dBA L _{eq}) ^d	Noise Impact Above Threshold
		Demolition	Grading	Building	Architectural Coating		
1	67.7	54.7	53.2	49.6	47.5	72.7	0.0
2	67.7	72.4	71.0	67.4	65.2	72.7	0.0
3	67.7	60.2	58.8	55.2	53.1	72.7	0.0
4	67.7	73.1	71.7	68.1	65.9	72.7	0.4
5	61.2	57.7	56.3	52.7	50.5	66.2	0.0
6	61.2	78.2	76.8	73.2	71.0	66.2	12.0
7	61.2	75.3	73.8	70.2	68.1	66.2	9.1
8	63.5	78.2	76.8	73.2	71.0	68.5	9.7
9	63.5	64.7	63.2	59.6	57.5	68.5	0.0
10	67.7	73.8	72.4	68.8	66.7	72.7	1.1
11	63.5	73.1	71.7	68.1	65.9	68.5	4.6
12	63.5	71.1	69.7	66.1	64.0	68.5	2.6

Notes:

^a ID refers to the sensitive receptor locations identified in Figure 2, Noise Monitoring and Sensitive Receptor Location Map.

^b Daytime noise levels are based on actual noise measurements taken at the Project Site vicinity.

^c An attenuation factor of 10 dBA was applied for sensitive receptors where buildings separate the Project Site and the associated sensitive receptor.

^d Calculations based on the loudest two pieces of heavy construction equipment specific to each phase.

Source: Parker Environmental Consultants, LLC, (see Appendix A, Noise Monitoring Data and Calculation Worksheets).

Implementation of Mitigation Measures N-1 through N-4 would reduce the noise levels associated with construction of the Proposed Project to nearby residents to the maximum extent that is technically feasible. As noted in Table 10, Estimated Exterior Construction Noise at Nearest Sensitive Receptors With Mitigation, estimated construction noise impacts would be substantially reduced to less than significant levels. Noise levels at each of the 12 receptors would be less than 75 dBA at a distance of 50 feet from the Project Site and would not be more than 5-dBA above ambient noise levels at any of the sensitive receptors.

Therefore, with mitigation, the Proposed Project would result in a less than significant impact with respect to generating a substantial temporary increase in ambient noise levels in the vicinity of the Project Site.

Table 10
Estimated Exterior Construction Noise at Nearest Sensitive Receptors With Mitigation

ID ^a	Ambient Noise (dBA L _{eq}) ^b	Noise Level Impact (dBA L _{eq}) by Phase ^c				Construction Noise Threshold (dBA L _{eq}) ^d	Noise Impact Above Threshold
		Demolition	Grading	Building	Architectural Coating		
1	67.7	40.6	39.5	37.0	34.5	72.7	0.0
2	67.7	58.3	57.2	54.7	52.2	72.7	0.0
3	67.7	46.2	45.1	42.6	40.1	72.7	0.0
4	67.7	59.0	57.9	55.4	53.9	72.7	0.0
5	61.2	43.6	42.5	40.0	37.5	66.2	0.0
6	61.2	64.1	63.0	60.5	58.0	66.2	0.0
7	61.2	61.2	60.1	57.6	55.1	66.2	0.0
8	63.5	64.1	63.0	60.5	58.0	68.5	0.0
9	63.5	50.6	49.5	47.0	44.5	68.5	0.0
10	67.7	59.8	58.7	56.2	53.7	72.7	0.0
11	63.5	59.0	57.9	55.4	52.9	68.5	0.0
12	63.5	57.1	56.0	53.5	51.0	68.5	0.0

Notes:

^a ID refers to the sensitive receptor locations identified in Figure 2, Noise Monitoring and Sensitive Receptor Location Map.

^b Daytime noise levels are based on actual noise measurements taken at the Project Site vicinity.

^c An attenuation factor of 10 dBA was applied for sensitive receptors where buildings separate the Project Site and the associated sensitive receptor.

^d Calculations based on the loudest two pieces of heavy construction equipment specific to each phase.

Source: Parker Environmental Consultants, LLC, (see Appendix A, Noise Monitoring Data and Calculation Worksheets).

