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Via Email

March 10, 2022

Vilia Zemaitaitis
Community Development Department
Planning Division Office
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Email: vzemaitaitis@glendaleca.gov

**Re: Comment on Sustainable Communities Environmental Assessment (SCEA)
Lucia Park Project (620 N. Brand Boulevard and 625 N. Maryland Avenue)**

Dear Principal Planner Zemaitaitis:

I am writing on behalf of the Supporters' Alliance for Environmental Responsibility ("SAFER") concerning the Sustainable Communities Environmental Assessment ("SCEA") prepared for the Lucia Park Project ("Project") located at 620 N. Brand Boulevard and 625 N. Maryland Avenue in the City of Glendale ("City").

After reviewing the SCEA with the assistance of Certified Industrial Hygienist, Francis "Bud" Offermann, PE, CIH, and air quality experts Matt Hagemann, P.G., C.Hg., and Paul E. Rosenfeld, Ph.D., of the Soil/Water/Air Protection Enterprise ("SWAPE"), SAFER requests that the the City revise the SCEA prior to approval of the Project because (1) the SCEA fails to incorporate all feasible mitigation measures from prior environmental impact reports and (2) the SCEA's conclusions about the Project's impacts to air quality are not supported by substantial evidence.

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PROJECT DESCRIPTION

The Lucia Park Project proposes the development of a residential apartment building on a 63,760-square-foot site, currently developed with a two-story office building and the six-story Chase Bank office building and an associated parking structure. The Project includes the demolition of the existing parking structure and two-story office building and construction of a 24-story, 294-unit residential building containing 247 one-bedroom and 47 two-bedroom apartments, with a parking garage containing 502 parking spaces, including 373 parking spaces for the proposed apartments in four levels of subterranean parking and two above-ground levels.

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The Project includes 41,625 square feet of residential development open space and 7,064 square feet of landscape area throughout the residential building. A number of community spaces are proposed throughout the building, including outdoor and private terraces and a pool on the fourth floor and a dog park on the fifth floor. Terraces are also proposed on the sixth, seventeenth, nineteenth, and twenty-first floors, including roof terraces on the twenty-third and twenty-fourth floors.

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LEGAL BACKGROUND

Sustainable Communities Environmental Assessment under SB 375

CEQA allows for the streamlining of environmental review for “transit priority projects” meeting certain criteria. (Pub. Res. Code §§ 21155, 21155.1, 21155.2.) To qualify as a transit priority project, a project must

- (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
- (2) provide a minimum net density of at least 20 dwelling units per acre; and
- (3) be within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan.

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(Pub. Res. Code § 21155(b).) A transit priority project is eligible for CEQA’s streamlining provisions where,

[The transit priority project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board . . . has accepted a metropolitan planning organization’s determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

(Pub. Res. Code § 21155(a).) On September 3, 2020, the Regional Council of the Southern California Association of Governments (“SCAG”) adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (“2020-2045 RTP/SCS”), which was accepted by the California Air Resources Board (“CARB”). The final program EIR for the 2020-2045 RTP/SCS was certified on May 7, 2020.

If “all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081” are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable communities environmental assessment (“SCEA”). (Pub. Res. Code § 21155.2.) A SCEA must contain an initial study which “identif[ies] all significant or potentially

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significant impacts of the transit priority project . . . based on substantial evidence in light of the whole record.” (Pub. Res. Code § 21155.2(b)(1).) The initial study must also “identify any cumulative effects that have been adequately addressed and mitigated pursuant to the requirements of this division in prior applicable certified environmental impact reports.” (*Id.*) The SCEA must then “contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study.” (Pub. Res. Code §21155(b)(2).) The SCEA is not required to discuss growth inducing impacts or any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network. (Pub. Res. Code § 21159.28(a).)

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After circulating the SCEA for public review and considering all comments, a lead agency may approve the SCEA with findings that all potentially significant impacts have been identified and mitigated to a less-than-significant level. (Pub. Res. Code § 21155(b)(3), (b)(4), (b)(5).) A lead agency’s approval of a SCEA must be supported by substantial evidence. (Pub. Res. Code §21155(b)(7).

DISCUSSION

I. The SCEA is not adequate under CEQA because it fails to require all feasible mitigation measures from the 2020-2045 RTP/SCS.

CEQA is clear that a SCEA is only appropriate where “all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081” are applied to the Project. (Pub. Res. Code § 21155.2.) In 2020, SCAG adopted the Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Program Environmental Impact Report (“2020-2045 RTP/SCS PEIR”), which included a Mitigation Monitoring and Reporting Program (“MMRP”). The MMRP included regional mitigation measures to be implemented by SCAG and project-level mitigation measures to be applied by lead agencies to specific projects (such as the Project here).

Despite CEQA’s clear directive that *all* feasible mitigation measures from prior EIRs must be applied to a project to qualify for a SCEA, numerous feasible mitigation measures from the 2020-2045 RTP/SCS PEIR are not being applied to the Project. For example, for mitigation measures to reduce air quality impacts, the SCEA simply lists mitigation measure PMM AQ-1 from the 2020-2045 RTP/SCS PEIR. (SCEA, p. 6.0-3 to 6.0-8.) PMM AQ-1, by its own terms, is a list of mitigation measures that the City “should consider” and “may include” for a project. (SCEA, p. 6.0-3.) There is no indication that the City has considered the many mitigation measures in PMM AQ-1 and decided which are feasible to apply to this Project.

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The failure of the SCEA to clearly state which prior mitigation measures will be applied to the Project is compounded by the inconsistencies between the mitigation measures listed in the SCEA. For example, PMM AQ-1 from the 2020 RTP/SCS PEIR suggests that heavy duty off-

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road construction equipment should meet “Tier 4 Final” emissions standard set by the EPA. At the same time, the SCEA also lists MM 4.2-2(h) from the Downtown Specific Plan EIR, which only requires that construction equipment meet the much dirtier Tier 2 emissions standard. (SCEA, p. 6.0-14.) Such inconsistencies could be remedied by the City revising the SCEA to make clear *which* prior mitigation measures will be applied to the Project. Indeed, CEQA requires that *all* feasible mitigation measures be applied to a project in order for the City to proceed with a SCEA rather than an EIR or MND.

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The SCEA also fails to require all feasible prior mitigation measures to reduce greenhouse gas (“GHG”) impacts. An addendum to the 2020-2045 RTP/SCS in September 2020 included mitigation measure PMM-GHG-1 to reduce GHG impacts. (See Ex. B, p. 16-18.) However, the SCEA makes no mention of PMM-GHG-1 and only relies on mitigation *policies* from the South Glendale Community Plan EIR. (SCEA, pp. 6.0-24 to 6.0-25.) The omission of the GHG mitigation from the 2020-2045 RTP-SCS runs afoul of CEQA’s requirement that all feasible prior mitigation measures be applied to a Project in order to proceed with a SCEA rather than an EIR or MND.

II. The SCEA’s conclusions regarding the Project’s air quality impacts are not supported by substantial evidence.

Indoor air quality expert Francis “Bud” Offermann, PE, CIH, and air quality experts Matt Hagemann, P.G., C.Hg., and Paul E. Rosenfeld, Ph.D., of the Soil/Water/Air Protection Enterprise (“SWAPE”) reviewed the SCEA and found that the SCEA’s conclusions as to the Project’s air quality impacts were not supported by substantial evidence. Mr. Offermann found that the SCEA failed to address and mitigate the human health impacts from indoor emissions of formaldehyde. Mr. Offermann’s comment and CV are attached as Exhibit A. SWAPE found that SCEA failed to properly model the Project’s emissions and failed to properly evaluate the Project’s health risk impacts from emissions of diesel particulate matter. SWAPE’s comment and CVs are attached as Exhibit B.

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A. The SCEA failed to discuss or mitigate the Project’s significant indoor air quality impacts.

The SCEA fails to discuss, disclose, analyze, and mitigate the significant health risks posed by the Project from formaldehyde, a toxic air contaminant (“TAC”). Certified Industrial Hygienist, Francis Offermann, PE, CIH, conducted a review of the Project, the SCEA, and relevant documents regarding the Project’s indoor air emissions. Mr. Offermann is one of the world’s leading experts on indoor air quality, in particular emissions of formaldehyde, and has published extensively on the topic. As discussed below and set forth in Mr. Offermann’s comment, the Project’s emissions of formaldehyde to air will result in very significant cancer risks to future residents of the Project. Mr. Offermann’s expert opinion demonstrates the Project’s significant health risk impacts, which the City has a duty to investigate, disclose, and mitigate in the SCEA prior to approval. Mr. Offermann’s comment and curriculum vitae are attached as Exhibit A.

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Formaldehyde is a known human carcinogen and listed by the State as a TAC. SCAQMD has established a significance threshold of health risks for carcinogenic TACs of 10 in a million and a cumulative health risk threshold of 100 in a million. The SCEA fails to acknowledge the significant indoor air emissions that will result from the Project. Specifically, there is no discussion of impacts or health risks, no analysis, and no identification of mitigations for significant emissions of formaldehyde to air from the Project.

Mr. Offermann explains that many composite wood products typically used in home and apartment building construction contain formaldehyde-based glues which off-gas formaldehyde over a very long time period. He states, “The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential, office, and retail building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.” (Ex. A, pp. 2-3.)

Mr. Offermann found that future residents of the Project’s residential units will be exposed to a cancer risk from formaldehyde of approximately 120 per million, *even assuming that* all materials are compliant with the California Air Resources Board’s formaldehyde airborne toxics control measure. (Ex. A, pp. 3-4.) This is more than 12 times SCAQMD’s CEQA significance threshold of 10 per million. (*Id.*, at p. 4.)

Mr. Offermann concludes that these significant environmental impacts must be analyzed and mitigation measures should be imposed to reduce the risk of formaldehyde exposure. (Ex. A, pp. 4-5, 11-12.) He prescribes a methodology for estimating the Project’s formaldehyde emissions in order to do a more project-specific health risk assessment. (*Id.*, pp. 5-10.) Mr. Offermann also suggests several feasible mitigation measures, such as requiring the use of no-added-formaldehyde composite wood products, which are readily available. (*Id.*, pp. 12-13.) Mr. Offermann also suggests requiring air ventilation systems which would reduce formaldehyde levels. (*Id.*) Since the SCEA does not analyze this impact at all, none of these or other mitigation measures have been considered.

When a Project exceeds a duly adopted CEQA significance threshold, as here, this alone establishes substantial evidence that the project will have a significant adverse environmental impact. Indeed, in many instances, such air quality thresholds are the only criteria reviewed and treated as dispositive in evaluating the significance of a project’s air quality impacts. (See, e.g. *Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 [County applies Air District’s “published CEQA quantitative criteria” and “threshold level of cumulative significance”]; see also *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 110-11 [“A ‘threshold of significance’ for a given environmental effect is simply that level at which the lead agency finds the effects of the project to be significant”].)

The California Supreme Court made clear the substantial importance that an air district significance threshold plays in providing substantial evidence of a significant adverse impact.

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(*Communities for a Better Environment v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 327 [“As the [South Coast Air Quality Management] District’s established significance threshold for NOx is 55 pounds per day, these estimates [of NOx emissions of 201 to 456 pounds per day] constitute substantial evidence supporting a fair argument for a significant adverse impact.”].) Since expert evidence demonstrates that the Project will exceed the SCAQMD’s CEQA significance threshold, there is substantial evidence that an “unstudied, **potentially significant environmental effect**” exists. (See *Friends of Coll. of San Mateo Gardens v. San Mateo Cty. Cmty. Coll. Dist.* (2016) 1 Cal.5th 937, 958 [emphasis added].) As a result, the City must address this impact and identify enforceable mitigation measures prior to approving the SCEA. (See Pub. Res. Code § 21155.2(b)(5) [SCEA must mitigate all impacts to level of insignificance].)

The failure of the SCEA to address the Project’s formaldehyde emissions is contrary to the California Supreme Court’s decision in *California Building Industry Ass’n v. Bay Area Air Quality Mgmt. Dist.* (2015) 62 Cal.4th 369, 386 (“*CBLA*”). In that case, the Supreme Court expressly holds that potential adverse impacts to future users and residents from pollution generated by a proposed project **must be addressed** under CEQA. At issue in *CBLA* was whether the Air District could enact CEQA guidelines that advised lead agencies that they must analyze the impacts of adjacent environmental conditions on a project. The Supreme Court held that CEQA does not generally require lead agencies to consider the environment’s effects on a project. (*CBLA*, 62 Cal.4th at 800-01.) However, to the extent a project may exacerbate existing environmental conditions at or near a project site, those would still have to be considered pursuant to CEQA. (*Id.* at 801.) In so holding, the Court expressly held that CEQA’s statutory language required lead agencies to disclose and analyze “impacts on **a project’s users or residents** that arise **from the project’s effects** on the environment.” (*Id.* at 800 [emphasis added].)

The carcinogenic formaldehyde emissions identified by Mr. Offermann are not an existing environmental condition. Those emissions to the air will be from the Project. People will be residing in and working in the Project’s buildings once built and emitting formaldehyde. Once built, the Project will begin to emit formaldehyde at levels that pose significant direct and cumulative health risks. The Supreme Court in *CBLA* expressly finds that this type of air emission and health impact by the project on the environment and a “project’s users and residents” must be addressed in the CEQA process. The existing TAC sources near the Project site would have to be considered in evaluating the cumulative effect on future residents of both the Project’s TAC emissions as well as those existing off-site emissions.

The Supreme Court’s reasoning is well-grounded in CEQA’s statutory language. CEQA expressly includes a project’s effects on human beings as an effect on the environment that must be addressed in an environmental review. “Section 21083(b)(3)’s express language, for example, requires a finding of a ‘significant effect on the environment’ (§ 21083(b)) whenever the ‘environmental effects of a project will cause substantial adverse effects *on human beings*, either directly or indirectly.’” (*CBLA*, 62 Cal.4th at 800.) Likewise, “the Legislature has made clear—in declarations accompanying CEQA’s enactment—that public health and safety are of great

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importance in the statutory scheme.” (*Id.* [citing e.g., PRC §§ 21000, 21001].) It goes without saying that the future residents and employees at the Project are human beings and their health and safety must be subject to CEQA’s safeguards.

The City has a duty to investigate issues relating to a project’s potential environmental impacts. (See *County Sanitation Dist. No. 2 v. County of Kern*, (2005) 127 Cal.App.4th 1544, 1597-98. [“[U]nder CEQA, the lead agency bears a burden to investigate potential environmental impacts.”].) The proposed buildings will have significant impacts on air quality and health risks by emitting cancer-causing levels of formaldehyde into the air that will expose future residents and employees to cancer risks potentially in excess of SCAQMD’s threshold of significance for cancer health risks of 10 in a million. Currently, outside of Mr. Offermann’s comments, the City does not have any idea what risks will be posed by formaldehyde emissions from the Project or the residences. As a result, the City must include an analysis and discussion in an updated SCEA which discloses and analyzes the health risks that the Project’s formaldehyde emissions may have on future residents and identifies appropriate mitigation measures.

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- B. The SCEA cannot be relied upon to determine the significance of the Project’s air quality impacts because the SCEA’s air model underestimated the Project’s emissions.

SWAPE’s review of the SCEA found that it underestimated the Project’s emissions and therefore cannot be relied upon to determine the significance of the Project’s air quality impacts. The SCEA relies on emissions calculated from the California Emissions Estimator Model Version CalEEMod.2020.4.0 (“CalEEMod”). (Ex. B, p. 2.) This model, which is used to generate a project’s construction and operational emissions, relies on recommended default values based on site specific information related to a number of factors (*Id.*, p. 2.) CEQA requires that any changes to the default values must be justified by substantial evidence. (*Id.*)

SWAPE reviewed the Project’s CalEEMod output files and found that the values input into the model were inconsistent with information provided in the SCEA. (Ex. B, p. 3.) This results in an underestimation of the Project’s emissions. (*Id.*) As a result, the SCEA’s air quality analysis cannot be relied upon to estimate the Project’s emissions.

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Specifically, SWAPE found that the following values used in the SCEA’s air quality analysis were either inconsistent with information provided in the SCEA or otherwise unjustified:

1. Unsubstantiated Changes to Architectural/Area Coating (Ex. B, pp. 3-4.)
2. Unsubstantiated Changes to Construction Phase Lengths (Ex. B, pp. 4-6.)
3. Improper Application of Operational Mitigation Measures (Ex. B, pp. 6-7.)

As a result of these errors in the SECA, the Project’s construction and operational emissions are underestimated and cannot be relied upon to determine the significance of the Project’s air quality impacts.

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C. The SCEA inadequately analyzed the Project's impact on human health from emissions of diesel particulate matter.

The SCEA concluded that the Project would result in a less-than-significant health risk impact without conducting a quantified construction or operational health risk analysis ("HRA"). (Ex. B, p. 8.) The SCEA concluded that construction-related TAC impacts would be less than significant because emissions of PM2.5 would not exceed localized thresholds. (*Id.*) However, SWAPE found that the SCEA's analysis of the Project's health risks were inadequate. (Ex. B, pp. 9-10.)

First, the localized significance threshold ("LST") methodology relied on by the SCEA does not account for TAC pollutants such as diesel particulate matter ("DPM"). Rather, the LST methodology only covers emissions of NOx, CO, PM10, and PM2.5. (Ex. B, p. 9.) As SWAPE explains, "this method cannot be used to determine whether emissions from TACs, specifically DPM, a known human carcinogen, would result in a significant health risk impact to nearby sensitive receptors." (*Id.*) By not analyzing the impacts of DPM emissions, the SCEA failed to provide substantial evidence that the impacts would be less than significant, as claimed.

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Second, the SCEA fails to include a quantified HRA to evaluate the Project's health risks to nearby sensitive receptors resulting from construction and operation of the Project. (Ex. B, p. 9.) The Project would generate approximately 1,198 average daily vehicle trips, yet the SCEA vague does not disclose or discuss the concentrations at which such pollutants would trigger adverse health effects. (*Id.*) Thus, the SCEA is inconsistent with CEQA's requirement to correlate the increase in emissions generated by the Project with the potential adverse impacts on human health. (*Id.*)

Third, the failure of the SCEA to provide a quantified HRA is inconsistent with the most recent guidance of the Office of Environmental Health Hazard Assessment ("OEHHA"). OEHHA recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). (Ex. B, pp. 9-10.) Therefore, the SCEA must be revised to include an analysis of health risks resulting from construction and operation of the Project.

D. An updated air quality analysis indicates that the Project will result in significant emissions of VOCs and DPM.

In an effort to accurately determine the proposed Project's construction and operational emissions, SWAPE prepared an updated CalEEMod model that includes more site-specific information and correct input parameters, as provided by the MND. (Ex. B, p. 7.) SWAPE's updated analysis "proportionately altered the individual construction phase lengths to match the proposed construction duration of 35 months, omitted the unsubstantiated changes to the architectural and area coating emission factors and areas, and excluded the incorrect area-related operational mitigation measures." (*Id.*) SWAPE's updated model found that Project's

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construction-related emissions of volatile organic compounds “VOCs” emissions exceed the applicable CEQA thresholds set by SCAQMD.” (*Id.* at pp. 7-8.)

Because the SCEA must “contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study” (Pub. Res. Code §21155(b)(2)), the SCEA must be revised in order to disclose and mitigate the Project’s significant VOC emissions.

SWAPE also prepared a screening-level health risk assessment (“HRA”) to evaluate potential DPM impacts from the construction and operation of the Project. (Ex. B, pp. 10-12.) SWAPE used AERSCREEN, the leading screening-level air quality dispersion model. (*Id.* at p. 10.) SWAPE used a sensitive receptor distance of 200 feet and analyzed impacts to individuals at different stages of life based on OEHHA and SCAQMD guidance. (*Id.* at pp. 11-12.)

SWAPE found that the excess cancer risk for infants, children, and adults at the closest sensitive receptor located approximately 200 feet away, over the course of Project construction and operation, is approximately 233, 127, and 13.4 in one million, respectively. (Ex. B, p. 13.) Moreover, SWAPE found that the excess cancer risk over the course of a residential lifetime is approximately 383 in one million. (*Id.*) The infants, children, adults, and lifetime cancer risks all exceed the SCAQMD threshold of 10 in one million. Because a SCEA is only appropriate where all impacts have been mitigated to a level of insignificance, the City must prepare a revised SCEA to mitigate this impact or otherwise prepare an EIR.

CONCLUSION

The SCEA for the Project should be revised prior to any further action on the Project. The SCEA’s fails to require all feasible mitigation measures from the 2020-2045 RTP/SCS EIR. Furthermore, the SCEA fails to identify and mitigate the Project’s air quality impacts to a less-than-significant level. For those reasons, the SCEA must be revised or, in the alternative, the City may prepare an EIR or MND. Thank you for considering these comments.

Sincerely,



Brian B. Flynn
Lozeau Drury LLP

EXHIBIT A



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Responses to Comments
Comment Letter No. 1



Date: January 27, 2022

To: Brian Flynn
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From: Francis J. Offermann PE CIH

Subject: Indoor Air Quality: Lucia Park Project - Glendale, CA
(IEE File Reference: P-4540)

Pages: 18

Indoor Air Quality Impacts

Indoor air quality (IAQ) directly impacts the comfort and health of building occupants, and the achievement of acceptable IAQ in newly constructed and renovated buildings is a well-recognized design objective. For example, IAQ is addressed by major high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014). Indoor air quality in homes is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home (EPA, 2011). Some segments of the population that are most susceptible to the effects of poor IAQ, such as the very young and the elderly, occupy their homes almost continuously. Additionally, an increasing number of adults are working from home at least some of the time during the workweek. Indoor air quality also is a serious concern for workers in hotels, offices and other business establishments.

The concentrations of many air pollutants often are elevated in homes and other buildings relative to outdoor air because many of the materials and products used indoors contain

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and release a variety of pollutants to air (Hodgson et al., 2002; Offermann and Hodgson, 2011). With respect to indoor air contaminants for which inhalation is the primary route of exposure, the critical design and construction parameters are the provision of adequate ventilation and the reduction of indoor sources of the contaminants.

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Indoor Formaldehyde Concentrations Impact. In the California New Home Study (CNHS) of 108 new homes in California (Offermann, 2009), 25 air contaminants were measured, and formaldehyde was identified as the indoor air contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), No Significant Risk Levels (NSRL) for carcinogens. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk) and for formaldehyde is 40 µg/day. The NSRL concentration of formaldehyde that represents a daily dose of 40 µg is 2 µg/m³, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m³, and 100% absorption by the respiratory system. All of the CNHS homes exceeded this NSRL concentration of 2 µg/m³. The median indoor formaldehyde concentration was 36 µg/m³, and ranged from 4.8 to 136 µg/m³, which corresponds to a median exceedence of the 2 µg/m³ NSRL concentration of 18 and a range of 2.3 to 68.

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Therefore, the cancer risk of a resident living in a California home with the median indoor formaldehyde concentration of 36 µg/m³, is 180 per million as a result of formaldehyde alone. The CEQA significance threshold for airborne cancer risk is 10 per million, as established by the South Coast Air Quality Management District (SCAQMD, 2015).

Besides being a human carcinogen, formaldehyde is also a potent eye and respiratory irritant. In the CNHS, many homes exceeded the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment (OEHHA, 2017b). The percentage of homes exceeding the RELs ranged from 98% for the Chronic REL of 9 µg/m³ to 28% for the Acute REL of 55 µg/m³.

The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and

particleboard. These materials are commonly used in building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.

In January 2009, the California Air Resources Board (CARB) adopted an airborne toxics control measure (ATCM) to reduce formaldehyde emissions from composite wood products, including hardwood plywood, particleboard, medium density fiberboard, and also furniture and other finished products made with these wood products (California Air Resources Board 2009). While this formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California, they do not preclude that homes built with composite wood products meeting the CARB ATCM will have indoor formaldehyde concentrations below cancer and non-cancer exposure guidelines.

A follow up study to the California New Home Study (CNHS) was conducted in 2016-2018 (Singer et. al., 2019), and found that the median indoor formaldehyde in new homes built after 2009 with CARB Phase 2 Formaldehyde ATCM materials had lower indoor formaldehyde concentrations, with a median indoor concentrations of $22.4 \mu\text{g}/\text{m}^3$ (18.2 ppb) as compared to a median of $36 \mu\text{g}/\text{m}^3$ found in the 2007 CNHS. Unlike in the CNHS study where formaldehyde concentrations were measured with pumped DNPH samplers, the formaldehyde concentrations in the HENGH study were measured with passive samplers, which were estimated to under-measure the true indoor formaldehyde concentrations by approximately 7.5%. Applying this correction to the HENGH indoor formaldehyde concentrations results in a median indoor concentration of $24.1 \mu\text{g}/\text{m}^3$, which is 33% lower than the $36 \mu\text{g}/\text{m}^3$ found in the 2007 CNHS.

Thus, while new homes built after the 2009 CARB formaldehyde ATCM have a 33% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 120 per million for homes built with CARB compliant composite wood products. This median lifetime cancer risk is more than 12 times the OEHHA 10 in a million cancer risk threshold (OEHHA, 2017a).

With respect to the Lucia Park Project - Glendale, CA, the buildings consist of residential spaces.

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The residential occupants will potentially have continuous exposure (e.g. 24 hours per day, 52 weeks per year). These exposures are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residential construction.

Because these residences will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor residential formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 24.1 $\mu\text{g}/\text{m}^3$ (Singer et. al., 2020)

Assuming that the residential occupants inhale 20 m^3 of air per day, the average 70-year lifetime formaldehyde daily dose is 482 $\mu\text{g}/\text{day}$ for continuous exposure in the residences. This exposure represents a cancer risk of 120 per million, which is more than 12 times the CEQA cancer risk of 10 per million. For occupants that do not have continuous exposure, the cancer risk will be proportionally less but still substantially over the CEQA cancer risk of 10 per million (e.g. for 12/hour/day occupancy, more than 6 times the CEQA cancer risk of 10 per million).

Appendix A, Indoor Formaldehyde Concentrations and the CARB Formaldehyde ATCM, provides analyses that show utilization of CARB Phase 2 Formaldehyde ATCM materials will not ensure acceptable cancer risks with respect to formaldehyde emissions from composite wood products.

Even composite wood products manufactured with CARB certified ultra low emitting formaldehyde (ULEF) resins do not insure that the indoor air will have concentrations of formaldehyde that meet the OEHHHA cancer risks that substantially exceed 10 per million. The permissible emission rates for ULEF composite wood products are only 11-15% lower than the CARB Phase 2 emission rates. Only use of composite wood products made with no-added formaldehyde resins (NAF), such as resins made from soy, polyvinyl

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acetate, or methylene diisocyanate can insure that the OEHHA cancer risk of 10 per million is met.

The following describes a method that should be used, prior to construction in the environmental review under CEQA, for determining whether the indoor concentrations resulting from the formaldehyde emissions of specific building materials/furnishings selected exceed cancer and non-cancer guidelines. Such a design analyses can be used to identify those materials/furnishings prior to the completion of the City's CEQA review and project approval, that have formaldehyde emission rates that contribute to indoor concentrations that exceed cancer and non-cancer guidelines, so that alternative lower emitting materials/furnishings may be selected and/or higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor concentrations and incorporated as mitigation measures for this project.

1-12

Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment

This formaldehyde emissions assessment should be used in the environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, the area-specific formaldehyde emission rate data for building materials/furnishings, and the design minimum outdoor air ventilation rates. This assessment allows the applicant (and the City) to determine, before the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed, if the total chemical emissions will exceed cancer and non-cancer guidelines, and if so, allow for changes in the selection of specific material/furnishings and/or the design minimum outdoor air ventilations rates such that cancer and non-cancer guidelines are not exceeded.

1.) Define Indoor Air Quality Zones. Divide the building into separate indoor air quality zones, (IAQ Zones). IAQ Zones are defined as areas of well-mixed air. Thus, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates. (e.g. hotel rooms, apartments, condominiums,

etc.) the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

2.) Calculate Material/Furnishing Loading. For each IAQ Zone, determine the building material and furnishing loadings (e.g., m² of material/m² floor area, units of furnishings/m² floor area) from an inventory of all potential indoor formaldehyde sources, including flooring, ceiling tiles, furnishings, finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard).

3.) Calculate the Formaldehyde Emission Rate. For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m²-h) and the area (m²) of material in the IAQ Zone, and from each furnishing (e.g. chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

1-12

NOTE: As a result of the high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014), most manufacturers of building materials furnishings sold in the United States conduct chemical emission rate tests using the California Department of Health “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers,” (CDPH, 2017), or other equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the United States conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions (BIFMA, 2018), or other equivalent chemical emission rate testing methods.

CDPH, BIFMA, and other chemical emission rate testing programs, typically certify that a material or furnishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines (OEHHA, 2017b) for the 35 specific VOCs, including formaldehyde, listed in

Table 4-1 of the CDPH test method (CDPH, 2017). These certifications themselves do not provide the actual area-specific formaldehyde emission rate (i.e., $\mu\text{g}/\text{m}^2\text{-h}$) of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed for the certification. Thus, for example, the data for a certification of a specific type of flooring may be used to calculate that the area-specific emission rate of formaldehyde is less than $31 \mu\text{g}/\text{m}^2\text{-h}$, but not the actual measured specific emission rate, which may be 3, 18, or $30 \mu\text{g}/\text{m}^2\text{-h}$. These area-specific emission rates determined from the product certifications of CDPH, BIFA, and other certification programs can be used as an initial estimate of the formaldehyde emission rate.

If the actual area-specific emission rates of a building material or furnishing is needed (i.e. the initial emission rates estimates from the product certifications are higher than desired), then that data can be acquired by requesting from the manufacturer the complete chemical emission rate test report. For instance if the complete CDPH emission test report is requested for a CDHP certified product, that report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017), but also all of the cancer and reproductive/developmental chemicals listed in the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), all of the toxic air contaminants (TACs) in the California Air Resources Board Toxic Air Contamination List (CARB, 2011), and the 10 chemicals with the greatest emission rates.

1-12

Alternatively, a sample of the building material or furnishing can be submitted to a chemical emission rate testing laboratory, such as Berkeley Analytical Laboratory (<https://berkeleyanalytical.com>), to measure the formaldehyde emission rate.

4.) Calculate the Total Formaldehyde Emission Rate. For each IAQ Zone, calculate the total formaldehyde emission rate (i.e. $\mu\text{g}/\text{h}$) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

5.) Calculate the Indoor Formaldehyde Concentration. For each IAQ Zone, calculate the indoor formaldehyde concentration ($\mu\text{g}/\text{m}^3$) from Equation 1 by dividing the total

formaldehyde emission rates (i.e. µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m³/h) for the IAQ Zone.

$$C_{in} = \frac{E_{total}}{Q_{oa}} \quad (\text{Equation 1})$$

where:

C_{in} = indoor formaldehyde concentration (µg/m³)

E_{total} = total formaldehyde emission rate (µg/h) into the IAQ Zone.

Q_{oa} = design minimum outdoor air ventilation rate to the IAQ Zone (m³/h)

The above Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2 “Calculation of Estimated Building Concentrations” of the California Department of Health “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers”, (CDPH, 2017).

6.) Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks. For each IAQ Zone, calculate the cancer and non-cancer health risks from the indoor formaldehyde concentrations determined in Step 5 and as described in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

7.) Mitigate Indoor Formaldehyde Exposures of exceeding the CEQA Cancer and/or Non-Cancer Health Risks. In each IAQ Zone, provide mitigation for any formaldehyde exposure risk as determined in Step 6, that exceeds the CEQA cancer risk of 10 per million or the CEQA non-cancer Hazard Quotient of 1.0.

Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures below the CEQA cancer and non-cancer health risks.

Source mitigation for formaldehyde may include:

- 1.) reducing the amount materials and/or furnishings that emit formaldehyde
- 2.) substituting a different material with a lower area-specific emission rate of

1-12

formaldehyde

Ventilation mitigation for formaldehyde emitted from building materials and/or furnishings may include:

- 1.) increasing the design minimum outdoor air ventilation rate to the IAQ Zone.

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option, as mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems.

1-12

Further, we are not asking that the builder “speculate” on what and how much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers,” (CDPH, 2017), and use the procedure described earlier above (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Outdoor Air Ventilation Impact. Another important finding of the CNHS, was that the outdoor air ventilation rates in the homes were very low. Outdoor air ventilation is a very important factor influencing the indoor concentrations of air contaminants, as it is the primary removal mechanism of all indoor air generated contaminants. Lower outdoor air exchange rates cause indoor generated air contaminants to accumulate to higher indoor air concentrations. Many homeowners rarely open their windows or doors for ventilation as a result of their concerns for security/safety, noise, dust, and odor concerns (Price, 2007). In the CNHS field study, 32% of the homes did not use their windows during the 24-hour Test Day, and 15% of the homes did not use their windows during the entire preceding week. Most of the homes with no window usage were homes in the winter field session. Thus, a substantial percentage of homeowners never open their windows, especially in the

1-13

winter season. The median 24-hour measurement was 0.26 air changes per hour (ach), with a range of 0.09 ach to 5.3 ach. A total of 67% of the homes had outdoor air exchange rates below the minimum California Building Code (2001) requirement of 0.35 ach. Thus, the relatively tight envelope construction, combined with the fact that many people never open their windows for ventilation, results in homes with low outdoor air exchange rates and higher indoor air contaminant concentrations.

According to the Draft Sustainable Communities Environmental Assessment for the Lucia Park Project, (City of Glendale, 2022), the Project is close to roads with moderate to high traffic (e.g., CA-134, West Doran Street, North Pacific Avenue, Sanchez Drive, Pioneer Drive, etc.). According to the Draft Sustainable Communities Environmental Assessment for the Lucia Park Project, (City of Glendale, 2022), the existing plus Project traffic noise levels are reported in Table 5.13-4 to range from 53.1 dBA 63.3 dBA CNEL. As a result the Project site is a sound impacted site.

1-13

As a result of high outdoor noise levels, the current project will require a mechanical supply of outdoor air ventilation to allow for a habitable interior environment with closed windows and doors. Such a ventilation system would allow windows and doors to be kept closed at the occupant's discretion to control exterior noise within building interiors.

PM_{2.5} Outdoor Concentrations Impact. An additional impact of the nearby motor vehicle traffic associated with this project, are the outdoor concentrations of PM_{2.5}. According to the Draft Sustainable Communities Environmental Assessment for the Lucia Park Project, (City of Glendale, 2022), the Project is located in the South Coast Air Basin, which is a State and Federal non-attainment area for PM_{2.5}.

1-14

An air quality analyses should to be conducted to determine the concentrations of PM_{2.5} in the outdoor and indoor air that people inhale each day. This air quality analyses needs to consider the cumulative impacts of the project related emissions, existing and projected future emissions from local PM_{2.5} sources (e.g. stationary sources, motor vehicles, and airport traffic) upon the outdoor air concentrations at the Project site. If the outdoor concentrations are determined to exceed the California and National annual average PM_{2.5}

exceedence concentration of 12 $\mu\text{g}/\text{m}^3$, or the National 24-hour average exceedence concentration of 35 $\mu\text{g}/\text{m}^3$, then the buildings need to have a mechanical supply of outdoor air that has air filtration with sufficient removal efficiency, such that the indoor concentrations of outdoor $\text{PM}_{2.5}$ particles is less than the California and National $\text{PM}_{2.5}$ annual and 24-hour standards.

1-14

It is my experience that based on the projected high traffic noise levels, the annual average concentration of $\text{PM}_{2.5}$ will exceed the California and National $\text{PM}_{2.5}$ annual and 24-hour standards and warrant installation of high efficiency air filters (i.e. MERV 13 or higher) in all mechanically supplied outdoor air ventilation systems.

Indoor Air Quality Impact Mitigation Measures

The following are recommended mitigation measures to minimize the impacts upon indoor quality:

Indoor Formaldehyde Concentrations Mitigation. Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins (CARB, 2009). CARB Phase 2 certified composite wood products, or ultra-low emitting formaldehyde (ULEF) resins, do not insure indoor formaldehyde concentrations that are below the CEQA cancer risk of 10 per million. Only composite wood products manufactured with CARB approved no-added formaldehyde (NAF) resins, such as resins made from soy, polyvinyl acetate, or methylene diisocyanate can insure that the OEHHA cancer risk of 10 per million is met.

1-15

Alternatively, conduct the previously described Pre-Construction Building Material/Furnishing Chemical Emissions Assessment, to determine that the combination of formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed the CEQA cancer and non-cancer health risks.

It is important to note that we are not asking that the builder “speculate” on what and how

much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers”, (CDPH, 2017), and use the procedure described above (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Outdoor Air Ventilation Mitigation. Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft² of floor area. Following installation of the system conduct testing and balancing to insure that required amount of outdoor air is entering each habitable room and provide a written report documenting the outdoor airflow rates. Do not use exhaust only mechanical outdoor air systems, use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for the occupants or maintenance personnel, that describes the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

PM_{2.5} Outdoor Air Concentration Mitigation. Install air filtration with sufficient PM_{2.5} removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems, such that the indoor concentrations of outdoor PM_{2.5} particles are less than the California and National PM_{2.5} annual and 24-hour standards. Install the air filters in the system such that they are accessible for replacement by the occupants or maintenance personnel. Include in the mechanical outdoor air ventilation system manual instructions on how to replace the air filters and the estimated frequency of replacement.

1-15

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APPENDIX A

INDOOR FORMALDEHYDE CONCENTRATIONS AND THE CARB FORMALDEHYDE ATCM

With respect to formaldehyde emissions from composite wood products, the CARB ATCM regulations of formaldehyde emissions from composite wood products, do not assure healthful indoor air quality. The following is the stated purpose of the CARB ATCM regulation - *The purpose of this airborne toxic control measure is to “reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in California”*. In other words, the CARB ATCM regulations do not “assure healthful indoor air quality”, but rather “reduce formaldehyde emissions from composite wood products”.

Just how much protection do the CARB ATCM regulations provide building occupants from the formaldehyde emissions generated by composite wood products? Definitely some, but certainly the regulations do not “*assure healthful indoor air quality*” when CARB Phase 2 products are utilized. As shown in the Chan 2019 study of new California homes, the median indoor formaldehyde concentration was of 22.4 $\mu\text{g}/\text{m}^3$ (18.2 ppb), which corresponds to a cancer risk of 112 per million for occupants with continuous exposure, which is more than 11 times the CEQA cancer risk of 10 per million.

Another way of looking at how much protection the CARB ATCM regulations provide building occupants from the formaldehyde emissions generated by composite wood products is to calculate the maximum number of square feet of composite wood product that can be in a residence without exceeding the CEQA cancer risk of 10 per million for occupants with continuous occupancy.

For this calculation I utilized the floor area (2,272 ft^2), the ceiling height (8.5 ft), and the number of bedrooms (4) as defined in Appendix B (New Single-Family Residence Scenario) of the Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, Version 1.1, 2017, California

Department of Public Health, Richmond, CA. <https://www.cdph.ca.gov/Programs/CCDCID/DEODC/EHLB/IAQ/Pages/VOC.aspx>.

For the outdoor air ventilation rate I used the 2019 Title 24 code required mechanical ventilation rate (ASHRAE 62.2) of 106 cfm (180 m³/h) calculated for this model residence. For the composite wood formaldehyde emission rates I used the CARB ATCM Phase 2 rates.

The calculated maximum number of square feet of composite wood product that can be in a residence, without exceeding the CEQA cancer risk of 10 per million for occupants with continuous occupancy are as follows for the different types of regulated composite wood products.

Medium Density Fiberboard (MDF) – 15 ft² (0.7% of the floor area), or
Particle Board – 30 ft² (1.3% of the floor area), or
Hardwood Plywood – 54 ft² (2.4% of the floor area), or
Thin MDF – 46 ft² (2.0 % of the floor area).

For offices and hotels the calculated maximum amount of composite wood product (% of floor area) that can be used without exceeding the CEQA cancer risk of 10 per million for occupants, assuming 8 hours/day occupancy, and the California Mechanical Code minimum outdoor air ventilation rates are as follows for the different types of regulated composite wood products.

Medium Density Fiberboard (MDF) – 3.6 % (offices) and 4.6% (hotel rooms), or
Particle Board – 7.2 % (offices) and 9.4% (hotel rooms), or
Hardwood Plywood – 13 % (offices) and 17% (hotel rooms), or
Thin MDF – 11 % (offices) and 14 % (hotel rooms)

Clearly the CARB ATCM does not regulate the formaldehyde emissions from composite wood products such that the potentially large areas of these products, such as for flooring, baseboards, interior doors, window and door trims, and kitchen and bathroom cabinetry,

could be used without causing indoor formaldehyde concentrations that result in CEQA cancer risks that substantially exceed 10 per million for occupants with continuous occupancy.

Even composite wood products manufactured with CARB certified ultra low emitting formaldehyde (ULEF) resins do not insure that the indoor air will have concentrations of formaldehyde that meet the OEHHA cancer risks that substantially exceed 10 per million. The permissible emission rates for ULEF composite wood products are only 11-15% lower than the CARB Phase 2 emission rates. Only use of composite wood products made with no-added formaldehyde resins (NAF), such as resins made from soy, polyvinyl acetate, or methylene diisocyanate can insure that the OEHHA cancer risk of 10 per million is met.

If CARB Phase 2 compliant or ULEF composite wood products are utilized in construction, then the resulting indoor formaldehyde concentrations should be determined in the design phase using the specific amounts of each type of composite wood product, the specific formaldehyde emission rates, and the volume and outdoor air ventilation rates of the indoor spaces, and all feasible mitigation measures employed to reduce this impact (e.g. use less formaldehyde containing composite wood products and/or incorporate mechanical systems capable of higher outdoor air ventilation rates). See the procedure described earlier (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Alternatively, and perhaps a simpler approach, is to use only composite wood products (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins.



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Expert Witness Services

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Education

- M.S. Mechanical Engineering Stanford University, Stanford, CA.
- Graduate Studies in Air Pollution Monitoring and Control University of California, Berkeley, CA.
- B.S. in Mechanical Engineering Rensselaer Polytechnic Institute, Troy, N.Y.

Professional Affiliations

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Work Experience

Mr. Offermann PE, CIH, has 36 years experience as an IAQ researcher, technical author, and workshop instructor. He is president of Indoor Environmental Engineering, a San Francisco based IAQ R&D consulting firm. As president of Indoor Environmental Engineering, Mr. Offermann directs an interdisciplinary team of environmental scientists, chemists, and mechanical engineers in indoor air quality building investigations. Under Mr. Offermann's supervision, IEE has developed both pro-active and reactive IAQ measurement methods and diagnostic protocols. He has supervised over 2,000 IAQ investigations in commercial, residential, and institutional buildings and conducted numerous forensic investigations related to IAQ.

Litigation Experience

Mr. Offermann has been qualified numerous times in court as an expert in the field of indoor air quality and ventilation for both plaintiffs and defendants. He has been deposed over 150 times in cases involving indoor air quality/ventilation issues in commercial, residential, and institutional buildings involving construction defects, and/or operation and maintenance problems. Examples of indoor air quality cases he has worked on are alleged personal injury and/or property damages from mold and bacterial contamination/moisture intrusion, building renovation activities, insufficient outdoor air ventilation, off gassing of volatile organic compounds from building materials and coatings, malfunctioning gas heaters and carbon monoxide poisoning, and applications of pesticides. Mr. Offermann has testified with respect to the scientific admissibility of expert testimony regarding indoor air quality issues via Daubert and Kelly-Frye motions.



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EXHIBIT B



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February 14, 2022

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Subject: Comments on the Lucia Park Project (SCH No. 2022010297)

Dear Mr. Flynn,

We have reviewed the January 2022 Draft Sustainable Communities Environmental Assessment ("SCEA") for the Lucia Park Project ("Project") located in the City of Glendale ("City"). The Project proposes to demolish an existing office building and parking structure and construct a 417,135-SF apartment building consisting of 294 residential units and 502 parking spaces on the 1.46-acre site.

Our review concludes that the SCEA fails to adequately evaluate the Project's hazards and hazardous materials, air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential hazards and hazardous materials, air quality, and health risk impacts that the project may have on the surrounding environment.

1-16

Hazards and Hazardous Materials

Inadequate Analysis and Disclosure of Impacts

A Phase I Environmental Site Assessment ("ESA") was not prepared for the Project site. The preparation of a Phase I ESA is routinely undertaken in the preparation of CEQA documents to identify and disclose hazardous waste issues that may present impacts to the public, workers, or the environment, and which may require further investigation, including environmental sampling and cleanup.

1-17

Standards for performing a Phase I ESA have been established by the US EPA and the American Society for Testing and Materials Standards ("ASTM").¹ Phase I ESAs are conducted to identify conditions that would indicate a release of hazardous substances and include:

- a review of all known sites in the vicinity of the subject property that are on regulatory agency databases undergoing assessment or cleanup activities;
- an inspection;
- interviews with people knowledgeable about the property; and
- recommendations for further actions to address potential hazards.

Phase I ESAs conclude with the identification of any "recognized environmental conditions" ("RECs") and recommendations to address such conditions. A REC is the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. If RECs are identified, then a Phase II ESA generally follows, which includes the collection of soil, soil vapor and groundwater samples, as necessary, to identify the extent of contamination and the need for cleanup to reduce exposure potential to the public.

A Phase I ESA, completed by a licensed environmental professional, is necessary for inclusion in an EIR to identify and disclose recognized environmental conditions, if any, at the proposed Project site. If past land uses have resulted in RECs, a Phase II should be conducted to sample for residual concentrations of contaminants in soil. Any contamination that is identified above regulatory screening levels, including California Department of Toxic Substances Control Soil Screening Levels,² should be further evaluated and cleaned up, if necessary, in coordination with the Regional Water Quality Control Board and the California Department of Toxic Substances Control.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The air quality analysis provided in the SCEA relies on emissions calculated with CalEEMod.2020.4.0 (5.0-23).³ CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant

¹ <http://www.astm.org/Standards/E1527.htm>.

