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Date: 7/30/19
Submitted in PLUM Committee
Council File No: 18-1156-S1 + 18-1156
Item No.: 5 + 6
Deputy: Communication Sec
Appellant Representative

July 30, 2019

**APPELLANT NEIGHBOR'S SECOND RESPONSE TO
PROPOSED CATEGORICAL EXEMPTION
RE: 1888 N. Lucile Ave. / 3627 W. Landa St.**

VIA HAND DELIVERY

City Council
City of Los Angeles
c/o Department of City Planning
201 N. Figueroa Street
Los Angeles, CA 90012

Re: Council File 18-1156 and Council File 18-1156-S1 (PLUM Committee 7/30/19
agenda items 5 and 6) (1888 N. Lucile Ave. / 3627 W. Landa St.)

Honorable Councilmembers:

These appeals concern two proposed single-family homes on adjacent parcels in the Silverlake neighborhood. My client is Barry Greenfield, Trustee of the Landa Street Trust, which owns the home at 3623 W. Landa Street. My client's property is immediately adjacent to the Landa Street site to the east, and is diagonally adjacent to the Lucile Avenue site.

This letter supplements the arguments made in our previous letters filed with each of the respective appeals on November 16, 2019 entitled "*Appellant Neighbor's Grounds for Appeal Re: 3627 Landa St.*" and on June 25, 2019, entitled *Appellant Neighbor's Response To Proposed Categorical Exemption Re: 1888 N. Lucile Ave. / 3627 W. Landa St.*" We offer the following additional comments, and we refer you specifically to the accompanying noise report dated July 30, 2019, prepared by Dale La Forest and Associates, which describes the unusual and extreme levels of noise that the construction of this project would impose on its neighbors. Some of these neighbors – including my client – are *less than 10 feet away from the construction site.*

1. The City Sandbagged the Appellant With Last Minute Studies and Reports.

The applicant's project development "team" – which consists of at least four lawyers and numerous consultants – has delayed this appeal over and over again, sometimes for literally months, in order to respond to the appellant's materials. The applicant's strategy is to take weeks or months to prepare large substantive documents, and then to present them to the City just days before the hearing, leaving no time for a meaningful response by the appellant. Then, when the appellant does prepare a response, the applicant continues the hearing in order to respond to it. Then, just a few days before the next hearing, the applicant and the City flood the record with more supposed "evidence" supporting the decision, again leaving the appellant virtually no time to respond.

City staff has facilitated, and has indeed participated in, this charade of a public process.

As just one example, the last PLUM Committee hearing on the appeal was scheduled for June 25, 2019, after a several months'-long continuance requested by the applicant. The initial study under consideration at the June 25 hearing was transmitted by City staff to the appellant's counsel on June 24, the day before the PLUM hearing. Moreover, this version of the Initial Study was substantially revised from all prior versions. The appellant had a single day to respond to the new initial study, and we responded in a single day. Our comment letter was submitted the day of the hearing, and it could not possibly have been submitted earlier.

The appellant would have liked the appeal to proceed to hearing on June 25. However, the applicant, with the cooperation of City staff, the applicant (not the appellant), once again asked to delay the hearing, evidently so that it could have the last word on the appeal, and based on that request the PLUM Committee continued the hearing for more than a month, to July 30. (City staff's allegation that the hearing was continued to benefit the appellant is preposterous)

The applicant then spent an entire month to develop an enormous new noise report with hundreds of citations. City staff finally transmitted this noise report and a lengthy letter from the applicant's lawyer on July 25, which was just five calendar days (and three business days) before the July 30 hearing. Of course, it is simply impossible for the appellant to digest this amount of material, much less respond to it, within three business days. So, as a result of the dilatory strategy of the City and the applicant, appellant here faces yet another emergency. He must prepare a substantive response at the very last minute, which in this case is necessarily on the day of the PLUM hearing.

The applicant and the City could have avoided this by continuing the PLUM hearing again, to allow the appellant sufficient time to review and respond to these materials. Indeed, upon receiving the new materials on July 25, the appellant's counsel asked both the applicant's representative and Associate Zoning Administrator Jack Chiang to request a 3-week continuance of the public hearing, to August 20, 2019. However, the applicant refused to consent to any extension of the City's time to act on the appeal. Accordingly, appellant has no choice but to do the best he can to respond to the avalanche of information in the within letter.

RESPONSES TO JULY 25 STAFF REPORT BY A.Z.A. JACK CHIANG

2. **The City Cannot Simply Ignore the CEQA Thresholds Adopted by the City Council in 2006**

In his July 25 staff report, Associate Zoning Administrator Jack Chiang makes the remarkable contention that the City's L.A. CEQA Thresholds Guide is "no longer in use today" because of the Planning Director's adoption of a purported "rule" in 2018 or 2019, stating that the City's thresholds of significance are the "Appendix G" environmental checklist questions adopted under the statewide CEQA Guidelines. (July 25 Staff Report at pg. 3.) The City contends that the Planning Director's action was made under his "rulemaking authority" pursuant to City Charter Section 506. The City also argues that the Thresholds Guide itself never required the City to use the thresholds contained therein.

The City's argument is cynical in the extreme. The Thresholds Guide was adopted by the City Council by resolution, and that resolution has not been rescinded or modified by the City Council. A "rule" made by the Planning Director pursuant to separate legal authority under the City Charter cannot override or rescind a resolution by the City Council, as the City Council is the City's legislative body and superior to the Planning Director in the City's hierarchy. Indeed, even Charter section 506 acknowledges this hierarchy, stating: "(d) Police Power. No grant of power by the Charter to any department or board of City government shall be construed to restrict the power of the Council to enact ordinances under the police power of the City, except as otherwise specifically provided in the Charter."

Moreover, the City's argument misunderstands the way CEQA thresholds are selected. CEQA case law confirms that the selection of thresholds in any given case is by its nature a fact-specific inquiry. The Appendix G environmental checklist questions are only the beginning of the inquiry. Indeed, the checklist questions – which are in many respects ambiguous and incomplete – cannot begin to provide actual significance thresholds for many impact categories. Not the least of these is noise, which is susceptible to scientific measurement and many site-specific factors, and therefore requires the agency to consider multiple thresholds. The Planning Director cannot simply wave away this requirement by adopting a "rule" that says that no such thresholds exist.

Indeed, given the absence of meaningful thresholds for noise in Appendix G, the City is obligated to look elsewhere for appropriate thresholds. Although there are numerous possible sources for thresholds, a primary source should be the City's own adopted thresholds, which were prepared after a great deal of study and tailored specifically to the City of Los Angeles. This is so even if the thresholds have been technically overridden by an inconsistent "rule" adopted by the Planning Director. Yet the applicant's noise expert, Garrett Zuleger, repeatedly asserts that the thresholds in the Thresholds Guide should be ignored, and in their place he substitutes cherry-picked thresholds from other, less pertinent sources in an attempt to establish that the impacts at issue are insignificant. As discussed in more detail in Mr. La Forest's July 30 letter, this effort falls flat.

3. The City Council is Required to Give Notice of its Intention to Adopt a Categorical Exemption.

The City proposed a Class 3 categorical exemption at the very last moment – in June 2019, more than nine months after the East Los Angeles Area Planning Commission acted, and more than two years after the public hearing on the project. Now, the City contends that it had no obligation to put its exemption decision in writing before adopting the project, citing to San Lorenzo Valley Community Advocates for Responsible Educ. v. San Lorenzo Valley Unified Sch. Dist. (2006) 139 Cal. App. 4th 1356. (July 25 Staff Report at pp. 3-4.) However, San Lorenzo merely stands for the proposition that the notice of the exemption determination itself must be given after the project is approved – by way of a “Notice of Exemption” under CEQA, which is filed with the County Recorder. The case does not permit, much less does it encourage, a city to state its intention to adopt a categorical exemption years after the initial public hearing and months after the decision by the planning commission on appeal. To the contrary, the categorical exemption determination must be based upon substantial evidence in the record, and in the interests of due process the grounds for the exemption should be aired by all of the various bodies – the zoning administrator, the area planning commission on appeal, and the City Council on appeal. Here, by proposing a Class 3 exemption only a few weeks before the final action by the City Council, the City has deprived the appellant of due process.

4. The City Cannot Use a Threshold for Noise That is Dependent Upon “Technical Feasibility” of the Noise Measure.

The City, having ignored its Thresholds Guide, attempts to establish that there are no significant noise impacts purely on the ground that the project complies with the City’s noise ordinance. The ordinance requires, among other things, that “Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet is prohibited.” (July 25 Staff Report at pg. 4 (citing to LAMC section 112.05.)) However, as the City points out, the ordinance goes on to say that this limitation “does not apply where the applicant demonstrates to the satisfaction of the City that compliance is technically infeasible.” (Id.) In other words, the City argues that even if noise exceeds 75dBA at a distance of 50 feet, if it is technically infeasible to reduce the noise, the impact is by definition not significant.

The City cannot do this. The significance threshold at issue here is 75dBA. If the project generates noise in excess of this level, the impact is significant. If it is not “technically feasible” to reduce the noise below this level, that issue is properly addressed in an EIR – by acknowledging that the impact is significant, considering alternative mitigation measures, and then, if necessary, declaring that the impact is significant and unavoidable under CEQA.

5. The City Cannot Ignore the Portion of the Site Which Has 60% Slope When Determining if a Categorical Exemption Applies.

As our June 25 letter explained, the Class 3 exemption applies only to “construction” of small structures and is silent as to grading. Further, the grading associated with the project,

which would occur on a site with slopes of up to 60%, would not qualify for a Class 4 exemption for “minor alterations of land.” Although the City does not argue that a Class 4 exemption would apply to the project, the fact that a Class 4 exemption demonstrably would not apply to the grading, taken alone, means that a Class 3 exemption for construction cannot reasonably be interpreted to allow the grading when associated with construction. The impacts associated with grading are the same whether associated with construction or not, and it makes no sense that one exemption expressly for grading would be limited strictly to slopes up to 10% in slope, while another categorical exemption that does not even expressly include grading would allow grading regardless of the slope.

The City attempts to escape this obvious interpretation by emphasizing that “only 10% of the project site exceeds a 60% slope whereas 79% of the project site is under 45% slope and yielding most of the site with a slope of less than 30%.” (July 25 Staff Report at pp. 9-10.) However, the City cannot pick and choose parts of the site when determining whether a categorical exemption applies. Here, it is clear that very little, if any, of the site’s grading would qualify for a Class 4 categorical exemption. Accordingly, it makes no sense for the same grading to qualify for a Class 3 exemption, which does not even mention grading.

6. The City Cannot Ignore its Own City CEQA Guidelines, Which Preclude the Use of a Categorical Exemption When “It Can Be Readily Perceived” That the Project “May” Have a Significant Impact.

It was not enough for the City to ignore its own *L.A. CEQA Thresholds* document. It also seeks to avoid the *City Of Los Angeles Environmental Quality Act Guidelines* (the “City CEQA Guidelines”). The City also boldly argues, without any citation to a rule, resolution, ordinance or other authority, that “the 2006 City CEQA Guidelines are no longer utilized by the Department of City Planning, as the Department relies on the most up to date State CEQA Guidelines, most recently updated in 2019 in order to stay current with State Law and the ongoing development and regulatory settings.” (July 25 Staff Report at pg. 12.)

In fact, the City CEQA Guidelines were adopted by resolution in 2002. (See Council File 02-1507.) They have never been rescinded or modified. Therefore, the City is bound by them. As discussed in more detail in our June 25 letter, under Article III(1) of the City CEQA Guidelines, “categorical exemptions are not used for projects where it can be readily perceived that such projects may have a significant effect on the environment.” This is a simple prohibition against the use of categorical exemptions whenever it can be “*readily perceived*” that the project “*may*” have a significant impact. Here, as set forth in the 2016 MND, the project would have potentially significant impacts on numerous categories, including aesthetics, air quality, geology/soils, hazards/hazardous materials, noise, public services, and transportation/traffic. As to construction noise in particular, these impacts have been described in great detail by Mr. La Forest in his letters. Since, in light of this evidence it can be “*readily perceived*” that the project “*may*” have a significant effect on noise and/or one of the other categories specified in the 2016 MND, no categorical exemption can apply under the City CEQA Guidelines.

**RESPONSES TO JULY 25 LETTER BY DEAN DENNIS OF HILL, FARRER AND
BURRILL**

7. **Mr. La Forest is a Noise Expert; He Need Not Be an Engineer, and Neither is Applicant's Expert an Engineer.**

The applicant's lawyer, Dean Dennis of Hill, Farrer and Burrill, says in his letter that "Mr. La Forest's opinion is not substantial evidence because he is not a professional noise engineer." (July 23 Dennis letter at pg. 3.) The City wisely does not adopt Mr. Dennis' criticism, and well it shouldn't – as the criticism is naïve and unjustified. As Mr. La Forest notes in his July 30 letter, there are no licensed noise engineers in California. Even the applicant's own "noise expert," Garrett Zuleger, is, according to his own resume at the end of his July 24 report, licensed only as a "chemical engineer." Further, Mr. Zuleger's only relevant education is a "B.S. in Chemical Engineering," and his only cited qualifications to be a noise expert are his "professional experience as an environmental and safety consultant" including various ambiguously described "noise related experience," consisting of various studies, modeling and calculations. Indeed, by Mr. Dennis' test Mr. Zuleger's report should be disregarded outright on the ground that it is not substantial evidence.

Mr. La Forest, as a licensed architect with decades of experience as a noise consultant, is far more qualified than Mr. Zuleger based on any relevant measure. Mr. Dennis' flimsy attempt to short circuit his report as not "substantial evidence" should be rejected outright.

8. **There is No Statutory Exemption At Issue Here.**

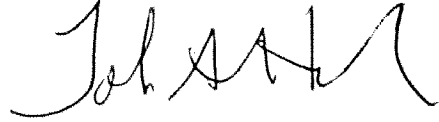
Applicant's lawyer says that "When reviewing a statutory exemption, the nature and extent of the project's environmental impacts are ordinarily irrelevant." (July 23 Dennis letter at pg. 4.) The point is irrelevant, as there is no statutory exemption at issue here. The State of California has adopted "statutory exemptions" from CEQA for numerous classes of projects. (See Public Resources Code section 21080(b) (specifying 15 statutory exemptions, including Olympic games and mass transit projects); Guidelines section 15282 (specifying 22 statutory exemptions); see *Sunset Sky Ranch Pilots Assn. v. County of Sacramento* (2009) 47 Cal.4th 902, 909 (purpose of statutory exemptions is to avoid the burden of CEQA review for entire classes of projects "even if there might be significant environmental effects.")

Unlike the statutory exemptions, which reflect policy decisions of the Legislature to preclude review even if impacts are significant, the separate and distinct "categorical exemptions" authorized by statute and the State CEQA Guidelines represent a determination by the Secretary for Resources that particular classes of projects generally do not have a significant effect on the environment. (See Public Resources Code section 21084(a); Guidelines, § 15300.) Consistent with this purpose, the Guidelines provide that even if the project nominally fits into the category defined by a categorical exemption the exemption "shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." (Guidelines 15300.2 (c)).

Honorable Councilmembers
July 30, 2019
Page 7

The City Council should grant the appeal and reverse the decision of the ELAAPC.

Very truly yours,

A handwritten signature in black ink, appearing to read "John A. Henning, Jr.", written in a cursive style.

John A. Henning, Jr.

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Associate Zoning Administrator
Department of City Planning
City of Los Angeles
200 North Spring Street, Room 763
Los Angeles CA 90012

**REPLIES TO APPLICANT'S CONSULTANTS
ABOUT CONSTRUCTION NOISE IMPACTS FOR NEW HOMES AT
1888 NORTH LUCILE AVENUE & 3627 WEST LANDA STREET**

Re: ZA-2015-1569-ZV-ZAD-1A; ENV-2015-1568-MND (3627 W. Landa St)
and ZA-2015-1567-ZAA-ZAD-1A (1888 N. Lucile Avenue)

Dear Mr. Chiang:

July 30, 2019

For the appeals of two Project approvals and their CEQA documents in connection with the above referenced project (the "Project"), I have been asked by John Henning to review the Responses from attorney Dean Dennis of Hill, Farrer & Burrill, LLP and from noise consultant Garrett Zuleger of Z Consulting Company.

On July 23, 2019, Dean Dennis submitted a letter to you responding to my June 25, 2019 Report on the potential noise impacts that could result from construction activities in the proposed building of two homes and related structures at 3627 W. Landa Street and 1888 N. Lucile Avenue. On July 24, 2019, Garrett Zuleger also submitted a letter to you responding to my June 25, 2019 Report. These are my responses to their letters. They shows that this Project's potential noise impacts will not be less-than-significant and there is not substantial evidence in support of approving this Project with merely a Categorical Exemption instead of adequate environmental review.

I have designed hundreds of homes in California for 44 years since 1975. I have also worked as an acoustical consultant reviewing and preparing environmental noise studies and CEQA project studies since 1985. I have included my professional resume demonstrating my experience and acoustical expertise in this letter.

ACOUSTICAL EXPERTISE

My June 25, 2019 Report on this Project is supported by substantial evidence that shows this Project will have significant noise and ground-borne vibration impacts upon some of the surrounding neighbors' residences. My Report is not based on speculation, but rather on facts, reasonable assumptions predicated upon fact, and my expert opinion in the field of environmental acoustics supported by facts and scientific calculations. Moreover, contrary to the unsupported assertions that Mr. Dennis and Mr. Zuleger make, the City's acoustical standards found in its 2006 L.A. CEQA Thresholds Guide still apply to this Project.

My Report constitutes substantial evidence because I am an expert in environmental acoustics as relevant to residential neighborhood projects. Mr. Dennis misrepresents my credentials in asserting otherwise. He argues that I am not a "professional noise engineer," as if to claim that only professional noise engineers are experts in environmental acoustics. To the contrary, my Resume (included, see below) supports that I have sufficient academic training and decades of professional experience that provides such expertise needed to support the validity of my findings in my Report.

A professional does not need to be a "professional noise engineer" in order to be an expert in noise assessments. Even the applicant's engineer from Z Consulting Company, Mr. Garrett Zuleger, is not a *noise engineer*; his training and professional registration is instead as a chemical engineer.

In California, there is not even a professional license type for a "noise engineer" or acoustical engineer.¹ If Mr. Dennis' claim had any merit that only a *professional noise engineer* is qualified as an expert in California environmental acoustics, then there would be no noise experts in California because noise experts are not licensable here. He is simply mistaken. Only Oregon licenses acoustical engineers.²

Noise experts can include others than just licensed acoustical engineers. The definition of an expert³ includes: "*having, involving, or displaying special skill or knowledge derived from*

¹ See: "License Types," at "License Lookup (Verification) for California-Licensed Professional Engineers," Board for Professional Engineers, Land Surveyors and Geologists, State of California, Department of Consumer Affairs, https://www.bpelsg.ca.gov/consumers/lic_lookup.shtml (Website accessed on 7/27/19; a copy will also be provided to City officials upon request and a copy is attached).

This list of license types lists the following types of California licensed engineers, none of which are "noise engineers":

License Types: AG - Agricultural Engineer, C - Civil Engineer, CH - Chemical Engineer, CO - Consulting Engineer, CR - Corrosion Engineer, CS - Control System Engineer, E - Electrical Engineer, EG - Certified Engineering Geologist, FP - Fire Protection Engineer, GE - Geotechnical Engineer (or Soil or Soils Engineer), GEO - Professional Geologist, GP - Professional Geophysicist, HG - Certified Hydrogeologist, I - Industrial Engineer, L - Land Surveyor, M - Mechanical Engineer, MF - Manufacturing Engineer, MT - Metallurgical Engineer, NU - Nuclear Engineer, P - Petroleum Engineer, PS - Photogrammetrist (Photogrammetric Surveyor), Q - Quality Engineer, S - Structural Engineer, SF - Safety Engineer, TR - Traffic Engineer.

² See: "No state licenses acoustical engineers except for Oregon, so an accredited engineering school education isn't absolutely *necessary*, although some consulting firms seem to prefer engineers."

<https://archinect.com/forum/thread/28242713/master-in-architectural-acoustics-paired-with-b-arch>)

³ Definition of "expert" --- <http://www.merriam-webster.com/dictionary/expert>

training or experience." Experts are qualified according to a number of factors, including but not limited to the number of years they have practice in their respective field, work experience related to the case, training and education. My expertise is derived from seven years of formal undergrad and post graduate university education in which I majored in Architecture (1966 – 1973) with included acoustical training, then decades of acoustical research, and special knowledge and experience relating to assessing environmental noise impacts in CEQA studies as I testified to in my public comments. My expertise comes from formal educational training in architecture and planning that includes the science of acoustics, and from many years of evaluation of acoustics as relates to environmental analysis challenging flawed projects or incompetent, industry-biased acousticians. My expertise in the science of acoustics is considerably beyond that of the ordinary layperson. My expertise in preparing and reviewing noise reports is documented in this Project's administrative record as submitted with my comments and on the following pages:

Statement of Qualifications

INTRODUCTION

Dale La Forest & Associates provides commercial and residential design services, acoustical consulting, environmental review, project planning permitting for government approvals and multi-disciplinary environmental studies for government and private industry and citizens groups.

HIGHLIGHTS

In 44 years, I have designed hundreds of homes in California. During the last 20 years, I have also prepared expert acoustical studies for various development projects and reviewed and commented upon dozens of noise studies prepared by others. My expertise in environmental noise analysis comes from this formal educational training in architecture and planning, and from many years of evaluation of acoustics as relates to environmental analysis and challenging flawed project applications prepared by less-than-professional, industry-biased acousticians. I regularly measure and calculate noise propagation and the effects of noise barriers and building acoustics as they apply to homes near projects and their vehicular travel routes. I have also prepared initial environmental studies for noise-sensitive development projects including hotel and campground projects along major highways. I have reviewed dozens of quarry project and batch plant project environmental documents. I have designed highway noise walls, recommended noise mitigations, and have designed residential and commercial structures to limit their occupants' exposure to excessive exterior noise levels throughout California.

See also: <http://definitions.uslegal.com/e/expert-witness/>

An expert witness is a witness who has knowledge beyond that of the ordinary lay person enabling him/her to give testimony regarding an issue that requires expertise to understand. Experts are allowed to give opinion testimony which a non-expert witness may be prohibited from testifying to. In court, the party offering the expert must lay a foundation for the expert's testimony. Laying the foundation involves testifying about the expert's credentials and experience that qualifies him/her as an expert.

Experts are qualified according to a number of factors, including but not limited to, the number of years they have practiced in their respective field, work experience related to the case, published works, certifications, licensing, training, education, awards, and peer recognition. They may be called as upon as consultants to a case and also used to give testimony at trial.

EXPERIENCE

1975 – 2019 **DESIGNER & PLANNER** — Dale La Forest & Associates; Mt. Shasta, CA.
Design of commercial, residential, subdivision planning projects and environmental and acoustical consulting for commercial and industrial firms and for the public.

Dale La Forest, Designer, INCE Associate (Institute of Noise Control Engineering)

EDUCATION

1966 – 1973 **University of Michigan**, College of Architecture and Planning - Bachelor of Architecture, 1973; and Masters studies in architecture and planning.

ACOUSTICAL ANALYSIS / COMMENTS

2019

6/5/19 Hilton Tru Hotel MND - 11111 South Prairie Ave, Inglewood CA
4/15/19 Mart South Hotel Conversion Project MND, Los Angeles CA
2/27/19 Citizens News Project MND, 1541 N. Wilcox Ave., Los Angeles, CA
2/11/19 2005 James Wood Hotel Project MND, Los Angeles, CA
2/4/19 Breaker Hotel Project CE, Long Beach, CA
1/23/19 Residence at 1888 N. Lucile Ave. MND, Los Angeles, CA

2018

12/5/18 100 E. Sunset Bridge Housing CE, Los Angeles, CA
11/6/18 Dewey Hotel Project CE, Los Angeles, CA
2/12/18 Residence at 17642 Tramonto Dr., Los Angeles, CA

2017

11/16/17 Crystal Geyser Water Company EIR, Mt Shasta, CA
8/18/17 Freeze Car Wash Project MND, Mt. Shasta, CA
3/13/17 Roseburg Water Line Project MND, Mt. Shasta, CA
1/19/17 Residence at 2056 Mandeville Canyon Rd., Los Angeles, CA

2016

8/31/16 Austin Quarry Project EIR, Madera County, CA

2015

10/20/15 Syar Napa Quarry Expansion Project EIR, Napa

2013

9/30/13 Shasta Dam Raising Draft EIS, Shasta County, CA
9/30/13 Livermore Walmart Project, Livermore, CA
8/27/13 Talmage Interchange Reconstruction Project MND, Ukiah, CA
6/10/13 Townhouse Project MND, Mt. Shasta, CA
3/15/13 Costco Wholesale Store DEIR, Ukiah, CA
3/14/13 Jaxon Enterprises Asphalt Plant IS/MND, Shasta County, CA
3/14/13 Amdun LLC Asphalt Plant IS/MND, Shasta County, CA
1/30/13 Grist Creek Aggregates Project IS/MND, Mendocino County, CA

2012

- 9/24/12 Austin Quarry Draft EIR, Madera County, CA
- 8/26/12 Tesoro Viejo Specific Plan Revised EIR, Madera County, CA
- 2011**
- 10/10/11 Eagle Peak Asphalt Batch plant MND, Callahan, CA
- 6/12/11 Walmart Expansion Project EIR, Poway, CA
- 2/20/11 McCloud Springs Ranch Subdivision MND, Siskiyou County, CA
- 1/4/11 Comingdeer Asphalt Batch Plant MND, Redding, CA
- 2010**
- 10/1/10 Biogreen Cogeneration Power Plant, La Pine, OR
- 7/13/10 Chapin Concrete Batch Plant MND, Volta, CA
- 1/25/10 Walmart Supercenter Draft EIR, Galt, CA
- 1/11/10 Doctor's Park MND, Mt. Shasta, CA
- 2009**
- 9/22/09 Livingston Concrete EIR, Placer County, CA
- 6/10/09 Poonkinney Quarry MND, Mendocino County, CA
- 5/11/09 Orchard Subdivision MND, City of Mt. Shasta, CA
- 1/2/09 McCloud Springs Ranch Subdivision MND, Siskiyou County, CA
- 2002**
- 10/8/02 Shasta Mountain Lodge Hotel 2 (Springhill Dr.), Mt. Shasta, CA
- 1995**
- 10/10/95 Shasta Mountain Lodge Hotel 1 (Mt. Shasta Blvd.), Mt. Shasta, CA

APPLICABLE NOISE STANDARDS INCLUDE 2006 L.A. CEQA THRESHOLDS GUIDE

My Report is indeed based upon the correct thresholds of significance used for residential projects in the City of Los Angeles. Those standards include the still valid 2006 L.A. CEQA Thresholds Guide which I cited to in my Report. Mr. Dennis, on pages 3 – 4 of his letter, challenges my use of some standards, but he never identifies which standards he believes are inapplicable. He never mentions the 2006 L.A. CEQA Thresholds Guide either although he claims he is supporting the Zuleger Response. Mr. Zuleger repeatedly claims the 2006 L.A. CEQA Thresholds Guide “does not reflect current City policy.” Presumably Mr. Dennis refers to that 2006 L.A. CEQA Thresholds Guide, though if he does, he never explains why it or any other standards I use are inapplicable. In any case, the 2006 L.A. CEQA Thresholds Guide is still a valid set of thresholds of significance in the City. Neither of these gentlemen provides any evidence that it has been legally voided for its thresholds of noise impact significance at this time. One would think that Mr. Dennis, an attorney, would have provided some rational or legal argument for his challenge to my choices of thresholds or noise standards if in fact there was really any problem with them.

The only challenge to my use of the 2006 L.A. CEQA Thresholds Guide is made by you, Mr. Chiang, in your July 25, 2019 Staff Report to the L.A. City Council on page 3. Yet you have not demonstrated with any meaningful evidence that the 2006 L.A. CEQA Thresholds Guide is “no

longer in use today.” To the contrary, there is evidence that the City is continuing to use this document this year for other projects, including possibly even for this same Landa/Lucille Project as demonstrated below. The L.A. City Council has not rescinded or altered the 2006 L.A. CEQA Thresholds Guide by any resolution, ordinance, rule or regulation that was supported by substantial evidence.

As the City was informed in comments in a letter⁴ on February 27, 2019 by attorney Dean Wallraff, Executive Director of Advocates for the Environment that challenges the City’s proposed changes in its thresholds of significance for environmental impacts:

“CEQA Guidelines § 15064.7(b) requires that: “thresholds of significance to be adopted for general use as part of the lead agency’s environmental review process must be adopted by ordinance, resolution, rule, or regulation...and supported by substantial evidence.” The Proposed Thresholds are being adopted for general use as part of the City’s environmental review process, so this Guidelines section applies. The process the City is following for the Project violates this requirement in three ways.

First, the Proposed Thresholds are not being adopted by “ordinance, resolution, rule, or regulation,” but by a decision of the Director of Planning, with the potential endorsement of the Commission. This violates § 15064.7(b).

Second, the 2006 Thresholds were adopted by the City Council. Neither the Department nor the Commission has the authority to set aside or supersede those thresholds.

Third, § 15065.7(b) requires that adopted CEQA thresholds must be supported by substantial evidence, and there is no such, evidence in the record in this case.”

(1) The City Council has not rescinded the 2006 L.A. CEQA Thresholds Guide. The City Chapter 506 does not allow heads of departments to void ordinances and rules made by the City Council.

(2) The City has not filed any Notice of Exemption for this “project” under CEQA, the alteration of its CEQA thresholds of significance, which is a discretionary action that may have significant impacts on the environment.

(3) There certainly was no substantial evidence presented by City officials this year or before that weakening the thresholds of significance for noise impacts by discarding the 2006 L.A. CEQA Thresholds Guide and relying solely on the State’s CEQA Guidelines in Appendix G would have no significant impacts on the environment or people.

(4) As of June 4, 2019, the 2006 L.A. CEQA Thresholds Guide has even been used by the Project applicant’s environmental consultants in this appeal in their June 4, 2019 Initial Study. See p. 69, pertinent to noise impacts:

⁴ See February 27, 2019 letter from Advocates for the Environment by Dean Wallraff to Diana Kitching, City Planner, Los Angeles Department of City Planning. Available online at: http://clkrep.lacity.org/online/docs/2014/14-1169_pc_3-1-19.pdf A copy will be made available to City officials if requested.

“No Impact. Based upon the criteria established in the City’s CEQA Thresholds Guide, a significant impact on ambient noise levels would normally occur if noise levels at a noise sensitive use attributable to airport operations exceed 65 dBA Community Noise Equivalent Level (CNEL) and the project increases ambient noise levels by 1.5 dBA CNEL or greater (City of Los Angeles 2006).”

(emphasis added)

http://clkrep.lacity.org/onlinedocs/2018/18-1156_misc_1_5-09-19.pdf

(5) As of April 11, 2019, the DCP is still using the 2006 L.A. CEQA Thresholds Guide for a Categorical Exemption: Letter from DCP to City Council: 124 East Olympic Boulevard / California Environmental Quality Act (CEQA) APPEAL; CY 19-0015

See p. 5

“Construction and operational noise levels would not exceed those thresholds established within the L.A. CEQA Thresholds Guide.”

(emphasis added)

http://clkrep.lacity.org/onlinedocs/2019/19-0015_misc_1_04-12-2019.pdf

(6) As of June, 2019 for a Mitigated Negative Declaration for LA Unified School District, Rise Kohyang High School Initial Study

This MND referenced the 2006 L.A. CEQA Thresholds Guide on p. 46.

https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/135/MND-IS_BrightStar%20HS.pdf

(7) As of April 17, 2019: L.A. Board of Recreation approves 1st & Broadway Civic Center Park Project and its IS/MND referencing the 2006 L.A. CEQA Thresholds Guide:

“ . . . that all potentially significant environmental effects of the Project have been properly disclosed, evaluated, and mitigated in the Final IS/MND in compliance with the California Environmental Quality Act (CEQA) and the State and City CEQA Guidelines, . . .”

(emphasis added)

<https://www.laparks.org/sites/default/files/pdf/commissioner/2019/apr17/19-075%20-%20Full%20Report.pdf>

(8) CEQA Guidelines § 15064.7(a) encourages agencies to publish thresholds of significance that the agency uses in the determination of the significance of environmental impacts. The City has published those standards on its website where it states: “The City of Los Angeles is also guided by the Los Angeles City CEQA Guidelines and the L.A. CEQA Thresholds Guide.”

<https://planning.lacity.org/EnvironmentalInfo.html>

(As accessed on 7/26/19)

(9) The City of Los Angeles has formally adopted and customarily uses the 2006 L.A. CEQA Thresholds Guide. The City’s recent attempts in February 2019 to switch to a different set of thresholds has not been finalized, so it is premature to claim that the City no longer uses the 2006 L.A. CEQA Thresholds Guide.

CEQA § 21082 requires the City to adopt thresholds of significance. Nothing in 21082 allows a planning director to nullify such legally adopted standards without formal City Council approval.

By adopting threshold of significance as a matter of policy, a lead agency “promotes consistency, efficiency, and predictability in the initial study process.” *Ibid.* It makes no sense and violates 21082 for the City to set thresholds on a project-to-project basis because that would be neither consistent nor predictable for project applicants or for possibly-apprehensive neighbors.

REPLIES TO LETTER FROM Z CONSULTING COMPANY WITH RESPONSES TO COMMENTS

I contend that the **2006 L.A. CEQA Thresholds Guide** is still in effect with applicable thresholds of significance for this Project. For sake of argument though, this Reply letter will demonstrate that even without those thresholds, this Project will still exceed other applicable noise thresholds such that it will create significant noise impacts.

ASSUME AS ALTERNATIVE 1: ONLY STATE CEQA GUIDELINES AND CITY STANDARDS AND STANDARDS OF OTHER AGENCIES FOR THRESHOLDS OF SIGNIFICANCE

The threshold of significance for this Project's construction noise impacts would be, at least, what the City identifies as:

THRESHOLD NOISE-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?⁵

For sake of argument, this Alternative 1 set of thresholds does not include standards in the 2006 L.A. CEQA Thresholds Guide.

To assess whether this Project's noise will exceed that threshold (Noise-1), one must first determine the *ambient* noise level. Second, the Project's temporary *increase* in noise levels at neighboring homes during construction must be measured or calculated. Third, a *threshold of significance for an unacceptable increase in noise levels must be selected*.

THRESHOLDS OF SIGNIFICANCE UNDER ALTERNATIVE 1

(1) NOISE ORDINANCE

The City's **noise ordinance** provides some thresholds. LAMC § 112.05 sets a threshold limit of a maximum of **75 dBA at 50 feet** for construction machinery and power equipment. That limit applies to the combined noise level from the use of multiple pieces of equipment, and is not merely for each single piece of equipment. For environmental review, the City routinely assesses construction noise impacts by combining noise emissions from separate, simultaneously-operated equipment. As shown below, this Project's construction noise will exceed that level of significance.

Yet this Project's Initial Study incorrectly assumes the threshold of significance for construction noise only applies separately to each unit of equipment. It ignores that when several loud equipment operations occur simultaneously, their combined noise level at nearby homes will be louder than if just a single equipment type was in use. There is no supporting evidence for that misplaced assumption that the threshold only applies to individual construction equipment, not in

⁵ This threshold is derived by the City claiming to have adopted the current CEQA Guidelines, Appendix G and claiming to have discarded thresholds in the 2006 L.A. CEQA Thresholds Guide.

CEQA or in practice within the City's history of considering composite noise impacts in its environmental review documents.⁶

(2) GENERAL PLAN

The City's **General Plan** also provides some thresholds for noise impacts.⁷ The City's General Plan Noise Element sets the permissible interior noise level limit of **45 dBA CNEL** within homes.⁸ That General Plan standard is also an applicable threshold of significance to prevent unacceptable disturbance of neighbors' use of their homes.⁹ This standard applies to all sources of noise. Noise levels outdoors on residential property greater than **70 dBA CNEL** are considered "normally unacceptable" in residential areas, so that too would constitute a threshold of significance.¹⁰ It requires that the ambient noise level at neighboring homes for an entire 24-hour day be measured or calculated. As shown below, this Project's construction noise will exceed that level of significance.

(3) FTA NOISE STANDARDS FOR INCREMENTAL INCREASE IN NOISE

There must also be another threshold of significance for construction noise to satisfy the State CEQA Guidelines and the City's proposed adoption of those 2019 CEQA Thresholds Guidelines. These guidelines ask if this Project will result in 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. The City does not have its own threshold for such an *increase* if it abandons the 2006 L.A. CEQA Thresholds Guide.¹¹ Instead, the City will have to borrow an incremental noise level increase threshold from standards of other agencies to comply with the State Thresholds Guidelines.

⁶ For example, for the January 24, 2019 IS/MND for the Citizens News Project at 1545-1551 N. Wilcox Avenue, Los Angeles, CA (ENV-2017-756-MND), the City stated on page III-78: "*The noise levels shown in Table III-10 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.*" https://planning.lacity.org/staffrpt/mnd/Pub_013119/ENV-2017-756.pdf

⁷ See: General Plan Noise Element, p. 2:2; LAMC § 91.1207.14.2 ("Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.") <https://planning.lacity.org/cwd/gnlpln/noiseElt.pdf>

⁸ See: City (2/3/99) General Plan Noise Element, p. 2:13 (stating the California Noise Standard for "addressing noise problems and define incompatible noise sensitive uses," including residential dwellings, is set at an interior noise level of a CNEL of 45 dB), <https://planning.lacity.org/cwd/gnlpln/noiseElt.pdf>. As discussed here in this comment letter, the Project's construction noise will exceed this limit of 45 CNEL.