Haul Truck Noise

During the course of the combined excavation and other construction activities, it is estimated that a total of approximately 8,500 cubic yards (cy) of soil and approximately 624 tons of construction and demolition debris would be exported to a landfill located within the City. The highest daily haul trips would occur during the grading/excavation phase. It is anticipated that 14 cy capacity haul trucks would be used to export soil, resulting in a total of approximately 1,214 haul round trips, or approximately up to 20 round trips per day (including 10 inbound and 10 outbound trips) for a projected duration of 66 hauling days. It is assumed that haul truck trips would occur uniformly predominately outside of peak hours. The local haul route exiting the Project Site to the Azusa Land Reclamation facility would travel west on Franklin Avenue, then

south along Van Ness Avenue, which provides access to the US-101 Freeway. Inbound haul trips would exit the US-101 Freeway at Gower Street, proceed north on Gower Street and eastbound onto Franklin Avenue to the Project Site. A Haul Truck Route program would be described for the Proposed Project and approved by LADOT as part of the Construction Management Plan. Since haul truck loading and unloading activities would occur on-site and/or within the boundaries of an approved traffic control plan and during the hours as required by the Noise Ordinance, the haul truck noise would be considered less than significant.

Operational Noise

HVAC Equipment Noise

Upon completion and operation of the Proposed Project, on-site operational noise would be generated by heating, ventilation, and air conditioning (HVAC) equipment installed on the new structure. However, the noise levels generated by these equipment types are not anticipated to be substantially greater than those generated by the current HVAC equipment serving the surrounding buildings in the Project vicinity. In addition, the operation of this and any other on-site stationary sources of noise would be required to comply with the LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties by more than five decibels. Thus, because the noise levels generated by the HVAC equipment serving the Proposed Project would not be allowed to exceed the ambient noise level by five decibels on the premises of the adjacent properties, a substantial permanent increase in noise levels would not occur at the nearby sensitive receptors. Adherence to LAMC Section 112.02 would ensure the Proposed Project's noise impacts from HVAC equipment to be less than significant.

Parking Noise

Activities within the designated parking areas associated with the Project Site would have the potential to increase ambient noise levels in the area. Sources of noise within the parking areas would include engines accelerating, doors slamming, car alarms, and people talking. Noise levels within the parking areas would fluctuate with the amount of automobile and human activity. However, the proposed parking areas would be provided on the subterranean level and ground level of proposed building. As such, sound would be enclosed and more muffled since such vehicular sounds would be contained within the parking structure of the Proposed Project. In addition, operational-related noise generated by motor driven vehicles within the Proposed Project is regulated under the LAMC. With regard to motor driven vehicles, LAMC Section 114.02 prohibits the operation of any motor driven vehicles upon any property within the City such that the created noise would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than 5 dBA. As such, impacts with respect to the Proposed Project's parking areas would be less than significant.

Off-Site Traffic Noise

The Proposed Project would increase traffic volumes on the surrounding roadways, which in turn has the potential to increase roadway noise. Based on the principles of roadway noise, it would take a doubling of

the roadway's traffic to generate a perceptible increase (3 dBA) in the ambient roadway noise volume. If a project would result in traffic that is less than double the existing traffic, then the Proposed Project's mobile noise impacts can be assumed to be less than significant. LADOT performed traffic counts at the intersection of Franklin Avenue and Garfield Place in 2011. This intersection experienced 20,984 vehicles in a 24-hour period. According to the Proposed Project's VMT Screening Summary, the Proposed Project would result in approximately 168 daily vehicle trips, a net increase of 106 net daily vehicle trips when accounting for existing trips. Accounting for a 1% ambient annual increase plus 168 daily trips from the Proposed Project, this intersection would experience approximately 23,813 trips per day for the year 2023 for a worst-case scenario, assuming all Project trips pass this intersection. Therefore, the Proposed Project's estimated 168 average daily trips would represent a small percent increase in the daily traffic volume at this intersection. Therefore, the Proposed Project would not double the traffic along the closest intersections and thus would not exceed the 3-dBA CNEL threshold of significance at the nearby study intersections and roadways. Thus, the Proposed Project's mobile source noise impact would be less than significant.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Construction

Construction activities have the potential to generate low levels of groundborne vibration. The operation of construction equipment generates vibrations that propagate through the ground and diminishes in intensity with distance from the source. Vibration impacts can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage of buildings at the highest levels. The construction activities associated with the Proposed Project could have an adverse impact on both sensitive structures (i.e., building damage) and populations (i.e., annoyance). The City of Los Angeles has not adopted any significance thresholds associated with groundborne vibration impacts. Therefore, this analysis uses Caltrans' vibration impact thresholds for building damage and FTA's vibration impacts thresholds for human annoyance. Consistent with LAMC Section 112.05, the implementation of technically feasible noise reducing measures would also serve to reduce construction related vibration levels to the maximum extent feasible.