² <https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-June-2020-A.pdf>.

³ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <http://www.aqmd.gov/caleemod/user's-guide>.

emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality and Greenhouse Gas Study ("AQ & GHG Study") as Appendix A to the SCEA, we found that several model inputs were not consistent with information disclosed in the SCEA. As a result, the Project's construction and operational emissions are underestimated. Therefore, an EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

1-18

Unsubstantiated Reductions to Architectural and Area Coating Emission Factors and Areas

Review of the CalEEMod output files demonstrates that the "Lucia Park - Project" model includes several reductions to the default architectural and area coating emission factors and areas (see excerpt below) (Appendix A, pp. 72, 104, 155):

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	281,566.00	241,463.00
tblArchitecturalCoating	ConstArea_Residential_Interior	844,698.00	724,389.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_Residential_Exterior	281566	241463
tblAreaCoating	Area_Residential_Interior	844698	724389

1-19

As you can see in the excerpt above, the nonresidential exterior and interior architectural and area coating emission factors were each reduced from their default value of 100- to 50-grams per liter ("g/L"). Additionally, the architectural and area coating area square feet were reduced from their default values. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.⁴ According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

"Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings" (Appendix A, pp. 71, 103, 154).

Furthermore, SCEA incorporates mitigation measure SCAG EIR PMM-AQ-1, which states:

"Architectural coatings and solvents applied during construction activities shall comply with SCAQMD Rule 1113, which governs the VOC content of architectural coatings" (p. 3.0-19).

However, these changes remain unsupported for two reasons.

⁴"CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 1, 14.

First, we cannot verify the accuracy of the revised architectural and area coating emission factors based on SCAQMD Rule 1113 alone. The SCAQMD Rule 1113 Table of Standards provides the required VOC limits (grams of VOC per liter of coating) for 57 different coating categories (e.g., Floor coatings, Faux Finishing Coatings, Fire-Proofing Coatings, Cement Coatings, Multi-Color Coatings, Primers, Sealers, Recycled Coatings, Shellac, Stains, Traffic Coatings, Waterproofing Sealers, Wood Coatings, etc.). The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As such, we cannot verify that SCAQMD Rule 1113 substantiates reductions to the default coating values without more information regarding what category of coating will be used. As the SCEA and associated documents fail explicitly require the Project use a specific type of coating, we are unable to verify the revised emission factors assumed in the model.

1-19

Second, SCAQMD fails to address architectural and area coating areas whatsoever. As the SCEA and associated also fail to mention or justify the architectural and area coating areas, we cannot verify the revised values.

These unsubstantiated reductions present an issue, as CalEEMod uses the architectural and area coating emission factors and areas to calculate the Project's reactive organic gas/volatile organic compound ("ROG"/"VOC") emissions associated with application rates and coating content. Thus, by including unsubstantiated reductions to the Project's architectural and area coating emission factors and areas, the model may underestimate the Project's ROG/VOC emissions and should not be relied upon to determine Project significance.

Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the "Lucia Park - Project" model includes several changes to the default individual construction phase lengths (see excerpt below) (Appendix A, pp. 73, 105, 156).

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	380.00
tblConstructionPhase	NumDays	200.00	662.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	4.00	76.00
tblConstructionPhase	NumDays	10.00	66.00

1-20

As a result of these changes, the model includes the following construction schedule (see excerpt below) (Appendix A, pp. 76, 108, 160):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Demolition	Demolition	8/1/2022	8/31/2022	5	23
2	Grading	Grading	9/1/2022	12/15/2022	5	76
3	Building Construction	Building Construction	12/1/2022	6/15/2025	5	662
4	Architectural Coating	Architectural Coating	1/1/2024	6/15/2025	5	380
5	Paving	Paving	9/1/2024	12/2/2024	5	66

As you can see from the excerpt above, the demolition phase was increased by 15%, from the default value of 20 to 23 days; the grading phase was increased by 1,800%, from the default value of 4 to 76 days; the building construction phase was increased by 231%, from the default value of 200 to 662 days; the architectural coating phase was increased by 3,700%, from the default value of 10 to 380 days; and the paving phase was increased by 560%, from the default value of 10 to 66 days. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.⁵ According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is: "Construction schedule per applicant" (Appendix A, pp. 71, 103, 154). Furthermore, regarding the Project's anticipated construction schedule, the SCEA states:

"Construction of the proposed Project is projected to take approximately 35 months, with construction anticipated to begin in August 2022 and continue through June 2025.⁴⁴ Construction activities would fall into four principal phases: (1) demolition; (2) grading; (3) site improvements, including paving; and (4) building construction" (p. 2.0-27).

However, these justifications are insufficient. While the SCEA indicates the total construction duration, the SCEA fails to mention or justify the individual construction phase lengths. This is incorrect, as according to the CalEEMod User's Guide:

"CalEEMod was also designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA."⁶

Here, as the SCEA only justifies the total construction duration of 35 months, the SCEA fails to provide substantial evidence to support the revised individual construction phase lengths. As such, we cannot verify the changes.

These unsubstantiated changes present an issue, as the construction emissions are improperly spread out over a longer period of time for some phases, but not for others. According to the CalEEMod User's Guide, each construction phase is associated with different emissions activities (see excerpt below).⁷

1-20

⁵ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 1, 14.

⁶ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 13-14.

⁷ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 32.

Demolition involves removing buildings or structures.

Site Preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.

Grading involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.

Building Construction involves the construction of the foundation, structures and buildings.

Architectural Coating involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.

Paving involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks.

1-20

As such, by disproportionately altering the individual construction phase lengths without proper justification, the model may underestimate the peak daily emissions associated with some phases of construction. Thus, the model should not be relied upon to determine Project significance.

Incorrect Application of Area-Related Operational Mitigation Measures

Review of the CalEEMod output files demonstrates that the “Alta Cuvee Mixed-Use Project” model includes the following area-related operational mitigation measures (see excerpt below) (Attachment A, pp. 72, 77, 79; Appendix F, pp. 70, 75, 77):

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

1-21

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.⁸ According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

“Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings” (Appendix A, pp. 71, 103, 154).

Furthermore, the SCEA incorporates mitigation measure SCAG EIR PMM-AQ-1, which states:

“Architectural coatings and solvents applied during construction activities shall comply with SCAQMD Rule 1113, which governs the VOC content of architectural coatings” (p. 3.0-19).

⁸ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 1, 14.

However, the inclusion of the above-mentioned operational mitigation measures remains unsupported for two reasons.

First, as previously discussed, the SCAQMD Rule 1113 alone cannot substantiate the use of low VOC paint. Without more information regarding what category of coating will be used, we cannot verify the inclusion of the above-mentioned mitigation measures.

Second, the inclusion of the operational mitigation measures, based on the Project's purported compliance with SCAQMD Rule 1113, is unsupported. As previously stated, according to the AEP *CEQA Portal Topic Paper* on mitigation measures:

"By definition, mitigation measures are not part of the original project design. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are above-and-beyond existing laws, regulations, and requirements that would reduce environmental impacts."⁹

As you can see in the excerpt above, mitigation measures "are not part of the original project design" and are intended to go "above-and-beyond" existing regulatory requirements. As such, the inclusion of these measures, based on the Project's compliance with SCAQMD Rule 1113, is unsubstantiated. As a result, the inclusion of the above-mentioned operational mitigation measures in the model is incorrect. By including several operational mitigation measures without properly committing to their implementation, the model may underestimate the Project's operational emissions and should not be relied upon to determine Project significance.

Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate Project's construction-related emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the SCEA. In our updated model, we proportionately altered the individual construction phase lengths to match the proposed construction duration of 35 months, omitted the unsubstantiated changes to the architectural and area coating emission factors and areas, and excluded the incorrect area-related operational mitigation measures.

Our updated analysis estimates that the Project's construction-related VOC emissions exceed the applicable SCAQMD threshold of 75 pounds per day ("lbs/day") (see table below).¹⁰

1-21

1-22

⁹ "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at*:

<https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 5.

¹⁰ "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at*:

<http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

SWAPE Criteria Air Pollutant Quality Emissions	
Construction	VOC (lbs/day)
SCEA	8.31
SWAPE	86.24
% Increase	938%
SCAQMD Threshold (lbs/day)	75
Exceeds?	Yes

1-22

As you can see in the excerpt above, the Project's construction-related VOC emissions, as estimated by SWAPE, increase by approximately 938% and exceed the applicable SCAQMD significance threshold. Thus, our model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the SCEA. As a result, an EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the surrounding environment.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The SCEA concludes that the maximum cancer risks at the Project site from diesel particulate matter ("DPM") emissions generated by diesel-vehicle travel along SR-134 for residents and workers are 1.06 and 7.55 in one hundred million, respectively (p. 5.0-28, Table 5.3-5). However, regarding the health risk impacts associated with Project construction or operation, the SCEA concludes that the proposed Project would have a less-than-significant impact based on a localized significance threshold ("LST") analysis, without conducting a quantified construction or operational health risk analysis ("HRA") (p. 5.0-27, Table 5.3-3, Table 5.3-4). Specifically, regarding the health risk impacts associated with construction-related toxic air contaminant ("TAC") emissions, the SCEA states:

1-23

"Proposed Project construction would result in short-term emissions of diesel particulate matter, which is a Toxic Air Contaminant (TAC). Diesel particulate matter poses a carcinogenic health risk that is generally measured using an exposure period of 30 years for sensitive residential receptors. Off-road heavy-duty diesel equipment would emit diesel particulate matter over the course of the construction period. Diesel particulate matter is a source of PM_{2.5} (diesel particles are typically 2.5 microns and smaller). As shown in **Table 5.3-3** localized diesel particulate matter would be below localized thresholds and there would be no significant impacts to the sensitive receptors located around the Project site".

As demonstrated above, the SCEA concludes less-than-significant construction-related TAC impacts because PM_{2.5} emissions do not exceed localized thresholds. Furthermore, regarding the Project's operational health risk impacts, the SCEA simply states:

"As shown in **Table 5.3-4**, emissions would not exceed the localized significance thresholds for operation. Therefore, localized operational impacts to sensitive receptors located around the Project site would be less than significant" (p. 5.0-28).

As demonstrated above, the SCEA fails to mention TAC emissions associated with Project operation. As such, the SCEA's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for four reasons.

First, the use of an LST analysis to determine the health risk impacts posed to nearby, existing sensitive receptors as a result of the Project's construction-related and operational TAC emissions is incorrect. While the LST method assesses the impact of pollutants at a local level, it only evaluates impacts from criteria air pollutants. According to the *Final Localized Significance Threshold Methodology* document prepared by the SCAQMD, the LST analysis is only applicable to NO_x, CO, PM₁₀, and PM_{2.5} emissions, which are collectively referred to as criteria air pollutants.¹¹ Because the LST method can only be applied to criteria air pollutants, this method cannot be used to determine whether emissions from TACs, specifically DPM, a known human carcinogen, would result in a significant health risk impact to nearby sensitive receptors. As a result, health impacts from exposure to TACs, such as DPM, were not analyzed, thus leaving a gap in the SCEA's analysis.

Second, the SCEA fails to quantitatively evaluate the Project's construction-related and operational TACs or make a reasonable effort to connect these emissions to potential health risk impacts posed to nearby existing sensitive receptors. This is incorrect, as construction of the proposed Project will produce emissions of DPM through the exhaust stacks of construction equipment over a potential construction duration of 35 months (p. 2.0-27). Furthermore, the Transportation Impact Analysis ("TIA"), provided as Appendix E to the SCEA, indicates that the proposed land uses are expected to generate approximately 1,198 average daily vehicle trips, which will generate additional exhaust emissions and continue to expose nearby sensitive receptors to DPM emissions (p. 26). However, the SCEA fails to evaluate the potential Project-generated TACs or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's construction-related and operational TAC emissions to the potential health risks posed to nearby receptors, the SCEA is inconsistent with CEQA's requirement to correlate the increase in emissions generated by the Project with the potential adverse impacts on human health.¹²

Third, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015.¹³ This guidance document describes the types of projects that warrant the preparation of an HRA. The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. As the Project's construction duration vastly exceeds the 2-month requirement set forth by OEHHA, it is clear that the Project meets the threshold warranting a quantified

¹¹ "Final Localized Significance Threshold Methodology." SCAQMD, Revised July 2008, *available at*: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>.

¹² "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, *available at*: <https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf>.

¹³ "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at*: http://oehha.ca.gov/air/hot_spots/hotspots2015.html

HRA under OEHHA guidance. Furthermore, the OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (“MEIR”). Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions be included in an EIR for the Project.

1-23

Fourth, by claiming a less than significant impact without conducting a quantified construction or operational HRA for nearby, existing sensitive receptors, the SCEA fails to compare the Project’s combined excess cancer risk to the applicable SCAQMD numeric threshold of 10 in one million.¹⁴ Thus, pursuant to CEQA and SCAQMD guidance, an analysis of the health risk posed to nearby, existing receptors from Project construction and operation should have been conducted.

Screening-Level Analysis Indicates a Potentially Significant Health Risk Impact

In order to conduct our screening-level risk analysis we relied upon AERSCREEN, which is a screening level air quality dispersion model.¹⁵ The model replaced SCREEN3, and AERSCREEN is included in the OEHHA¹⁶ and the California Air Pollution Control Officers Associated (“CAPCOA”)¹⁷ guidance as the appropriate air dispersion model for Level 2 health risk screening analyses (“HRSAs”). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

1-24

In order to estimate the health risk impacts posed to residential sensitive receptors as a result of the Project’s construction-related and operational TAC emissions, we prepared a preliminary HRA using the annual PM₁₀ exhaust estimates from the CalEEMod output files included in the SCEA. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. The SCEA’s CalEEMod model indicates that construction activities will generate approximately 528 pounds of DPM over the 1,049-day construction period.¹⁸ The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from

¹⁴ “South Coast AQMD Air Quality Significance Thresholds.” SCAQMD, April 2019, *available at*: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

¹⁵ U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

¹⁶ “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at*: http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf

¹⁷ CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

¹⁸ See Attachment B for calculations.

point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$\text{Emission Rate} \left(\frac{\text{grams}}{\text{second}} \right) = \frac{528.1 \text{ lbs}}{1,049 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.00264 \text{ g/s}}$$

Using this equation, we estimated a construction emission rate of 0.00264 grams per second (“g/s”). Subtracting the 1,049-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project’s operational DPM for an additional 27.13 years, approximately.¹⁹ The SCEA’s operational CalEEMod emissions indicate that operational activities will generate approximately 87 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$\text{Emission Rate} \left(\frac{\text{grams}}{\text{second}} \right) = \frac{86.6 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.00125 \text{ g/s}}$$

Using this equation, we estimated an operational emission rate of 0.00125 g/s. Construction and operational activity was simulated as a 1.46-acre rectangular area source in AERSCREEN with approximate dimensions of 109- by 54-meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of Glendale was obtained from U.S. 2020 Census data.²⁰

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.²¹ The SCEA indicates that the nearest sensitive receptors are residences 200 feet, or approximately 61 meters, from the Project site (p. 5.0-26). Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 7.094 µg/m³ DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.7094 µg/m³ for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 3.343 µg/m³ DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3343 µg/m³ for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by

¹⁹ See Attachment B for calculations.

²⁰ “Redlands.” United States Census Bureau, 2020, available at: <https://datacommons.org/place/geoid/0630000>

²¹ “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised.” EPA, 1992, available at: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; see also “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf> p. 4-36.

OEHHA. Consistent with the 1,049-day construction schedule included in the Project's CalEEMod output files, the annualized average concentration for Project construction was used for the entire third trimester of pregnancy (0.25 years) and the infantile stage of life (0 – 2 years), as well as the first 0.62 years of the child stage of life; and the annualized averaged concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remaining 13.38 years of the child stage of life, and the entire adult stage of life (16 – 30 years).

Consistent with OEHHA guidance and recommended by the SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors ("ASF") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.^{22, 23, 24} According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant), as well as multiplied by a factor of three during the child stage of life (2 – 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district with jurisdiction over the City, and several other air districts in the state. Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.²⁵ Finally, according to SCAQMD guidance, we used a Fraction of Time At Home ("FAH") Value of 1 for the 3rd trimester, infant, and child receptors, and a FAH value of 0.73 for adult receptors.²⁶ We used a cancer potency factor of 1.1 (mg/kg-day)⁻¹ and an averaging time of 25,550 days. The results of our calculations are shown below.

²² "Draft Environmental Impact Report (SCEA) for the Proposed The Exchange (SCH No. 2018071058)." SCAQMD, March 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8>, p. 4.

²³ "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, available at: http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, available at: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, p. 65, 86.

²⁴ "Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document." SJVAPCD, May 2015, available at: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>, p. 8, 20, 24.

²⁵ "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," July 2018, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf>, p. 16.

"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

²⁶ "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

The Maximally Exposed Individual at an Existing Residential Receptor							
Age Group	Emissions Source	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk (without ASFs*)	ASF	Cancer Risk (with ASFs*)
3rd Trimester	Construction	0.25	0.7094	361	9.65E-07	10	9.65E-06
Infant (Age 0 - 2)	Construction	2	0.7094	1090	2.33E-05	10	2.33E-04
	Construction	0.62	0.7094	572	3.82E-06		
	Operation	13.38	0.3343	572	3.85E-05		
Child (Age 2 - 16)	Total	14			4.24E-05	3	1.27E-04
Adult (Age 16 - 30)	Operation	14	0.3343	261	1.34E-05	1	1.34E-05
Lifetime		30			8.01E-05		3.83E-04

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

1-24

As demonstrated in the table above, the excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project construction and operation, utilizing ASFs, is approximately 9.65, 233, 127, and 13.4 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), utilizing ASFs, is approximately 383 in one million. The infant, child, adult, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the SCEA.

Utilizing ASFs is the most conservative, health-protective analysis according to the most recent guidance by OEHHA and reflects recommendations from the air district. Results without ASFs are presented in the table above, although we do not recommend utilizing these values for health risk analysis. Regardless, excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project construction and operation, without ASFs, are approximately 0.966, 23.3, 42.4, and 13.4 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), without ASFs, is approximately 80.1 in one million. While we recommend the use of ASFs, the Project's infant, child, adult, and lifetime cancer risks without ASFs, as estimated by SWAPE, exceed the SCAQMD threshold of 10 in one million regardless, thus resulting in a potentially significant impact not previously addressed or identified by the SCEA.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to

be conservative and tends to err on the side of health protection.²⁷ The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, our screening-level HRA indicates a potentially significant impact, the City should prepare an EIR analysis with an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

1-24

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The SCEA estimates that the Project would generate net annual GHG emissions of 2,773 metric tons of carbon dioxide equivalents per year ("MT CO₂e/year") (see excerpt below) (p. 5.0-84, Table 5.8-7)

TABLE 5.8-7 OPERATIONAL GREENHOUSE GAS EMISSIONS	
Source	Unmitigated MTCO ₂ e per year
Construction (amortized)	76
Area	65
Energy	1,129
Mobile	1,374
Waste	68
Water	192
Total	2,904
<i>Existing</i>	<i>131</i>
Net Total	2,773
<i>Refer to Appendix A: Air Quality and Greenhouse Gas Study</i>	
<i>Abbreviation: MTCO₂e = metric tons of carbon dioxide emissions.</i>	
<i>Note: Totals may not add up exactly due to rounding in the modeling calculations</i>	
<i>Emissions do not include existing Chase Building to remain.</i>	

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However, the SCEA elects not to compare emissions to a threshold. Rather, the SCEA's analysis relies upon the Project's consistency with SCAG's 2020-2045 RTP/SCS, the Greener Glendale Plan, and the South Glendale Community Plan EIR (p. 5.0-85 - 5.0-88). However, the SCEA's analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for two reasons:

- (1) The SCEA's quantitative GHG analysis relies upon an unsubstantiated air model; and
- (2) The SCEA fails to identify a potentially significant greenhouse gas impact;

²⁷ "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>, p. 1-5

1) *Unsubstantiated Quantitative Analysis of Emissions*

As previously stated, the SCEA estimates that the Project would generate net annual GHG emissions of 2,773 MT CO₂e/year (p. 5.0-84, Table 5.8-7). However, the SCEA's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ & GHG Study as Appendix A to the SCEA, we found that several of the values inputted into the model are not consistent with information disclosed in the SCEA. As a result, the model underestimates the Project's emissions, and the SCEA's quantitative GHG analysis should not be relied upon to determine Project significance. An EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

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2) *Failure to Identify a Potentially Significant GHG Impact*

In an effort to quantitatively evaluate the Project's GHG emissions, we compared the Project's GHG emissions, as estimated by the SCEA, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO₂e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.²⁸ When applying the SCAQMD 2035 efficiency target of 3.0 MT CO₂e/SP/year, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact.²⁹ As previously stated, the SCEA estimates that the Project would generate net annual GHG emissions of 2,773 MT CO₂e/year (p. 5.0-84, Table 5.8-7). According to CAPCOA's *CEQA & Climate Change* report, a service population is defined as "the sum of the number of residents and the number of jobs supported by the project."³⁰ The SCEA indicates that the Project would generate approximately 765 new residents (p. 3.0-9). As the Project only proposes residential land uses, we estimate a service population of 765 people.³¹ When dividing the Project's net annual GHG emissions, as estimated by the SCEA, by a service population of 765 people, we find that the Project would emit approximately 3.6 MT CO₂e/SP/year (see table below).³²

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²⁸ "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, available at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf), p. 2.

²⁹ "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, available at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf), p. 2.

³⁰ CAPCOA (Jan. 2008) *CEQA & Climate Change*, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

³¹ Calculated: 765 residents + 0 employees = 765 service population.

³² Calculated: (2,773 MT CO₂e/year) / (765 service population) = (3.6 MT CO₂e/SP/year).

SWAPE Annual Greenhouse Gas Emissions	
Project Phase	Proposed Project
Total Emissions (MT CO ₂ e/year)	2,773.00
Service Population	765
Service Population Efficiency (MT CO ₂ e/SP/year)	3.6
SCAQMD Population Efficiency 2035 Target	3.0
Exceeds?	Yes

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As demonstrated above, the Project's service population efficiency value exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO₂e/SP/year, indicating a potentially significant impact not previously identified or addressed by the SCEA. As a result, the SCEA's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

Design Features Should Be Included as Mitigation Measures

Our analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. We recommend that the SCEA implement all project design features and regulatory compliance measures as formal mitigation measures. As a result, we could guarantee that these measures would be implemented, monitored, and enforced on the Project site. Including formal mitigation measures by properly committing to their implementation would result in verifiable emissions reductions that may help reduce emissions to less-than-significant levels.

Furthermore, in an effort to reduce the Project's GHG emissions, we identified several mitigation measures that are applicable to the proposed Project. Therefore, to reduce the Project's emissions, we recommend consideration of SCAG's 2020 RTP/SCS PEIR's Greenhouse Gas Project Level Mitigation Measures ("PMM-GHG-1"), as described below:³³

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SCAG RTP/SCS 2020-2045
Greenhouse Gas Project Level Mitigation Measures – PMM-GHG-1 In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the <i>State CEQA Guidelines</i>, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:

³³ "4.0 Mitigation Measures." Connect SoCal Program Environmental Impact Report Addendum #1, September 2020, available at: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocial_addendum_4_mitigationmeasures.pdf?1606004420, p. 4.0-2 – 4.0-10; 4.0-19 – 4.0-23; See also: "Certified Final Connect SoCal Program Environmental Impact Report." Southern California Association of Governments (SCAG), May 2020, available at: <https://scag.ca.gov/peir>.

b) Reduce emissions resulting from projects through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines.
c) Include off-site measures to mitigate a project's emissions.
d) Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to: i. Use energy and fuel-efficient vehicles and equipment; ii. Deployment of zero- and/or near zero emission technologies; iii. Use lighting systems that are energy efficient, such as LED technology; iv. Use the minimum feasible amount of GHG-emitting construction materials; v. Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production; vi. Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse; vii. Incorporate design measures to reduce energy consumption and increase use of renewable energy; viii. Incorporate design measures to reduce water consumption; ix. Use lighter-colored pavement where feasible; x. Recycle construction debris to maximum extent feasible; xi. Plant shade trees in or near construction projects where feasible; and xii. Solicit bids that include concepts listed above.
e) Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to the following: i. Promote transit-active transportation coordinated strategies; ii. Increase bicycle carrying capacity on transit and rail vehicles; iii. Improve or increase access to transit; iv. Increase access to common goods and services, such as groceries, schools, and day care; v. Incorporate affordable housing into the project; vi. Incorporate the neighborhood electric vehicle network; vii. Orient the project toward transit, bicycle and pedestrian facilities; viii. Improve pedestrian or bicycle networks, or transit service; ix. Provide traffic calming measures; x. Provide bicycle parking; xi. Limit or eliminate park supply; xii. Unbundle parking costs; xiii. Provide parking cash-out programs; xiv. Implement or provide access to commute reduction program;
f) Incorporate bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; and planning for and building local bicycle projects that connect with the regional network;
g) Improving transit access to rail and bus routes by incentives for construction and transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and
h) Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs including but not limited to measures that: i. Provide car-sharing, bike sharing, and ride-sharing programs; ii. Provide transit passes;

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iii. Shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services; iv. Provide incentives or subsidies that increase that use of modes other than single-occupancy vehicle; v. Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms; vi. Provide employee transportation coordinators at employment sites; vii. Provide a guaranteed ride home service to users of non-auto modes.
i) Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;
j) Land use siting and design measures that reduce GHG emissions, including: i. Developing on infill and brownfields sites; ii. Building compact and mixed-use developments near transit; iii. Retaining on-site mature trees and vegetation, and planting new canopy trees; iv. Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and v. Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.
k) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities. The measures provided above are also intended to be applied in low income and minority communities as applicable and feasible.
l) Require at least five percent of all vehicle parking spaces include electric vehicle charging stations, or at a minimum, require the appropriate infrastructure to facilitate sufficient electric charging for passenger vehicles and trucks to plug-in.
m) Encourage telecommuting and alternative work schedules, such as: i. Staggered starting times ii. Flexible schedules iii. Compressed work weeks
n) Implement commute trip reduction marketing, such as: i. New employee orientation of trip reduction and alternative mode options ii. Event promotions iii. Publications
o) Implement preferential parking permit program
p) Implement school pool and bus programs
q) Price workplace parking, such as: i. Explicitly charging for parking for its employees; ii. Implementing above market rate pricing; iii. Validating parking only for invited guests; iv. Not providing employee parking and transportation allowances; and v. Educating employees about available alternatives.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An EIR should be prepared to include all feasible mitigation measures, as well as include an

updated air quality, health risk, and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

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Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

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Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A: Construction Calculations
Attachment B: CalEEMod Output Files
Attachment C: Health Risk Calculations
Attachment D: AERSCREEN Output Files
Attachment E: Matt Hagemann CV
Attachment F: Paul E. Rosenfeld CV

Attachment A

Construction Schedule Calculations					
Phase	Default Phase Length	Construction Duration	%	Construction Duration	Revised Phase Length
Demolition	20	339	0.0590	1049	62
Grading	4	339	0.0118	1049	12
Construction	200	339	0.5900	1049	619
Architectural Coating	10	339	0.0295	1049	31
Paving	10	339	0.0295	1049	31

Total Default Construction Duration		Revised Construction Duration
Start Date	8/1/2022	8/1/2022
End Date	7/6/2023	6/15/2025
Total Days	339	1049

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	502.00	Space	0.00	200,800.00	0
Apartment High Rise	294.00	Dwelling Unit	1.23	417,135.00	841

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2025
Utility Company	Glendale Water and Power				
CO2 Intensity (lb/MWhr)	948.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with SCEA's model.

Land Use - Consistent with SCEA's model.

Construction Phase - See SWAPE comment on "Unsubstantiated Changes to Individual Construction Phase Lengths"

Trips and VMT - Consistent with SCEA's model.

Demolition - Consistent with SCEA's model.

Grading - Total acres graded less than SCEA's model.

Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors and Areas"

Vehicle Trips - Consistent with the SCEA's model.

Woodstoves - Consistent with the SCEA's model.

Construction Off-road Equipment Mitigation - Consistent with SCEA's model.

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Water Mitigation - Consistent with SCEA's model.

Energy Mitigation - Consistent with SCEA's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	200.00	619.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	10.00	31.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	14.70	0.00
tblGrading	MaterialExported	0.00	76,000.00
tblLandUse	LandUseSquareFeet	294,000.00	417,135.00
tblLandUse	LotAcreage	4.52	0.00
tblLandUse	LotAcreage	4.74	1.23
tblTripsAndVMT	HaulingTripLength	20.00	6.80
tblVehicleTrips	ST_TR	4.53	4.32
tblVehicleTrips	SU_TR	3.59	3.42
tblVehicleTrips	WD_TR	4.45	4.24
tblWoodstoves	NumberCatalytic	14.70	0.00
tblWoodstoves	NumberNoncatalytic	14.70	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2020.4.0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1244	1.2778	1.0626	3.2000e-003	0.1628	0.0441	0.2070	0.0506	0.0416	0.0922	0.0000	296.1661	296.1661	0.0339	0.0225	303.7126
2023	0.3296	1.9547	3.0795	8.0800e-003	0.4741	0.0711	0.5452	0.1271	0.0685	0.1956	0.0000	727.2013	727.2013	0.0541	0.0305	737.6443
2024	0.3101	1.8752	2.9974	8.0100e-003	0.4778	0.0632	0.5409	0.1281	0.0608	0.1889	0.0000	723.4875	723.4875	0.0529	0.0298	733.6939
2025	1.4151	0.5168	0.8731	2.1900e-003	0.1235	0.0176	0.1411	0.0331	0.0168	0.0499	0.0000	197.5435	197.5435	0.0182	6.9500e-003	200.0680
Maximum	1.4151	1.9547	3.0795	8.0800e-003	0.4778	0.0711	0.5452	0.1281	0.0685	0.1956	0.0000	727.2013	727.2013	0.0541	0.0305	737.6443

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2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0651	1.0894	1.1388	3.2000e-003	0.1628	0.0415	0.2043	0.0506	0.0413	0.0919	0.0000	296.1659	296.1659	0.0339	0.0225	303.7125
2023	0.2149	2.0023	3.1923	8.0800e-003	0.4741	0.0993	0.5734	0.1271	0.0990	0.2262	0.0000	727.2010	727.2010	0.0541	0.0305	737.6440
2024	0.2080	2.0079	3.1234	8.0100e-003	0.4778	0.1000	0.5777	0.1281	0.0997	0.2278	0.0000	723.4872	723.4872	0.0529	0.0298	733.6936
2025	1.3886	0.5912	0.9215	2.1900e-003	0.1235	0.0308	0.1542	0.0331	0.0307	0.0638	0.0000	197.5434	197.5434	0.0182	6.9500e-003	200.0679
Maximum	1.3886	2.0079	3.1923	8.0800e-003	0.4778	0.1000	0.5777	0.1281	0.0997	0.2278	0.0000	727.2010	727.2010	0.0541	0.0305	737.6440

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	13.89	-1.18	-4.53	0.00	0.00	-38.52	-5.26	0.00	-44.21	-15.76	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2022	10-31-2022	0.7445	0.5544
2	11-1-2022	1-31-2023	0.8275	0.7678
3	2-1-2023	4-30-2023	0.5575	0.5411
4	5-1-2023	7-31-2023	0.5708	0.5539
5	8-1-2023	10-31-2023	0.5736	0.5566
6	11-1-2023	1-31-2024	0.5692	0.5606
7	2-1-2024	4-30-2024	0.5353	0.5428
8	5-1-2024	7-31-2024	0.5418	0.5495

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9	8-1-2024	10-31-2024	0.5445	0.5522
10	11-1-2024	1-31-2025	0.5400	0.5560
11	2-1-2025	4-30-2025	0.3801	0.4123
12	5-1-2025	7-31-2025	1.3621	1.3667
		Highest	1.3621	1.3667

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513
Energy	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	1,126.2666	1,126.2666	0.0365	7.1300e-003	1,129.3046
Mobile	0.6262	0.7055	6.4840	0.0143	1.5606	0.0105	1.5711	0.4164	9.7100e-003	0.4261	0.0000	1,353.9560	1,353.9560	0.0906	0.0571	1,373.2388
Waste						0.0000	0.0000		0.0000	0.0000	27.4525	0.0000	27.4525	1.6224	0.0000	68.0124
Water						0.0000	0.0000		0.0000	0.0000	6.0771	165.1151	171.1922	0.6299	0.0154	191.5395
Total	2.3944	0.9380	9.6035	0.0157	1.5606	0.0433	1.6039	0.4164	0.0425	0.4589	33.5296	2,710.3129	2,743.8425	2.3854	0.0808	2,827.5466

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513
Energy	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	1,112.8320	1,112.8320	0.0361	7.0700e-003	1,115.8415
Mobile	0.6262	0.7055	6.4840	0.0143	1.5606	0.0105	1.5711	0.4164	9.7100e-003	0.4261	0.0000	1,353.9560	1,353.9560	0.0906	0.0571	1,373.2388
Waste						0.0000	0.0000		0.0000	0.0000	27.4525	0.0000	27.4525	1.6224	0.0000	68.0124
Water						0.0000	0.0000		0.0000	0.0000	4.8617	140.1196	144.9812	0.5042	0.0124	161.2761
Total	2.3944	0.9380	9.6035	0.0157	1.5606	0.0433	1.6039	0.4164	0.0425	0.4589	32.3142	2,671.8829	2,704.1971	2.2592	0.0777	2,783.8202

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62	1.42	1.44	5.29	3.85	1.55

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2022	10/25/2022	5	62	
2	Grading	Grading	10/26/2022	11/10/2022	5	12	
3	Building Construction	Building Construction	11/11/2022	3/26/2025	5	619	

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4	Paving	Paving	3/27/2025	5/8/2025	5	31
5	Architectural Coating	Architectural Coating	5/9/2025	6/20/2025	5	31

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 12****Acres of Paving: 0**

Residential Indoor: 844,698; Residential Outdoor: 281,566; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 12,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	9,500.00	14.70	6.90	6.80	LD_Mix	HDT_Mix	HHDT
Building Construction	7	296.00	64.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0162	0.0000	0.0162	2.4500e-003	0.0000	2.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0524	0.5153	0.4328	7.5000e-004		0.0260	0.0260		0.0243	0.0243	0.0000	65.3408	65.3408	0.0167	0.0000	65.7571
Total	0.0524	0.5153	0.4328	7.5000e-004	0.0162	0.0260	0.0422	2.4500e-003	0.0243	0.0267	0.0000	65.3408	65.3408	0.0167	0.0000	65.7571

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0133	2.9600e-003	5.0000e-005	1.2900e-003	9.0000e-005	1.3800e-003	3.5000e-004	9.0000e-005	4.4000e-004	0.0000	4.6325	4.6325	2.5000e-004	7.4000e-004	4.8577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	1.1500e-003	0.0150	4.0000e-005	4.4200e-003	3.0000e-005	4.4400e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	3.6555	3.6555	1.0000e-004	1.0000e-004	3.6877
Total	1.7300e-003	0.0144	0.0179	9.0000e-005	5.7100e-003	1.2000e-004	5.8200e-003	1.5200e-003	1.2000e-004	1.6400e-003	0.0000	8.2880	8.2880	3.5000e-004	8.4000e-004	8.5454

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0162	0.0000	0.0162	2.4500e-003	0.0000	2.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.3752	0.4779	7.5000e-004		0.0223	0.0223		0.0223	0.0223	0.0000	65.3407	65.3407	0.0167	0.0000	65.7570
Total	0.0174	0.3752	0.4779	7.5000e-004	0.0162	0.0223	0.0384	2.4500e-003	0.0223	0.0247	0.0000	65.3407	65.3407	0.0167	0.0000	65.7570

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0133	2.9600e-003	5.0000e-005	1.2900e-003	9.0000e-005	1.3800e-003	3.5000e-004	9.0000e-005	4.4000e-004	0.0000	4.6325	4.6325	2.5000e-004	7.4000e-004	4.8577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	1.1500e-003	0.0150	4.0000e-005	4.4200e-003	3.0000e-005	4.4400e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	3.6555	3.6555	1.0000e-004	1.0000e-004	3.6877
Total	1.7300e-003	0.0144	0.0179	9.0000e-005	5.7100e-003	1.2000e-004	5.8200e-003	1.5200e-003	1.2000e-004	1.6400e-003	0.0000	8.2880	8.2880	3.5000e-004	8.4000e-004	8.5454

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0468	0.0000	0.0468	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2400e-003	0.1019	0.0553	1.2000e-004		4.4500e-003	4.4500e-003		4.1000e-003	4.1000e-003	0.0000	10.8616	10.8616	3.5100e-003	0.0000	10.9495
Total	9.2400e-003	0.1019	0.0553	1.2000e-004	0.0468	4.4500e-003	0.0512	0.0212	4.1000e-003	0.0253	0.0000	10.8616	10.8616	3.5100e-003	0.0000	10.9495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0107	0.3465	0.1078	1.0900e-003	0.0279	2.0600e-003	0.0299	7.6600e-003	1.9700e-003	9.6300e-003	0.0000	108.1205	108.1205	5.5100e-003	0.0172	113.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.7000e-004	2.2300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5442	0.5442	2.0000e-005	1.0000e-005	0.5490
Total	0.0109	0.3467	0.1101	1.1000e-003	0.0285	2.0600e-003	0.0306	7.8300e-003	1.9700e-003	9.8100e-003	0.0000	108.6647	108.6647	5.5300e-003	0.0172	113.9180

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3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0468	0.0000	0.0468	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0300e-003	0.0613	0.0729	1.2000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	10.8616	10.8616	3.5100e-003	0.0000	10.9494
Total	3.0300e-003	0.0613	0.0729	1.2000e-004	0.0468	2.9100e-003	0.0497	0.0212	2.9100e-003	0.0241	0.0000	10.8616	10.8616	3.5100e-003	0.0000	10.9494

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0107	0.3465	0.1078	1.0900e-003	0.0279	2.0600e-003	0.0299	7.6600e-003	1.9700e-003	9.6300e-003	0.0000	108.1205	108.1205	5.5100e-003	0.0172	113.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.7000e-004	2.2300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5442	0.5442	2.0000e-005	1.0000e-005	0.5490
Total	0.0109	0.3467	0.1101	1.1000e-003	0.0285	2.0600e-003	0.0306	7.8300e-003	1.9700e-003	9.8100e-003	0.0000	108.6647	108.6647	5.5300e-003	0.0172	113.9180

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0297	0.2251	0.2291	4.0000e-004		0.0106	0.0106		0.0102	0.0102	0.0000	32.6838	32.6838	5.6900e-003	0.0000	32.8262
Total	0.0297	0.2251	0.2291	4.0000e-004		0.0106	0.0106		0.0102	0.0102	0.0000	32.6838	32.6838	5.6900e-003	0.0000	32.8262

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2500e-003	0.0592	0.0197	2.3000e-004	7.2600e-003	5.4000e-004	7.8000e-003	2.1000e-003	5.1000e-004	2.6100e-003	0.0000	21.9984	21.9984	7.3000e-004	3.1700e-003	22.9623
Worker	0.0183	0.0152	0.1978	5.2000e-004	0.0584	3.8000e-004	0.0588	0.0155	3.5000e-004	0.0159	0.0000	48.3287	48.3287	1.3800e-003	1.3100e-003	48.7542
Total	0.0205	0.0745	0.2175	7.5000e-004	0.0656	9.2000e-004	0.0666	0.0176	8.6000e-004	0.0185	0.0000	70.3271	70.3271	2.1100e-003	4.4800e-003	71.7166

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0115	0.2174	0.2426	4.0000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	32.6838	32.6838	5.6900e-003	0.0000	32.8261
Total	0.0115	0.2174	0.2426	4.0000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	32.6838	32.6838	5.6900e-003	0.0000	32.8261

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2500e-003	0.0592	0.0197	2.3000e-004	7.2600e-003	5.4000e-004	7.8000e-003	2.1000e-003	5.1000e-004	2.6100e-003	0.0000	21.9984	21.9984	7.3000e-004	3.1700e-003	22.9623
Worker	0.0183	0.0152	0.1978	5.2000e-004	0.0584	3.8000e-004	0.0588	0.0155	3.5000e-004	0.0159	0.0000	48.3287	48.3287	1.3800e-003	1.3100e-003	48.7542
Total	0.0205	0.0745	0.2175	7.5000e-004	0.0656	9.2000e-004	0.0666	0.0176	8.6000e-004	0.0185	0.0000	70.3271	70.3271	2.1100e-003	4.4800e-003	71.7166

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1980	1.5224	1.6394	2.8700e-003		0.0669	0.0669		0.0646	0.0646	0.0000	236.0789	236.0789	0.0401	0.0000	237.0811
Total	0.1980	1.5224	1.6394	2.8700e-003		0.0669	0.0669		0.0646	0.0646	0.0000	236.0789	236.0789	0.0401	0.0000	237.0811

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4000e-003	0.3353	0.1255	1.5500e-003	0.0524	1.6100e-003	0.0540	0.0151	1.5400e-003	0.0167	0.0000	151.2761	151.2761	5.0600e-003	0.0218	157.8902
Worker	0.1222	0.0970	1.3146	3.6600e-003	0.4217	2.6000e-003	0.4243	0.1120	2.3900e-003	0.1144	0.0000	339.8463	339.8463	8.9300e-003	8.7400e-003	342.6731
Total	0.1316	0.4323	1.4401	5.2100e-003	0.4741	4.2100e-003	0.4783	0.1271	3.9300e-003	0.1311	0.0000	491.1224	491.1224	0.0140	0.0305	500.5633

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0833	1.5700	1.7522	2.8700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808
Total	0.0833	1.5700	1.7522	2.8700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4000e-003	0.3353	0.1255	1.5500e-003	0.0524	1.6100e-003	0.0540	0.0151	1.5400e-003	0.0167	0.0000	151.2761	151.2761	5.0600e-003	0.0218	157.8902
Worker	0.1222	0.0970	1.3146	3.6600e-003	0.4217	2.6000e-003	0.4243	0.1120	2.3900e-003	0.1144	0.0000	339.8463	339.8463	8.9300e-003	8.7400e-003	342.6731
Total	0.1316	0.4323	1.4401	5.2100e-003	0.4741	4.2100e-003	0.4783	0.1271	3.9300e-003	0.1311	0.0000	491.1224	491.1224	0.0140	0.0305	500.5633

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1860	1.4494	1.6398	2.8900e-003		0.0590	0.0590		0.0570	0.0570	0.0000	237.9108	237.9108	0.0396	0.0000	238.9013
Total	0.1860	1.4494	1.6398	2.8900e-003		0.0590	0.0590		0.0570	0.0570	0.0000	237.9108	237.9108	0.0396	0.0000	238.9013

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1700e-003	0.3386	0.1238	1.5400e-003	0.0528	1.6300e-003	0.0545	0.0153	1.5600e-003	0.0168	0.0000	150.1526	150.1526	5.1100e-003	0.0216	156.7263
Worker	0.1149	0.0873	1.2339	3.5800e-003	0.4249	2.5100e-003	0.4274	0.1129	2.3100e-003	0.1152	0.0000	335.4241	335.4241	8.1500e-003	8.1800e-003	338.0663
Total	0.1241	0.4258	1.3577	5.1200e-003	0.4778	4.1400e-003	0.4819	0.1281	3.8700e-003	0.1320	0.0000	485.5767	485.5767	0.0133	0.0298	494.7926

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0839	1.5820	1.7657	2.8900e-003		0.0958	0.0958		0.0958	0.0958	0.0000	237.9105	237.9105	0.0396	0.0000	238.9010
Total	0.0839	1.5820	1.7657	2.8900e-003		0.0958	0.0958		0.0958	0.0958	0.0000	237.9105	237.9105	0.0396	0.0000	238.9010

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1700e-003	0.3386	0.1238	1.5400e-003	0.0528	1.6300e-003	0.0545	0.0153	1.5600e-003	0.0168	0.0000	150.1526	150.1526	5.1100e-003	0.0216	156.7263
Worker	0.1149	0.0873	1.2339	3.5800e-003	0.4249	2.5100e-003	0.4274	0.1129	2.3100e-003	0.1152	0.0000	335.4241	335.4241	8.1500e-003	8.1800e-003	338.0663
Total	0.1241	0.4258	1.3577	5.1200e-003	0.4778	4.1400e-003	0.4819	0.1281	3.8700e-003	0.1320	0.0000	485.5767	485.5767	0.0133	0.0298	494.7926

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0404	0.3176	0.3794	6.7000e-004		0.0120	0.0120		0.0116	0.0116	0.0000	55.3978	55.3978	9.0400e-003	0.0000	55.6240
Total	0.0404	0.3176	0.3794	6.7000e-004		0.0120	0.0120		0.0116	0.0116	0.0000	55.3978	55.3978	9.0400e-003	0.0000	55.6240

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0700e-003	0.0785	0.0283	3.5000e-004	0.0123	3.8000e-004	0.0127	3.5500e-003	3.6000e-004	3.9200e-003	0.0000	34.3303	34.3303	1.2000e-003	4.9500e-003	35.8349
Worker	0.0251	0.0182	0.2679	8.1000e-004	0.0989	5.6000e-004	0.0995	0.0263	5.1000e-004	0.0268	0.0000	76.1906	76.1906	1.7100e-003	1.7800e-003	76.7635
Total	0.0271	0.0967	0.2962	1.1600e-003	0.1112	9.4000e-004	0.1122	0.0298	8.7000e-004	0.0307	0.0000	110.5209	110.5209	2.9100e-003	6.7300e-003	112.5984

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0195	0.3683	0.4111	6.7000e-004		0.0223	0.0223		0.0223	0.0223	0.0000	55.3978	55.3978	9.0400e-003	0.0000	55.6239
Total	0.0195	0.3683	0.4111	6.7000e-004		0.0223	0.0223		0.0223	0.0223	0.0000	55.3978	55.3978	9.0400e-003	0.0000	55.6239

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0700e-003	0.0785	0.0283	3.5000e-004	0.0123	3.8000e-004	0.0127	3.5500e-003	3.6000e-004	3.9200e-003	0.0000	34.3303	34.3303	1.2000e-003	4.9500e-003	35.8349
Worker	0.0251	0.0182	0.2679	8.1000e-004	0.0989	5.6000e-004	0.0995	0.0263	5.1000e-004	0.0268	0.0000	76.1906	76.1906	1.7100e-003	1.7800e-003	76.7635
Total	0.0271	0.0967	0.2962	1.1600e-003	0.1112	9.4000e-004	0.1122	0.0298	8.7000e-004	0.0307	0.0000	110.5209	110.5209	2.9100e-003	6.7300e-003	112.5984

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8800e-003	0.0826	0.1363	2.1000e-004		3.8200e-003	3.8200e-003		3.5300e-003	3.5300e-003	0.0000	18.2490	18.2490	5.7900e-003	0.0000	18.3936
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.8800e-003	0.0826	0.1363	2.1000e-004		3.8200e-003	3.8200e-003		3.5300e-003	3.5300e-003	0.0000	18.2490	18.2490	5.7900e-003	0.0000	18.3936

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	4.1000e-004	5.9800e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7005	1.7005	4.0000e-005	4.0000e-005	1.7133
Total	5.6000e-004	4.1000e-004	5.9800e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7005	1.7005	4.0000e-005	4.0000e-005	1.7133

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9500e-003	0.1029	0.1527	2.1000e-004		5.9900e-003	5.9900e-003		5.9900e-003	5.9900e-003	0.0000	18.2490	18.2490	5.7900e-003	0.0000	18.3936
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.9500e-003	0.1029	0.1527	2.1000e-004		5.9900e-003	5.9900e-003		5.9900e-003	5.9900e-003	0.0000	18.2490	18.2490	5.7900e-003	0.0000	18.3936

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	4.1000e-004	5.9800e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7005	1.7005	4.0000e-005	4.0000e-005	1.7133
Total	5.6000e-004	4.1000e-004	5.9800e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7005	1.7005	4.0000e-005	4.0000e-005	1.7133

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3330					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6500e-003	0.0178	0.0280	5.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	3.9575	3.9575	2.2000e-004	0.0000	3.9629
Total	1.3356	0.0178	0.0280	5.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	3.9575	3.9575	2.2000e-004	0.0000	3.9629

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	1.8500e-003	0.0271	8.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	5.0000e-005	2.7100e-003	0.0000	7.7178	7.7178	1.7000e-004	1.8000e-004	7.7758
Total	2.5400e-003	1.8500e-003	0.0271	8.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	5.0000e-005	2.7100e-003	0.0000	7.7178	7.7178	1.7000e-004	1.8000e-004	7.7758

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3330					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	0.0210	0.0284	5.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	3.9575	3.9575	2.2000e-004	0.0000	3.9629
Total	1.3339	0.0210	0.0284	5.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	3.9575	3.9575	2.2000e-004	0.0000	3.9629

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	1.8500e-003	0.0271	8.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	5.0000e-005	2.7100e-003	0.0000	7.7178	7.7178	1.7000e-004	1.8000e-004	7.7758
Total	2.5400e-003	1.8500e-003	0.0271	8.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	5.0000e-005	2.7100e-003	0.0000	7.7178	7.7178	1.7000e-004	1.8000e-004	7.7758

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6262	0.7055	6.4840	0.0143	1.5606	0.0105	1.5711	0.4164	9.7100e-003	0.4261	0.0000	1,353.9560	1,353.9560	0.0906	0.0571	1,373.2388
Unmitigated	0.6262	0.7055	6.4840	0.0143	1.5606	0.0105	1.5711	0.4164	9.7100e-003	0.4261	0.0000	1,353.9560	1,353.9560	0.0906	0.0571	1,373.2388

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking with Elevator	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	944.0595	944.0595	0.0328	3.9800e-003	946.0660
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	957.4940	957.4940	0.0333	4.0400e-003	959.5291
NaturalGas Mitigated	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755
NaturalGas Unmitigated	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	3.16268e+006	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	3.16268e+006	0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0171	0.1457	0.0620	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.7726	168.7726	3.2300e-003	3.0900e-003	169.7755

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.13205e+006	487.2910	0.0170	2.0500e-003	488.3267
Enclosed Parking with Elevator	1.09235e+006	470.2030	0.0164	1.9800e-003	471.2024
Total		957.4940	0.0333	4.0300e-003	959.5291

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.10084e+006	473.8565	0.0165	2.0000e-003	474.8636
Enclosed Parking with Elevator	1.09235e+006	470.2030	0.0164	1.9800e-003	471.2024
Total		944.0595	0.0328	3.9800e-003	946.0660

6.0 Area Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513
Unmitigated	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0600e-003	0.0518	0.0221	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	60.0103	60.0103	1.1500e-003	1.1000e-003	60.3669
Landscaping	0.0915	0.0350	3.0354	1.6000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	4.9651	4.9651	4.7800e-003	0.0000	5.0844
Total	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0600e-003	0.0518	0.0221	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	60.0103	60.0103	1.1500e-003	1.1000e-003	60.3669
Landscaping	0.0915	0.0350	3.0354	1.6000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	4.9651	4.9651	4.7800e-003	0.0000	5.0844
Total	1.7512	0.0868	3.0575	4.9000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	64.9753	64.9753	5.9300e-003	1.1000e-003	65.4513

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	144.9812	0.5042	0.0124	161.2761
Unmitigated	171.1922	0.6299	0.0154	191.5395

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	19.1553 / 12.0762	171.1922	0.6299	0.0154	191.5395
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		171.1922	0.6299	0.0154	191.5395

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	15.3242 / 11.3395	144.9812	0.5042	0.0124	161.2761
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		144.9812	0.5042	0.0124	161.2761

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	27.4525	1.6224	0.0000	68.0124
Unmitigated	27.4525	1.6224	0.0000	68.0124

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	135.24	27.4525	1.6224	0.0000	68.0124
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.4525	1.6224	0.0000	68.0124

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	135.24	27.4525	1.6224	0.0000	68.0124
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		27.4525	1.6224	0.0000	68.0124

9.0 Operational Offroad

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Lucia Park - Project****Los Angeles-South Coast County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	502.00	Space	0.00	200,800.00	0
Apartment High Rise	294.00	Dwelling Unit	1.23	417,135.00	841

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2025
Utility Company	Glendale Water and Power				
CO2 Intensity (lb/MW hr)	948.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with SCEA's model.

