PC ATTACHMENT 6

APPENDIX 1

CITY OF LAKE FOREST CEQA SIGNIFICANCE THRESHOLDS GUIDE

Published November 20, 2001 Revised July 21, 20240

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SECTION 1 INTRODUCTION

1.1 CEQA SIGNIFICANCE THRESHOLDS

The *City of Lake Forest CEQA Significance Thresholds Guide* has been prepared as an internal guidance document for City staff. The information presented herein shall be used by staff for the review of projects, and in the preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA). CEQA requires the analysis of discretionary projects to disclose their potential effects on the environment.

As stated in Section 15064(a) of the State CEQA Guidelines, "Determining whether a project may have a significant effect plays a critical role in the CEQA process." The identification of significance of an impact determines the level of environmental review required and the need for mitigation measures to reduce or eliminate project impacts. The tools used by a lead agency to make significance determinations include, but are not limited to: CEQA's Mandatory Findings of Significance, Appendix G of the CEQA Guidelines (the model Initial Study checklist), agency (e.g., South Coast Air Quality Management District, Governor's Office of Planning and Research) regulatory standards and guides (e.g., South Coast Air Quality Management District, Governor's Office of Planning and Research), consultation with other agencies, and the lead agency's specific thresholds of significance. As defined in the CEQA Guidelines (Section 15064.7) "a threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant."

Section 15064(b)(1) of the State CEQA Guidelines states: "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting." The City of Lake Forest CEQA Significance Thresholds Guide is a tool that compiles information that is useful in the preparation of environmental documents. This information can be used to improve the level of consistency, predictability, and objectivity of the City's environmental documents. The Guide provides assistance in evaluating the significance of project impacts for six key topical issues in the City of Lake Forest: circulation/transportation, noise, air quality, land use, aesthetics, and water resources. For each topical issue, the following information is provided: background information; discussion of relevant standards, planning guidelines, policies etc.; thresholds of significance; and potential mitigation. It should be noted that the mitigation measures suggested in this document are examples of the types of mitigation that could be applied to a project to reduce identified environmental impacts. The actual mitigation recommended for a project will vary depending on the project itself, the specific impact, and other issues that may arise on a case-by- case basis. It is not intended that each mitigation measure identified in this document be applied to every project or that the mitigation be written exactly as presented herein. Similarly, there may be mitigation required of a project that is not identified in this document.

The *City of Lake Forest CEQA Significance Thresholds Guide* is a document that provides guidance and does not require mandatory application of all thresholds for every project. The guidance provided in this document does not substitute for the use of independent judgment to determine significance or the evaluation of the evidence in the record, but is intended to provide sufficient flexibility to use the most appropriate criteria (i.e., on a case-by-case basis) for a particular project. (See *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099.) CEQA includes additional

topics and requirements that are not addressed in this *City of Lake Forest CEQA Significance Thresholds Guide*. Section 15064(b)(2) of the State CEQA Guidelines states: "Thresholds of significance, as defined in Section 15064.7(a), may assist lead agencies in determining whether a project may cause a significant impact. When using a threshold, the lead agency should briefly explain how compliance with the threshold means that the project's impacts are less than significant. Compliance with the threshold does not relieve a lead agency of the obligation to consider substantial evidence indicating that the project's environmental effects may still be significant." The lead agency is responsible for ensuring that all CEQA requirements are met.

1.2 <u>CITY OF LAKE FOREST</u>

The City of Lake Forest is located between the coastal floodplain and the Santa Ana Mountains. The western portion of the City is near sea level while the northeastern portion of the City becomes progressively higher and steeper, reaching elevations of up to 1,500 feet. The Santa Ana Mountains can be seen from various points within the City (including major roadways) while views of the Saddleback Valley floor and the Pacific Ocean can be seen from the higher elevations. The Recreation and Resources Element of the City of Lake Forest General Plan states that, "Lake Forest's recreational amenities and natural resources form an important part of its unique character and quality of life. In our community, these resources include the City's parks and trails, natural open space areas, scenic vistas, and cultural, and biological, resources. It is important to understand, document, and appreciate these resources so that these valuable pieces of the community can be preserved and protected for future generations."

Notable natural features in the City include the foothills of the Santa Ana Mountains and natural water courses. The Whiting Ranch Wilderness Park is a prominent visual feature in the northern portion of the City located generally between the planned communities of Portola Hills and Foothill Ranch. There are five water courses that traverse the City: Aliso Creek, Serrano Creek, Borrego Canyon Wash, and two smaller creeks. While portions of these creeks are channelized for flood control purposes, significant portions of Aliso Creek and Serrano Creek include trails and open space and have a natural/undeveloped character. The City of Lake Forest also has four man-made lakes, three located within residential developments and one in <u>VillageVeterans</u> Park.