⁹ That 45 dBA CNEL standard is also found in the California Building Standards Code (California Code of Regulations [CCR] Title 24, Part 2, Chapter 12):

§ 1208A.8.2 Allowable Interior Noise: Interior noise levels attributable to exterior sources shall not exceed 45 decibels in any habitable room. The noise metric shall be either the L_{dn} or the community noise equivalent level (CNEL), consistent with the Noise Element of the local General Plan.

¹⁰ Source: Noise Element of the City of Los Angeles General Plan, 1999; Also, "Exterior noise levels that are above the upper value of normally acceptable category for various land uses, according to the Noise Element of the City of Los Angeles General Plan." See p. 12.12, DEIR for Cornfield Arroyo Seco Specific Plan: https://planning.lacity.org/eir/CornfieldArroyo/DEIR/Volume%20I/Ch12_CASP%20DEIR%20Noise-Vibration.pdf

¹¹ The 2006 L.A. CEQA Thresholds Guide provides an incremental increase threshold, where construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. This is the threshold that was used in my comment letter.

Mr. Zuleger’s noise study for the INITIAL STUDY is lacking the most essential understanding of what this specifically defined threshold of significance requires. Nowhere in the Initial Study, his noise study, or his *Z Consulting Company*’s Responses is there any description of such an incremental increase threshold of significance or an evaluation of this Project’s “increase in ambient noise levels in the vicinity of the Project in excess of standards.” As a chemical engineer, he may not appreciate California’s standards for noise assessments. But the law is clear. To protect neighbors from excessive construction noise, the Initial Study must evaluate the incremental increase significance for all Project noise sources and compare any increase above the ambient noise level with some applicable threshold of significance. He has not done that in his noise study, and his Responses are completely devoid of any appreciation for that State and Local noise standard. As such, the Initial Study is without substantial evidence in showing that the Project’s construction noise level increase will be less-than-significant.

Not only is the evaluation of such incremental thresholds of significance required in the Initial Study, but these thresholds are available from other agencies. The Federal Transit Administration (FTA) has noise criteria for such increases in noise that are well founded in regulatory agency guidance and scientific studies, including:

- US Environmental Protection Agency Levels Document
- American Public Transit Association Guidelines
- Synthesis of Social Surveys on Noise Annoyance (Schultz 1978)
- US Department of Housing and Urban Development Standards
- CHABA Working Group 69, Guidelines for Preparing Environmental Impact Statements on Noise

Federal Transit Administration (FTA) Incremental Noise Standards

Ambient Noise Level without Project (L_{dn})	Noise Increase Required for Significant Impact
< 60 dB	+ 3.0 dB or more
60 – 65 dB	+ 2.0 dB or more
67-75 dB	+ 1.0 dB or more
> 75 dB	0 dB

For example, if this neighborhood’s ambient noise level is below 60 dBA L_{dn} , then the threshold of significance would be triggered by construction noise that increased that ambient noise level by 3.0 dB or more. For purposes of this Reply letter, that **+3 dB threshold of significance** will be used above the Project’s neighborhood 24-hour day-night weighted average ambient noise level.¹² As shown below, this Project’s construction noise will exceed that level of significance.

¹² This 3 dBA increase threshold of significance is consistent with the City’s standards where “An increase in noise levels by 3 decibels or more within the “normally unacceptable” or “clearly unacceptable” categories, or any increase of 5 decibels or more.” See DEIR for Cornfield Arroyo Seco Specific Plan and Redevelopment Plan, p. 12-12, available online: https://planning.lacity.org/eir/CornfieldArroyo/DEIR/Volume%20I/Ch12_CASP%20DEIR%20Noise-Vibration.pdf

For comparison, if the City used its 2006 L.A. CEQA Thresholds Guide, then a different threshold of significance would result. Since construction activities associated with the proposed development at the Project Site would last for more than ten days in a three-month period, the proposed Project would cause a significant noise impact during construction if the ambient exterior noise levels at the identified off-site sensitive receptors would be increased by 5 dBA or more. That metric is the L_{eq} noise level, typically measured as an average noise level for one hour. The City's standard practice is to compare construction noise level increases to one-hour ambient noise levels.¹³

THRESHOLD NOISE-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The Project construction vibration impact would be significant if it exceeded the Federal Transit Administration (“FTA”) vibration threshold of significance of 80 VdB at residences, or exceeded the Caltrans' recommended level of 0.2 in/sec PPV.¹⁴ For purposes of assessing the Project's potential for significant human annoyance impacts due to ground-borne vibrations at neighboring homes caused by Project construction, a 72 dBA threshold is applicable for frequent events:

Table IV.H-5
FTA Vibration Impact Criteria for Human Annoyance

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

^a “Frequent Events” are defined as more than 70 vibration events of the same source per day.
^b “Occasional Events” are defined as between 30 and 70 vibration events of the same source per day.
^c “Infrequent Events” are defined as fewer than 30 vibration events of the same source per day.
^d This criterion limit is based on the levels that are acceptable for most moderately sensitive equipment such as optical microscopes.
Source: Federal Transit Administration, 2006.

¹³ See: January 24, 2019 IS/MND for the Citizens News Project at 1545-1551 N. Wilcox Avenue, Los Angeles, CA (ENV-2017-756-MND), on page III-79, Table III-11, “Estimated Exterior Construction Noise at Nearest Sensitive Receptors”, where existing ambient noise levels (in dBA L_{eq}) are compared with the noise level above ambient. Also see footnotes, stating: “Source: Calculations based on Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Final Report, May 2006. It should be noted that the peak noise level increase at the nearby sensitive receptors during project construction represents the highest composite noise level that would be generated periodically during a worst-case construction activity and does not represent continuous noise levels occurring throughout the construction day or period.” Thus, the City uses composite noise levels when evaluating a project's noise impacts. The City also evaluates the peak noise level during construction, not the average noise level, consistent with the provisions set forth in LAMC Section 112.05. This Project's IS/MND is available online at: https://planning.lacity.org/staffrpt/mnd/Pub_013119/ENV-2017-756.pdf

¹⁴ See FTA (May 2006) Transit Noise and Vibration Impact Assessment, pp. 12:10-14, available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.

The City uses such FTA standards in assessing projects' ground-borne vibration impacts:

See: Providence Tarzana Medical Center EIR, p. IV.H-4 and -5 and -9:

("The City currently does not have any adopted standards, guidelines, or thresholds relative to ground-borne vibration. As such, available guidelines from the FTA are utilized to assess impacts due to ground-borne vibration.")

https://planning.lacity.org/eir/ProvidenceTarzanaMedicalCtr/FEIR/files/D_IVH.pdf

The FTA standards also apply to vibration impacts causing human annoyance:

Providence Tarzana Medical Center EIR, p. IV.H-10:

In addition to the FTA Construction Vibration Impact Criteria for Building Damage, the FTA guidance manual also provides vibration criteria for human annoyance for various uses. These criteria were established primarily for rapid transit (rail) projects and, as indicated in Table IV.H-5 on page IV.H-11, are based on the frequency of vibration events. Specific criteria are provided for three land use categories: (1) Vibration Category 1—High Sensitivity; (2) Vibration Category 2—Residential; and (3) Vibration Category 3—Institutional.

Comment – page 4:

SUBSTANTIAL EVIDENCE SHOWS THAT PROJECT CONSTRUCTION NOISE WILL CREATE SIGNIFICANT NOISE IMPACTS WITHIN NEIGHBORHOOD AFFECTING DOZENS OF SURROUNDING HOMES.

Such construction noise levels would massively exceed the Project site's 55.7 dBA L_{eq} daytime ambient noise level by 43 dBA at nearby homes.

Reply to Z Consulting's Response II-1, p. 1:

Mr. Zuleger is mistaken arguing that the 2006 L.A. CEQA Thresholds Guide "does not reflect current City policy." As explained above, it is still used for CEQA environmental studies. Mr. Zuleger's failure to include these valid thresholds in his Noise Report does not make this Project exempt from them.

He never addresses the point of this comment, that project noise will greatly exceed the ambient noise level at nearby homes. None of his Responses acknowledge that the State as well as the City require an Initial Study to evaluate if "*the project will result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies*"?

All my comments about the Project's construction noise levels are accurately substantiated.

Comment – page 4:

Construction Noise Will Exceed City's Maximum 75 dBA L_{max} at 50 feet in Residential Area

Reply to Z Consulting's Response II-2, p. 2:

Mr. Zuleger responds that the comment is incorrect because construction equipment noise will not exceed the Noise Ordinance limits (1) since "regulatory control measures" will prevent exceedances, and (2) because the comment purportedly misinterprets the Noise Ordinance "maximum" limit metric as meaning L_{max} instead of L_{eq} which Mr. Zuleger used in his Noise Report.

1) He is incorrect to assert that the Project's proposed regulatory control measures will prevent exceedances of the threshold of significance. One regulatory control measure controls the hours of the day that construction can occur, but it does not limit how loud that noise may be. The other regulatory control measure sets decibel limits from LAMC § 112.05, but those limits are not the only thresholds of significance applicable to this Project as described above. Those

regulatory control measures are not enforceable. Nor does the condition requiring the Applicant to monitor noise via sound metering include any criterion. Nor does it specify mandatory actions to be taken by the Applicant when noise levels are excessive (e.g., cease construction). Hence, implementation is merely aspirational and subject to Applicant's voluntary actions. Nor does the City take a "belt and suspenders' approach" by requiring the Applicant to perform noise testing upon the start of and during operations to ensure compliance with the City's Noise Ordinance.¹⁵

The Initial Study admits the City's decibel noise limitations shall not apply where compliance is technically infeasible. (*ibid*) The Initial Study does not define which of the Project's construction activities will be infeasible to adequately mitigate. The Initial Study states that "[n]oise barriers are not practical for phases of construction that require constant mobility around the site, such as site preparation and grading."¹⁶ Thus since the City claims such mobile equipment noise is not practical to regulate, such construction noise generated during site preparation and grading would not be restricted by the City's regulatory control measures and would remain potentially significant at neighboring homes. Therefore, it is speculative whether this RCM will sufficiently reduce noise levels to prevent significant noise impacts to neighbors. Other reasons these regulatory control measures will not reduce construction noise impacts to a less-than-significant level are contained in my Noise Report on pages 20 to 23.

2) My Report did not misinterpret the Noise Ordinance's meaning of *maximum* noise levels. My interpretation is routinely used by the City in its other CEQA environmental reviews.

Maximum simply means "maximum," and not *averaged-for-an-hour* as Mr. Zuleger would have some people believe. (See his Response IV-7, pp. 10-11)

There is no support in the City's Noise Ordinance or past practices by the Planning Department for Mr. Zuleger's claim that, when interpreting the standard of the maximum noise level "*the appropriate unit of measurement is the maximum 1-hour L_{eq} over the duration of equipment usage,*" which is what his Noise Study erroneously uses.¹⁷ He is cloaking his erroneous interpretation of an average noise level by bringing in the one-hour duration where all noise levels in that hour are averaged together logarithmically. But nothing in LAMC § 112.05 requires an annoyed neighbor to somehow measure a construction site's noise levels for an hour, then perform complicated logarithmical calculations to derive an averaged L_{eq-1} hour value.

Instead, all one needs to do is use a simple noise meter that displays the maximum noise level during any chosen time interval.

¹⁵ *Walters v. City of Redondo Beach* (2016) 1 Cal.App.5th 809, 824.

¹⁶ See: Initial Study, PDF p. 67.

¹⁷ Definition of L_{eq} : Integrated or Equivalent Noise Level (" L_{eq} "): The energy **average** A-weighted noise level during the measurement period. Also see: Mangrove Estates EIR, p. 4.8-1, which states:

*"One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (**essentially, the average noise level**). Typically, L_{eq} is summed over a one-hour period."* (emphasis added)

<https://planning.lacity.org/eir/MangroveEstates/FEIR/EIR%20Sections/4.8%20Noise.pdf>

The fact that Federal and State agency noise level charts list the maximum noise levels for various types of construction equipment supports the interpretation that the Noise Ordinance's maximum noise level means exactly what it says, the maximum that is measurable and is identified in commonly available reference documents.

Comment – page 5:

CONSTRUCTION NOISE EXCEEDS CITY'S INTERIOR ROOM MAXIMUM NOISE LEVEL OF 45 dBA L_{dn} .

Equipment such as an excavator or backhoe generating a noise level of 85 dBA L_{eq} at 50 feet, when operated for 11 hours a day, produces an average noise level of 81.6 dBA L_{dn} at 50 feet. For the closest homes with their windows closed at that 50-foot distance, their interior room noise levels would be reduced by about 25 dB to 56.6 dBA L_{dn} , exceeding the City's 45 dBA L_{dn} threshold of significance.

Reply to Z Consulting's Response II-3, p. 2:

Mr. Zuleger is mistaken arguing that the 2006 L.A. CEQA Thresholds Guide is not used and only the Noise Ordinance sets any threshold of significance for a project's noise impacts, not even the City's General Plan or Building Code. As explained above, both the General Plan and the 2006 L.A. CEQA Thresholds Guide is still used for CEQA environmental studies. Mr. Zuleger's failure to include these valid thresholds in his Noise Report does not make this Project exempt from them.

Nonetheless, this Project will exceed the thresholds of significance identified above even if the **2006 L.A. CEQA Thresholds Guide** standards are not included.

Mr. Zuleger's other reasons why this comment is not accurate also are without credibility.

- * The day-night noise level cited above for an excavator or backhoe generating a noise level of 85 dBA L_{eq} at 50 feet was indeed calculated correctly using the L_{eq} noise metric as is appropriate. Mr. Zuleger however seems to have overlooked that in his criticism, thus entirely undermining his claim.
- * The regulatory control measures do not offer substantial noise reductions for some homes because they are unenforceable and may be discarded if infeasible, because as shown below Mr. Zuleger has overestimated the amount of noise reduction that mufflers provide.
- * There are not any substantial shielding effects whatsoever of terrain, intervening structures, vegetation, fences and surface roughness to reduce noise impacts to homes directly to the north across Lucile Avenue as shown in my Report on Figures 2, 3 and B-2. Mr. Zuleger's argument is completely erroneous for those nearby homes, and therefore offers no substantial evidence to support his flawed Noise Report.

- * He is wrong claiming that the backhoe and excavator calculations use unsubstantiated noise level predictions. Even using the lesser noise levels that he claims such equipment will generate, the Project's construction noise impact upon neighbors will still be excessive.

For example, if, as he claims, excavator operational noise is 77 dBA L_{eq} at 50 feet, when operated for 11 hours a day, that operation produces an average noise level of 73.6 dBA L_{dn} at 50 feet. For the closest homes with their windows closed at that 50-foot distance, their interior room noise levels would be reduced by about 25 dB to 48.6 dBA L_{dn} , exceeding the City's 45 dBA L_{dn} threshold of significance. When other equipment is simultaneously operated during excavator use, the noise exceedance above the Noise Ordinance limits and above the ambient noise levels is even greater. That constitutes a significant noise impact that the Initial Study never considers. His error includes the assumption that only one piece of heavy equipment will operate at one time, and the City's threshold of significance does not parallel what CEQA requires that includes all sources of noise that occur together.

Comment – page 6:

NO SUBSTANTIAL EVIDENCE EXISTS TO SUPPORT THAT SOME OF PROJECT'S TYPES OF NOISE IMPACTS WILL BE LESS-THAN-SIGNIFICANT.

Neither the Project's Initial Study nor the applicant's Noise Study¹⁸ even identifies or analyzes the noise impacts that typical backup warning alarms used on heavy equipment make. As shown below, such noise impacts will be significant in the Project's neighborhood.

Reply to Z Consulting's Response III-1, p. 3:

Mr. Zuleger is mistaken arguing that the Noise Ordinance, used as a threshold of significance, does not consider maximum L_{max} noise levels. As explained above, the Noise Ordinance, LAMC § 112.05, does limit construction noise to at most a maximum (not an average) noise level of 75 dBA. (L_{max})

Backup alarms therefore must be evaluated for their maximum noise level when heard on neighbors' properties. The fact that backup alarms emit loud noise in short pulses does not mean that neighbors will instinctively average out such annoying loud sounds the way Mr. Zuleger contends the City must interpret its Noise Ordinance. Such brief impulsive noise levels are intrusive, and are subject to a 5 dB penalty as well.¹⁹

¹⁸ See: *Air Quality and Noise Impact Assessment*, April 8, 2019, by Z Consulting Company, at Initial Study, PDF p. 131.

¹⁹ The Noise Ordinance provides a penalty of 5 dBA for steady high-pitched noise or repeated impulsive noises." (Los Angeles Municipal Code, chapter XI, article I, section 111.02(b))

Comment – pages 6 to 7:

NO SUBSTANTIAL EVIDENCE EXISTS TO SUPPORT THAT GROUND-BORNE VIBRATION IMPACTS WILL BE LESS-THAN-SIGNIFICANT.

This Project will create significant and severe ground-borne vibration impacts to neighboring residents. Such disturbance will result because the Project's demolition phase, excavation operations, site grading and drilling for foundation pilings or caissons will cause serious ground-borne vibrations at homes as close as 10 to 15 feet away. Construction vibration will cause significant annoyance impacts to neighbors and could cause potential structural damage to their homes. As shown below, such ground-borne vibration impacts will exceed typical vibration standards used by the City for other construction projects.

Reply to Z Consulting's Response III-2, p. 4:

Mr. Zuleger argues that the Project's ground slope is not unique, but slope has nothing to do with vibration impacts caused by heavy equipment or drilling operations occurring just a few feet from some neighboring homes. He offers no evidence in support of his Response.

He also inaccurately claims that "neighboring homes are not uniquely susceptible to vibration damage" and again, presents no evidence to support that statement. My Report, on page 53, footnote 129, however documents that two adjacent homes were built long ago in 1948 and 1939 and are wood framed and stucco-clad, and as such are prone to damage from excessive construction ground-borne vibration.

Mr. Zuleger is incorrect in Responding that vibration impacts will be less-than-significant. He provides his reasons in Response VI-23, so I will accordingly reply to those Responses below for his Response VI-23. Briefly though, although he seems unaware of it, CEQA vibration impact analysis also must include annoyance-based thresholds of significance. The City routinely evaluates human *annoyance* impacts in CEQA reviews where circumstances are relevant.²⁰ His Noise Study is inadequate because, in part, it never analyzes this Project's significant annoyance impacts caused by significant ground-borne vibration during nearby construction activities.

²⁰ *Example, see: DEIR for 5th and Hill Project*, City of Los Angeles, Nov. 2018, pages IV.H-16 to -17: "In general, groundborne vibrations of 75 dBA are considered potentially annoying. Vibrations of 85 VdB or greater would likely be highly annoying and disruptive irrespective of the affected land use. Based on FTA guidance, construction vibration impacts associated with human *annoyance* would be significant if the following were to occur (applicable to frequent events; 70 or more vibration events per day):

- Project construction activities cause ground-borne vibration levels to exceed 72 VdB at offsite sensitive uses, including residential and hotel uses."

"Modeled vibration sources include *on-site auger drill rigs* and large dozer-type equipment, as well as haul trucks that would travel on nearby roadways. As shown, on-site vibration generated by *auger drill rigs* and large-dozer type equipment *would exceed the criteria for human annoyance*"

Ibid., Page IV.H-30

Most people consider groundborne vibration to be an annoyance that can affect *concentration* or disturb sleep. Construction therefore can have significant annoyance impacts during the daytime when people sometimes need to concentrate.

Comment – page 7:

NO SUBSTANTIAL EVIDENCE EXISTS TO SUPPORT THAT USE OF OTHER CONSTRUCTION EQUIPMENT BESIDES DRILL RIGS WILL BE LESS-THAN-SIGNIFICANT.

Additionally, the Initial Study presents clearly erroneous conclusions that the noise impacts from the operation of heavy equipment (other than drill rigs) on the Project site will be less-than- significant during construction. Besides drilling, the Project will use heavy equipment like an excavator, jackhammer, tractor, loader, backhoe, dump truck, crane, and concrete truck. But no temporary noise barrier is proposed to shield noise from these equipment types. The upper proposed home's lot at 3627 Landa Street that is not as steep and may not need caisson drilling would not be required to install temporary noise barriers. But neighboring homes are very close on the east, south and west sides. The Initial Study offers no substantial evidence that the Project's noise impacts from use of this other heavy equipment will be less-than-significant as heard anywhere in the neighborhood. All of the construction equipment noise levels predicted in the Project's Noise Study Table 7 are not substantiated with calculations or reasonable assumptions. As an indication of their unreliability, those equipment noise level characterizations are significantly lower than what are estimated in the City's 2006 CEQA Threshold Guide.

Reply to Z Consulting's Response III-3, p. 4:

Contrary to Mr. Zuleger's assertion, the regulatory control measures (RCMs) are not sufficient to ensure Project noise impacts will be less-than-significant with a considerable safety margin, as explained above.

There is no supporting evidence in the Initial Study for his assumption of a 10-dBA reduction from the combined effects of the RCMs. He appears to have made that number up out of thin air since he points to no evidence to back it up in the Noise Study.

It is not true that mufflers on heavy equipment will reduce their noise levels by 10 dBA. Requiring mufflers as a RCM does not reduce equipment noise by 10 dBA because most heavy construction equipment already had mufflers when their noise levels were evaluated. Besides, the City estimates that mufflers only reduce equipment noise by **between 1 to 3 dBA**, not 10 dBA.²¹ The Project's Noise Study is essentially double-counting the decibels and the benefit of mufflers, and as such, is severely underestimating how loud construction noise will be. Previously the

²¹ See: 2006 L.A. CEQA Thresholds Guide, p. I.1-9, Exhibit I.1-2, for difference between noise levels during different construction phases without and with mufflers. (e.g. only between 1 to 3 dBA). Also see next page with this Exhibit.

Project’s MND included as a noise mitigation: “*The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.*” The final Initial Study however abandons this noise mitigation and replaces it with this ineffective measure: “*All heavy construction equipment that is able to use mufflers will do so.*” That measure is so vague and weak that it cannot be enforced, and as such, offers no realistic evidence of any reduction in construction noise levels.

MUFFLERS REDUCE NOISE LEVELS BY 1 – 3 dB ONLY

2006 L.A. CEQA Thresholds Guide p. I.1-9

I.1. Construction Noise

**Exhibit I.1-2
OUTDOOR CONSTRUCTION NOISE LEVELS**

<u>Construction Phase</u>	<u>Noise Level (dBA Leq)</u>	
	<u>Noise Levels at 50 feet</u>	
	<u>50 feet</u>	<u>with Mufflers (dBA)</u>
Ground Clearing	84	82
Excavation, Grading	89	86
Foundations	78	77
Structural	85	83
Finishing	89	86

Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

While it is true that neighbors to the north will experience more noise reduction than those to the east and west due to somewhat greater separation distances, it is not true that their noise impact exposure will be less-than-significant and that portable barriers are not needed when mobile equipment like backhoes and graders move about the Project site. Mr. Zuleger presents no evidence in his Response or his Noise Study that those homes immediately to the north on the other side of Lucile Avenue will not be exposed to significant noise impacts.

My Report stated: “All of the construction equipment noise levels predicted in the Project’s Noise Study Table 7 are not substantiated with calculations or reasonable assumptions.” Mr. Zuleger responded that he provided calculations in Appendix C of his Noise Study. But that is simply not true; Appendix C presents no calculations whatsoever, only the results of two brief noise tests and a chart with Construction Equipment Noise Data. Those are not calculations. Nowhere else did Mr. Zuleger provide any calculations predicting the noise level exposure that neighbors to the north would be exposed to from this Project’s construction activities.

Accordingly, the Initial Study has no substantial evidence to back up its conclusions of a less-than-significant impact upon some nearby homes.

Comment – pages 7 - 8:

IV. PROJECT NOISE LEVELS WILL BE SEVERE AND SIGNIFICANT AT HOMES TO THE NORTH AND DOWNHILL DUE TO UNUSUAL STEEPNESS OF PROJECT SITE.

This Project poses unusual circumstances that may preclude the use of a Categorical Exemption. The Project site, especially for the lower home to be built along Lucile Avenue, is very steep with a slope as steep as about 60%.²² However, the City's CEQA Guidelines, for Class 4 minor alterations to land, only allows a CEQA Categorical Exemption for grading of land up to 15% slope.²³ The Initial Study does not explain why the part of this Project that requires grading and excavating on this Project site's steep site that has a slope percentage greatly in excess of the City's Class 4 standards is categorically exempt.

Reply to Z Consulting's Response IV-1, p. 5:

Mr. Zuleger's Response claims the Project does not need a Class 4 Categorical Exemption for minor alterations of land even though the Project site slope of 60% in places exceeds the maximum of 15% slope allowed by the City's Categorical Exemption. He however provides no explanation to support his claim other than parroting the Initial Study's statement that the Project qualifies for a Class 3 Categorical Exemption.

It matters not that steep slopes have been developed in the Project neighborhood in the past. Categorical exemptions in excess of the City's slope limits are not granted because previous homes built on slopes greater than 15% have been constructed.

Comment – pages 7 - 8:

²² See: Initial Study, PDF pp. 44 and 199 where slope gradients of 2:1 are described. The Project site's slope percentage is calculated by dividing the vertical rise by the horizontal run. Multiply this number by 100 to arrive at the percentage slope. For instance, 1 foot rise divided by 2 foot run = $0.5 \times 100 = 50\%$ slope. The Project's topographic mapping also supports this slope percentage. See: May 23, 2017 Survey Map for 1888 Lucile Avenue and 3627 Landa Street with topographic contour lines, that shows a 12-foot rise in about 20 feet horizontal distance on the lower lot. That topography of 6:10 represents a 60% slope. The architect's "West Elevation (Lucile Home)" shows a grade slope of about a 30-degree angle.

²³ See: City's Dept. of Building and Safety "Categorical Exemption Questionnaire" on page 19: "Is the grading to be done on land with an existing slope of fifteen percent or less (< 15%)?" http://buildingincalifornia.com/wp-content/uploads/2014/02/geology_engineering.pdf

IV. PROJECT NOISE LEVELS WILL BE SEVERE AND SIGNIFICANT AT HOMES TO THE NORTH AND DOWNHILL DUE TO UNUSUAL CIRCUMSTANCE OF STEEPNESS OF PROJECT SITE.

The Initial Study itself twice mischaracterizes this Project site as having a “gentle slope”, but in reality a 60% slope is sometimes defined as an “extreme slope,” not a gentle slope. For example, the City determined that only 0.14 % of the single-family areas in the Hillside Area are greater than a 45% slope.²⁴ This Project’s steepness of slope not only necessitates additional noisy, time-consuming caisson foundation work, but also increases the construction work’s noise impacts as the hillside itself acts like a canyon wall to reflect more noise towards homes that are at a lower elevation, unblocked by intervening homes, and situated to the north. Those homes to the north expose more of their roofs than walls to direct view from this Project site when compared to typical homes on low-slope lots. Roofs of homes do not block sound transmission as well as exterior walls because roofs have typically have some unblocked ventilation openings and roofs are often less dense than exterior walls that may have heavy stucco covering. Therefore, this Project site’s steepness presents an unusual circumstance not allowed by the City’s CEQA Guidelines for a Class 4 Categorical Exemption, and therefore not allowed for any Categorical Exemption including a Class 3 exemption as now is being requested.

Reply to Z Consulting’s Response IV-2, p. 5:

While Mr. Zuleger’s Response discusses the different slopes of the Project site, he never explains why most of the site having a slope greater than 15% qualifies for a Class 4 Categorical Exemption. What is important is that the steepest slopes on the Project site of about 60%, are at its northern most end near Lucile Avenue, where heavy equipment noise will be closest to homes north of Lucile Avenue and will additionally bounce or reflect from the steep hillside to additionally impact these homes.

Even more importantly, he never responds to the main point of the comment that the Project site’s steep slope tends to reflect more construction noise down to the homes north of Lucile Avenue. So loud construction noise, coupled with additional reflected noise from the hillside, will be even louder at those homes to the north than if the neighborhood was flat.

Additionally, he fails to respond to the comment, even in his subsequent Response IV-3, that Project construction noise will be more severe at the interiors of those homes to the north because roofs of homes do not block sound transmission as well as exterior walls because roofs have typically have some unblocked ventilation openings and roofs are often less dense than exterior walls that may have heavy stucco covering.

Mr. Zuleger ignores that the City’s General Plan sets noise standards as discussed above, which become thresholds of significance for CEQA review purposes, as to the maximum acceptable interior noise levels within homes. His reliance solely upon the Noise Ordinance for thresholds violates CEQA which specifically includes the General Plan:

²⁴ See: http://planning.lacity.org/Code_Studies/BaselineHillsideOrd/CPC-2010-581-CA052710SRpt.pdf, page A-20.

“THRESHOLD NOISE-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the **local general plan** or noise ordinance, or applicable standards of other agencies?” *(emphasis added)*

Therefore the Initial Study fails to consider appropriate thresholds of significance and fails to evaluate the significant noise impact this Project’s construction may create at homes to the north downward from this Project site’s steep hillside.

Comment – pages 9 - 10:

CAISSON DRILLING NOISE LEVELS WILL BE SIGNIFICANT AT NEAREST HOMES TO THE NORTH OF PROJECT SITE BECAUSE THEY ARE CLOSE AND NO TEMPORARY NOISE BARRIER BLOCKS THAT DIRECTION.

The Initial Study provides no evidence at all that Project noise resulting from drill rig operations for the 1888 Lucile Avenue home’s proposed foundation will be less-than-significant at some nearby homes across the street to the north. The Initial Study proposes no temporary noise barrier between the drill rigs and the homes to the north at 1887, 1881 and 1877 Lucile Avenue. Barriers are only proposed to the east and west of the temporary drill rigs. At distances as close as about 70 feet from a probable drilling location to the home at 1881 Lucile Avenue with no intervening noise barrier, such drilling noise levels will greatly exceed the City’s maximum standards. An auger drill rig will generate a noise level of about 85 dBA L_{max} at a 50-foot distance. At the nearest homes to the north only about 70 feet away at the closest and unshielded by any temporary noise barrier, that drilling noise level would be reduced by distance to about 82.1 dBA L_{max} . The daytime ambient noise level near those homes is claimed in the Initial Study to be 55.7 dBA L_{eq} . Therefore drilling noise would be as much as 26.4 dBA louder than ambient noise levels at these homes to the north. ($82.1 - 55.7 = 26.4$) That represents a significant noise level increase because it would be more than 5 dBA greater than the ambient noise level at those homes.²⁵ The Initial Study however never evaluates drilling noise levels at homes to the north.

Yet the Initial Study and Noise Study never disclose how loud that the Project’s construction noise from operation of multiple pieces of heavy equipment and frequent construction vehicle traffic will be at these nearby homes. The Noise Study only purports to evaluate and calculate noise impacts on neighbors from such equipment as if they are shielded by temporary noise barriers, but no Project Design Feature is proposed to shield such heavy equipment’s noise to the north. The Project’s noise control feature for temporary noise barriers only applies to operation of the drill rigs during drilling and then only for the closest neighbors to both the east and west.²⁶ No temporary noise barrier use

²⁵ See: 2006 L.A. CEQA Thresholds Guide for a 5 dB increase being considered to be significant.

²⁶ See: Initial Study, PDF p. 67.

is proposed to shield drilling noise from nearby neighboring homes to the north immediately across Lucile Avenue.

Reply to Z Consulting's Response IV-3, p. 7:

Mr. Zuleger's response makes the curious and unsupported argument that because the Noise Ordinance sets a noise standard in decibels based upon a 50-foot distance, that essentially the evaluation of this Project's construction noise level's exceedance of a threshold of significance "does not depend on the distance to the receptors." As explained above, the Noise Ordinance does not set the only threshold of significance. CEQA's Appendix G also sets a threshold when a project's temporary noise level increases are significantly greater than the ambient noise level. Thus the Initial Study is required to evaluate this Project's noise levels at homes to the north even though they are greater than 50 feet away.

Contrary to Mr. Zuleger's response, the Initial Study contains no calculations that "*demonstrate that the portable noise barriers are not necessary for the drill rig to meet the applicable limits at any receptors.*" The regulatory control measures will not suffice as discussed above to protect homes to the north from excessive construction noise exposure. The portable noise barriers will not be positioned to block any noise from the various mobile pieces of heavy equipment and trucks used on and off the site during construction.

Mr. Zuleger's response is repeatedly unsupported by any evidence. For example, he claims that "*The slope also shields much of the northern neighbors' property from a sizable portion of the Project site.*" But that is irrelevant because the loudest, closest equipment operations are on the steepest portion of the site that is entirely unshielded from homes to the north. (See illustration below and in comment Report.)

Or consider this response he makes: "*Additionally, noise propagation near ground level experiences far more attenuation than free field noise propagation due to factors including surface roughness, variations in elevation, vegetation, and intervening structures (such sheds, parking structures, fences, roof overhangs, etc.).*" That too is entirely irrelevant for the loudest, closest equipment operations which will be on the steepest portion of the site nearest to Lucile Avenue. Because that portion of the site is elevated on a steep slope, there is even less earthen surfaces to attenuate transmitted noise emitted from above those northern homes. There will be not intervening vegetation or structures to block noise. Mr. Zuleger is merely grasping at straws with such excuses, for they offer no substantial evidence supporting a claim of a less-than-significant noise impact to those neighbors to the north.

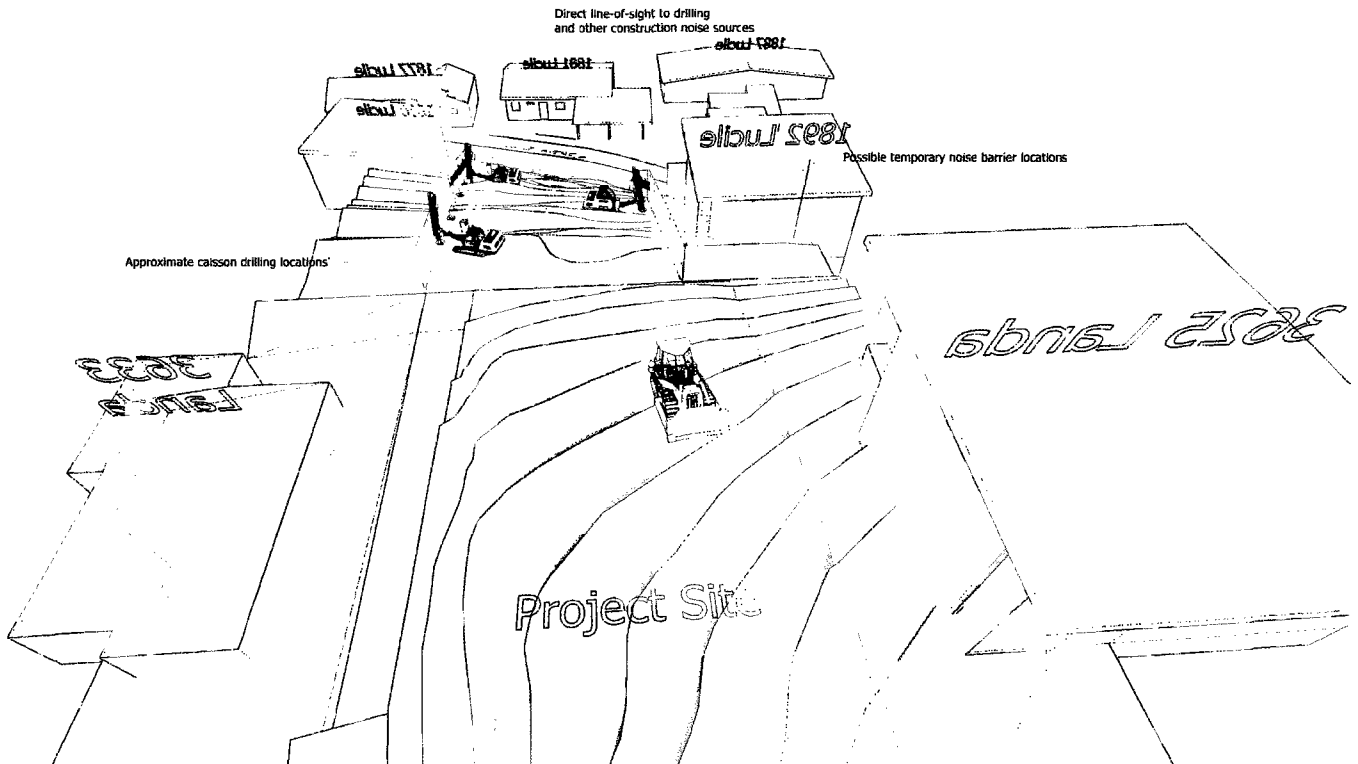
As demonstrated elsewhere in this Reply letter, Mr. Zuleger's other responses about the regulatory control measures offering a 10 dB noise reduction are without supporting evidence. The L_{max} (maximum noise level) descriptor is indeed the proper unit of measurement for application of the City's Noise Ordinance which limits the maximum noise level during construction, not the averaged L_{eq} metric. There will be no substantial shielding effects from of terrain, intervening structures, vegetation, fences, of surface roughness for the loudest and nearest construction operations on the Project site when measured at homes across Lucile Avenue.