Land Use - Consistent with SCEA's model.

Construction Phase - See SWAPE comment on "Unsubstantiated Changes to Individual Construction Phase Lengths"

Trips and VMT - Consistent with SCEA's model.

Demolition - Consistent with SCEA's model.

Grading - Total acres graded less than SCEA's model.

Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors and Areas"

Vehicle Trips - Consistent with the SCEA's model.

Woodstoves - Consistent with the SCEA's model.

Construction Off-road Equipment Mitigation - Consistent with SCEA's model.

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Mitigation - Consistent with SCEA's model.

Energy Mitigation - Consistent with SCEA's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	200.00	619.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	10.00	31.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	14.70	0.00
tblGrading	MaterialExported	0.00	76,000.00
tblLandUse	LandUseSquareFeet	294,000.00	417,135.00
tblLandUse	LotAcreage	4.52	0.00
tblLandUse	LotAcreage	4.74	1.23
tblTripsAndVMT	HaulingTripLength	20.00	6.80
tblVehicleTrips	ST_TR	4.53	4.32
tblVehicleTrips	SU_TR	3.59	3.42
tblVehicleTrips	WD_TR	4.45	4.24
tblWoodstoves	NumberCatalytic	14.70	0.00
tblWoodstoves	NumberNoncatalytic	14.70	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.3933	72.1171	27.3531	0.2031	12.6331	1.0860	13.7192	4.8586	1.0118	5.8704	0.0000	21,956.59 31	21,956.59 31	1.6632	3.1521	22,937.48 90
2023	2.5448	14.8277	24.2890	0.0633	3.7185	0.5468	4.2653	0.9955	0.5270	1.5225	0.0000	6,280.929 3	6,280.929 3	0.4575	0.2526	6,367.642 6
2024	2.3749	14.1155	23.4327	0.0622	3.7185	0.4822	4.2007	0.9955	0.4643	1.4598	0.0000	6,200.026 3	6,200.026 3	0.4440	0.2452	6,284.209 7
2025	86.3343	13.3929	22.6586	0.0611	3.7185	0.4232	4.1418	0.9955	0.4073	1.4028	0.0000	6,105.697 7	6,105.697 7	0.4312	0.2379	6,187.373 7
Maximum	86.3343	72.1171	27.3531	0.2031	12.6331	1.0860	13.7192	4.8586	1.0118	5.8704	0.0000	21,956.59 31	21,956.59 31	1.6632	3.1521	22,937.48 90

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Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3573	65.3485	30.2780	0.2031	12.6331	0.8288	13.4619	4.8586	0.8139	5.6725	0.0000	21,956.59 31	21,956.59 31	1.6632	3.1521	22,937.48 90
2023	1.6623	15.1941	25.1565	0.0633	3.7185	0.7638	4.4824	0.9955	0.7617	1.7572	0.0000	6,280.929 3	6,280.929 3	0.4575	0.2526	6,367.642 6
2024	1.5956	15.1283	24.3940	0.0622	3.7185	0.7631	4.4816	0.9955	0.7610	1.7565	0.0000	6,200.026 3	6,200.026 3	0.4440	0.2452	6,284.209 7
2025	86.2228	15.0568	23.6978	0.0611	3.7185	0.7622	4.4808	0.9955	0.7602	1.7557	0.0000	6,105.697 7	6,105.697 7	0.4312	0.2379	6,187.373 7
Maximum	86.2228	65.3485	30.2780	0.2031	12.6331	0.8288	13.4619	4.8586	0.8139	5.6725	0.0000	21,956.59 31	21,956.59 31	1.6632	3.1521	22,937.48 90

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.97	3.26	-5.93	0.00	0.00	-22.84	-2.20	0.00	-28.48	-6.69	0.00	0.00	0.00	0.00	0.00	0.00

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Energy	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.396 8	1,019.396 8	0.0195	0.0187	1,025.454 6
Mobile	3.7198	3.7012	37.6797	0.0847	9.1381	0.0601	9.1982	2.4342	0.0558	2.4900		8,852.874 7	8,852.874 7	0.5612	0.3444	8,969.527 4
Total	14.0914	8.9248	64.0670	0.1175	9.1381	0.5945	9.7326	2.4342	0.5902	3.0244	0.0000	15,208.05 57	15,208.05 57	0.7242	0.4601	15,363.26 67

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Energy	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.396 8	1,019.396 8	0.0195	0.0187	1,025.454 6
Mobile	3.7198	3.7012	37.6797	0.0847	9.1381	0.0601	9.1982	2.4342	0.0558	2.4900		8,852.874 7	8,852.874 7	0.5612	0.3444	8,969.527 4
Total	14.0914	8.9248	64.0670	0.1175	9.1381	0.5945	9.7326	2.4342	0.5902	3.0244	0.0000	15,208.05 57	15,208.05 57	0.7242	0.4601	15,363.26 67

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2022	10/25/2022	5	62	
2	Grading	Grading	10/26/2022	11/10/2022	5	12	
3	Building Construction	Building Construction	11/11/2022	3/26/2025	5	619	
4	Paving	Paving	3/27/2025	5/8/2025	5	31	
5	Architectural Coating	Architectural Coating	5/9/2025	6/20/2025	5	31	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12

Acres of Paving: 0

Residential Indoor: 844,698; Residential Outdoor: 281,566; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 12,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	9,500.00	14.70	6.90	6.80	LD_Mix	HDT_Mix	HHDT
Building Construction	7	296.00	64.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5219	0.0000	0.5219	0.0790	0.0000	0.0790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241	0.5219	0.8379	1.3598	0.0790	0.7829	0.8619		2,323.4168	2,323.4168	0.5921		2,338.2191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0113	0.4063	0.0947	1.5000e-003	0.0424	3.0200e-003	0.0454	0.0116	2.8900e-003	0.0145		164.7038	164.7038	8.7500e-003	0.0261	172.7099
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	0.0563	0.4392	0.6071	2.8300e-003	0.1877	3.9500e-003	0.1916	0.0502	3.7500e-003	0.0539		299.9203	299.9203	0.0124	0.0294	308.9873

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.2 Demolition - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5219	0.0000	0.5219	0.0790	0.0000	0.0790			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	0.5621	12.1033	15.4154	0.0241	0.5219	0.7182	1.2401	0.0790	0.7182	0.7972	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0113	0.4063	0.0947	1.5000e-003	0.0424	3.0200e-003	0.0454	0.0116	2.8900e-003	0.0145		164.7038	164.7038	8.7500e-003	0.0261	172.7099
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	0.0563	0.4392	0.6071	2.8300e-003	0.1877	3.9500e-003	0.1916	0.0502	3.7500e-003	0.0539		299.9203	299.9203	0.0124	0.0294	308.9873

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7988	0.0000	7.7988	3.5332	0.0000	3.5332			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.7988	0.7423	8.5411	3.5332	0.6829	4.2161		1,995.4825	1,995.4825	0.6454		2,011.6169

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8183	55.1082	17.7389	0.1815	4.7225	0.3430	5.0656	1.2958	0.3282	1.6240		19,857.0979	19,857.0979	1.0150	3.1496	20,821.0432
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	1.8530	55.1335	18.1330	0.1825	4.8343	0.3438	5.1781	1.3254	0.3289	1.6543		19,961.1106	19,961.1106	1.0178	3.1521	20,925.8720

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Grading - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7988	0.0000	7.7988	3.5332	0.0000	3.5332			0.0000			0.0000
Off-Road	0.5043	10.2150	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	0.5043	10.2150	12.1450	0.0206	7.7988	0.4850	8.2838	3.5332	0.4850	4.0182	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8183	55.1082	17.7389	0.1815	4.7225	0.3430	5.0656	1.2958	0.3282	1.6240		19,857.0979	19,857.0979	1.0150	3.1496	20,821.0432
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	1.8530	55.1335	18.1330	0.1825	4.8343	0.3438	5.1781	1.3254	0.3289	1.6543		19,961.1106	19,961.1106	1.0178	3.1521	20,925.8720

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1259	3.1350	1.0749	0.0125	0.4099	0.0299	0.4398	0.1180	0.0286	0.1466		1,346.9542	1,346.9542	0.0450	0.1941	1,405.9209
Worker	1.0245	0.7479	11.6663	0.0303	3.3086	0.0212	3.3298	0.8775	0.0195	0.8970		3,078.7761	3,078.7761	0.0833	0.0741	3,102.9319
Total	1.1504	3.8829	12.7412	0.0428	3.7185	0.0511	3.7696	0.9955	0.0481	1.0436		4,425.7303	4,425.7303	0.1284	0.2682	4,508.8528

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1259	3.1350	1.0749	0.0125	0.4099	0.0299	0.4398	0.1180	0.0286	0.1466		1,346.9542	1,346.9542	0.0450	0.1941	1,405.9209
Worker	1.0245	0.7479	11.6663	0.0303	3.3086	0.0212	3.3298	0.8775	0.0195	0.8970		3,078.7761	3,078.7761	0.0833	0.0741	3,102.9319
Total	1.1504	3.8829	12.7412	0.0428	3.7185	0.0511	3.7696	0.9955	0.0481	1.0436		4,425.7303	4,425.7303	0.1284	0.2682	4,508.8528

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0737	2.4565	0.9517	0.0119	0.4100	0.0124	0.4223	0.1180	0.0118	0.1299		1,281.8078	1,281.8078	0.0430	0.1843	1,337.7991
Worker	0.9479	0.6608	10.7262	0.0293	3.3086	0.0200	3.3286	0.8775	0.0184	0.8958		2,997.3338	2,997.3338	0.0746	0.0683	3,019.5577
Total	1.0215	3.1174	11.6779	0.0412	3.7185	0.0323	3.7509	0.9955	0.0302	1.0257		4,279.1417	4,279.1417	0.1176	0.2526	4,357.3568

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0737	2.4565	0.9517	0.0119	0.4100	0.0124	0.4223	0.1180	0.0118	0.1299		1,281.8078	1,281.8078	0.0430	0.1843	1,337.7991
Worker	0.9479	0.6608	10.7262	0.0293	3.3086	0.0200	3.3286	0.8775	0.0184	0.8958		2,997.3338	2,997.3338	0.0746	0.0683	3,019.5577
Total	1.0215	3.1174	11.6779	0.0412	3.7185	0.0323	3.7509	0.9955	0.0302	1.0257		4,279.1417	4,279.1417	0.1176	0.2526	4,357.3568

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.921 4	2,001.921 4	0.3334		2,010.256 3
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.921 4	2,001.921 4	0.3334		2,010.256 3

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0714	2.4615	0.9314	0.0117	0.4100	0.0124	0.4224	0.1180	0.0119	0.1299		1,262.557 5	1,262.557 5	0.0431	0.1817	1,317.785 6
Worker	0.8835	0.5901	9.9841	0.0285	3.3086	0.0192	3.3277	0.8775	0.0176	0.8951		2,935.547 4	2,935.547 4	0.0675	0.0635	2,956.167 8
Total	0.9549	3.0517	10.9155	0.0402	3.7185	0.0316	3.7501	0.9955	0.0295	1.0250		4,198.104 8	4,198.104 8	0.1107	0.2452	4,273.953 4

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.921 4	2,001.921 4	0.3334		2,010.256 3
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.921 4	2,001.921 4	0.3334		2,010.256 3

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0714	2.4615	0.9314	0.0117	0.4100	0.0124	0.4224	0.1180	0.0119	0.1299		1,262.557 5	1,262.557 5	0.0431	0.1817	1,317.785 6
Worker	0.8835	0.5901	9.9841	0.0285	3.3086	0.0192	3.3277	0.8775	0.0176	0.8951		2,935.547 4	2,935.547 4	0.0675	0.0635	2,956.167 8
Total	0.9549	3.0517	10.9155	0.0402	3.7185	0.0316	3.7501	0.9955	0.0295	1.0250		4,198.104 8	4,198.104 8	0.1107	0.2452	4,273.953 4

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0694	2.4499	0.9143	0.0115	0.4100	0.0125	0.4224	0.1180	0.0119	0.1300		1,239.8265	1,239.8265	0.0434	0.1786	1,294.1251
Worker	0.8263	0.5303	9.3049	0.0275	3.3086	0.0183	3.3269	0.8775	0.0168	0.8943		2,863.7188	2,863.7188	0.0609	0.0593	2,882.9239
Total	0.8957	2.9801	10.2192	0.0390	3.7185	0.0307	3.7493	0.9955	0.0287	1.0242		4,103.5452	4,103.5452	0.1043	0.2379	4,177.0489

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0694	2.4499	0.9143	0.0115	0.4100	0.0125	0.4224	0.1180	0.0119	0.1300		1,239.8265	1,239.8265	0.0434	0.1786	1,294.1251
Worker	0.8263	0.5303	9.3049	0.0275	3.3086	0.0183	3.3269	0.8775	0.0168	0.8943		2,863.7188	2,863.7188	0.0609	0.0593	2,882.9239
Total	0.8957	2.9801	10.2192	0.0390	3.7185	0.0307	3.7493	0.9955	0.0287	1.0242		4,103.5452	4,103.5452	0.1043	0.2379	4,177.0489

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0233	0.4087	1.2100e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		125.7714	125.7714	2.6700e-003	2.6100e-003	126.6149
Total	0.0363	0.0233	0.4087	1.2100e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		125.7714	125.7714	2.6700e-003	2.6100e-003	126.6149

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0136		0.3864	0.3864		0.3864	0.3864	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3195	6.6399	9.8512	0.0136		0.3864	0.3864		0.3864	0.3864	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0233	0.4087	1.2100e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		125.7714	125.7714	2.6700e-003	2.6100e-003	126.6149
Total	0.0363	0.0233	0.4087	1.2100e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		125.7714	125.7714	2.6700e-003	2.6100e-003	126.6149

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.9987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	86.1696	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1647	0.1057	1.8547	5.4800e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		570.8088	570.8088	0.0121	0.0118	574.6369
Total	0.1647	0.1057	1.8547	5.4800e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		570.8088	570.8088	0.0121	0.0118	574.6369

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.9987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	86.0581	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1647	0.1057	1.8547	5.4800e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		570.8088	570.8088	0.0121	0.0118	574.6369
Total	0.1647	0.1057	1.8547	5.4800e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		570.8088	570.8088	0.0121	0.0118	574.6369

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7198	3.7012	37.6797	0.0847	9.1381	0.0601	9.1982	2.4342	0.0558	2.4900		8,852.874 7	8,852.874 7	0.5612	0.3444	8,969.527 4
Unmitigated	3.7198	3.7012	37.6797	0.0847	9.1381	0.0601	9.1982	2.4342	0.0558	2.4900		8,852.874 7	8,852.874 7	0.5612	0.3444	8,969.527 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking with Elevator	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
NaturalGas Unmitigated	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	8664.87	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	8.66487	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

6.0 Area Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Unmitigated	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4851	4.1454	1.7640	0.0265		0.3352	0.3352		0.3352	0.3352	0.0000	5,292.0000	5,292.0000	0.1014	0.0970	5,323.4477
Landscaping	0.7323	0.2796	24.2835	1.2800e-003		0.1346	0.1346		0.1346	0.1346		43.7842	43.7842	0.0421		44.8370
Total	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.7842	5,335.7842	0.1435	0.0970	5,368.2847

Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4851	4.1454	1.7640	0.0265		0.3352	0.3352		0.3352	0.3352	0.0000	5,292.000 0	5,292.000 0	0.1014	0.0970	5,323.447 7
Landscaping	0.7323	0.2796	24.2835	1.2800e- 003		0.1346	0.1346		0.1346	0.1346		43.7842	43.7842	0.0421		44.8370
Total	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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Lucia Park - Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Lucia Park - Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	502.00	Space	0.00	200,800.00	0
Apartment High Rise	294.00	Dwelling Unit	1.23	417,135.00	841

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2025
Utility Company	Glendale Water and Power				
CO2 Intensity (lb/MWhr)	948.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with SCEA's model.

Land Use - Consistent with SCEA's model.

Construction Phase - See SWAPE comment on "Unsubstantiated Changes to Individual Construction Phase Lengths"

Trips and VMT - Consistent with SCEA's model.

Demolition - Consistent with SCEA's model.

Grading - Total acres graded less than SCEA's model.

Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors and Areas"

Vehicle Trips - Consistent with the SCEA's model.

Woodstoves - Consistent with the SCEA's model.

Construction Off-road Equipment Mitigation - Consistent with SCEA's model.

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Mitigation - Consistent with SCEA's model.

Energy Mitigation - Consistent with SCEA's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	200.00	619.00
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	10.00	31.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	14.70	0.00
tblGrading	MaterialExported	0.00	76,000.00
tblLandUse	LandUseSquareFeet	294,000.00	417,135.00
tblLandUse	LotAcreage	4.52	0.00
tblLandUse	LotAcreage	4.74	1.23
tblTripsAndVMT	HaulingTripLength	20.00	6.80
tblVehicleTrips	ST_TR	4.53	4.32
tblVehicleTrips	SU_TR	3.59	3.42
tblVehicleTrips	WD_TR	4.45	4.24
tblWoodstoves	NumberCatalytic	14.70	0.00
tblWoodstoves	NumberNoncatalytic	14.70	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2020.4.0

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Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.3073	74.4897	27.8862	0.2032	12.6331	1.0881	13.7212	4.8586	1.0137	5.8723	0.0000	21,966.92 56	21,966.92 56	1.6585	3.1548	22,948.52 55
2023	2.6128	15.0123	23.4518	0.0617	3.7185	0.5469	4.2654	0.9955	0.5271	1.5226	0.0000	6,125.068 7	6,125.068 7	0.4584	0.2578	6,213.336 7
2024	2.4411	14.2928	22.6633	0.0608	3.7185	0.4822	4.2008	0.9955	0.4644	1.4599	0.0000	6,047.691 2	6,047.691 2	0.4449	0.2500	6,133.320 3
2025	86.3477	13.5634	21.9498	0.0596	3.7185	0.4233	4.1418	0.9955	0.4073	1.4028	0.0000	5,957.468 0	5,957.468 0	0.4320	0.2424	6,040.495 4
Maximum	86.3477	74.4897	27.8862	0.2032	12.6331	1.0881	13.7212	4.8586	1.0137	5.8723	0.0000	21,966.92 56	21,966.92 56	1.6585	3.1548	22,948.52 55

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Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2712	67.7212	30.8110	0.2032	12.6331	0.8308	13.4640	4.8586	0.8158	5.6744	0.0000	21,966.9256	21,966.9256	1.6585	3.1548	22,948.5255
2023	1.7303	15.3786	24.3194	0.0617	3.7185	0.7639	4.4824	0.9955	0.7618	1.7573	0.0000	6,125.0687	6,125.0687	0.4584	0.2578	6,213.3367
2024	1.6619	15.3056	23.6247	0.0608	3.7185	0.7632	4.4817	0.9955	0.7611	1.7566	0.0000	6,047.6912	6,047.6912	0.4449	0.2500	6,133.3203
2025	86.2363	15.2273	22.9890	0.0596	3.7185	0.7623	4.4809	0.9955	0.7603	1.7558	0.0000	5,957.4680	5,957.4680	0.4320	0.2424	6,040.4954
Maximum	86.2363	67.7212	30.8110	0.2032	12.6331	0.8308	13.4640	4.8586	0.8158	5.6744	0.0000	21,966.9256	21,966.9256	1.6585	3.1548	22,948.5255

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.97	3.17	-6.04	0.00	0.00	-22.82	-2.20	0.00	-28.46	-6.69	0.00	0.00	0.00	0.00	0.00	0.00

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Energy	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.396 8	1,019.396 8	0.0195	0.0187	1,025.454 6
Mobile	3.6541	3.9947	36.9090	0.0811	9.1381	0.0601	9.1982	2.4342	0.0558	2.4901		8,478.790 1	8,478.790 1	0.5763	0.3592	8,600.248 4
Total	14.0257	9.2182	63.2963	0.1139	9.1381	0.5945	9.7326	2.4342	0.5902	3.0244	0.0000	14,833.97 11	14,833.97 11	0.7394	0.4749	14,993.98 76

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Energy	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.396 8	1,019.396 8	0.0195	0.0187	1,025.454 6
Mobile	3.6541	3.9947	36.9090	0.0811	9.1381	0.0601	9.1982	2.4342	0.0558	2.4901		8,478.790 1	8,478.790 1	0.5763	0.3592	8,600.248 4
Total	14.0257	9.2182	63.2963	0.1139	9.1381	0.5945	9.7326	2.4342	0.5902	3.0244	0.0000	14,833.97 11	14,833.97 11	0.7394	0.4749	14,993.98 76

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2022	10/25/2022	5	62	
2	Grading	Grading	10/26/2022	11/10/2022	5	12	
3	Building Construction	Building Construction	11/11/2022	3/26/2025	5	619	
4	Paving	Paving	3/27/2025	5/8/2025	5	31	
5	Architectural Coating	Architectural Coating	5/9/2025	6/20/2025	5	31	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12

Acres of Paving: 0

Residential Indoor: 844,698; Residential Outdoor: 281,566; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 12,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	9,500.00	14.70	6.90	6.80	LD_Mix	HDT_Mix	HHDT
Building Construction	7	296.00	64.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5219	0.0000	0.5219	0.0790	0.0000	0.0790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241	0.5219	0.8379	1.3598	0.0790	0.7829	0.8619		2,323.4168	2,323.4168	0.5921		2,338.2191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.4228	0.0964	1.5000e-003	0.0424	3.0300e-003	0.0454	0.0116	2.8900e-003	0.0145		164.7521	164.7521	8.7300e-003	0.0261	172.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	0.0592	0.4591	0.5668	2.7600e-003	0.1877	3.9600e-003	0.1916	0.0502	3.7500e-003	0.0539		292.8194	292.8194	0.0124	0.0296	301.9561

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.2 Demolition - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5219	0.0000	0.5219	0.0790	0.0000	0.0790			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	0.5621	12.1033	15.4154	0.0241	0.5219	0.7182	1.2401	0.0790	0.7182	0.7972	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.4228	0.0964	1.5000e-003	0.0424	3.0300e-003	0.0454	0.0116	2.8900e-003	0.0145		164.7521	164.7521	8.7300e-003	0.0261	172.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	0.0592	0.4591	0.5668	2.7600e-003	0.1877	3.9600e-003	0.1916	0.0502	3.7500e-003	0.0539		292.8194	292.8194	0.0124	0.0296	301.9561

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7988	0.0000	7.7988	3.5332	0.0000	3.5332			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.7988	0.7423	8.5411	3.5332	0.6829	4.2161		1,995.4825	1,995.4825	0.6454		2,011.6169

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7299	57.4782	18.3042	0.1817	4.7225	0.3451	5.0676	1.2958	0.3302	1.6259		19,872.9298	19,872.9298	1.0102	3.1522	20,837.5273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	1.7669	57.5061	18.6660	0.1826	4.8343	0.3458	5.1801	1.3254	0.3308	1.6562		19,971.4431	19,971.4431	1.0131	3.1548	20,936.9086

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Grading - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7988	0.0000	7.7988	3.5332	0.0000	3.5332			0.0000			0.0000
Off-Road	0.5043	10.2150	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	0.5043	10.2150	12.1450	0.0206	7.7988	0.4850	8.2838	3.5332	0.4850	4.0182	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7299	57.4782	18.3042	0.1817	4.7225	0.3451	5.0676	1.2958	0.3302	1.6259		19,872.9298	19,872.9298	1.0102	3.1522	20,837.5273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	1.7669	57.5061	18.6660	0.1826	4.8343	0.3458	5.1801	1.3254	0.3308	1.6562		19,971.4431	19,971.4431	1.0131	3.1548	20,936.9086

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1244	3.2642	1.1120	0.0125	0.4099	0.0300	0.4399	0.1180	0.0287	0.1467		1,347.4603	1,347.4603	0.0449	0.1944	1,406.4979
Worker	1.0967	0.8264	10.7114	0.0287	3.3086	0.0212	3.3298	0.8775	0.0195	0.8970		2,915.9941	2,915.9941	0.0843	0.0791	2,941.6878
Total	1.2212	4.0907	11.8235	0.0412	3.7185	0.0512	3.7697	0.9955	0.0482	1.0437		4,263.4544	4,263.4544	0.1292	0.2735	4,348.1857

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1244	3.2642	1.1120	0.0125	0.4099	0.0300	0.4399	0.1180	0.0287	0.1467		1,347.4603	1,347.4603	0.0449	0.1944	1,406.4979
Worker	1.0967	0.8264	10.7114	0.0287	3.3086	0.0212	3.3298	0.8775	0.0195	0.8970		2,915.9941	2,915.9941	0.0843	0.0791	2,941.6878
Total	1.2212	4.0907	11.8235	0.0412	3.7185	0.0512	3.7697	0.9955	0.0482	1.0437		4,263.4544	4,263.4544	0.1292	0.2735	4,348.1857

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0712	2.5720	0.9816	0.0119	0.4100	0.0124	0.4224	0.1180	0.0119	0.1299		1,283.9699	1,283.9699	0.0428	0.1848	1,340.1031
Worker	1.0184	0.7300	9.8592	0.0277	3.3086	0.0200	3.3286	0.8775	0.0184	0.8958		2,839.3111	2,839.3111	0.0757	0.0730	2,862.9479
Total	1.0896	3.3019	10.8408	0.0397	3.7185	0.0324	3.7509	0.9955	0.0303	1.0258		4,123.2810	4,123.2810	0.1184	0.2578	4,203.0510

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0712	2.5720	0.9816	0.0119	0.4100	0.0124	0.4224	0.1180	0.0119	0.1299		1,283.9699	1,283.9699	0.0428	0.1848	1,340.1031
Worker	1.0184	0.7300	9.8592	0.0277	3.3086	0.0200	3.3286	0.8775	0.0184	0.8958		2,839.3111	2,839.3111	0.0757	0.0730	2,862.9479
Total	1.0896	3.3019	10.8408	0.0397	3.7185	0.0324	3.7509	0.9955	0.0303	1.0258		4,123.2810	4,123.2810	0.1184	0.2578	4,203.0510

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.921 4	2,001.921 4	0.3334		2,010.256 3
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.921 4	2,001.921 4	0.3334		2,010.256 3

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0688	2.5772	0.9610	0.0117	0.4100	0.0125	0.4225	0.1180	0.0120	0.1300		1,264.731 7	1,264.731 7	0.0429	0.1822	1,320.097 5
Worker	0.9524	0.6517	9.1851	0.0270	3.3086	0.0192	3.3277	0.8775	0.0176	0.8951		2,781.038 0	2,781.038 0	0.0685	0.0678	2,802.966 5
Total	1.0211	3.2289	10.1461	0.0387	3.7185	0.0317	3.7502	0.9955	0.0296	1.0251		4,045.769 8	4,045.769 8	0.1115	0.2500	4,123.064 0

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.921 4	2,001.921 4	0.3334		2,010.256 3
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.921 4	2,001.921 4	0.3334		2,010.256 3

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0688	2.5772	0.9610	0.0117	0.4100	0.0125	0.4225	0.1180	0.0120	0.1300		1,264.731 7	1,264.731 7	0.0429	0.1822	1,320.097 5
Worker	0.9524	0.6517	9.1851	0.0270	3.3086	0.0192	3.3277	0.8775	0.0176	0.8951		2,781.038 0	2,781.038 0	0.0685	0.0678	2,802.966 5
Total	1.0211	3.2289	10.1461	0.0387	3.7185	0.0317	3.7502	0.9955	0.0296	1.0251		4,045.769 8	4,045.769 8	0.1115	0.2500	4,123.064 0

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0667	2.5652	0.9436	0.0115	0.4100	0.0125	0.4225	0.1180	0.0120	0.1300		1,241.9999	1,241.9999	0.0432	0.1790	1,296.4323
Worker	0.8937	0.5854	8.5669	0.0260	3.3086	0.0183	3.3269	0.8775	0.0168	0.8943		2,713.3156	2,713.3156	0.0619	0.0633	2,733.7383
Total	0.9604	3.1506	9.5104	0.0376	3.7185	0.0308	3.7494	0.9955	0.0288	1.0243		3,955.3155	3,955.3155	0.1051	0.2424	4,030.1706

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0667	2.5652	0.9436	0.0115	0.4100	0.0125	0.4225	0.1180	0.0120	0.1300		1,241.9999	1,241.9999	0.0432	0.1790	1,296.4323
Worker	0.8937	0.5854	8.5669	0.0260	3.3086	0.0183	3.3269	0.8775	0.0168	0.8943		2,713.3156	2,713.3156	0.0619	0.0633	2,733.7383
Total	0.9604	3.1506	9.5104	0.0376	3.7185	0.0308	3.7494	0.9955	0.0288	1.0243		3,955.3155	3,955.3155	0.1051	0.2424	4,030.1706

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0393	0.0257	0.3763	1.1400e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		119.1659	119.1659	2.7200e-003	2.7800e-003	120.0628
Total	0.0393	0.0257	0.3763	1.1400e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		119.1659	119.1659	2.7200e-003	2.7800e-003	120.0628

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0136		0.3864	0.3864		0.3864	0.3864	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3195	6.6399	9.8512	0.0136		0.3864	0.3864		0.3864	0.3864	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0393	0.0257	0.3763	1.1400e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		119.1659	119.1659	2.7200e-003	2.7800e-003	120.0628
Total	0.0393	0.0257	0.3763	1.1400e-003	0.1453	8.0000e-004	0.1461	0.0385	7.4000e-004	0.0393		119.1659	119.1659	2.7200e-003	2.7800e-003	120.0628

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.9987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	86.1696	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1781	0.1167	1.7076	5.1900e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		540.8298	540.8298	0.0123	0.0126	544.9006
Total	0.1781	0.1167	1.7076	5.1900e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		540.8298	540.8298	0.0123	0.0126	544.9006

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.9987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	86.0581	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1781	0.1167	1.7076	5.1900e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		540.8298	540.8298	0.0123	0.0126	544.9006
Total	0.1781	0.1167	1.7076	5.1900e-003	0.6595	3.6400e-003	0.6631	0.1749	3.3500e-003	0.1783		540.8298	540.8298	0.0123	0.0126	544.9006

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6541	3.9947	36.9090	0.0811	9.1381	0.0601	9.1982	2.4342	0.0558	2.4901		8,478.790 1	8,478.790 1	0.5763	0.3592	8,600.248 4
Unmitigated	3.6541	3.9947	36.9090	0.0811	9.1381	0.0601	9.1982	2.4342	0.0558	2.4901		8,478.790 1	8,478.790 1	0.5763	0.3592	8,600.248 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,246.56	1,270.08	1,005.48	4,153,480	4,153,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking with Elevator	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
NaturalGas Unmitigated	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	8664.87	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	8.66487	0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0934	0.7985	0.3398	5.1000e-003		0.0646	0.0646		0.0646	0.0646		1,019.3968	1,019.3968	0.0195	0.0187	1,025.4546

6.0 Area Detail

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Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7
Unmitigated	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.784 2	5,335.784 2	0.1435	0.0970	5,368.284 7

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4851	4.1454	1.7640	0.0265		0.3352	0.3352		0.3352	0.3352	0.0000	5,292.0000	5,292.0000	0.1014	0.0970	5,323.4477
Landscaping	0.7323	0.2796	24.2835	1.2800e-003		0.1346	0.1346		0.1346	0.1346		43.7842	43.7842	0.0421		44.8370
Total	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.7842	5,335.7842	0.1435	0.0970	5,368.2847

Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4851	4.1454	1.7640	0.0265		0.3352	0.3352		0.3352	0.3352	0.0000	5,292.0000	5,292.0000	0.1014	0.0970	5,323.4477
Landscaping	0.7323	0.2796	24.2835	1.2800e-003		0.1346	0.1346		0.1346	0.1346		43.7842	43.7842	0.0421		44.8370
Total	10.2782	4.4250	26.0475	0.0277		0.4698	0.4698		0.4698	0.4698	0.0000	5,335.7842	5,335.7842	0.1435	0.0970	5,368.2847

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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Lucia Park - Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Attachment C

Construction			
2022		Total	
Annual Emissions (tons/year)	0.0375	Total DPM (lbs)	528.0558904
Daily Emissions (lbs/day)	0.205479452	Total DPM (g)	239526.1519
Construction Duration (days)	153	Emission Rate (g/s)	0.002642796
Total DPM (lbs)	31.43835616	Release Height (meters)	3
Total DPM (g)	14260.43836	Total Acreage	1.46
Start Date	8/1/2022	Max Horizontal (meters)	108.71
End Date	1/1/2023	Min Horizontal (meters)	54.35
Construction Days	153	Initial Vertical Dimension (meters)	1.5
2023		Setting	Urban
Annual Emissions (tons/year)	0.0993	Population	196,543
Daily Emissions (lbs/day)	0.544109589	Start Date	8/1/2022
Construction Duration (days)	365	End Date	45,823
Total DPM (lbs)	198.6	Total Construction Days	1049
Total DPM (g)	90084.96	Total Years of Construction	2.87
Start Date	1/1/2023	Total Years of Operation	27.13
End Date	1/1/2024		
Construction Days	365		
2024			
Annual Emissions (tons/year)	0.1257		
Daily Emissions (lbs/day)	0.688767123		
Construction Duration (days)	366		
Total DPM (lbs)	252.0887671		
Total DPM (g)	114347.4648		
Start Date	1/1/2024		
End Date	1/1/2025		
Construction Days	366		
2025			
Annual Emissions (tons/year)	0.0508		
Daily Emissions (lbs/day)	0.278356164		
Construction Duration (days)	165		
Total DPM (lbs)	45.92876712		
Total DPM (g)	20833.28877		
Start Date	1/1/2025		
End Date	6/15/2025		
Construction Days	165		

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.0433
Daily Emissions (lbs/day)	0.237260274
Total DPM (lbs)	86.6
Emission Rate (g/s)	0.001245616
Release Height (meters)	3
Total Acreage	1.46
Max Horizontal (meters)	108.71
Min Horizontal (meters)	54.35
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	196,543

Attachment D

Start date and time 02/04/22 11:04:32

AERSCREEN 21112

Lucia Park - Project Construction

Lucia Park - Project Construction

----- DATA ENTRY VALIDATION -----

METRIC

ENGLISH

** AREADATA ** -----

Emission Rate: 0.264E-02 g/s 0.210E-01 lb/hr

Area Height: 3.00 meters 9.84 feet

Area Source Length: 108.71 meters 356.66 feet

Area Source Width: 54.35 meters 178.31 feet

Vertical Dimension: 1.50 meters 4.92 feet

Model Mode: URBAN

Population: 196543

Dist to Ambient Air: 1.0 meters 3. feet

** BUILDING DATA **

No Building Downwash Parameters

**** TERRAIN DATA ****

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

**** FUMIGATION DATA ****

No fumigation requested

**** METEOROLOGY DATA ****

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u^*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2022.02.04_LuciaPark_AERSCREEN_Construction.out

*** AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 02/04/22 11:07:27

Running AERMOD

Processing Winter

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Spring

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Summer

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Autumn

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 30

***** WARNING MESSAGES *****

*** NONE ***

FLOWSECTOR ended 02/04/22 11:07:35

REFINE started 02/04/22 11:07:35

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

***** WARNING MESSAGES *****

*** NONE ***

REFINE ended 02/04/22 11:07:36

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

Ending date and time 02/04/22 11:07:38

**Responses to Comments
Comment Letter No. 1**

Concentration	Distance	Elevation	Diag	Season/Month	Zo sector	Date	H0	U*	W*	DT/DZ	ZICNV
ZIMCH M-O L E N	Z0 BOWEN	ALBEDO	REF WS	HT REF TA	HT						
0.80345E+01	1.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.94151E+01	25.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.10512E+02	50.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
* 0.10681E+02	55.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.70940E+01	75.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.45589E+01	100.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.33098E+01	125.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.25545E+01	150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.20567E+01	175.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.17068E+01	200.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.14501E+01	225.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.12521E+01	250.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.10982E+01	275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.97392E+00	300.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.87205E+00	325.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.78750E+00	350.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.71638E+00	375.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.65528E+00	400.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.60282E+00	425.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.55734E+00	450.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.51759E+00	475.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.48243E+00	500.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.45123E+00	525.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.42335E+00	550.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.39823E+00	575.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.37560E+00	600.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.35516E+00			625.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.33656E+00			650.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.31961E+00			675.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.30409E+00			700.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.28984E+00			725.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.27672E+00			750.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.26460E+00			775.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.25338E+00			800.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.24298E+00			825.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.23330E+00			850.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.22428E+00			875.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.21582E+00			900.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.20788E+00			925.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.20044E+00			950.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.19341E+00			975.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.18679E+00			1000.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.18134E+00			1025.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.17543E+00			1050.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.16985E+00			1075.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.16458E+00			1100.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.15958E+00			1125.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.15483E+00			1150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.15033E+00			1175.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.14605E+00			1200.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.14197E+00			1225.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.13809E+00			1250.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.13439E+00			1275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13085E+00			1300.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12748E+00			1325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12425E+00			1350.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12116E+00			1375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11820E+00			1400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11537E+00			1425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11265E+00			1450.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11004E+00			1475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10753E+00			1500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10512E+00			1525.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10280E+00			1550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10057E+00			1575.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.98425E-01			1600.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.96355E-01			1625.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.94360E-01			1650.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.92434E-01			1675.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.90576E-01			1700.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.88782E-01			1725.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.87048E-01			1750.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.85372E-01			1775.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.83751E-01			1800.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.82183E-01			1824.99	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.80665E-01			1850.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.79195E-01			1875.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.77770E-01			1900.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.76390E-01			1924.99	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.75051E-01			1950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.73752E-01			1975.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.72492E-01			2000.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.71269E-01			2025.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.70080E-01			2050.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.68927E-01			2075.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.67805E-01			2100.00	0.00	15.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.66715E-01			2125.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.65654E-01			2150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.64623E-01			2175.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.63619E-01			2200.00	0.00	20.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.62642E-01			2225.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.61690E-01			2250.00	0.00	15.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.60764E-01			2275.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.59861E-01			2300.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.58981E-01			2325.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.58124E-01			2350.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.57287E-01			2375.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.56472E-01			2400.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.55676E-01			2425.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.54900E-01			2449.99	0.00	25.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.54142E-01			2475.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.53402E-01			2500.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.52679E-01			2525.00	0.00	20.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.51973E-01			2550.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.51283E-01			2575.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.50609E-01			2600.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.49951E-01			2625.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0				

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.49307E-01			2650.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.48677E-01			2675.00	0.00	25.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.48061E-01			2700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.47458E-01			2725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.46868E-01			2750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.46291E-01			2775.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.45726E-01			2800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.45173E-01			2825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.44632E-01			2850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.44101E-01			2875.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.43582E-01			2900.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.43073E-01			2925.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.42574E-01			2950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.42085E-01			2975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.41605E-01			3000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.41136E-01			3025.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.40675E-01			3050.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.40223E-01			3075.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.39779E-01			3100.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.39345E-01			3125.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.38918E-01			3150.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.38499E-01			3174.99	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.38088E-01			3200.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.37684E-01			3225.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.37288E-01			3250.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.36899E-01			3275.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.36517E-01			3300.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.		6.0		