The City has developed as a series of primarily residential Planned Communities. Development within each Planned Community is designed to be compatible and form a consistent visual image. In older areas of the City, particularly near I-5, residential neighborhoods were not developed as part of Planned Communities and have less architectural and visual consistency.

Low-scale (one- to three-story) commercial development is concentrated near I-5 and along the primary arterials of El Toro Road, Lake Forest Drive, Bake Parkway and Portola Parkway. Existing sources of night lighting within the City include commercial districts, parking areas, outdoor sports facilities, and roadways.

1.3 SUMMARY OF SIGNIFICANCE THRESHOLDS

The following provides a summary of the thresholds of significance presented in Sections 2 through 7 of this document.

Circulation/Transportation

A proposed project would normally have a significant impact if it is determined to:

• Not meet any of the screening criteria described in Attachment 1 to this CEQA Significance

Threshold Guide - City of Lake Forest Transportation Analysis Guidelines; and

- Exceed any of the vehicle miles traveled (VMT) thresholds described in Attachment 1 to this CEQA Significance Threshold Guide *City of Lake Forest Transportation Analysis Guidelines;* and/or
- Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; and/or
- Includes design features or uses that may cause traffic hazards such as sharp curves, tight turning radii from streets, limited roadway visibility, short merging lanes, uneven road grades, or any other conditions determined by the City traffic engineer to be a hazard; and/or
- Results in inadequate emergency access.

NOISE

Traffic Noise

A proposed project would normally have a significant offsite traffic noise impact if one of the following criteria are met:

- When existing noise levels are less than 60 dBA CNEL, a 5 dBA CNEL increase in noise will be considered significant;
- When existing noise levels are between 60 dBA and 65 dBA CNEL, a 3 dBA CNEL increase in noise will be considered significant;
- When existing noise levels exceed 65 dBA CNEL, a 1.5 dBA CNEL increase in noise will be considered significant.

Stationary Noise

The project would normally have a significant stationary noise impact if it would:

• Exceed the stationary source noise criteria for the City of Lake Forest as specified by the exterior noise standards set forth in the Noise Control Chapter (11.16) of the Lake Forest Municipal Code

Construction Noise

The project would normally have a significant construction noise impact if it would:

- Exceed 80 dBA Leq(1-hour) between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday.
- Exceed 50 dBA Leq (1-hour) between 7:00 p.m. and 7:00 a.m., Monday through Saturday, or at any time on Sunday or a legal City of Lake Forest holiday.

Vibration

The project would normally have a significant vibration impact if it would:

• Exceed the Federal Transit Administration (FTA) vibration limits listed in Table 3-3.



SECTION 3 NOISE

3.1 BACKGROUND

Potential noise impacts are commonly divided into two groups: short-term construction and longterm operational (stationary source and mobile vehicular noise). Short-term impacts are usually associated with noise generated by construction activities. Long-term impacts include effects on surrounding land uses generated by a project once it is operational, and those impacts which occur at a project site. Construction-related and operational noise impacts are addressed in this section.

Noise has been defined as unwanted sound and it is known to have adverse effects on people. Based on these effects, criteria have been established to help protect public health and safety and prevent disruption of certain human activities. These criteria are based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses, and annoyance.

Most noise metrics use the A-weighted noise level to quantify noise impacts on humans. A-weighting is a frequency weighting that accounts for human sensitivity to different frequencies. When the A-scale is used, the decibel levels are represented by dBA (A-weighted decibels). The City of Lake Forest's noise standards are expressed in terms of dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10 dBA increase is judged by most people as a doubling of the sound level. Generally, noise increases of less than three dB are not detectable by the human ear.

Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Noise from transportation activities (transportation corridors, major arterials, collector roadways, railroad, etc.) is the primary component of the noise environment in the City of Lake Forest. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers, pile drivers, and portable generators, can reach high levels. Noise levels from construction equipment generally range from 76 to 91 dBA for equipment powered by internal combustion engines, saws, and vibrating equipment, and from the mid-80s to more than 100 dBA for impact equipment. Excavation and grading activities typically represent the highest potential for noise impacts.

3.2 NOISE METRICS

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. Two of the most commonly used noise scales are the Equivalent Noise Continuous Sound Level (LEQ) and the Community Noise Equivalent Level (CNEL).