Remarkably, Mr. Zuleger still fails to provide any noise level prediction for construction noise at those nearby homes even using his purported lower construction noise levels. He never describes how much louder the Project's noise levels will be than ambient noise levels at these homes to the north, and whether or not that represents a significant noise level increase. As such, he fails to answer the basic question presented by the CEQA Guidelines Appendix G:

“Would the project result in generation of a substantial temporary 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?”

Without evidence that this increase due to construction noise will not be significant, the Initial Study is legally inadequate when reaching its conclusion of a less-than-significant construction noise impact.

Figure 1
SIMULATED VIEW LOOKING DOWNHILL TO NORTH FROM PROJECT SITE²⁷



Comment – page 10:

Construction Noise Levels Will Exceed Maximum Allowable Interior Noise Levels of 45 dBA L_{dn} at Nearby Homes.

The Initial Study and its Noise Study present no evidence to show that this Project’s construction noise will be consistent with the City’s and California’s noise standards that restrict noise levels in interior rooms of nearby homes from exceeding a day-night average noise level of 45 dBA L_{dn}. Calculation of a day-night sound level also requires measurement of noise levels at nighttime, but the applicant’s noise consultant only obtained brief two, 1-hour noise level measurements in the daytime, not at nighttime. Nonetheless, as shown below, daytime construction noise even with the proposed Project Design Features will be so loud that the day-night averaged sound levels at homes in the neighborhood will exceed the permissible limit of 45 dBA L_{dn}.

²⁷ The 3D simulations of the Project site’s topography in this Report are based upon the applicant’s May 23, 2017 Survey Map for 1888 Lucile Avenue and 3627 Landa Street with its topographic contour lines, and with surrounding homes located per Google Earth aerial mapping.

Reply to Z Consulting's Response IV-4, p. 8:

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

He is incorrect to respond that because *Project construction will not occur during nighttime hours, and the applicable significance threshold does not include nighttime noise, then it is not necessary to monitor or calculate noise levels during the nighttime*. His claim ignores that the City's thresholds of significance for noise impacts includes evaluating whether the Project is consistent with the General Plan's noise standards. Those General Plan standards include the maximum-allowed interior residential noise level of 45 dBA L_{dn} as calculated with the day-night weighted average L_{dn} metric.

There is no substantial evidence in the Initial Study, the Noise Study or Mr. Zuleger's response showing that this Project's noise levels during construction will not exceed that 45 dBA L_{dn} General Plan limit or threshold of significance.

Comment, continued – page 11:

Construction Noise Levels Will Exceed Maximum Allowable Interior Noise Levels of 45 dBA L_{dn} at Nearby Homes.

The Initial Study severely underestimates how loud the Project's construction noise will be, as is evident comparing its noise level estimations²⁸ with data in the 2006 L.A. CEQA Thresholds Guide, p. I.1-9, Exhibit I.1-2. For example, the Project's noise consultant estimates site preparation and grading equipment with mufflers to generate noise levels between **62 to 68 dBA L_{eq}** at 50 feet. By comparison, the 2006 L.A. CEQA Thresholds Guide estimates noise levels from equipment operating with mufflers during excavation and grading to be about **86 dBA L_{eq}** at 50 feet. The Project's noise consultant therefore, without clearly revealing calculations, estimates Project noise levels to be between 19 to 24 dB lower than the City's data predicts. That severe discrepancy is due to several serious factors:

(His Response interrupts those factors and addresses just the first paragraph here):

Reply to Z Consulting's Response IV-5, p. 8:

Mr. Zuleger claims the noise level cited for earthwork and grading in this comment is not suitable for comparison to the impacts calculated in the Initial Study, in part, because those noise

²⁸ See: Initial Study, PDF p. 182, "Air Quality and Noise Impact Assessment", Tbl.: Construction Equipment Noise Data"

levels are quoted from the **2006 L.A. CEQA Thresholds Guide**. That statement is illogical, because construction equipment noise levels do not change just because the City may someday choose to adopt different thresholds. If the City recognized such equipment generates those noise levels both recently and still recently in some other 2019 CEQA reviews, then that data is still suitable for comparison to this Project's noise impacts. As commented, the 2006 L.A. CEQA Thresholds Guide estimates noise levels from equipment operating with mufflers during excavation and grading to be about 86 dBA Leq at 50 feet.

Mr. Zuleger's response again repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

CEQA requires evaluation of the noise impact from the combined operations of all project equipment at times that multiple pieces of construction equipment are operated. This procedure is also routinely followed by the City when considering composite noise impacts in its environmental review documents.²⁹

At least for its instructive information value, if not also for setting a threshold of significance, the **2006 L.A. CEQA Thresholds Guide**, p. I.1-4, also requires that analysis of project impacts takes into account combined noise levels:

“Determine the *combined noise levels* from equipment that will be operated simultaneously. Noise levels measured in decibels increase logarithmically and cannot be added arithmetically.”
(*emphasis added*)

There is no evidence in the Initial Study that the noise from the combined operations of more than one piece of heavy construction equipment on this Project site will either comply with the Noise Ordinance standards, the CEQA Thresholds, or will not have significant noise impacts.

If Mr. Zuleger wishes to now introduce new evidence and new noise data from Ventura County or even the Commonwealth of Massachusetts to support his Noise Study at this last moment, then the City will have to provide a new public review opportunity to allow for informed public participation. It will have to at least provide the appellant/neighbor to this Project sufficient time to consider that newly-introduced data. That information is however not a part of the Initial Study, was not used in Mr. Zuleger's Noise Study, and cannot retroactively support the Initial Study's conclusions of a less-than-significant construction noise impact. Rather, the noise data

²⁹ For example, for the January 24, 2019 IS/MND for the Citizens News Project at 1545-1551 N. Wilcox Avenue, Los Angeles, CA (ENV-2017-756-MND), the City stated on page III-78: “*The noise levels shown in Table III-10 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.*” https://planning.lacity.org/staffrpt/mnd/Pub_013119/ENV-2017-756.pdf

within the 2006 L.A. CEQA Thresholds Guide is relevant to this Project as my Report cited. Besides, this Project's Initial Study itself even cites to that 2006 L.A. CEQA Thresholds Guide.³⁰ Mr. Zuleger is attempting to cherry pick data with noise levels from far off sources that are more favorable to defending his Noise Study when relevant, applicable data is available within the City's own **2006 L.A. CEQA Thresholds Guide** used routinely in City project application reviews.

Comment, continued – page 11:

Construction Noise Levels Will Exceed Maximum Allowable Interior Noise Levels of 45 dBA L_{dn} at Nearby Homes.

The Project's Noise Study fails to account for increased noise levels when more than a single piece of heavy equipment operates simultaneously. The Project proposes using multiple pieces of equipment at any time during all of its construction phases.³¹ For example, there would not be a need for three jackhammers if only one was being used at a time. Yet nowhere does the Initial Study evaluate the noise impacts from the simultaneous use of three jackhammers. Construction noise is louder when multiple noise sources are operated simultaneously. No Project Design Feature is proposed to prohibit multiple noise sources during construction. The City previously acknowledged in 2016 for this same Project that the use of multiple equipment at the same time would create significant noise impacts. The 2016 MND even included noise mitigation #XII-20 that states, in part: "*Demolition and construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.*" The applicant now however is proposing with the Initial Study and correspondence dated June 4, 2019 abandoning this particular approved noise mitigation without explanation.

Reply to Z Consulting's Response IV-6, p. 9:

Mr. Zuleger's Response is unconvincing. He states: "*The Initial Study presents the noise level of each piece of equipment individually because the Noise Ordinance limit applies to a single piece of equipment.*" There however is no evidence that the Noise Ordinance limit applies only to a single piece of equipment; that is merely his opinion. And it is an absurd opinion from the viewpoint of protecting neighbors from excessive construction noise levels. That interpretation would permit a builder to simultaneously use three unusually-quiet jackhammers at once, each generating a maximum noise level of 75 dBA when measured at 50 feet away. (That's an

³⁰ As of June 4, 2019, the 2006 L.A. CEQA Thresholds Guide is used by the Project applicant's environmental consultants in the appeal in their June 4, 2019 Initial Study. See p. 69, pertinent to noise impacts:

"No Impact. Based upon the criteria established in the City's CEQA Thresholds Guide, a significant impact on ambient noise levels would normally occur if noise levels at a noise sensitive use attributable to airport operations exceed 65 dBA Community Noise Equivalent Level (CNEL) and the project increases ambient noise levels by 1.5 dBA CNEL or greater (City of Los Angeles 2006)."

(emphasis added)

http://clkrep.lacity.org/online/docs/2018/18-1156_misc_1_5-09-19.pdf

³¹ See: Initial Study, PDF p. 134, Table 1, "Construction Schedule and Equipment" where three jammerhammers are listed as Project construction equipment.

unlikely condition though, because without any proposed RCMs to quiet jackhammers, individual operations of each jackhammer will each emit maximum noise levels of about 89 dBA L_{max} at 50 feet.³²) Three jackhammers operated together would emit **a noise level of 93.8 dBA L_{max} at 50 feet,**³³ which would be nearly 5 dBA louder than if just one jackhammer was used. So if somehow each jackhammer was quieted to 75 dBA L_{max} at 50 feet, all three together would emit a combined noise level of 79.8 dBA L_{max} at 50 feet. It is absurd that the City with its Noise Ordinance would find neighbors could not be subjected to more than 75 dBA at 50 feet of construction noise, but would inconsistently allow over 79 dBA at 50 feet of combined jackhammering noise. Since Mr. Zuleger has not supported his interpretation with any evidence, then it must be dismissed as speculation and not substantial evidence.

Mr. Zuleger also presents a table he created that purportedly presents the combined noise level for each phase of operation assuming one piece of each type of equipment is operating simultaneously. That table however is irrelevant to my comment because it does not include the combined noise level from three jackhammers operated simultaneously. That may occur too because the applicant identifies that three jackhammers will be used. That table is also incorrect because he assumes a jackhammer produced a noise level of 50 dBA L_{eq} at 50 feet, but that is an average noise level but the City's Noise Ordinance requires the use of equipment's maximum noise level (as should be considered with the L_{dn} descriptor for maximum equipment noise levels.) The Table 1 that Mr. Zuleger presents in Appendix "D" to the Initial Study and his Noise Study identifies the maximum ("Spec 721.560") noise level of a jackhammer to be 85 dBA L_{max} and an even louder actually-measured noise level of 89 dBA L_{max} . That evidence is part of this Project's administrator record, and it shows jackhammers to be 17 dBA louder than Mr. Zuleger claims. My Report uses the information he submitted, and calculates three jackhammers operated together would emit a noise level of 93.8 dBA L_{max} at 50 feet. His response that: "*Even based on this conservative usage scenario, all impacts are below the 75 dBA Leq Noise Ordinance limit for a single piece of equipment*" is clearly erroneous. Homes are within 50 feet of where jackhammering would occur. No amount of the proposed regulatory control measures would reduce such combined three-piece-jackhammering noise by 18.8 dBA to comply with the Noise Ordinance limits. (93.8 dBA – 75.0 dBA = 18.8 dBA) Mr. Zuleger never claims such RCMs would reduce construction noise that much.

Comment, continued – page 11:

Construction Noise Levels Will Exceed Maximum Allowable Interior Noise Levels of 45 dBA L_{dn} at Nearby Homes.

³² See: Initial Study, PDF p. 184, Table 1, CA/T equipment noise emissions, 5th column, Jackhammer: 89 dBA L_{max}
Also see the 1971 EPA study, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," with excerpts of this document in the Exhibit attached to this Reply letter, at page 22, Table II, where jackhammers are typically rated at 88 dBA at 50 feet.

³³ Calculation: Sound levels in decibels are logarithmic values that cannot be combined by normal algebraic addition. Instead, the sound levels in decibels are first converted to energy equivalents, the energy equivalents are added algebraically, and the total energy equivalent is converted back to its decibel values. In this case, 89 dB + 89 dB + 89 dB = $10 \cdot \log(10^{(89/10)} + (10^{(89/10)} + (10^{(89/10)})) = \mathbf{93.8 \text{ dB}}$.

This comment, continued from above, shows that construction noise levels will cause the interior noise levels at nearby homes to exceed the City's 45 dBA L_{dn} limit because the Initial Study underestimates how loud construction noise will be. It states, in part:

The Noise Study erroneously uses as a threshold of significance an *average* noise level which is obviously lower than a *maximum* noise level, but the City's standards prohibit construction noise that exceeds a maximum of 75 dBA L_{max} , not an averaged 75 dBA L_{eq} .³⁴

The Noise Study greatly underestimates maximum equipment noise levels by considering a "usage factor" which is the percentage of time the equipment is operating under full power.³⁵ That usage factor may be relevant when considering an average noise level, but is entirely irrelevant when evaluating a maximum noise level as the City's noise ordinance requires. A neighbor should not be subjected to excessive noise levels above the City's permissible maximum levels just because the equipment is only operated part of the time during a work day.

Reply to Z Consulting's Response IV-7, p. 10:

As explained above in reply to his Response II-2, p. 2, my Report did not misinterpret the Noise Ordinance's meaning of *maximum* noise levels. My interpretation is routinely used by the City in its other CEQA environmental reviews. Maximum simply means "maximum," and not *averaged-for-an-hour* as Mr. Zuleger would have some people believe. But nothing in LAMC § 112.05 requires an annoyed neighbor subjected to excessive noise to somehow measure a construction site's noise levels for an hour, then perform complicated logarithmical calculations to derive an averaged $L_{eq-1 \text{ hour}}$ value. Instead, all one needs to do is use a simple noise meter that displays the maximum noise level during any chosen time interval. That is the plain meaning of § 112.05's use of the word "maximum."

Mr. Zuleger responds to this comment:

"It must be assumed that the word "maximum" is being utilized in the common sense of the word, rather than the more specific sense that requires technical knowledge. Furthermore, it must be assumed that, if the Ordinate (sic) intended the L_{max} unit to be utilized to determine compliance, the term L_{max} would have been defined and utilized."

Indeed, the common sense of the word "maximum" is what I used in my Report. It does not take any technical knowledge to use a noise meter to measure construction noise at its maximum. Most noise meters have the capability of displaying the maximum noise level during a measurement period. Pushing a button to select that option does not require technical knowledge. The City's Noise Ordinance is obviously written to be easily interpreted by its officials and the public with the use of the common place term "maximum."

³⁴ See: Initial Study, PDF p. 182 where noise levels are evaluated as: " L_{eq} at 50 feet." L_{eq} represents an average noise level called an "equivalent continuous noise level" (See: Initial Study, PDF p. 138). But the LAMC § 112.05 prohibits construction noise louder than a maximum of 75 dBA, which means 75 dBA L_{max} .

³⁵ See: Initial Study, PDF p. 182, "Air Quality and Noise Impact Assessment", Tbl.: Construction Equipment Noise Data", fourth column for "Usage Factor", and footnote B.

Construction Noise Levels Will Exceed Maximum Allowable Interior Noise Levels of 45 dBA L_{dn} at Nearby Homes.

The Noise Study assumes without evidence or calculations that various Project Design Features will reduce noise impacts at neighboring homes by 10 dBA. There is no substantial evidence in the Project's Noise Study or Initial Study that a 10 dBA reduction will occur with any of the equipment types when abiding by the Project Design Features. Instead, the applicant's noise consultant jumped to that conclusion without supporting that determination with meaningful facts and calculations. Those Features are quite inadequate.

Reply to Z Consulting's Response IV-8, p. 12:

MUFFLERS WILL NOT BLOCK AS MUCH NOISE AS CLAIMED

Responses from Mr. Zuleger point to mere conclusions he has made without adequate supporting evidence. He claims that mufflers will reduce construction equipment noise levels by 10 dB but does not provide persuasive evidence that will be true. He points to an excerpt from an EPA document he quoted in his Noise Study, later labeled in the Initial Study as "Appendix D", but that Appendix "D" also does not prove that claim. There, in that document which he created, he merely assumes "*the Project will utilize a number of noise controls, including restricted hours, demolition procedures, mufflers, and temporary noise barriers. Collectively, these controls are assumed to reduce noise impacts by 10 dBA.*" That statement in itself is not evidence; it is basically speculation and an unsupported assumption without any calculations to back it up.

Mr. Zuleger claims in his Noise Study that: "*The EPA's Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (see excerpt in Appendix D) indicates that mufflers result in a noise reduction of 10 dBA.*" But that claim may be exaggerated. That 1971 EPA report is now 48 years old, so it can be assumed that construction equipment in that intervening half century has already been upgraded with better silencing devices. Even a 5 to 10 dBA reduction will no longer be possible by adding mufflers when internal combustion power construction equipment already has mufflers.

For comparison, the City's more recent **2006 L.A. CEQA Thresholds Guide** predicts mufflers reduce noise by only between 1 to 3 dB as documented elsewhere in this Reply letter. For excerpts from the EPA's 1971 document, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

ACOUSTICAL BARRIERS WILL NOT BLOCK AS MUCH NOISE AS CLAIMED

As far as barriers added around drilling equipment, the EPA estimates on page 14 of its 1971 report “perhaps 5 dB(A) may be obtained by use of enclosures.” That is less than the 10 dBA that Mr. Zuleger estimates.

For reducing the noise of pneumatic jackhammers, the EPA, p. 14, estimates that surrounding barriers, if used, may reduce noise by 3 to 10 dB(A). But the Initial Study does not require acoustic barriers around jackhammering operations, so 10 dB reductions will not occur there either.

He also claims that: “*The Federal Highway Administration’s Noise Barrier Design Handbook (see excerpt in Appendix A (or D)) indicates that 10 dBA of reduction is “attainable” from a noise barrier.*” That may be possible under some circumstances, but not in the situation this Project presents on a steep hillside with neighboring two-story homes. Because the Project’s steep hillside has grades up to 60%, that steep slope also elevates some neighboring homes. As the result, temporary noise barriers will not even block the line-of-sight from the drill rigs to the upper floors of homes to the east or southeast of the construction site when drilling caisson holes on the west of the Project site. (See illustrations on next pages) In that case where neighboring walls will remain visible without blocking line-of-sight, these noise barriers will have negligible attenuation effect, not 10 dBA of noise reduction claimed in the Initial Study.

REGULATORY CONTROL MEASURES WILL NOT PROVIDE 10 dBA NOISE REDUCTION

Mr. Zuleger’s response claims that “*the Initial Study only assumes a total of 10 dBA reduction from the RCMs, even though each RCM may achieve that individually. This redundancy of RCMs helps to ensure that actual noise impacts during Project construction will not exceed the significance thresholds.*” He has not shown that any one of the RCM’s may achieve a 10 dBA reduction in construction noise under the circumstances of this steep hillside situation. Nor are the assumptions (i.e. not calculations) in the Initial Study backed up with any calculations to support a 10 dBA reduction for homes in all directions from Project construction. Finally, by narrowing construing the significance thresholds to only those standards in the Noise Ordinance, the Initial Study does not show Project noise will not exceed the General Plan standards for interior rooms in nearby homes. The Initial Study also does not show that noise increases above the level of the ambient noise in the neighborhood will not be significant, something required by CEQA for noise impact significance evaluation.

The temporary noise barriers on the east and west sides of the drilling rigs would not block any line-of-sight between the drill rigs and homes *to the north*. Therefore those barriers will not reduce drill rig noise at those homes by any decibels, much less by 10 dBA as the Initial Study claims.³⁶ There is no evidence in the Initial Study that the proposed temporary noise barriers will actually interrupt the line-of-sight between the drill rigs and all exterior walls of nearby homes to the east and west so as to produce claimed drill rig noise level reductions.

³⁶ See: Initial Study, PDF pp. 67, 95, and 144.

Moreover, merely breaking the line-of-sight from the noise source to the homes will not reduce construction drilling noise by 10 dBA. The Project's Noise Study³⁷ itself states: "Typically, a 5-dBA [insertion loss] can be expected for receivers whose line-of-sight to the roadway is just blocked by the barrier," meaning that at most only a 5 dBA reduction can be expected, not a 10 dBA reduction as claimed in the Noise Study.³⁸ The Noise Study's Figure 13 (Line-of-Sight) also shows that a line-of-sight blockage as proposed by this Project's Project Design Feature only results in a 5 dBA reduction in noise levels. The Initial Study therefore significantly exaggerates the amount of noise reduction that neighbors can expect.

Comment – page 12:

A. ALLOWING LONGER WORKDAYS WILL INCREASE PROJECT NOISE IMPACTS.

- A. Restricting construction to daytime hours does not lower Project noise levels in the daytime at all. Such a restriction would only be meaningful when calculating a project's day-night weighted average (dBA L_{dn} or CNEL) noise level, but the Initial Study does not evaluate that noise metric anywhere.

If anything, the newly proposed Project Design Feature that would allow weekday construction to occur from 7:00 a.m. to **9:00 p.m.** will increase the Project's harmful noise impacts. The 2016 MND restricted weekday construction from only 7:00 a.m. to **6:00 p.m.** Now the applicant is seeking to extend a construction workday by 27% by adding another three hours per day of construction work. That longer workday also potentially increases the Project's day-night 24-hour average noise level, but nothing in the Initial Study discloses this consequence.

Reply to Z Consulting's Response IV-9, p. 12:

Mr. Zuleger's response entirely misses the point of this comment, that increasing the allowed hours of construction will likely increase the Project's noise impacts. The now proposed regulatory control measure change to add three extra hours each workday compared to the hours proposed in the former 2016 MND will potentially allow more total hours of noise over a 24-hour period. Thus the Project's day-night average noise level (measured with the CNEL or L_{dn} metric) will increase, and the City's General Plan noise thresholds could be further exceeded.

Mr. Zuleger is incorrect to assert that the applicable significance threshold for noise impacts does not include nighttime noise levels. To assess a CNEL or L_{dn} 24-hour ambient noise level in the neighborhood, one must indeed include nighttime noise and, in this case, the extra 27% of allowable daytime hours Project noise can now occur.

³⁷ See: Initial Study, PDF p. 186, quoted from the FHWA Highway Noise Barrier Design Handbook.

³⁸ See: Initial Study, PDF pp. 67, 95 and 144. e.g. On PDF p. 144, the Initial Study erroneously states: "Any substantial material (buildings, terrain, walls, etc.) that breaks line-of-site between a noise source and the receptor will reduce the noise level experienced by that receptor by at least 10 dBA." Yet on PDF p. 186, the Initial Study, Fig. 13 excerpted from the Federal Highway Administration's Noise Barrier Design Handbook shows only a 5 dB loss from a noise barrier if the line-of-sight is just blocked and the barrier does not extend higher than the line-of-sight.

Comment – page 12:

B. THE DEMOLITION PROCEDURE WILL NOT SHIELD THE NORTHERN NEIGHBORS FROM CONSTRUCTION NOISE.

B. The demolition procedure proposed by the Applicant is described leaving the existing home's east-facing wall during demolition intact until the last. But it does not limit construction noise levels at homes to the north because that existing home's remaining wall before demolition is in the wrong position on the east and will not shield the neighbors to the north across Lucile Avenue from direct, line-of-sight to construction noise sources.

Reply to Z Consulting's Response IV-10, p. 12:

Mr. Zuleger's response fails to address the point of the comment that this demolition procedure will not reduce construction noise at the homes north of the Project site along Lucile Avenue. There will be no "increased shielding from terrain and other intervening features" for homes directly across Lucile Avenue to the north; he is simply mistaken to allege those features will reduce the direct line-of-sight noise transmission from demolishing the existing home to those homes to the north. Therefore nothing he responds with denies the point of the comment that this demolition procedure will be ineffective for some homes. The Initial Study is therefore inadequate and not supported with substantial evidence in finding the Project's noise impacts will be less-than-significant.

Comment – page 12:

C. REQUIRING MUFFLERS DOES NOT REDUCE EQUIPMENT NOISE BY 10 dBA.

Requiring mufflers does not reduce equipment noise by 10 dBA because most heavy construction equipment already had mufflers when their noise levels were evaluated. Besides, the City estimates that mufflers only reduce equipment noise by between 1 to 3 dBA, not 10 dBA.³⁹ That applicant's Noise Study is essentially double-counting the decibels and the benefit of mufflers, and as such, is severely underestimating how loud construction noise will be. Previously the MND included as a noise mitigation: "*The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.*" The Initial Study however abandons this noise mitigation and replaces it with this ineffective measure: "All heavy construction equipment that is able to use mufflers will do so." That measure is so vague and weak that it cannot be enforced, and as such, offers no realistic evidence of any reduction in construction noise levels. That measure surely does not support any conclusion of a less-than-significant noise impact. For example, jackhammers do not have conventional mufflers, for much of their noise is generated where their metal pointed end breaks up

³⁹ See: 2006 L.A. CEQA Thresholds Guide, p. I.1-9, Exhibit I.1-2, for difference between noise levels during different construction phases without and with mufflers. (e.g. only between 1 to 3 dBA).

concrete, and therefore this measure offers no reduction in jackhammer noise when these loudest of equipment types are used.

Reply to Z Consulting's Response IV-11, p. 13:

The **2006 L.A. CEQA Thresholds Guide** provides adequate evidence that mufflers do not provide a 10 dBA noise reduction. Mr. Zuleger may disagree with the City's data in that Guide, and may prefer to cite to information more favorable to defending his Noise Study. But that does not invalidate the City's long-standing document that is routinely relied upon by project planning consultants including by Dudek for this same Project's Initial Study in numerous places.⁴⁰

The **2006 L.A. CEQA Thresholds Guide** is also 35 years newer than the 1971 EPA study he refers to, so presumably its measurement differences of noise levels from construction equipment with and without muffler upgrades reflects more modern equipment.

His Response IV-5 does not adequately address the concerns raised in this comment as described above in my Reply to Response IV-5.

As described above, the demolition procedure regulatory control measure will not adequately reduce **jackhammer** noise impacts to homes to the north.

The Initial Study is therefore inadequate and not supported with substantial evidence in finding the Project's noise impacts will be less-than-significant.

Comment – pages 12 and 13:

D. TEMPORARY NOISE BARRIERS WILL NOT REDUCE PROJECT NOISE BY 10 dBA.

The temporary noise barriers on the east and west sides of the drilling rigs would not block any line-of-sight between the drill rigs and homes to the north. Therefore those barriers will not reduce drill rig noise at those homes by any decibels, much less by 10 dBA as the Initial Study claims.⁴¹ There is no evidence in the Initial Study that the proposed temporary noise barriers will actually interrupt the line-of-sight between the drill rigs and all exterior walls of nearby homes to the east and west so as to produce claimed drill rig noise level reductions.

For that matter, because the Project's steep hillside has grades up to 60%, that steep slope also elevates some neighboring homes. As the result, temporary noise barriers will not even block the line-of-sight from the drill rigs to the upper floors of homes to the east or southeast of the construction site when drilling caisson holes on the west of the Project site. (See illustrations on next pages) In that case where neighboring walls will remain visible without blocking line-of-sight, these noise barriers will have negligible attenuation effect, not 10 dBA of noise reduction. The upper floor windows and northern deck of the home at 3625 Landa Street will not be blocked from line-of-sight to the drill rig because it is not "the nearest home to the east" to benefit from the Project Design Feature. Moreover, the Noise Study itself documents that a noise barrier that just barely blocks the line-of-sight from the noise source to the receiver only reduces the noise by 5 dB at most, and maybe only 3 dB for homes that are more distant from the noise barrier. Similarly, there is no evidence in the

⁴⁰ See: Initial Study for 3627 Landa and 1888 Lucile Residential Project, June 2019, pp. 1, 63, 72, 78, 90, 95.

⁴¹ See: Initial Study, PDF pp. 67, 95, and 144.

Initial Study that the proposed temporary noise barriers will actually interrupt the line-of-sight between the drill rigs and any other nearby homes to the north so as to produce any drill rig noise level reductions in that direction.

Reply to Z Consulting's Response IV-12, p. 13:

Mr. Zuleger is incorrect in these Responses:

"The Initial Study noise calculations demonstrate that the portable noise barriers are not necessary for the drill rig to meet the applicable limits at any receptors.

That statement is false. No such calculations demonstrate that drilling noise will be less than the several thresholds of significance for this Project even with the use of portable noise barriers.

"The muffler RCM alone is sufficient to achieve the 10-dBA reduction assumed in the Initial Study (per the EPA's Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, excerpt included with Initial Study).

That muffler RCM will not provide that 10-dBA reduction for the reasons provided above.

"The portable noise barrier RCM is included to provide additional insurance that the receptors expected to experience the highest construction noise (the immediate neighbors to the east and west) will not experience impacts that exceed the significance threshold. As documented with 3D illustrations in my Report, those barriers will not even block the line-of-sight between drill rigs and the upper floors of homes to the east and west. No such 10-dB noise reduction will be possible under this circumstance. Mr. Zuleger provides no evidence to the contrary. Merely reciting the 1971 EPA document is not sufficient for the unique circumstances this Project and its steep hillside provide that was never considered in the EPA's report.

"As explained in Response IV-3, noise levels at the neighbors to the north and south will be lower than those to the east and west due to increased attenuation from distance and shielding effects.

That response is not documented with any calculations or meaningful evidence in the Initial Study or Mr. Zuleger's letter. It is a pure fabrication that has no support in the record. The upper floors of homes to the east and west will not be blocked by the short barriers around drill rigs, and due to the very short distances to those homes, their rooms will definitely be exposed to louder, not quieter, noise levels during Project construction.

The Initial Study is therefore inadequate and not supported with substantial evidence in finding the Project's noise impacts will be less-than-significant.

Comment – page 13:

TEMPORARY NOISE BARRIERS WILL NOT REDUCE PROJECT NOISE BY 10 dBA.

The significant discrepancies in the applicant's predicted noise levels and his consultants' errors using the wrong noise metric, rather than what the City's municipal code requires,

demonstrates that the City does not have substantial evidence to support the Initial Study's determination of a less-than-significant noise impact..

Reply to Z Consulting's Response IV-13, p. 14:

Mr. Zuleger is incorrect in asserting that “*the responses in this Section demonstrate that the Initial Study noise analysis uses the correct noise metric, accurately predicts Project construction noise levels, and presents substantial evidence to support the less-than-significant noise impact.*”

It is not appropriate to use the average noise level of construction equipment when the Noise Ordinance requires that the maximum noise level be limited. The Initial Study fails to consider the combined and therefore louder noise levels from multiple construction equipment operated simultaneously. Very little evidence is provided in the Initial Study for its less-than-significant noise impact conclusions; Mr. Zuleger's assertions are typically unsupported and therefore do not constitute substantial evidence.

Figure 2
SIMULATED VIEW LOOKING SOUTH ACROSS LUCILE AVENUE TO THE PROJECT SITE SHOWING THAT PROPOSED NOISE BARRIERS TO THE EAST AND WEST WILL NOT ADEQUATELY BLOCK DIRECT LINE-OF-SIGHT TO TWO-STORY EXISTING HOMES ON SUCH A STEEP HILLSIDE

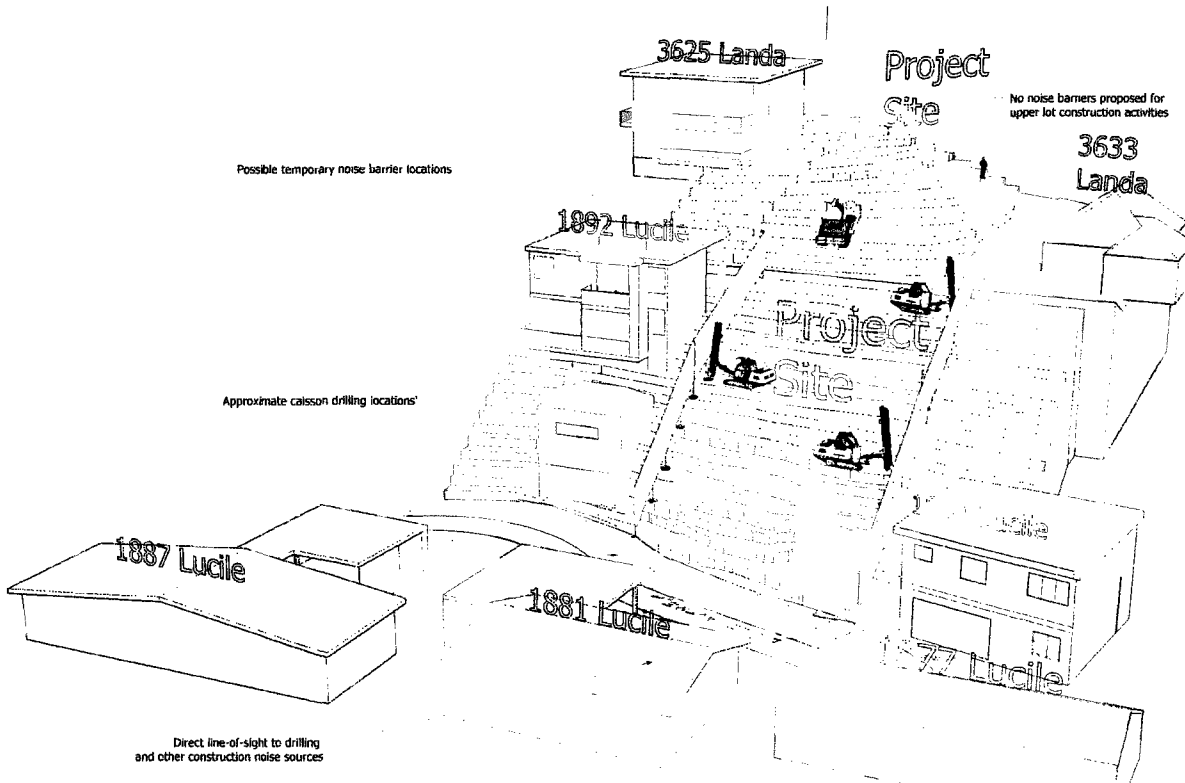


Figure 3
SIMULATED VIEW LOOKING NORTH FROM PROJECT SITE TO SEVERAL EXISTING HOMES ACROSS LUCILE AVENUE THAT WILL NOT BE SHIELDED FROM PROJECT DRILLING NOISE BY ANY PROPOSED TEMPORARY NOISE BARRIER

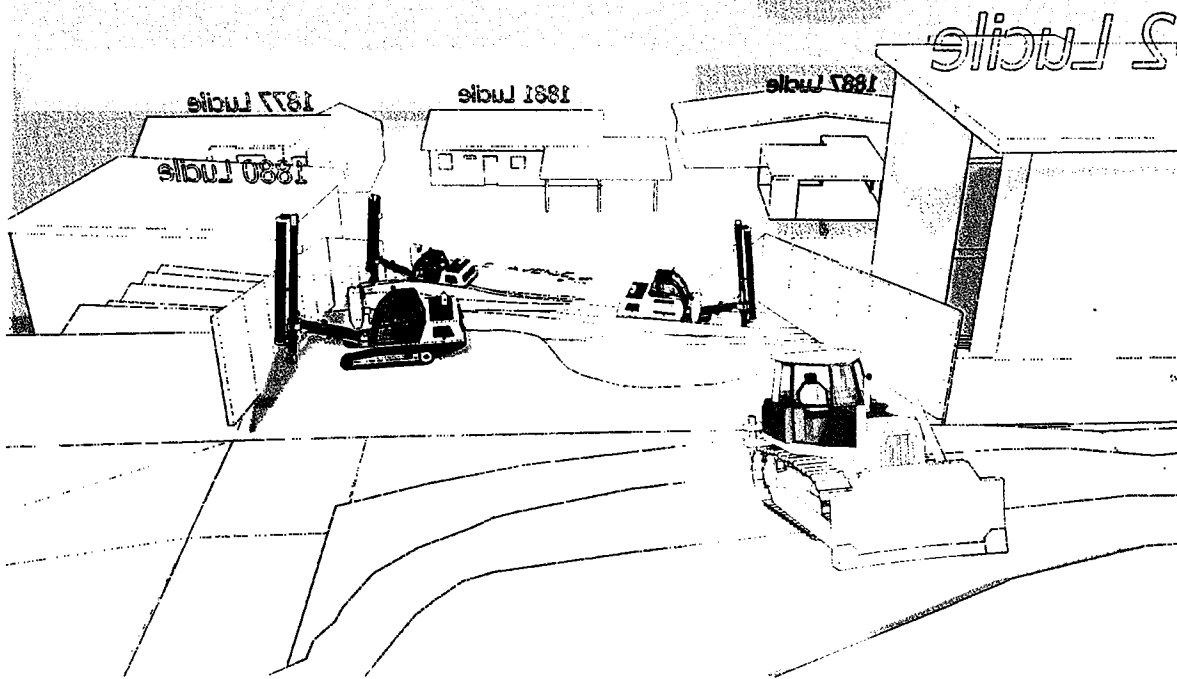
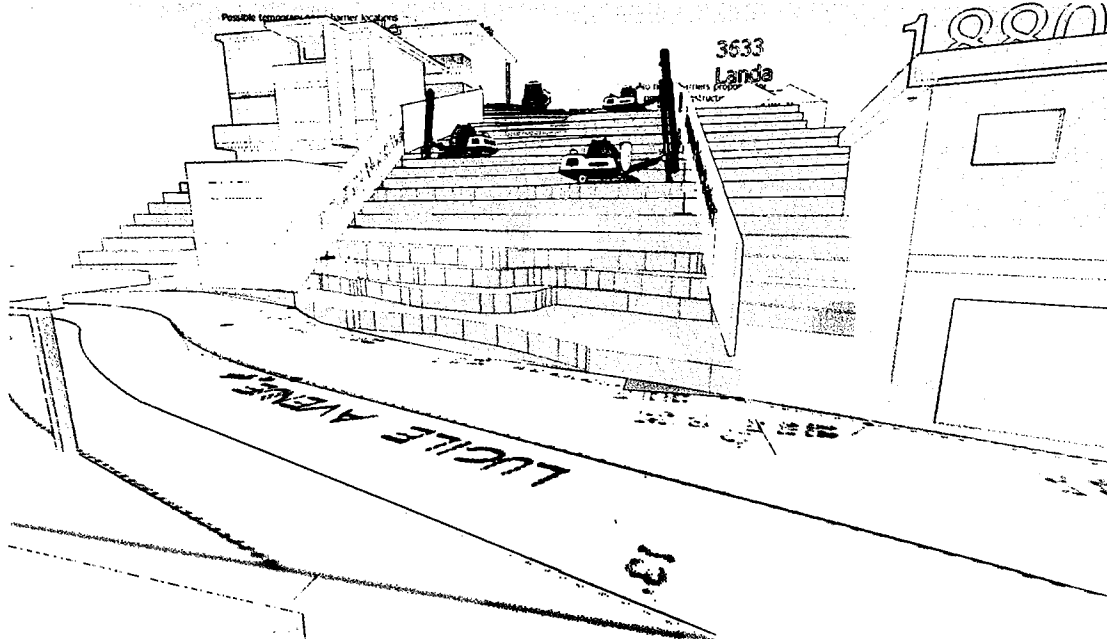


Figure 4
SIMULATED VIEW LOOKING SOUTH ILLUSTRATING HOW TEMPORARY NOISE BARRIERS CANNOT BLOCK DIRECT LINE-OF-SIGHT FROM DRILL RIGS TO TWO-STORY HOMES ON STEEP HILLSIDE FROM DRILLING NOISE IMPACTS



V. CATEGORICAL EXEMPTIONS CANNOT RELY ON WEAK *DE FACTO* MITIGATION MEASURES TO EVADE CEQA’S REQUIREMENT FOR A MND OR EIR.