Responses to Comments
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1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.36142E-01			3325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.35773E-01			3350.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.35411E-01			3375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.35055E-01			3400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.34706E-01			3425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.34362E-01			3450.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.34024E-01			3475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.33692E-01			3500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.33365E-01			3525.00	0.00	25.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.33044E-01			3550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.32729E-01			3575.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.32418E-01			3600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.32112E-01			3625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.31812E-01			3650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.31516E-01			3675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.31225E-01			3700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.30939E-01			3724.99	0.00	20.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.30657E-01			3750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.30379E-01			3775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.30106E-01			3800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.29837E-01			3825.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.29572E-01			3850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.29312E-01			3875.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.29055E-01			3900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.28802E-01			3925.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.28553E-01			3950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.28307E-01			3975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

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1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.28066E-01			4000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27827E-01			4025.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27593E-01			4050.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27361E-01			4075.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27133E-01			4100.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26909E-01			4125.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26687E-01			4150.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26469E-01			4175.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26253E-01			4200.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26041E-01			4225.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25832E-01			4250.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25625E-01			4275.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25422E-01			4300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25221E-01			4325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25023E-01			4350.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24827E-01			4375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24635E-01			4400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24444E-01			4425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24257E-01			4450.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24072E-01			4475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23889E-01			4500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23708E-01			4525.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23530E-01			4550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23355E-01			4575.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23181E-01			4600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23010E-01			4625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.22841E-01			4650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.22674E-01			4675.00	0.00	20.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.22509E-01			4700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.22347E-01			4725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.22186E-01			4750.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.22027E-01			4775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21870E-01			4800.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21715E-01			4825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21562E-01			4850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21411E-01			4875.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21262E-01			4900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.21115E-01			4924.99	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.20969E-01			4950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.20825E-01			4975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.20683E-01			5000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										

Start date and time 02/04/22 11:13:58

AERSCREEN 21112

Lucia Park - Project Operations

----- DATA ENTRY VALIDATION -----

METRIC

ENGLISH

** AREADATA **

Emission Rate:	0.125E-02 g/s	0.989E-02 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	108.71 meters	356.66 feet
Area Source Width:	54.35 meters	178.31 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	196543	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

**** TERRAIN DATA ****

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

**** FUMIGATION DATA ****

No fumigation requested

**** METEOROLOGY DATA ****

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u^*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2022.02.04_LuciaPark_AERSCREEN_Operations.out

*** AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 02/04/22 11:14:56

Running AERMOD

Processing Winter

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 15

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***** WARNING MESSAGES *****  
*** NONE ***
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Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 20

```
***** WARNING MESSAGES *****  
*** NONE ***
```

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 25

```
***** WARNING MESSAGES *****  
*** NONE ***
```

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Spring

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Summer

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 0

***** WARNING MESSAGES *****
*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 5

***** WARNING MESSAGES *****
*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 10

***** WARNING MESSAGES *****
*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 30

***** WARNING MESSAGES *****

*** NONE ***

Running AERMOD

Processing Autumn

Processing surface roughness sector 1

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 0

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 5

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 10

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 15

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 20

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 25

***** WARNING MESSAGES *****

*** NONE ***

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 30

***** WARNING MESSAGES *****

*** NONE ***

FLOWSECTOR ended 02/04/22 11:15:03

REFINE started 02/04/22 11:15:03

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

***** WARNING MESSAGES *****

*** NONE ***

REFINE ended 02/04/22 11:15:04

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

Ending date and time 02/04/22 11:15:06

**Responses to Comments
Comment Letter No. 1**

Concentration	Distance	Elevation	Diag	Season/Month	Zo sector	Date	H0	U*	W*	DT/DZ	ZICNV
ZIMCH M-O L E N	Z0 BOWEN	ALBEDO	REF WS	HT REF TA	HT						
0.37864E+01	1.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.44371E+01	25.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.49541E+01	50.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
* 0.50336E+01	55.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.33432E+01	75.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.21485E+01	100.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.15598E+01	125.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.12039E+01	150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.96927E+00	175.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.80439E+00	200.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.68338E+00	225.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.59010E+00	250.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.51756E+00	275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.45898E+00	300.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.41097E+00	325.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.37113E+00	350.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.33761E+00	375.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.30882E+00	400.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.28409E+00	425.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.26266E+00	450.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.24393E+00	475.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.22736E+00	500.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.21265E+00	525.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.19951E+00	550.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.18767E+00	575.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0
1.000 1.50 0.35	0.50	10.0	310.0	2.0							
0.17701E+00	600.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020 -999.	21. 6.0

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.16738E+00			625.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.15861E+00			650.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.15062E+00			675.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.14331E+00			700.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.13659E+00			725.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.13041E+00			750.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.12470E+00			775.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11941E+00			800.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11451E+00			825.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10995E+00			850.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10570E+00			875.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10171E+00			900.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.97970E-01			925.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.94460E-01			950.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.91146E-01			975.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.88029E-01			1000.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.85459E-01			1025.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.82677E-01			1050.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.80048E-01			1075.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.77560E-01			1100.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.75203E-01			1125.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.72968E-01			1150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.70845E-01			1175.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.68828E-01			1200.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.66907E-01			1225.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.65078E-01			1250.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.63333E-01			1275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

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1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.61668E-01			1300.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.60077E-01			1325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.58556E-01			1350.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.57100E-01			1375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.55706E-01			1400.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.54370E-01			1425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.53089E-01			1450.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.51858E-01			1475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.50677E-01			1500.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.49541E-01			1525.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.48449E-01			1550.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.47398E-01			1575.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.46385E-01			1600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.45410E-01			1625.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.44469E-01			1650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.43562E-01			1675.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.42686E-01			1700.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.41840E-01			1725.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.41023E-01			1750.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.40233E-01			1775.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.39469E-01			1800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.38730E-01			1825.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.38015E-01			1850.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.37322E-01			1875.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.36651E-01			1900.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.36000E-01			1924.99	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.35369E-01			1950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

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1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.34757E-01			1975.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.34163E-01			2000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.33587E-01			2025.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.33027E-01			2050.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.32483E-01			2075.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.31955E-01			2100.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.31441E-01			2125.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.30941E-01			2150.00	0.00	30.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.30455E-01			2175.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.29982E-01			2200.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.29521E-01			2225.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.29073E-01			2250.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.28636E-01			2275.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.28211E-01			2300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27796E-01			2325.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.27392E-01			2350.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26998E-01			2375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26614E-01			2400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.26239E-01			2425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25873E-01			2449.99	0.00	25.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25515E-01			2475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.25167E-01			2500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24826E-01			2525.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24493E-01			2550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.24168E-01			2575.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23851E-01			2600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23540E-01			2625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

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1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.23237E-01			2650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.22940E-01			2675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.22650E-01			2700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.22366E-01			2725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.22088E-01			2750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.21816E-01			2775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.21550E-01			2800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.21289E-01			2825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.21034E-01			2850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.20784E-01			2875.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.20539E-01			2900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.20299E-01			2925.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.20064E-01			2950.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.19833E-01			2975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.19607E-01			3000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.19386E-01			3025.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.19169E-01			3050.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.18956E-01			3075.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.18747E-01			3100.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.18542E-01			3125.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.18341E-01			3150.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.18143E-01			3175.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17950E-01			3200.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17760E-01			3225.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17573E-01			3250.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17390E-01			3275.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17210E-01			3300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

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1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.17033E-01			3325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16859E-01			3350.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16688E-01			3375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16521E-01			3400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16356E-01			3425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16194E-01			3450.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.16035E-01			3475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15878E-01			3500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15724E-01			3525.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15573E-01			3550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15424E-01			3575.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15278E-01			3600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.15134E-01			3625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14992E-01			3650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14853E-01			3675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14715E-01			3700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14581E-01			3725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14448E-01			3750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14317E-01			3775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14188E-01			3800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.14061E-01			3825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13937E-01			3850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13814E-01			3875.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13693E-01			3900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13574E-01			3925.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13456E-01			3950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13341E-01			3975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13226E-01			4000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13114E-01			4025.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.13004E-01			4050.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12895E-01			4075.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12787E-01			4100.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12681E-01			4125.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12577E-01			4150.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12474E-01			4175.00	0.00	25.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12373E-01			4200.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12272E-01			4225.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12174E-01			4250.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.12076E-01			4275.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11981E-01			4300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11886E-01			4325.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11793E-01			4350.00	0.00	10.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11700E-01			4375.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11610E-01			4400.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11520E-01			4425.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11432E-01			4450.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11344E-01			4475.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11258E-01			4500.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11173E-01			4525.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11089E-01			4550.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.11006E-01			4575.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10925E-01			4600.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10844E-01			4625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			
1.000	1.50	0.35	0.50	10.0	310.0	2.0													
0.10764E-01			4650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0			

Responses to Comments
Comment Letter No. 1

1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10686E-01			4675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10608E-01			4700.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10531E-01			4725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10456E-01			4750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10381E-01			4775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10307E-01			4800.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10234E-01			4825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10162E-01			4850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10091E-01			4875.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.10020E-01			4900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.99507E-02			4924.99	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.98820E-02			4950.00	0.00	5.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.98142E-02			4975.00	0.00	15.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.97471E-02			5000.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										



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**Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review**

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

- principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Clean up at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.



Technical Consultation, Data Analysis and
Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H₂O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health*. 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P.**, (2015) Modeling the Effect of Refinery Emission On Residential Property Value. *Journal of Real Estate Research*. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.**, Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermid and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS-6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld**. (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The 23rd *Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference*. Lecture conducted from Indianapolis, Maryland.

Rosenfeld, P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation*. Lecture conducted from Anaheim California.

Rosenfeld, P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest*. Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell*. Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest*. Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 019-L-2295
Rosenfeld Deposition, 5-14-2021
Trial, October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty, Plaintiff vs. Consolidated Rail Corporation and National Railroad Passenger Corporation
d/b/a AMTRAK,
Case No.: No. 18-L-6845
Rosenfeld Deposition, 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe, Plaintiff vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA
Rail, Defendants
Case No.: No. 17-cv-8517
Rosenfeld Deposition, 5-25-2021

In the Superior Court of the State of Arizona In and For the County of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Phoenix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff*, vs. Marathon Petroleum, LP, *Defendant*.
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant*.
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

- In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS “Conti Perdido”
Defendant.
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019
- In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019
- In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19
- In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case No.: 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018
- In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosiences, LLC, et al., Defendants
Cause No.: 1923
Rosenfeld Deposition, 11-17-2017
- In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017
- In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017
- In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020
- In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018
- In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action NO. 14-C-30000
Rosenfeld Deposition, June 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant*.
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeannette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil Action No. CV 2008-2076
Rosenfeld Deposition: September 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

COMMENT LETTER NO. 1:

Supporters Alliance for Environmental Responsibility (“SAFER”)
Brian B. Flynn
Attorney, Lozeau Drury LLP
1939 Harrison Street, Ste. 150
Oakland, CA 94612

Response to Comment 1-1

The comment requests the SCEA be revised in response to the comments presented in this letter. This comment incorrectly claims the SCEA does not incorporate all feasible mitigation measures from prior environmental impact reports (EIRs); in addition, it includes comments on the air quality analysis in the SCEA. As further discussed in Response to Comment 1-4 through 1-9, the SCEA does not need to be revised as it incorporated all feasible mitigation measures from prior EIRs, which include (1) the SCAG 2020–2045 RTP/SCS Program EIR; (2) the City of Glendale South Glendale Community Plan EIR; and (3) the City of Glendale Downtown Specific Plan EIR). As discussed in the following responses, the Air Quality analysis in the SCEA is sufficient and adequately discloses all potential impacts.

Response to Comment 1-2

The comment includes a description of the proposed Project. As this comment does not address the information, analysis nor conclusions in the SCEA, no further response is necessary.

Response to Comment 1-3

This comment includes legal background for the preparation of a SCEA document pursuant to CEQA. As this comment does not address the information, analysis nor conclusions in the SCEA, no further response is necessary.

Response to Comment 1-4

This comment asserts that numerous feasible mitigation measures from the 2020-2045 RTP/SCS Program EIR were not applied to the proposed Project. Specifically, the comment claims mitigation measure PMM AQ-1 is identified in the SCEA as being incorporated into the Project, but the SCEA does not identify which of the individual measures in PMM AQ-1 are feasible and incorporated into the Project. This is incorrect. Table 3.3-1 of the SCEA identifies the applicability of all mitigation measures from the prior EIRs, including PMM AQ-1. Table 3.3-1 states which mitigation measures from PMM AQ-1 would be incorporated into the Project and provides an explanation as to why mitigation measures “i,” “r,” “s,” “t,” “v,” “w,” “x,” “aa,”

“cc vi,” “cc xi,” “cc xii,” “cc xiii,” “cc xv,” and “cc xvii” in PMM AQ-1 are not incorporated into the Project.¹ The explanations of why these mitigation measures are not applicable to this project are provided in Table 3.3.-1 of the SCEA and below:

- Item “i” is not incorporated into the proposed Project because it is specifically applicable to Caltrans projects.
- Item “r” is not incorporated into the proposed Project because SCAQMD “SOON” funds would not be included as part of the proposed Project.
- Item “s” is not incorporated into the proposed Project because the Project site is not located within an AB 617 community.
- Item “t” is not incorporated into the proposed Project because it is specifically applicable to school projects.
- Item “v” is not incorporated into the proposed Project because it is specifically applicable to airport projects.
- Item “w” is not incorporated into the proposed Project because it is specifically applicable to port projects.
- Item “x” is not incorporated into the proposed Project because it is specifically applicable to rail projects.
- Item “aa” is not incorporated into the proposed Project as Glendale is not identified as a low-income and/or minority community.
- Item “cc vi” is not incorporated into the proposed Project because the proposed project would not result in substantial adverse effects related to aesthetics or transportation (see Appendix E to of the SCEA) that would require replacement of traffic lights.
- Item “cc ix” is not incorporated into the proposed Project because the Project site is not a landfill or wastewater treatment plant.

¹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Pages 3-19 through 3-26. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

- Item “cc xii” is not incorporated into the proposed Project because the proposed project would not result in substantial adverse effects related to transportation (see Appendix E to the SCEA) that would require traffic calming measures.
- Item “cc xiii” is not incorporated into the proposed Project because non-motorized zones would not be included as part of the proposed Project. It is not applicable to individual private development projects.
- Item “cc xv” is not incorporated into the proposed Project because dedicated bike trails would not be included as part of the proposed Project.
- Item “cc xvii” is not incorporated into the proposed Project because the proposed Project would not provide residential streets and therefore permits would not be required. All 373 parking spaces would be provided within four subterranean levels for the residential use proposed on the site. The amount of parking supplied for the proposed Project would be consistent with the GMC.²

This comment also asserts there are inconsistencies between mitigation measures listed in the SCEA, such as which tier will be required for construction equipment between PMM AQ-1 from the 2020-2045 RTP/SCS Program EIR and MM 4.2-2(h) from the City of Glendale Downtown Specific Plan EIR. PMM AQ-1 Item “q” states, “Require projects to use Tier 4 Final equipment or better for all engines above 50 horsepower (hp). In the event that construction equipment cannot meet to Tier 4 Final engine certification, the Project representative or contractor must demonstrate through future study with written findings supported by substantial evidence that is approved by SCAG before using other technologies/strategies.”³ Additionally, PMM AQ-1 Items “bb iii” and “bb iv” state “Nonroad diesel engines on site shall be Tier 2 or higher” and “Diesel nonroad construction equipment on site for more than 10 total days shall have either (1) engines meeting EPA Tier 4 nonroad emissions standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines for 50 hp and greater and by a minimum of 20% for engines less than 50 hp.”⁴ City of Glendale Downtown Specific Plan EIR MM 4.2-2(h) requires construction equipment to meet or exceed Tier 2 standards use emulsified diesel fuels, and equip construction equipment with oxidation catalysts, particulate traps, or other verified or certified retrofit technologies to the extent feasible. As

² City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Pages 3-20. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

³ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 3-20. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁴ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 3-23. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

CEQA requires all feasible mitigation measures be applied to a project preparing a SCEA, both 2020-2045 RTP/SCS Program EIR PMM AQ-1 and City of Glendale Downtown Specific Plan EIR MM 4.2-2(h) are applied to the proposed Project. In this case, as two measures from prior applicable EIRs address construction equipment, the City will require the most restrictive requirement to be met. It is important to note that the SCEA concluded the construction emissions would be below the significance thresholds without mitigation measures or compliance without mitigation.

Last, this comment incorrectly states that 2020-2045 RTP/SCS Program EIR PMM GHG-1 is not mentioned in the SCEA and the SCEA only relies on mitigation policies from the City of Glendale South Glendale Community Plan EIR. The applicability of 2020-2045 RTP/SCS Program EIR PMM GHG-1 is discussed in Table 3.3-2 of the SCEA. PMM GHG-1 reads “In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to greenhouse gas emissions, as applicable and feasible.”

As discussed in this table, PMM GHG-1 is not incorporated into the Project because, in accordance with the analysis in Section 5.8: Greenhouse Gas Emissions, “the GHG emissions generated by the project would not result in substantial adverse effects related to greenhouse gas emissions and the Project would not conflict with an applicable plan, policy, or regulation for the purposes of reducing the emissions of GHGs. The proposed Project would reduce greenhouse gas emissions and improve air quality by concentrating residential uses within one-half mile of a high-quality transit corridor and within a transit priority area. The proposed Project would provide new housing near public transit, which would encourage the use and productivity of the existing public transportation system. The Project would comply with the California Green Building Standards Code (CALGreen), and would incorporate eco-friendly building materials, systems, and high-performance building envelope. In addition, the proposed Project would comply with the Greener Glendale Plan, which incorporates twelve (12) measures in addition to the mandatory Green Building Standards for new construction projects. As such, the Project’s location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. The Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases.”⁵ PMM GHG-1 is not incorporated into the Project because the Project would not result in substantial adverse GHG impacts as discussed in Table 3.3-2 of the SCEA.

⁵ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Pages 3-53 through 3-54. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

Response to Comment 1-5

While not a CEQA issue, project inhabitants would be protected from potential indoor air quality issues, as the proposed Project would be required to comply with CALGreen Section 4.504.5 and 5.504.4.5, which set formaldehyde emissions limits for composite wood products. Composite wood products manufactured in or imported to the U.S. are required to be certified and labeled as California Air Resources Board (CARB) Airborne Toxic Control Measures (ATCM) Phase II or Toxic Substances Control Act (TSCA) Title VI compliant.

As further discussed in Response to Comment 1-6, the information of the effects formaldehyde on indoor air quality provided by Mr. Offermann does not support the need for further analysis of the potential effects of off-gassing of formaldehyde from building materials on indoor air quality. Moreover, as discussed in Responses to Comment 1-7 through 1-9, SWAPE's claims that air quality analysis in the SCEA is insufficient is inaccurate and the supplemental analysis provided by SWAPE does not properly reflect the proposed Project.

Response to Comment 1-6

The comment letter includes a paper prepared by Indoor Environmental Engineering as Exhibit A which states that air quality analysis in the SCEA is not adequate as it does not discuss, disclose, analyze, and mitigate the significant health risks posed from formaldehyde, a toxic air contaminant. The comment asserts that residents of new residential buildings are exposed to high levels of off-gassed formaldehyde from composite wood products used to construct buildings. The comment also states that residents of the Project site would be exposed to adverse levels of PM_{2.5} from ambient concentrations of PM_{2.5} within the Project site.

The comment alleges that its expert, Mr. Offermann, has determined that indoor emissions of formaldehyde will result in a significant health risk that requires further analysis to determine appropriate mitigation. Mr. Offermann's claims assume this Project will be built using typical materials and construction methods used in California, such that future residents will experience a cancer risk from formaldehyde of approximately 120 in one million. Mr. Offermann cites his own, thirteen years old, 2009 study—the California New Home Study (CNHS), and calculates a 180 in one million figure based on this outdated 2009 study. Moreover, Mr. Offermann cites the updated CNHS, conducted in 2016-2018 (Singer et. al., 2019), which found that the median indoor concentrations of formaldehyde in new homes built after 2009 with California Air Resources Board (CARB) Phase 2 Formaldehyde ATCM materials had lower indoor formaldehyde concentrations, with a median indoor concentration of 22.4 µg/m³ (18.2 ppb) as compared to a median of 36 µg/m³ found in the 2007 CNHS. However, while new homes built after the 2009 CARB formaldehyde ATCM have a 33% lower median indoor formaldehyde concentration and cancer

risk, the median lifetime cancer risk is still 120 per million for homes built with CARB compliant composite wood products.

Mr. Offermann's claim that the proposed Project would result in significant impacts is based on pure speculation and assumption regarding (1) project construction and materials; (2) how much ventilation the proposed apartment units would have; and (3) size and type of residential units included in the proposed Project. First, Mr. Offermann assumed the proposed Project would use formaldehyde containing materials during construction. Mr. Offermann's conclusion is based on speculation as exact building materials have not been finalized for the proposed Project and are not required to be disclosed or analyzed under CEQA. Moreover, Mr. Offermann states that the proposed Project will be built with CARB Phase II Formaldehyde ATCM materials. Again, this is speculation as CARB has approved no-added formaldehyde (NAF) materials that would be available for use in construction of the proposed Project. It is unknown at this time whether the proposed Project will utilize NAF materials or what percentage of materials will contain formaldehyde. As such, analyzing formaldehyde concentrations associated with the proposed Project is not feasible at this time, but in any event any materials will be required to comply with LORS.

Second, Mr. Offermann referenced the roadway noise analysis for the SCEA and labeled the proposed Project a "sound impacted site" which would lead residents to keep their windows closed, thus lowering ventilation. As Mr. Offermann mentions, roadway noise would reach a maximum of 63.3 dBA. As detailed within the Noise Study for the SCEA, noise levels are considered "normally acceptable" up to 65 dBA for multi-family residences. As such, Mr. Offermann's claim that the proposed Project would be a "sound impacted site" is incorrect. Third, Mr. Offermann's calculations regarding the proposed Project assumed values for floor area, ceiling height, and number of bedrooms for a "New Single-Family Residence Scenario" as defined in the *Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, Version 1.1, 2017*. These values do not reflect the size of the residential units included in the proposed Project and are an inaccurate reference as the proposed Project includes a multi-family development, not single-family residences. Specifically, Mr. Offermann's assumed a 4-bedroom, single-family residence with a floor area of 2,272 square feet results in an inaccurate and gross overestimation of the amount of formaldehyde containing materials that could potentially be used in a single unit because the proposed Project would not include units over 1,500 square feet.

Moreover, there are several variables that contribute to formaldehyde concentrations within residential dwellings including:⁶

- the age of the building, since the release of formaldehyde decreases with time.
- temperature and relative humidity.
- the air exchange rate.
- the season.

Mr. Offermann's assumptions about indoor formaldehyde concentrations for the proposed residences do not consider several of these factors and therefore cannot be considered reliable. Mr. Offerman states wood products typically used in residential construction contain formaldehyde products which off-gas formaldehyde "over a very long time period," but Mr. Offerman provides no reference to this statement and does not specify a time period. However, the Agency for Toxic Substances and Disease Registry cites one study that shows that most formaldehyde is released from products within two years.⁷ Therefore, Mr. Offerman's assumption that the proposed Project's residents would be exposed to high formaldehyde concentrations 24 hours per day, 52 weeks per year, with an average 70-year lifetime, is a gross overestimation and does not consider the fact that indoor formaldehyde levels decrease substantially after the first few years of construction. Moreover, Mr. Offermann does not include any information or analysis regarding temperature, humidity, seasonal conditions, or air exchange technology specific to the Project site, all of which he states are relevant to indoor formaldehyde concentrations. Mr. Offermann's speculations and assumptions do not constitute substantial evidence that the Project would result in significant interior air quality impacts from formaldehyde.

Response to Comment 1-7

The letter includes a paper prepared by SWAPE as Exhibit B which claims the emission estimates calculated with the California Emissions Estimator Model Version CalEEMod.2020.4.0 presented in the SCEA underestimated the emissions that will result from the project. Specifically, SWAPE incorrectly claims that several default values were changed without any substantiation for changing these default values. The first claim is that the exterior and interior architectural and area coating emission factors were incorrectly reduced from their default value of 100- to 50-grams per liter (g/L). As shown in the CalEEMod "User Entered Comments & Non-Default Data" table, this change is consistent with SCAQMDS Rule 1113 (Architectural Coatings) which identifies 50 g/L as the standard for building envelope coatings effective January 1, 2019, and is considered regulatory compliance. Moreover, as noted in the SCEA, and contrary to assertions, the construction emission results presented in Table 5.3-1 are not adjusted to include

⁶ World Health Organization, WHO Guidelines for Indoor Air Quality: Selected Pollutants, 2010. Available at: https://www.euro.who.int/_data/assets/pdf_file/0009/128169/e94535.pdf. Accessed March 2022.

⁷ Agency for Toxic Substances and Disease Registry. Formaldehyde in Your Home: What you need to know. Available at: <https://www.atsdr.cdc.gov/formaldehyde/home/index.html#Park>. Accessed March 2022.

regulatory compliance measures that would lower emissions (e.g., construction equipment controls, control efficiency of PM₁₀ (dust control measures per SCAQMD Rule 403), or reduced VOC emissions from architectural coatings (per SCAQMD Rule 1113). Therefore, the SCEA reflects a worst-case scenario analysis.⁸ As shown in Table 5.3-1 in the SCEA, and in Appendix A, Attachments A.3 and A.4 (2.1 Overall Construction – Unmitigated Construction), construction emissions would be below SCAQMD thresholds without any regulatory compliance or mitigation measures.⁹

SWAPE also claims the construction phase lengths were altered within the CalEEMod analysis without substantiation. This claim is also incorrect because the SCEA relied on construction phase lengths provided by the proposed Project's contractor and the estimates are from the most reliable source for estimating the length of construction phases in order to provide inputs into the model. The commenter has not shown why relying on construction contractor construction phase time estimates is not warranted or reliable. Moreover, these phase lengths are disclosed in Appendix A to the SCEA in Table 11, provided below.¹⁰ Accordingly, the commenter's criticisms that the time frames and description of the construction activities were not disclosed is inaccurate, are not warranted, and are based on speculation, which is not substantial evidence.

TABLE 11 PROJECT CONSTRUCTION SCHEDULE				
Construction Activity	Approximate Start Date	Approximate End Date ^{a,b}	Duration (Days)	Description
Demolition	8/1/22	8/31/22	23	Removal of existing one-story office building and parking structure
Grading	9/1/22	12/15/22	76	Grading of site and export of 76,000 cubic yards of soil
Building Construction	12/1/22	6/15/2025	662	Construction of 294-unit apartment building and parking structure
Paving	9/1/24	12/2/24	66	Paving of asphalt surfaces
Architectural Coating ^c	1/1/24	6/15/25	380	Application of architectural coatings to building materials

Note: Refer to Attachment A.3 Proposed (Summer) and Attachment A.4 Proposed (Winter), Section 3.0: Construction Detail.

^a Construction of the proposed Project would occur over approximately 35 months.

^b The proposed Project would be subject to a Development Agreement that currently has a six (6) year term. While the construction could start as early as August 2022, it could start as late as July 2028 depending on when the entitlements are approved. The most conservative analysis of construction impacts would be to assume construction would begin August 2022

⁸ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-24. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-24. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

¹⁰ Meridian Consultants LLC. *Air Quality & Greenhouse Gas Technical Study for the Lucia Park Project 625 N. Maryland Avenue and 620 N. Grand Boulevard Glendale, California 91203*. December 2021. Appendix A. Page 29. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65591/637781192050470000>. Accessed March 2022.

TABLE 11
PROJECT CONSTRUCTION SCHEDULE

Construction Activity	Approximate Start Date	Approximate End Date ^{a,b}	Duration (Days)	Description
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through June 2022 as emissions would be higher in earlier years. Thus, this study analyzes construction impacts between August 2022 through June 2025.

^c *Architectural coating will be taking place intermittently throughout building construction.*

Lastly, SWAPE claims the analysis incorrectly utilized area and architectural coating mitigation for operational emissions. As discussed previously, this change is consistent with SCAQMD Rule 1113 (Architectural Coatings) which identifies 50 g/L as the standard for building envelope coatings effective January 1, 2019. The Project is required to comply with this existing standard. Moreover, the operational emission results presented in Table 5.3-3 in the SCEA reflect a worse-case scenario, they do not include any reductions that would result from existing regulations, such as reduced VOC emissions from architectural coatings (per SCAQMD Rule 1113). As shown in Table 5.3-3 in the SCEA, and in Appendix A, Attachments A.3 and A.4 (2.2 Overall Operational – Unmitigated Operational), operational emissions would be below SCAQMD thresholds without taking into account reductions that would result from compliance from existing regulations or mitigation measures.¹¹

SWAPE's claim that the construction and operational emission estimates provided in the SCEA are underestimated is unfounded.

Response to Comment 1-8

The comment erroneously claims that the SCEA did not quantitatively evaluate the proposed Project's construction-related and operational Toxic Air Contaminants (TACs) or connect these emissions to potential health risk impacts posed to nearby existing sensitive receptors. The City relies on methodology established by SCAQMD for preparation of CEQA air quality analyses. SCAQMD shares responsibility with the CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout the urban portions of various counties including Los Angeles. SCAQMD has jurisdiction over an area of approximately 10,743 square miles. Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality emissions associated with new development projects within the Air Basin, such as the proposed Project. Instead, SCAQMD published the CEQA Air Quality Handbook to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating the potential air quality impacts of projects proposed in the Air Basin. The CEQA Air Quality Handbook provides standards, methodologies, and

¹¹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-27. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

procedures for conducting air quality analyses and was relied upon by the City in the preparation of the analysis for this Project.

Although OEHHHA provides recommendations for health risk assessments, the proposed Project is within SCAQMD jurisdiction and therefore follows the guidance recommended by SCAQMD. SCAQMD recommends an HRA analysis for projects that include diesel particulate matter from mobile sources at facilities such as truck stops and warehouse distribution centers,¹² and for facilities with stationary diesel engines.¹³ This does not apply to the proposed Project as it would not include such facilities. Additionally, the SCAQMD CEQA Handbook does not recommend analysis of Toxic Air Contaminants (TACs) from short-term construction activities.¹⁴ Instead, SCAQMD recommends the utilization of localized significance thresholds (LSTs) for projects less than 5 acres, which applies to the proposed Project. These LSTs assess emissions of concern from construction equipment including NOx, CO, PM10, and PM2.5.¹⁵ As detailed within the SCEA, the proposed Project would not exceed the appropriate LSTs established by SCAQMD, including particulate matter from equipment exhaust (particulate matter is expressed in terms of PM2.5 and PM10 within CalEEMod).¹⁶ The rationale for not requiring a health risk assessment for construction activities is the limited duration of exposure to TACs from short-term activities. The SCAQMD methodology defines health effects from carcinogenic air toxics in terms of individual cancer risk. Specifically, “Individual Cancer Risk” is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology.

The proposed Project would not represent a long-term source of TAC emissions because the greatest potential for diesel particulate emissions would only occur during excavation/grading activities of approximately 76 days, and other construction activities during the overall construction schedule of approximately 35 months would use fewer pieces of heavy-duty diesel construction equipment in comparison to excavation/grading activities.¹⁷ No residual TAC emissions and corresponding individual cancer risk are anticipated after construction. Therefore, additional evaluation of construction TAC emissions was not warranted.

¹² SCAQMD, Mobile Source Toxics Analysis, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>. Accessed May 2022.

¹³ SCAQMD, Estimating Overall Facility Risks, <https://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/iws-facilities/dice/estimating-overall-facility-risks>. June 2022.

¹⁴ SCAQMD, Air Quality Analysis Guidance Handbook, <http://www.aqmd.gov/CEQA/hdbk.html>. Accessed June 2022.

¹⁵ SCAQMD, Final Localized Significance Threshold Methodology, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>. Accessed June 2022.

¹⁶ CalEEMod User Guide, Appendix A: Calculation Details for CalEEMod, <http://www.aqmd.gov/caleemod/user's-guide>. Accessed June 2022.

¹⁷ See CalEEMod results provided in Appendix A to the SCEA.

SCAQMD provides LSTs for operation of projects less than five acres in size, which are included in the SCEA. As demonstrated in the SCEA, the proposed Project would not exceed SCAQMD's operational LSTs.

As discussed above, SCAQMD recommends an HRA analysis for projects that include diesel particulate matter from mobile sources at facilities such as truck stops and warehouse distribution centers,¹⁸ and for facilities with stationary diesel engines.¹⁹ This does not apply to the proposed Project as it would not include such facilities. SCAQMD also recommends an HRA analysis where new sensitive land uses are sited near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).²⁰ In accordance with this recommendation, an HRA (see Appendix B to the SCEA) was prepared to evaluate the potential for increased health risks to future residents of the proposed Project resulting from exposure to diesel particulate matter (DPM) emissions generated by vehicles on the SR-134 and the on-ramp from Brand Boulevard (See SCEA Table 5.3-5). The HRA shows the excess cancer risk and chronic hazard indices for future residents of the proposed Project based on proximity to a TAC source, the SR-134.²¹ The building façades facing towards SR-134 freeway and the on-ramp from Brand Boulevard would be closest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road. The cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project site. The maximally exposed individual receptor (MEIR) is represented by the proposed use located closest to the nearest travel lane.

As shown in Table 5.3-5, the maximum cancer risk at the Project site from DPM emissions generated by diesel-vehicle travel along SR-134 for residents and workers is 1.06 in one million and 7.55 in one hundred million, respectively.²² The cancer risk for residents at the Project site would not exceed SCAQMD's suggested significance criteria of 10 per one million. Additionally, the maximum non-cancer hazard indices for the proposed Project's residents and workers are 0.01 for the MEIR receptors, below the significance criterion of 1.

¹⁸ SCAQMD, Mobile Source Toxics Analysis, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>. Accessed May 2022.

¹⁹ SCAQMD, Estimating Overall Facility Risks, <https://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/iws-facilities/dice/estimating-overall-facility-risks>. June 2022.

²⁰ SCAQMD, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005, accessed April 2021, <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>

²¹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-28. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

²² City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-28. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

The comment also states the SCEA should have analyzed health risks from the approximately 1,198 daily vehicle trips the proposed Project would generate. The SCEA's air quality analysis does account for the vehicle trips associated with the proposed Project. As shown in the CalEEMod output sheets for the proposed Project, the modeling assumes and analyzes more than the 1,198 weekday daily trips that will be generated by the proposed Project. As shown in Table 5.13-2 of the SCEA, emissions generated during operation of the proposed Project would still result in emission levels below SCAQMD thresholds for criteria pollutants including PM10 and PM2.5 even with analysis of a greater number of trips than will be generated by the proposed Project. SCAQMD's technical guidance for mobile health risk assessments addresses the analysis of potential cancer risks from diesel particulate emissions from truck idling and movement (such as, but not limited to, truck stops, warehouse and distribution centers, or transit centers), ship hoteling at ports, and train idling.²³ None of these activities or conditions apply to the proposed Project. Therefore, since the proposed Project does not trigger imposition of SCAQMD's criteria for analyzing mobile health risks, and proposed Project emissions would be below SCAQMD thresholds, a health risk assessment for the proposed Project's mobile emissions is not warranted.

SWAPE's claim that the SCEA does not include a quantified construction or operational health risk analysis is unfounded.

Response to Comment 1-9

First, this comment refers to information provided in an MND. The proposed Project was analyzed using a SCEA not an MND. As discussed previously, this comment letter attaches a paper prepared by SWAPE as Exhibit B. SWAPE estimates air emissions for the Project using the CalEEMod air emissions model, but altered the construction schedule compared to the SCEA, all the while claiming it has included "more site-specific information and correct input parameters," but the comment does not provide any basis for the alterations it uses. As discussed in Response to Comment 1-7, the proposed construction schedule for the Project was provided by the Project applicant and reflects the anticipated duration of each phase of construction based on the characteristics of the Project. SWAPE's CalEEMod analysis does not rely on Project-specific information and the results, therefore, are not an accurate representation of the proposed Project.

Additionally, SWAPE provided an HRA analysis using the AERSCREEN model. The purpose of the AERSCREEN model is to screen for the possibility of a potential impact, whereas AERMOD is the dispersion

²³ SCAQMD, Air Quality Analysis Handbook, Mobile Source Toxics Analysis, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>.

model suitable for use in preparing an HRA.²⁴ A number of points need to be made regarding such a modeling approach.

First, there are issues regarding the conservative nature of the model itself. The AERSCREEN model is widely acknowledged (including by the US EPA) as being overly conservative.²⁵ AERSCREEN does not account for spatial relation, geography, or local meteorology. It looks at a hypothetical sensitive receptor and assesses impacts as if that receptor is downwind of the source. Rather than being precise about source and receptor locations (both of which are critical in assessing real potential impact), it simply takes the worst-case emissions information (regardless of where it would be generated on site and whether it would move over time) and assume that there is a receptor within 75 meters, regardless of whether airflow actually goes in that direction. AERSCREEN, therefore, may be helpful as an initial screening exercise. In this case, there are sensitive receptors within 75 meters of the Project site, but they are not downwind. As shown in windrose data available on SCAQMD's website,²⁶ wind in the area primarily blows north and west. The nearest air quality sensitive receptors are east of the Project site. For these reasons, the AERSCREEN run completed in support of the comment overestimates the potential concentration of TACs and, therefore, the corresponding health risk values.

Furthermore, though OEHHA's guidance recommends evaluation of short-term projects, that guidance supports HRAs written for the purpose of AB 2588 inventories and focuses on stationary sources associated with facilities such as automobile body shops, gasoline service stations, power plants, or treatment facilities. Any given construction activity resulting in emissions would occur on a given portion of the 1.46-acre site for a relatively short duration. For instance, a grader may be operating within 100 meters to the closest receptor on a given day, but the next it could be on the other side of the site. This is not a stationary source.

OEHHA's guidance recognizes that "The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste remediation." The analysis contained within the SCEA and the Air Quality and Greenhouse Gas Study are not intended to support permitting decisions by the local air district.

There are also issues associated with the information SWAPE entered into the AERSCREEN model. For instance, the screening modeling undertaken by SWAPE modeled both on- and off-site exhaust PM10 emissions as occurring on-site. This has the effect of overestimating on site emissions that would occur

²⁴ SCAQMD, South Coast AQMD Modeling Guidance for AERMOD, <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>.

²⁵ United States Environmental Protection Agency, AERSCREEN User's Guide, April 2021.

²⁶ SCAQMD, AERMOD Table 1: Meteorological Stations & Years of Meteorological Data Available, <http://www.aqmd.gov/home/air-quality/meteorological-data/aermod-table-1>.

on site and would therefore result in increased concentrations at the downwind sensitive receptor. Not only do the off-site PM10 exhaust emissions not emanate from the site and occur farther away from the site itself, and therefore the receptors in question, the analysis also characterizes all exhaust PM10 emissions as being emitted from diesel vehicles. This is inaccurate in terms of vehicular mix because all of the construction-period PM10 would not stem from diesel fuel burning sources. Specifically, PM10 estimates include fugitive dust from soil hauling, bulldozing, and truck loading, in addition to equipment exhaust.²⁷ It is clear that SWAPE's input data is inaccurate and therefore analysis inappropriately overestimates DPM emissions. These input errors in the comment letter result in model output that is not accurate and is inapplicable to the proposed Project.

Response to Comment 1-10

This comment concludes the letter and reiterates the position taken in the letter that the SCEA did not require all feasible mitigation measures from the 2020-2045 RTP/SCS Program EIR and does not identify or mitigate the proposed Project's air quality impacts to a less than significant level. As shown in Responses to Comments 1-1 through 1-10, the SCEA does not need to be revised and the Air Quality analysis in the SCEA is sufficient and adequately discloses the potential impacts of the proposed Project.

Response to Comment 1-11

The comment provides general background information on indoor air quality. No response is warranted.

Response to Comment 1-12

This comment alleges indoor formaldehyde will result in a significant air quality impact that was not analyzed. The 14-year old California New Home Study (CNHS) referenced was prepared by the commenter, and the conclusions on potential formaldehyde exposure are based on outdated data on construction materials. The 2016-18 CNHS referenced presents assumptions about the measurement of formaldehyde levels in single family homes, but does not provide any reference supporting its contention that indoor concentrations were not adequately measured. This comment recognizes that the Project would be built with CARB compliant composite wood products, assumes continuous occupancy, and on that basis, concludes cancer risks would be elevated. The commenter assumes, without presenting any evidence, that the resins used in construction materials that will be used in the Project will be formaldehyde laden resins. Moreover, the commenter also assumes, again without any evidence, that the Project developer will furnish the apartments, and on that basis concludes the SCEA is inadequate. Please see Response to Comment 1-6 for additional discussion of indoor formaldehyde.

²⁷ CalEEMod User Guide, Appendix A: Calculation Details for CalEEMod, <http://www.aqmd.gov/caleemod/user's-guide>. Accessed June 2022.

Response to Comment 1-13

The comment indicates that the proposed Project should include a mechanical supply of outdoor air ventilation to allow for a habitable interior environment with closed windows and doors. This conclusion is based on faulty premises. First, the commenter's conclusions are based on studies of single family homes and the Project is a multi-family high-rise residential rental project, thus it is not comparable for this reason. The comment bases its conclusions on a 2007 study of behaviors of single family home owners with respect to opening windows; this high rise Project does not present the same concerns for keeping windows closed due to safety/security, noise, dust and odor that are concerns for single family residential home owners. Based on this faulty premise, the commenter concludes there will be a "low outdoor air exchange" rate, but this conclusion is not based on consideration of the characteristics of the Project. The commenter concludes, without evidence, that the Project is a "sound impacted" site because of its proximity to roadways. See Response to Comment 1-6 for additional discussion of indoor formaldehyde. The proposed Project would comply with the most recent 2019 California Green Building Standards Code which requires heating/ventilating/air conditioning (HVAC) systems which would provide code compliant ventilation to the proposed building.

Response to Comment 1-14

The comment states that residents of the Project site would incur health effects associated with exposure to dangerous levels of PM2.5, for which the South Coast Air Basin is in nonattainment for the California ambient air quality standards (CAAQS). However, as held by the California Supreme Court (Court) in the *California Building Industry Association v. BAAQMD*, (2015) 62 Cal.4th 369, CEQA reviews the impacts of a project on the environment rather than the effects of the environment on the residents or users of a project. The Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment – and not the environment's impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions." *Id.* at 392.

As directed by the Court, the potential environmental impact of a project on the existing environment would only need to be analyzed if the Project would exacerbate an existing adverse condition. The comment asserts that the SCEA should have evaluated the health impacts of existing environmental PM2.5 to residents of the Project site.

The SCEA does, however, evaluate the Project's PM2.5 emissions in Table 5.3-3 and Table 5.3-4, and determined, based on this analysis, that localized emissions of PM2.5 generated by the proposed Project

would be below the SCAQMD localized significance thresholds (LSTs).²⁸ The Project would not, therefore, exacerbate the existing concentrations of PM 2.5 and no further analysis of the effect of the proposed Project on existing PM 2.5 levels is required.

Contrary to the commenter's belief, an HRA was conducted for the proposed Project and is included in Appendix B of the SCEA. The HRA evaluated the potential for increased health risks to future residents of the proposed Project, specifically health risks resulting from exposure to diesel exhaust emissions (a TAC) generated by vehicles on the SR-134 and the on-ramp from Brand Boulevard. Table 5.3-5 from the SCEA shows the estimated range of excess cancer risk and chronic hazard indices for future residents of the proposed Project.²⁹ The building façades facing towards SR-134 freeway. The on-ramp from Brand Boulevard would be nearest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road. The cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project site. The maximally exposed individual receptor (MEIR) is represented by the proposed use located closest from the nearest travel lane.

As shown in Table 5.3-5, the maximum cancer risk at the Project site from DPM emissions generated by diesel-vehicle travel along SR-134 for residents and workers are 1.06 in one million and 7.55 in one hundred million, respectively.³⁰ The cancer risk for residents at the site would not exceed SCAQMD's suggested significance criteria of 10 per one million. Additionally, the maximum non-cancer hazard indices for the proposed Project's residents and workers are 0.01 for the MEIR receptors, below the significance criterion of 1.

No further analysis is required regarding the effects of the environment on future residents of the Project.

Response to Comment 1-15

This comment recommends indoor formaldehyde, outdoor air ventilation, and PM2.5 outdoor air mitigation measures. Please see Response to Comment 1-6 and 1-12.

Response to Comment 1-16

²⁸ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-27. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

²⁹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-28. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

³⁰ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-28. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

The comment asserts the SCEA does not adequately evaluate hazards and hazardous materials, health risk, and greenhouse gas impacts and, therefore, an EIR should be prepared. As discussed in Responses to Comments 1-4 through 1-9, 1-7, and 1-24 through 1-27, the SCEA does not need to be revised and the analysis in the SCEA of potential hazards and hazardous materials, air quality, greenhouse gas emissions, and health risk impacts is adequate. The Project will not result in significant impacts that require the preparation of an EIR as asserted in this comment.

Response to Comment 1-17

This comment states a Phase I Environmental Site Assessment (ESA) was not prepared. The comment asserts a Phase I ESA is routinely undertaken in the preparation of CEQA documents and is necessary for inclusion in an EIR. While information from a Phase I ESA may be incorporated into an environmental review document if one has been prepared, preparation of a Phase I ESA is not required by CEQA. The Environmental Checklist Form included in Appendix G to the CEQA Guidelines asks if a project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? Gov. Code Sec 65962.5 refers to the “Cortese List” database maintained by the California Environmental Protection Agency.