Table 11, Vibration Source Levels for Construction Equipment, identifies various PPV and RMS velocity (in VdB) levels for the types of construction equipment that would operate during the construction of the Proposed Project. Based on the information presented in Table 11, vibration velocities could reach as high as approximately 0.089 inches per second PPV at 25 feet from the source activity, depending on the type of construction equipment in use. This corresponds to a RMS velocity level (in VdB) of 87 VdB at 25 feet from the source activity.

Table 11
Vibration Source Levels for Construction Equipment

Equipment	Approximate PPV (in/sec)				Approximate RMS (VdB)			
	25 Feet	50 Feet	75 Feet	100 Feet	25 Feet	50 Feet	75 Feet	100 Feet
Large Bulldozer	0.089	0.031	0.017	0.011	87	78	73	69
Caisson Drilling	0.089	0.031	0.017	0.011	87	78	73	69
Loaded Trucks	0.076	0.027	0.015	0.010	86	77	72	68
Jackhammer	0.035	0.012	0.007	0.004	79	70	65	61
Small Bulldozer	0.003	0.001	0.0006	0.0004	58	49	44	40
<i>Note: in/sec = inches per second.</i> <i>Source: Caltrans Transportation and Construction Vibration Guidance Manual (Sept. 2013), which references the vibration source levels from the Federal Transit Administration.</i>								

Structural Vibration Impacts

In terms of construction vibration impacts on buildings, there are no buildings that are directly adjacent to the Project Site's property lines. The multi-family residential building to the west has an approximate 5-foot setback. Therefore, the Proposed Project would not have the potential to exceed the groundborne vibration thresholds for structural damage. Furthermore, protection against damage to adjacent structures is provided by existing law. Both the California Civil Code and the LAMC impose affirmative obligations on excavating landowners to protect against damage to adjacent structures. Civil Code Section 832 requires that excavating owners give notice of the excavation to owners of adjoining lands and buildings, use ordinary care and skill and take reasonable precautions to sustain adjoining land. Civil Code Section 832 also imposes additional obligations on owners excavating deeper than nine feet. LAMC Section 91.3307 requires that adjoining public and private property, including without limitation footings and foundations, be protected from damage during construction. As such, the Proposed Project's construction activities would have no groundborne vibration impacts upon any surrounding structures.

Operational

The Proposed Project is a multi-family residential development and would not involve the use of stationary equipment that would result in high vibration levels, which are more typical for large commercial and industrial projects. Although groundborne vibration at the Project Site and immediate vicinity may currently result from heavy-duty vehicular travel (e.g., refuse trucks and transit buses) along Franklin Avenue and Garfield Place, the proposed land uses would not result in a substantial increase in the use of these heavy-duty vehicles on the public roadways. While refuse trucks would be used for the removal of solid waste at the Project Site, the collection of refuse would occur within the enclosed parking structure which would effectively attenuate groundborne vibration and noise impacts. As such, vibration impacts associated with operation of the Proposed Project would be less than significant.

- 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?

No Impact. A significant impact may occur if the Proposed Project were located within an airport land use plan and would introduce substantial new sources of noise or substantially add to existing sources of noise within or in the vicinity of the Project Site. There are no public airports or private air strips within a two-mile radius of the Project Site, and the Project Site is not within any airport land use plan or airport hazard zone. The Proposed Project would not expose people to excessive noise levels associated with airport uses. Therefore, no impact would occur.

D. Mitigation Measures

Construction activities of the Proposed Project would exceed 75 dBA at a distance of 50 feet from the Project Site (in conflict with LAMC 112.05) and would exceed ambient noise levels by more than 5-dBA thresholds for some nearby adjacent sensitive receptors. Therefore, the Proposed Project would incorporate the following mitigation measures to further attenuate construction noise to the maximum extent feasible. With mitigation, the Proposed Project would result in a less than significant impact with respect to generating a substantial temporary increase in ambient noise levels in the vicinity of the Project Site.

Increased Noise Levels (Demolition, Grading, and Construction Activities)

- N-1** Construction and demolition shall be restricted to the hours of 7:00 AM to 6:00 PM Monday through Friday, and 8:00 AM to 6:00 PM on Saturday.
- N-2** The project contractor(s) shall employ noise minimization strategies when using mechanized construction equipment. To the maximum extent practical, demolition and construction activities shall be scheduled and coordinated so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels. Construction equipment shall not idle when not in use. The contractor shall place noise construction equipment as far from the Project Site edges as practicable.
- N-3** The project contractor shall use power construction equipment with noise shielding and muffling devices to the extent available and feasible. The noise mufflers shall be consistent with manufacturers' standards and be equipped with all construction equipment, fixed or mobile.
- N-4** The project contractor shall erect a temporary noise-attenuating sound barrier along the perimeter of the Project Site. The sound wall shall be a minimum of 8 feet in height to block the line-of-site of construction equipment and off site receptors at the ground level. The sound barrier shall include ¾ inch plywood or other sound absorbing material capable of achieving a 15 dBA reduction in sound level. Localized and portable sound enclosures shall be used to further significantly reduce noise from these types of equipment. Products such as Echo Barrier Outdoor noise barrier/absorbers can provide a 10-20 dBA noise reduction or more if the barrier is doubled up.