Critical to the CEQA review process under a MND or EIR is a lead agency’s consideration of project design features (“PDF”), regulatory compliance measures (“RCM”), and other mitigation measures (“MM”) intended to reduce potentially significant environmental impacts.⁴² This is typically proposed in the CEQA document’s Mitigation and Monitoring Reporting and Program (“MMRP”), which can subsequently be made enforceable via conditions of approval (“COA”) attached to the project approvals, thus making MMRP compliance mandatory and ensuring impacts will be either less than significant or mitigated to the fullest extent feasible.

Here, because this Landa/Lucile Project is now being reviewed under a Categorical Exemption, no explicit mitigation measures or MMRP are being considered or publicly vetted. Nevertheless, based on the relevant documents and admissions, it is clear that this Project was designed with Project Design Features and approved subject to RCMs/COAs (i.e., de facto mitigation measures) to purportedly ensure the Project would not cause excessive noise to surrounding single-family homes during construction, “to help attenuate noise to the east,” and to provide additional confidence that the construction noise impacts will be less than significant by complying with the Los Angeles Noise Ordinance.⁴³ However, these statements serve as an implicit admission by the City that the proposed construction activities have the potential of causing a significant noise impact, which necessitates a more thorough CEQA review (i.e., MND, EIR).

The City previously proposed and approved a MND for a similar Project on this same Site on or about February 10, 2016.⁴⁴ That MND determined that the Project’s construction noise would be potentially significant unless mitigated.⁴⁵ The MND proposed noise mitigation measure XII-20:

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

- 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.
- Demolition and construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.

⁴² See e.g., Baldwin Hills Crenshaw Plaza Master Plan (DCP Case No. ENV-2012-1962) Draft EIR Noise Section, PDF pp. 22; also see: 6533 W. Selma Avenue (DCP Case No. ENV-2016-3751) MND, PDF pp. 200-201.

⁴³ See: Initial Study, PDF pp. 14, 135, 141, 142.

⁴⁴ See: ENV-2015-1568-MND (3627 West Landa Street, 1888 North Lucile Avenue; Case No. ZA-2015-1567-ZAD-ZAA; ZA-2015-1569-ZV-ZAD), signed February 10, 2016. The floor areas of the two homes then proposed are not the same but are similar to what is now proposed in 2019.

⁴⁵ *Ibid*, MND p. 22, Item XII(d).

- The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.

The current Initial Study makes no reference to that previous DCP determination. That 2016 MND is not even mentioned, as if it did not exist or apply to this Project. The current Initial Study also abandons the 2006 MND’s noise mitigations about operating several pieces of equipment simultaneously and using state-of-the-art noise shielding. Now instead the Initial Study claims with this proposed Categorical Exemption there will be no significant noise impacts because of various Project Design Features and de facto mitigation measures. The City provides no explanation for this relaxed interpretation. Moreover, as discussed below, these de facto mitigation measures are inadequate and improper under CEQA.

Reply to Z Consulting’s Response V-1, p. 16:

Mr. Zuleger is incorrect in asserting that “*Project documents prepared before the Initial Study are no longer relevant and may be ignored.*” The City Council is required by CEQA to consider all documents in this Project’s administrative record. This is essentially the same Project as was proposed and studied with the 2006 IS/MND. The City then considered its noise impacts would be potentially significant unless mitigated. The Initial Study now has weakened the environmental protections by eliminating mitigations and weakening some COAs and RCMs. The Project’s noise impacts will still therefore be significant.

Comment – page 16:

V. CATEGORICAL EXEMPTIONS CANNOT RELY ON WEAK *DE FACTO* MITIGATION MEASURES TO EVADE CEQA’S REQUIREMENT FOR A MND OR EIR. (CONTINUED)

1. Applicant’s Noise-Attenuating Project Design Features

Under CEQA, a lead agency may not use project-specific mitigation measures to reduce project impacts as a means to qualify for a categorical exemption and evade a more demanding CEQA review.⁴⁶

⁴⁶ See e.g., *Salmon Protection & Watershed Network v. County of Marin* (2004) 125 Cal. App. 4th 1098, 1102-1103, 1108 (when invalidated categorical exemption “subject to conditions meant to minimize ‘adverse physical effects on the natural environment[.]’” the court stated while “mitigation measures may support a negative declaration but not a categorical exemption . . . Reliance upon mitigation measures (whether included in the application or later adopted) involves an evaluative process of assessing those mitigation measures and weighing them against potential environmental impacts, and that process must be conducted under established CEQA standards and procedures for EIR’s or negative declarations.” Emphasis added); *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster* (1997) 52 Cal. App. 4th 1165, 1200 (“In determining whether the significant effect exception to a categorical exemption exists, ‘[i]t is the possibility of a significant effect . . . which is at issue, not a determination of

Mitigation measures are not appropriate for categorical exemptions because lead agencies are not required to evaluate mitigation measures during the preliminary review of a project; instead, consideration of mitigation measures are reserved (as relevant here) for MNDs subject to CEQA's fair argument standard whereby the lead agency shall treat an impact as significant if there is a disagreement between experts over the significance of an effect.⁴⁷ While the distinction between elements of a project and measures designed to mitigate impacts of the project may not always be clear, any mischaracterization is significant if it precludes or obfuscates required disclosure of the project's environmental impacts and analysis of potential mitigation measures.⁴⁸

Here, as discussed above, the Project includes jackhammering rock foundations and caisson drilling to prevent a home from sliding down a steep hillside, construction methods which are by no means common and typical construction for single-family home projects as intended by the State Legislature when it proposed the Class 3 Categorical Exemption category.⁴⁹

Reply to Z Consulting's Response V-2, p. 16:

Mr. Zuleger totally ignores the main point of this comment that it is improper under CEQA for Categorical Exemptions to rely on weak *de facto* mitigation measures relabeled as regulatory control measures or conditions of approval to evade CEQA's requirement for a MND or EIR.

Mr. Zuleger is incorrect in asserting "*the Project site's slope is typical for area hillside residences, the Project's construction will utilize practices common for area hillside residences, and the Class 3 Categorical Exemption does apply.*" Those factors do not exempt this Project from the City's requirement for environmental review of projects with steep slopes greater than 15% as discussed above.

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the actual effect, which would be the subject of a negative declaration or an EIR. Appellants cannot escape the law by taking a minor step in mitigation and then find themselves exempt from the exception to the exemption.' [Citation]." Emp. added).

⁴⁷ See: *Azusa Land Reclamation Co.*, 52 Cal. App. 4th at 1200-1201 (citing CEQA Guidelines section 15064(h)(2)).

⁴⁸ See: *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal. App. 5th 160, 184-185; *Lotus v. Department of Transportation* (2014) 223 Cal. App. 4th 645, 656-57, fn.8 (Absent a determination regarding the significance of the impacts to the root systems of the old growth redwood trees, it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered ... Simply stating that there will be no significant impacts because the project incorporates 'special construction techniques' is not adequate or permissible." (Emphasis added)).

⁴⁹ For example, the 2002 City's CEQA Thresholds only offer a Categorical Exemption for sites not steeper than 15%, but this Project site has slopes with about a 60% grade.

TEMPORARY NOISE BARRIERS ARE MITIGATIONS THAT PRECLUDE THE USE OF A CATEGORICAL EXEMPTION

The Project includes a couple of noise-attenuating Project Design Features to purportedly mitigate these Project-specific construction noise impacts that would occur “due to the close proximity of surrounding single-family residential land uses,”⁵⁰ including:

- **TEMPORARY NOISE BARRIERS.** This Project includes temporary noise barriers just for the use of stationary equipment such as drill rigs. Those temporary noise barriers are to reduce noise impacts associated with that type of construction during drilling of the home’s foundation caissons on steep hillsides.⁵¹ They are to be positioned on the east and west side of the drill rig to break the line-of-sight between the drill rig’s engine and the nearest neighbors to both the east and west. There is no mention, much less requirement, that the temporary noise barrier be of sufficient height, girth, material, or absorptive properties that will achieve a specified acoustical performance rating (e.g., STC or OITC rating).⁵² At most, they will partially block direct noise from the barriers but some direct noise will diffract (bend) around such barrier wall surfaces and continue directly toward neighboring homes, or bounce to the north from uphill ground surfaces that reflect such loud noise toward nearby homes along Lucile Avenue.

The Project’s temporary noise barriers as proposed would not block any construction noise emitted toward homes to the north or south, homes that are still close enough for those construction noise levels to be excessive. As such, this Project Design Feature has unknown sound absorption/ attenuation properties. Thus, it is at best speculative whether it will sufficiently reduce noise levels to prevent significant impacts to those neighboring receptors.

Reply to Z Consulting’s Response V-3, pp. 16 to 17:

Mr. Zuleger is incorrect in asserting the same flawed responses that he did before in his Response IV-12. He never responds this time to a new comment though that “there is no mention, much less requirement, that the temporary noise barrier be of sufficient height, girth, material, or absorptive properties that will achieve a specified acoustical performance rating (e.g., STC or OITC rating.)” He also does not respond to the comment about the proposed noise barriers that “At most, they will partially block direct noise from the barriers but some direct noise will diffract (bend) around such barrier wall surfaces and continue directly toward

⁵⁰ See Initial Study PDF p. 14

⁵¹ See: Initial Study, p. 14

⁵² STC: “Sound Transmission Class.” OITC: “Outdoor/Indoor Transmission Class.” STC is the oldest and most widely recognized sound control rating system. STC ratings are measured as a difference in decibel levels, where a higher rating indicates more complete sound absorption and sound deadening performance. STC was originally developed to measure the sound transmission between interior walls. OITC is a newer rating system developed specifically for measuring sound transmission of low- and mid-frequency noises through exterior walls. While not as well known as STC, OITC is a more appropriate measure when comparing the true sound control performance of an exterior wall.

neighboring homes, or bounce to the north from uphill ground surfaces that reflect such loud noise toward nearby homes along Lucile Avenue.” No relevant response provided; no evidence pointed to either. It is as if these comments fell upon deaf ears, something one would not expect from a professional noise consultant when confronted with a complaint that a proposed noise measure will not be effective if so vaguely specified.

These are Mr. Zuleger’s responses that do not address the comment’s concerns about noise barrier effectiveness as specified in the Initial Study:

Initial Study noise calculations demonstrate that the portable noise barriers are not necessary for the drill rig to meet the applicable limits at any receptors.

The muffler RCM alone is sufficient to achieve the 10-dBA reduction assumed in the Initial Study (per the EPA’s Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, excerpt included with Initial Study).

The portable noise barrier RCM is included to provide additional insurance that the receptors expected to experience the highest construction noise (the immediate neighbors to the east and west) will not experience impacts that exceed the significance threshold.

As explained in Response IV-3, noise levels at the neighbors to the north and south will be lower than those to the east and west due to increased attenuation from distance and shielding effects.

For these reasons, the noise barrier RCM specifications provided in the Initial Study are adequate. Any purpose built portable noise barriers that blocks line of site from the drill rig’s engine to the immediate neighbors to the east and west will be sufficient, in combination with the other RCMs, to ensure that construction noise impacts are less than significant.

As discussed in Replies to Response IV-12, these responses are inadequate. The Project’s noise impacts will still therefore be significant.

Comment – pages 17 - 18:

DEMOLITION PROCEDURES PROPOSED WILL PROVIDE NO NOISE REDUCTION TO HOMES TO NORTH

DEMOLITION PROCEDURES: The Project proposes to shield some demolition noise impacts to neighboring homes on the east of the Site by starting demolition activities on the west side and progressing to the east. The east-facing wall of the structure would be preserved for as long as possible.⁵³ The Initial Study concludes, but without substantial

⁵³ See: Initial Study, PDF p. 135 for this noise control feature labeled “Demolition procedures.”

evidence, that “[f]ollowing this procedure, much of the demolition noise will be shielded from the receptors to the east.” The Applicant has failed to provide any meaningful information about this project design feature and, therefore, it is entirely speculative whether this PDF will sufficiently reduce noise levels to prevent significant impacts to receptors.

Reply to Z Consulting’s Response V-4, p. 17:

The comment and Mr. Zuleger’s Response V-4 essentially duplicate what is discussed above for **Response IV-10**, (not Response IV-9 as he claims) so this Reply will direct the reader to the Reply to Response IV-10 above.

Comment – page 17:

APPLICANT’S NOISE-ATTENUATING PROJECT DESIGN FEATURE FOR MUFFLERS IS NOT ADEQUATE TO LESSEN PROJECT CONSTRUCTION NOISE TO A LESS-THAN-SIGNIFICANT LEVEL. JACKHAMMERS USE NO MUFFLERS SO THEIR SIGNIFICANT NOISE IMPACTS WILL NOT BE REDUCED.

MUFFLERS. The Project also proposes that “[a]ll heavy construction equipment that is able to use mufflers will do so.” The Initial Study fails to demonstrate that this measure will reduce the Project’s overall noise levels significantly. This measure is vague and unenforceable by not defining which equipment is considered to be *heavy equipment*. The three jackhammers proposed for use during Project construction are likely not considered to be heavy equipment because they can be carried by workers and jackhammers have no engines.⁵⁴ Yet jackhammers are one of the loudest types of construction equipment being proposed for use on this Project.⁵⁵ Noise from jackhammers can be quieted but not clearly by this Project Design Feature.

Reply to Z Consulting’s Response V-5, p. 17:

Mr. Zuleger is incorrect in asserting that “*the heavy construction equipment is clearly listed in the Initial Study,*” as if that indicates whether jackhammers’ noise will be muffled at all. The Initial Study never specified *what* heavy construction equipment that is able to use mufflers will do so either. It is not true that: “*The demolition procedure RCM effectively addresses noise associated with jackhammers.*” There is no explanation in the Initial Study or Mr. Zuleger’s Response where jackhammers will be used during the existing home’s foundation demolition, and how that procedure will lessen noise impacts from jackhammering to neighbors to the east or

⁵⁴ The Initial Study, PDF p. 135, states: “All heavy construction equipment that is able to utilize mufflers will do so. As engine noise is the predominant source of noise associated with most construction equipment, utilization of mufflers will substantially reduce noise impacts.” Jackhammers would be used during demolition work. (See PDF pp. 67, 182, 184, 196)

⁵⁵ Source: Initial Study, PDF p. 182, “Construction Equipment Noise Data – dBA,” demolition construction phase, 89 dBA L_{max} at 50 feet.

north. The Project's noise impacts from jackhammering and other major construction equipment noise will still therefore be significant.

Comment – page 18:

Project Design Features' Noise Reducing Benefits are too Speculative

The above-listed Project Design Features are not merely measures taken to comply with building codes, but rather minor steps taken by the Applicant to minimize noise impacts that were relied upon by DCP, which is not allowed for categorical exemption projects. Additionally, the Applicant has failed to provide any meaningful information about these Project Design Features and, thus, their effectiveness is entirely speculative when considering the many factors that must be considered when designing competent noise barriers and crafting other useful mitigation measures (as discussed below).

Reply to Z Consulting's Response V-6, p. 17:

Mr. Zuleger is incorrect in asserting "*The RCMs in the Initial Study are used to ensure compliance with the Noise Ordinance.*" Mr. Zuleger's response implies, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. And he implies that the RCMs will ensure compliance with the Noise Ordinance, even if he fails to consider other applicable thresholds of significance.

As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels. The Project's noise impacts will still therefore be significant.

Comment – page 18:

NO EVIDENCE PRESENTED IN INITIAL STUDY SHOWING THAT TEMPORARY NOISE BARRIERS WILL BE EFFECTIVE IN REDUCING PROJECT'S SIGNIFICANT NOISE IMPACTS

While temporary noise barriers can reduce noise levels by up to 10 dBA if they are tall and long enough,⁵⁶ their effectiveness is highly dependent on a multitude of factors, most notably that they are of sufficient height to break the line-of-sight between the noise sources and receivers (i.e., diffracted noise); have sufficient thickness and density of material to cause sufficient transmission loss of noise traveling through the barrier and

⁵⁶ See: Initial Study, PDF p. 186, Figure 13; also see (Caltrans (Sept. 2013) Technical Noise Supplement, PDF pp. 147-160.

ultimately reaching the receiver (i.e., transmitted noise); and placement of the barrier, with optimal performance occurring when placed near either the noise source or receiver.⁵⁷ Ineffective noise barriers include those that are not tall enough to break the line-of-sight,⁵⁸ where transmission loss is not at least 10 dBA more than the desired noise reduction,⁵⁹ or when placed approximately halfway between the noise source and receiver.⁶⁰ Like with noise barriers, transmission loss of outside noise through a building structure (i.e., barrier insertion loss) is highly variable and can range from a 5 to 35 dBA reduction depending on materials used (e.g., light frame, masonry, brick), sound rating of material used (i.e., STC/OITC),⁶¹ and whether windows are generally open or closed.⁶²

Here, however, the Project's Initial Study fails to provide many details about the temporary noise barriers, including their heights in relation to noise source, thickness, materials, STC/OITC rating, or locations in relation to all the most-affected noise sources and receivers. All that the Initial Study⁶³ states, and only about the temporary noise barriers' locations, is:

“The noise barriers will be placed on both the east and west side of the drill rig in an orientation that breaks line-of-site between the drill rig's engine and the nearest neighbors to both the east and west. The noise barrier will be located as close to the drill rig as possible to maximize effectiveness.”

That restriction will have no benefit to nearby homes to the north if only the east and west sides are blocked by temporary noise barriers.

Moreover, merely breaking the line-of-sight from the noise source to the homes will not reduce construction drilling noise by 10 dBA. The Project's Noise Study⁶⁴ itself states: “Typically, a 5-dBA [insertion loss] can be expected for receivers whose line-of-sight to the roadway is just blocked by the barrier,” meaning that at most only a 5 dBA reduction

⁵⁷ *Ibid.*, PDF pp. 146-152; *see also* 22147 Clarendon Street (DCP Case No. ENV-2015-1853) Draft-EIR Appendix G-Noise Study, PDF p. 16.

⁵⁸ *See* Noise Solution (6/4/14) Applications and Limitations of Acoustical Walls; *see also* Wilson Ihrig & Associates (11/12/14) Preliminary Noise Assessment Study, p. 12.

⁵⁹ Caltrans (Sep. 2013) Technical Noise Supplement, PDF p. 148-149.

⁶⁰ *Ibid.*, PDF p. 151.

⁶¹ *Supra* fn. 57.

⁶² Federal Highway Administration (“FHWA”) (Dec. 2011) Highway Traffic Noise-Analysis and Abatement Guidance, pp. 30-31 (Tbl. 6); *see also* Wilson, Ihrig & Associates (11/19/14) Title 24 Acoustical Evaluation Exterior Sound Insulation, PDF p. 7-8 (“Title 24 requires all exterior elements surrounding this area must provide a minimum 18 dBA noise reduction ... The STC was originally developed to evaluate speech privacy through interior partitions. The OITC rating was adopted more recently to provide a more accurate measure of the noise reduction for typical exterior noise sources (e.g., airplanes, traffic), which have a different frequency content than speech.”); *see e.g.*, 1000 S. Hill St. (DCP Case No. ENV-2016-4711) MND Appendix G-Noise Calculations, PDF p. 20 (showing 0-5-dBA attenuation scenario); Villa Marina Mixed Use Project (DCP Case No. ENV-2004-3812) Draft EIR Appendix E-Noise Calculations, PDF p. 3 (showing up to 15-dBA insertion loss); 22147 Clarendon Street (DCP Case No. ENV-2015-1853) Draft EIR Noise Section, PDF p. 13; 1034 S. Hill (DCP Case No. ENV-2016-4711) MND, PDF p. 167.

⁶³ *See*: Initial Study, pp. 14 – 15; Also see Initial Study, PDF p. 66.

⁶⁴ *See*: Initial Study, PDF p. 186, quoted from the FHWA Highway Noise Barrier Design Handbook.

can be expected, not a 10 dBA reduction as claimed in the Noise Study.⁶⁵ The Noise Study's Figure 13 (Line-of-Sight) also shows that a line-of-sight blockage as proposed by this Project's Project Design Feature only results in a 5 dBA reduction in noise levels. The Initial Study therefore significantly exaggerates the amount of noise reduction that neighbors can expect.

Similarly, no meaningful data is provided in the Initial Study about the proposed temporary noise barriers to reasonably estimate noise attenuation at any of the surrounding homes most likely to be impacted by this Project's construction noise. Moreover, the Noise Study fails to indicate the (1) *individual noise levels* generated by the Project's various heavy equipment sources at each home; (2) *combined noise levels* for all these noise sources when added together (i.e., composite noise levels); or (3) *compare composite noise levels against the 3- or 5-dBA increase thresholds* under the City Threshold Guide, or any other threshold supported by substantial evidence. By failing in the first instance to provide a good-faith estimate of actual noise impacts, the *Noise Study cannot justify with substantial evidence* that noise impacts to receptors are less than significant. Nor can it claim that *de facto* mitigation measures provide sufficient noise attenuation because the Applicant has failed to even determine what level of attenuation is necessary in the first place.

In sum, contrary to CEQA, the Applicant has precluded and obfuscated the Project's noise impacts and analysis of potential mitigation measures by seeking to abandon the [2016] MND's noise mitigation measures and now relying on *de facto* mitigation measures not tethered to actual and competent analysis.

Reply to Z Consulting's Response V-7, p. 18:

Mr. Zuleger provides similar responses as he did in Response V-3 above to comments about the proposed temporary noise barriers' ineffectiveness. But again, he entirely fails to respond to these comments that there is no mention, much less requirement, that the temporary noise barrier be of sufficient height, girth, material, or absorptive properties that will achieve a specified acoustical performance rating (e.g., STC or OITC rating.) He ignores the concern expressed that their placement is not specified. He also does not respond to the comment about the proposed noise barriers that they will partially block direct noise from the barriers but some direct noise will diffract (bend) around such barrier wall surfaces and continue directly toward neighboring homes, or bounce to the north from uphill ground surfaces that reflect such loud noise toward nearby homes along Lucile Avenue. No relevant response provided to this detailed comment; no evidence is pointed to either to demonstrate the noise barriers will be effective.

His responses, copied below, are essentially hollow assurances that do not amount to substantial evidence as required by CEQA:

⁶⁵ See: Initial Study, PDF pp. 67, 95 and 144. e.g. On PDF p. 144, the Initial Study erroneously states: "Any substantial material (buildings, terrain, walls, etc.) that breaks line-of-site between a noise source and the receptor will reduce the noise level experienced by that receptor by at least 10 dBA." Yet on PDF p. 186, the Initial Study, Fig. 13 excerpted from the Federal Highway Administration's Noise Barrier Design Handbook shows only a 5 dB loss from a noise barrier if the line-of-sight is just blocked and the barrier does not extend higher than the line-of-sight.

The Initial Study noise calculations demonstrate that the portable noise barriers are not necessary for the drill rig to meet the applicable limits at any receptors. The muffler RCM alone is sufficient to achieve the 10-dBA reduction assumed in the Initial Study (per the EPA's Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, excerpt included with Initial Study). The portable noise barrier RCM is included to provide additional insurance that the receptors expected to experience the highest construction noise (the immediate neighbors to the east and west) will not experience impacts that exceed the significance threshold. As explained in Response IV-3, noise levels at the neighbors to the north and south will be lower than those to the east and west due to increased attenuation from distance and shielding effects. For these reasons, the noise barrier RCM specifications provided in the Initial Study are adequate. Any purpose built portable noise barriers that blocks line of site from the drill rig's engine to the immediate neighbors to the east and west will be sufficient, in combination with the other RCMs, to ensure that construction noise impacts are less than significant.

As explained in Response II-1, the construction noise threshold applicable to the Project is the Noise Ordinance, Section 112.05, not the L.A. CEQA Thresholds Guide or any other source.

NOISE LEVEL CALCUATIONS ARE UTTERLY MISSING FROM INITIAL STUDY:

Clearly the lack of scientific analysis with accurate acoustical calculations in his Noise Study undermines these bare conclusions. Surprisingly, his Noise Study and the Initial Study do not present any calculations whatsoever concerning this Project's noise impacts to neighbors. What the Initial Study claims to be calculations are at most just data from noise measurements (i.e. not calculations) and tables with noise levels. Those are not calculations. There is no prediction of how loud this Project will be at neighboring homes anywhere to be found in the Initial Study. It is entirely atypical for a professional claiming to be an engineer with qualifications to assess noise impacts to not use acoustical calculations to assure the public that a project's noise impacts will not harm neighbors. Being a licensed chemical engineer is insufficient assurance to the public that Mr. Zuleger's work in preparing this Project's Noise Study is adequate for CEQA review. No substantial evidence supports his conclusions. The Project's noise impacts, earlier admitted by City officials in the 2016 MND to be potentially significant, will still therefore be significant.

Comment – pages 20 - 21:

CITY'S NOISE-ATTENUATING REGULATORY COMPLIANCE MEASURES & CONDITIONS OF APPROVAL ARE INADEQUATE

Under CEQA, mitigation measures ("MM") are to include enforceable performance criteria capable of reducing, minimizing, rectifying, compensating, or avoiding the

impact altogether⁶⁶—which ensures the integrity of the public decision-making process by precluding stubborn problems or serious criticism from being swept under the rug.⁶⁷ To this end, CEQA requires: (1) mitigation measures to be fully enforceable, actually implemented, and not mere expressions of hope;⁶⁸ (2) lead agencies cannot rely on compliance with existing laws of uncertain efficacy;⁶⁹ and (3) agencies can defer crafting of mitigation measures to post project-approval only when guided by performance standards and armed with meaningful information reasonably justifying an expectation of compliance.⁷⁰

Here, Department of City Planning’s proposed Initial Study includes some noise-attenuating regulatory compliance measures (“RCM”) and conditions of approval (“COA”) to mitigate Project-specific impacts, including:

- **RESTRICTED CONSTRUCTION HOURS:** Construction will be confined to daytime hours only, as defined by the City of Los Angeles Construction Noise Ordinance (7:00 AM-9:00 PM, Monday through Friday, 8:00 AM-6:00 PM Saturdays). Construction activities that generate noise will also be prohibited on Sundays and all federal holidays.⁷¹
- **DECIBEL LIMITS:** The Initial Study bases its finding the Project would have a less-than-significant noise impact upon the applicant’s compliance with the City’s Municipal Code § 112.05 which sets some decibel limits on the operation of power equipment and tools.⁷²

The above-listed RCMs/COAs, however, are not enforceable or reasonably expected to be complied with so as to ensure neighbors are not adversely impacted. First, restricting construction hours does not include a specific performance criterion (e.g., dBA or dBC noise level) that would constitute a sufficiently negative impact or nuisance. Nor does the condition requiring the Applicant to monitor noise via sound metering include any criterion. Nor does it specify mandatory actions to be taken by the Applicant when noise levels are excessive (e.g., cease construction). Hence, implementation is merely aspirational and subject to Applicant’s voluntary actions. Nor does the City take a “‘belt and suspenders’ approach” by requiring the Applicant

⁶⁶ See *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407; see also CEQA Guidelines § 15370.

⁶⁷ *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935; see also *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 280–281.

⁶⁸ CEQA Guidelines §§ 15126.4(a)(2), 15097; see also *Lincoln Place Tenants Ass’n v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1508; *Federation of Hillside & Canyon Ass’ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261.

⁶⁹ See *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 17 Cal.App.5th 413, 433 (“none of these measures had any probability of implementation, their inclusion in the EIR was illusory.”); *Californians for Alternatives to Toxics v. Department of Food and Agriculture* (2005) 136 Cal.App.4th 1, 17 (“[c]ompliance with the law is not enough to support a finding of no significant impact under the CEQA.”).

⁷⁰ CEQA Guidelines § 15126.4(a)(1)(B); *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92-93; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 Cal.App.3d 872, 884.

⁷¹ See: Initial Study, PDF pp. 65, 135. See also LAMC § 41.40.

⁷² See: Initial Study, PDF pp. 68, 138, 142.

to perform noise testing upon the start of and during operations to ensure compliance with the City's Noise Ordinance.⁷³

Reply to Z Consulting's Response V-8, p. 19:

Mr. Zuleger does not respond to the main point of this comment, that the Initial Study's noise-attenuating regulatory compliance measures and conditions of approval are inadequate. His responses merely state:

The Initial Study does not assume the hours restriction RCM causes any reduction in daytime noise levels. The hours restriction RCM is taken directly from the Noise Ordinance section 41.40.

"As a Noise Ordinance requirement, this RCM is not voluntary and is enforceable. The Noise Ordinance does not require self monitoring of construction noise impacts, nor is this a standard practice for residential construction projects."

He claims the Noise Ordinance is enforceable. But since this Ordinance deems those construction activities that are not feasible to attenuate to comply with the City's standards to be exempt from those standards, then there is no way for the public or the City to enforce them. This is not a standard residential construction project, since it will be built partially on a very steep hillside requiring some very noisy construction activities. Unless CEQA-compliant noise mitigations are imposed that adequately deal with such construction noise, this Project's noise impacts will still be significant.

Comment – page 19:

REGULATORY COMPLIANCE MEASURES MAY NOT SUFFICIENTLY REGULATE PROJECT'S NOISE IMPACTS

Second, the Initial Study admits the City's decibel noise limitations shall not apply where compliance is technically infeasible. (*ibid*) The Initial Study does not define which of the Project's construction activities will be infeasible to adequately mitigate. The Initial Study states that "[n]oise barriers are not practical for phases of construction that require constant mobility around the site, such as site preparation and grading."⁷⁴ Thus since the City claims such mobile equipment noise is not practical to regulate, such construction noise generated during site preparation and grading would not be restricted by the City's RCM and would remain potentially significant at neighboring homes. Therefore, it is entirely speculative whether this RCM will sufficiently reduce noise levels to prevent significant noise impacts to neighbors.

⁷³ *Walters v. City of Redondo Beach* (2016) 1 Cal.App.5th 809, 824.

⁷⁴ *See: Initial Study*, PDF p. 67.

Reply to Z Consulting’s Response V-9, p. 19:

Mr. Zuleger is incorrect in asserting that:

“The Initial Study’s noise calculations demonstrate that, with the provided RCMs, noise levels will be less than the applicable Noise Ordinance limits. Therefore, the Initial Study does not depend on the infeasibility clause of the Noise Ordinance to establish that construction noise impacts are less than significant.”

Essentially, though it may seem impolite to be so direct, that is a bald-faced lie. The Initial Study contains no calculations at all demonstrating that with the proposed regulatory control measures, this Project’s noise levels will be less than the applicable Noise Ordinance limits. Calculations should have been provided showing how much greater than the ambient noise level this Project’s construction noise levels would be as measured at nearby sensitive receptors. That would have allowed City officials to judge whether or not the Project’s noise impacts would be significant under the City’s and State’s CEQA Guidelines Appendix G standards and the City’s General Plan standards. The Noise Ordinance is not the only measure of the relevant noise threshold of significance here.

Mr. Zuleger’s response also fails to address points raised in this comment that the Noise Ordinance’s decibel noise limitations shall not apply where compliance is technically infeasible. The serious harm of a professional engineer misrepresenting the truth like that is that people might be misled by just seeing his licensed credentials into believing what he states is truthful.

Comment – page 13:

THE PROPOSED REGULATORY COMPLIANCE MEASURES DO NOT SATISFY ALL NOISE ORDINANCE STANDARDS, OTHER APPLICABLE NOISE THRESHOLDS OF SIGNIFICANCE, AND WILL NOT LESSEN PROJECT NOISE IMPACTS TO LESS THAN SIGNIFICANT

Third, the COAs and RCMs requiring compliance with the Noise Ordinance, including LAMC § 112.05 (limiting construction noise levels to 75 dBA L_{max} at 50 feet) and LAMC § 112.01 (5-dBA increase in ambient noise levels limit due to operation of a radio, boombox, backup warning beeper, or similar device often found on construction sites) are inadequate because the conditions do not require noise metering by the Applicant. Additionally, the Code would allow an additional 5-dB increase for powered equipment or devices (including, e.g., leaf blowers, which are not construction equipment) which creates a loud, raucous or impulsive sound (LAMC § 112.04). While the Code may allow up to a 5-dB increase for *individual* noise sources, the City Threshold Guide imposes a 5-dB increase threshold for *all* noise sources—something ignored by the Noise Study. Additionally, it is impractical to expect police officers, much less a lay member of the public, to compute complex noise calculations to determine whether noise levels are exceeded over a sufficient period of time to trigger the 5-dBA CNEL increase in ambient noise levels. Lastly, the codified noise standards are A-

weighted that (as discussed above) ignores low-frequency noise impacts. Hence, enforcement/compliance is entirely speculative and insufficient under CEQA.

Reply to Z Consulting's Response V-10, p. 20:

Mr. Zuleger is incorrect in asserting:

As explained in Response II-1, the construction noise threshold applicable to the Project is the Noise Ordinance Section 112.05, not Noise Ordinance Section 112.01 (Section 112.01 applies to "radios, television sets, and similar devices", not heavy construction equipment), Noise Ordinance Section 112.04 (Section 112.04(b) does not apply to "equipment and operations specifically mentioned and related elsewhere in this Chapter"), or the L.A. CEQA Thresholds Guide.

Reply: It is well known and very common for construction crews to play loud music while they work. Such loud music can be a source of complaints by neighbors. Builders will typically not know the neighbors so they may have little incentive to respect the neighbors' rights to quiet enjoyment of their yards and homes. All sources of construction noise must be considered when evaluating this Project's noise impacts. Accordingly, the proposed RCMs for this Project are inadequate because they do not even satisfy all the Noise Ordinance standards. It is the combined noise levels from all sources, including stereos played loudly by builders, that must be evaluated to determine if this Project's noise level increase is significantly louder than the existing ambient noise levels in the neighborhood.

Noise Ordinance Section 112.05 is, like all ordinances, enforceable. Additionally, noise measurements in the CNEL unit of measurement are not utilized to determine compliance with this ordinance. Finally, the Noise Ordinance clearly states that A-weighted noise levels should be used to determine compliance. A-weighted noise levels most accurately represent the human response to noise and are used as standard throughout environmental noise analysis industry.

Reply: Mr. Zuleger ignores that the General Plan also sets noise standards to protect the interiors of nearby homes even in the daytime from excessive noise. Those standards are thresholds of significance too. Those standards are based on the CNEL or L_{dn} metric which are not used in the Noise Ordinance. Mr. Zuleger does not explain how LAMC § 112.05 is enforceable if the Project applicant discovers and claims the City's decibel noise limitations do not apply because compliance is technically infeasible. The Project's noise impacts will still therefore be significant.

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ENFORCEMENT OF PROJECT'S RCMS AND NOISE ORDINANCE IS SPECULATIVE, AND IS THEREFORE INADEQUATE FOR CEQA.