Additionally, the appropriate CEQA documentation prepared for the proposed Project is an SCEA and not an EIR because, with mitigation, the Project will not result in significant impacts. The SCEA analyzed hazards and hazardous materials impacts of the proposed Project using the thresholds in the CEQA Guidelines, specifically determining if the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. A geographical search for hazardous materials sites, as defined in Government Code Section 66962.5, was conducted based on a review of these databases. The Project site is not located on a list of hazardous materials sites compiled pursuant to Section 65962.5.³¹

Construction of the proposed Project would involve the routine handling of small quantities of hazardous or potentially hazardous materials, such as gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles on the Project site. The proposed Project generally would not produce significant amounts of hazardous waste, nor use or transport hazardous waste beyond those materials typically used in a residential development. Hazardous waste and materials transported, used, and stored would be conducted in accordance with applicable

³¹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Pages 3-93. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

State and federal laws during construction and operation of the proposed Project. The SCEA determined the proposed Project would result in less than significant impacts to hazards and hazardous materials. No further analysis is warranted.

Response to Comment 1-18

The comment outlines the capabilities of CalEEMod, specifically regarding default model values and the user's ability to override default values as long as they are justified by substantial evidence. The comment claims that the proposed Project's CalEEMod analysis is not consistent with information disclosed in the SCEA. Specific concerns regarding the CalEEMod analysis are addressed in Responses to Comment 1-19 and 1-20.

Response to Comment 1-19 and 1-20

This comment claims that several default values were changed without any substantiation and alleges the evaluation incorrectly utilized area and architectural coating mitigation for operational emissions. As the commenter notes, the Project is divided into four phases of construction for purposes of analysis. These, are typical construction phases defined by the construction contractor, and constitute substantial evidence of what will occur on the site during demolition and construction of the proposed Project. The commenter does not identify what additional information is required, or why defining and describing the four construction phases is "insufficient," or why definition of the typical construction phases is not justification for the model adjustments. The commenter's own criticism in Comment 1-20 illustrate that the time frames for the construction phases are verifiable, e.g. demolition- 23 days, grading -76 days (this project includes subterranean parking as set forth in the Project description), 662 days for construction, 380 days for application of architectural coatings, and 66 days for paving, all of which are appropriate time frames based on the construction contractors reasonable estimates for a Project of this size, and the Commenter has not shown why these time frames are not reasonable or justified. Please also see Response to Comment 1-7.

Response to Comment 1-21

This comment claims that several default values were changed without any substantiation for changing these default values and underestimated emissions calculated from CalEEMod. The Commenter does not explain why compliance with regulatory standards does not substantiate assuming low VOC paints will be used as the Project in order to comply with specific laws or regulations. As the court explained in *Oakland Heritage Alliance v City of Oakland* (2011) 195 CA4th 884, 906, "a condition requiring compliance with regulations is a common and reasonable mitigation measure and may be proper where it is reasonable to expect compliance." The court upheld the city's reliance on standards in the building code and city building

ordinances to mitigate seismic impacts. The Guidelines specify that reliance on compliance with a regulatory permit or similar process is sufficient mitigation if compliance with such standards can be reasonably expected, based on substantial evidence, to reduce the impact to the specified performance standard. 14 Cal Code Regs §15126.4(a)(1).

The commenter presumes, without evidence, that the Project will not comply with regulatory standards and on that basis cites to the AEP CEQA Portal Paper (which does not represent binding law and is legally disclaimed (p. 10-11). There is no law requiring mitigation measures to go “above and beyond” existing regulatory requirements where there is no evidence of significant impacts in the first instance. There is no reason to expect the Project would not comply with SCAQMD Rules 1113, and the commenter has provided none. Please also see Responses to Comments 1-7, 1-19, and 1-20

Response to Comment 1-22

This comment claims the updated CalEEMod model prepared for the comment letter estimates the Project’s construction-related VOC emissions exceed the applicable SQACMD threshold, resulting in a potentially significant air quality impact. However, the model the commenter prepared fails to disclose the parameters it used for creating an AQ model run that results in the Project generating a significant air quality impact, and on that basis has not shown that the SCEA air quality analysis is inadequate or wrong in any way, and does not provide any substantial evidence of an air quality impact. Please also see Response to Comment 1-9.

Response to Comment 1-23

This comment claims the SCEA fails to mention TAC emissions associated with proposed Project operation and, as such, the evaluation of the proposed Project’s potential health risk impacts is incorrect. Please also see Response to Comment 1-8 and 1-9.

Response to Comment 1-24

This comment discusses the screening-level analysis conducted in the comment letter that incorrectly indicates a potentially significant health risk impact. Please also see Responses to Comments 1-8 and 1-9.

Response to Comment 1-25

This comment incorrectly states the analysis of the greenhouse gas impacts in the SCEA is inadequate. Please also see Responses to Comments 1-4, 1-7, and 1-26.

Response to Comment 1-26

This comment claims the quantitative GHG analysis in the SCEA and Air Quality and Greenhouse Gas Study is unsubstantiated and underestimates emissions. Please also see Responses to Comments 1-4 and 1-7.

Response to Comment 1-27

This comment utilized SCAQMD's 2035 service population efficiency target of 3.0 MTCO₂e per year as a GHG threshold. This is not an applicable threshold because it has not been adopted by SCAQMD. There are no federal, State, or local quantitative adopted thresholds of significance for addressing a project's GHG emissions. As such, the SCEA correctly quantified GHG emissions for the proposed Project and, in the absence of any adopted numeric threshold, then evaluated the significance of these emissions by considering whether the proposed Project conflicts with applicable regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction of mitigation of greenhouse gas emissions. This approach is consistent with CEQA Guidelines section 15064.4(b)(2) and GHG threshold 5.8(b). As discussed in CEQA Guidelines section 15064.4(a),

The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Quantify greenhouse gas emissions resulting from a project; and/or

(2) Rely on a qualitative analysis or performance based standards.³²

Specifically, the SCEA assessed the proposed Project's conformity with regional and local GHG reduction plans including SCAG's 2020-2045 RTP/SCS, the City's Greener Glendale Plan, and the City's South Glendale Community Plan EIR. The SCEA found that the proposed Project would not conflict with these plans and would, therefore, not result in a significant GHG impact.

Response to Comment 1-28

The comment states design features should be included as mitigation measures. As discussed in Response to Comment 1-4 through 1-9, 1-7, and 1-24 through 1-27, the SCEA does not need to be revised and the proposed Project's analysis of potential hazards and hazardous materials, air quality, and health risk impacts is sufficient. As such, further mitigation measures are not warranted.

³² CEQA Guidelines Section 15064.4(a). Available at: https://www.califaep.org/docs/2022_CEQA_Statute_and_Guidelines.pdf. Accessed June 2022.

Response to Comment 1-29

The comment includes a disclaimer on the analysis conducted by SWAPE. No response is warranted.

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Re: **Comments on the Sustainable Communities Environmental
Assessment – Lucia Park Project (Case Nos. PDR 2119308,
PDA1806045) (SCH: 2022010297)**

Dear Ms. Zemaitaitis and Mr. Lanzafame:

We are writing on behalf of Coalition for Responsible Equitable Economic Development Los Angeles (“CREED LA”) to provide comments to the City of Glendale (“City”) on the Sustainable Communities Environmental Assessment¹ (“SCEA”) prepared for the Lucia Park Project, Case Nos. PDR 2119308, PDA1806045, SCH 2022010297 (“Project”) pursuant to the California Environmental Quality Act (“CEQA”)² proposed by Cimmarusti Holdings, LLC (“Applicant”).

The Project proposes the demolition of the existing parking structure and two-story commercial building fronting Maryland Place located at 625 N. Maryland Avenue and construction of a new 294-unit, 24-story multi-family residential building on a 63,760 SF (1.48 acre) project site zoned DSP Gateway District. The Project will be located at 620 North Brand Blvd and 625 North Maryland Avenue in Glendale, adjacent to State Route 134 (“SR 134”). The proposed Floor Area Ratio

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¹ City of Glendale, Draft Sustainable Communities Environmental Assessment for The Lucia Park Project (January 2022) available at <https://ceqanet.opr.ca.gov/2022010297>

² Pub. Resources Code (“PRC”) §§ 21000 *et seq.*
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(“FAR”) is 7.25 and the building height is 266 feet. The Project includes 373 subterranean parking spaces for the residential use and 129 above-ground, replacement parking spaces for the existing commercial bank building, as well as a publicly accessible open space plaza fronting Brand Boulevard and residential amenity spaces throughout the project. No changes are proposed to the existing commercial bank building at 620 N. Brand Boulevard. The building was identified as a potential historic resource in the 2019 South Glendale Historic Resources Survey and is therefore considered a historic resource under CEQA. The Applicant has also requested a Development Agreement to secure a six-year entitlement period for the project and to lock in the current Development Impact Fees.

2-1

The proposed Project requires discretionary approval of Design Review pursuant to Glendale Municipal Code (“GMC”) Chapter 30.47, and a Development Agreement.

I. INTRODUCTION

The SCEA prepared for the Project is significantly flawed and does not comply with the requirements of CEQA. Moreover, the City lacks substantial evidence to support the City’s conclusion that the Project will result in less than significant impacts. In addition, substantial evidence shows that the Project would result in significant impacts on air quality, public health, and noise. The City may not approve the Project until the City prepares a sustainable communities environmental impact report (“SCEIR”) that adequately analyzes the Project’s significant and potentially significant impacts and incorporates all feasible mitigation measures to reduce those impacts to less than significant levels.

2-2

We prepared these comments with the assistance of air quality expert James Clark. Ph.D., and noise expert Derek Watry. Dr. Clark and Mr. Watry’s technical comments and curriculum vitae are attached hereto as Exhibit A³ and Exhibit B⁴ respectively and are fully incorporated herein.

³ **Exhibit A** Dr. James Clark, Comments on Draft Sustainable Communities Environmental Assessment (SCEA) For Stage II Final Design Review Case No. PDR 2119308, Development Agreement Case No. PDA1806045 (March 3, 2022).

⁴ **Exhibit B** Derek Watry, Lucia Park Project Glendale, California Review and Comment on SCEA Noise Analysis (March 2, 2022).

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We urge the City to reject the SCEA and direct staff to prepare an SCEIR to evaluate the Project's unmitigated, significant and potentially significant impacts.

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II. STATEMENT OF INTEREST

CREED LA is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental and public service impacts of the Project. The coalition includes the Sheet Metal Workers Local 105, International Brotherhood of Electrical Workers Local 11, Southern California Pipe Trades District Council 16, and District Council of Iron Workers of the State of California, along with their members, their families, and other individuals who live and work in the City of Glendale.

Individual members of CREED LA and its member organizations include City of Glendale residents Bryan Gonzalez, Jose Carmen Cortez, Daniel Torres, Loren Brown, and Axel Brutz. These individuals live, work, recreate, and raise their families in the City of Glendale and surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist onsite.

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In addition, CREED LA has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

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III. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report (“EIR”) (except in certain limited circumstances).⁵ The EIR is the very heart of CEQA.⁶ “The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.”⁷

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.⁸ “Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR “protects not only the environment but also informed self-government.”⁹ The EIR has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.”¹⁰

2-4

Second, CEQA requires public agencies to avoid or reduce environmental damage when “feasible” by requiring “environmentally superior” alternatives and all feasible mitigation measures.¹¹ The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.”¹² If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.”¹³

⁵ See, e.g., CEQA § 21100.

⁶ *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.

⁷ *Comtys. for a Better Env’ v. Cal. Res. Agency* (2002) 103 Cal. App.4th 98, 109 (“*CBE v. CRA*”).

⁸ 14 CCR § 15002(a)(1).

⁹ *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.

¹⁰ *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm’rs.* (2001) 91 Cal. App. 4th 1344, 1354 (“*Berkeley Jets*”); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

¹¹ 14 CCR § 15002(a)(2) and (3); see also *Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at 564.

¹² 14 CCR § 15002(a)(2).

¹³ CEQA § 21081; 14 CCR § 15092(b)(2)(A) & (B).

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A Transit Priority Project (“TPP”) is a type of CEQA project that was created by Senate Bill 375. CEQA Section 21155 sets forth the requirements for a project to qualify as a TPP, including consistency with the general use designations, density, building intensity, and applicable policies specified for the project area in an approved Sustainable Communities Strategy, as well as minimum density and residential requirements and proximity to a major transit stop or transit corridor.¹⁴

A TPP may be reviewed using a Sustainable Communities Environmental Assessment (“SCEA”) or a Sustainable Communities Environmental Impact Report (“SCEIR”), two forms of CEQA documents that were established by SB 375.¹⁵ The goal of this streamlined review is not to undercut or circumvent CEQA’s requirements, but to provide incentives for TPPs that are consistent with a larger effort to reduce greenhouse gas emissions by providing a streamlined channel for such projects. Thus, the SCEA or SCEIR must comply with CEQA’s informational goal, as well as with CEQA’s goal to reduce or avoid adverse environmental impacts when feasible.

2-4

An SCEA must include:

1. An Initial Study that:
 - a. identifies all significant or potentially significant impacts of the TPP, except those not required for review under 21159.28¹⁶
 - b. Identifies any cumulative effects that have been adequately addressed and mitigated in prior applicable and certified EIRs;
2. Measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project¹⁷

The SCEA must be circulated for a 30-day notice and comment period, and notice must be provided as required for an EIR, pursuant to Public Resources Section 21092.¹⁸ The lead agency must consider all comments received,¹⁹ and can

¹⁴ CEQA § 21155(a).

¹⁵ CEQA §§ 21155.2, 21155.3.

¹⁶ *Id.* Pursuant to Pub. Resources Code, section 21159.28, the SCEA need not analyze (1) growth inducing impacts or (2) any specific or cumulative impacts from cars and light duty truck trips generated by the project on global warming or the regional transportation network.

¹⁷ Pub. Resources Code, § 21155.2 (b).

¹⁸ *Id.*; Pub. Resources Code, section 21092 also requires that all materials referred to or relied upon in the environmental review document be made available for the full public comment period.

¹⁹ *Id.*

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only approve the SCEA after holding a public hearing, and finding that all potentially significant impacts have been identified and analyzed, and mitigation measures have been implemented to reduce the Project's significant effects to a level of insignificance.²⁰ The lead agency's decision will be reviewed under the substantial evidence standard.²¹

The lead agency shall conduct the public hearing, or a planning commission may conduct the public hearing, if local ordinances permit direct appeal of the Planning Commission's decision for a fee of \$500.00 or less.²²

Here, the City must make the following findings in order to determine that the Project complies with the requirements of CEQA for using an SCEA pursuant to PRC Section 21155.2(b):

1. The proposed Project is consistent with the general use designations, density, building intensity, and applicable policies specified for the project area in the Regional Transportation Plan/Sustainable Communities Strategy ("RTP/SCS") prepared by the Southern California Association of Governments ("SCAG");
2. The State Air Resources Board, pursuant to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted SCAG's determination that the sustainable communities strategy adopted by SCAG in the 2020–2045 RTP/SCS would, if implemented, achieve the greenhouse gas emission reduction targets;
3. The proposed Project qualifies as a transit priority project pursuant to PRC Section 21155(b);
4. The proposed Project is a residential or mixed-use project as defined by PRC Section 21159.28(d);

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²⁰ Pub. Resources Code, § 21152.2(b)(5).

²¹ Pub. Resources Code, § 21155.2(b)(7); *see also Sacramento for Fair Planning v. City of Sacramento* (2019) 37 Cal. App. 5th 698, 722.

²² Pub. Res. Code, § 21155.2(b)(6).

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5. The proposed Project incorporates all relevant and feasible mitigation measures, performance standards, or criteria set forth in prior environmental reports, including the RTP/SCS Program Environmental Impact Report;

6. All potentially significant or significant effects required to be identified and analyzed pursuant to CEQA have been identified and analyzed in an initial study; and

7. The proposed Project, as mitigated, either *avoids or mitigates to a level of insignificance all potentially significant or significant effects of the proposed Project required to be analyzed pursuant to CEQA*.²³

2-4

The City is not excused from analyzing the air quality, public health, and noise impacts of the Project by relying on an SCEA. While Section 21155 allows a lead agency to exclude analysis of the Project's GHG and transportation cumulative impacts, the Project's other impacts must undergo a full analysis, and the SCEA must identify and analyze all potentially significant impacts from the Project and implement mitigation to reduce impacts to less than significant levels. In this case, the City failed to conduct a proper analysis of the Project's noise, air quality, and public health impacts. Furthermore, the SCEA fails to mitigate the significant effects of the Project rendering the SCEA incomplete.

IV. THE SCEA FAILS TO ANALYZE AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS

An SCEA must fully disclose all potentially significant impacts of a Project and implement all feasible mitigation to reduce those impacts to less than significant levels. The lead agency's significance determination with regard to each impact must be supported by accurate scientific and factual data.²⁴ An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.²⁵

2-5

Moreover, the failure to provide information required by CEQA is a failure to proceed in the manner required by CEQA.²⁶ Challenges to an agency's failure to

²³ Pub. Resources Code § 21155.2(b) (emphasis added).

²⁴ 14 CCR § 15064(b).

²⁵ *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.

²⁶ *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
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proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.²⁷ In reviewing challenges to an agency's approval of an environmental document based on a lack of substantial evidence, the court will 'determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements.'²⁸

2-5

Even when the substantial evidence standard is applicable to agency decisions to certify an environmental document and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'²⁹

A. The City Failed to Provide Access to Documents Relied Upon in the SCEA

Despite multiple written requests, the City declined to provide CREED LA with the unlocked air quality analysis modeling files used to perform the Project's Health Risk Assessment ("HRA"), including the American Meteorological Society/Environmental Protection Agency Regulator Model ("AERMOD") files. This is a violation of CEQA's requirement that all documents referenced or relied upon in an SCEA be made available for public review during the CEQA public comment period.³⁰

2-6

CREED LA submitted several letters during the public comment period requesting the production of the AERMOD input files, so that Dr. Clark could review the accuracy of the air modeling for the Project.³¹ The City expressly

²⁷ *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.

²⁸ *Id.*, *Madera Oversight Coal., Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102.

²⁹ *Berkeley Jets*, 91 Cal.App.4th at 1355.

³⁰ PRC §§ 21092(b)(1), 21155.2(b)(3).

³¹ Letter from ABJC, Request for Immediate Access to Documents Referenced in the Sustainable Communities Environmental Assessment – Lucia Park Project (Case Nos. PDR 2119308, PDA1806045) (January 3, 2022); Letter from ABJC, Request for Extension of CEQA Review Period for the Sustainable Communities Environmental Assessment – Lucia Park Project (Case Nos. PDR 2119308, PDA1806045) (February 8, 2022); letter from ABJC, Second Request for Immediate Access 6000-006j

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declined to provide access to the unlocked emissions files, based on an assertion that the citations and assumptions used in the SCEA's air modeling calculations were provided in a manner that allows review and evaluation by a technical practitioner.³² This is incorrect. Without access to the input files, Dr. Clark was forced to recreate the City's HRA modeling based on the scattered information provided in Appendix B, as described below.

The City's failure to provide access to the SCEA's air pollution emissions modeling files violates CEQA. A CEQA document may not rely on missing information because it "must contain facts and analysis, not just the bare conclusions of a public agency."³³ Documents held by the lead agency, as well as by its outside consultant, are treated as being in the agency's possession and are required to be disclosed in response to record request and included in the CEQA record for a project if the agency relies on the studies to support the project's CEQA review.³⁴ In such instances, the agency is deemed to have direct or constructive possession of that evidence.³⁵ In this case, the CalEEMod input files relied on in SCEA Appendix A and the unlocked AERMOD input files relied on in SCEA Appendix B are used to support the SCEA's significance conclusions regarding the Project's air quality and public health impacts. The City therefore has a duty to produce these files to CREED LA and any other requesting members of the public, as part of the CEQA public review period on the SCEA.

2-6

B. The SCEA's Health Risk Analysis Is Inaccurate, Out-of-Date, and Unsupported

Dr. Clark reviewed the modeling assumptions used in SCEA Appendix B, and concludes that the City's modeling suffers from major flaws which render its significance conclusions unsupported.

2-7

to Project Emissions Data for Sustainable Communities Environmental Assessment – Lucia Park Project (Case Nos. PDR 2119308, PDA1806045) (February 16, 2022).

³² **Exhibit C:** Email from City of Glendale, Response to Re: Second Request for Immediate Access to Project Emissions Data for Sustainable Communities Environmental Assessment (February 18, 2022)

³³ *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831.

³⁴ *Consolidated Irrig. Dist. v. Superior Court* (2012) 205 Cal.App.4th 697, 710; *See also City of San Jose v Superior Court* (2017) 2 Cal.App.5th 608, 623.

³⁵ *Id.*

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As a preliminary matter, Dr. Clark notes in his comments that, according to Appendix B, the air dispersion modeling was conducted using AERMOD version 10.0.1.³⁶ According to the July 2021 AERMOD Implementation Guide from U.S. EPA is the current version of AERMOD is version 21112.³⁷ Dr. Clark explains that the modeling software utilized by the City is more than a decade old and lacks modeling capability for many relevant emissions factors. For example, Dr. Clark explains that the software lacks the capability to import background concentrations, calculate hourly emissions using multi-year assessments, or process large postfiles.³⁸ Dr. Clark suggests that the City may be referring to version 10.0.1 of the graphical user interface used to run AERMOD.³⁹ Even if true, Dr. Clark explains that that version 10.0.1 does not correct the SCEA's modeling errors, and demonstrates a lack of understanding of the modeling program.

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Despite the City's clear misunderstanding of the AERMOD program, Dr. Clark was able to independently identify the geographic location of all of the sources included in the mobile source dispersion model.⁴⁰ The sources are shown below as red volume boxes in the figure below.

³⁶ SCEA, Appendix B, p. 18.

³⁷ U.S. EPA. 2021. AERMOD Implementation Guide. Dated July, 2021. Pg. 1.
https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_implementation_guide.pdf

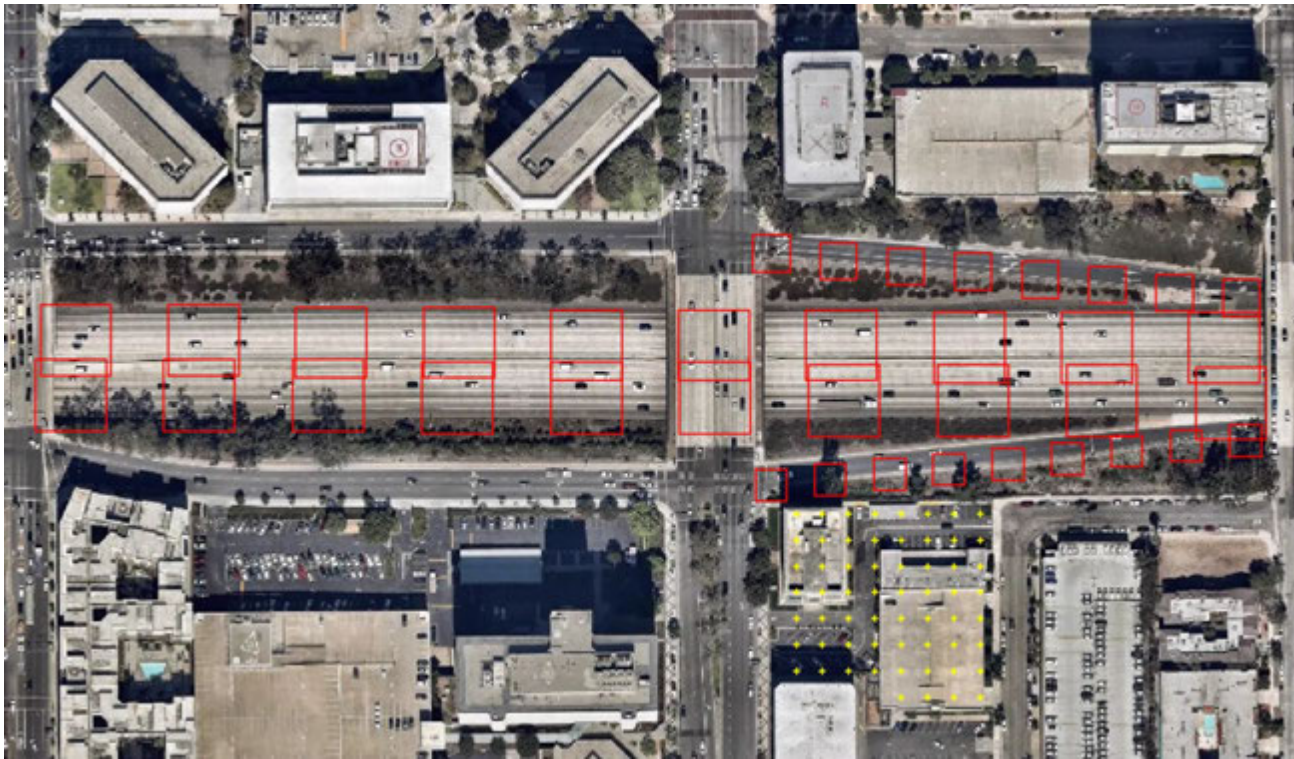
³⁸ Clark Comments, p. 2.

³⁹ Clark Comments, p. 3.

⁴⁰ Clark Comments, p. 3.

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Dr. Clark explains that the yellow crosses indicate the receptors at ground-level across the project site.⁴¹ According to Appendix B, diesel vehicle traffic was modeled as a line source comprised of separate volume sources along the stretch of SR-134.⁴² Ten sources are identified on the east bound lanes of State Route 134.⁴³

ID	X	Y	CO (1-
EB SR-134			
L0000782	384059.9	3780196	1
L0000783	384109	3780196	1
L0000784	384158.2	3780196	1
L0000785	384207.3	3780195	1
L0000786	384256.5	3780195	1
L0000787	384305.6	3780195	1
L0000788	384354.7	3780194	1
L0000789	384403.9	3780194	1
L0000790	384453	3780194	1
L0000791	384502.2	3780193	1

Ten sources are identified on the west bound lanes of State Route 134.⁴⁴

⁴¹ Clark Comments, p. 3.

⁴² SCEA, Appendix B, p. 18.

⁴³ Clark Comments, p. 3.

⁴⁴ Clark Comments, p. 3

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WB SR-134			
L0000772	384499.7	3780214	1
L0000773	384451.1	3780214	1
L0000774	384402.4	3780214	1
L0000775	384353.8	3780215	1
L0000776	384305.1	3780215	1
L0000777	384256.5	3780215	1
L0000778	384207.9	3780216	1
L0000779	384159.2	3780216	1
L0000780	384110.6	3780217	1
L0000781	384061.9	3780217	1

Eight sources are identified from the off-ramp to Brand Avenue from west bound lanes of State Route 134.⁴⁵

Off-Ramp to Brand from WB SR-134			
L0001114	384506.2	3780233	4
L0001115	384480.7	3780235	4
L0001116	384455.1	3780238	4
L0001117	384429.5	3780240	4
L0001118	384403.9	3780243	4
L0001119	384378.3	3780245	4
L0001120	384352.7	3780247	4
L0001121	384327.1	3780250	4

Finally, eight sources are identified as using the on-ramp to east bound lanes of State Route 134.⁴⁶

On-Ramp to EB SR-134 from Brand			
L0001105	384326.9	3780162	1
L0001106	384349.5	3780164	1
L0001107	384372.1	3780166	1
L0001108	384394.7	3780168	1
L0001109	384417.3	3780170	1
L0001110	384439.9	3780172	1
L0001111	384462.5	3780175	1
L0001112	384485.1	3780177	1
L0001113	384507.7	3780179	1

Dr. Clark proceeded to use the diesel exhaust emissions parameters as detailed in Appendix B. When recreating the model using the City's data, Dr. Clark found that Appendix B describes the use of "digital elevation model (DEM) data for the Pasadena and Mount Wilson 7.5-minute quadrangles obtained through the

⁴⁵ Clark Comments, p. 4.

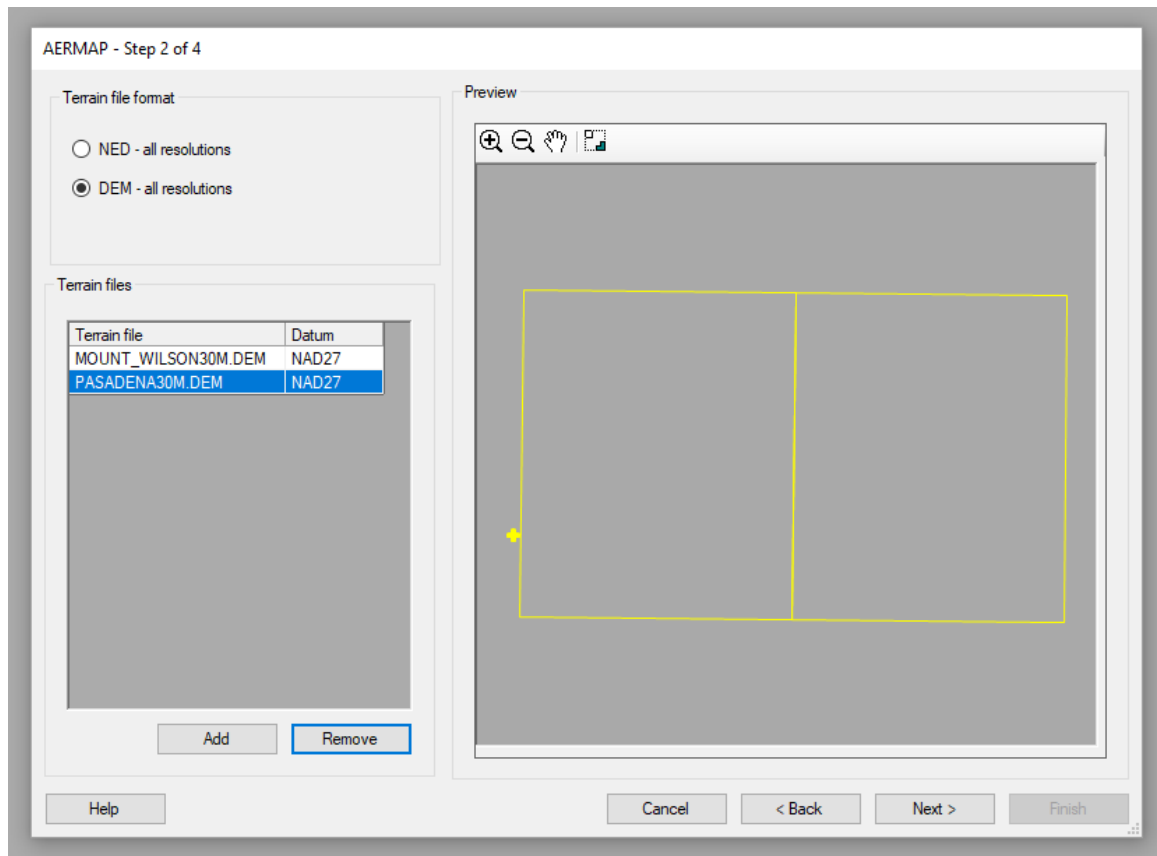
⁴⁶ Clark Comments, p. 4.
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AERMOD program.”⁴⁷ As Dr. Clark points out in his comments, AERMOD does not have a component that stores 7.5-minute quadrangles. Quadrangles can be obtained through the California Air Resources Board’s (“CARB”) HARP Digital Elevation Model Files.⁴⁸

Despite this error, Dr. Clark was able to download comparable Pasadena and Mt. Wilson DEMs and upload them to the AERMOD model. Upon uploading the DEMs, Dr. Clark found that neither of the DEMs were useful because no sources for the model were associated with either DEM rendering them useless for analysis of the Project.⁴⁹



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⁴⁷ Clark Comments, p. 5.

⁴⁸ Clark Comments, p. 5.

⁴⁹ Clark Comments, p. 5.

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Dr. Clark ultimately found that the only DEM required in the model is the Burbank DEM because no receptors are identified as being present in the Pasadena or Mt. Wilson DEMs.⁵⁰ The output from the re-analysis of the impacts from SR-134 are included in Exhibit B to Dr. Clark’s comment letter. As discussed below, Dr. Clark’s analysis demonstrates that the Project has significant health impacts.

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Finally, Appendix B to the SCEA’s Appendix B is labeled “AERMOD Output Sheets”.⁵¹ However, review of the appendix clearly shows that Appendix B to the Health Risk Assessment contains the Emission Inventory from the EMFAC2021 (v 1.0.1) analysis of the Los Angeles region. The City must correctly label the information in the report.

C. The SCEA Fails to Disclose, Analyze and Mitigate Potentially Significant Air Quality Impacts

The SCEA fails to disclose and analyze potentially significant impacts of the Project and does not implement all feasible mitigation to reduce those impacts to less than significant levels, in violation of CEQA. The SCEA concludes that no additional project-specific mitigation measures are necessary in order to reduce the Project’s air quality impacts.⁵² However, as detailed below, Dr. Clark found potentially significant air quality impacts that are not mitigated through incorporation of the proposed mitigation measures, performance standards, or criteria from prior applicable environmental impact reports including those required under SCAG 2020-2045 RTP/SCS Program EIR; South Glendale Community Plan EIR; and Downtown Specific Plan EIR.

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1. The SCEA Fails to Disclose and Analyze the Potentially Significant Health Risk from Exposure to Diesel Particulate Matter

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The City performed a Health Risk Assessment (“HRA”) to assess the impact of pollutants on individuals residing at the Project site resulting from exposure to diesel exhaust emissions generated by vehicles on the SR-134 and the on-ramp from Brand Boulevard adjacent to the Project site.⁵³ The HRA found that the Project

⁵⁰ Clark Comments, p. 5.

⁵¹ SCEA, Appendix B, p. 32.

⁵² SCEA, p. 5.0-40.

⁵³ SCEA, p. 5.0-28.

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would not result in a significant impact with mitigation as it would result in a maximally exposed individual receptor (“MEIR”) of 1.06 in 1,000,000 residents, and 7.55 in 100,000,000 workers.⁵⁴ Based on the City’s analysis, the SCEA concludes that the cancer risk for residents at the site would not exceed SCAQMD’s significance criteria of 10 per 1,000,000 million. However, in his review, Dr. Clark discovered that the City’s analysis failed to measure all the potential impacts of the Project and improperly found that the Project will result in a less than significant impact.

Using the input values from the City’s air model, Dr. Clark found that the health impacts to the future residents would be 19.9 in one million, in excess of the SCAQMD threshold of significance of 10 in one million, and substantially higher than the SCEA concludes.⁵⁵ Dr. Clark concludes that the impact remains significant, despite the mitigation measures described in the SCEA.⁵⁶

A lead agency’s significance determination must be supported by accurate scientific and factual data.⁵⁷ An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.⁵⁸ These standards apply to an SCEA’s analysis of the air quality impacts of a Project.

In *Sierra Club v. County of Fresno*, the California Supreme Court affirmed CEQA’s mandate to protect public health and safety by holding that an EIR fails as an informational document when it fails to disclose the public health impacts from air pollutants that would be generated by a development project.⁵⁹ In *Sierra Club*, the Supreme Court held that the EIR for the Friant Ranch Project—a 942-acre master-planned, mixed-use development with 2,500 senior residential units, 250,000 square feet of commercial space, and open space on former agricultural land in north central Fresno County—was deficient as a matter of law in its informational discussion of air quality impacts as they connect to adverse human

2-9

⁵⁴ *Ibid.*

⁵⁵ Clark Comments, pp. 7-8; SCAQMD, Air Quality Significance Thresholds (2019) <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

⁵⁶ Clark Comments, p. 8.

⁵⁷ 14 C.C.R. § 15064(b).

⁵⁸ *Kings County Farm Bureau*, 221 Cal.App.3d at 732.

⁵⁹ *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 518–522.
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health effects.⁶⁰ As the Court explained, “a sufficient discussion of significant impacts requires not merely a determination of whether an impact is significant, but some effort to explain the nature and magnitude of the impact.”⁶¹ The Court concluded that the County’s EIR was inadequate for failing to disclose the nature and extent of public health impacts caused by the project’s air pollution. The EIR failed to comply with CEQA because the public, after reading the EIR, “would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin.”⁶² CEQA mandates discussion, supported by substantial evidence, of the nature and magnitude of impacts of air pollution on public health.⁶³

In *Berkeley Jets*, the Court of Appeal held that an EIR must analyze the impacts from human exposure to toxic substances.⁶⁴ In that case, the Port of Oakland approved a development plan for the Oakland International Airport.⁶⁵ The EIR admitted that the Project would result in an increase in the release of TACs and adopted mitigation measures to reduce TAC emissions, but failed to quantify the severity of the Project’s impacts on human health.⁶⁶ The Court held that mitigation alone was insufficient, and that the Port had a duty to analyze the health risks associated with exposure to TACs.⁶⁷ As the CEQA Guidelines explain, “[t]he EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected.”⁶⁸

The failure to provide information required by CEQA makes meaningful assessment of potentially significant impacts impossible and is presumed to be prejudicial.⁶⁹ Challenges to an agency’s failure to proceed in the manner required

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⁶⁰ *Id.* at 507–508, 518–522.

⁶¹ *Id.* at 519, citing *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514–515.

⁶² *Id.* at 518. CEQA’s statutory scheme and legislative intent also include an express mandate that agencies analyze human health impacts and determine whether the “**environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.**” (Public Resources Code § 21083(b)(3) (emphasis added).) Moreover, CEQA directs agencies to “take immediate steps to identify any critical thresholds for the **health and safety of the people** of the state and take all coordinated actions necessary to prevent such thresholds being reached.” (Public Resources Code § 21000(d) (emphasis added).)

⁶³ *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 518–522.

⁶⁴ *Berkeley Jets*, 91 Cal.App.4th at 1369–1371.

⁶⁵ *Id.* at 1349–1350.

⁶⁶ *Id.* at 1364–1371.

⁶⁷ *Id.*

⁶⁸ 14 C.C.R. § 15003(b).

⁶⁹ *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236–1237.
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by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.⁷⁰ Courts reviewing challenges to an agency's approval of an EIR based on a lack of substantial evidence will "determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements."⁷¹

Here, the HRA contains substantial errors and omissions which resulted in an inaccurate and incomplete health risk analysis, and an incorrect and unsupported significance determination. A corrected HRA for the Project shows that the Project will result in cancer risk to future residents that exceed the threshold of significance, and requires additional mitigation.

Appendix B to the SCEA states that the building façades facing towards SR-134 freeway and the on-ramp from Brand Boulevard would be nearest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road; the cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project site.⁷² In Table 4 of the Appendix, the text states that the maximum cancer risk from DPM emissions generated by diesel-vehicle travel along SR-134 Freeway for residents was calculated to be 1.06 in one-million.⁷³ The maximum cancer risk from DPM emissions generated by diesel-vehicle travel along SR-134 Freeway for workers on site was calculated to be 0.0755 in one-million.⁷⁴

TABLE 4 ESTIMATED INHALATION CANCER RISK AND CHRONIC HAZARDS		
Receptor	Cancer Risk	Chronic Noncancer Hazard Index
Resident MEIR	1.06E-06	0.01
Worker MEIR	7.55E-08	0.01

Note: See Appendix B for calculations.

⁷⁰ *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.

⁷¹ *Id.* (internal quotations omitted).

⁷² SCEA, Appendix B, p. 13.

⁷³ SCEA, Appendix B, p. 13.

⁷⁴ SCEA, Appendix B, p. 13.

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Upon re-running the air dispersion model, Dr. Clark found that the annual average ground level concentration of DPM across the Project site was calculated to range from 0.01258 ug/m³ to 0.02387 ug/m³.⁷⁵ Dr. Clark then used CARB's HARP Standalone Risk Assessment Tool and determined that the minimum cancer risk from inhalation of DPM emitted from sources on SR-134 and the adjacent roadways is 1.11 x 10⁻⁵ or 11.1 in one million.⁷⁶ For the maximum concentration modeled, the cancer risk from inhalation of DPM emitted from sources on SR-134 and the adjacent roadways was calculated to be 1.99 x 10⁻⁵ or 19.9 in one million.⁷⁷

In both scenarios, Dr. Clark's analysis shows that the Project will expose residents to TAC DPM concentrations that result in cancer risk in excess of the SCAQMD threshold of significance of 10 in one million.⁷⁸ Dr. Clark's analysis of the Project's air modeling shows a significant impact that the City has failed to disclose and mitigate. The re-analysis of the health risks for the Project from SR-134 are provided in Exhibit C to this letter.

Dr. Clark states in his comments that the SCEA's mitigation measures, including the use of MERV 13 filters in HVAC equipment⁷⁹, will not result in a reduction of the minimum cancer risk for the Project's future residents to less than significant levels because the SCEA would need to include a mitigation measure requiring residents to keep their windows closed over 50% of the time in perpetuity.⁸⁰ Dr. Clark notes that the only way to ensure a mitigation measure of this type would be effective would be to ensure that all windows on site were not able to be opened.⁸¹ Additional mitigation measures are necessary in order for the City to reduce the Project's air quality impacts to less than significant levels. The City must correct the HRA and show that the impacts from SR-134 are more significant than was outlined in the draft SCEA in an SCEIR.

2-9

⁷⁵ Clark Comments, p. 7.

⁷⁶ Clark Comments, p. 7.

⁷⁷ Clark Comments, p. 7.

⁷⁸ SCAQMD, Air Quality Significance Thresholds (2019) <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>

⁷⁹ SCEA, p. 5.0-32.

⁸⁰ Clark Comments, p. 8.

⁸¹ Clark Comments, p. 8.

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2. The SCEA Fails to Disclose and Analyze the Potential Air Quality Impacts from the Use of Backup Generators

The City failed to account for the reasonably foreseeable use of backup generators (“BUG”) during Project operations. Dr. Clark explains that, given the size of the Project, and the need for continuous electrical supply, a BUG must be installed on site.⁸² Operational emissions from BUGs due to testing and maintenance along unscheduled events, including but not limited to Public Safety Power Shutoff (“PSPS”) events and extreme heat events must be analyzed by the City.⁸³

Extreme heat events are defined as periods where the temperatures throughout California exceed 100 degrees Fahrenheit.⁸⁴ The total duration of the PSPS events lasted between 141 hours to 154 hours in 2019.⁸⁵ In 2021, the Governor of California declared that during extreme heat events the use of stationary generators shall be deemed an emergency use.⁸⁶ The number of Extreme Heat Events is likely to increase in California with the continuing change in climate the State is currently undergoing.⁸⁷

During a PSPS or an extreme heat event, power is expected to come from engines regulated by CARB and California’s 35 air pollution control and air quality management districts (air districts).⁸⁸ Additionally, Dr. Clark states that the health effects related to emissions from diesel BUGs are a particular concern during PSPS and extreme heat events.⁸⁹

According to the California Public Utilities Commission (“CPUC”) de-energization report, in October 2019, there were almost **806 PSPS events** (emphasis added) that impacted almost 973,000 customers (~7.5% of households in California) of which ~854,000 of them were residential customers, and the rest were

2-10

⁸² Clark Comments, p. 8.

⁸³ Clark Comments, p. 8.

⁸⁴ Governor of California, Proclamation of a State of Emergency (June 17, 2021) *available at* <https://www.gov.ca.gov/wp-content/uploads/2021/06/6.17.21-Extreme-Heat-proclamation.pdf>

⁸⁵ Clark Comments, p. 7.

⁸⁶ 17 C.C.R. § 93115.4 sub. (a) (30) (A)(2).

⁸⁷ Clark Comments, p. 7.

⁸⁸ CARB, 2019, Use of Back-up Engines For Electricity Generation During Public Safety Power Shutoff Events (October 25, 2019) *available at* https://ww2.arb.ca.gov/sites/default/files/2019-10/PSPS_Back-up_Power_Guidance.pdf

⁸⁹ Clark Comments, p. 7.

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commercial, industrial, medical baseline, or other customers.⁹⁰ CARB's data also indicated that on average each of these customers had about 43 hours of power outage in October 2019.⁹¹ Using the actual emission factors for each diesel BUG engines in the air district's stationary BUGs database, CARB staff calculated that the 1,810 additional stationary generators running during a PSPS in October 2019 generated 126 tons of NOx, 8.3 tons of particulate matter, and 8.3 tons of DPM.⁹²

As Dr. Clark explains in his comments, testing and maintenance of BUGs along with each PSPS or extreme heat event that occurs during the operational phase of the project will result in significant concentrations of DPM to be released that are not accounted for in the City's analysis.⁹³ In 2021, two extreme heat events were declared.⁹⁴ For the June 17, 2021 extreme heat event, the period for which stationary generator owners were allowed to use their BUGs lasted 48 hours.⁹⁵ For the July 9, 2021 extreme heat event, the period for which stationary generator owners were allowed to use their BUGs lasted 72 hours.⁹⁶ Had the Project been in operation during these two extreme heat events, the Project would have run the BUGs for 120 hours, in addition to the 50 hours of use accounted for in the DEIR's air quality analysis. Furthermore, CARB notes though that the number of Extreme heat events is likely to increase, and thereby PSPS events, with the continuing change in climate that the State is currently undergoing.⁹⁷

While the City is not required to analyze the worst-case scenarios, there is substantial evidence demonstrating that PSPS events and extreme heat events are reasonably foreseeable events which will require the use of the BUGs beyond just 50 hours of routine testing during Project operations. A detailed analysis of the emissions from these additional hours of the BUGs operation should be included in an SCEIR, including an analysis of the extra time the BUGs will need to run to account for extreme heat events and PSPS.

2-10

⁹⁰ California Public Utilities Commission ("CPUC"), Emission Impact: Additional Generator Usage associated With Power Outage (January 30, 2020) available at https://ww2.arb.ca.gov/sites/default/files/2020-01/Emissions_Inventory_Generator_Demand%20Usage_During_Power_Outage_01_30_20.pdf.