- N-5** An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive noise levels. Any reasonable complaints shall be rectified within 24 hours of their receipt.
- N-6** The Applicant shall provide a courtesy notice of the project's construction related activities to adjacent business owners and residences a minimum of two weeks prior to commencement of construction.

E. Cumulative Impacts

Development of the Proposed Project in conjunction with related projects (identified in Section 2, Project Description of the SCEA) in the Project vicinity would result in an increase in construction-related and traffic-related noise as well as on-site stationary noise sources in the already urbanized area of the City of Los Angeles. The Project Applicant has no control over the timing or sequencing of the related projects that have been identified within the Proposed Project study area and it is impossible to predict with any degree of certainty the occurrence of concurrent construction activities. Therefore, any quantitative analysis that assumes multiple, concurrent construction projects would be speculative. Localized construction impacts associated with noise generally occur within an area of 500 feet or less of the Project Site. Construction-period noise for the Proposed Project and each related project (that has not yet been built) would be localized and mitigated on a project-by-project basis. As shown in Figure 2.17 of Section 2, Project Description, of the SCEA, Related Project Nos. 4 through 9 are located farther than 500 feet of the Project Site. Related Project No. 1, located at 1806 N. Gramercy Place, approximately 450 feet south of the Project Site, is currently under construction and is anticipated to be completed with construction activities by the time the Proposed Project begins construction. Related Project No. 2 (Case No. ZA-2019-6570-CUB-SPP-SPPA), located at 1841 N. Western Avenue, approximately 260 feet east of the Project Site was approved in 2021 and may have concurrent construction activities as the Proposed Project. The closest project to the Proposed Project is Related Project No. 3 (Case No. DIR-2021-5478-TOC-SPP-HCA), located at 1853 N. Garfield Place, directly south of the Project Site. This related project was proposed in 2021 and has not been approved, which may have concurrent activities as the Proposed Project. However, each of the related projects would be required to comply with the City's noise ordinance, as well as implement mitigation measures that may be prescribed pursuant to CEQA provisions that require potentially significant impacts to be reduced with feasible mitigation. As demonstrated above, the Proposed Project's construction noise impacts, with the implementation of Mitigation Measures N-1 through N-6, would result in less than significant impacts. As such, the Proposed Project's construction noise impact would not be cumulatively considerable. Additionally, because each related project would be required to comply with the City's noise ordinance, cumulative impacts associated with construction noise would be mitigated to less than significant levels.

4. REFERENCES

Beranek, Leo L., Acoustical Measurements, Acoustical Society of America, 1988.

Beranek, Leo L., and Ver L. Istvan, Noise Vibration Control Engineering, Principles and Applications, 1992.

Bies, David A. and Hansen, Colin H., Engineering Noise Control, Theory and Practice, Fourth Edition, 2009.

California Department of Transportation, Representative Environmental Noise Levels, and Technical Noise Supplement, 2009.

California Department of Transportation, Transportation and Construction Vibration Guidance Manual, September 2013.

City of Los Angeles, Case Reports and Mapping Interactive Map, Bi-Weekly Case Filings, website: <https://planning.lacity.org/resources/case-reports>, accessed September 2022.

City of Los Angeles, Department of City Planning, Zoning Information and Map Access System, website: www.zimas.lacity.org, accessed June 2020.

City of Los Angeles, Department of Public Works, Bureau of Engineering, NavigateLA, website, <http://navigatela.lacity.org/navigatela/>, accessed June 2020.

City of Los Angeles, Los Angeles Historic Resources Inventory, website, <http://http://historicplacesla.org/map>, accessed June 2020.

City of Los Angeles, Noise Element of the General Plan, November 24, 1992.

City of Los Angeles Noise Ordinance (LAMC Section 111 to 116.1).

Federal Transit Administration (Harris Miller Miller & Hanson), Transit Noise and Vibration Impact Assessment, May 2006.

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.