Fourth, compliance with the City's Noise Ordinance presumes noise complaints will be timely inspected by LAPD's Noise Enforcement or the local police station (i.e., Central Community Police Station) with properly calibrated sound meters. However, according to LAPD,⁷⁵ only Noise Enforcement is routinely equipped with said meters, leaving the local police station's VICE unit unequipped to make an objective investigation. Additionally, no aggregated data or reports are made available to the public regarding the number of complaints received, citations issued, or how often the City follows up a lengthy nuisance abatement process, often a two-year process until final resolution. Yet again, enforcement/compliance is entirely speculative.

Reply to Z Consulting's Response V-11 p. 20:

Mr. Zuleger is incorrect in asserting:

Noise Ordinance Section 112.05 is, like all ordinances, enforceable. Consistent with the Noise Ordinance 112.05, the Project applicant has identified equipment that is technically feasible for use in the construction of the Project and complies with the City's Noise Ordinance. The appellant presumes, with no evidence, that the equipment identified by the Project applicant does not comply with the ordinance. Appellant's vague references to phone calls with LAPD officers is speculative with respect to this project and does not constitute substantial evidence.

Again, it is not true that construction loud noise exceeding the Noise Ordinance's 75 dBA at 50 feet standard is enforceable if the Project applicant claims the City's decibel noise limitations do not apply because compliance is technically infeasible. Mr. Zuleger argument that construction equipment is technically feasible to use; the question should be whether use of that equipment will generate noise levels that are not technically feasible to be kept to less than the Noise Ordinance's standard? He also utterly ignores that there are other applicable thresholds of significance as identified above that are unrelated to the Noise Ordinance.

Mr. Zuleger is simply wrong to claim that we have "*presume[d], with no evidence, that the equipment identified by the Project applicant does not comply with the ordinance.*" Such evidence supported by verifiable calculations is contained in my Noise Report. For example, the combined noise levels from the Project's potential use of the three **jackhammers** simultaneously are shown to exceed the Noise Ordinance standards as well as other applicable thresholds.

⁷⁵ Per several phone calls with officers within the LAPD Noise Enforcement Unit, Central Community Police Station, and local Vice Unit.

Comment – page 22:

COMPLIANCE WITH NOISE ORDINANCE WILL NOT ENSURE PROJECT CONSTRUCTION NOISE WILL NOT BE SIGNIFICANT.

Fifth, even if compliance with the City noise regulations is achieved, compliance alone is not dispositive on the question of whether Project-related noise may have significant noise impacts.⁷⁶ Lead agencies may not ignore substantial evidence to the contrary.

Reply to Z Consulting’s Response V-12, p. 20:

Mr. Zuleger is incorrect in asserting, without any evidence, that the City’s current policy is to only use the Noise Ordinance when assessing the significance of construction projects’ noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels. Mere compliance with the Noise Ordinance will not ensure the Project’s noise impacts will be less-than-significant, especially if the applicant is permitted to claim compliance is infeasible for some undisclosed reason later.

Comment – page 22:

LONGER CONSTRUCTION HOURS MAY INCREASE PROJECT’S 24-HOUR AVERAGE NOISE LEVEL ABOVE CITY THRESHOLD OF SIGNIFICANCE.

Sixth, the newly-proposed measures increase the number of hours per day that construction may occur. The 2016 MND limited construction to “the hours of 7:00 am to **6:00 pm** Monday through Friday, and 8:00 am to 6:00 pm on Saturday.” Now however three additional hours per day are being proposed where the mitigation limits construction to only the hours between 7:00 AM - **9:00 PM**, Monday through Friday and 8:00 AM - 6:00 PM Saturdays. (emphasis added) That change is inconsistent with the 2016 MND’s mitigation, and could significantly increase the total construction noise level that the neighborhood is exposed to when averaged over a 24-hour day. That change would allow loud construction to occur from 6 p.m. to 9 p.m. when many neighbors may be home relaxing and having dinner. That change would allow noisy construction work to occur for 27% more time each weekday than the mitigation allowed. (14 hrs. / 11 hrs. = 1.27) Yet nothing is stated in the applicant’s June 4, 2019 Initial Study to direct the reader’s attention to this change or explain why this longer-work change might not lead to a significant increase in noise impacts.

⁷⁶ See: *Keep Our Mountains Quiet v. County of Santa Clara* (2015) 236 Cal.App.4th 714, 734, fn. 11.

Reply to Z Consulting's Response V-13, p. 21:

Mr. Zuleger is incorrect in responding that “*the hours restriction RCM is taken directly from the Noise Ordinance section 41.40. Project documents prepared previous to the Initial Study are not relevant and may be ignored.*” His response ignores the point of the comment that the new change in the Project’s regulatory control measures by adding three permissible construction hours per day may increase the Project’s overall construction noise level, when measured in the CNEL or L_{dn} metric for 24-hour averaged noise level, and thus exceeding an applicable threshold of significance.

All previous documents in this Project’s administrative record must be considered by the City Council in order to comply with CEQA, including the 2016 IS/MND and all comments submitted for it.

Comment – pages 22 - 23:

COMPLIANCE WITH RCMs AND NOISE ORDINANCE WILL NOT ENSURE PROJECT CONSTRUCTION NOISE IMPACTS WILL NOT BE SIGNIFICANT.

The abovementioned issues are symptomatic of a poorly crafted noise ordinance that prove difficult to enforce.⁷⁷ Here, the Initial Study’s claim that COA/RCM compliance will suffice serves only to sweep under the rug the problems of loud construction noise. The City cannot rely on illusory mitigation measures of unknown efficacy when the Applicant has failed to disclose, much less analyze, reasonably foreseeable impacts to nearby receptors. Nor, can the City cure the Applicant’s flawed Categorical Exemption

⁷⁷ Come On Feel The Noise: The Problem With Municipal Noise Regulation (2006) 15 U. Miami Bus. L. Rev. 47, PDF pp. 28-29 (“*Actual enforcement of the ordinance can also prove difficult ... some have been apt to call noise ordinances a sorry collection of restrictions or state that noise laws have ‘been almost entirely unworkable.’” Emph. added); Int’l J. Police Strat. & Mgmt. (2000) Policing Entertainment Districts, PDF pp. 12, 22 (“*Few cities have enforceable noise ordinances* (Table IV(26)). Decibel limits are too low, ambient noise levels are too high, and it is difficult to attribute noise to sources. Enforcement requires specialized equipment, training and, sometimes, citizen complaints ... To simplify noise regulation, the city of Irvine required the Irvine Amphitheater to install a permanent noise-monitoring station. When the noise level reaches a certain limit, the Amphitheater must turn down the volume.” Emph. added); The Great Mash-Up Debate: A Holistic Approach To Controlling Noise Pollution In Florida’s Downtown Districts (2016) 14 Ave Maria L. Rev. 222, PDF pp. 14-18 (“Due to the intricate nature of the investigation report, the enforcement of local ordinances may not be an effective remedy. When a resident makes a noise complaint, an enforcement officer will arrive at the scene and begin the report. In order to verify the complaint, the enforcement officer must corroborate the noise. By the time the form is complete and the officer has been able to measure the noise to determine if there has been a violation, the business (restaurant, bar, or nightclub) might have had the opportunity to turn down or shut off the music. Thus, the process itself renders the ordinance ineffective ... Prior to the issuance of the notice of violation, a code inspector or law enforcement officer will generally first issue an oral or written warning to immediately cease the violation. In some cities, such as Miami Beach, an inspector may issue one oral courtesy per day ... A code enforcement officer may hesitate in enforcing a noise complaint without building a strong case that will likely result in favor of the prosecution.” Emph. added).*

request by merely adopting additional noise-related COAs because recirculation of the Project's CEQA review would be required.⁷⁸

Reply to Z Consulting's Response V-14, p. 21:

Mr. Zuleger is entirely incorrect in asserting "*The Initial Study does analyze and disclose noise impacts to the nearby receptors and the proposed RCMs are not "illusory mitigation measures of unknown efficacy", as evidenced by the responses in this Letter. This claim is unsubstantiated.*"

No such analysis including calculations of noise levels this Project may generate during construction at neighboring homes is provided in the Initial Study. The RCMs offer only illusory assurances of compliance with applicable thresholds. They won't even assure compliance with the Noise Ordinance. They do not even address compliance with the General Plan standards as thresholds. They especially do not prevent this Project's noise impacts from substantially exceeding the ambient noise levels at neighboring homes, especially if compliance with § 112.05's noise limits is not considered by some unknown standard to be feasible and therefore would not be required by City officials. If only these RCMs and COAs are approved to address noise impacts, then the Project's noise impacts will still be significant.

Comment – pages 23 - 24:

VI. CONSTRUCTION NOISE IMPACTS WILL BE SIGNIFICANT.

A. INITIAL STUDY FAILS TO PROVIDE SUFFICIENT INFORMATION TO ASSESS PROJECT'S NOISE IMPACTS

The L.A. CEQA Threshold Guide (p. I.1:2-3) provides clear construction-related screening thresholds that require "further study" in an expanded Initial Study ("IS"), Negative Declaration ("ND"), MND, or EIR if construction activities are within 500 feet of noise sensitive uses, such as residential uses. In evaluating this screening threshold, applicants are to provide "information on construction activities" (*id.*), yet not enough is presented in the Initial Study's noise discussion.

These screening thresholds assist the City and DCP in responding to the questions in the State's Initial Study Checklist⁷⁹ and to determine the appropriate environmental document (e.g., ND, MND, EIR) (*id.* at p. vii). These are less demanding than the City's significance thresholds that assist the City and DCP to determine "whether a project's impacts would be presumed significant under normal circumstances and, therefore,

⁷⁸ See *Gentry v. Murrieta* (1995) 36 Cal.App.4th 1359, 1380 ("if there was substantial evidence to support a fair argument that the Project would have a significant effect... then the City could not adopt new mitigation conditions aimed at this effect without recirculating its proposed negative declaration. Nevertheless, the City added mitigation condition... without recirculating. In so doing, it abused its discretion").

⁷⁹ CEQA Guidelines, Appendix G: Environmental Checklist Form, http://resources.ca.gov/ceqa/guidelines/Appendix_G.html.

require mitigation to be identified” (*id.*). Here, the Initial Study lacks basic information and analysis required to satisfy even the minimal standards for screening evaluations under the L.A. CEQA Thresholds Guide—much less satisfy the more demanding requirements for significance determinations (discussed below).

When determining if construction noise impacts are significant under the L.A. CEQA Thresholds Guide (pp. I.1:4, I.2:5), applicants are required to establish ambient noise levels by either taking field measurements, by implementing a noise-monitoring program consistent with the City Code, or by using the “presumed Ambient Noise Levels” (LAMC § 111.03) The applicant did not submit nighttime field measurements of ambient noise levels near the Project site. Without such information, and pursuant to the L.A. CEQA Thresholds Guide, the presumed Ambient Noise Levels set forth in LAMC § 111.03 should apply, which provides a 40-dBA nighttime (10 p.m. – 7 a.m.) baseline. Under the L.A. CEQA Thresholds Guide (pp. I.1:3-5), applicants are required to provide specific facts and analysis when making significance determinations, which the Initial Study’s noise discussion fails to satisfy as demonstrated below:

Environmental Setting Requirements: including the identification of noise sensitive land uses within 500 feet of the project site, and quantification of ambient noise levels (existing and projected at the time of construction) measured in CNEL.⁸⁰

The Project applicant did not submit nighttime ambient noise level measurements and the Initial Study does not contain such measurements obtained from other sources. The Initial Study also does not predict the construction noise levels that will occur at neighboring homes.

Reply to Z Consulting’s Response VI-1, p. 22:

Mr. Zuleger responds: “Ambient noise measurements were collected for the Project and are provided in the Initial Study. Nighttime noise measurements are not necessary because the Project construction activities will not occur at night (per the Noise Ordinance prohibition) and because the Noise Ordinance Section 112.05 limits applicable to the Project are not based on day night averaged noise levels (such as Ldn or CNEL).”

His noise level measurements for the Initial Study were too short to describe the actual day-long ambient conditions in the neighborhood. They included no nighttime measurements. While nighttime measurements are not mandatory, some values must be used in their place, and the City provides those standards in the **2006 L.A. CEQA Thresholds Guide**. He failed to consider those nighttime noise levels in his Noise Study. Therefore the Initial Study never provides even the basic information and analysis required to satisfy even the minimal standards for screening evaluations under the L.A. CEQA Thresholds Guide — or the CEQA Guidelines Appendix G standards for increases above ambient levels, much less satisfy the more demanding requirements for significance determinations under the City’s General Plan and other relevant thresholds.

⁸⁰ Community Noise Equivalent Level (“CNEL”): The average A-weighted noise level in a 24-hour day, obtained after adding 5 dB to evening hours (7:00 p.m. to 10:00 p.m.) and 10 dB to sound levels measured in the night (between 10:00 p.m. and 7:00 a.m.).

INITIAL STUDY FAILS TO PROVIDE SUFFICIENT INFORMATION TO ASSESS PROJECT’S NOISE IMPACTS (CONTINUED)

Project Impact Requirements: including the duration of construction activities, identify the type, amount, and scheduling of construction equipment to be used during each construction phase, and the distance from construction activities to noise sensitive uses.

Here, the Project’s noise discussion fails to provide the location of equipment in relation to the residential uses adjacent or near to the Project site. Because the applicant has failed to provide sufficient information regarding equipment phasing and equipment usage, it is impossible for the applicant or public to assess the collective noise impacts from numerous construction equipment and activities operating during any phase of the 16-month construction period—much less demonstrate with substantial evidence that said impacts would be less than significant under applicable thresholds and standards.

Calculation of Noise Emissions Requirements: including the noise levels provided in the L.A. CEQA Threshold Guide or other applicable references, or other noise models if appropriate, and determine the combined noise levels from equipment that will be operated simultaneously.

Here, the Project’s noise discussion fails to accurately disclose the maximum typical heavy equipment noise levels included in the L.A. CEQA Threshold Guide, much less determine or calculate the combined noise levels from equipment operating simultaneously. The Initial Study’s Project Design Feature no longer requires, as the previous mitigation measure did, for demolition and construction activities to be scheduled so as to avoid operating several pieces of equipment simultaneously. This Project consists of the construction of two separate homes, both of which may have construction occurring at the same time with cumulative noise impacts louder than for just one home’s construction.

Moreover, as discussed below, these de facto mitigation measures are inadequate and improper under CEQA.

Reply to Z Consulting’s Response VI-2, p. 22:

Mr. Zuleger is incorrect in asserting these responses, which are also provided responding to previous comments:

“These claims are inaccurate. The Initial Study provides adequate information regarding the Project’s construction. Furthermore, the applicable noise limits are attributed to each piece of equipment separately. Nonetheless, Response IV-6 presents the total noise level for each phase of construction based on a conservative scenario for construction and the total impacts are lower than the noise limit applicable to individual pieces of

equipment. The Initial Study adequately accounts for noise impacts from construction of the entire Project, including both structures.”

This response is entirely misleading. The Initial Study does not indicate where caisson drilling or jackhammering during construction and demolition will occur. When such noisy and vibration-producing construction activity is proposed, the exact distances to neighboring homes must be provided so that accurate assessment of noise and ground-borne vibration impacts can be assessed. Other issues raised in this Response V-2 are replied to above in previous replies. In any case, the Initial Study fails to provide adequate information, and therefore it fails to comply with CEQA.

Comment – pages 24 - 25:

INITIAL STUDY FAILS TO PROVIDE SUFFICIENT INFORMATION TO ASSESS PROJECT’S NOISE IMPACTS (CONTINUED)

Comparison to Ambient Noise Levels/Significance Threshold Requirements: in establishing the change in noise level from construction activities at the location of sensitive receptors, applicants are to subtract the projected noise level without construction equipment from the projected noise level during construction activities. Considering the number of days various noise levels are projected, the applicant shall determine whether construction activities would exceed both the number of days, times of day, and dBA increases in the significance threshold.

Here, the Initial Study’s noise discussion fails to identify most of the applicable thresholds under the L.A. CEQA Threshold Guide, fails to quantify and determine the significance of the temporary increases in ambient noise during construction, and does not mention the City’s General Plan Noise Element or Municipal Code that sets permissible interior noise level limit of 45 CNEL,⁸¹ much less demonstrate that the Project’s construction noise will not exceed this 45 CNEL limit at neighboring homes.

Reply to Z Consulting’s Response VI-3, p. 22:

Mr. Zuleger is wrong in responding, “*as explained in Response II-1, the City’s policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA Thresholds Guide or the General Plan.*”

⁸¹ See City (2/3/99) General Plan Noise Element, p. 2:13 (stating the California Noise Standard for “addressing noise problems and define incompatible noise sensitive uses,” including residential dwellings, is set at an interior noise level of a CNEL of 45 dB), <https://planning.lacity.org/cwd/gnlpln/noiseElt.pdf>. As discussed herein this comment Report, the Project’s construction noise will exceed this limit of 45 CNEL. See also: LAMC section 91.1207.14.2: “Allowable Interior Noise Levels. Interior noise levels attributable to exterior sources shall not exceed 45 db in any habitable room. The noise metric shall be either the day-night average sound level (Ldn) or the community noise equivalent level (CNEL) . . .”.

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards such as the 45 CNEL interior residential noise limit standard, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

Comment – page 25:

INITIAL STUDY FAILS TO PROVIDE SUFFICIENT INFORMATION TO ASSESS PROJECT'S NOISE IMPACTS (CONTINUED)

Cumulative Impacts: including the identification of construction activities for related projects that would coincide with the project's construction operations; calculate noise levels using the same above-listed methodology and logarithmically add the noise from these construction activities to the project-related construction noise to determine the cumulative effect of the construction activities.

Here, the Initial Study's noise section fails to consider, calculate and mitigate for the cumulative and thus potentially louder noise impacts of building two homes at one time.

Reply to Z Consulting's Response VI-4, p. 23:

Mr. Zuleger responds that: *"This claim is inaccurate. The Initial Study accounts for noise impacts from construction of the entire Project, including both structures."*

But his claim is without supporting evidence in the Initial Study. Nowhere does the Initial Study consider that additional noise may occur to bother neighbors from two separate building crews building two separate homes at one time. His rationale, explained earlier, is that he incorrectly believes that the threshold of significance for construction noise only applies to individual construction equipment, not the combined noise levels from multiple units operating at one time. As explained above, that contention has no basis in law under CEQA. Residents to the east and the west of the Project site could be exposed to noise levels of roughly equal intensity at the same time from both home's construction. Noise levels from separate building sites can be louder than the noise level from either one alone. The Initial Study is indeed inadequate for its failure to assess the noise impacts of the whole of the project.

Comment – page 25:

INITIAL STUDY FAILS TO PROVIDE SUFFICIENT INFORMATION TO ASSESS PROJECT'S NOISE IMPACTS (CONTINUED)

To summarize, the Project's noise discussion in the Initial Study is fundamentally flawed because it lacks sufficiently meaningful information, much less analysis supported by substantial evidence, that informs the City and the public of all the potentially significant construction noise impacts. Moreover, the omission of most of the City's applicable thresholds conceals the true noise impacts of this Project. Based on my review and the facts/analysis discussed herein, there is a fair argument that construction noise will exceed the City's thresholds and, therefore, be significant. In fact, there is substantial evidence supported by facts and scientific calculations demonstrating that such noise impacts *will be significant during construction*. As such, the Initial Study is inadequate, a Categorical Exemption is inappropriate, and a more thorough noise analysis is warranted in accordance with the City's L.A. CEQA Thresholds Guide and best practices exercised by other public agencies. Critically, this review should be pursuant to an EIR, where specific mitigation measures can be considered and made enforceable.

Reply to Z Consulting's Response VI-5, p. 25:

Mr. Zuleger is incorrect in asserting *"This claim is unsubstantiated. The Initial Study provides an adequate assessment of construction noise impacts. Additionally, the City's policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA Thresholds Guide."*

As explained above, the Initial Study does not adequately assess construction noise. Considering that it fails to include all applicable thresholds of significance, there is no possible way that it adequately assessed such noise relative to those thresholds.

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

B. THE INITIAL STUDY DOES NOT DESCRIBE ALL APPLICABLE THRESHOLDS OF SIGNIFICANCE FOR MAXIMUM CONSTRUCTION NOISE LEVELS.

To demonstrate the various ways the Project’s construction noise impacts will be significant, one must first recognize the applicable noise standards pertinent to this Project, which in some cases the noise discussion fails to do, and includes the following:

The City must analyze if construction of these two homes at the same time would result in a substantial temporary increase in ambient noise levels in the Project vicinity above levels existing without the project?⁸² The Initial Study points to two thresholds of significance where the Project’s construction noise level is not permitted to exceed 75 dBA L_{max} at a distance of 50 feet and construction is not allowed between 9 p.m. – 7 a.m.⁸³ But the Initial Study does not identify several other important and applicable City noise standards such as not increasing ambient noise levels in the neighborhood *outdoors* at any residential property line by more than 5 dBA CNEL, or increasing *interior* residential noise levels above 45 dBA L_{dn} . By failing to evaluate the Project’s significant noise level increases compared to ambient noise levels using these other applicable noise standards, the Initial Study fails to comply with CEQA. The Initial Study also does not describe what threshold of significance applies to ground-borne vibration during construction.

The Project applicant has only submitted two noise level measurements, each about one-hour long in the daytime, and both indicating noise levels of 55.7 dBA $L_{eq-1 hr}$. No measurements were reported during nighttime hours. The City in this case assumes that the daytime ambient noise level in this residential area is 55.7 dBA L_{eq} but the nighttime ambient noise level is 40 dBA L_{eq} .⁸⁴ This daytime ambient noise level of 55.7 dBA L_{eq} should have been used in part to evaluate this Project’s construction noise level increases based upon the L_{dn} or CNEL metric. But the City overlooked this obligation. It is required to evaluate the day-night average noise level during Project construction to compare to the City’s ambient noise levels or other noise standards, but it has not done so in the Initial Study.

The City elsewhere than this Project’s Initial Study defines⁸⁵ that a project would normally have a significant impact on noise levels from construction if:

⁸² See L.A. CEQA Thresholds Guide (2006) Page I.1-1, A. Initial Study Checklist Question XI.(d).

⁸³ See: Initial Study, PDF p. 138, referencing LAMC § 112.05 for a maximum 75 dBA noise level at 50 feet for construction machinery (e.g. tractors, dozers, drills, loaders, shovels/cranes, etc.); Also, LAMC § 41.40 prohibiting construction using machines between 9 p.m. and 7 a.m.

⁸⁴ See L.A. Municipal Code, SEC. 111.03. MINIMUM AMBIENT NOISE LEVEL. For this residential zone, the ambient noise level at nighttime is presumed to be 40 dBA nighttime. Also see L.A. CEQA Thresholds Guide (2006) Page I.1-9, Exhibit I.1-3, “Presumed Ambient Noise Levels”

⁸⁵ See L.A. CEQA Thresholds Guide (2006) Page I.1-3, Section 2(A) Significance Threshold.

1) Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA (CNEL) or more at a noise sensitive use. (L.A. CEQA Thresholds Guide, p. I.1:3) (In this case and only if construction lasts shorter than 10 days, Project noise levels would be significant if they exceed 65.6 dBA CNEL at homes in the neighborhood. (55.6 dBA CNEL calculated daytime ambient level + 10 dBA = **65.6 dBA CNEL**)) This standard is not applicable to this Project though due to the length of Project construction exceeding 10 days in three months.

2) Construction activities lasting more than 10 days in a three-month period would generate noise levels that exceed existing 24-hour weighted average ambient exterior noise levels by 5 dBA or more at a noise sensitive use or at any neighbor's residential property line outdoors.⁸⁶ (In this case, because Project construction will certainly last more than 10 days in a three-month period,⁸⁷ the Project noise levels would be significant if they exceed **60.6 dBA CNEL** at residential property lines in the neighborhood. (55.6 CNEL + 5 = 60.6 CNEL) See [page 48](#) below for explanation and calculation of this 60.6 dBA CNEL threshold of significance.) The Initial Study does not analyze this threshold of significance contained in the 2006 L.A. CEQA Thresholds Guide, p. I-2.3,

3) Another standard is that the City's Municipal Code § 112.05(a) defines that a project's maximum allowed noise level resulting from use of construction equipment like an auger drill rig or a crane is **75 dBA L_{max}** as measured at a distance of 50 feet from that equipment.⁸⁸ The Initial Study purports to consider this standard, but mistakenly uses 75 dBA L_{eq} instead which is the wrong metric. The Initial Study uses an *averaged* noise level and not the required *maximum* noise level the City's Noise Ordinance actually regulates. Nearly all of the heavy construction equipment emits noise levels greater than this 75 dBA L_{max} threshold of significance, so absent careful noise mitigations, this standard may become a barrier for the Project.

⁸⁶ The noise impacts on neighboring residents would extend over the entire construction phase of the Project, which is estimated to be 16 months including grading, foundation and construction. (October 1, 2018 *Appellant Neighbor's Grounds For Appeal, Re: 1888 Lucile Ave.*; p. 16.)

⁸⁷ See: Initial Study, PDF p. 134: "approximate construction schedule is from August 2019 to June 2021", and, for example, demolition predicted to last for 45 work days in a 51-day timeframe, including jackhammering.

⁸⁸ See L.A. Municipal Code SEC. 112.05. MAXIMUM NOISE LEVEL OF POWERED EQUIPMENT OR POWERED HAND TOOLS:
Between the hours of 7:00 a.m. and 10:00p.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 there from:
(a) 75dB(A) 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**. (*emphasis added*)

Note (by author of this review): This code section 112.05 also states: "Said noise limitations shall not apply where compliance therewith is technically infeasible. . . . Technical infeasibility shall mean that said noise limitations 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." However, for purposes of determining whether or not such construction noise is significant, technical infeasibility for compliance is of no consequence.

4) One other standard to be considered is the California Noise Insulation Standards (Building Code Title 24, Section 3501 et seq.). This standard for residential land uses sets a maximum interior noise level of **45 dBA L_{dn}** in any habitable room, averaged over a 24-hour period. The City's General Plan Noise Element also sets that permissible interior noise level limit of **45 dBA L_{DN}** or **45 CNEL**.⁸⁹ As also does LAMC section 91.1207.14.2. This standard protects against sleep disturbance impacts at nighttime, and more pertinent here to actual construction noise, against unreasonable annoyance impacts during the daytime. The Initial Study never evaluates this standard.

5) The General Plan Noise Element identifies an exterior sound level greater than 70 dBA CNEL for a single family residential neighborhood as "normally unacceptable," requiring analysis and noise insulation features for projects. The Initial Study also never evaluates this standard which will be exceeded by construction noise impacting neighboring properties.

6) The Project construction vibration impact would be significant if it exceeded the Federal Transit Administration ("FTA") vibration threshold of significance of 80 VdB at residences, or exceeded the Caltrans' recommended level of 0.2 in/sec PPV.⁹⁰ The Initial Study never evaluates this standard either.

7) Project construction occurs between 9:00 p.m. and 7:00 a.m. on weekdays, in part.

Of the seven applicable construction noise standards listed above, the Initial Study only discloses two of them (#3 and #7) as existing and being relevant to this Project. (Maximum of 75 dBA L_{max} at 50 feet and allowable construction hours) The lack of any analysis in the Initial Study of the Project's consistency with the other five noise/vibration standards demonstrates the City has no substantial evidence supporting its determination that Project construction noise impacts will be less-than-significant.

Reply to Z Consulting's Response VI-6, p. 24:

This response ignores most of the lengthy comments above, instead merely repeating an incorrect assertion:

As explained in Response II-1, the City's policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA

⁸⁹ See: City (2/3/99) General Plan Noise Element, p. 2:13 (stating the California Noise Standard for "addressing noise problems and define incompatible noise sensitive uses," including residential dwellings, is set at an interior noise level of a CNEL of 45 dB), <https://planning.lacity.org/cwd/gnlpln/noiseElt.pdf>. As discussed here in this comment Report, the Project's construction noise will exceed this limit of 45 dBA CNEL.

⁹⁰ See FTA (May 2006) Transit Noise and Vibration Impact Assessment, pp. 12:10-14, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.

Thresholds Guide, General Plan, Building Code, or CalTrans. The La Forest Report's argument that the City must apply all available standards to the Project is inaccurate.

Without any evidence, this response claims that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. That threshold is relevant whether the City someday shifts over to a different set of thresholds than are found in the **2006 L.A. CEQA Thresholds Guide** or not. But Mr. Zuleger failed to analyze that standard in his Noise Study. The Initial Study should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

This response also states: "*Response IV-7 explains why the applicable Noise Ordinance limit is meant to be applied to noise levels using the L_{eq} unit of measurement, not the L_{max} unit of measurement.*" But as explained above, and in Reply to Response IV-7, the correct limit for compliance with the Noise Ordinance is the maximum noise level from construction equipment, not an averaged noise level as Mr. Zuleger claims.

Comment – page 28:

DOZENS OF HOMES NEAR THE PROJECT SITE COULD BE SUBJECTED TO EXCESSIVE CONSTRUCTION NOISE LEVELS FROM OPERATION OF HEAVY EQUIPMENT THAT EXCEED THE CITY'S MAXIMUM LIMIT OF A NOISE LEVEL OF 75 dBA L_{MAX} AT 50 FEET FROM THE SOURCE, AND ALSO EXCEED THE CITY'S THRESHOLD OF SIGNIFICANCE IN GENERATING AN INCREASE IN EXISTING AMBIENT NOISE LEVELS BY MORE THAN 5 OR 10 dBA L_{EQ} .

Based on the acoustical principles and math discussed below, it is apparent that this Project will generate and expose dozens of neighboring residents to noise levels in excess of the above-listed thresholds and standards.

Predictable Construction Noise Levels for Proposed Foundation Construction

To evaluate the significance of this Project's construction noise impacts, the first step is to review these standards listed above, including those in the City of L.A.'s CEQA Threshold Guide for its definition of applicable thresholds of significance for noise impacts.

The Project's likely noise levels to be generated during foundation construction activities should be compared to all of those above-listed thresholds of significance. This Project's Lucile/Landa homes construction will generate loud noise levels during pile or caisson drilling operations. The Project's "Geology and Soils Report Approval Letter" dated January 7, 2015 identifies that these will be "two new pile-supported single family residences." These two homes are recommended to have conventional and/or drilled-pile

foundations bearing on competent bedrock. Those piles or caissons may extend 10 feet or more into bedrock, likely similar to foundations of adjacent homes.

As will be demonstrated, this Project's foundation construction activities with noisy caisson drilling operations will generate noise levels in excess of all of the noise standards identified above. As such, this Project will create significant noise impacts in its neighborhood. As shown below in **Figure A**, dozens of homes exist within a few hundred feet of this Project site.

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The noise generated during caisson drilling will likely be the most significant noise source during the Project's foundation construction. To drill a possible 12 or more caisson holes, an auger drill rig and crane will likely be used near constantly for more than one day. The City needs to know how many hours per day such drilling will occur, and also how many days such construction activities will last. The more hours a day that drilling occurs, the greater the Project's averaged noise levels will be. The more days that construction goes on, the less tolerant neighbors will become of continuing noise. To address such reduced tolerance for persistent construction noise, the City's standards even compel a reduction in a project's allowable noise levels when such noisy construction takes longer than 10 days within a three-month period.

Reply to Z Consulting's Response VI-7, p. 26:

Mr. Zuleger is incorrect on all three counts in asserting:

"As explained in Response II-1, the City's policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA Thresholds Guide.

This noise limitation is applied to each piece of equipment's peak hour Leq noise level. As such, the noise impacts do not depend on the number of days of operation.

"The claim that the homes in Figure A are exposed to significant construction noise impact is incorrect and unsubstantiated."

Mr. Zuleger's response states, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

As pointed out above in great detail, it is not true that the threshold of significance is applied only to a single piece of equipment based upon an averaged "peak hour" noise level.

Whether or not Mr. Zuleger chooses to look at the evidence presented above, it not true the claim that "the homes in Figure A are exposed to significant construction noise impact is incorrect and unsubstantiated." That evidence is presented in my Noise Report. He fails to explain here why he finds that evidence to be unsubstantiated. Absent any credible opposition to that evidence and calculations, the Initial Study is inadequate and not supported with substantial evidence in finding the Project's noise impacts will be less-than-significant.

Duration of Construction Activities for Foundation Caisson Drilling.

On February 9, 2018, I personally spoke to Mr. Darnell Tapia, a construction estimator with Leon Kraus Drilling⁹¹, about his experience drilling in Los Angeles' hillsides. He estimated that drilling for caisson installations would proceed at a rate of about 125 linear feet to 150 linear feet of depth per day with unknown soil conditions, and a maximum of 200 linear feet per day under the best of conditions. He also estimated from his experience that auger drill rigs are used nearly full time during such deep drilling operations.⁹²

The Project documents that have been made available do not reveal how many caissons and piles will be drilled for these two homes' foundations. To roughly estimate how many caissons might be drilled, we contacted a local architect with experience with such foundations, Michael Mekeel of Offenhauser/Mekeel Architects. He obtained a site plan and cross-sections of foundation details and needed retaining walls for the 1888 Lucile Avenue home.⁹³ He estimated that at least 12 piles would be needed below two retaining walls along the home site's east and west side property lines. There may more piles for as many as four to seven retaining walls needed.⁹⁴

To estimate the depth of these new caisson holes, the least amount of drilling would require about 15 feet of depth per caisson. This depth is approximated from the caisson depths shown in Project documents for the two neighboring homes which scale to about 15 feet each.⁹⁵

For the two Lucile/Landa homes, assuming 12 caissons at 15 feet of depth each, approximately **180 linear feet** of caisson holes would need to be drilled. ($12 \times 15 = 180$). It will likely take **more than one day** to drill those caissons holes.⁹⁶ Other construction

⁹¹ For reference: Leon Kraus Drilling: 13753 Gladstone Ave; Sylmar, CA 91342, Phone (818) 367-4237

⁹² Therefore with nearly full time use during caisson drilling, the applicant would not be able to relax his noise compliance obligation pursuant to City laws, but may have to adhere to stricter standards if drilling results in high-pitched noise or repeated impulsive noises: "To account for people's increased tolerance for short-duration noise impacts, the Noise Regulation provides a 5 dBA allowance (increase) for noise sources occurring more than 5 minutes, but less than 15, in any 1-hour period, and an additional 5 dBA allowance for noise sources occurring 5 minutes or less in any 1-hour period. Additionally, the Noise Regulation provides a penalty of 5 dBA for steady high-pitched noise or repeated impulsive noises." (Los Angeles Municipal Code, chapter XI, article I, section 111.02(b))

⁹³ See: Attachment B in my previous Report for Site Plan and Cross-sections with added notations in red ink.

⁹⁴ See: *Appellant Neighbor's Grounds For Appeal Re: 1888 Lucile Ave.*, October 1, 2018, p. 6: "As shown by the attached diagram, the Lucile project requires not 3 retaining walls, but rather, 7 retaining walls. (Tab C.)"

⁹⁵ See: Project file, Exhibit 4, "Section A", showing a cross-section view of foundations for adjacent homes at 1892 N. Lucile Avenue and 3823 W. Landa Street.

⁹⁶ As estimated by Leon Kraus Drilling at a different location, the drilling for the Lucile/Landa homes' caisson installations would proceed at a rate of about 125 linear feet to 150 linear feet of depth per day with unknown soil conditions. ($180 / 125 =$ approximately 1.4 days of drilling)

noise sources such as bulldozers, excavation equipment, sawing, hammering that exceed City standards at close by homes will also create significantly intrusive noise sources lasting for months.

Reply to Z Consulting's Response VI-8, p. 26:

Mr. Zuleger is incorrect in asserting:

“This claim is speculative and irrelevant. As explained in Response II-1, the City’s policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA Thresholds Guide. This noise limitation is applied to each piece of equipment’s peak hour Leq noise level. As such, the noise impacts do not depend on the number of days of operation.”

Mr. Zuleger’s response repeats, without any evidence, that the City’s current policy is to only use the Noise Ordinance § 112.05 when assessing the significance of construction projects’ noise impacts. As explained above, that contention is inaccurate. The City Council has not yet rescinded the **2006 L.A. CEQA Thresholds Guide**. The City, and even this Project applicant’s consultant who prepared the Initial Study, is still using it. It requires an assessment of how many days construction noise will occur so that neighbors are not exposed to noise level increases greater than either 5 dB or 10 dB above ambient noise levels.

At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

To repeat what has been stated before, Mr. Zuleger is incorrect to claim the City’s threshold of significance is applied only to each piece of construction equipment, and not their combined noise emissions.

Comment – pages 31 - 32:

THE PROJECT’S CONSTRUCTION NOISE LEVEL INCREASES WILL EXCEED EXISTING AMBIENT EXTERIOR NOISE LEVELS BY 5 dBA FOR MORE THAN 10 DAYS IN A THREE-MONTH PERIOD IN ITS NEIGHBORHOOD, AND THAT IS CONSIDERED A SIGNIFICANT NOISE IMPACT WHICH WOULD IMPACT BETWEEN 24 TO 59 NEIGHBORHOOD HOMES.

Noise level increases during Project construction will exceed the City’s thresholds of significance. With neighboring homes as close as 15 feet to this Project, and as close as 10 feet to the Project’s retaining walls, significant levels of construction noise will likely exceed City thresholds at these homes for more than 10 days in a three-month period. Such longer construction periods occur for other similar Los Angeles home construction

projects.⁹⁷ This Lucile/Landa Project will be noisier than ordinary single-family home projects because it consists of the demolition of one existing home, site excavation and grading on a steep hillside, and the construction of two new homes and their garages. As demonstrated below, noise limit exceedances of City thresholds will occur regularly during Project site preparation, caisson drilling, and other construction equipment use.