⁹¹ *Ibid.*

⁹² *Ibid.*

⁹³ Clark Comments, p. 8.

⁹⁴ *Ibid.*

⁹⁵ *Ibid.*

⁹⁶ *Ibid.*

⁹⁷ CARB, California's 2017 Climate Change Scoping Plan (November 2017) p. 6. Available at https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf
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An SCEIR must be written for the Project that includes an analysis of the additional operation of the BUGs that will occur at the project site that is not accounted for in the current air quality analysis.

2-10

D. The SCEA Fails Analyze and Mitigate Potentially Significant Noise Impacts

The SCEA's review of potential noise impacts from the Project identified potentially significant noise impacts from the Project's construction. It concludes that all the potentially significant impacts will be mitigated below level of significance.

Noise expert, Derek Watry reviewed the SCEA's analysis and found that it fails to properly disclose, analyze and mitigate the Project's potentially significant construction noise impacts.

Mr. Watry states the construction noise analysis for the Project references the Federal Transit Administration ("FTA") *Transit Noise and Vibration Impact Assessment Manual*.⁹⁸ Section 7 of the *FTA Manual* addresses noise and vibration during construction, and, although the *Manual* states expressly that "... it is not the purpose of this manual to specify standardized criteria for construction noise impact, the following guidelines can be considered reasonable criteria for assessment", its methodology and criteria have come into widespread use.⁹⁹ Mr. Watry explains that the FTA methodology is commonly completed using the Roadway Construction Noise Model ("RCNM") published by the Federal Highway Administration ("FHWA").¹⁰⁰

2-11

Mr. Watry states that the *FTA Manual* presents two options for assessing construction noise: Option A – General Assessment and Option B – Detailed Assessment. Regarding these options, the *Manual* states:¹⁰¹

- A general assessment of construction noise is warranted for projects in an early assessment stage when the equipment roster and schedule are undefined and only a rough estimate of construction noise levels is practical.

⁹⁸ Watry Comments, p. 3.

⁹⁹ Watry Comments, p. 3.

¹⁰⁰ Watry Comments, p. 3.

¹⁰¹ Watry Comments, p. 3.

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- A detailed analysis of construction noise is warranted when many noise-sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts.

The General Assessment makes more conservative assumptions which results in higher noise level estimates, but also has higher criteria.¹⁰² Conversely, the Detailed Assessment makes more realistic assumptions (lower estimates), but has lower criteria.¹⁰³

Here, the SCEA uses the Detailed Assessment prediction methodology, but uses the General Assessment criteria. Upon further investigation, Mr. Watry found that if the City used the Detailed Assessment criteria, it would have concluded that construction noise will cause a significant and unavoidable impact on the neighboring commercial building.¹⁰⁴

The basis of the General Assessment methodology is that it is based on only the two loudest pieces of equipment and those are assumed to run at full power 100% of the time thereby creating the most noise possible.¹⁰⁵ The Detailed Assessment considers all of the reasonably foreseeable equipment, but accounts for the typical amounts of time that that equipment operates at full power (the “usage factor”).¹⁰⁶ The calculations in the City’s construction noise survey includes five foreseeable pieces of equipment - concrete saw, dozer, tractor, backhoe and front end loader - and their respective usage factors.¹⁰⁷ This is a Detailed Assessment and, as Mr. Watry points out, should use the corresponding criteria.¹⁰⁸

Mr. Watry applied the appropriate Detailed Assessment criteria to the five pieces of equipment listed in the Project’s noise study and found that the Project’s construction noise will exceed the applicable criterion by 13.9 dBA, resulting in a

2-11

¹⁰² Watry Comments, p. 3.

¹⁰³ Watry Comments, p. 3.

¹⁰⁴ Watry Comments, p. 3.

¹⁰⁵ Watry Comments, p. 3.

¹⁰⁶ Watry Comments, p. 3.

¹⁰⁷ SCEA, Appendix D, p. 49.

¹⁰⁸ Watry Comments, p. 3.

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significant impact.¹⁰⁹ The City must revise its construction noise analysis and present its findings in an SCEIR for public review.

Despite the fact that the SCEA incorrectly concludes that no mitigation would be required for construction noise, it discusses a number of means and methods to reduce construction noise. Mr. Watry states that many of the mitigation measures are not applicable to the Project, while others are not practical, and would therefore not reduce the significant noise impact which he identified to less than significant levels.¹¹⁰ Mr. Watry explains the inadequacies of many of the Project's mitigation measures, as detailed below:

- “. . . optimal muffler systems on all equipment would reduce construction noise levels by 10 dBA or more”.¹¹¹

Mr. Watry states that the language of this mitigation measure is based on language from *Construction Noise; Specification, Control, Measurement, and Mitigation*. Technical Report E-53, Construction Engineering Research Laboratory, published in April 1975. Construction equipment was not commonly muffled in 1975. However, in the last 47 years mufflers have become standard equipment.¹¹² The SCEA uses the FHWA Roadway Construction Model which uses source data from modern, muffled equipment, therefore additional noise attenuation from mufflers may be expected.¹¹³

- “. . . the use of a noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to break the line-of-sight to the receiver.”¹¹⁴

Mr. Watry states that while the above statement is technically correct, “the line-of-sight to the receiver” does not apply to the multi-story office buildings that are immediately next to the Project site.¹¹⁵

2-11

¹⁰⁹ Watry Comments, p 5.

¹¹⁰ Watry Comments, p. 5.

¹¹¹ SCEA, 5.0-156.

¹¹² Watry Comments, p. 6.

¹¹³ Watry Comments, p. 6.

¹¹⁴ SCEA, 5.0-156.

¹¹⁵ Watry Comments, p. 6.

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- “Modifications such as dampening of metal surfaces or the redesign of a particular piece of equipment can achieve noise reduction of up to 5 dBA.”¹¹⁶

Mr. Watry points out that the language quoted in the SCEA is taken out of context.¹¹⁷ The full quote from the FHWA report cited by the SCEA as the source for this statement is:

Modifications such as dampening of metal surfaces is quite effective in reducing noise due to vibration. Another possibility is the redesign of a particular piece of equipment to achieve quieter noise levels. These modifications can usually only be done by the manufacturer or with factory assistance and can be costly, time consuming, and possibly ineffective in reducing the overall noise levels.¹¹⁸

Mr. Watry states that the measure would require contractors to find and use equipment that is demonstrably quieter than equipment that is currently in common use.¹¹⁹ Because this would require the use of non-standard equipment, the SCEA should substantiate that it, in fact, is a reasonable and feasible, and the specifics of the quieter equipment should be incorporated into the formal mitigation measures of the project.

- “Moving stationary equipment away from sensitive receptors will reduce noise levels at the receptor as every doubling of distance will reduce noise by 4 to 6 dBA.”¹²⁰

This is a correct statement, but, as Mr. Watry observes, the sources of construction noise used in the Noise Study calculations are mobile, not stationary. Therefore, the equipment could not feasibly be moved away from the sensitive receptors as they must be able to move about the site to complete the Project.

2-11

¹¹⁶ SCEA, 5.0-156.

¹¹⁷ Watry Comments, p. 6.

¹¹⁸ FHWA, Special Report - Measurement, Prediction, and Mitigation, Chapter 4 Mitigation (June 28, 2017) https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm Accessed March 7, 2022 (emphasis added).

¹¹⁹ Watry Comments, p. 6.

¹²⁰ SCEA, 5.0-156.

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The City must prepare an SCEIR to properly analyze the potentially significant construction noise impacts from the Project, disclose the Project's potentially significant noise impacts, and propose feasible, effective, mitigation measures to reduce the Project's significant impacts.

2-11

V. CONCLUSION

There is substantial evidence supporting a fair argument that the Project may result in potentially significant air quality and noise impacts that were not identified in the SCEA, and thus have not been adequately analyzed or mitigated. We urge the City to fulfill its responsibilities under CEQA by withdrawing the SCEA and preparing a legally adequate SCEIR to address the potentially significant impacts described in this comment letter and the attached expert comments. This is the only way the City and the public will be able to ensure that the Project's significant environmental impacts are mitigated to less than significant levels.

2-12

Sincerely,

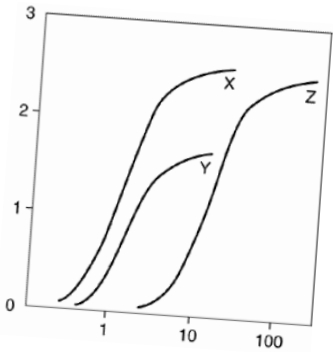


Kevin T. Carmichael

KTC:lj1

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EXHIBIT A



Clark & Associates

Environmental Consulting, Inc.

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Los Angeles, CA 90066

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March 9, 2022

Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Attn: Mr. Kevin T. Carmichael

**Subject: Comments On Draft Sustainable Communities
Environmental Assessment (SCEA) For Stage II Final
Design Review Case No. PDR 2119308, Development
Agreement Case No. PDA1806045**

Dear Mr. Carmichael:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed materials related to the 2022 City of Glendale SCEA of the above referenced project.

Clark's review of the materials in no way constitutes a validation of the conclusions or materials contained within the plan. If we do not comment on a specific item this does not constitute acceptance of the item.

Project Description:

According to the City of Glendale's Notice of Intent/Notice of Availability, Adelfia Properties II, LLC has submitted a Stage II Final Design Review application for the construction of a new 294-unit, 24-story multi-family residential building on a 63,760 SF (1.48 acre) project site zoned DSP Gateway District. The Project, entitled Lucia Park, will be located at 620 North Brand Blvd and 625 North Maryland Avenue in Glendale, adjacent to State Route 134. The proposed Floor Area Ratio is 7.25 and the building height is 266 feet (7.25 FAR and 275 feet maximum by right). The Project includes 373 subterranean parking spaces for the residential use and 129 above-ground, replacement parking spaces for existing commercial bank building, as well as a publicly accessible open space plaza fronting Brand Boulevard

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and residential amenity spaces throughout the project. No changes are proposed to the existing commercial/bank building at 620 N. Brand Boulevard; this building was identified as a potential historic resource in the 2019 South Glendale Historic Resources Survey and is therefore considered a historic resource under the California Environmental Quality Act (CEQA). The existing parking structure and two-story commercial building fronting Maryland Place (625 N. Maryland Avenue) will be demolished. The SCEA states that the Project complies with all of the development standards and no variances are proposed. A Development Agreement is also being requested for a six-year entitlement period for the Project and to lock in the current Development Impact Fees.

2-13

The conclusion from the City that all other potential impacts would be less than significant is in fact without merit. There are substantial impacts that are not addressed in the City's analysis that must be addressed in an environmental impact report (EIR).

Specific Comments:

1. The Description Of The Air Dispersion Model In Appendix B Is Vague And Has A Number Of Omissions/Errors The Must Be Corrected.

After reconstructing the AERMOD dispersion model from the information compiled in Appendix B to the SCEA, it is clear that there are several flaws in the description to the model presented in the Appendix. According to the text of Appendix B, the air dispersion modeling was conducted using the American Meteorological Society/Environmental Protection Agency Regulator Model (AERMOD v. 10.0.1).¹ This reference is out of date. According to the July 2021 AERMOD Implementation Guide from U.S. EPA, the current version of AERMOD is 21112.² This would make the version utilized by the City more than a decade old, and would not have the capability to import background concentrations, calculate hourly emissions using multi-year assessments, or process large postfiles. If the reference to version 10.0.1 is to the graphical user interface (GUI) used to run AERMOD, the City must correct the text in the SCEA. Either way it is clear the author of Appendix

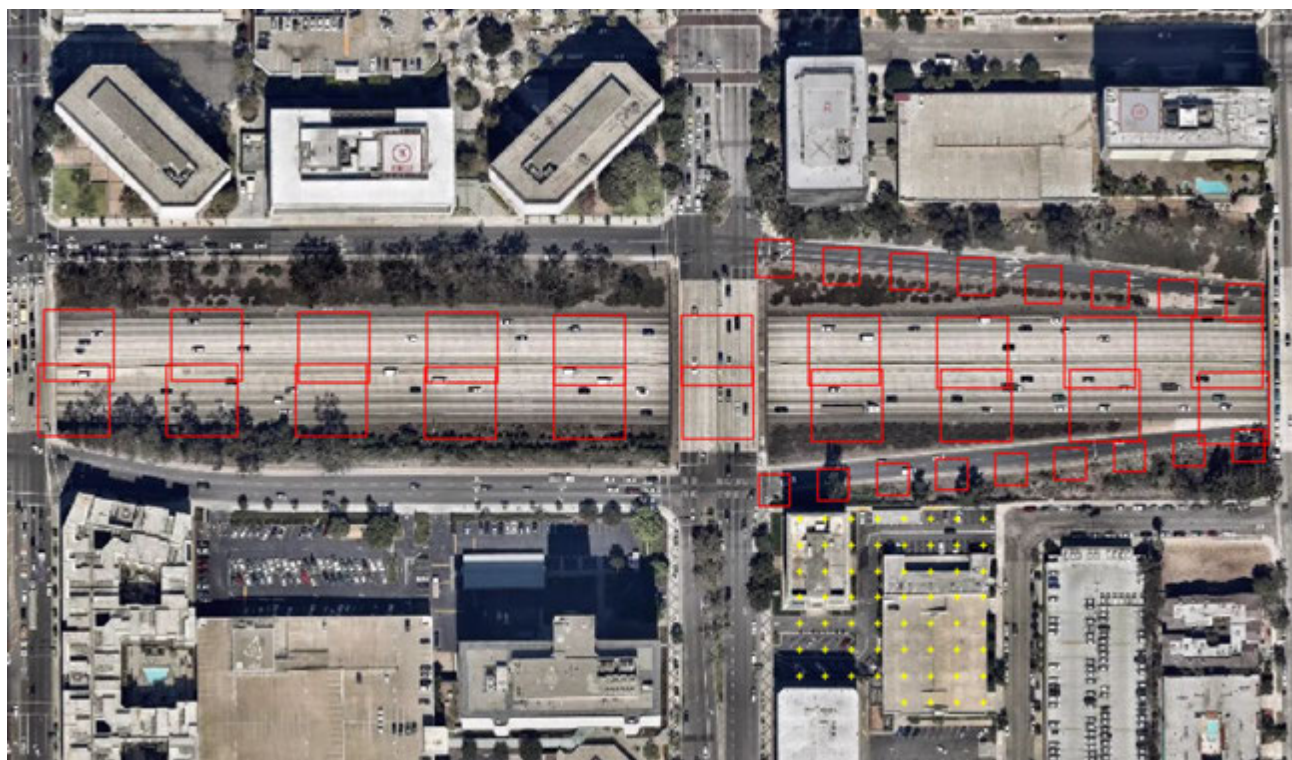
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¹ Appendix B to SCEA. 2022. Health Risk Assessment. Pg 18 of 39.

² U.S. EPA. 2021. AERMOD Implementation Guide. Dated July, 2021. Pg. 1.
https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_implementation_guide.pdf

B is unaware of what version of AERMOD was being utilized, how it functioned, or what the outputs from the model mean. The City must correctly identify the model version utilized in this analysis.

From the table on page 31 of 39 of Appendix B, it is possible to identify the geographic location of all of the sources included in the mobile source dispersion mode. The sources are shown below as red volume boxes in the figure below.



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The yellow crosses indicate the receptors at ground-level across the Project site. According to Appendix B, diesel vehicle traffic was modeled as a line source comprised of separate volume sources along the stretch of SR-134. Ten sources are identified on the east bound lanes of State Route 134.

ID	X	Y	CO (1-
EB SR-134			
L0000782	384059.9	3780196	1
L0000783	384109	3780196	1
L0000784	384158.2	3780196	1
L0000785	384207.3	3780195	1
L0000786	384256.5	3780195	1
L0000787	384305.6	3780195	1
L0000788	384354.7	3780194	1
L0000789	384403.9	3780194	1
L0000790	384453	3780194	1
L0000791	384502.2	3780193	1

Ten sources are identified on the west bound lanes of State Route 134.

WB SR-134			
L0000772	384499.7	3780214	1
L0000773	384451.1	3780214	1
L0000774	384402.4	3780214	1
L0000775	384353.8	3780215	1
L0000776	384305.1	3780215	1
L0000777	384256.5	3780215	1
L0000778	384207.9	3780216	1
L0000779	384159.2	3780216	1
L0000780	384110.6	3780217	1
L0000781	384061.9	3780217	1

Eight sources are identified from the off-ramp to Brand Avenue from west bound lanes of State Route 134.

Off-Ramp to Brand from WB SR-134			
L0001114	384506.2	3780233	4
L0001115	384480.7	3780235	4
L0001116	384455.1	3780238	4
L0001117	384429.5	3780240	4
L0001118	384403.9	3780243	4
L0001119	384378.3	3780245	4
L0001120	384352.7	3780247	4
L0001121	384327.1	3780250	4

An additional eight sources are identified as using the on-ramp to east bound lanes of State Route 134.

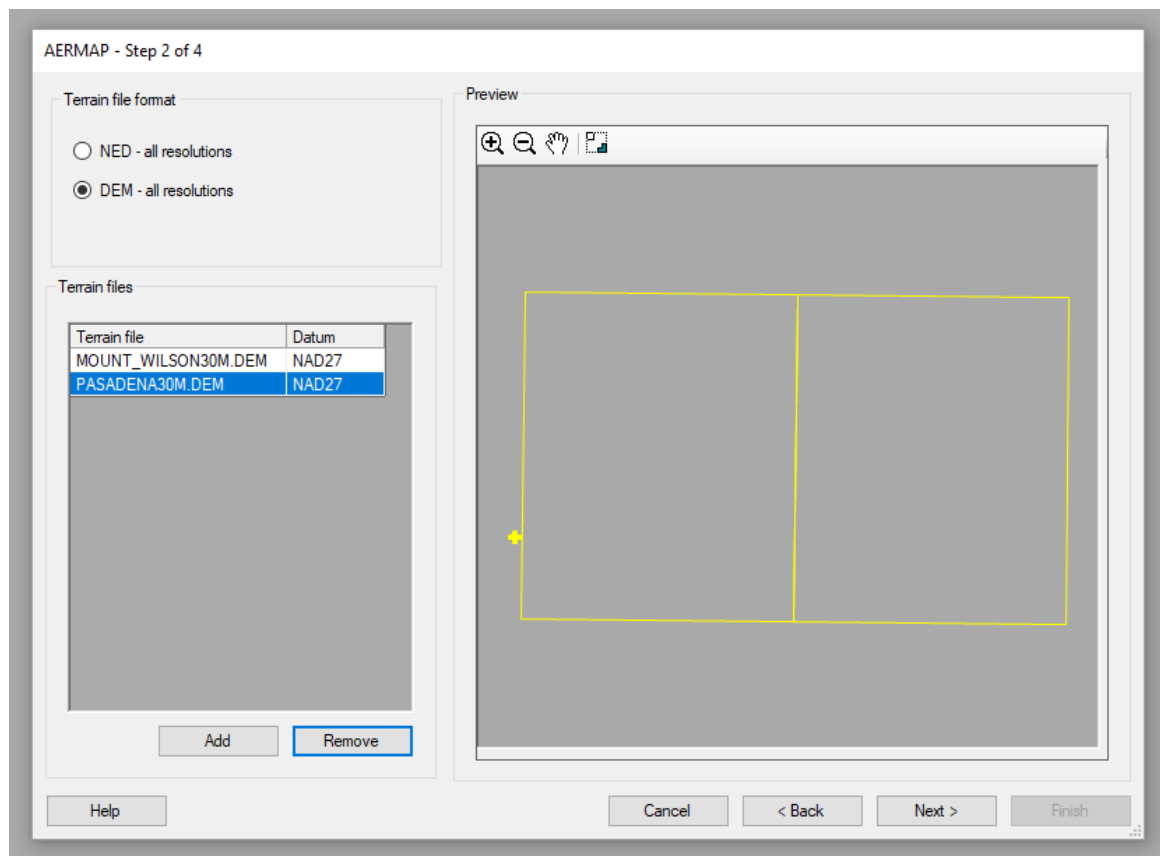
On-Ramp to EB SR-134 from Brand			
L0001105	384326.9	3780162	1
L0001106	384349.5	3780164	1
L0001107	384372.1	3780166	1
L0001108	384394.7	3780168	1
L0001109	384417.3	3780170	1
L0001110	384439.9	3780172	1
L0001111	384462.5	3780175	1
L0001112	384485.1	3780177	1
L0001113	384507.7	3780179	1

“Diesel exhaust emissions were modeled using a release height of 7.41 feet (2.26 meters), which is the weighted average height of an exhaust stack above ground level for the combined diesel car and truck traffic along this stretch of freeway. The plume height and width used for each volume source along the SR-134 was 14.83 feet and 88.58 feet (4.52 and 27 meters), respectively. The plume height and width used for each volume source along the on-ramp from Brand Boulevard was 14.83 feet and 39.37 feet (4.52 and 12.0 meters), respectively. The plume height and width used for each volume source along off-ramp to Brand Boulevard was 14.83 feet and 45.93 feet (4.52 and 14.00 meters), respectively. Based on guidance, the plume height was determined by multiplying the average stack height by a factor of 2, while the plume width was determined by adding 19.69 feet (6 meters)

2-14

to the freeway width.”³ The text does not restrict to the emissions on an hourly basis during the day or week, therefore in this re-analysis the emissions were assumed to occur all day, every day of the year.

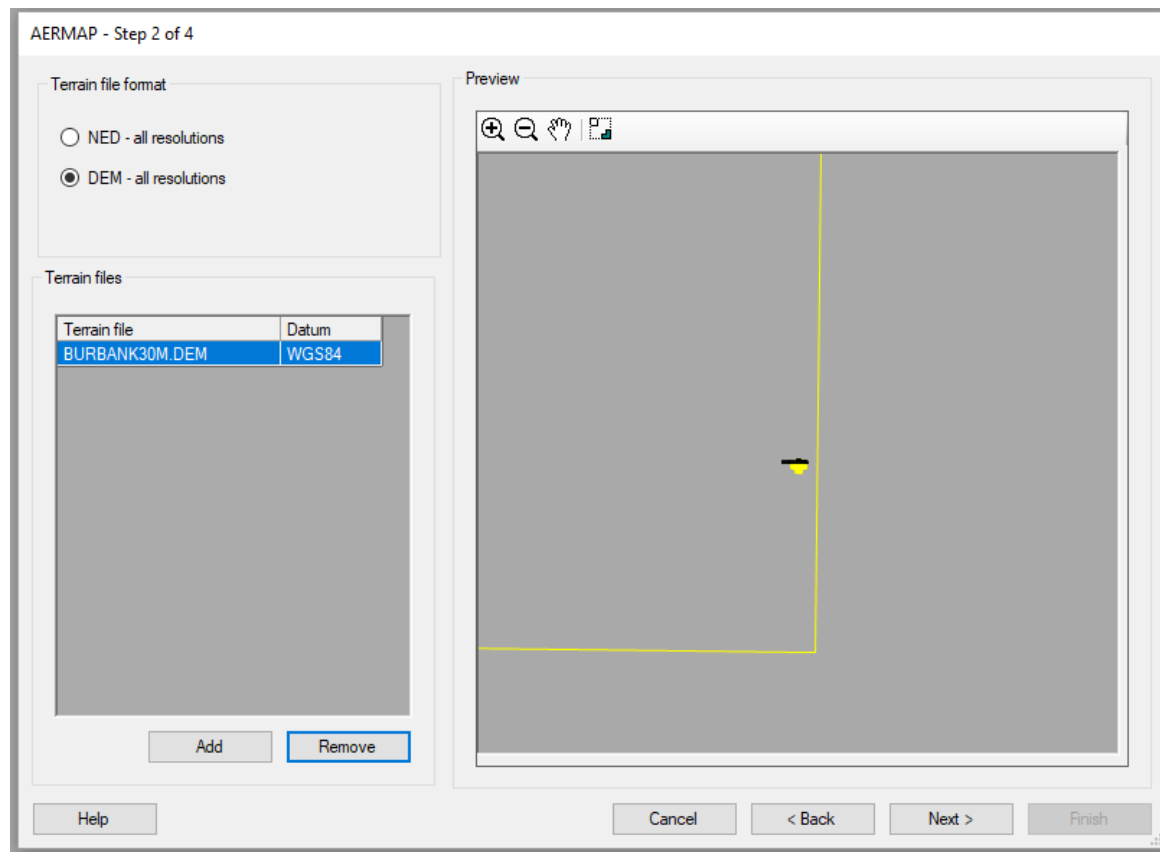
Under the section of Appendix B labeled Terrain Data on page 20 of 39, the City describes the use of “digital elevation model (DEM) data for the Pasadena and Mount Wilson 7.5-minute quadrangles obtained through the AERMOD program.” AERMOD does not have a component that stores 7.5-minute quadrangles. Quadrangles can be obtained through the California Air Resources Board’s (CARB) HARP Digital Elevation Model Files (ww2.arb.ca.gov/resources/documents/harp-digital-elevation-model-files). After downloading the Pasadena and Mt. Wilson DEMs and uploading them to the AERMOD model, neither the Pasadena Quadrangle DEM or the Mt. Wilson DEM are useful in the model domain. The Pasadena DEM is to the east of the receptors for the Project location. The Mt. Wilson DEM is to the east of the Pasadena DEM and no sources for the model were associated with that DEM.



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³ Appendix B to SCEA. 2022. Health Risk Assessment. Pg 18 of 39.

The only DEM required in the model is the Burbank DEM. No receptors are identified as being present in the Pasadena or Mt. Wilson DEMs.



2-14

The City must update the model to correctly identify the DEM that contains the receptors at the project site.

According to Appendix B, “discrete receptors were placed inside the boundary of the Project site at areas where future residences would be located. Based on SCAQMD’s AERMOD modeling guidance, all receptors should be set to a height of 0 feet (0 meters), so that ground level concentrations are analyzed. In order to fulfill SCAQMD’s requirements and accurately characterize the risk throughout the Project site, a 32.81 foot by 32.81 foot (10 meter by 10 meter) receptor grid was placed over the Project site (including site boundaries). The receptor grid was then converted to discrete receptors to maintain spacing and provide for ease in determining the maximum exposed individual (MEI).”⁴

⁴ Appendix B to SCEA. 2022. Health Risk Assessment. Pg 20 of 39.

Appendix B of Appendix B is labeled “AERMOD Output Sheets”. A review of the appendix clearly shows that Appendix B to the Health Risk Assessment contains the Emission Inventory from the EMFAC2021 (v 1.0.1) analysis of the Los Angeles region. The City must correctly label the information in the report. The output from the re-analysis of the impacts from SR-134 are included in Exhibit A to this letter.

2-14

2. The HRA For Mobile Sources In The SCEA Underestimates The Potential Health Risk From Diesel Particulate Matter (DPM)

According to Appendix B to the SCEA, the building façades facing towards SR-134 freeway and the on-ramp from Brand Boulevard would be nearest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road; the cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project site.⁵ In Table 4 of the Appendix, the text states that the maximum cancer risk from DPM emissions generated by diesel-vehicle travel along SR-134 Freeway for residents was calculated to be 1.06 in one-million. The maximum cancer risk from DPM emissions generated by diesel-vehicle travel along SR-134 Freeway for workers on site was calculated to be 0.0755 in one-million.

2-15

Receptor	Cancer Risk	Chronic Noncancer Hazard Index
Resident MEIR	1.06E-06	0.01
Worker MEIR	7.55E-08	0.01

Note: See Appendix B for calculations.

After re-running the air dispersion model, the annual average ground level concentration of DPM across the Project site was calculated to range from 0.01258 ug/m³ to 0.02387 ug/m³. Using the CARB’s HARP Standalone Risk Assessment Tool, the minimum cancer risk from inhalation of DPM emitted from sources on SR-134 and the adjacent roadways was calculated to be 1.11 x 10⁻⁵ or 11.1 in one million. For the maximum concentration modeled, the cancer risk from inhalation of DPM emitted from sources on SR-134 and the adjacent roadways was calculated to be 1.99 x 10⁻⁵ or 19.9 in one

⁵ Appendix B to SCEA. 2022. Health Risk Assessment. Pg 13 of 39.

million. The re-analysis of the health risks for the Project from SR-134 are provided in Exhibit B to this letter.

Even with the mitigation measures outlined in the SCEA (MERV 14 through 16 filters), the residents will need to keep their windows and doors closed to the outside at least 50% of the time in perpetuity. The only way the mitigation measures will be effective are to ensure that no windows or doors are allowed to open to the outside. This is an unrealistic and unenforceable expectation to impose on future residents. This mitigation measure could also create a potential fire hazard or health hazard for residents of the structure if they were required to keep their windows and doors closed the majority of their time indoors. The City must correct the HRA and show that the impacts from SR-134 are more significant than was outlined in the draft SCEA in an EIR, and must impose additional mitigation beyond the MERV 14 through MERV 16 filtration evaluated in the Air Quality Analysis and Health Risk Analysis of the Project. Additional mitigation measures could include modifying HVAC systems to ensure that intake air flow is taken from areas farthest away from SR-134, and/or inclusion of oxidative catalysts on HVAC systems to further reduce the Project's operational health risk to residents.

3. The Air Quality Analysis For The Project Fails To Include Impacts From The Emergency Generator(s) That Will Be Installed Onsite.

The City has failed to include all sources of DPM in its analysis. Given the size of the Project and the need for continuous electrical supply, a back-up generator (BUG) must be installed on site. The site drawings for the SCEA fail to detail where the BUG will be specifically located. Operational emissions from BUGs due to testing and maintenance along unscheduled events, including but not limited to Public Safety Power Shutoff (PSPS) events and extreme heat events, must be analyzed by the City. Extreme heat events are defined as periods wherein the temperatures throughout California exceed 100 degrees Fahrenheit.⁶ The total duration of the PSPS events lasted between 141 hours to 154 hours in 2019. In 2021, the Governor of California declared that, during extreme heat events, the use of stationary generators shall be deemed an emergency use under California Code of Regulations

⁶ Governor of California. 2021. Proclamation of a state of emergency. June 17, 2021.



(CCR), title 17, section 93115.4 sub. (a) (30) (A)(2). The number of Extreme Heat Events is likely to increase in California with the continuing change in climate the State is currently undergoing.

Power produced during PSPS or extreme heat events is expected to come from engines regulated by CARB and California's 35 air pollution control and air quality management districts (air districts).⁷ Of particular concern are health effects related to emissions from diesel back-up engines. Diesel particulate matter (DPM) has been identified as a toxic air contaminant, composed of carbon particles and numerous organic compounds, including over forty known cancer-causing organic substances. The majority of DPM is small enough to be inhaled deep into the lungs and make them more susceptible to injury.

2-16

According to the California Public Utilities Commission (CPUC) de-energization report,⁸ in October 2019, there were almost **806 PSPS events** (emphasis added) that impacted almost 973,000 customers (~7.5% of households in California) of which ~854,000 of them were residential customers, and the rest were commercial/industrial/medical baseline/other customers. CARB's data also indicated that, on average, each of these customers had about 43 hours of power outage in October 2019.⁹ Using the actual emission factors for each diesel BUG engines in the air district's stationary BUGs database, CARB staff calculated that the 1,810 additional stationary generators (like those proposed for the Project) running during a PSPS in October 2019 generated 126 tons of NOx, 8.3 tons of particulate matter, and 8.3 tons of DPM. In addition to creating an onsite source of DPM which will affect the residents of the structure, the additional NOx emissions could increase the daily emission rate above the regional threshold depending on the size of the BUG utilized by the Project.

An EIR must be written for the Project that includes an analysis of the additional operation of the BUG that will occur at the project site that is not accounted for in the current air quality analysis.

⁷ CARB. 2019. Use of Back-up Engines For Electricity Generation During Public Safety Power Shutoff Events. October 25, 2019.

⁸ <https://www.cpuc.ca.gov/deenergization/> as cited in CARB, 2020. Potential Emission Impact of Public Safety Power Shutoff (PSPS), Emission Impact: Additional Generator Usage associated With Power Outage..

⁹ CARB, 2020. Potential Emission Impact of Public Safety Power Shutoff (PSPS), Emission Impact: Additional Generator Usage associated With Power Outage..

Conclusion

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project could result in significant unmitigated impacts if the SCEA is approved. The City must re-evaluate the significant impacts identified in this letter by requiring the preparation of a revised draft environmental impact report.

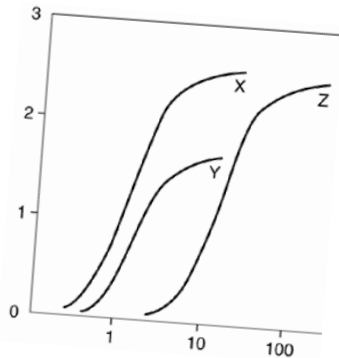
2-17

Sincerely,



EXHIBIT

CV



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James J. J. Clark, Ph.D.

Principal Toxicologist

Toxicology/Exposure Assessment Modeling

Risk Assessment/Analysis/Dispersion Modeling

Education:

Ph.D., Environmental Health Science, University of California, 1995

M.S., Environmental Health Science, University of California, 1993

B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

Professional Experience:

Dr. Clark is a well-recognized toxicologist, air modeler, and health scientist. He has 30 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling, RESRAD, GENII); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

LITIGATION SUPPORT

Case: Pamela Butler Vs. Mallinckrodt, Inc. & Cotter Corporation. Case No.: 4:2018cv01701 United States District Court Eastern District of Missouri Eastern Division

Case: Kenneth Edward Koterba Vs. Mallinckrodt, Inc. & Cotter Corporation. Case No.: 4:2018cv01702 United States District Court Eastern District of Missouri Eastern Division

Case: Anthony Hines Vs. Mallinckrodt, Inc. & Cotter Corporation. Case No.: 4:2018cv01703 United States District Court Eastern District of Missouri Eastern Division

Case: Emery David Walick, III Vs. Mallinckrodt, Inc. & Cotter Corporation. Case No.: 4:2018cv01704 United States District Court Eastern District of Missouri Eastern Division

Client: Humphrey, Farrington & McClain, P.C., Independence, Missouri

Dr. Clark performed a historical dose reconstruction for community members exposed to radioactive waste released into the environment from the St. Louis Air Port Site (SLAPS) and the Hazelwood Interim Storage Site (HISS). The releases resulted in impacts to soils, sediments, surface waters, and groundwater in the vicinity of the SLAPS and HISS sites. The analysis was performed in general accordance with the methods outlined by the Agency for Toxic Substances Control (ATSDR) for assessing radiation doses from historical source areas in North St. Louis County, Missouri.

Case Result: Trial Pending

Case: Don Strong, et al. vs. Republic Services, Inc., Bridgeton Landfill, LLC, vs. Cotter Corporation, N.S.L., Case No.: 17SL-CC01632-01 Circuit Court of St. Louis County, State of Missouri, Division 17

Client: Humphrey, Farrington & McClain, P.C., Independence, Missouri

Dr. Clark performed a historical dose reconstruction for community members from radiologically impacted material (RIM) releases from the adjacent West Lake Landfill. The analysis was performed in general accordance with the methods outlined by the Agency for Toxic Substances Control (ATSDR) for assessing radiation doses from historical source areas in North St. Louis County, Missouri.

Case Result: Settlement in favor of plaintiff.

Case: Arnold Goldstein, Hohn Covas, Gisela Janette La Bella, et al.. vs. Exxon Mobil Corporation, PBF Energy Inc., Torrance Refining Company LLC, et al., Case No.: 2:17-cv-02477DSF United States District Court for the Central District of California

Client: Sher Edlging, LLP, San Francisco, California and Matern Law Group , PC., El Segundo, California

Dr. Clark performed a historical dose reconstruction for community members from an active 700 acre petroleum refinery in Los Angeles. The analysis included a multi-year dispersion model was performed in general accordance with the methods outlined by the U.S. EPA and the SCAQMD for assessing the health impacts in Torrance, California. The results of the analysis are being used as the basis for injunctive relief for the communities surrounding the refinery.

Case Result: Trial Pending

**Case: Scott D. McClurg, et al. v. Mallinckrodt Inc. and Cotter Corporation.
Lead Case No.: 4:12CV00361 AGF United States District Court Eastern District
of Missouri Eastern Division**

Client: Environmental Law Group, Birmingham, AL.

Dr. Clark performed a historical dose reconstruction for community members and workers exposed to radioactive waste released into the environment from the St. Louis Air Port Site (SLAPS) and the Hazelwood Interim Storage Site (HISS). The releases resulted in impacts to soils, sediments, surface waters, and groundwater in the vicinity of the SLAPS and HISS sites. The analysis included the incorporation of air dispersion modeling across the community to determine ground-level air concentrations and deposition of thorium and uranium isotopes and their respective daughter products. The dose reconstruction considered all relevant pathways to determine total doses of radiation received across the community from 1946 through 2017.

Case Result: Settlement in favor of plaintiff.

**Case: Mary Ann Piccolo V. Headwaters Incorporated, et al. Seventh Judicial
Court In and For Carbon County, State of Utah. Case No. 130700053**

Client: Law Offices of Roy L. Mason. Annapolis, MD

Dr. Clark performed a dose assessment of an individual occupationally exposed to metals and silica from fly ash who later developed cancer. A review of the individual's medical and occupational history was performed to prepare opinions regarding his exposure and later development of cancer.

Case Result: Settlement in favor of plaintiff.

**Case: Tracey Coleman V. Headwaters Incorporated, et al. Seventh Judicial Court
In and For Carbon County, State of Utah. Case No. 140902847**

Client: Law Offices of Roy L. Mason. Annapolis, MD

Dr. Clark performed a dose assessment of an individual occupationally exposed to metals and silica from fly ash who later developed cancer. A review of the individual's medical and occupational history was performed to prepare opinions regarding his exposure and later development of cancer.

Case Result: Settlement in favor of plaintiff.

**Case: David Dominguez and Amanda Dominguez V. Cytex Industries, Inc et al.
Superior Court of the State Of California for the County Of Los Angeles – Central
Civil West. Civil Action. BC533123**

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to hexavalent chromium who later developed cancer. A review of the individual's medical and occupational history was performed to prepare opinions regarding her exposure and later development of cancer.

Case Result: Settlement in favor of plaintiff.

SELECTED AIR MODELING RESEARCH/PROJECTS

Client(s) – Multiple

Indoor Air Evaluations, California: Performed multiple indoor air screening evaluations and risk characterizations consistent with California Environmental Protection Agency's (Cal/EPA) Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB) methodologies. Characterizations included the use of DTSC's modified Johnson & Ettinger Model and USEPA models, as well as the attenuation factor model currently advocated by Cal/EPA's Office of Environmental Health and Hazard Assessment (OEHHA).

Client – Confidential

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model were used to estimate acute and chronic exposure concentrations to multiple contaminants and were be incorporated into a comprehensive risk evaluation.

Client – Confidential

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS

Client: City of Santa Clarita, Santa Clarita, California

Dr. Clark managed the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Imminent and Substantial Endangerment Order. Dr. Clark assisted the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

Client – Confidential, Los Angeles, California

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

PUBLIC HEALTH/TOXICOLOGY

Client: Brayton Purcell, Novato, California

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

Client: Covanta Energy, Westwood, California

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

Client: Kaiser Venture Incorporated, Fontana, California

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS

Kaiser Ventures Incorporated, Fontana, California

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

ANR Freight - Los Angeles, California

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

Kaiser Ventures Incorporated, Fontana, California

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

Unocal Corporation - Los Angeles, California

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

Client: Confidential, Los Angeles, California

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

Client: Confidential, San Francisco, California

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.

Client: Confidential, San Francisco, California

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

IT Corporation, North Carolina

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

Professional Associations

American Public Health Association (APHA)
Association for Environmental Health and Sciences (AEHS)
American Chemical Society (ACS)
International Society of Environmental Forensics (ISEF)
Society of Environmental Toxicology and Chemistry (SETAC)

Publications and Presentations:

Books and Book Chapters

Sullivan, P., **J.J. J. Clark**, F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and **J.J. J. Clark**. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and **J.J.J. Clark**. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., **Clark, J.J.J.** 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

Clark, J.J.J. 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment*. Art Diaz, Ed.. Oxford University Press: New York.

Clark, J.J.J. 2000. "Toxicology of Perchlorate" in *Perchlorate in the Environment*. Edward Urbansky, Ed. Kluwer/Plenum: New York.

Clark, J.J.J. 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.

Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

Journal and Proceeding Articles

- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, Volume 70 (2008) page 002254.
- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, Volume 70 (2008) page 000527
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research*. 105:194-199.
- Rosenfeld, P.E., **Clark, J. J.**, Hensley, A.R., and Suffet, I.H. 2007. "The Use Of An Odor Wheel Classification For The Evaluation of Human Health Risk Criteria For Compost Facilities" *Water Science & Technology*. 55(5): 345-357.
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** 2006. "Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13th Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.
- Clark, J.J.J.** 2003. "Manufacturing, Use, Regulation, and Occurrence of a Known Endocrine Disrupting Chemical (EDC), 2,4-Dichlorophenoxyacetic Acid (2,4-D) in California Drinking Water Supplies." National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Minneapolis, MN. March 20, 2003.

- Rosenfeld, P. and **J.J.J. Clark**. 2003. "Understanding Historical Use, Chemical Properties, Toxicity, and Regulatory Guidance" National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Phoenix, AZ. February 21, 2003.
- Clark, J.J.J.**, Brown A. 1999. Perchlorate Contamination: Fate in the Environment and Treatment Options. In Situ and On-Site Bioremediation, Fifth International Symposium. San Diego, CA, April, 1999.
- Clark, J.J.J.** 1998. Health Effects of Perchlorate and the New Reference Dose (RfD). Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.
- Browne, T., **Clark, J.J.J.** 1998. Treatment Options For Perchlorate In Drinking Water. Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.
- Clark, J.J.J.**, Brown, A., Rodriguez, R. 1998. The Public Health Implications of MtBE and Perchlorate in Water: Risk Management Decisions for Water Purveyors. Proceedings of the National Ground Water Association, Anaheim, CA, June 3-4, 1998.
- Clark J.J.J.**, Brown, A., Ulrey, A. 1997. Impacts of Perchlorate On Drinking Water In The Western United States. U.S. EPA Symposium on Biological and Chemical Reduction of Chlorate and Perchlorate, Cincinnati, OH, December 5, 1997.
- Clark, J.J.J.**; Corbett, G.E.; Kerger, B.D.; Finley, B.L.; Paustenbach, D.J. 1996. Dermal Uptake of Hexavalent Chromium In Human Volunteers: Measures of Systemic Uptake From Immersion in Water At 22 PPM. *Toxicologist*. 30(1):14.
- Dodge, D.G.; **Clark, J.J.J.**; Kerger, B.D.; Richter, R.O.; Finley, B.L.; Paustenbach, D.J. 1996. Assessment of Airborne Hexavalent Chromium In The Home Following Use of Contaminated Tapwater. *Toxicologist*. 30(1):117-118.
- Paulo, M.T.; Gong, H., Jr.; **Clark, J.J.J.** (1992). Effects of Pretreatment with Ipratropium Bromide in COPD Patients Exposed to Ozone. *American Review of Respiratory Disease*. 145(4):A96.
- Harber, P.H.; Gong, H., Jr.; Lachenbruch, A.; **Clark, J.**; Hsu, P. (1992). Respiratory Pattern Effect of Acute Sulfur Dioxide Exposure in Asthmatics. *American Review of Respiratory Disease*. 145(4):A88.
- McManus, M.S.; Gong, H., Jr.; Clements, P.; **Clark, J.J.J.** (1991). Respiratory Response of Patients With Interstitial Lung Disease To Inhaled Ozone. *American Review of Respiratory Disease*. 143(4):A91.
- Gong, H., Jr.; Simmons, M.S.; McManus, M.S.; Tashkin, D.P.; Clark, V.A.; Detels, R.; **Clark, J.J.** (1990). Relationship Between Responses to Chronic Oxidant and Acute

Ozone Exposures in Residents of Los Angeles County. American Review of Respiratory Disease. 141(4):A70.

Tierney, D.F. and **J.J.J. Clark**. (1990). Lung Polyamine Content Can Be Increased By Spermidine Infusions Into Hyperoxic Rats. American Review of Respiratory Disease. 139(4):A41.