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period but is typically measured for one hour. It is the energy sum of all the events and background noise levels that occur during that time period.

LMAX means the highest sound level measured during the measurement period.

CNEL is the predominant rating scale used in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. "Time_weighted" means that noise that occurs during certain sensitive time periods is penalized in noise analyses. Noises occurring in the evening time period-(7:00 p.m. to 10:00 p.m.) are penalized by 5 dBA and nighttime (10:00 p.m. to 7:00 a.m.) noises are penalized by 10 dBA. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60

CNEL."

3.3 APPLICABLE NOISE STANDARDS

The City of Lake Forest General Plan (Public Safety Element) and the City's Municipal Code (Chapter 11.16_{7-} Noise Control) establish noise standards for the City.

PUBLIC SAFETY AND NOISE ELEMENT OF THE GENERAL PLAN

Table SN-2PS-1 of the Public Safety and Noise Element summarizes Cityland use compatibility noise standards for various types of land uses (Table 3-1 below). As a result of the Supreme Court decision regarding the assessment of the environment's impacts on projects (California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD), 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while noise from existing sources is taken into account as part of the baseline, the direct effects of noise from nearby noise sources relative to land use compatibility of a future project is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required with the exception of new school projects, projects significantly affected by airport noise, and project's that would exacerbate existing conditions (i.e., projects that would have a significant operational impact that could expose on-site users to substantial noise). In the cases of these exceptions, the noise and land use compatibility standards from Table 3-1 should be used to evaluate the potential impact of surrounding noise sources on future sensitive project residents, workers, or users. The standards represent the maximum allowable noise level for the identified uses and are used by the City to determine noise impacts associated with implementation of projects. These noise standards are summarized below:

TABLE 3-1 INTERIOR AND EXTERIOR NOISE STANDARDSLAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT

	Outdoor	Interior Spaces	
Land Use ¹	Activity Areas ^{2, 3}	Ldn/ CNEL, dB	Leq, dB ⁴
Residential	60	45	_
Motels/Hotels	65	45	_
Mixed-Use	65	45	_
Hospitals, Nursing Homes	60	45	_
Theaters, Auditoriums	_	_	35
Churches	60	_	40
Office Buildings	65	-	45
Schools, Libraries, Museums	70	_	45
Playgrounds, Neighborhood Parks	70	_	-
Industrial	75	_	45
Golf Courses, Water Recreation	70	_	_

NOISE ORDINANCE

The Noise Control Chapter (11.16) of the Lake Forest Municipal Code ("Noise Ordinance"), is designed to protect people from non-transportation (stationary) noise sources such as music, construction activity, machinery, and <u>pumpsequipment such as</u> air conditioners. The Noise Ordinance sets limits foren the level and the duration of time a stationary noise sources may impact

a residential use, depending on the type of land use that is receiving the noise. The louder the level becomes, the shorter the time becomes that it is allowed to occur. Table 3-2 lists the A-weighted noise level and the maximum cumulative period of time that the noise level may occur during a 1-hour period (dBA) limit for these sources. The ordinance applies different criteria during different time periods. The noise criteria are more stringent in late night and early morning hours and reflect a heightened sensitivity to noise during these time periods.

		<u>Noise Level (dBA</u>				
Land Use	<u>Noise Level (dBA Leq)</u>	<u>Lmax)</u>	Time Period			
	<u>60</u>	<u>80</u>	<u>7:00 a.m10:00</u>			
Residential in			<u>p.m.</u>			
Residential Zones	<u>50</u>	<u>70</u>	10:00 p.m7:00			
			<u>a.m.</u>			
Desidential Deution of	<u>CE</u>	<u>85</u>	<u>7:00 a.m.–10:00</u>			
Residential Portion of	<u>65</u>		<u>p.m.</u>			
Mixed-Use in Mixed-	50	70	<u>10:00 p.m7:00</u>			
<u>Use Zones</u>	<u>50</u>	<u>10</u>	<u>a.m.</u>			
Churches, Hospitals, and Schools in						
Residential and	<u>65</u>	<u>85</u>	All Hours			
Mixed-Use Zones						
Churches, Hospitals,						
and Schools in						
Commercial and	<u>70</u>	<u>90</u>	<u>All Hours</u>			
Industrial Zones						
maddia Zones						

 TABLE 3-2

 CITY OF LAKE FOREST NOISE ORDINANCE

Section 11.16.0560 of the Noise Ordinance identifies specific activities that would be exempt from the provisions of the noise restrictions. Exempted activities include, but are not limited to, construction, repair, remodeling, and grading, provided that: (1) the City has issued a building permit, grading permit, or similar permit for such activities; (2) said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, includingMonday through Saturday, or at any time on Sunday or a federallegal City of Lake Forest holiday; and (3) the average construction noise levels do not exceed 80 dBA Leq(1-hour) at nearby "noise-sensitive land uses," as that term is defined in Section 11.16.020 of the Municipal Code.