Foundation Construction Noise will be Excessive

First, consider just the noise impacts in building these homes' foundations. Even if only the site work and foundation construction noise levels exceed City standards, and not other onsite construction noise levels, this Project will generate noise increases above ambient noise levels by more than 10 dBA, and that would be significant.⁹⁸ If more caissons are required than roughly assumed or if greater depths of drilling are required, then the caisson construction period could increase to more than 10 days. Caisson construction activities exceeding 10 days would trigger the stricter 5 dBA increase standard.⁹⁹ Or other excessively noisy construction from operation of heavy equipment and vehicles lasting a total of more than 10 days within a 3-month period would invoke that stricter 5 dBA increase standard.

The exact locations for proposed caisson drilling were not made available, but this generalized diagram on the next page, Figure "B," as based upon advice from a local architect, illustrates their approximate positions for my firm's Report noise impact analysis.

Many neighboring homes will be exposed to more than this significant noise level because of this Project's steep hillside lots, the foundation work being proposed, and the close proximity of many neighboring homes. To calculate such noise levels, the following assumptions are made as to how loud the equipment is, how many hours per day it will be used, whether noise muffling will also occur, and the distances to neighboring homes in the vicinity.

⁹⁷ See e.g., 3599 Lankershim Boulevard (DCP Case No. ENV-2014-4031-EIR, *Single-Family Residence in Studio City Project*; the proposed project was the development of a two-story single-family residence with basement) (from EIR, Section IV.E Noise, p. IV.E-14: "For the proposed project, the construction scenario is expected to last approximately 15 months, and noise levels are projected to periodically exceed the 5 dBA standard for construction lasting more than 10 days in a three month period by a maximum of 12.1 dBA at the closest sensitive receptor. Therefore, the proposed project would result in a potentially significant impact to noise relating to exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and the consideration of mitigation measures and alternatives is required.")

<http://planning.lacity.org/eir/StudioCitySingleFam/DEIR/4E%20Noise.pdf>

⁹⁸ See L.A. CEQA Thresholds Guide (2006) Page I.1-3, Section 2(A) Significance Threshold. The City defines that "a project would normally have a significant impact on noise levels from construction if construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use."

⁹⁹ The City defines that "a project would normally have a significant impact on noise levels from construction if "construction activities lasting more than 10 days in a three month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use." *Ibid.*

Reply to Z Consulting’s Response VI-9, p. 27:

Mr. Zuleger is incorrect in asserting “*This claim is unsubstantiated and irrelevant. As explained in Response II-1, the City’s policy is to utilize the Noise Ordinance Section 112.05 to assess construction noise impacts from residential projects, not the L.A. CEQA Thresholds Guide.*”

Actually, this comment is well substantiated and its assumptions about caisson drilling locations is supported by the opinion of a California licensed Architect who reviewed the Project plans.

Mr. Zuleger’s response again repeats, and again without any evidence, that the City’s current policy is to only use the Noise Ordinance when assessing the significance of construction projects’ noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

Comment – page 32:

Auger Drilling Equipment Operational Noise Levels

For this calculation, the caisson installation equipment or auger drill rig will generate about **85 dBA L_{max} at a 50-foot distance**.¹⁰⁰ Numerous equipment noise prediction reference sources, including even this Initial Study’s Appendix D, identify auger drill rigs producing 85 dBA L_{max} at a 50-foot distance, as does the FHWA.¹⁰¹

This Project’s May 2019 Initial Study’s estimation of a drill rig generating a noise level of 77 dBA L_{eq} at 50 feet¹⁰² is irrelevant and erroneous because that is an *average* noise level, not a *maximum* noise level that must be used when compared to the City’s noise ordinance LAMC § 112.05. If the Initial Study had correctly implemented § 112.05, it would have used a maximum noise level of 85 dBA L_{max} for drill rigs found in the fourth column of the table on PDF p. 184, a value of 85 dBA L_{max} from the Federal Highway Administration Roadway Construction Noise Model.

Reply to Z Consulting’s Response VI-10, p. 27:

¹⁰⁰ See *Construction Noise Assessment* (2017) by Illingworth & Rodkin, Inc., page 6, Table 3, “Construction Equipment 50-foot Noise Emission Limits” - Auger Drill Rig: 85 dBA L_{max} Source: Federal Highway Administration Roadway Construction Noise Model.

¹⁰¹ See: Initial Study, PDF p. 184, Table 1, Auger Drill Rig, 4th column: 85 dBA L_{max} at 50 feet. See also the 2006 FHWA Roadway Construction Noise Manual Users Guide, p. 3, Table IV.F-7; or p. 3, Table 1. Available online at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf The *L.A. CEQA Thresholds Guide*, p. I.1-9, Exhibit I.1-2, “Outdoor Construction Noise Levels”, identifies excavation and grading activities to produce noise levels slightly louder of 86 dBA at 50 feet with mufflers.

¹⁰² See: Initial Study, PDF p. 182, for Drill Rig, fifth column.

Mr. Zuleger is in error in asserting “*this claim is incorrect. Response IV-7 explains why the applicable Noise Ordinance limit is meant to be applied to noise levels using the L_{eq} unit of measurement, not the L_{max} unit of measurement.*”

As I replied to Response IV-7, my Report did not misinterpret the Noise Ordinance’s meaning of **maximum** noise levels. My interpretation is routinely used by the City in its other CEQA environmental reviews. Maximum simply means “maximum,” and not *averaged-for-an-hour* as Mr. Zuleger claims. But nothing in LAMC § 112.05 requires an annoyed neighbor subjected to excessive noise to somehow measure a construction site’s noise levels for an hour, then perform complicated logarithmical calculations to derive an averaged $L_{eq-1 \text{ hour}}$ value. Instead, all one needs to do is use a simple noise meter that displays the maximum noise level during any chosen time interval. That is the plain meaning of § 112.05’s use of the word “maximum.”

Comment – pages 32 - 36:

Caisson Drilling Noise Levels Will Be Excessive At Neighboring Homes

Equipment Noise Mitigation

The Project’s Initial Study vaguely requires a *de facto* mitigation measure for the use of mufflers if that heavy construction “equipment is able to use mufflers” to somewhat quiet the noise from the equipment during its operations.¹⁰³

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¹⁰³ See Initial Study, PDF p. 14, “Mufflers. All heavy construction equipment that is able to use mufflers will do so.”

Figure B
APPROXIMATE LOCATION FOR CAISSON DRILLING
 (Caisson locations only shown in a generalized way for noise impact analysis purposes)

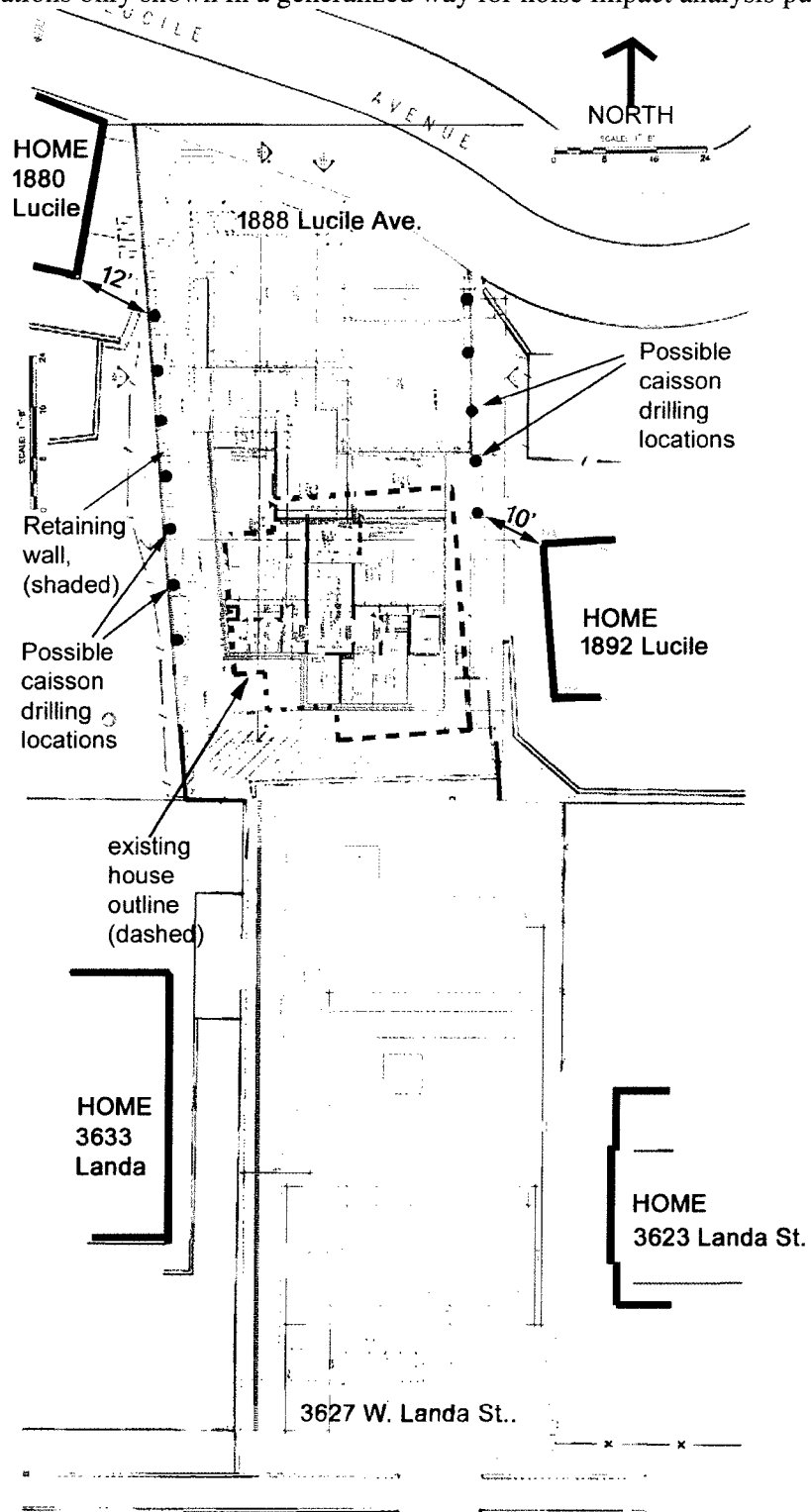
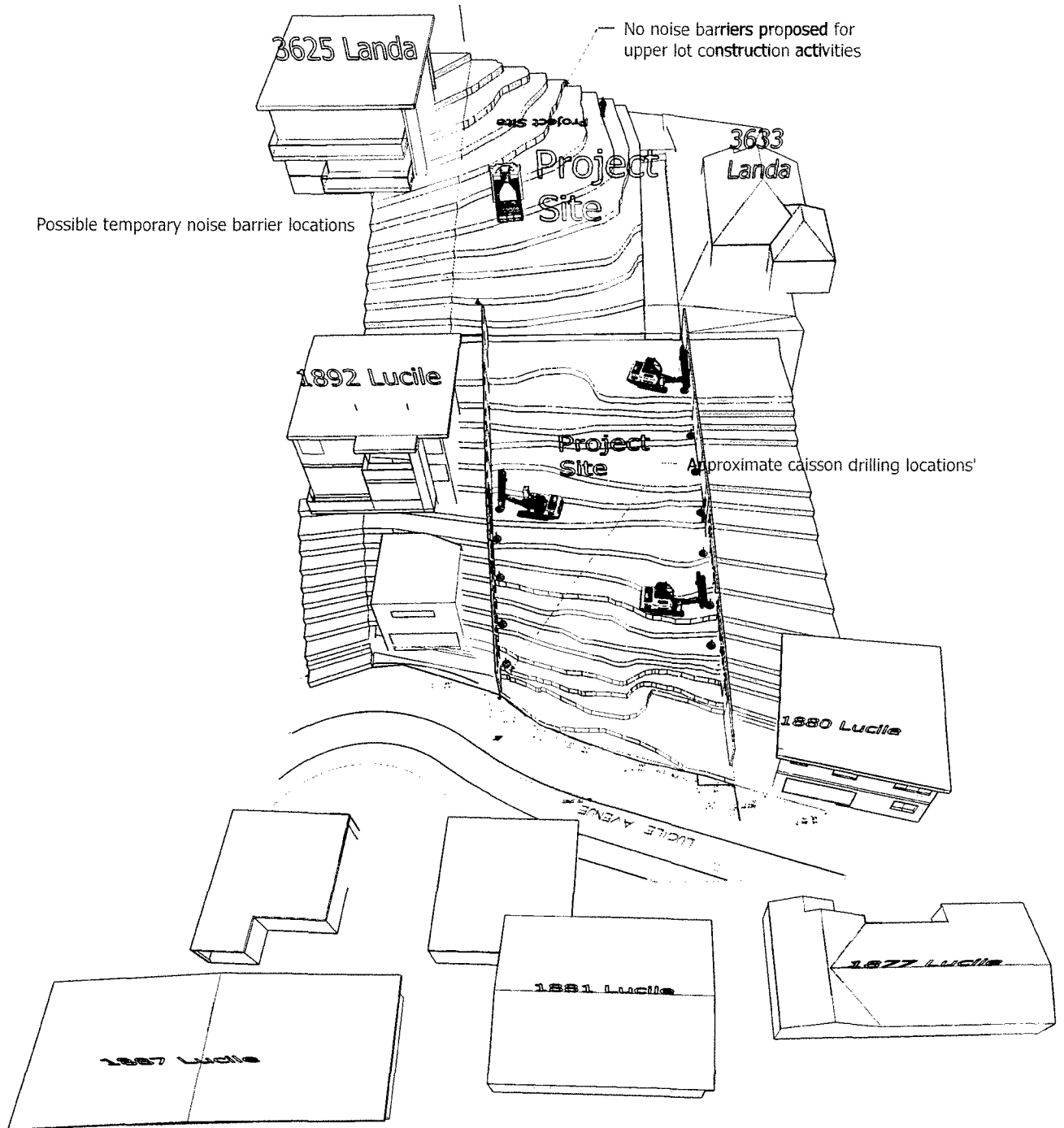


Figure B-2
3D-VIEW OF NEIGHBORING HOMES TO
APPROXIMATE LOCATION FOR CAISSON DRILLING
 (North direction is toward bottom of illustration; topo map represents 2-foot contour intervals)



Calculation of Auger Drilling Equipment Noise Levels¹⁰⁴

To evaluate whether this Project's construction noise levels will be significant and will exceed City standards by exceeding ambient noise levels by more than 10 dBA, it is necessary to calculate how loud that construction noise will be at neighboring homes some distance from this Project's drilling operations.

In this Project's neighborhood, some homes are significantly higher in elevation compared to this Project's hillside site, and their upper floors may have direct line-of-sight exposure to such equipment activity. Accordingly some neighboring homes will not be shielded from direct noise paths during drilling. Calculations can provide relatively accurate estimations of noise exposure when such direct views exist unblocked by topography or intervening structures.

The distance from the noise source to a receptor is a primary consideration in determining the actual noise level experienced at the receptor. Most reference noise levels are specified at a distance of 50 feet from the source. The calculation of noise from a point source, such as construction equipment, at other distances uses the following "Equation 1" for noise attenuation over distance:

$$(1) \quad L_2 = L_1 - |20 \log_{10} \left(\frac{d_1}{d_2} \right) |,$$

Where:

L_1 = known sound level at d_1

L_2 = desired sound level at d_2

d_1 = distance of known sound level from the noise source

d_2 = distance of the sensitive receptor from the noise source

This equation is the mathematical expression for a noise level being reduced by 6 dBA for each doubling of distance from the source.¹⁰⁵

Typical noise levels for construction equipment are shown in Tables 1 and 2 below.

¹⁰⁴ Formulas for noise level calculation are from the Inglewood Oil Field Specific Plan Project Draft EIR, (2015), which was accessed online at <http://www.culvercity.org/home/showdocument?id=9697> on February 9, 2018, and alternatively a copy will be provided to the City if requested.

¹⁰⁵ U.S. Department of Transportation Federal Highway Administration ("FHWA") Website (8/24/17) Highway Traffic Noise Analysis and Abatement Policy and Guidance, https://www.fhwa.dot.gov/Environment/noise/regulations_and_guidance/polguide/polguide02.cfm; *see also* California Department of Transportation ("Caltrans") (Sep. 2013) Technical Noise Supplement, pp. 2:27-28 (stating for point sources, "sound level attenuates or drops off at a rate of 6 dBA for each doubling of the distance[;]"). Also see CalTrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Oct. 1998; p. 25, Equation N-2141.1, or http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

Table 1:
Typical Construction Noise Levels, Equipment Powered by Internal Combustion Engines
 (U.S. EPA, 1971, NTID300.1 Report)¹⁰⁶

Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86
Impact Equipment	
Type	Noise Levels (dBA) at 50 Feet
Saws	71 - 82
Vibrators	68 - 82
Notes: 1 Referenced Noise Levels from the Environmental Protection Agency (EPA)	

¹⁰⁶ U.S. EPA (12/31/71) Noise from Construction Equipment and Operations Building Equipment, and Home Appliance, p. 11, <https://nepis.epa.gov/Exec/QueryPDF.cgi/9101NN3I.PDF?Dockey=9101NN3I.PDF>; *see also* MD Acoustics (10/30/17) Noise Impact Study for Commonwealth Development, p. 31 (utilizing U.S. EPA Noise Levels for mixed-commercial development in the City of San Jacinto, CA), https://www.sanjacintoca.gov/UserFiles/Servers/Server_10384345/File/City%20Government/Community%20Development/Planning/CEQA/Commonwealth%20Crossings/07-NoiseStudy.pdf.

Table 2
NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT
(L.A. CEQA Threshold Guide, p. I.1-8)

<u>Equipment</u>	<u>Levels in dBA at 50 feet^a</u>
Front Loader	73-86
Trucks	82-95
Cranes (moveable)	75-88
Cranes (derrick)	86-89
Vibrator	68-82
Saws	72-82
Pneumatic Impact Equipment	83-88
Jackhammers	81-98
Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (peaks)	95-107
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

* Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of emissions as that shown in this table.

Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

Reply to Z Consulting's Response VI-11, p. 30:

Mr. Zuleger responds with statements that prove not to be accurate where he writes:

“Please note that both of the above references for noise source data are from the same source, EPA’s Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. Also, note that these noise levels do not include the use of mufflers, which the same source states reduce noise levels by 10 dBA. The La Forest Report contradicts itself by arguing the 10-dBA reduction for mufflers is inaccurate, while then using the same source for noise levels. See Response IV-5 for an explanation of why the noise source data used in the Initial Study is correct.”

Mr. Zuleger has not accurately read the EPA’s 1971 publication if he believes that adding mufflers will reduce this Project’s construction equipment noise levels by 10 dBA. The EPA’s publication does not actually state that or even imply it. He must have misread the report by taking the data in *Table V* out of context which, at first glance, might appear to indicate improving mufflers on engine exhausts probably results in a 10 dBA reduction in noise. But that is not the whole picture, and he is incorrect to claim as much. There is even a footnote associated

with this *Table V* that states” Incremental reductions can be realized only by simultaneously quieting of all sources of equal strength.”¹⁰⁷ That means if the engine’s exhaust is quieted with an improved muffler, but the engine block or transmission or hydraulic system is not equally quieted, then the desired incremental reductions may not be very great. Not as great as Mr. Zuleger claims, anyway. Other portions of that EPA document must be read to understand what the EPA report states. Reducing exhaust noise by adding better mufflers will only reduce the noise from that heavy construction equipment by a small fraction, because such equipment produces substantial noise emissions from other locations than just its exhaust pipes.

In the Appendix C of that 1971 EPA report, is a report called Sound Level Considerations by American Construction Machinery Manufacturers by H. T. Larmore that is dated May 24, 1971.

It begins on page C-1¹⁰⁸ by stating: “This presentation will attempt to place the problem of noise into its proper perspective relative to construction and construction machines – both as a potential cause of hearing loss for workers and as an air pollutant for the nearby community of construction sites.”

Then on page C-5 it states:

“THE COMPLEX ANSWERS

These individual and collective answers are not simple nor do results come easily or cheaply. As a beginning, component noise sources are rapidly being isolated and evaluated. Oversimplification of the problem frequently leads many to believe that engine exhaust noises are the culprit and that larger mufflers would turn the trick. To be sure, that is part of the problem. However, noise reduction of the exhaust permits other machine noises to become dominant. Larger mufflers also create a visibility problem since they usually end up directly in front of or behind the operator.

There are several other noise sources which are the same order of magnitude as exhaust noises, depending on the machine and its configuration.

These are:

1. Internal engine noises exclusive of the combustion itself.
2. Engine air inlet
3. Transmission and other gear noises.
4. Hydraulic system noises including the pump, tubes, valves, cylinders and hydraulic motors
5. Air noise from the fan and radiator.
6. Various moving mechanical elements such as crawler tracks, or scraper elevators.

It is very likely that on a large machine today each of these noises is individually in excess of 90 dB(A) (decibels on "A" rating scale). In the case of two equal noise source levels, the sum is

¹⁰⁷ See: 1971 EPA report linked below, on PDF p. 310 for its page C-1 and Appendix C.

¹⁰⁸ See: “1971 EPA Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances”, PDF p. 314 for Appendix C, page C-5. Excerpts from this document are attached as an Exhibit to this Reply letter. This document is available online at:
<https://nepis.epa.gov/Exe/ZyPDF.cgi/9101NN31.PDF?Dockey=9101NN31.PDF>

about 3 dBA higher than either source alone. For equal noise sources, the sum is about 6 dBA higher.

And this in reverse acts much the same way. Suppose the total noise of a machine is 100 dBA composed of four equal noise sources. Let's say the exhaust, engine noises, gear and hydraulic noises and fan noises are these four. If by some magic the exhaust and internal engine noises could be reduced to zero, the machine would still have a noise level of 97 dBA. So, this is the challenge to the engineers who are studying each noise source and striving for noise reduction of each component.”

Apparently understanding this issue has been a challenge also to this applicant’s engineer, Mr. Zuleger. Thus, this EPA report explains that while reducing engine exhaust noise with improved mufflers might quiet just the exhaust noise by 10 dBA, the combined noise emission of the construction equipment might diminish only about 3 dB to 97 dBA.

Such a predicted reduction if mufflers are used closely parallels the data in the **2006 L.A. CEQA Thresholds Guide** that my Report relies upon. The City’s Threshold Guide describes noise level differences between equipment with mufflers and without mufflers of up to about a 3 dBA difference. Accordingly, my Report does not contradict itself and is not inaccurate. With the use of the 1971 EPA document as substantial evidence concerning the inadequacy of the proposed muffler RCM proposed in the Initial Study, it can be seen that the Project’s noise impacts will still therefore be significant.

Comment – pages 38 - 39:

CATEGORICAL EXEMPTIONS CANNOT RELY ON WEAK *DE FACTO* MITIGATION MEASURES TO EVADE CEQA’S REQUIREMENT FOR A MND OR EIR.

Equipment Acoustic Utilization Factor

If heavy equipment is operated full time and at full power throughout a day, its noise impact in the neighborhood will be greater than if operated intermittently or for just a few hours of a day. Equipment noise levels are cumulative when averaged over hours, so they are higher when not interrupted by long, quiet periods. During drilling at this Project site, such an auger drill rig would be operated nearly constantly for much of the work day according to Mr. Tapia who was consulted about similar drilling. With the estimated number of caissons to be drilled, such construction would take at least one day. While continuous use of individual equipment may not be realistic, the applicant has failed to provide the City or the public any information regarding construction timing or likely concurrent equipment usage. Nevertheless, the construction impacts raised herein identify numerous construction equipment and activities that will be likely employed and that will generate significant noise levels on an ongoing basis that require adequate analysis and mitigation. This constitutes substantial evidence supporting a fair argument that the Project will have significant construction noise impacts that can be feasibly mitigated.

In the circumstance of this Project with its caisson hole drilling, the auger drill rig equipment will remain relatively stationary for long hours as deep holes are slowly drilled. For construction equipment, the average noise level, L_{eq} , is related to the maximum noise level, L_{max} , by the following equation:

$$L_{eq} = L_{max} + 10 \log (AUF), \text{ where,}$$

L_{eq} is the average noise level from a piece of construction equipment at 50 feet,

L_{max} is the maximum noise level from a piece of construction equipment at 50 feet, and

AUF is the acoustic utilization factor, which is the fraction of time that a piece of construction equipment is typically at full power.

The L_{max} and AUF data for construction equipment noise from operation of the auger drill rig are tabulated in the impact analysis calculations below in this Table 3:

Table 3:
CALCULATION OF AUGER DRILL NOISE LEVELS AT DIFFERENT DISTANCES

Max. Auger Noise Level: (dBA L_{max})	AUF% use factor (dBA L_{eq})	Average Auger Noise Level: (dBA L_{eq})	Distance in feet from noise source									
			25	50	100	150	200	250	300	350		400
Loudness at specified distance in dBA L_{eq}												
85	20%	78	84.0	78.0	72.0	68.5	66.0	64.0	62.4	61.1	59.9	20%
85	40%	81	87.0	81.0	75.0	71.5	69.0	67.0	65.5	64.1	63.0	40%
85	60%	82.8	88.8	82.8	76.8	73.2	70.7	68.8	67.2	65.9	64.7	60%
85	80%	84	90.0	84.0	78.0	74.5	72.0	70.1	68.5	67.1	66.0	80%
85	100%	85	91.0	85.0	79.0	75.5	73.0	71.0	69.4	68.1	66.9	100%
EXCEEDS THRESHOLD OF SIGNIFICANCE												
80	20%	73	79.0	73.0	67.0	63.5	61.0	59.0	57.4	56.1	54.9	20%
80	40%	76	82.0	76.0	70.0	66.5	64.0	62.0	60.5	59.1	58.0	40%
80	60%	77.8	83.8	77.8	71.8	68.2	65.7	63.8	62.2	60.9	59.7	60%
80	80%	79	85.0	79.0	73.0	69.5	67.0	65.1	63.5	62.1	61.0	80%
80	100%	80	86.0	80.0	74.0	70.5	68.0	66.0	64.4	63.1	61.9	100%

65.7 dBA L_{eq} threshold of significance if drilling for more than 1 day
60.7 dBA L_{eq} threshold of significance if noise for more than 10 days

where $L_d = L_{ref} - 20 \log (d/ref)$ and where $L_{eq} = L_{max} + 10 \log (AUF)$

Note: these calculations show that Project drilling noise levels will exceed City standards of a 10 dB maximum increase above presumed ambient noise levels at all distances of up to 400 feet from source of drilling for a 80% or 100% use factor, not taking into account either decreases in loudness due to shielding of other structures or increases in loudness due to reflections of noise from steep hillside surfaces or other structures.

The threshold of significance under the circumstance that the Project's foundation caisson construction drilling occurs for more than one day and less than 10 days is **65.7 dBA L_{eq}**.¹⁰⁹ That means that if drill rig noise levels exceed 65.7 dBA L_{eq} at a neighboring residence, its noise impact just based upon an increase in loudness during drilling would be significant. **Table 3** above shows that this City's 10 dBA maximum increase noise standard for drilling is exceeded at distances up to about 400 feet from possible caisson drilling locations where drill rig noise is not effectively shielded by temporary noise barriers or other existing structures on other properties.

The Table 3 shows that noise standard exceedance would also occur during drilling as measured at homes and their outdoor yards within 200 feet, even when a muffler or the applicant's proposed temporary noise barrier that just breaks the line-of-sight is used on an auger drill rig to reduce its noise by 5 dBA.

Reply to Z Consulting's Response VI-12, p. 31:

Mr. Zuleger is incorrect in asserting:

"As stated in Response II-1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance, specifically Section 112.05. The La Forest Report uses an incorrect threshold of significance from the L.A. CEQA Thresholds Guidelines."

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels. Since the **2006 L.A. CEQA Thresholds Guide** has not been rescinded by the City Council and is still in use, then its thresholds are still applicable to this Project's noise impacts.

He also responds:

"Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for numerous reasons, including:

"The calculations do not include the 10 dBA noise reduction provided by the noise muffler RCM, as stated in the same document that the La Forest Report uses for noise source data (see Response VI-11)

¹⁰⁹ Calculation: 55.7 dBA L_{eq} + 10 dB = 65.7 dBA L_{eq}

As described in reply to Response VI-11, mufflers will not provide a 10 dBA noise reduction and there is no substantial evidence supporting that assertion in the Initial Study or elsewhere.

The calculations do not include any reduction in noise from the portable barrier RCM, which is expected to provide a 5 to 10 dBA reduction in noise for the most impacted neighbors to the east and west.

Again as described in detail above, there are no calculations or evidence in the Initial Study supporting such a 5 to 10 dBA reduction at all neighboring homes from the use of these temporary noise barriers.

The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness, etc. are not included.

No such shielding will present itself to those homes north of Lucile Avenue directly across from this Project site.

“The calculation is based on inaccurate and speculative acoustic utilization factors (AUF). The appropriate AUF for the drill rig is 20%, based on the FHWA’s Roadway Construction Noise Model. The La Forest Report utilizes AUFs up to 100% (which are not theoretically possible for this type of construction equipment) for these calculations. This is based on a misunderstanding or mischaracterization of the AUF. The AUF does not represent the percentage of time the equipment is used, as the La Forest Report implies. Rather, it represents the percentage of time the equipment is used at full load. In other words, the AUF is the combination of the percentage of time the equipment is utilized and, more importantly, a load factor that represents the intensity of use during that time. Construction equipment does not operate constantly at full load (i.e., always running the engine at 100% of capacity). All equipment has a load cycle over which the power output of the engine and, therefore, the amount of noise generated changes.”

Mr. Zuleger’s response seems to indicate that he did not carefully read the comment above and its Table 3 labeled “CALCULATION OF AUGER DRILL NOISE LEVELS AT DIFFERENT DISTANCES.” The Initial Study does not describe what AUF factor will be used. Accordingly my Report, to cover all bases, presented Table 3 with different AUFs that demonstrate even with an AUF as low as 20% within distances up to 100 feet between drilling operations and unshielded home upper walls, such drilling noise impacts will still exceed the threshold of significance. Accordingly this Response is in error, and there is evidence this Project’s drilling noise levels will be significant at some homes.

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Calculating Number of Days of Excessive Construction Noise to Determine Threshold of Significance for Noise Impacts above Existing Ambient Noise Level – Drilling Noise Levels Will Be Significant at Nearby Homes.

Some assumptions must be made to determine which thresholds of significance for noise level increases should be used. As discussed above, there is good reason to predict that all of this Project's excessively noisy construction phases will last for more than 10 days in a 3-month period. The Project application documents do not comply with the City's CEQA Thresholds Guide to contain required information about the type and amount of equipment, description of construction phasing or scheduling of equipment, or the location of equipment in relation to the residential uses adjacent to the Project site. Regardless of whether excessive construction noise levels occur for less than or for more than 10 days in a 3-month period, this Project's noise levels will exceed these City standards pertaining to excessive construction noise levels:

L.A.'s CEQA Threshold Guide (2006), page I-1.3, states that:

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

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

Drilling for the Project home's foundation caissons will undoubtedly take more than one day. So at a minimum, the threshold of significance would be exceeded if construction noise levels at neighboring homes would exceed 10 dBA above the existing ambient exterior noise level. If drilling and other noisy construction lasts for more than 10 days, a 5 dBA threshold of exceedance would apply.

The Initial Study states that measurements reveal that this Project's site daytime ambient noise levels are about 55.7 dBA L_{eq} . Therefore if this Project generates construction noise during foundation drilling of greater than **65.7 dBA L_{eq}** at neighboring homes, its noise impact will be considered to be significant. This threshold of significance of 65.7 dBA L_{eq} can be compared to **Table 3** above to evaluate at what distance the Project's noise impacts will be significant. Similarly, a **60.7 dBA L_{eq}** threshold can be compared if that drilling lasts for more than 10 days.

For example, the loudest phases of construction (excavation/grading and finishing) will potentially generate noise levels upwards of 99 dBA at the nearest homes located perhaps

just 10 feet from the proposed Project site.¹¹⁰ Such construction noise levels would exceed the Project site's 55.7 dBA L_{eq} daytime ambient noise level by **43 dBA**.¹¹¹ That noise level would be 39 dBA greater than the City's 10 dBA exceedance threshold of significance at the nearest residential property lines. (L.A. CEQA Thresholds Guide, p. I.1:3). This would be a significant noise impact.

Reply to Z Consulting's Response VI-13, p. 33:

Mr. Zuleger is incorrect in asserting:

"As stated in Response II-1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance, specifically Section 112.05. The La Forest Report uses an incorrect threshold of significance from the L.A. CEQA Thresholds. The significance threshold for this Project does not depend on the number of days of construction activity."

"Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for the reasons outlined in Response VI-12."

In reply, and of course there is repetition involved, Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

The **2006 L.A. CEQA Thresholds Guide** should be used for these significance analyses. Even if it isn't used, the calculations in this comment above demonstrate that the Project's drilling noise could exceed the project site's daytime ambient noise level of 55.7 dBA L_{eq} at some unshielded 2nd story home walls with windows by about 43 dBA. Such a dramatic exceedance is surely a significant impact even under the State's current CEQA Guidelines Appendix G or the City's possible adoption of that same threshold. The Project's noise impacts will still therefore be significant.

¹¹⁰ Calculation is based upon a construction noise level of 86 dBA at 50 feet, but increased to 99 dBA as distance shrinks to 10 feet from property line for closest excavation and grading activities. The adjacent home at 1892 Lucile Avenue is approximately 10 feet from where this Project's caissons will be drilled along its eastern retaining wall (See [Figure B](#)).

¹¹¹ Exceedance calculation: (99 dBA [at 10 feet] construction noise during excavation of) – (55.7 dBA daytime ambient level) = (43 dBA exceedance above daytime ambient level). That increase would be 39 dBA greater than the City's 10 dBA threshold of significance (LAMC § 111.02).

Project Site Excavation Noise Levels will be Significant

Or for example, site excavation of at least 11 feet in depth for the Project’s lower floors will also last more than one day. The center of these excavation areas would be about 25 feet from the Project’s adjacent residential property lines. Excavation activities from just one piece of heavy equipment like a **backhoe** produces noise levels of up to 95 dBA at 50 feet. At 35 feet, such equipment noise is increased by the shorter distance to about 98 dBA.¹¹² No temporary noise barriers are proposed for excavation equipment noise reduction, only for drill rig noise. That noise level from excavation of 98 dBA or louder when excavation occurs in the center of the Project’s site would *exceed the presumed daytime ambient noise level of 50 dBA by about 48 dBA*. Excavation activities closer than 35 feet would produce even louder noise, especially when more than a single piece of heavy equipment is operated simultaneously.¹¹³ That noise level would greatly exceed the City’s presumed daytime threshold of significance of 5 dBA during excavation and is considered significant.¹¹⁴ Therefore, the consideration of mitigation measures and alternatives is required.

Reply to Z Consulting’s Response VI-14, p. 33:

Mr. Zuleger is incorrect in again asserting:

“As stated in Response II-1, the City of Los Angeles’ policy is to assess noise impacts associated with construction of residential projects using the City’s Noise Ordinance, specifically Section 112.05. The La Forest Report uses an incorrect threshold of significance from the L.A. CEQA Thresholds.

Mr. Zuleger’s response repeats, without any evidence, that the City’s current policy is to only use the Noise Ordinance when assessing the significance of construction projects’ noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

“Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for numerous reasons, including:

¹¹² Noise level increase due to shorter distance is calculated as increased by about 6 dB for each halving of distance.

¹¹³ The Initial Study does not propose any mitigation measure or Project Design Feature to prohibit multiple noise sources occurring at one time, although the MND did.

¹¹⁴ Excavation work, including demolition and site preparation phases, will take more than 10 days within a 3-month period, thus a 5 dBA noise level increase standard applies. *See*: Initial Study, PDF p. 134, Table 1, Construction Schedule and Equipment, predicting those phases to take 59 work days in a 9 week period.

“The calculations do not include the 10 dBA noise reduction provided by the noise muffler RCM, as stated in the same document that the La Forest Report uses for noise source

As explained above, mufflers will not reduce construction equipment noise levels by 10 dBA.

“The substantial shielding effects of terrain, intervening structures, vegetation, fences,

No such shielding exists to the north of the Project site for homes along Lucile Avenue.

“The La Forest Report’s source for noise data indicates that backhoes produce 73- 95 dBA at 50 feet (without mufflers). The La Forest Report utilizes the maximum end of this broad range. This noise level is much higher than other reliable sources of noise data (see Response IV-5).”

There is no evidence in the Initial Study that this backhoe noise data is unreliable. Nothing in the RCMs or COAs for this Project of the Noise Ordinance prevents the Project builders from using backhoes that generate such noise levels.

Mr. Zuleger does not seem to understand or appreciate that even if quieter backhoes are used, their use could create noise levels that still greatly exceed the applicable threshold of significance here. For example, if a backhoe emits noise in the middle of that 73 -95 dBA at 50 feet range, say **84 dBA** at 50 feet, (about 11 dBA quieter), then at 35 feet in the center of the Project site, its noise level would be about 87 dBA and would exceed the presumed daytime ambient noise level of 50 dBA by about 37 dBA. That too is a very large exceedance and would constitute a significant noise impact to neighboring homes.