EXHIBIT A

AERMOD ANALYSIS RESULTS

DPM concentrations across site.txt

03/02/22
10:35:57

* AERMOD (21112): NO TITLE SPECIFIED
* AERMET (16216):
* MODELING OPTIONS USED: RegDEFAULT CONC ELEV RURAL ADJ_U*
* PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL
* FOR A TOTAL OF 60 RECEPTORS.
* FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I8.8,2X,A8)

X	Y	AVERAGE CONC	ZELEV	ZHILL	ZFLAG	AVE	GRP	NUM YRS	NET ID
384376.70000	3780080.90000	0.00566	176.36	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780080.90000	0.00566	176.65	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780080.90000	0.00566	176.94	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780080.90000	0.00566	177.00	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780090.90000	0.00592	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780090.90000	0.00594	176.12	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780090.90000	0.00597	176.28	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780090.90000	0.00600	176.44	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780090.90000	0.00600	176.61	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780090.90000	0.00601	176.79	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780090.90000	0.00602	176.96	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780100.90000	0.00601	177.00	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780100.90000	0.00633	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780100.90000	0.00635	176.21	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780100.90000	0.00638	176.48	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780100.90000	0.00639	176.75	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780100.90000	0.00641	176.86	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780100.90000	0.00642	176.92	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780100.90000	0.00641	176.99	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780100.90000	0.00641	177.00	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780110.90000	0.00679	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780110.90000	0.00681	176.23	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780110.90000	0.00684	176.51	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780110.90000	0.00685	176.80	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780110.90000	0.00687	176.90	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780110.90000	0.00687	176.94	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780110.90000	0.00687	176.99	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780110.90000	0.00684	177.04	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780120.90000	0.00733	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780120.90000	0.00735	176.14	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780120.90000	0.00738	176.31	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780120.90000	0.00740	176.49	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780120.90000	0.00741	176.65	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780120.90000	0.00741	176.81	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780120.90000	0.00739	176.97	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780120.90000	0.00735	177.12	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780130.90000	0.00797	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780130.90000	0.00798	176.05	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780130.90000	0.00801	176.12	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780130.90000	0.00804	176.18	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780130.90000	0.00806	176.40	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780130.90000	0.00803	176.67	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780130.90000	0.00800	176.94	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780130.90000	0.00795	177.21	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780140.90000	0.00875	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780140.90000	0.00876	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780140.90000	0.00880	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780140.90000	0.00884	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780140.90000	0.00884	176.26	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780140.90000	0.00879	176.59	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780140.90000	0.00872	176.93	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780140.90000	0.00866	177.26	514.00	0.00	ANNUAL	ALL	00000005	
384336.70000	3780150.90000	0.00977	175.93	514.00	0.00	ANNUAL	ALL	00000005	
384346.70000	3780150.90000	0.00973	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384356.70000	3780150.90000	0.00979	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384366.70000	3780150.90000	0.00983	176.00	514.00	0.00	ANNUAL	ALL	00000005	
384376.70000	3780150.90000	0.00984	176.26	514.00	0.00	ANNUAL	ALL	00000005	
384386.70000	3780150.90000	0.00971	176.59	514.00	0.00	ANNUAL	ALL	00000005	
384396.70000	3780150.90000	0.00961	176.93	514.00	0.00	ANNUAL	ALL	00000005	
384406.70000	3780150.90000	0.00956	177.26	514.00	0.00	ANNUAL	ALL	00000005	

8 hour modeled DPM concentrations.txt

03/02/22
11:34:19

* AERMOD (21112): NO TITLE SPECIFIED
* AERMET (16216):
* MODELING OPTIONS USED: RegDFAULT CONC ELEV RURAL ADJ_U*
* PLOT FILE OF HIGH 1ST HIGH 8-HR VALUES FOR SOURCE GROUP: ALL
* FOR A TOTAL OF 60 RECEPTORS.
* FORMAT: (3(1X,F13.5),3(1X,F8.2),3X,A5,2X,A8,2X,A5,5X,A8,2X,I8)

X	Y	AVERAGE CONC	ZELEV	ZHILL	ZFLAG	AVE	GRP	RANK	NET ID	DATE(CONC)
384376.70000	3780080.90000	0.08208	176.36	953.00	0.00	8-HR	ALL	1ST		12090208
384386.70000	3780080.90000	0.08317	176.65	953.00	0.00	8-HR	ALL	1ST		12090208
384396.70000	3780080.90000	0.08365	176.94	953.00	0.00	8-HR	ALL	1ST		12090208
384406.70000	3780080.90000	0.08399	177.00	953.00	0.00	8-HR	ALL	1ST		12090208
384336.70000	3780090.90000	0.08608	175.93	953.00	0.00	8-HR	ALL	1ST		12090208
384346.70000	3780090.90000	0.08750	176.12	953.00	0.00	8-HR	ALL	1ST		12090208
384356.70000	3780090.90000	0.08825	176.28	953.00	0.00	8-HR	ALL	1ST		12090208
384366.70000	3780090.90000	0.08893	176.44	953.00	0.00	8-HR	ALL	1ST		12090208
384376.70000	3780090.90000	0.09009	176.61	953.00	0.00	8-HR	ALL	1ST		12090208
384386.70000	3780090.90000	0.09060	176.79	953.00	0.00	8-HR	ALL	1ST		12090208
384396.70000	3780090.90000	0.09101	176.96	953.00	0.00	8-HR	ALL	1ST		12090208
384406.70000	3780090.90000	0.09129	177.00	953.00	0.00	8-HR	ALL	1ST		12090208
384336.70000	3780100.90000	0.09449	175.93	953.00	0.00	8-HR	ALL	1ST		12090208
384346.70000	3780100.90000	0.09593	176.21	953.00	0.00	8-HR	ALL	1ST		12090208
384356.70000	3780100.90000	0.09670	176.48	953.00	0.00	8-HR	ALL	1ST		12090208
384366.70000	3780100.90000	0.09796	176.75	953.00	0.00	8-HR	ALL	1ST		12090208
384376.70000	3780100.90000	0.09854	176.86	953.00	0.00	8-HR	ALL	1ST		12090208
384386.70000	3780100.90000	0.09900	176.92	953.00	0.00	8-HR	ALL	1ST		12090208
384396.70000	3780100.90000	0.09933	176.99	953.00	0.00	8-HR	ALL	1ST		12090208
384406.70000	3780100.90000	0.09953	177.00	953.00	0.00	8-HR	ALL	1ST		12090208
384336.70000	3780110.90000	0.10455	175.93	953.00	0.00	8-HR	ALL	1ST		13010908
384346.70000	3780110.90000	0.10641	176.23	953.00	0.00	8-HR	ALL	1ST		13010908
384356.70000	3780110.90000	0.10747	176.51	953.00	0.00	8-HR	ALL	1ST		13010908
384366.70000	3780110.90000	0.10908	176.80	953.00	0.00	8-HR	ALL	1ST		13010908
384376.70000	3780110.90000	0.10983	176.90	953.00	0.00	8-HR	ALL	1ST		13010908
384386.70000	3780110.90000	0.11050	176.94	953.00	0.00	8-HR	ALL	1ST		13010908
384396.70000	3780110.90000	0.11095	176.99	953.00	0.00	8-HR	ALL	1ST		13010908
384406.70000	3780110.90000	0.11180	177.04	953.00	0.00	8-HR	ALL	1ST		13010908
384336.70000	3780120.90000	0.11815	175.93	953.00	0.00	8-HR	ALL	1ST		13010908
384346.70000	3780120.90000	0.12006	176.14	953.00	0.00	8-HR	ALL	1ST		13010908
384356.70000	3780120.90000	0.12112	176.31	953.00	0.00	8-HR	ALL	1ST		13010908
384366.70000	3780120.90000	0.12207	176.49	953.00	0.00	8-HR	ALL	1ST		13010908
384376.70000	3780120.90000	0.12349	176.65	953.00	0.00	8-HR	ALL	1ST		13010908
384386.70000	3780120.90000	0.12412	176.81	953.00	0.00	8-HR	ALL	1ST		13010908
384396.70000	3780120.90000	0.12461	176.97	953.00	0.00	8-HR	ALL	1ST		13010908
384406.70000	3780120.90000	0.12525	177.12	953.00	0.00	8-HR	ALL	1ST		13010908
384336.70000	3780130.90000	0.13420	175.93	953.00	0.00	8-HR	ALL	1ST		13010908
384346.70000	3780130.90000	0.13617	176.05	953.00	0.00	8-HR	ALL	1ST		13010908
384356.70000	3780130.90000	0.13713	176.12	953.00	0.00	8-HR	ALL	1ST		13010908
384366.70000	3780130.90000	0.13792	176.18	953.00	0.00	8-HR	ALL	1ST		13010908
384376.70000	3780130.90000	0.13888	176.40	953.00	0.00	8-HR	ALL	1ST		13010908
384386.70000	3780130.90000	0.14011	176.67	953.00	0.00	8-HR	ALL	1ST		13010908
384396.70000	3780130.90000	0.14065	176.94	953.00	0.00	8-HR	ALL	1ST		13010908
384406.70000	3780130.90000	0.14097	177.21	953.00	0.00	8-HR	ALL	1ST		13010908
384336.70000	3780140.90000	0.13697	175.93	953.00	0.00	8-HR	ALL	1ST		13010908
384346.70000	3780140.90000	0.13744	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384356.70000	3780140.90000	0.13589	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384366.70000	3780140.90000	0.13539	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384376.70000	3780140.90000	0.13498	176.26	953.00	0.00	8-HR	ALL	1ST		13010908
384386.70000	3780140.90000	0.14519	176.59	953.00	0.00	8-HR	ALL	1ST		13010908
384396.70000	3780140.90000	0.14292	176.93	953.00	0.00	8-HR	ALL	1ST		13010908
384406.70000	3780140.90000	0.14074	177.26	953.00	0.00	8-HR	ALL	1ST		13010908
384336.70000	3780150.90000	0.12671	175.93	953.00	0.00	8-HR	ALL	1ST		13010908
384346.70000	3780150.90000	0.14918	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384356.70000	3780150.90000	0.14803	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384366.70000	3780150.90000	0.13598	176.00	953.00	0.00	8-HR	ALL	1ST		13010908
384376.70000	3780150.90000	0.13419	176.26	953.00	0.00	8-HR	ALL	1ST		13010908
384386.70000	3780150.90000	0.13124	176.59	953.00	0.00	8-HR	ALL	1ST		13010908
384396.70000	3780150.90000	0.15518	176.93	953.00	0.00	8-HR	ALL	1ST		13010908
384406.70000	3780150.90000	0.15069	177.26	953.00	0.00	8-HR	ALL	1ST		13010908

EXHIBIT B

HARP Standalone Health Risk Analysis Results

*HARP - HRACalc v21081 3/3/2022 1:47:27 PM - Cancer Risk - Input File: C:\Users\jclar\OneDrive\Desktop\Clark and Associates\Project 148 - ABJC - Lucia Park Project\AERMOD Output\Max Cancer Risk DPMHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK
1			9901	DieselExhPM	0.02387	2.11E-05	30YrCancerDerived_Inh	*	2.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
										PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
										0.00E+00	0.00E+00	0.00E+00	INHALATION		0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v21081 3/3/2022 1:46:49 PM - Cancer Risk - Input File: C:\Users\jclar\OneDrive\Desktop\Clark and Associates\Project 148 - ABJC - Lucia Park Project\AERMOD Output\Min Cancer Risk DPMHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK
1			9901	DieselExhPM	0.01258	1.11E-05	30YrCancerDerived_Inh	*	1.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
										PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
										0.00E+00	0.00E+00	0.00E+00	INHALATION		0.00E+00	0.00E+00	0.00E+00

EXHIBIT B



WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #22-005.04

10 March 2022

Kevin T. Carmichael, Esq.
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, California 95814

Subject: **Lucia Park Project
Glendale, California
Review and Comment on SCEA Noise Analysis**

Dear Mr. Carmichael,

As requested, we have reviewed the information and noise impact analyses in the following documents:

*Draft Sustainable Communities Environmental Assessment
for the Lucia Park Project (SCEA)
City of Glendale Community Development Department
January 2022*

*Noise Technical Study for the Lucia Park Project (Noise Study)
Meridian Consultants
January 2022
(Appendix D of the SCEA)*

This letter reports our comments on the noise analysis in the subject document.

Wilson Ihrig, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our 56 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Environmental Noise Model (ENM), Traffic Noise Model (TNM), Roadway Construction Noise Model (RCNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

2-18



Adverse Effects of Noise¹

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result. The problems and irritation that are associated with speech disturbance have become more pronounced during the COVID-19 pandemic because many people find themselves and the people they live with trying to work and learn simultaneously in spaces that were not designed for speech privacy.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. While sheltering-in-place during the COVID-19 pandemic, many people are finding working and learning more difficult because their home environment is not as quiet as their office or school was.

2-19

¹ More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (<https://www.who.int/docstore/peh/noise/Comnoise-1.pdf>)

Comments on Construction Noise Analysis

For the construction noise analysis, the SCEA preparers reference the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA Report 0123, September 2018). Section 7 of the FTA *Manual* addresses noise and vibration during construction, and, although the *Manual* states expressly that "... it is not the purpose of this manual to specify standardized criteria for construction noise impact, the following guidelines can be considered reasonable criteria for assessment", its methodology and criteria have come into widespread use. [FTA *Manual* at p. 172] As is often the case, the FTA methodology is executed using the Roadway Construction Noise Model (RCNM) published by the Federal Highway Administration (FHWA).²

The FTA *Manual* presents two options for assessing construction noise: Option A – General Assessment and Option B – Detailed Assessment. Regarding these options, the *Manual* states:

- A general assessment of construction noise is warranted for projects in an early assessment stage when the equipment roster and schedule are undefined and only a rough estimate of construction noise levels is practical.
- A detailed analysis of construction noise is warranted when many noise-sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts.

[FTA *Manual* at p. 177]

Each option has its own methodology and assessment criteria. In general, the General Assessment makes more conservative assumptions (resulting in higher noise level estimates), but also has higher criteria. Conversely, the Detailed Assessment makes more realistic assumptions (lower estimates), but has lower criteria. The SCEA errs in that it uses the Detailed Assessment prediction methodology, but uses the General Assessment criteria. Had it used the Detailed Assessment criteria, as it should have, it would have concluded that construction noise will cause a significant and unavoidable impact on the neighboring commercial building. The error and correction are spelled out in detail in the paragraphs that follow.

The hallmark of the General Assessment methodology is that it is based on only the two loudest pieces of equipment and those are assumed to run at full power 100% of the time (when they produce the maximum amount of noise). In contrast, the Detailed Assessment considers all of the reasonably foreseeable equipment, but accounts for the typical amounts of time that that equipment operates at full power (the "usage factor"). Attachment B of the Noise Study provides the construction noise calculation worksheets. Figure 1 shows an excerpt from Attachment B. Note that the calculation includes five foreseeable pieces of equipment and their respective usage factors. This is a Detailed Assessment and, as such, should use the corresponding criteria.

² https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/



Report dat #####						
Case Desc: Demolition						
----- Receptor #1 -----						
Baselines (dBA)						
Descriptio	Land Use	Daytime	Evening	Night		
Site 2	Residentia	69.5	69.5	69.5		
Equipment						
		Spec	Actual	Receptor	Estimated	
		Lmax	Lmax	Distance	Shielding	
		(dBA)	(dBA)	(feet)	(dBA)	
Description	Impact Device	Usage(%)				
Concrete Saw	No	20		89.6	205	0
Dozer	No	40		81.7	205	0
Tractor	No	40	84		205	0
Backhoe	No	40		77.6	205	0
Front End Loader	No	40		79.1	205	0

Figure 1 Excerpt from Noise Study Showing Construction Noise Calculations

Because the construction of Lucia Park is proposed to occur only during the daytime, the appropriate criteria are those highlighted in Figure 2 which shows the table from the FTA *Manual* containing the Detailed Analysis Construction Noise Criteria.^{3,4}

2-20

Table 7-3 Detailed Analysis Construction Noise Criteria			
Land Use	<i>Leq,eq(8hr)</i> , dBA Day	Night	<i>Ldn,eq(30day)</i> , dBA 30-day Average
Residential	80	70	75
Commercial	85	85	80*
Industrial	90	90	85*

*Use a 24-hour *Leq(24hr)* instead of *Ldn,eq(30day)*.

Figure 2 Table 7-3 of the FTA *Manual* – Detailed Assessment Noise Criteria

³ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, FTA Report No. 0123, September 2018, p. 179.

⁴ “*Leq,eq(8hr)*” denotes the *energy equivalent level* over an 8-hour workday. The *equivalent level* is the steady noise level that has the same amount of acoustical energy as the actual, time-varying noise levels. It is essentially the average noise level.



Table 5.13-3 of the SCEA presents the SCEA's construction noise level estimates and ostensibly assesses them. Figure 3 presents a copy of Table 5.13-3 in which I have inserted the Detailed Assessment noise criteria and revised the assessment accordingly.

TABLE 5.13-3 PROJECT CONSTRUCTION NOISE ESTIMATES					
Noise Monitoring Site	Nearest Off-Site Building Structures	Distance from Project Site (feet)	Max dBA (Leq-1hour)	Significance Threshold (dBA)	Exceeds FTA Threshold?
Site 1	Commercial use adjacent to the Project site	10	98.9	100.0 85	No Yes
Site 2	Multi-family residential uses along Maryland Place and Louise Street	205	73.7	90.0 80	No
Site 3	Multi-family residential uses along Doran Street and Maryland Avenue	195	74.2	90.0 80	No
Site 4	Multi-family residential uses on the corner of Sanchez Drive and Central Avenue	720	62.8	90.0 80	No

Source: FHWA, RCNM, version. 1.1.
Refer to Appendix D: Noise Study

Figure 3 Table 5.13-3 of the SCEA – Construction Noise Estimates and Assessment

As can be seen in Figure 3, the construction noise estimate at the commercial building adjacent to the Project site will exceed the applicable criterion by 13.9 dBA.

Comments on Means and Methods to Reduce Construction Noise

Despite the fact that the SCEA incorrectly concluded that no mitigation would be required for construction noise, it nonetheless discusses a number of means and methods to reduce construction noise. Some of those measures are not applicable and others are not practical. All of the following quotes are from the SCEA at page 5.0-156:

- “... optimal muffler systems on all equipment would reduce construction noise levels by 10 dBA or more”.

- The source for this quote is:

P.D. Schomer and B. Homans, *Construction Noise; Specification, Control, Measurement, and Mitigation*. Technical Report E-53, Construction Engineering Research Laboratory, April 1975

Note the date: 1975. Construction equipment was not commonly muffled in 1975, but that has changed in the ensuing 47 years. The SCEA uses the FHWA Roadway

Construction Model which uses source data from modern, muffled equipment. No additional noise attenuation from mufflers may be expected.

- "... the use of a noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to break the line-of-sight to the receiver."
 - This is correct, however, the qualifier - when it is tall enough to break the line-of-sight to the receiver - does not apply to the multi-story office buildings that are immediately next to the development site.
- "Modifications such as dampening of metal surfaces or the redesign of a particular piece of equipment can achieve noise reduction of up to 5 dBA."
 - The full quote from the FHWA report cited by the SCEA as the source for this statement is:

Modifications such as dampening of metal surfaces is quite effective in reducing noise due to vibration. Another possibility is the redesign of a particular piece of equipment to achieve quieter noise levels. These modifications can usually only be done by the manufacturer or with factory assistance and can be costly, time consuming, and possibly ineffective in reducing the overall noise levels.⁵ [emphasis added]

This measure effectively means, "Find and use equipment that is demonstrably quieter than equipment that is currently in common use." Because this would require the use of non-standard equipment, the SCEA should substantiate that the use and availability of such equipment is, in fact, reasonable and feasible. The specifics of the quieter equipment should be incorporated into the formal mitigation measures of the project.

- "Moving stationary equipment away from sensitive receptors will reduce noise levels at the receptor as every doubling of distance will reduce noise by 4 to 6 dBA."
 - This is a correct statement, but, for the most part, the construction noise calculations in Attachment B of the Noise Study are mobile, not stationary.

In addition to these project-specific comments, the SCEA also reiterates numerous "mitigation measures" from various regional and area plan EIRs in Section 6.5 Mitigation Monitoring and Reporting Program [SCEA at pp. 6.0-27 to 6.0-33].⁶ Not all of these pertain to construction noise. Those that do are either similar to those just discussed, e.g., "install temporary noise barriers during construction", or are similarly ineffectual at reducing actual noise levels, e.g., "post . . . who to notify

⁵ https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm

⁶ The referenced EIRs are:

- SCAG 2020-2045 RTP/SCS Program EIR
- City of Glendale South Glendale Community Plan EIR
- City of Glendale Downtown Specific Plan EIR

in the event of a problem". If people in the office building find it difficult to work when the average noise level outside the building is 99 dBA (see Figure 3), calling someone to report that as a problem will not lead to any abatement of the noise levels unless some of the equipment is not functioning properly and the noise levels are actually higher than 99 dBA. This is not to say that the generic measures listed in Section 6.5 are not good "best practices" that should be followed; I'm simply pointing out that the determination of significance is based on quantified noise levels and criteria, and that there is, unfortunately, nothing the project can do to reduce those noise levels given the close proximity and height of the noise-sensitive receivers in the building on the adjoining lot.

2-21

Conclusion

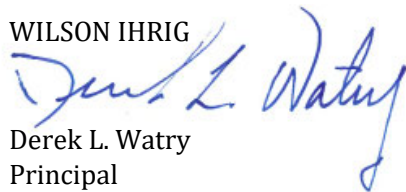
The SCEA uses the FTA Detailed Assessment calculation methodology for construction noise, but then assesses those calculations using the less restrictive General Assessment criteria. When the correct Detailed Assessment criteria are used, the construction noise levels are revealed to be significant at the office buildings immediately adjacent to the project site. Despite concluding incorrectly that construction noise would not cause a significant impact, the SCEA discusses several means and methods to reduce the noise. All of these are either inapplicable or impractical for the situation at hand. Additionally, the SCEA includes generic noise mitigation measures from three regional and area EIR documents, but none of those measures would be capable of reducing the noise levels presented in the SCEA due to the proximity and height of the affected building. Therefore, the construction noise impact will be significant and unavoidable should this project proceed.

2-22

Please contact me if you have any question about this review of the noise analysis in the *Lucia Park Project* SCEA noise analysis.

Very truly yours,

WILSON IHRIG



Derek L. Watry
Principal

2022-03-10 - lucia park - noise - d watry.docx



DEREK L. WATRY

Principal

Since joining Wilson Ihrig in 1992, Derek has gained experienced in many areas of practice including environmental, construction, forensic, architectural, and industrial. For all of these, he has conducted extensive field measurements, established acceptability criteria, and calculated future noise and vibration levels. In the many of these areas, he has prepared CEQA and NEPA noise technical studies and EIR/EIS sections. Derek has a thorough understanding of the technical, public relations, and political aspects of environmental noise and vibration compliance work. He has helped resolve complex community noise issues, and he has also served as an expert witness in numerous legal matters.

Education

- M.S. Mechanical Engineering, University of California, Berkeley
- B.S. Mechanical Engineering, University of California, San Diego
- M.B.A. Saint Mary's College of California

Project Experience

12th Street Reconstruction, Oakland, CA

Responsible for construction noise control plan from pile driving after City received complaints from nearby neighbors. Attendance required at community meetings.

525 Golden Gate Avenue Demolition, San Francisco, CA

Noise and vibration monitoring and consultation during demolition of a multi-story office building next to Federal, State, and Municipal Court buildings for the SFDPW.

911 Emergency Communications Center, San Francisco, CA

Technical assistance on issues relating to the demolition and construction work including vibration monitoring, developing specification and reviewing/recommending appropriate methods and equipment for demolition of Old Emergency Center for the SFDPW.

Central Contra Costa Sanitary District, Grayson Creek Sewer, Pleasant Hill, CA

Evaluation of vibration levels due to construction of new sewer line in hard soil.

City of Atascadero, Review of Walmart EIR Noise Analysis, Atascadero, CA

Review and Critique of EIR Noise Analysis for the Del Rio Road Commercial Area Specific Plan.

City of Fremont, Ongoing Environmental Services On-Call Contract, Fremont, CA

Work tasks primarily focus on noise insulation and vibration control design compliance for new residential projects and peer review other consultant's projects.

City of Fremont, Patterson Ranch EIR, Fremont, CA

Conducted noise and vibration portion of the EIR.

City of King City, Silva Ranch Annexation EIR, King City, CA

Conducted the noise portion of the EIR and assessed the suitability of the project areas for the intended development. Work included a reconnaissance of existing noise sources and receptors in and around the project areas, and long-term noise measurements at key locations.



Conoco Phillips Community Study and Expert Witness, Rodeo, CA

Investigated low frequency noise from exhaust stacks and provided expert witness services representing Conoco Phillips. Evaluated effectiveness of noise controls implemented by the refinery.

Golden Gate Park Concourse Underground Garage, San Francisco, CA

Noise and vibration testing during underground garage construction to monitor for residences and an old sandstone statue during pile driving for the City of San Francisco.

Laguna Honda Hospital, Clarendon Hall Demolition, San Francisco, CA

Project manager for performed vibration monitoring during demolition of an older wing of the Laguna Honda Hospital.

Loch Lomond Marina EIR, San Rafael, CA

Examined traffic noise impacts on existing residences for the City of San Rafael. Provided the project with acoustical analyses and reports to satisfy the requirements of Title 24.

Mare Island Dredge and Material Disposal, Vallejo, CA

EIR/EIS analysis of noise from planned dredged material off-loading operations for the City of Vallejo.

Napa Creek Vibration Monitoring Review, CA

Initially brought in to peer review construction vibration services provided by another firm, but eventually was tapped for its expertise to develop a vibration monitoring plan for construction activities near historic buildings and long-term construction vibration monitoring.

San Francisco DPW, Environmental Services On-Call, CA

Noise and vibration monitoring for such tasks as: Northshore Main Improvement project, and design noise mitigation for SOMA West Skate Park.

San Francisco PUC, Islais Creek Clean Water Program, San Francisco, CA

Community noise and vibration monitoring during construction, including several stages of pile driving. Coordination of noise and ground vibration measurements during pile driving and other construction activity to determine compliance with noise ordinance. Coordination with Department of Public Works to provide a vibration seminar for inspectors and interaction with Construction Management team and nearby businesses to resolve noise and vibration issues.

San Francisco PUC, Richmond Transport Tunnel Clean Water Program, San Francisco, CA

Environmental compliance monitoring of vibration during soft tunnel mining and boring, cut-and-cover trenching for sewer lines, hard rock tunnel blasting and site remediation. Work involved long-term monitoring of general construction activity, special investigations of groundborne vibration from pumps and bus generated ground vibration, and interaction with the public (homeowners).

Santa Clara VTA, Capitol Expressway Light Rail (CELR) Bus Rapid Transit (BRT) Update EIS, CA

Reviewed previous BRT analysis and provide memo to support EIS.



Shell Oil Refinery, Martinez, CA

Identified source of community noise complaints from tonal noise due to refinery equipment and operations. Developed noise control recommendations. Conducted round-the-clock noise measurements at nearby residence and near to the property line of the refinery and correlated results. Conducted an exhaustive noise survey of the noisier pieces of equipment throughout the refinery to identify and characterize the dominant noise sources that were located anywhere from a quarter to three-quarters of a mile away. Provided a list of actions to mitigate noise from the noisiest pieces of refinery equipment. Assisted the refinery in the selection of long-term noise monitoring equipment to be situated on the refinery grounds so that a record of the current noise environment will be documented, and future noise complaints can be addressed more efficiently.

Tyco Electronics Corporation, Annual Noise Compliance Study, Menlo Park, CA

Conducted annual noise compliance monitoring. Provided letter critiquing the regulatory requirements and recommending improvements.

University of California, San Francisco Mission Bay Campus Vibration Study, CA

Conducted measurements and analysis of ground vibration across site due to heavy traffic on Third Street. Analysis included assessment of pavement surface condition and propensity of local soil structure.

COMMENT LETTER NO. 2:

Coalition for Responsible Equitable Economic Development Los Angeles (“CREED LA”)
Kevin T. Carmichael
Attorney, Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Response to Comment 2-1

The comment includes a description of the proposed Project. As this comment does not address the information, analysis, or conclusions in the SCEA, no further response is necessary.

Response to Comment 2-2

The comment incorrectly states the SCEA is significantly flawed and does not comply with CEQA because the proposed Project would result in significant impacts on air quality, public health, and noise. The comment does not provide specific analysis to support the claim that impacts would be significant. As discussed in Responses to Comments 2-4 through 2-22, the SCEA and its appendices provided facts, reasonable assumptions based on facts, and expert opinion supported by facts that constitute substantial evidence, as defined by CEQA, all of which supports the conclusions in the SCEA that the impacts Project would either be less than significant or mitigated to less than significant. As such, the City correctly relied on this substantial evidence to support its determination to prepare an SCEA.

Response to Comment 2-3

The comment includes a statement of interest from CREED LA. As this comment does not address the information, analysis, or conclusions in the SCEA, no further response is necessary.

Response to Comment 2-4

The comment includes legal background on the purpose of CEQA, the definition of a Transit Priority Project, and the requirements for an SCEA. The comment states that a SCEA must include a full analysis of Project impacts including air quality, public health, and noise. The comment incorrectly claims that the City failed to conduct a proper analysis of the proposed Project’s noise, air quality, and public health impacts. The comment makes this claim with no substantial evidence. Section 5.0 of the SCEA included full analyses of the proposed Project’s noise, air quality, and health impacts.

Response to Comment 2-5

The comment states a SCEA must fully disclose all potentially significant impacts of a project and implement all feasible mitigation to reduce those impacts to less than significant levels, as well as presents additional information related to CEQA requirements. The comment claims the SCEA fails to analyze and mitigate potentially significant impacts but does not provide specific examples. The SCEA and its appendices provided facts, reasonable assumptions based on facts, and expert opinion supported by facts that constitute substantial evidence, as defined by CEQA, all of which supports the conclusions in the SCEA that the Project impacts would either be less than significant or mitigated to less than significant. The City can rely on this substantial evidence to support its determination.

Response to Comment 2-6

The comment incorrectly states that CEQA requires the City to provide the unlocked air quality analysis modeling files used for the Air Quality and Greenhouse Gas Study and Health Risk Assessment (Appendices A and B to the SCEA), but it does not state that all of that input data used in the air quality analysis was already in the SCEA document. There is no CEQA requirement to provide duplicative information and this is not a CEQA violation. Dr. Clark was able to recreate the City's HRA modeling using the City's input data. In order to amplify and clarify this response to comments, despite the fact that providing the "unlocked air quality analysis modeling files" is duplicative, the unlocked files are being provided in response to this comment. The unlocked data files unequivocally demonstrate (testifying to that which has already been demonstrated), that all of the appropriate parameters were used as input for generating the air quality model run and output by using valid versions of the air quality models (See Response to Comment 2-7 regarding the use of correct air quality models). The comment also claims not providing the unlocked air quality analysis modeling files violated CEQA standards as a CEQA document may not rely on missing information or only present the conclusions of an agency. As stated in the Meridian Consultants LLC memorandum on February 18, 2022 (**Appendix A**), the Air Quality/Greenhouse Gas (AQ/GHG) Technical Report included a detailed description on methodology and assumptions. Information disclosed included type and versions of modeling software used, project data used to estimate emissions, and all additional assumptions made in the absence of project-specific data. This information was provided for all phases of the proposed Project analyzed, including construction and operations. This is what Dr. Clark used to generate his version of the air quality analysis, albeit with modified inputs, so as to produce results showing Project air quality impacts.

All parties reviewing the SCEA are easily able to review the City's input data/information to understand the methodology and assumptions used in the analysis. The CalEEMod output files provide a table showing changes to default model assumptions that includes the reason for each change from a default

assumption in the model (Section 1.3 of the CalEEMod output files). In addition, the AQ/GHG report identified data inputs for operational emissions, e.g., trip generation factors for each use, and data sources and/or assumptions used to estimate operational emissions. Adjustments to trip generation rate model inputs were made based on the traffic study prepared for the Project, which is also appended to the SCEA. For these reasons, the unlocked input files are not required to review the emissions modeling to confirm or comment on the results as all the input data was provided.

Similarly, the technical study for the Mobile Health Risk Assessment identifies input parameters and specific citations for the sources for information used (e.g., annual average daily trips on SR-134 Freeway) and a description of the modeling methodology. The description of the modeling methodology in the technical study identifies the models used, meteorological data sources, source treatment (e.g., line source for roadways), receptor treatment (i.e., receptor grid and number of receptors), and equations used to estimate cancer and non-cancer risk. The methodology and technical appendices include the modeling results including the data to support the results and findings of the analysis. The unlocked input files are not needed to complete a technical review of the modeling to confirm or comment on the modeling and the results of the modeling. The air quality and HRA conclusions were based on facts and analysis contained in the Air Quality and Greenhouse Gas Study and Health Risk Assessment and the appended output files, not just bare conclusions. Therefore, the City did not violate any applicable CEQA requirements. The foregoing notwithstanding, all the input data used (e.g., the unlocked air quality analysis modeling files) are provided with these Responses to Comments. This data demonstrates that sufficient information and data was already available, amplifies the SCEA analysis and conclusions, and clarifies any confusion the commenter may have concerning the Health Risk Assessment and Air Quality analysis in the SCEA.

Response to Comment 2-7

The comment incorrectly states that the air dispersion modeling software utilized in the Health Risk Assessment is more than a decade old and lacks modeling capability. This comment is not correct. The AERMOD software used for the analysis is Lakes Software AERMOD View Version 10.0.1, which utilizes the latest US EPA AERMOD model version 21112. This software incorporates the U.S. EPA's preferred regulatory air dispersion model into an easy-to-use interface. Contrary to the commenter's assertions, this software imports background concentrations, provided hourly emissions using multi-year assessments and processes large postfiles.

The comment further provides explanation related to difference in the use of digital elevation model (DEM) data for the Pasadena Mt. Wilson station and the Burbank station. It is important to note that the dispersion modeling in the HRA utilized preprocessed meteorological data obtained from SCAQMD from

the Burbank Airport Meteorological Station, which is the station nearest to the Project site.³³ This comment has no merit as the comment suggests the proposed Project's HRA analysis should have used the Burbank DEM which was already included in the proposed Project HRA modeling as detailed within Appendix B.

The comment states that the cover page to Appendix B of the HRA is labeled incorrectly. Although the cover page title is incorrect, there is no missing information from the HRA report. The HRA table of contents indicates that the report includes EMFAC worksheets and AERMOD Output Sheets. All of these documents are attached to the HRA and the error on the appendix cover page does not change the analysis or conclusion of the HRA analysis.

Response to Comment 2-8

The comment incorrectly states the proposed Project would result in potentially significant impacts and does not implement all feasible mitigation to reduce impacts to less than significant. As discussed in Table 5.3-1 of the SCEA, construction impacts would not exceed the SCAQMD regional construction thresholds. More specifically, the emissions provided in Table 5.3-1 of the SCEA do not reflect the reductions that would result from compliance with existing regulations and, for this reason, provides a conservative analysis. Therefore, mitigation measures are not required as the Project will not result in significant impacts.³⁴ Additionally, as shown in Table 5.3-2, operational emissions would also not exceed SCAQMD emissions thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant.³⁵ Therefore, mitigation measures would not be required. Table 5.3-3 of the SCEA provides localized emissions related to both construction and operation. As shown, emissions would not exceed the localized significance thresholds.³⁶ Additionally, the localized construction emission estimates (which includes particulate matter from equipment exhaust)³⁷ also do not reflect the reductions in emissions that would result from existing regulations, thus providing a worst-case analysis. Therefore, project specific mitigation would not be required.

³³ SCAQMD Meteorological Data for AERMOD, www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod

³⁴ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-24. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

³⁵ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-25. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

³⁶ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-27. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

³⁷ CalEEMod User Guide, Appendix A: Calculation Details for CalEEMod, <http://www.aqmd.gov/caleemod/user's-guide>. Accessed June 2022.

Response to Comment 2-9

The comment states that HRA performed by the City failed to measure all the potential impacts of the Project and improperly found that the Project will result in a less than significant impact. Furthermore, the comment states that the HRA contains substantial errors and omissions which resulted in an inaccurate and incomplete health risk analysis, and an incorrect and unsupported significance determination. However, the comment does not identify any specific errors or emissions to the HRA modeling. As discussed under Response 2-7, the City's HRA utilized the correct model and data in its analysis.

The comment states by using the input values from the City's air model,³⁸ different emission results were obtained that would result in potentially significant impacts. To the contrary, the input summaries for the dispersion model and calculation sheets provided in the Appendix of the HRA (Appendix B of the SCEA) support the results identified in the SCEA.

Additionally, the comment incorrectly states that the mitigation measure including Minimum Efficiency Reporting Value (MERV) 13 filters in HVAC equipment would require residents to keep their windows closed over 50 percent of the time to be effective. This statement is incorrect as the modeling provides a risk assessment for windows to be open/closed for: 25 percent of the time; 50 percent of the time; 75 percent of the time; and 100 percent of the time. As provided in the risk calculations (See Appendix B to the SCEA), the results for all of these scenarios are less than significant for all levels of MERV filters assessed.

Response to Comment 2-10

This comment makes the incorrect assumption that the proposed Project is required to include a backup generator. No reference is provided for this claim and the comment letter mentions that a backup generator is not included in the proposed Project's site plan. Moreover, the comment letter recognizes that analysis of this worst-case scenario is not required.

Response to Comment 2-11

The comment incorrectly states the SCEA analysis fails to properly disclose, analyze, and mitigate the proposed Project's potentially significant construction noise impacts.

³⁸ Please note that in Comment 2-6 the commenter alleges the City refused to provide input data, and in response to the request for such data the City stated that all the input information was available in the SCEA (See Response to Comment 2-6). This is indeed true as the commenter here uses the very City's input data it alleges was not disclosed to generate different emission results.

The comment claims the proposed Project utilized incorrect thresholds in the construction noise analysis conducted for the proposed Project. The comment states that the FTA Manual presents two options for assessing construction noise: Option A – General Assessment and Option B – Detailed Assessment. Regarding these options, the Manual states:³⁹

- A general assessment of construction noise is warranted for projects in an early assessment stage when the equipment roster and schedule are undefined and only a rough estimate of construction noise levels is practical.
- A detailed analysis of construction noise is warranted when many noise-sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts.

The comment incorrectly assumes that the construction noise analysis requires as a detailed analysis per the FTA Manual descriptions above. However, the proposed Project does not meet this criterion. First, the proposed Project does not have “many” noise-sensitive sites adjacent to the proposed Project. The analysis analyzed one on-site receptor with the nearest off-site receptor being located over 200 feet from the Project site. Moreover, the City does not have local ordinances that define construction noise regulations. Section 1.3 of the Glendale General Plan Noise Element states that “Noise generation can also be reviewed during the evaluation of environmental effects of new construction. Mitigation measures or conditions of approval, if needed, can then be incorporated into the design of the project to reduce noise impacts. Finally, having an adopted noise ordinance allows Glendale to enforce standards adopted by the City Council. Glendale employs all these techniques to manage the noise environment of the City.” Pursuant to Section 4.4.3 of the Noise Element of the City’s General Plan, construction noise is exempted from compliance with the City’s Noise Ordinance in Section 8.36.080. It states, “The noise ordinance exempts construction activities from compliance with the noise ordinance limits under certain circumstances. If construction occurs within 500 feet of a residential zone, then construction is prohibited from 7 p.m. to 7 a.m. every night and from 7 p.m. on Saturday to 7 a.m. on Monday (i.e., no Sunday construction). Construction on certain holidays is also prohibited.” The Project will comply with these General Plan restrictions which are echoed in the Glendale Municipal Code (GMC) restricts operation of noise generating construction equipment from occurring between the hours of 7:00 PM on one day and 7:00 AM of the next day, or from 7:00 PM on Saturday to 7:00 AM on Monday, or from 7:00 PM preceding a holiday. As stated in the SCEA, the proposed Project would comply with this regulation.⁴⁰

³⁹ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

⁴⁰ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-156. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

Furthermore, a general assessment is more applicable to the proposed Project for several reasons. Although a general construction schedule has been laid out for the proposed Project, the construction equipment list for each phase of construction is based on the CalEEMod air emission modeling provided in Appendix A to the SCEA. The final construction equipment list is currently not known. As such, the CalEEMod analysis relied on model defaults to generate the mix of equipment during each phase of construction. Therefore, the noise analysis relied on a generalized assumption for equipment based on model defaults. Moreover, the noise analysis conservatively assumed all pieces of equipment would be operating simultaneously as a worst-case scenario. In reality, equipment operation would be staggered through the construction period.

Moreover, the comment's claim that the detailed assessment thresholds are more conservative is incorrect. The detailed assessment thresholds are expressed in terms of Leq-8hour (average noise levels over an 8-hour period) while the general assessment thresholds are expressed in terms of Leq-1hour (average noise levels over an 1-hour period). The construction noise analysis conducted for the proposed Project expressed noise levels in terms of Leq-1hour. As such, the proposed Project correctly compares these noise levels to the general assessment thresholds. The comment's claim the proposed Project would exceed the detailed assessment threshold by 13.9 dBA is baseless as it compares the proposed Project's Leq-1hour data to an Leq-8hour threshold.

For these reasons, the proposed Project's analysis is classified as a general assessment.

It is important to note that the City's General Plan and Municipal Code do not establish numeric maximum acceptable source noise levels or noise level increases at potentially affected receivers. Chapter 8.36 of the Glendale Municipal Code (GMC) prohibits construction activities within 500 feet of a residential zone between the hours of 7:00 PM on one date and 7:00 AM of the next day or from 7:00 PM on Saturday to 7:00 AM on Monday or from 7:00 PM preceding a holiday. Moreover, Section 8.36.290(K) of the GMC provides an exemption from the Noise Ordinance for any activity, operation, or noise, which cannot be brought into compliance (with the Noise Ordinance) because it is technically infeasible to do so. "Technical infeasibility" means that noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers, and/or any other noise reduction devices or techniques during the operation of the equipment. Therefore, for purposes of analysis, the SCEA utilizes the thresholds obtained from the FTA Transit Noise and Vibration Impact Assessment Manual.⁴¹ As stated in the SCEA, the FTA General Assessment Construction Noise Criteria identifies daytime and nighttime thresholds for residential,

⁴¹ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed March 2022.

commercial, and industrial land uses, which are considered reasonable criteria for use in assessing the potential for adverse community reaction to noise generated by construction activities.

The construction noise criteria threshold for residential uses is 90 dBA (Leq-1hour) during the daytime and 80 dBA (Leq-1hour) during the nighttime period. Additionally, construction noise thresholds for commercial and industrial uses are 100 dBA (Leq-1hour) during both the daytime and nighttime periods. The SCEA analysis concludes construction noise levels would range between 62.8 dBA (Leq-1hour) at the multi-family residential uses on the corner of Sanchez Drive and Central Avenue (Site 4) to a high of 98.9 dBA (Leq-1hour) at commercial use adjacent to the Project site (Site 1). Noise levels due to construction would not exceed the daytime 90 dBA Leq threshold for residential uses and 100 dBA Leq threshold for commercial uses.⁴² As such, the comment's claim that the SCEA requires mitigation measures for construction noise is incorrect.

The comment identifies several reasons why these techniques are not applicable to the proposed Project. The comment claims that additional noise attenuation from mufflers would not be applicable to the proposed Project as the FHWA Roadway Construction Model used to analyze proposed Project noise impacts already accounts for muffled equipment. As mentioned, the proposed Project does not require mitigation to reduce impacts to less than significant and did not rely on additional noise reduction techniques outside of the FHWA Roadway Construction Model noise analysis to make this determination. As mufflers are relevant to the proposed Project, it was appropriately discussed in the SCEA as a feasible method to reduce noise. The claim in the comment that the use of a barrier would not apply to the adjacent multi-story office building is unfounded as heavy-duty equipment would remain on ground-level where these barriers would be located. Higher levels of the adjacent building would not experience the same levels of noise as ground level floors due to distance. The use of barriers would serve to reduce noise levels at ground-floor levels where construction noise would be highest. As such, this technique is applicable to the proposed Project. The claim in the comment that the dampening of metal surfaces should be incorporated as formal mitigation to the SCEA is unfounded as mitigation is not required to achieve a less than significant impact for construction noise. The comment's claim that moving stationary equipment away from sensitive receptors is not a valid form of reducing noise is unfounded. First, the comment claims this noise reduction technique is correct but states it is not applicable to the proposed Project as most heavy-duty equipment is mobile, not stationary. However, the proposed Project would utilize stationary equipment such as generators and cranes where this technique is feasible. As such, this technique can be applied to the proposed Project.

⁴² City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-156. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

Therefore, the SCEA analysis properly discloses construction noise levels and accurately concludes the proposed Project would result in less than significant impacts prior to mitigation. The SCEA also identifies appropriate measures from prior EIRs to be incorporated, which would further reduce noise levels caused by construction.

Response to Comment 2-12

The comment incorrectly concludes that the proposed Project may result in potentially significant air quality and noise impacts that were not identified in the SCEA. The comment summarizes the previous comments (refer to Responses to Comments 2-1 through 2-11), therefore no response is warranted.

Response to Comment 2-13

The comment includes a description of the proposed Project. As this comment does not address the information, analysis, or conclusions in the SCEA, no further response is necessary.

Response to Comment 2-14

This comment discusses the reconstruction of the AERMOD dispersion model and claims there are several flaws in the description to the model presented in the HRA. Please refer to Response to Comment 2-7.

Response to Comment 2-15

This comment asserts the HRA for mobile sources underestimates the potential health risk from DPM and that the HRA must be corrected to show the more significant impacts from SR-134. Additionally, this comment states that even with mitigation such as MERV filters, the Project will result in a significant impact. Please refer to Response to Comment 2-9.

Response to Comment 2-16

This comment claims all sources of DPM were not included in the analysis, including emergency generators back up generates installed onsite. Please see Response to Comment 2-10.

Response to Comment 2-17

This comment is a conclusion that claims the proposed Project could result in significant unmitigated impacts if the SCEA is approved. As discussed in Responses to Comments 2-1 through 2-16, these claims are unfounded. The analysis in the SCEA, Air Quality and Greenhouse Gas Study (Appendix A to the SCEA),

and HRA (Appendix B to the SCEA) are sound and provide substantial evidence that the proposed Project would not result in significant unmitigated impacts.

Response to Comment 2-18

The comment includes an introductory statement about Wilson Ihrig, Acoustical Consultants. As this comment does not address the information, analysis, or conclusions in the SCEA, no further response is necessary.

Response to Comment 2-19

The comment includes background information on adverse effects of noise. As this comment does not address the information, analysis, or conclusions in the SCEA, no further response is necessary.

Response to Comment 2-20

As discussed in Response to Comment 2-11, the analysis in the SCEA utilized the correct construction noise thresholds and included appropriate noise reduction techniques that are applicable to the proposed Project even though they are not required to reduce noise impacts to less than significant.