3.4 THRESHOLDS OF SIGNIFICANCE

TRAFFIC NOISE

A proposed project would normally have a significant offsite traffic noise impact if both of the following criteria are met:-

- Project traffic will cause a noise level increase of 3 dB or more on a roadway segment adjacent to a noise sensitive land use. Noise sensitive land uses include the following: residential (single family, multi-family, mobile home); hotels; motels; nursing homes; hospitals; parks, playgrounds and recreation areas; and schools.
- The resulting "future with project" noise level exceeds the noise standard for sensitive land uses as identified in the City of Lake Forest General Plan (refer to Table 3-1 above, Interior and Exterior Noise Standards).

Generally, a 3 dBA increase in noise levels is barely perceptible, and a 5 dBA increase in noise levels is clearly perceptible. In areas where the existing ambient noise level exceeds 65 dBA CNEL, the noise environment is considered degraded and less of an increase in ambient noise levels is allowed. Therefore, a proposed project would normally have a significant offsite traffic noise impact if one of the following criteria are met:

- When existing noise levels are less than 60 dBA CNEL, a 5 dBA CNEL increase in noise will be considered significant;
- When existing noise levels are between 60 dBA and 65 dBA CNEL, a 3 dBA CNEL increase in noise will be considered significant;
- When existing noise levels exceed 65 dBA CNEL, a 1.5 dBA CNEL increase in noise will be considered significant.

STATIONARY NOISE

The Noise Ordinance sets limits on the level and duration of time a stationary noise source (e.g., <u>mechanical equipment</u>) may impact a <u>residential noise sensitive</u> area. Table 3-2 outlines these noise limits. The determination that a project has the potential to exceed the City's established noise limits is typically based on a noise technical report prepared by a qualified acoustical consultant. The project would normally have a significant <u>stationary</u> noise impact if it would:

 <u>Ee</u>xceed the stationary source noise criteria for the City of Lake Forest as specified by the exterior noise standards set forth in the Noise Control Chapter (11.16) of the Lake Forest <u>Municipal Codelisted in Table 3-2</u>.

CONSTRUCTION NOISE

Per Section 11.16.050, a project would normally have a significant construction noise impact if construction noise exceeds 80 dBA Leq at nearby Noise-Sensitive Land Uses, as that term is defined in the Municipal Code, between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday, or exceeds 50 dBA Leq (1-hour) at nearby Noise-Sensitive Land Uses between 7:00 p.m. and 7:00 a.m., Monday through Saturday, or at any time on Sunday or a legal City of Lake Forest holiday.

VIBRATION

The Noise Control Chapter (11.16) of the Lake Forest Municipal Code states that operating or

permitting the operation of any device that creates vibration that is distinctly perceptible to an individual at a receiving vibration-sensitive land use is prohibited. A project would normally have a significant vibration impact if it would exceed the following FTA vibration limits listed in Table 3-3:

TABLE 3-3 VIBRATION STANDARDS

Building Category	PPV (in/sec)*
I. Reinforced concrete, steel, or timber (no plaster)	<u>0.5</u>
II. Engineered concrete and masonry (no plaster)	<u>0.3</u>
III. Non-engineered timber and masonry buildings	<u>0.2</u>
IV. Buildings extremely susceptible to vibration damage (i.e., fragile historic buildings)	<u>0.12</u>
<pre>*in/sec = inches per second; PPV = peak particle velocity</pre>	
Source: Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment.	

3.5 POTENTIAL MITIGATION

The mitigation measures listed in this section are examples of the types of mitigation that could be applied to a project to reduce identified noise impacts. The actual mitigation recommended for a project will vary depending on the project itself, the specific impact, and other issues that may arise on a case-by-case basis. It is not intended that each mitigation measure identified in this section be applied to every project or that the mitigation be written exactly as presented herein. Similarly, mitigation may be required of a project that is not identified in this document.