Comment – page 40:

Site Excavation Noise Levels will be Significant (continued).

From **Table 3** above, it can be seen that construction noise levels from auger drilling would exceed a 65.7 dBA L_{eq} threshold of significance up to 200 feet from the drilling locations for any *acoustic utilization factor*.¹¹⁵ If auger drilling occurs for more than 60% of the time as can be expected and temporary noise barriers are used as proposed, that threshold would be exceeded at 200 feet from the drilling location even to the east and west and would include another couple of dozen homes.¹¹⁶ This Table 3 also shows that

¹¹⁵ Acoustic utilization factor: Defined as the fraction of time that a piece of construction equipment is typically at full power; herein considered for 20%, 40%, 60%, 80% or 100% of the time.

¹¹⁶ See Figure C on page 45 with locations of affected homes within 300 feet of Project construction. Homes where the line-of-sight from the drill rig to any exterior walls of the homes is just broken by the temporary noise barriers will have a 5 dBA reduction in construction noise per Initial Study, Appendix D. Also, more distant homes not nearby and directly behind the temporary noise barrier will have even less noise

if construction noise exceedances above City standards occur for more than 10 days in a 3-month period, and thus results in a lower, 60.7 dBA L_{eq} threshold of significance, then homes within 400 feet of the Project could be exposed to significant noise impacts for nearly all calculated acoustic utilization factors, or essentially any feasible drilling operations. Within 200 feet of this Project's construction, there are 24 homes. Within 300 feet of such construction, there are about 59 homes. See **Figure C** below on page 43.

Reply to Z Consulting's Response VI-1, p. 25:

Mr. Zuleger is incorrect in asserting:

"As stated in Response II-1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance, specifically Section 112.05. The La Forest Report uses an incorrect threshold of significance from the L.A. CEQA Thresholds. Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for the reasons outlined in Response VI-12."

This is simply not an adequate response. It completely ignores the evidence presented in the Report. As described above in reply to Response VI-12, there is no merit to claiming the calculations are inaccurate.

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

Comment – page 41- 42:

E. PROJECT CONSTRUCTION NOISE FROM COMBINED USE OF OTHER EQUIPMENT WILL BE SIGNIFICANT AT HOMES BECAUSE IT WILL ALSO EXCEED CITY'S NOISE LIMIT OF 75 dBA L_{MAX} AT 50 FEET AND BE CLEARLY AUDIBLE AT DISTANT HOMES.

Construction activities that generate a noise level greater than 75 dBA L_{max} at 50 feet would produce a significant noise impact according to the City's Noise Ordinance.¹¹⁷ One

attenuation because "[f]or those residents not directly behind the barrier, a noise reduction of 3 to 5 dB(A) can typically be provided..." (See: Initial Study, PDF p. 186, quoted from the FHWA Noise Barrier Design Handbook.)

¹¹⁷ According to § 112.05 of the LAMC, construction activities may not exceed 75 dBA L_{max} at a distance of 50 feet 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.

can determine approximately how many homes will be exposed to such excessive and significant noise levels from this Project's other heavy construction equipment that will be unblocked by any temporary noise barriers. Individual operations of each jackhammer will each emit maximum noise levels of about **89 dBA L_{max} at 50 feet**.¹¹⁸ But more than one jackhammer will at times be operating on this Project site, and the combined noise levels from more than one being operated will be louder than from just one's use. The applicant proposes using three jackhammers, presumably at the same time.¹¹⁹ During demolition, other equipment may be operating at the same time including a mini excavator, two backhoes, and one dump truck. Consider however the significance of the Project's noise impact on neighbors of just the operation of three jackhammers at the same time.

If three jackhammers (or three other heavy equipment units) each generate 89 dBA L_{max} at 50 feet, when combined they would **produce a noise level of 93.8 dBA L_{max} at 50 feet**.¹²⁰ This is a noise level that would significantly exceed the City's threshold of significance of 75 dBA L_{max} at 50 feet by more than 18 dBA. If operated equidistant from any home in the Project's neighborhood, their combined maximum noise level would drop to about 87.8 dBA L_{max} at 100 feet, 81.8 dBA L_{max} at 200 feet, and 75.8 dBA L_{max} at 400 feet.¹²¹ Those noise levels would be excessive as defined by the Noise Ordinance, LAMC § 112.05, and would create significant noise impacts because they would be starkly audible as they would greatly exceed the ambient noise levels at those homes. Even at 400 feet, their combined noise level of 75.8 dBA L_{max} would greatly exceed the City's presumed daytime noise level of 50 dBA L_{eq} **by over 25 dBA**.¹²²

There are dozens of homes within 300 to 400 feet of this Project site as shown on **Figure C** below that could be exposed to significant noise impacts from the operation of multiple equipment during Project construction. Even at a distance of 800 feet from the Project

¹¹⁸ See: Initial Study, PDF p. 184, Table 1, CA/T equipment noise emissions, 5th column, Jackhammer: 89 dBA L_{max}

¹¹⁹ See: Initial Study, PDF p. 134, Construction Schedule and Equipment list.

¹²⁰ Calculation: Sound levels in decibels are logarithmic values that cannot be combined by normal algebraic addition. Instead, the sound levels in decibels are first converted to energy equivalents, the energy equivalents are added algebraically, and the total energy equivalent is converted back to its decibel values. In this case, $89 \text{ dB} + 89 \text{ dB} + 89 \text{ dB} = 10 \cdot \log(10^{(89/10)} + (10^{(89/10)} + (10^{(89/10)})) = \mathbf{93.8 \text{ dB}}$.

¹²¹ Given noise attenuation due to distance is reduced by about 6 dB for each doubling of distance from a point source, one can calculate a dB level at different distances when there is a known dB level for a known distance by the following equation: $\text{dB}_2 = \text{dB}_1 - 10 \times A \times \text{LOG}(d_2/d_1)$ where:

LOG = logarithm, base 10,

A = dB drop-off rate coefficient (in this Project's case, a = 2.0 for a 6 dB drop off rate (point source, no atmospheric absorption)).

dB_1 = dB level at know distance from source, d_1

dB_2 = dB level at another distance from source, d_2

d_1 = known distance from source for known decibel level dB_1

d_2 = second distance from source for which known decibel level estimate (dB_2) is desired

In this case, at a location 100' (d_2) from the Project site work, where $\text{dB}_1 = 89.8 \text{ dBA L}_{\text{max}}$ at 50' (d_1) from the three combined noise sources, $\text{dB}_2 = \text{dB}_1 - 10 \times A \times \text{LOG}(d_2/d_1) = 89.8 - 10 \times 2.0 \times \text{LOG}(100/50) =$

$83.8 \text{ dBA L}_{\text{max}}$. At distances of 200 feet and 400 feet, this same formula results in the values above.

¹²² The Initial Study contains no noise level measurements at neighboring homes that far away, so the City requires that we presume the daytime ambient noise level is 50 dBA L_{eq} in such residential areas.

site, the noise level from simultaneous operation of three loud jackhammers would be about 69.8 dBA L_{max} .¹²³ At that noise level and distance, the Project's noise would be clearly audible above the presumed 50 dBA L_{eq} daytime ambient noise level by over 19 dBA. Within 800 feet are likely more than 100 homes which could be exposed to this Project's excessive construction noise.

There is an additional factor pertinent to jackhammer noise because of its unique, impulsive character that is particularly annoying to people. But the Initial Study entirely fails to identify the City's Noise Ordinance requirement per LAMC § 111.02(b)(2) that predicted noise levels from certain construction equipment like jackhammers be increased for purposes of significance analysis by 5 dB to account for its "repeated impulsive noise." The predicted noise impacts of three jackhammers used simultaneously for Project demolition would have to be increased by those 5 dB, resulting in a significantly greater noise impact than calculated above of **98.8 dBA L_{max}** at 50 feet.¹²⁴ That noise level as adjusted for the jackhammer noise character would be over 23 dBA greater than the City's threshold of significance of 75 dBA L_{max} at 50 feet.

By comparison, the Initial Study evaluates jackhammer noise as if it would emit only 72 dBA L_{eq} at 50 feet. The Initial Study ignores that three may be used, ignores the 5-dB adjustment from LAMC § 111.02, and ignores that the City's requirement that maximum, not average, noise levels must be referenced.

Even acknowledging that many of these homes will be blocked from direct line-of-sight by intervening residential structures between them and these three combined noise sources, and thus not exposed to the total noise level just calculated, that still leaves a large number of homes to be significantly impacted by this Project's construction noise that will still be above the City's threshold of significance.

Reply to Z Consulting's Response VI-16, p. 35:

Mr. Zuleger is incorrect in asserting:

While this claim uses the correct significance threshold for this Project's construction noise impacts, the calculations used to determine the noise levels are inaccurate for numerous reasons, including:

The calculations incorrectly use the L_{max} unit of measurement, not the L_{eq} (see Response IV 7).

Not so. See above for reply to similar Response.

¹²³ Calculation: Reduction by 6 dBA for each doubling of distance: 75.8 dBA L_{max} - 6 dB = 69.8 dBA L_{max}

¹²⁴ Calculation: 93.8 + 5 dB penalty adjustment for impulsive noise per LAMC § 111.02 = 98.8 dBA L_{max} .

The calculations do not include any reduction provided by the demolition procedure RCM, which is expected to reduce jackhammering noise levels at the maximum exposed receptor by 5 to 10 dBA.

Not so. Nowhere in the Initial Study is any evidence, much less authentic calculations, supporting the claim that the demolition procedure will reduce **jackhammer** noise by any amount because nothing will shield such construction noise from direct line-of-sight to homes north of Lucile Avenue.

The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness, etc. are not included.

No evidence in the Initial Study supports that claim; as stated above, no shielding exists to homes to the north.

The calculations sum the noise level of multiple pieces of equipment together while the significance threshold is applied to each piece of equipment individually.

Not true. See above demonstrating why the thresholds of significance apply to all the Project's noise emissions when occurring simultaneously.

The calculations apply a 5 dBA adjustment to jackhammer noise inappropriately by claiming that the noise is impulsive. Impulsive noise is defined as "sound of short duration, usually less than one second, with an abrupt onset and rapid decay. By way of example "impulsive sound" shall include, but shall not be limited to, explosions, musical base drum beats, or the discharge of firearms." Due to the rapid action of a jackhammer, its noise is perceived as a constant noise (i.e., each impact of the jackhammer with the surface is not heard independently), not an impulsive noise.

Most people would characterize **jackhammer** noise as impulsive sounding.

The calculations assume an ambient noise level of 50 dBA, while measurements documented an ambient noise level of 55.7 dBA.

Not so. The construction day is proposed from 7:00 a.m. until 9:00 p.m., for 14 hours. The brief noise level measurements recording ambient conditions of 55.7 lasted only one hour each. That one hour does not represent the ambient noise conditions for the other 14 hours of the workday which change throughout the day and evening. In the absence of sufficient measurements, the City's procedure is to presume the daytime ambient noise level is 50 dBA L_{eq} .

Moreover, even if all daytime hours were measured at 55.7 dBA L_{eq} , the Project's construction noise would still greatly exceed that ambient level as calculated above and would be considered a significant noise impact.

Comment – pages 43 - 45:
**Homes within 200 or 300 feet of Project Construction of Lucile House or Landa House Will
be Exposed to Excessive Construction Noise**

Figure C

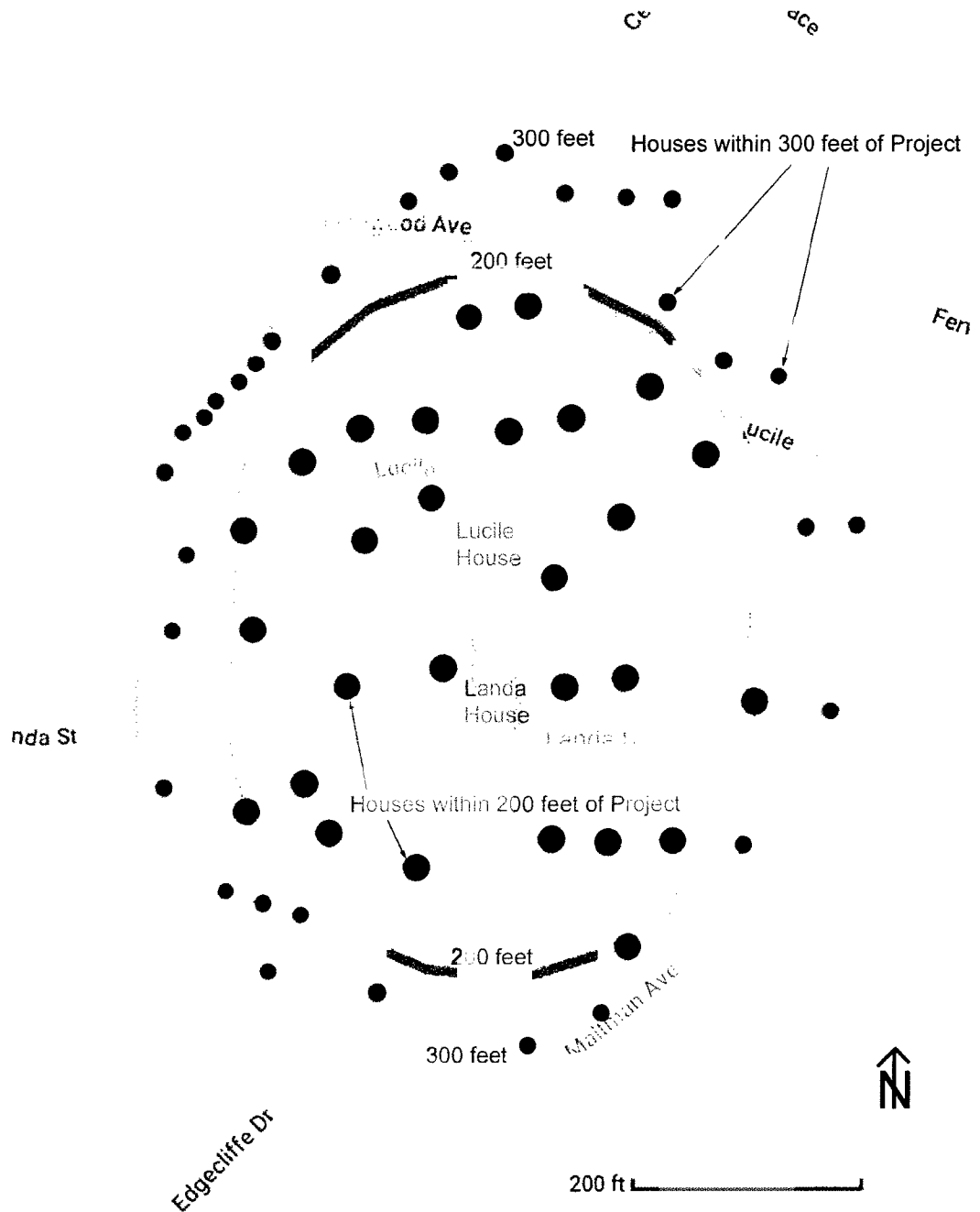
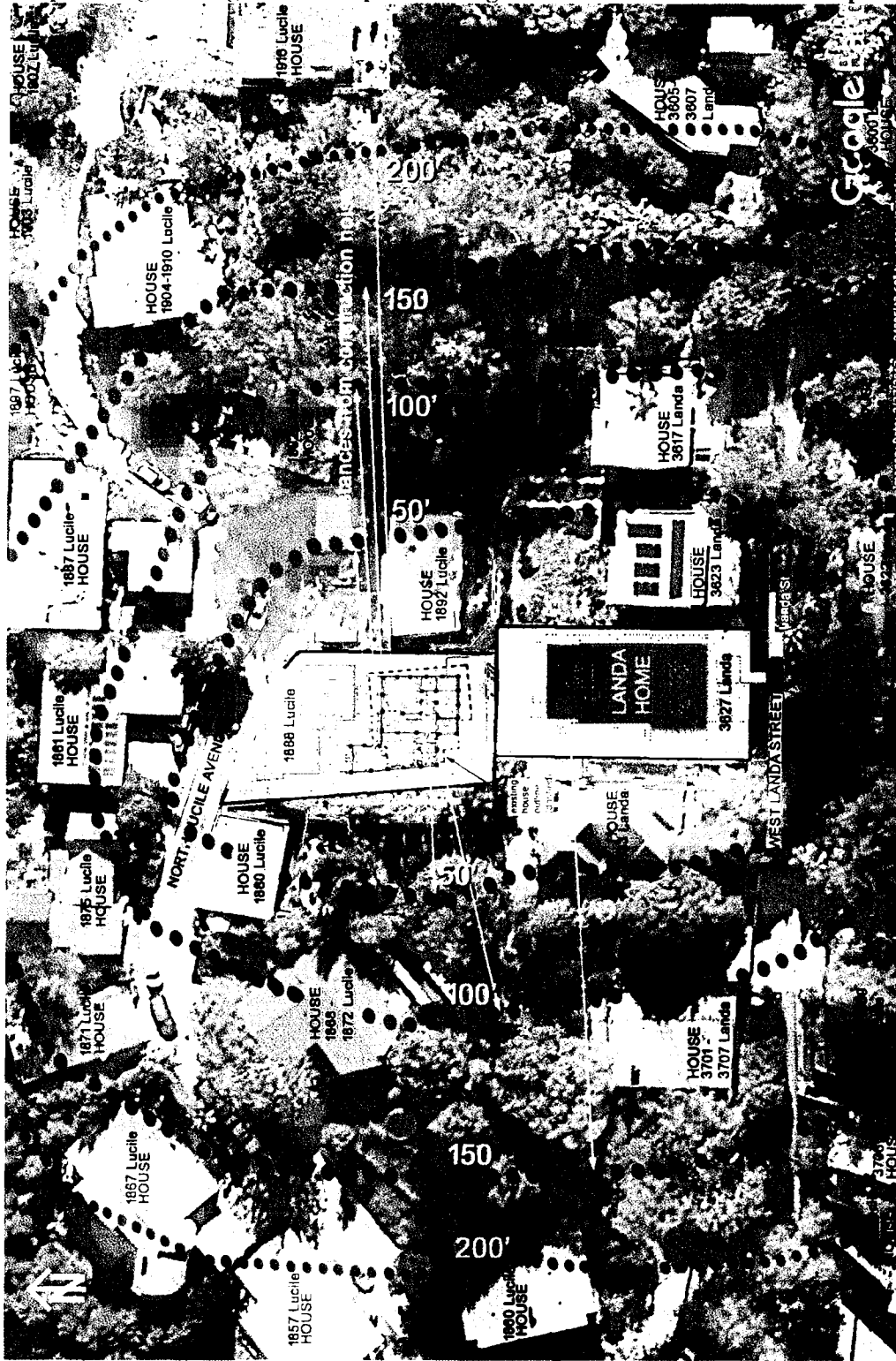


FIGURE A (REPEATED)

Map of Neighboring Homes Exposed to Significant Construction Noise Impacts



INITIAL STUDY FAILS TO CONSIDER SIGNIFICANT NOISE IMPACTS OF USE OF HEAVY CONSTRUCTION EQUIPMENT WARNING BEEPERS OR BACKUP ALARMS THAT COULD EXCEED CITY'S MAXIMUM NOISE LEVEL LIMITS.

The Initial Study fails to disclose that noise from heavy equipment backup warning beepers would be very audible and would generate significant noise impacts at dozens of homes near this Project site. Backup alarms or beepers are a frequent source of complaints from neighbors, even when used only during the daytime. Backup alarms must generate a noise level at least 5 to 10 dBA above the background noise in the vicinity of the rear of the machine where a person would be warned by the alarm. Thus, they are significantly louder than the drilling equipment and site grading equipment's noise. Yet the Initial Study fails to describe their decibel rating or suggest placing limits on their loudness. Backup alarms typically produce from 97 to 112 decibels at four feet,¹²⁵ which attenuates to about 75 to 91 dBA at 50 feet,¹²⁶ and can even be heard at the distances where the nearest neighbors live. At those noise levels, their use would exceed the City's maximum limit of 75 dBA L_{max} at 50 feet.¹²⁷ These backup alarms beep about once per second at a penetrating frequency of about 1,100 Hertz designed to be easily heard by most people.

A single backup warning beeper emitting 91 dBA L_{max} at 50 feet could be as loud as 72 dBA L_{max} at 400 feet away. (Calculated being 6 dB quieter for each doubling of distance.) No temporary noise barrier would be used during construction where backup alarms are operated. Noise levels of 72 dBA L_{max} which would be over 16 dBA greater than ambient noise levels¹²⁸ would exceed the City's maximum 5 or 10 dB increase standard in its CEQA Thresholds Guide as discussed above. Use of such backup beepers that amplify sounds, disturb the quiet, and generate a noise level that exceeds ambient noise levels on neighboring properties by more than 5 dB also would violate the City's Noise Ordinance, LAMC sections 112.01(a) and 112.04(b).¹²⁹ The Initial Study never evaluated such backup alarm noise impacts. Such significant noise level increases could impact dozens of homes within 400 feet of this Project. The City is therefore without substantial evidence to conclude there would be a less-than-significant construction noise impact during this Project's heavy equipment use.

Reply to Z Consulting's Response VI-17, p. 37:

Mr. Zuleger is incorrect in asserting:

¹²⁵ Source of back-up alarm noise levels from alarm manufactured by Pollak, #41-761, "Manually adjustable Back-up Alarm," rated at 112, 107, 97 dB.

¹²⁶ Noise level attenuation due to distance is calculated as reduced by about 6 dB for each doubling of distance.

¹²⁷ See: LAMC section 112.05(a).

¹²⁸ Calculation: $91 - 75 = 16$ dBA louder

¹²⁹ See: LAMC section 112.04(b): "... no person shall operate ... any machinery, equipment, tools, or other mechanical or electrical device... 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 (5) decibels."

Equipment back up alarms occur infrequently (i.e., when equipment backs up), for a short duration (i.e., only while the equipment is backing up), and only include brief impulses of sound (i.e., short beeps separated by silence). For these reasons, backup alarms have a negligible effect on the Leq noise levels used to determine significance of construction noise impacts in the Initial Study. See Response IV-7 for an explanation of why the significance threshold is not meant to be applied to Lmax noise levels.

This response does not take into account how loud backup alarms are. Loud noise, even lasting one half a second for each second it is heard, contributes greatly to the L_{eq} measurement due to the logarithmic nature of decibel measurements. Backup movements occur frequently too. It provides no supporting evidence that they have only a negligible effect on L_{eq} noise levels.

The significance threshold indeed applies to the L_{max} noise level metric. One only needs to read the Noise Ordinance to understand that these construction noise standards in § 112.05 apply to maximum noise levels.

As stated in Response II-1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance Section 112.05, not the L.A. CEQA Thresholds Guide or Noise Ordinance Section 112.01 (Section 112.01 applies to "radios, television sets, and similar devices", not heavy construction equipment).

Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for numerous reasons, including:

The calculations incorrectly use Lmax instead of Leq (see Response IV 7).

The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness, etc. are not included.

The calculations assume that the adjustable volume backup alarms would be set on their highest of 3 settings (97, 107, 112 dBA at 4 feet), which is unlikely for a small scale construction operation in a relatively quiet area.

The calculations include an error in the free field propagation calculation (112 dBA at 4 feet is equivalent to 90 dBA at 50 feet, not 91 dBA).

Not so. A professional noise consultant would realize that noise levels do not attenuate (reduce) at that free field propagation rate of 6 dBA for each doubling of distance when measured so close to heavy construction equipment as four feet. That is because warning alarms mounted to construction equipment are not narrowly focused to the rear. They need to broadcast sound to the sides as well to protect workers. Sound waves bounce off of adjacent surfaces of the equipment where the warning alarm is mounted. The reflections add to the direct transmission of the sound waves. Thus the response is inaccurate as well as petty in complaining about such a small difference in volume. Even if the backup alarms are much quieter than possible, their noise

impacts to neighbors living so nearby would still be significant. The Project's noise impacts will still therefore be significant.

Comment – pages 45 - 47:

PROJECT CONSTRUCTION WILL EXPOSE NEIGHBORS' OUTDOOR YARDS TO SIGNIFICANT AND EXCESSIVE INCREASES IN EXTERIOR NOISE LEVELS OF MORE THAN 5 dBA ABOVE EXISTING AMBIENT NOISE LEVELS MEASURED IN CNEL.

Los Angeles additionally evaluates the significance of this Project's noise impact by examining how much louder construction noise will be than the average ambient noise level that exists at a neighbor's property lines during a 24-hour day. If the Project causes the average daily noise level there at any neighbor's property line to increase by 5 dBA CNEL¹³⁰ or more, that increase would be significant.¹³¹ This threshold is important to protect neighbors' use of their outdoor yards from nearby excessive construction noise.

At this Lucile Avenue Project site, with a reported ambient noise level during the day of 55.7 dBA L_{eq} and at night a presumed noise level of 40 dBA L_{eq} , the day-night average CNEL noise level is currently about **55.6 dBA CNEL**.¹³² (See below footnote for both the calculation and the formula used on the next page.) As will be shown, this Project will generate noise levels that greatly exceed this City threshold of significance of an additional 5 dBA CNEL at not only adjacent properties, but also at many other residential outdoor yards in the neighborhood.

First though, here is how the CNEL for the existing ambient day/night averaged noise level is calculated:

¹³⁰ Community Noise Equivalent Level ("CNEL"): The average A-weighted noise level in a 24-hour day, obtained after adding 5 dB to evening hours (7:00 p.m. to 10:00 p.m.) and 10 dB to sound levels measured in the night (between 10:00 p.m. and 7:00 a.m.).

¹³¹ See 2006 L.A. CEQA Thresholds Guide, p. I.2-3, "A. Significance Threshold. A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, **or any 5 dBA or greater noise increase** (. . .)." (*emphasis added*)

¹³² Calculation of CNEL: Assign **55.7 dBA L_{eq}** to each daytime hour from 7 a.m. – 7 p.m., and **60.7 dBA L_{eq}** for each evening hour from 7 p.m. – 10 p.m., (i.e. add 5 dB to each hour presumed at 55.7 dB), and **50 dBA L_{eq}** for each hour from 10p.m. – 7 a.m. (i.e. add 10 dB to each nighttime hour presumed at 40 dB). Then calculate the logarithmic average of these noise levels for all 24 hours in a day with this formula:
CNEL= $10\log_{10}[(1/24)\times\{(10^{(40+10)/10}\times 7\text{ hrs})+(10^{(55.7)/10}\times 12\text{ hrs})+(10^{(55.7+5)/10}\times 3\text{ hrs})+(10^{(40+10)/10}\times 2\text{ hrs})\}]$
= **55.6 CNEL** (See also **Exhibit 1** ("Long-term Noise Measurement Summary" CNEL calculation))

Community Noise Equivalent Level

CNEL is the same as L_{dn} except for an additional weighting of almost 5 dBA for the evening hours between 7 p.m. and 10 p.m. The equation is essentially the same as Equation 2-23, with an additional definition of $W_i = 10\log_{10}(3)$, which is 4.77. Calculations for CNEL are similar to L_{dn} . The result is normally about 0.5 dBA higher than L_{dn} using the same 24-hour data. The equation for the CNEL is as follows:

$$CNEL = 10\log_{10}\left[\left(\frac{1}{24}\right) \sum_{i=1}^{24} 10^{L_{eq}(h)_i + W_i/10}\right] \quad (2-24)$$

Where:

$W_i = 0$ for day hours (7 a.m. to 7 p.m.)

$W_i = 10\log_{10}(3) = 4.77$ for evening hours (7 p.m. to 10 p.m.)

$W_i = 10$ for night hours (10 p.m. to 7 a.m.)

$L_{eq}(h)_i = L_{eq}$ for the i th hour

Source: Cal. Dept of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Sept. 2013; p. 2-53

http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

Or the above CNEL formula (#2-24) can be formatted slightly differently but with the same result:

$$CNEL = 10\log_{10}\left\{\frac{1}{24}\left[\sum_{0000}^{0700} 10^{(L_i + 10) \cdot 10} + \sum_{0700}^{1900} 10^{L_i \cdot 10} + \sum_{1900}^{2200} 10^{(L_i + 5) \cdot 10} + \sum_{2200}^{2400} 10^{(L_i + 10) \cdot 10}\right]\right\}$$

(Night: 7 hrs) (Day: 12 hrs) (Evening: 3 hrs) (Night: 2 hrs)

Source: <http://www.modalshop.com/filelibrary/831-Appendix%20C.pdf>

With this formula, one can calculate what the City would consider to be the existing ambient noise level in this Project's vicinity, which on a day-night averaged basis, is **55.6 dBA CNEL**:

Calculation:

$$\begin{aligned} CNEL &= 10\log_{10}\left[\left(\frac{1}{24}\right) \times \left\{ \left(10^{(40+10)/10} \times 7 \text{ hrs}\right) + \left(10^{(55.7)/10} \times 12 \text{ hrs}\right) + \left(10^{(55.7+5)/10} \times 3 \text{ hrs}\right) + \left(10^{(40+10)/10} \times 2 \text{ hrs}\right) \right\}\right] \\ &= 10\log_{10}\left[\left(\frac{1}{24}\right) \times \{700,000 + 4,458,423 + 3,524,693 + 200,000\}\right] \\ &= 10\log_{10}\left[\left(\frac{1}{24}\right) \times 8,883,116\right] = 10 \times \log_{10}[370.129] = 10 \times 5.56 = \mathbf{55.6 \text{ CNEL}} \end{aligned}$$

Thus the calculated ambient noise level at the Project site is **55.6 CNEL**. This is one of several baselines for measuring the Project's noise impacts. Also the City considers a project's construction noise level increase of 5 dB greater than this ambient noise level to be significant. Therefore the threshold of significance for Project construction noise increases at nearby residential property lines is **60.6 dBA CNEL**. ($55.6 + 5 = 60.6$) Any construction noise exceedance of this 60.6 dBA CNEL threshold at neighboring property lines (i.e. their outdoor yards) is considered to be a significant noise impact.

Reply to Z Consulting's Response VI-18, p. 38:

Mr. Zuleger is incorrect in asserting:

As stated in Response II 1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance Section 112.05, not the L.A. CEQA Thresholds Guide. Additionally, as construction will not occur during nighttime hours, the use of nighttime noise levels to determine the significance of Project construction noise impacts is not logical.

Mr. Zuleger's response repeats, without any evidence, that the City's current policy is to only use the Noise Ordinance when assessing the significance of construction projects' noise impacts. As explained above, that contention is inaccurate. At the very least, the City should also be using its own CEQA Thresholds Guide which assesses whether an increase in construction noise is significantly greater than the ambient noise levels. It should also be using its General Plan standards, as well as those from other agencies when the City does not have sufficient thresholds to evaluate potentially harmful noise or vibration levels.

Compliance with General Plan noise standards requires the use of the 24-hour L_{dn} descriptor and the calculations that provide that day-night weighted noise level.

Comment – page 47:

(1). NOISE LEVELS FROM CAISSON DRILLING FOR EVEN 6 HOURS PER DAY WOULD GREATLY EXCEED CITY'S THRESHOLD OF SIGNIFICANCE.

The likely noise levels during caisson drilling will be calculated below first without the proposed temporary noise barrier, and then with a barrier reducing that noise level as much as purportedly claimed in the Initial Study by 10 dB.¹³³

If heavy construction noise during caisson drilling occurs, for example, **for six hours in a work day** (where the allowable construction workday is 7 a.m. – 6 p.m., even less than the permitted 7 a.m. – 9 p.m. workday specified in the Initial Study), and if the drilling auger generates a noise level of 85 dBA L_{eq} at a 50-foot distance, and the drill rig or auger's source of the noise (engine) is located 10 feet from a neighboring property line near where drilled caissons for retaining walls are likely to be installed, and the job site is relatively quiet for the five hours of that permissible work day, the CNEL calculation for the noise level the closest neighbors would be exposed to is as follows:

Because an auger drill rig produces a noise level of 85 dBA L_{eq} at 50 feet,¹³⁴ then at a property line 10 feet away from auger equipment, the construction noise level would be

¹³³ See: Initial Study, PDF pp. 67, 95, and 144.

99.0 dBA L_{eq}. (This calculation is based upon noise increasing by 6 dB for each halving of distance between source and receiver, and the standard formula.)¹³⁵

Then, assuming the other Project construction noise levels during all the other hours during that workday are no higher than the existing ambient noise level, calculations show that the neighboring property line would be exposed to a day-night average noise level of about **93.0 dBA CNEL**:

Calculation:

$$\begin{aligned} \text{CNEL} &= \\ &= 10 \log_{10} \left[(1/24) \times \left\{ (10^{(40+10)/10} \times 7 \text{ hrs}) + (10^{(99)/10} \times 6 \text{ hrs}) + (10^{(55.7)/10} \times 6 \text{ hrs}) + (10^{(55.7+5)/10} \times 3 \right. \right. \\ &\quad \left. \left. \text{hrs}) + (10^{(40+10)/10} \times 2 \text{ hrs}) \right\} \right] \\ &= 10 \log_{10} \left[(1/24) \times \{ 700,000 + 47,659,694,408 + 13,375,268 + 3,524,693 + 200,000 \} \right] \\ &= 10 \log_{10} \left[(1/24) \times 47,677,494,04? \right] = 10 \times \log_{10} [1,986,562,252] = 10 \times 9.30 = \mathbf{93.0 \text{ dBA CNEL}} \end{aligned}$$

(This formula is similar to the previous one above that calculated the ambient noise level except that 6 hours of drilling auger noise of 99 dBA L_{eq} at 10 feet is increased during the daytime, representing how loud drilling activity will be 10 feet from the Project site's side lot property lines to the east or west.)

The City's threshold of significance is any construction noise level increase of more than 5 dB greater than the presumed 55.6 dBA CNEL ambient level here, which then is **60.6 dBA CNEL**. But, for example, with six hours of drilling producing 93.0 dBA CNEL at a property line 10 feet away, drilling noise **would exceed this City threshold of significance by over 32 dBA CNEL**. (93.0 – 60.6 = 32.4 dB) This exceedance would be an extremely significant noise impact that requires analysis in an MND or EIR and effective mitigations. This impact would be greater yet if during the Initial Study's permissible 14 hour work-day, more than 6 hours of drilling occurred. Caisson drilling for longer than 6 hours a day is common in order to efficiently use the heavy equipment. Or this type of noise impact would be more significant yet if the drilling occurs even closer to the property line where the applicant's architectural drawings indicate retaining walls will be constructed, and will likely need pile foundations. (See **Figure B** above for approximate locations for this Project's proposed retaining wall caisson drilling.)

Now, with the use of temporary noise barriers that reduce caisson drilling noise levels at neighboring lots to the east and west by as much as 10 dB as the Initial Study purportedly asserts,¹³⁶ this Project's construction noise levels will still be extremely significant and disturbing to this neighborhood. With six hours of drilling producing a drilling noise level of 93.0 dBA CNEL at a neighbor's property line 10 feet away, and reducing that noise level by 10 dB with the use of temporary noise barriers, that drilling noise level **would exceed this City threshold of significance by over 22 dBA CNEL**. (93.0 – 60.6 – 10.0 = 22.4 dBA) This exceedance would still become an extremely significant noise impact that requires analysis and effective mitigations. Clearly, the proposed Project Design

¹³⁴ See *Construction Noise Assessment* (2017) by Illingworth & Rodkin, Inc., page 6, Table 3, "Construction Equipment 50-foot Noise Emission Limits" - Auger Drill Rig: **85 dBA L_{max}** Source: Federal Highway Administration Roadway Construction Noise Model.

¹³⁵ Calculation: Here, L_v(at 10 feet) = [85 dB – 20 x Log(10/50)] = [85 dB – 20 x -0.70] = [85 + 14] = **99 dB**

¹³⁶ See: Initial Study, PDF pp. 67, 95 and 144.

Features or de facto noise mitigation of using temporary noise barriers will be ineffective in reducing the Project's noise impacts to a less-than-significant level.¹³⁷

Reply to Z Consulting's Response VI-19, p. 40:

Mr. Zuleger is incorrect in asserting

As stated in Response II-1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance Section 112.05, not the L.A. CEQA Thresholds Guide. Additionally, as construction will not occur during nighttime hours, the use of nighttime noise levels to determine the significance of Project construction noise impacts is not logical.

Furthermore, the drill rig noise calculations are incorrect for numerous reasons, including:

The calculations do not include the 10 dBA noise reduction provided by the noise muffler RCM.

The Lmax unit of measurement is incorrectly used instead of the Leq unit of measurement (see Response IV 7). While the calculations say that a noise level of 85 dBA Leq is utilized, the actual noise level being utilized is 85 dBA Lmax.

The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness are not included.

The calculations are for a highly speculative scenario in which the drill rig operates constantly at 100% load for 6 hours in a day within 10 feet of a neighbor.

The main, emphasized noise levels do not include the noise reduction provided by the portable noise barrier RCM.

Replies to these same responses have been provided for previous responses. None of these responses have merit as shown above.

The amount of exceedance of the ambient noise levels under this scenario is so great that there should be no question that this Project's noise impacts will be significant. Even if the **2006 L.A. CEQA Thresholds Guide** is not applicable, the project's noise impacts will be significant.

¹³⁷ A noise level of 83 dBA CNEL, including a 10 dB reduction from a noise barrier, would also be inconsistent with the General Plan's Table IV.E-2 "Land Use Compatibility" chart (Noise Element, Exhibit I, p. I-1) showing that any residential noise exposure greater than 75 dBA CNEL is "clearly unacceptable." (93 CNEL – 10 = 83 CNEL)

(2). NOISE LEVEL FROM CAISSON DRILLING FOR EVEN ONE HOUR PER DAY WOULD GREATLY EXCEED CITY'S THRESHOLD OF SIGNIFICANCE.

With the same facts assumed in the above example, including that no other construction noise occurs except with only **one hour per day** of caisson drilling, those Project noise levels would still significantly impact adjacent residences. It would produce a noise level of **75.2 dBA CNEL** at adjacent property lines with the use of temporary noise barriers reducing drilling noise purportedly by 10 dB. (85.2 – 10 = 75.2) That 75.2 dBA CNEL noise level would be much greater than the City's 60.6 dBA CNEL threshold of significance identified above. (i.e. **14.6 dB** greater than threshold of significance) Even one-hour per day of caisson drilling would create a significant noise impact.

Calculation:

$$\begin{aligned} \text{CNEL} &= 10 \log_{10} [(1/24) \times \{ (10^{(40+10)/10} \times 7 \text{ hrs}) + (10^{(99)/10} \times 1 \text{ hr}) + (10^{(55.7)/10} \times 11 \text{ hrs}) + (10^{(55.7+5)/10} \times 3 \\ &\quad \text{hrs}) + (10^{(40+10)/10} \times 2 \text{ hrs}) \}] = \\ &= 10 \log_{10} [(1/24) \times \{ 700,000 + 7,943,282,347 + 371,535 + 4,986,888 + 200,000 \}] \\ &= 10 \log_{10} [(1/24) \times 7,948,640,770] = 10 \times \log_{10} [331,193,365] = 10 \times 8.52 = \mathbf{85.2 \text{ dBA CNEL}} \\ &\quad \text{without barriers} \end{aligned}$$

Reply to Z Consulting's Response VI-20, pp. 40 - 41:

Mr. Zuleger is incorrect in asserting:

“As stated in Response II 1, the City of Los Angeles’ policy is to assess noise impacts associated with construction of residential projects using the City’s Noise Ordinance Section 112.05, not the L.A. CEQA Thresholds Guide. Additionally, as construction will not occur during nighttime hours, the use of nighttime noise levels to determine the significance of Project construction noise impacts is not logical.

This response, just like previous identical responses, is inaccurate as demonstrated above.

Furthermore, the drill rig noise calculations are incorrect for numerous reasons, including:

- *The calculations do not include the 10--dBA noise reduction provided by the noise muffler RCM.*

No, mufflers will not reduce construction equipment noise by 10 dBA.

- *The L_{\max} unit of measurement is incorrectly used instead of the L_{eq} unit of measurement (see Response IV--7). While the calculations say that a noise level of 85 dBA L_{eq} is utilized, the actual noise level being utilized is 85 dBA L_{\max} .*

- *The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness are not included.*

There will be no intervening shielding between some Project operations and homes to the north of Lucile Avenue.

The Project's noise impacts will still therefore be significant.

Comment – pages 49 - 50:

(3). NOISE LEVEL FROM CAISSON DRILLING FOR SIX HOURS PER DAY WOULD EXCEED CITY'S THRESHOLD OF SIGNIFICANCE EVEN 200 FEET AWAY.

Other apprehensive residents in the Project's neighborhood might want to know if the Project would significantly impact their property with construction noise even if they are more distant than those who live on adjacent parcels. Calculations provided below demonstrate that auger drilling without better noise mitigations lasting 6 hours per day, without other Project construction noise during those hours or other work hours, would exceed the City's threshold of significance at some residential lots even 200 feet away.

First, consider that numerous homes exist to the north and south of this Project site that will not have such drilling noise blocked by the temporary noise barriers only proposed on the east and west sides of the drill rigs. Moreover, the temporary noise barrier height is only proposed to just break the line-of-sight to those nearest homes to the east and west, and that height will decrease noise levels by at most 5 dBA.¹³⁸ The noise level from just the auger drilling at 200 feet away from homes would be about **73 dBA L_{eq}** if the auger produces 85 dBA L_{eq} at 50 feet.¹³⁹ For homes blocked by the temporary noise barriers, they would be exposed to about 68 dBA L_{eq} of drilling noise. Then that drilling noise level can be calculated in terms of the day-night average CNEL metric at homes 200 feet away from the drilling.

With that construction noise level continuing for six hours at a measurable level of 73 dBA L_{eq} at 200 feet away, and with existing reported or presumed ambient noise levels for the other 18 hours of a day, more distant residential lots could be exposed to Project noise level increases of a day-night averaged noise level of **67.2 dBA CNEL:**

Calculation:

$$\text{CNEL} = 10 \log_{10} \left[\frac{1}{24} \times \left\{ (10^{(40+10)/10} \times 7 \text{ hrs}) + (10^{(73)/10} \times 6 \text{ hrs}) + (10^{(55.7)/10} \times 6 \text{ hrs}) + (10^{(55.7+5)/10} \times 3 \text{ hrs}) + (10^{(40+10)/10} \times 2 \text{ hrs}) \right\} \right]$$

¹³⁸ See: Initial Study, PDF p. 187, Fig. 13 “line-of-sight”. Also, “Typically, a 5-dB(A) [insertion loss] can be expected for receivers whose line-of-sight to the roadway is just blocked by the barrier.”

¹³⁹ Calculation is based upon noise levels decreasing by 6 dB for each doubling of distance between source and receiver. The distance increase from 50 feet to 200 feet involves two doublings. (to 100', and to 200') At 200 feet away, the noise level would therefore be about 12 dB quieter (6 dB x 2 doublings = 12 dB). Thus 85 dBA L_{eq} – 12 dBA = **73 dBA L_{eq} at a distance of 200 feet.**

$$=10\log_{10}[(1/24)\times\{700,000 + 119,715,739 + 2,229,211 + 1,114,606 + 200,000\}]$$

$$=10\log_{10}[(1/24)\times 123,959,556] = 10 \times \log_{10}[5,164,982] = 10 \times 6.72 = \mathbf{67.2 \text{ dBA CNEL}}$$

That noise level of 67.2 dBA CNEL would create a significant noise impact even 200 feet away where not blocked by the temporary noise barriers because it would exceed the City's threshold of significance of 60.6 dBA CNEL by more than 5 dBA. (67.2 – 60.6 = 6.6 dB increase.) There are about three dozen homes with outdoor yards within 200 feet of where this Project's drilling would occur.¹⁴⁰ While some of them are partially shielded to some extent by intervening homes from such construction noise, and some will be partially screened by temporary noise barriers, many of the neighborhood homes in direct line-of-sight of this 1888 Lucile Avenue hillside lot will be closer and thus will not be adequately buffered. This too demonstrates that heavy construction noise on this Project site will generate a significant noise impact by increasing the 24-hour average noise level in many neighbors' yards by more than 5 dBA CNEL.

For homes to the east and west that would be partially shielded by temporary noise barriers, those within 100 feet will also be exposed to excessive, significant noise levels. A noise level of 67.2 dBA CNEL at 200 feet is about 73.2 dBA CNEL at 100 feet. If reduced by 5 dB by temporary noise barriers, that drilling noise level would be about 68.2 dBA CNEL, and still greater than the City's 60.7 dBA CNEL threshold of significance in this neighborhood with the data that has been presented. Even with a 10 dB reduction due to some form of a noise barrier, that resulting noise level of 63.2 dBA CNEL would still exceed the City's 60.6 dBA CNEL threshold of significance by 2.6 dB.

The Initial Study, p. 65, Section XIII(a) accordingly incorrectly evaluates this Project's temporary construction noise level “generating a substantial temporary . . . increase in ambient noise levels in the vicinity of the project in excess of standards . . .” where the Initial Study determines this impact would be less-than-significant. This finding is not supported in the Initial Study or attached Noise Study. With the few *de facto* noise mitigations as proposed, none of which effectively and sufficiently lessen caisson drilling noise at adjacent property lines, the Project's noise level increases will still be quite excessive as shown above in examples (1), (2), and (3). Therefore, the Project as proposed is not compliant with CEQA in protecting neighbors' outdoor yards (and homes) from excessive construction noise.

Reply to Z Consulting's Response VI-21, p. 42:

Mr. Zuleger is incorrect in asserting

As stated in Response II 1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance Section 112.05, not the L.A. CEQA Thresholds Guide. Additionally, as construction will not occur during nighttime hours, the use of nighttime noise levels to determine the significance of Project construction noise impacts is not logical.

¹⁴⁰ See Figure “C” above for location of the yards and homes within 200 feet of this Project site.

Furthermore, the drill rig noise calculations are incorrect for numerous reasons, including:

The calculations do not include the 10 dBA noise reduction provided by the noise muffler RCM.

The Lmax unit of measurement is incorrectly used instead of the Leq unit of measurement (see Response IV 7). While the calculations say that a noise level of 85 dBA Leq is utilized, the actual noise level being utilized is 85 dBA Lmax.

The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness are not included.

As discussed above, none of these responses have merit. The Project's noise impacts will still therefore be significant.

Comment – pages 51 - 52:

PROJECT CONSTRUCTION WILL EXPOSE NEIGHBORING HOMES TO SIGNIFICANT AND EXCESSIVE INTERIOR NOISE LEVELS DURING DRILLING OR OTHER OPERATIONS OF GREATER THAN CITY'S MAXIMUM DAILY NOISE LEVEL LIMIT OF 45 dBA L_{DN}.

The Los Angeles General Plan's Noise Element identifies a maximum residential noise standard of 45 dBA Ldn in any habitable room, averaged over a 24-hour period.¹⁴¹ This standard protects against sleep disturbance impacts at nighttime, and more pertinently here to actual construction noise, against unreasonable annoyance impacts during the daytime. While the City does not enforce this 45 dBA Ldn standard for single-family homes during applications for a typical building permit, this standard nonetheless remains as an identified threshold of significance for purposes of determining significant impacts under CEQA when other factors present here require environmental review.

For example, if this Project's caisson drilling operations with a 60% acoustic utilization factor (AUF) generate muffled noise levels of 77.8 dBA Leq at 50 feet, then at a 200-foot distance such noise levels would be about 65.7 dBA Leq. (See tabular calculations above in Table 3.). There are about 24 homes within 200 feet of this Project's drilling locations that could be exposed to Project construction noise levels as high as this. (See Figure A, aerial photo map of neighboring homes with lines marking 200 foot distances from site

¹⁴¹ See e.g., General Plan Noise Element, p. 2:2; LAMC § 91.1207.14.2 ("Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan."); L.A. CEQA Thresholds Guide, p. I.4:4 (screening threshold for airport noise impacts includes whether sensitive uses, including dwelling units and habitable rooms, have "adequate acoustic insulation to ensure an interior CNEL of 45 dB or less").

drilling locations, or Figure C.) During a long work day (as permitted according to the Initial Study between 7:00 a.m. to 9:00 p.m. with 14 hours of drilling, with drilling using a 60% use factor continuing for those 14 hours, one can calculate the day-night weighed average noise level heard 200 feet away.¹⁴² The use of the auger drill rig would generate a calculated “day-night average” noise level of 63.5 dBA L_{dn} at that 200-foot distance for homes not blocked by the temporary noise barrier.¹⁴³

The formula for calculation of the L_{dn} noise level is (using CalTrans equation N-2223.3)¹⁴⁴

“The L_{dn} descriptor is actually a 24 hour L_{eq}, or the energy-averaged result of 24 1-hour L_{eq}’s, with the exception that the night-time hours (defined as 2200 - 0700 hours) are assessed a 10 dBA “penalty”. . . . Mathematically this “day-night” descriptor is expressed as:

$$L_{dn} = 10 \text{ Log}_{10} \left[\left(\frac{1}{24} \right) \sum_{i=1}^{24} 10^{L_{eq}(h)_i + W_i / 10} \right] \quad (\text{eq.N-2223.3})$$

where: W_i = 0 for day hours (0700 - 2200); W_i = 10 for night hours (2200 - 0700); L_{eq(h)_i} = L_{eq}(for the ith hour)

Calculation:

$$\begin{aligned} L_{dn} &= 10 \log_{10} \left[(1/24) \times \{ (10^{65.7/10}) \times 14 \text{ hrs-drilling} \} + (10^{55.7/10}) \times 1 \text{ hrs-quiet} \} + (10^{(40+10)/10}) \times 9 \text{ hrs-night} \} \right] \\ &= 10 \log_{10} \left[(1/24) \times \{ 37,153,522 \times 14 + 371,535 \times 1 + 100,000 \times 9 \} \right] \\ &= 10 \log_{10} \left[(1/24) \times 53,286,467 \right] = 10 \times \log_{10} [2,220,269] = 10 \times 6.35 = \mathbf{63.5 \text{ dBA } L_{dn}} \end{aligned}$$

For neighbors at that 200-foot distance from this Project’s foundation hole drilling locations who have their windows open on such days, their homes would attenuate (reduce) that exterior noise level by as much as 15 dBA.¹⁴⁵ Thus their homes’ interior noise levels in rooms facing this Project would be over approximately 48 dBA L_{dn}. (63.5 – 15 = 48.5) That residential interior noise level would be greater than the City’s threshold of significance of 45 dBA L_{dn} even at that 200-foot distance.

Moreover, this Project location presents that unusual circumstance of being perched on a **steep** hillside with a grade of up to 60% on the lower lot facing Lucile Avenue. That steepness of slope not only necessitates additional noisy, time-consuming caisson foundation work. The steep hillside also increases the construction work’s noise impacts as it reflects more noise towards homes that are at a lower elevation, unblocked by intervening homes, and situated to the north. Those homes to the north expose more of their roofs than walls to direct view from this Project site. Roofs do not block sound

¹⁴² The work day for drilling may be 14 hours long because the Initial Study allows 14 hours of construction between 7 a.m. – 9 p.m.

¹⁴³ This calculation of a day-night averaged noise level given an ‘AUF’ of 60% and the L_{eq} noise level of 65.7 dBA L_{eq} results from considering that noise levels for 14 daytime hours are 65.7 dBA L_{eq}, for another 1 daylight hour which is supposedly reported to be 55.7 dBA L_{eq}, and the remaining 9 nighttime hours in a 24-hour day are presumed to be at least 40 dBA L_{eq}. The logarithmic averaging of those 24 hours results in that 63.5 dBA L_{dn} day-night weighted average noise level. See calculation on next page.

¹⁴⁴ See Oct. 1998 CalTrans Technical Noise Supplement, p. 48, equation N-2223.3, for calculation of L_{dn}: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

¹⁴⁵ Residential rooms with open windows typically attenuate exterior noise levels by between 10 to 15 dBA as most of the acoustic energy of exterior noise is blocked by the more solid wall and roof surfaces.

transmission as well as exterior walls because roofs have typically have some unblocked ventilation openings and roofs are often less dense than exterior walls that may have heavy stucco covering. Such Project noise levels from auger drilling and even louder construction activities would exceed the City's interior noise exposure standards of 45 dBA L_{dn}. That would create a significant noise impact, and would harm a substantial number of neighboring residents.

Reply to Z Consulting's Response VI-22, p. 43:

Mr. Zuleger is incorrect in asserting

As stated in Response II 1, the City of Los Angeles' policy is to assess noise impacts associated with construction of residential projects using the City's Noise Ordinance Section 112.05, not the General Plan. Interior and day night noise levels are not used to determine the significance of Project impacts.

Replied to this response before in this letter and provided evidence that it is not accurate.

Furthermore, the calculations used to determine the noise levels presented in this claim are inaccurate for numerous reasons, including:

- *The calculations do not include the 10 dBA noise reduction provided by the noise muffler RCM, as stated in the same document that the La Forest Report uses for noise source data (see Response VI 11).*

Replied to this response before in this letter and provided evidence that it is not accurate.

- *The calculations do not include any reduction in noise from the portable barrier RCM, which is expected to provide a 5 to 10 dBA reduction in noise for the most impacted neighbors to the east and west.*

Replied to this response before in this letter and provided evidence that it is not accurate.

- *The substantial shielding effects of terrain, intervening structures, vegetation, fences, surface roughness, etc. are not included.*

Replied to this response before in this letter and provided evidence that it is not accurate.

- *The calculation is based on an inaccurate and speculative AUF of 60%. The appropriate AUF for the drill rig is 20%, based on the FHWA's Roadway Construction Noise Model.*

That response is inaccurate. Drill rigs for boring caissons are used nearly continuously and have a higher AUF than those used for FHWA roadway projects. On February 9, 2018, I personally spoke to Mr. Darnell Tapia, a construction estimator with Leon Kraus Drilling¹⁴⁶, about his experience drilling in Los Angeles' hillsides. He estimated that from his experience that auger drill rigs are used nearly full time during such deep drilling operations.¹⁴⁷

¹⁴⁶ For reference: Leon Kraus Drilling: 13753 Gladstone Ave; Sylmar, CA 91342, Phone (818) 367-4237

¹⁴⁷ Therefore with nearly full time use during caisson drilling, the applicant would not be able to relax his noise compliance obligation pursuant to City laws, but may have to adhere to stricter standards if drilling results in high-pitched noise or repeated impulsive noises: "To account for people's increased tolerance for short-

- *The calculations are based on a highly speculative scenario in which the drill rig operates for 14 hours per day, at 60% load, in direct line of site to a neighbor with their window open.*

It is not speculative to have consulted a professional well driller who explained that drill rigs operate nearly continuously during such caisson drilling in Los Angeles hillsides. Evidence of direct line-of-sight between drill rig locations and neighboring homes is provided above.

Note that the La Forest Report's claims that interior noise levels are higher when the noise travels through a receptor's roof than through their exterior walls is unsubstantiated and, especially considering the calculations assume the exterior wall has an open window, incorrect.

It is reasonable to assume that during the construction, neighbors may wish to keep their windows open for natural ventilation. The sound attenuation capabilities of roofs are lower than walls covered with stucco that have greater mass. Roofs also have ventilation opening that cannot be closed, and which allow construction noise to enter into attic spaces more readily than through exterior walls.

Also, note that the implication that this Project is unique based on its slope is refuted in Response IV-2.

This response is replied to above and is denied as being credible. The hillside lot's steepness near Lucile Avenue is so unique that the Project applicant will have to locate a garage on another lot,

Comment – pages 52 - 57:

GROUND-BORNE VIBRATION IMPACTS WILL BE SIGNIFICANT TO IMMEDIATE NEIGHBORS DURING FOUNDATION CONSTRUCTION AND OTHER SITE WORK.

This Project proposes demolition of an existing home, site grading, foundation excavation and drilling for installation of footing caissons and retaining walls. These construction activities will cause significant vibration impacts to neighboring homes or their occupants. The Project's Initial Study however concludes without evidence that there will be no impact due to ground-borne noise or vibration by claiming "*As such, it is anticipated that vibration generated during construction of the Project would not cause damage to buildings nor affect sensitive receptors.*"

Therefore, construction impacts associated with vibration would be less than significant." The Initial Study is not factually accurate. Had the Initial Study been supported with calculations, it would be obvious that Project demolition, excavation operations, site

duration noise impacts, the Noise Regulation provides a 5 dBA allowance (increase) for noise sources occurring more than 5 minutes, but less than 15, in any 1-hour period, and an additional 5 dBA allowance for noise sources occurring 5 minutes or less in any 1-hour period. Additionally, the Noise Regulation provides a penalty of 5 dBA for steady high-pitched noise or repeated impulsive noises." (Los Angeles Municipal Code, chapter XI, article I, section 111.02(b))

grading and drilling for foundation pilings or caissons will cause serious ground-borne vibrations.

Some homes in the immediate vicinity of the Project site would be exposed to construction-related vibration levels above acceptable thresholds of significance. These nearest neighboring homes would be exposed to even greater vibration impacts than is often assumed because they are closer to proposed excavation activities than 25 feet, a distance often used for vibration discussion. Some homes are only about 10 to 15 feet away from Project construction locations.¹⁴⁸ At such close distances as 15 feet from where deep soil excavation is proposed for the Project's basement foundation, vibration impacts at least can significantly disturb neighbors and exceed applicable vibration safety standards. The vibration impacts from this construction work at this close distance can be shown to be severe. Construction vibration could even damage two of those adjacent older neighboring homes built in 1939 and 1948.¹⁴⁹ "Historic-period homes (i.e., constructed in 1969 or earlier)" are not generally built with current, more stringent seismic codes and construction practices, so they are less resistant to earth-borne movements such as vibration caused by pile-driving or excavation.¹⁵⁰

A vibration level of 0.20 PPV in./sec. or greater is the threshold at which there is a risk of "architectural" damage to normal dwelling – houses with plastered walls and ceilings.¹⁵¹ This Project may generate ground-borne vibrations that exceed this vibration level at adjacent homes.

Ground-borne vibration would be generated during construction of the Project by various construction activities and equipment, such as the demolition of existing structures and pavement, site preparation work, excavation of below-grade levels, foundation work, and new building erection. The City has not adopted any quantitative thresholds for construction vibration. However, CEQA requires the City to consider whether the Project would result in the exposure of persons or their structures to excessive ground-borne vibration or ground-borne noise levels. As such, FTA policies and guidelines are often utilized to assess impacts due to ground-borne vibration for projects reviewed by the

¹⁴⁸ See Responses to Appellant's Grounds for Appeal, Re: 1888 Lucile, Exhibit 4, "Plot Plan," submitted by Crest Real Estate. (PDF p. 17 of *LUC ELAAPC addtl doc packet.pdf*) indicating a 7-foot setback from the common property line to the home to the east at 3617 West Landa Street; see also the Architectural drawings for the *Landa Project Site Plan*, Sheet A1.0, indicating an 8-foot setback from that common property line to its east. (7 feet + 8 feet = 15 feet separation distance.); see also correspondence from Michael Mekeer, Architect, about placement of retaining wall caissons along east and west side yard property lines, which are within 10 to 12 feet of adjacent homes; see Figure B for location of pile drilling.

¹⁴⁹ The adjacent home at 1880 Lucile Avenue was built in 1948. Adjacent home at 3633 Landa St. was built in 1939. Both of these historic-period homes have stucco on their exterior walls; stucco is rigid and more likely to be damaged by severe construction vibration than most other building materials. (See: *Responses to Appellant's Grounds for Appeal, Re: 1888 Lucile, "Exhibit 1"*) (Not Exhibit 1 attached to this Report)

¹⁵⁰ See South Coast 101 HOV Lanes Project, EIR/EIS, p. 16.
http://www.dot.ca.gov/dist05/projects/sb_101hov/final/tech_reports/vibration_report.pdf

¹⁵¹ See South Coast HOV Lane Project, p. 10, Table 1: "Vibration Level and Intensity"
<http://sbcountyplanning.org/PDF/boards/MPC/06-06-2012/SOUTH-COAST-LANES/Vibration%20Study.pdf>

City.¹⁵² To evaluate the Project's vibration impacts, one should use the FTA's vibration impact thresholds for sensitive buildings to determine whether ground-borne vibration would be "excessive." A vibration velocity level of 75 VdB¹⁵³ is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.¹⁵⁴ Therefore, as shown in **Table 5** below, the FTA recommends an 80 VdB threshold of significance at residences and buildings where people typically sleep (e.g., nearby residences).

¹⁵² See FTA (May 2006) Transit Noise And Vibration Impact Assessment, pp. 8:3, 12:10-14, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf; See e.g., 631 S. Spring St. (DCP Case No. ENV-2015-2356-EIR) DEIR Noise Section, PDF pp. 8-9, 13, 23, 28, <https://planning.lacity.org/eir/SpringStHotel/Deir/DEIR%20Sections/Spring%20St%20Hotel%20IV.H%20Noise.pdf>; 622 S. Lucas Ave. (DCP Case No. ENV-2015-3927-MND) MND, PDF pp. 195-197, http://cityplanning.lacity.org/staffrpt/mnd/Pub_102716/ENV-2015-3927.pdf; 1720 N. Vine St. (DCP Case No. ENV-2011-675-EIR) DEIR Vol. I, PDF pp. 79, 646-647, 658, 665-667, https://planning.lacity.org/eir/Millennium%20Hollywood%20Project/DEIR/DEIR%20Sections/Millennium%20Hollywood%20DEIR_Volume%201_COMPILED.pdf.

¹⁵³ Vibration velocity ("VdB") is used to describe vibration because it corresponds well to human response to environmental vibration. Vibration is defined by the maximum vibration level during an event. Human sensitivity to vibration increases with increasing numbers of events during the day. The abbreviation "VdB" is used for vibration decibels to reduce the potential for confusion with sound decibels.

¹⁵⁴ See e.g., 631 S. Spring St. (DCP Case No. ENV-2015-2356-EIR) DEIR Appendix H-1, p. IV.H:3, <https://planning.lacity.org/eir/SpringStHotel/DEIR/DEIR%20Sections/Spring%20St%20Hotel%20IV.H%20Noise.pdf>.

**Table 5:
Ground-Borne Vibration ("GBV") and Ground-Borne Noise ("GBN")
Impact Criteria for General Assessment (FTA)¹⁵⁵**

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/sec)			GBN Impact Levels (dB re 20 micro Pascals)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ¹	65 VdB ¹	65 VdB ¹	N/A ⁴	N/A ⁴	N/A ⁴
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Notes:

- "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
- "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
- "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
- This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
- Vibration-sensitive equipment is generally not sensitive to ground-borne noise.

Vibration impacts during some construction activities for this demolition/two house/two garage Project will significantly exceed that 80 VdB threshold of significance limit at neighboring homes. The Project applicant has not disclosed how the Project's foundation walls will be constructed.

When caisson drilling is used to support the home's foundation and retaining walls on the steep hillside, the vibration impacts would be significant at the closest neighboring homes. Table 6 below presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. The nearest homes are 10 to 15 feet to this Project's construction activities. Accordingly, the vibration levels associated with caisson drilling is 0.089 in/sec PPV and 87 VdB at 25 feet. But at only 15 feet from caisson drilling, the vibration level is calculated to be nearly **94 VdB**:

$$\begin{aligned} \text{Calculation: } L_v(15 \text{ feet}) &= 87 \text{ VdB} - 30 \times \text{Log}(15/25) = 87 \text{ VdB} - (30 \times -0.22) \\ &= 87 + 6.6 = \mathbf{93.6 \text{ VdB}}. \end{aligned}$$

¹⁵⁵ See FTA (May 2006) Transit Noise And Vibration Impact Assessment, p. 8:3 (Table 8-1), https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.

At a distance of 10 feet from caisson drilling for a retaining wall on the property line between this 1888 Lucile Avenue Project site and the home adjacent to the east at 1892 Lucile Avenue, that vibration level is calculated to be about **99 VdB**.¹⁵⁶ The FTA's maximum acceptable level is 80 VdB for homes (See Table 5 above for "Category 2"). This Project's vibration levels could exceed this standard by about 14 to 19 VdB.¹⁵⁷ Exposing this nearest neighboring home to a vibration level of **99 VdB** could cause structural damage to this home because 94 VdB is the threshold for such damage (see Table 7 on page 33 below). Accordingly, this Project's demolition work, site grading, retaining wall drilling, foundation preparation and construction activities could result in significant vibration impacts.

Table 6: Vibration Source Levels for Construction Equipment
(FTA, 2006, Report FTA-VA-90-1003-06)¹⁵⁸

TABLE 5 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft. (in/sec)	Approximate L _v at 25 ft. (VdB)
Pile Driver (Impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Source: United States Environmental Protection Agency, 1973. Legal Compilation on Noise, Vol. 1, p. 2-104.

Table 7: Construction Vibration Damage Criteria
(FTA, Report FTA-VA-90-1003-06)¹⁵⁹

TABLE 14 VIBRATION CRITERIA TO PREVENT DAMAGE TO STRUCTURES

Building Category	PPV (in/sec)	RMS (VdB)
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06).

¹⁵⁶ Calculation: $L_v(10 \text{ feet}) = 87 \text{ VdB} - 30 \times \text{Log}(10/25) = 87 \text{ VdB} - (30 \times -0.40) = 87 + 12 = 99 \text{ VdB}$.

See formula reference on following pages.

¹⁵⁷ Calculations: $94 - 80 = 14 \text{ VdB}$ exceedance; $99 - 80 = 19 \text{ VdB}$ exceedance.

¹⁵⁸ FTA (May 2006) *Transit Noise and Vibration Impact Assessment*, p. 12:12 (Table 12-2), https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.

¹⁵⁹ *Ibid.*, p. 12:13 (Table 12-3).

Vibration levels at the nearest residences immediately adjacent to the Project site (one built in 1959 and another built 1948) would be substantially higher than 0.2 in/sec. PPV because they are closer than 25 feet to Project excavation activities. Construction vibration could cause a significant impact including potential structural damage to these homes. Neighboring homes are non-engineered timber-framed buildings that appear to be stucco-covered that could be damaged by vibration levels greater than 94 VdB, as reflected in **Table 7** above.

Construction activities would be located within 50 feet of four existing homes. At that distance, vibration impacts would exceed the Caltrans recommended level of 0.2 in/sec PPV concerning structural damage and FTA's maximum acceptable level of 80 VdB with respect to human response for residential uses (i.e., annoyance). Thus, caisson drilling during Project construction activities could result in the exposure of existing offsite sensitive receptors to excessive ground vibration and vibration noise levels. This impact would be potentially significant.

Project construction activities could create vibration levels that exceed the threshold of significance at some older adjacent homes. For example, a *vibratory roller* operating only about 15 feet from a neighboring home could have a vibratory level of 100 VdB, a level which would greatly exceed the 80 VdB limit.¹⁶⁰ Alternatively, a *large bulldozer* or a *caisson drilling rig* operated that close during excavations might produce a vibration level of 94 VdB that also could greatly exceed that 80 VdB limit.¹⁶¹ Alternatively, a *clam shell drop* producing about 94 VdB at 25 feet could still produce a significant vibration level of 80.6 VdB at a distance of 70 feet.¹⁶² There are about 7 homes within 70 feet of this Project's ground level excavation area that could be significantly exposed to vibration levels greater than 80 VdB.¹⁶³

A vibration limit of 0.20 in/sec PPV should be used to minimize the potential for cosmetic damage at nearby buildings of standard conventional construction. **Table 6** above indicates that the Project's foundation work would exceed that vibration limit at a

¹⁶⁰ See Table 6 above, showing a *vibratory roller* with an approximate vibration level (L_v) of 94 VdB at 25 feet would be about 100 VdB at 15 feet. The Estimated L_v is calculated as: $L_v(D) = L_v(25 \text{ feet}) - 30\text{Log}(D/25)$ where:

$L_v(D)$ = estimated velocity level in decibels at distance.

$L_v(25 \text{ feet})$ = RMS velocity amplitude at 25 feet.

D= distance from equipment to receiver. (in this case, 15 feet.)

Here, $L_v(15 \text{ feet}) = 94 \text{ VdB} - 30 \times \text{Log}(15/25) = 94 \text{ VdB} - 30 \times -0.22 = 94 + 6.6 = \mathbf{100.6 \text{ VdB}}$.

For formula used here, see FTA (May 2006) Transit Noise And Vibration Impact Assessment, p. 12:11.

See also DEIR for Temple Israel of Hollywood Enhancement Project, p. IV.H:24 for formula, online at <https://planning.lacity.org/eir/TempleIsrael/DEIR/DEIR%20Sections/IV.H.%20Noise.pdf>

¹⁶¹ *Ibid.*, a *large bulldozer* generates a vibration level (L_v) of 87 VdB at 25 feet which, closer at the nearest homes 15 feet away or closer, would be about 94 dBA at 15 feet. Here, $L_v(15 \text{ feet}) = 87 \text{ VdB} - 30 \times \text{Log}(15/25) = 87 \text{ VdB} - 30 \times -0.22 = 87 + 6.6 = 93.6 \text{ VdB} = \mathbf{\sim 94 \text{ VdB}}$.

¹⁶² *Ibid.*, the impact from a *clam shell drop* generates a vibration level (L_v) of 94 VdB at 25 feet which, at homes 70 feet away, would be about 80.6 VdB. Here, $L_v(70 \text{ feet}) = 94 \text{ VdB} - 30 \times \text{Log}(70/25) = 94 \text{ VdB} - (30 \times 0.48) = 94 - 13.4 = \mathbf{80.6 \text{ VdB}}$.

¹⁶³ Homes within 70 feet of Project construction include those at 1880 Lucile, 1872 Lucile, 3633 Landa, 3623 Landa, 1892 Lucile, 1881 Lucile, and 1896 Lucile Avenue.

distance of 25 feet for the equipment such as clam shovels and vibratory rollers. If the City also accepts a vibration threshold for this Project of greater than 80 VdB, then the use of hoe rams, loaded trucks, caisson drilling, and large bulldozers would generate excessive and significant vibration impacts at that distance of 25 feet.

With Project vibration impacts being so significant to some neighboring residents and in excess of FTA impact thresholds, this Project's Initial Study is not accurate and without substantial evidence in determining there will be "no impacts" due to construction vibration. Notably, the Initial Study and Project application documents provide absolutely no evidence that there will be no construction vibration impacts to neighboring residences.

Reply to Z Consulting's Response VI-23, p. 46:

Mr. Zuleger is incorrect in asserting:

"Vibration impacts from construction activities can more suitably be compared to thresholds meant to ensure that nearby receptors are not damaged. For this type of assessment, the units of peak particle velocity (PPV in inches/second) should be utilized, not the units of vibration level (Lv in VdB). Both of La Forest Report's significance threshold sources for damage to structures include a threshold of 0.2 PPV for "non-engineered timber and masonry buildings".

As shown above, CEQA also considers excessive ground-borne vibration impacts causing human annoyance to be significant environmental impacts. The Initial Study however never considers this human annoyance impact when severe vibration will occur with drill rig operations with 10 or 15 feet from neighboring homes.

The calculations used to claim that vibration impacts exceed the structural damage significance threshold are inaccurate for numerous reasons, including:

They are based on vibration levels for equipment that will not be utilized for Project construction, including vibratory rollers, clam shovel drops, and large bulldozers.

Vibration levels in units of VdB are incorrectly compared to structural damage thresholds, instead of the units of PPV.

The piece of construction equipment that will be utilized by the Project with the highest vibration level based on Table 6 is the caisson drilling rig. The La Forest Report claims that this source's vibration impact will exceed the structural damage threshold. This is incorrect because the drill rig has a PPV of 0.089 inches/second at 25 feet, which is less than the PPV threshold of 0.2 inches/second. Even assuming the same distance as the La Forest Report (15 feet), the PPV from the drill rig would be 0.19 inches/second, still below the PPV threshold of 0.2 inches/second.

Mr. Zuleger ignores that severe vibration impacts could result because caisson drilling will occur as close as 10 feet to one neighboring home as my Report analyzed on page 55. At that close distance, the vibration levels using a PPV of 0.089 inches/second at 25 feet would exceed the threshold of significance of 0.2 inches/second. That represents a significant ground-borne vibration impact that could potentially damage this neighboring home, not to mention generating severe human annoyance impacts.

Also, note that Project's slope does not make its construction unique (see Response IV-2) and the neighboring homes are not uniquely susceptible to vibration damage. There is no reason that construction vibration impacts represent a special cause for concern for this Project.

For some neighboring homes to be exposed to excessive ground-borne vibration impacts, this Project would not only be a cause for concern. It would also have significant environmental impacts.

Response VI-24

"Project impacts are less than significant without mitigation, as presented in the Initial Study. Furthermore, the RCMs presented in the Initial Study are sufficient to ensure that the Project complies with the Noise Ordinance. As such, the above measures are not necessary for this Project. The City is not required to apply all potential control measures to every project.

It is not true, as shown above, that this Project's noise impacts will be less-than-significant without noise mitigations. That statement is based upon the failure to consider all appropriate thresholds of significance. And a failure to include the **2006 L.A. CEQA Thresholds Guide** in those thresholds. It is also based upon multiple errors in interpreting the Noise Ordinance and other applicable standards this Project must comply with.

"Also, please note that Project documents prepared before the Initial Study are not relevant and may be ignored."

CEQA requires the City Council to consider all previously submitted comments on this Project. Therefore the previous IS/MND is part of the Project record and must also be considered by City officials.

III. CONCLUSION

As discussed above, the Project's Initial Study's noise discussion fails to provide basic information required for the City to adequately assess the true noise impacts of this Project. As a result, likely construction and vibration noise impacts were overlooked. This Reply letter presents fair arguments that the Project as proposed, even with regulatory control measures, will still create significant noise impacts. That evidence discussed above demonstrates the current

Categorical Exemption is inadequate for this Project's CEQA review. Moreover, feasible mitigation measures are available and need to be considered pursuant to a CEQA-compliant MND or EIR—just like similar projects reviewed by the City.

If further opportunities become available to review this Project or its environmental impacts, please notify me at that time.

Sincerely,

A handwritten signature in black ink that reads "Dale La Forest". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Dale La Forest

Professional Planner, Designer, INCE Associate (Institute of Noise Control Engineering)

Dale La Forest & Associates