CONSTRUCTION NOISE

- Potential mitigation measures for short-term construction-related noise impacts that <u>exceed the significance thresholds</u> may include: Ensure that construction activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday;
- Use noise control devices such as equipment mufflers, enclosures, and barriers. Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. Stage construction operations as far from noise sensitive uses as possible;
- Require a haul plan subject to approval by the City;
- Avoid residential areas when planning haul truck routes;
- Maintain all sound-reducing devices and restrictions throughout the construction period;
- Replace noise equipment with quieter equipment (for example, a vibratory pile driver instead of a conventional pile driver and rubber-tired equipment rather than track equipment);

- Change the timing and/or sequence of the noisiest construction operations to avoid sensitive times of day.
- Use of the best available noise control techniques (e.g., absorptive mufflers, use of intake silencers, engine enclosures and acoustically attenuating shields or shrouds) on equipment and trucks used for project construction.
- Use of temporary sound barriers/blankets to break the line of sight between construction equipment and nearby sensitive receptors. Barriers must be constructed with solid material with a density of at least 1 pound per square foot with no gaps from the ground to the top of the barrier and must be lined on the construction side with acoustical blanket.
- Use of hydraulically or electrically powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) for project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler and/or sound attenuation barriers/blankets on the compressed air exhaust may be used. Quieter procedures would include, for example, drills rather than impact equipment.
- Use of temporary power poles or the electrical grid instead of generators.
- Locating stationary noise sources as far from adjacent properties as possible, and use of temporary sheds, insulation barriers, or other measures as determined by the City.
- To the extent consistent with applicable safety regulations, use of trucks with SAE J994 Class "D" or equivalent reverse motion alarms (ambient-adjusting, or "smart alarms" that automatically adjust the alarm to 5 dBA above the ambient near the operating equipment) or switched off back-up alarms with human spotters in compliance with all safety requirements and laws.
- Truck routes that avoid residential areas to the extent possible.

STATIONARY NOISE SOURCES

The following mitigation measures may reduce noise generated from stationary sources Potential mitigation measures for long-term stationary noise impacts that exceed the significance thresholds may include:

- Redesign the source to radiate less noise (e.g., substitute a quieter equipment type/process or enclose the source with sound absorbent material);
- Use insulation or construct solid barriers between noise sources and noise receivers;
- Separate noise sources from noise receivers by distances sufficient to attenuate the noise to acceptable levels;
- Insulate structures;
- Limit the hours of use for the of noise generating equipment;
- Prepare an acoustical analysis and adopt the <u>resulting_recommended_insulation and</u> attenuation measures;
- Conduct ilnspections of the noise generating equipment prior to issuance of the occupancy

permits to verify onsite containment of noise-emissions.

MOBILE VEHICULAR SOURCESTRAFFIC NOISE

The following mitigation measures may reduce noise generated from mobile vehicular sourcesPotential mitigation measures for long-term mobile noise impacts that exceed the significance thresholds may include:

- Attenuate the soundnoise by using barriers, <u>"quiet pavement" (e.g., rubberized asphalt),</u> or redirect sound transmission paths;
- Reduce vehicle trip generation <u>and/</u>or <u>reduce</u> speed limits on roadways;
- Locate any delivery, truck loading, or trash pickup areas as far from <u>"noise</u>-sensitive land uses<u>" (as that term is defined in Section 11.16.020 of the Municipal Code)</u> as possible-;
- Limit designated delivery and loading/unloading hours for deliveries.

VIBRATION

Potential mitigation measures for vibration impacts that exceed the significance thresholds may include:

- Use of equipment that generates lower vibration levels (e.g., static rollers instead of vibratory rollers, smaller earthmoving equipment when within close distances of receptors, alternatives to impact pile driving);
- Increase or establish minimum property line setbacks for vibration-generating equipment;
- Require vibration monitoring during applicable phases of construction.

REQUIREMENT FOR SUBSEQUENT NOISE ANALYSIS

Under certain circumstances, specific design features or mitigation to reduce interior and exterior noise levels cannot be determined until later in the design phase of a project. The following requirements for future noise analysis could be applied to a project, acknowledging that recommendations from these studies need to be included in the final project design.

- Prepare an acoustical analysis report which describes in detail the exterior noise environment and identifies preliminary mitigation measures.
- Prepare an acoustical analysis report which describes the acoustical design features of the structures required to satisfy the interior noise standards established by the City.

3.6 <u>REFERENCES</u>

City of Lake Forest <u>2020</u> General Plan – <u>Public Safety Element</u>, <u>2020</u> (June). Public Safety Element.Prepared by De Novo Planning Group.

City of Lake Forest Master Environmental Assessment. 1994 (April). Prepared by Cotton/Beland/Associates, Inc.

City of Lake Forest Municipal Code, Chapter 11.16, ___ Noise Control.