Response to Comment 2-21

As discussed in Response to Comment 2-11, the analysis in the SCEA utilized the correct construction noise thresholds. Therefore, the claim in this comment that the SCEA incorrectly concluded that no mitigation would be required for construction noise is incorrect. Moreover, the comment incorrectly claims that measures are not applicable, and others are not practical. As explained previously in Response to Comment 2-11, these noise reduction techniques are applicable to the proposed Project even though they are not required to reduce noise impacts to less than significant.

Response to Comment 2-22

This comment concludes the comment letter reiterating incorrect claims that the construction noise levels would be significant, inapplicable, or impractical methods to reduce noise were used in the SCEA, and inclusion of generic noise mitigation measures from previous EIRs. Please see Response to Comment 2-11. Additionally, a SCEA must incorporate all feasible mitigation measures from prior applicable certified EIRs. The SCEA incorporated all feasible mitigation measures from prior EIRs (SCAG 2020–2045 RTP/SCS Program EIR, City of Glendale South Glendale Community Plan EIR, and City of Glendale Downtown Specific Plan EIR) as required by CEQA.



P.O. Box 4173 Glendale CA 91202
www.GlendaleHistorical.org

March 9, 2022

Villa Zemaitaitis
Community Development Department
Planning Division Office
633 East Broadway, Room 103
Glendale, CA 91206

Re: Comment on Sustainable Communities Environmental Assessment (SCEA) for 620 N Brand and 625 N Maryland Ave, Glendale CA 91203

Dear Ms Zemaitaitis:

Thank you for the opportunity to comment on this important project.

The Glendale Historical Society observes with disappointment that the 620 North Brand Boulevard Parking Garage (Parking Garage), which is an original component of the larger Home Savings & Loan property (Home Savings), and is both functionally related to the main building and was designed specifically by the architects to reflect features of the larger commercial building and to serve the office building, is proposed for demolition as part of the project without any mention or recognition of historic resource impacts.

The main issues are: ignoring that the Home Savings Parking Garage is a character-defining feature of the 620 N. Brand Boulevard historic resource, the proposed project's lack of conformance with the Secretary of the Interior's Standards for Rehabilitation, the fact that it is not consistent with the current requirements in the Downtown Specific Plan, and the use of a Sustainable Communities Environmental Assessment (SCEA).

Parking Garage

The proposed project would destroy the setting of the property and importantly demolish the functionally related, matching Parking Garage at 620 North Brand, which must be considered a contributing feature of the Home Savings property.

The Glendale Historical Society (TGHS) advocates for the preservation of important Glendale landmarks, supports maintaining the historic character of Glendale's neighborhoods, educates the public about and engages the community in celebrating and preserving Glendale's history and architectural heritage, and operates the Doctors House Museum. TGHS is a tax-exempt, not-for-profit 501(c)(3) organization, and donations to TGHS are tax-deductible to the extent permitted by law.

3-1

3-2

Public

TGHS believes that the Parking Garage is “functionally related” to the main Home Savings Building. The National Park Service directs “Buildings may be functionally related historically if they “...were located on the same property historically (thus, lack of individual lot lines historically could indicate a relationship); were designed as an overall composition around a common landscape feature and are reasonably proximate” (Technical Preservation Services, National Park Service, Functionally Related Structures – General Criteria 2007). The Parking Garage meets each of these stated general criteria.

TGHS notes that the City of Glendale, to date, has not considered the Parking Garage a contributor to or a significant part of the historical resource. However, the Home Savings Parking Garage is part of, and contributes to, the significance of the historical resource. This assertion is based on facts (e.g. the date of the Parking Garage construction and as the project architect’s design), reasonable assumption predicated on facts (if the main building is significant under the themes Commercial Development, Post-World War II Commercial Development, Architecture & Design: Post-World War II Modernism (1919-2000), Post-World War II Commercial Development (1945-1969), then so is its *matching, functionally-related* Parking Garage) and expert opinion supported by facts. The evaluation was made by Francesca Smith, who meets the Secretary of the Interior’s Professional Qualification Standards in History and Architectural History and has a substantial design review record. Demolition of the Parking Garage at 620 North Brand Boulevard is expected to cause substantial adverse change to the significance of the National Register-eligible historical resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired (California Public Resources Code Section 5020.1(q)). The Parking Garage was specifically designed to correspond to the design of the main building, which since its completion has relied on the Parking Garage for the retail and office uses. Its low-scale concrete-finished exterior reflects the filleted exterior design of the larger building. Both have cornices, and the Parking Garage exterior even corresponds to the effect of the vertical exterior window arrangement.

3-2



Figure 1: Parking Garage at 620 North Brand Boulevard, view east. Note the simple base, filleted shaft separated by screens and the bracketed, wide upper frieze. The stepped out, framed entry portal on the right-hand side further echoes the Corporate Modern design style of the main building it was constructed to serve. Photograph January 2022.

We note the close correspondence in the Character Defining Features section, Overall Visual Character and Exterior Materials and Craftsmanship between the Home Savings Building and its Parking Garage using the consultant-prepared Historical Resource Technical Report (January 2022, p. 32). In the table below, review of the Overall Visual Character of the Home Savings Building and the Parking Garage reveals that the Parking Garage shares the main building's most important characteristics and materials. "Yes" in the tables below means that a concept applies to the Parking Garage as well:

Overall Visual Character

Home Savings Building

- Proximity to freeway
- Setback from west property line that continues around the office building
- Six story height
- Rectangular form
- Vertical orientation
- Symmetrical composition of each façade

Home Savings Building Parking Garage

- YES**
- Not applicable (NA), but consistent setbacks on east and west sides**
- NA two-story height, executed in proportion**
- YES**
- YES despite its low height**
- YES on Maryland side, one of two primary façades**

3-3

- | | |
|-------------------------------|--|
| • Flat roof with parapet | YES flat top deck with flat parapet |
| • Wide frieze | YES |
| • Narrow window bays | YES narrow openings with screens |
| • Centrally located entrances | NO but symmetrical entrances on Maryland side |

Exterior Materials and Craftsmanship

Home Savings Building

Home Savings Building Parking Garage

- | | |
|---|--|
| • Precast exposed concrete aggregate piers and paving | YES precast exposed concrete piers and vertical fillets
Concrete paving is normally poured-in-place |
| • Metal framed doors and windows | NA |
| • Two-toned window and spandrel glass | NA |

3-3

The consultant states the garage is not part of the resource because it was built outside the period of significance, which is 1969, the year the Homes Savings Building was completed. Let us leave aside the unjustifiably narrow period of significance that excludes a functionally related and more-over *matching* structure. The Parking Garage was built in 1970, and was designed Homolka and Associates, who were associated with the construction of the main building, which was designed by Heusel, Homolka and Associates. The senior partner, Francis J. Heusel died in 1968.

The Home Savings Building itself was not completed until 1970. The Inspection Record establishes final inspection completed by a Glendale City Building Inspector bearing the initials “AUR” on March 10, 1970 (Building Permit No. 40497, Inspection Record). It makes even less sense to consider the functionally related Parking Garage that was completed in 1970 not historically significant on the grounds it was completed *after* the main building, which was completed the same year. The consultant further erred in evaluating the Parking Garage separately, as though it were not an integral part of and moreover a contributor to the larger Home Savings property.

Based on these facts and our evaluation prepared by a qualified architectural historian, the Parking Garage is part of, and contributes to, the significance of the historic resource. Because of the proposed Parking Garage demolition and the setting impacts, the proposed project is expected to cause a significant effect on the environment, which should have been the conclusion by the Lead Agency.

Substantial adverse change in the significance of a historical resource *is* considered a significant impact on the environment (CEQA Guidelines Section 15064.5(b).). Substantial adverse changes means demolition, destruction, relocation or alteration of the resource or its immediate surround-

3-4

ings resulting in the significance of the resource being materially impaired. Significance of a resource materially impaired when the physical characteristics that convey its historical significance and that justify its designation as a historical resource are demolished or materially altered in an adverse manner.

3-4

The Lead Agency must prepare an Environmental Impact Report when substantial evidence in the record demonstrates that a project may have a significant effect on the environment.

Compliance with the Secretary of the Interior’s Standards for Rehabilitation

TGHS was dismayed to note that the consultant and the Staff reports prepared for the project applied only one of ten of the Secretary of the Interior’s Standards for Rehabilitation (Standards) to the proposed project, which is a serious oversight, a procedural omission and is absolutely necessary for any proposed project that would be built on the property of and abutting other historic resources. The cursory reference in the consultant’s report to Standard 9, with the puzzling equivocation that “the project *could be* considered ‘related new construction’” (p. 45, emphasis added), as though that were not precisely what a 24-story building would be, is simply not adequate and does not make sense (p. 41).

3-5

Nor does the assertion that the Standards “are not directly applicable because they are not the threshold for impacts” (p. 41). The Standards are codified both in the Glendale Municipal Code under definitions (Chapter 15.20 Historic Preservation, Section 15.20.020) as well as in the California Environmental Quality Act (CEQA). Indeed, rehabilitation projects that meet the Standards are generally, but not always considered categorically exempt from CEQA review. The Standards are nationally recognized and used as the best measurement to gauge potential impacts of a project, are always applicable for a project involving a historic resource under CEQA. Whether or not the Standards are the “threshold for impacts” is irrelevant. This project does not meet the Standards *because* it would result in substantial adverse impacts to a historic resource, not the other way around.

3-6

We note that nothing in the Staff Report addresses either historical resources’ setting or the massive changes proposed to those settings.

Absent a local or state definition for setting, it is a term of art specifically defined in National Register guidance as:

the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.

3-7

Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer’s concept of nature and aesthetic preferences.

The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as...vegetation; simple manmade features (paths or fences); and *relationships between buildings and other features or open space*.

These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings (National Park Service “How to Apply the National Register Criteria for Evaluation” 1990, revised 1995, emphasis added).	3-7
The current proposed project would permanently destroy the character of the property, including but not limited to its relationship to surrounding contributing features and its integral internal open space.	
While each of the Standards applies to the proposed project, Standards 1, 2, 4, 5, 9 and 10 are particularly germane and, as demonstrated below, would not be met or followed in the proposed project:	
1. A property will be used as it was historically or be given a new use that requires minimal change to the distinctive materials, features, spaces, and spatial relationships.	3-8
The Home Savings Building and its property include the landscaped surface parking lot and its functionally related, original, and matching Parking Garage (Parking Garage). Elements of the Home Savings Building’s property (Assessor’s Parcel No. 5643-018-032) and its distinctive matching contributing garage would be subject to demolition, which would clearly alter not only the Parking Garage itself, but the spaces between buildings, landscaping, parking lot and spatial relationships associated with the property. Each of those characteristics would be permanently lost by the construction of the out-of-scale new project.	
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.	3-9
Likewise, the currently proposed project would demolish both the extant open space and its original, functionally related, coordinated Parking Garage which clearly cannot be understood as retaining or preserving those contributing and character-defining features.	
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.	
Despite the consultant’s suggestions to the contrary, the Parking Garage is an original feature of the Home Savings property. While there is no clear known record of the landscaping in the related parking lot, its current planting plan and arrangements of lawn, foundation planting and trees with low, stepped stacked Roman blocks or bricks should be considered the historic baseline.	3-10
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property will be preserved.	
The Parking Garage’s distinctive features, as well as the concrete exterior features and finishes, including the board-formed concrete mushroom interior columns’ construction techniques, the stack bond concrete masonry unit end walls as well as other examples of that craftsmanship which characterize the Home Savings Parking Garage would be permanently lost.	3-11



Figure 2: Parking Garage interior view north. Note the fitted screens in the exterior openings (left) archaic stack bond endwalls (center and right), and square, full height support columns at center and right with yellow bases. Photograph January 2022.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the historic integrity of the property and its environment.

The proposed more than 460,000 square-foot (SF) new “addition” would certainly be related new construction. It would demolish, thereby destroying, the historic materials that characterize the property including the landscaped parking lot and the functionally-related Parking Garage.

3-12

10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The latest design for the proposed nearly half-a million SF “new addition,” which is both adjacent and undeniably related new construction, would require that all of Home Savings integral parking be destroyed. If the more than 460,000 SF addition was removed in the future, the essential form and integrity of the Home Saving Building property and its environment would be more than impaired; they would have more than four-story below-grade pits. The Home Savings Building would have no parking whatsoever, and worse, its related setting including the Parking Garage would be forever lost.

3-13

Another important historic resource impact we see has not been addressed is the very real potential for vibration-related damage to both historic properties (including differential settlement) during and in the immediate years following construction. Protection from other construction-related activities, such as equipment and vehicles striking buildings, over-spray of various materials, over-excavation of the soil and pile driving depths and methods will present a serious threat to the historic properties. Without a complete study by a qualified structural engineer who has a demonstrated specialty in the protection of historic buildings before and during construction directed by clear, concise mitigation measures that would ensure structural investigations, pre-construction surveys, continuous vibration monitoring with related stop-work orders that would trigger less vibration-intense equipment or methods, we can only assume that damage may well occur to the historic resources, which would be extremely close to the proposed project, its subterranean garage and whatever types of pilings will be proposed. This concern was voiced by Design Review Board Caro Minas, CE, GE, a geotechnical engineer, in the DRB meeting on January 13.

3-14

For these reasons, we believe this project as currently proposed does not comply with even the most basic principles in the Standards for Rehabilitation. This analysis was thoroughly reviewed for adequacy and accuracy by former Board of Directors and former Design Review Board member Francesca Smith, who meets and exceeds the Secretary of the Interior’s Professional Qualification Standards.

3-15

Downtown Specific Plan Compliance

The Glendale Downtown Specific Plan (DSP) contains Standards that direct:

B. The bulk of buildings shall be reduced through the articulation of building massing and building facades.

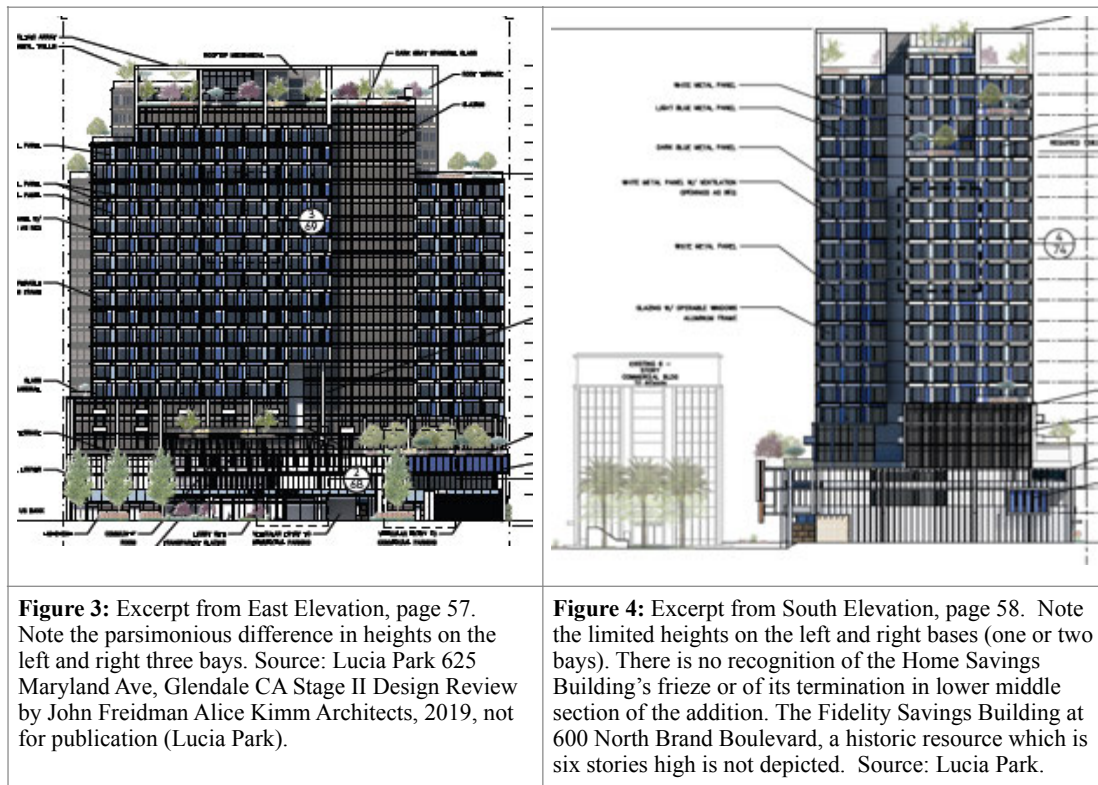
Articulation emphasizes the different visible aspects of the various parts of a building. Sometimes the effect completely obscures the sense of the whole, breaking it down into too many pieces, but in most cases, articulation creates a balance between the two. Articulation can also be expressed in recessed bays, which require giving up small amounts of valuable real estate. The modest articulation in the following figures emphasize the proposed building's nearly indefinable parts (Figure 1). There are three basic components, the base, equal and repetitive “grid” bay types on the left and right sides and the off-center, top and far left bays proposed as “dark gray spandrel glass.” The

3-16

only visible proposed enunciation of components, other than the obvious differences in materials, is in the difference in heights at the top floors of the proposed project, see Figures 3, 4, 5 and 6.

We also note that the proposed differences in color on the exterior of a high-rise, which is generally a difficult long-term maintenance choice, does not provide the necessary articulation. The proposed busy color scheme would provide some animation at an unnecessary long-term cost, but not the necessary articulation of massing required. Note that the differences in color are nearly lost at the scale depicted in the figures below.

3-16



D. High-rise facades (as defined in Chapter 30.33 of the Zoning Code) shall provide a substantial modulation or change of materials every 150 feet in length.

The material presented does not clearly show 150 foot intervals nor does it provide adequate scale to determine those measurements. Based on our 150 foot estimates used in review of elevations, the proposed design does not comply with the standard for the required substantial modulation in continuous walls or the requisite differences in materials.

3-17

G. To improve the consistency of scale on the streets, new buildings shall respond to the scale and placement of design features of earlier buildings adjacent to them. Such design features include but are not limited to cornice lines, colonnades, fenestration, and materials.

Review of the full design packet as well as Exhibit 1 and Figures 3, 4 and 5 reveals that that the project, as currently proposed, does not respond to the modest scale of the existing historic resources. The Home Savings Building has, among other character-defining features:

- a prominent cornice line,
- a raised, continuous exterior podium with low open, wide stairs,
- deep, full height exterior fins,
- a Parking Garage designed as a miniature interpretation of the main building, and
- an existing open parking lot.

Although the proposed design does incorporate some features of the Home Savings Building, there are opportunities to strengthen the connection with additional modifications.

K. Projects built adjacent to historic structures that are smaller in scale shall step down at the street wall to align with the existing cornice.

We see inadequate evidence in the proposed 24-story building design of any such response to the existing, established low-rise scale on the subject property block. To that end, little human scale is expressed in the proposed design.

Because the proposed cornice lines would not align with the historic buildings on either side, the proposed window bay rhythm and fenestration bear no relation to the existing, elegantly modulated Home Savings Building.

The proposed building at 24 stories would not “step down” as described to align with the existing cornices (see Figure 6). A string course or “a horizontal band... in a building forming a part of the design” is not a step, except on three bays at the slim north side which notably faces the freeway (*Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/stringcourse>. Accessed 9 Jan. 2022). In the section entitled “Building Design: Massing and Scale,” the Downtown Specific Plan directs in a diagram that “High rise massing should be divided to reduce overall bulk and step graciously down towards lower adjacent structures” (page 4-11). We see little stepping and no demonstrated evidence of design courtesy or deference toward the existing, low-rise historic resources.

3-18

3-19

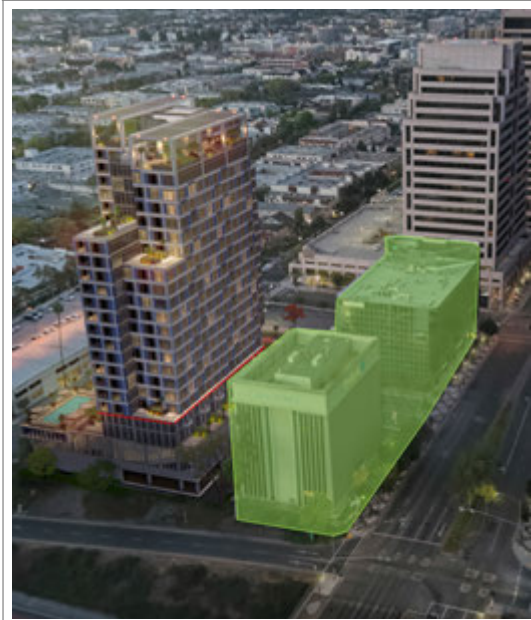


Figure 6: Annotated excerpt from page 8 of Exhibit 1, Stage II Final Design Review Packet. Proposed project string course is highlighted in a dashed red, the historic buildings at 600 and 620 North Brand in green. Note that the building immediately south of the proposed project (top right) has stepped volumes at beginning at the base which diminish in size sequentially from the wide base to the top floors, thus allowing the much taller, larger building to fit into the existing low-rise context. Source: “high aerial from northwest- looking south on Brand Blvd” Lucia Park 625 Maryland Ave, Clendale CA Stage II Design Review by John Freidman Alice Kimm Architects, 2019, not for publication.

The project Staff Report asserts “The project effectively utilizes off-set building forms, step-backs, façade modulations and floor plate reductions to lessen the appearance of its mass. The end volumes also step down at their outside corners in order to break down their overall massing, similar to several taller commercial buildings just to the south on the same side of Brand Boulevard (400-550 N. Brand, [Figure 7]).” The project provides the absolute minimum step-backs and doesn’t compare to those in the block to the immediate south.

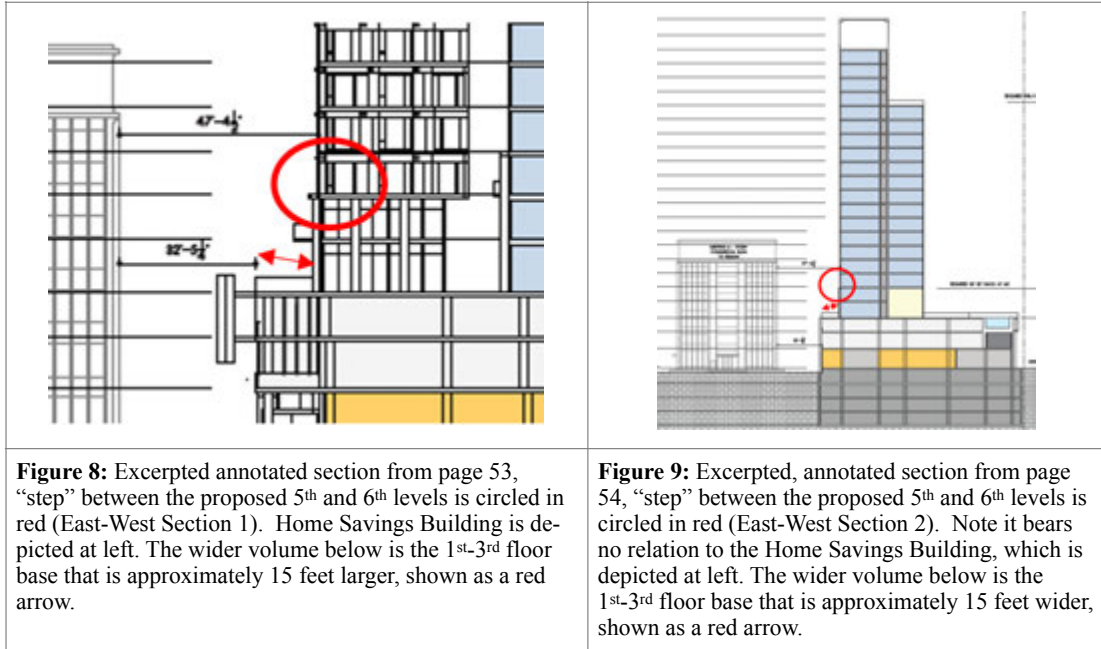
3-19

Figure 7: Rendering of 550 N Brand Boulevard, a 21-story building designed by HOK, Inc. and completed in 1989. It is located on the block immediately south of the proposed project. Note the five generous major steps in the design, as well as the different window rhythms, shapes and sizes of openings, the inverted entrance and corners that reduce the perceived mass of the Post-Modernist style building. Not for publication.



Additional details of the proposed “step” in the proposed project In Figures 8 and 9, and on pages 53, 56 and 57 of Exhibit 1, Stage II Final Design Review Packet reveal that the step it is no more than a difference in materials, applied at the same depths, embellished by a horizontal band. The proposed step is more window dressing than a demonstrable difference in dimension.

↕
3-19
↕



What review of the design packet reveals is that the proposed project steps “away” from the Home Savings Building by fewer than 15 feet, which is less than the length of standard parking spaces (red arrows, Figures 8 and 9). What the proposed project would actually “step back” from are the low-rise buildings on the east side of Maryland Avenue, by 20 feet (just 2 feet longer than a standard parking space).

3-19

Is the Proposed Project Eligible for a SCEA?

TGHS cannot determine whether the proposed project is being considered a Transit Priority Project under Senate Bill 375 (SB 375) and that would be the reason the Lead Agency is preparing a SCEA instead of an Environmental Impact Report (EIR). SB 375 provides several CEQA reform provisions, including streamlined review and analysis of residential or mixed-use projects consistent with the Sustainable Communities Strategy (SCS); modified review and analysis, through an expedited SCEA for Transit Priority Projects (TPPs) that are consistent with the SCS; and a complete CEQA exemption for TPPs that are consistent with the SCS and meet a specific list of other requirements. A project does not qualify for the CEQA streamlining exemption if it can be expected to cause impacts to historic resources, as is the case here.

3-20

Conclusion

We are grateful for the opportunity to comment. We at TGHS are not opposed to new development as the city desperately needs new housing options for its residents. We do believe that the current proposal is detrimental to current historical resources, including but not limited to demolishing the Home Savings garage that was developed and designed as part of the bank building.

3-21

Sincerely,



John Schwab-Sims
Vice President, Advocacy
The Glendale Historical Society

COMMENT LETTER NO. 3:

The Glendale Historical Society
John Schwab-Sims
Vice President, Advocacy
P.O. Box 4173
Glendale, CA 91202
March 9, 2022

Response to Comment 3-1

This introductory comment states the parking garage is an original component and character-defining feature of the of the Home Savings & Loan property (Chase Building), the proposed Project does not conform to Secretary of the Interior’s Standards for Rehabilitation, is inconsistent with the Downtown Specific Plan requirements, and the preparation of a Sustainable Communities Environmental Assessment (SCEA) may not have been appropriate.

With respect to the existing parking garage, the construction history of the Project site is documented by the building permit record. The permit for the Chase Building was issued on December 11, 1968, and the permit for the parking garage was issued on June 19, 1970. Thus, the parking garage is not an original component of the Chase Building. Copies of these permits are provided in Appendix H to the SCEA, Appendix C to this Responses to Comments, and also provided on the following pages.

The January 2022 Historical Resources Technical Report (Historic Report; Appendix F of the SCEA) recognizes that the Chase Building and parking garage were designed by the same architect. However, no information was found during the preparation of the Historic Report indicating the Project site was master planned with the Chase Building, parking garage, and surface parking lots conceived as a single architectural entity. The parking garage is an ancillary building that it visually consistent with the Chase Building but does not add meaning to the reason the Chase Building was determined to be a historical resource: its role in the developmental history of downtown Glendale.

The commenter alleges the parking garage was ignored in the 2017-18 South Glendale Historic Resource Survey (“Survey”), prepared as part of the South Glendale Community Plan and was ignored in the Historic Report. That is not the case. In both cases, the documents analyzed the historicity of the parking garage and concluded it was not a significant character-defining feature of the Chase Building or an individually eligible historical resource. The survey consultant has submitted a letter to verify this finding that is provided in Appendix I to the SCEA, Appendix D this Responses to Comments, and provided on the following page.

JOB ADDRESS: 247-5970

630 BRAND BLVD C.O.D

NUMBER

STREET

APPLICATION FOR A
BUILDING PERMIT

BUILDING SECTION, PUBLIC WORKS DIVISION
CITY OF GLENDALE, CALIFORNIA

CONTRACTOR HOME SAVINGS & LOAN	STATE LIC. NO.
MAILING ADDRESS 9229 WILSHIRE, BEVERLY HILLS	TEL. NO. CR 36666
ARCH. ☒ ENGR. HEUSEL HOMOLKA & ASSOC	STATE LIC. NO. C-25C
MAILING ADDRESS 666 E. OCEAN SUITE 1402 LONG BEACH	TEL. NO. 437-1234
OWNER HOME SAVINGS & LOAN	TEL. NO. CR 36666
MAILING ADDRESS 9229 WILSHIRE BEVERLY HILLS	

DESCRIPTION OF WORK

NEW ☒ ADD'N ☐ ALTER. ☐ REPAIR ☐ DEMOLISH ☐		
FLOOR AREA (SQ. FT.) 47909	NO. OF STORIES 6	NO. OF DWELLING UNITS NONE
PRES. BLDG. USE	PROPOSED BLDG. USE OFFICE BLDG	
DESCRIBE WORK TO BE DONE CONSTRUCT 6 STORY OFFICE BUILDING		

BUILDING

NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF ORIGINAL COPY ONLY

EXTERIOR WALL MATERIAL CONCRETE	ROOF FRAMING MATERIAL CONCRETE
PARTITIONING MATERIAL STL. STUDS & GYP. BD	ROOF COVERING MATERIAL COMPO & GRAVEL
LOT	NO. OF EXISTING BLDGS. ON LOT
WIDTH	DEPTH

VALUATION NOTE: Include Labor, Mat., Wiring, Plumb., Heat, Etc. **\$950,000.00**

INFORMATION PROVIDED BY BLDG. SECTION				
USE ZONE		FIRE ZONE		TRACT
F-2		F-2		93
REQ'D SET BACKS	FRONT	RIGHT SIDE	LEFT SIDE	REAR
TYPE OF CONSTR. I		SPECIAL CASE NO.		
Approval & Information by Others		EASEMENT		
CITY ENGINEER		None Engr		
DIST. FACE OF CURB TO P.L. 15 FT.		SEWER DRIVEWAY		
PUBLIC SERVICE		PLANNING		
WATER F.C.K. ELECTRIC and				
P.C. FEE 238.25		PERM. PLAN APPROVED ☒ CHECKERS APPROVAL		
PERMIT FEE 1076		W/OUS PLAN ☒		

I have carefully read and examined the above application and find the same to be true and correct. All provisions of the Laws and Ordinances governing building construction will be complied with whether specified herein or not. No person shall be employed in violation of the Labor Code of the State of California. I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.

HEUSEL, HOMOLKA & ASSOC.
By *Frederick S. Kinsale*
SIGNATURE OF OWNER OR AUTHORIZED AGENT

PERMANENT

CASH M.O. NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESCRIBED HEREIN.

40497 OCT 8 68 FC 53825A
42816 DEC 11 68 BP 1,076.50

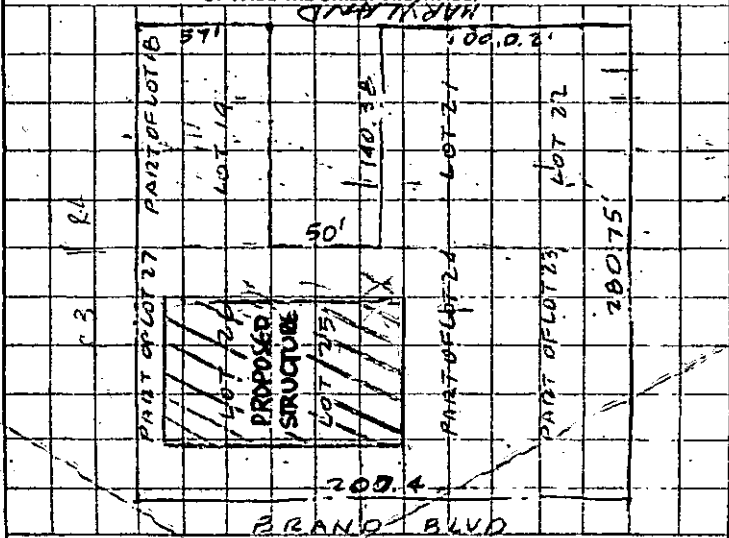
INSPECTION REPORT

ITEM	INSPECTOR	DATE
SET BACKS FRONT <i>FR</i> SIDE <i>FR</i> SIDE <i>FR</i> REAR		
TRENCHES: WIDTH <i>FR</i> DEPTH <i>FR</i>	<i>QUR</i>	<i>2/24/79</i>
1st. FLOOR JOIST		
FRAMING		
FINAL	<i>QUR</i>	<i>3/10/76</i>

PARTIAL OR MISC. INSPECTIONS

Partial Pads	awk	1/2/69
Partial Pads	awk	1/9/69
Head Beam	awk	1/31/69
Steel as marked	awk	2/17/69
Steel as marked	awk	2/19/69
71 Wall + 1 st Slab	awk	3/6/69
2 nd floor Beam + steel	awk	3/26/69
2 nd floor Column steel	awk	4/2/69
Integrip steel	awk	4/4/69
3 rd floor steel	awk	4/21/69
4 th floor steel	awk	5/14/69
4 th floor steel	awk	5/26/69
5 th floor wall steel	awk	6/11/69
6 th floor steel	awk	7/7/69

NOTE: LOCATE ALL STRUCTURES ON LOT, MAKE BOTTOM OF PAGE THE STREET FRONTAGE.



Date May 11, 1971Certificate No. 7777

CERTIFICATE OF USE AND OCCUPANCY

FOR NEW STRUCTURE OR BUILDING

CITY OF GLENDALE

Name Home Savings & LoanUse & Occupancy Address 621 N. MarylandUse Parking Structure Occupancy F-3 Type Bldg. II

THIS CERTIFIES THAT SO FAR AS ASCERTAINED BY OR MADE KNOWN TO THE BELOW NAMED PARTIES, THE BUILDING AT THE ABOVE ADDRESS COMPLIES WITH THE APPLICABLE REQUIREMENTS OF THE STATE HOUSING ACT, ALL BUILDING, PLUMBING AND ELECTRICAL ORDINANCES, THE FIRE PREVENTION CODE, AND THE ZONING APPENDIX OF THE GLENDALE MUNICIPAL CODE, AND THAT ALL FLOOR LOAD AND ROOM CAPACITY SIGNS HAVE BEEN INSTALLED.

CLYDE A. BLODGETT
Superintendent of Buildings

WYLIE H. EATON
Zoning Administrator

JOB ADDRESS

612-623 NO. MARYLAND AVE

NUMBER

STREET

APPLICATION FOR A
BUILDING PERMIT C.O.I.BUILDING SECTION, PUBLIC WORKS DIVISION
CITY OF GLENDALE, CALIFORNIA

CONTRACTOR

CITY LIC. NO.

HOME SAVINGS & LOAN

MAILING ADDRESS

TEL. NO.

9245 WILSHIRE BLVD BEVERLY HILLS

PTB-4455

ARCH.

STATE LIC. NO.

ENGR. FRANK HOMOLKA

C1829

MAILING ADDRESS

TEL. NO.

666 E. OCEAN BLVD L.B.

HE 71234

OWNER

TEL. NO.

HOME SAVINGS & LOAN

MAILING ADDRESS

WILSHIRE BLVD LA

CONSTRUCTION LENDER
& BRANCH

MAILING ADDRESS

DESCRIPTION OF WORKNEW ☒ ADD'N ☐ ALTER. ☐ REPAIR ☐ DEMOLISH ☐FLOOR AREA
(SQ. FT.)

37,800

NO. OF
STORIES

2

NO. OF DWELLING
UNITS

0

PRESENT BLDG. USE

PROPOSED BLDG. USE

PARKING STRUCTURE

DESCRIBE WORK
TO BE DONE

CONSTRUCT NEW PARKING

STRUCTURE

LOT

LOT

NO. OF EXISTING

WIDTH 150

DEPTH 140.66

BLDG. ON LOT

0

NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF ORIGINAL COPY ONLY

VALUATIONNOTE: Include Labor, Mat.,
Wiring, Plumb., Heat, Etc. \$200,000

MAP BK.

5644

PAGE

34

PARCEL #

6

LOT NO.

51433

BLOCK NO.

TRACT

MENUT

USE

ZONE

PRF

ZONE

2

OCCU

F3

REQ'D

FRONT

RIGHT SIDE

LEFT SIDE

REAR

SET

BACKS

12'

0'

0'

28'

TYPE OF

CONSTR.

II

SPECIAL

CASE NO.

50344

APPROVAL & INFORMATION BY OTHERS

CITY ENGINEER

EASEMENT

NONE IN ENGR

DIST. FACE OF

SEWER

DRIVE

CURB TO P.I.

10

FT.

YES

NO

OVER

place

PUBLIC SERVICE

PLANNING

WATER

FCK

ELECTRIC

DFD

P.C. FEE

163

PERMIT FEE

PERM. PLAN

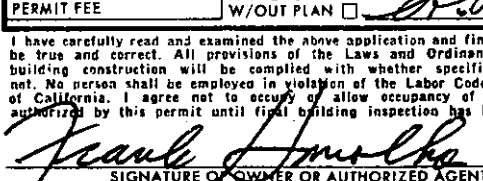
APPROVED

W/OUT PLAN

CHECKER'S APPROVAL

R.P.H.

I have carefully read and examined the above application and find the same to be true and correct. All provisions of the Laws and Ordinances governing building construction will be complied with whether specified herein or not. No person shall be employed in violation of the Labor Code of the State of California. I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.


 SIGNATURE OF OWNER OR AUTHORIZED AGENT
PERMANENT

CASH M.O. PLAN CHECK VALIDATION

NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESENTED HEREIN.

 16325 R
 11250
 59284 MAY 19 70 PC
 60424 JUN 19 70 PC

 223,000
 35150
 60425 JUN 19 70 BP

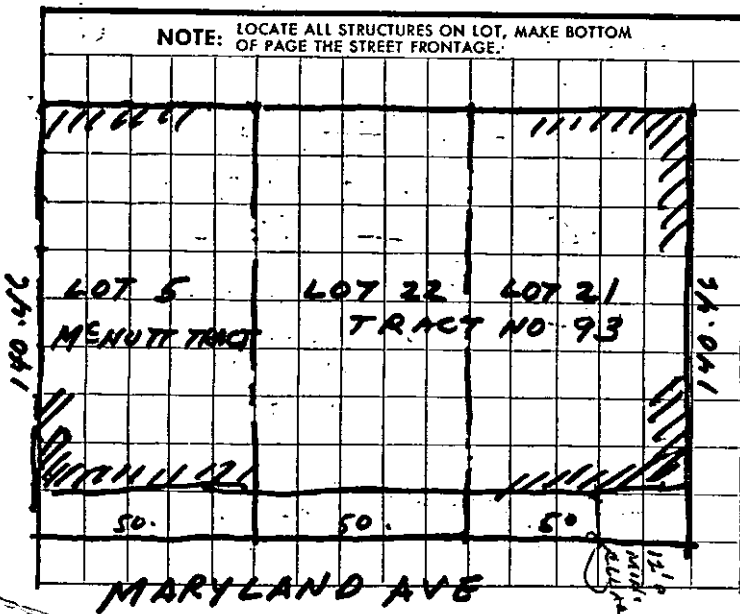
INSPECTION RECORD

ITEM				INSPECTOR	DATE
SET BACKS FRONT	L. SIDE	R. SIDE	FIELD CHECK REAR		
12	0	0			
TRENCHES: WIDTH <i>p.c.</i> DEPTH <i>p.c.</i>					
1st. FLOOR JOIST: SLAB					
FRAMING					
FINAL <i>U & O</i>				<i>[Signature]</i>	2-17-71

PARTIAL OR MISC. INSPECTIONS

<i>Footings O.K.</i>		
<i>N & S walls only</i>	<i>J.M.</i>	<i>7/23/70</i>
<i>2nd flr on masonry wall.</i>	<i>J.M.</i>	<i>7/28/70</i>
<i>2nd flt O.K.</i>		
<i>E. & W. S. side</i>	<i>J.M.</i>	<i>8/3/70</i>
<i>& 1/2 N. side</i>		
<i>O.K. Steel for</i>		
<i>S & W. & North</i>		
<i>wall for platform</i>	<i>J.M.</i>	<i>8/5/70</i>
<i>partial steel in</i>		
<i>inner walls</i>	<i>J.M.</i>	<i>8/10/70</i>

NOTE: LOCATE ALL STRUCTURES ON LOT, MAKE BOTTOM OF PAGE THE STREET FRONTAGE.



City of GLENDALE

PLANNING DIVISION
JEFFREY HOLLAND
PLANNING DIRECTOR



CALIFORNIA

633 EAST BROADWAY
GLENDALE, CALIFORNIA 91205
TELEPHONE 244-4651
245-6871

April 17, 1970

Home Savings and Loan Association
9245 Wilshire Boulevard
Beverly Hills, California

Re: Case No. 5034-U

Gentlemen:

Pursuant to the provisions of Article IX, Appendix, Glendale Municipal Code, the Zoning Administrator on April 8, 1970, conducted and closed a hearing, taking under submission the application for Variance to Sections 304, 305, 407 and 806, Zoning Appendix, Glendale Municipal Code, to permit a two-story split level parking building with no side or rear yards and a 12-foot front setback on Lots 21 and 22, Tract No. 93, and Lot 5, McNutt Tract, being 613-623 No. Maryland Avenue, which is in the R4 Multiple Dwelling and P Automobile Parking Zones and No. 3 Fire Zone.

After considering the evidence presented with respect to this application, under the provisions of Section 900, Appendix, the Zoning Administrator has made the following findings:

- I. The strict application of the provisions of the ordinance would result in practical difficulties or unnecessary hardship inconsistent with the general purposes and intent of the ordinance in that the ~~zone would permit such a structure where provided~~ for a dwelling building or a hotel and would permit an open parking area for a commercial use but technically precludes concealment of the automobiles where provided for commercial uses.
- II. There are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood in that 63 per cent of the frontage in the block on the west side of Maryland

Home Savings and Loan Association

April 17, 1970

Avenue is already developed with public parking areas and 81 per cent of the entire block is developed commercially.

III. The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or neighborhood in which the property is located in that the buildings will be of pleasing design, well landscaped, set back 3 feet more than required for open parking areas and will help alleviate parking congestion caused by a rapid influx of new businesses into the area.

IV. The granting of the variance will not be contrary to the objectives of the ordinance in that the requirements of Article IX, Appendix, Glendale Municipal Code, have been found in favor of the application.

It is, therefore, the determination of the Zoning Administrator on April 17, 1970, that this application for variance be granted subject to compliance with the following conditions:

1. That all construction be substantially in accordance with the plot plan submitted;
2. That no openings be allowed on the side walls where the structure abuts other private properties;
3. That screening or walls be provided on the lower levels and a parapet wall be provided on the top deck of sufficient height to conceal the parked vehicles from general view from Maryland Avenue;
4. That the 12-foot deep setback area on Maryland Avenue be landscaped, including the installation of specimen trees and adequate watering devices;
5. That the building be of modern architecture and pleasing design;
6. That any lights not shine or reflect onto other properties;
7. That any signs on the Maryland Avenue frontage be approved by the Zoning Administrator and be kept to a minimum necessary for identification and directions;

Home Savings and Loan Association

April 17, 1970

8. That any requirements of the City Traffic Engineer be met with respect to ingress and egress;
 9. That vehicle "stop" signs be provided at each driveway exit; and
 10. That final plans, including a landscaping and watering device plan, be approved by the Zoning Administrator prior to issuance of a building permit.
-

Under the provisions of Article X, Appendix, the determination of the Zoning Administrator does not become effective for a fifteen-day period. This period of time is allowed for any person aggrieved by this determination to file a written appeal, in triplicate on forms which shall be provided upon request, to the Board of Zoning Adjustments.

The rights and privileges granted by this variance will expire one year from the date of this grant unless promptly commenced and used in full compliance with the law and all conditions of approval.

Yours very truly,

Robert C. Robertson,
Planning Director



W. H. Eaton, Zoning Administrator

WHE:BFF:ep

REGISTERED MAIL

cc: City Clerk; Building Section; Traffic Engineer; H. B. Sharp;
John M. Lawson



NUMBER	STREET
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued. (Sec. 3097, Civil Code.)	
CONSTRUCTION LENDER & BRANCH	
MAILING ADDRESS	
CITY	ZIP

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason: (Sec. 7011.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law, Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom, and the basis for the alleged exemption. Any violation of Section 7011.5 by any applicant for a permit, subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).)

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale. (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project. (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec. _____ B. & P.C. for this reason: _____

Signature: _____ Owner

33348014-83/12/91T07L-181-74

PLAN CHECK VALIDATION

WORKERS' COMPENSATION DECLARATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof. (Sec. 3800, Labor Code.)

Policy No. _____ Company _____

CERTIFICATE OF EXEMPTION FROM WORKERS' COMPENSATION INSURANCE
(This section need not be completed if the permit is for one hundred dollars (\$100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

NOTICE TO APPLICANT: If, after making this Certificate of Exemption you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

Applicant: _____ Date: _____

I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Signature of Applicant: _____ Date: _____

Form PWB 51 (Rev 8/88)

PERMANENT

621 N. MARYLAND AVE.

NUMBER	STREET
APPLICATION FOR A BUILDING PERMIT	
BUILDING SECTION, PUBLIC WORKS DIVISION	
633 E. BROADWAY, CITY OF GLENDALE, CA 91206-4390 (818) 956-4835	

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license number is _____

CONTRACTOR: <u>FRANK HOMOLKA ASSC</u>	STATE LIC. NO. <u>370124</u>
MAILING ADDRESS: <u>800 E OCEAN BLVD #105</u>	TEL. NO. <u>215 4371234</u>
CITY: <u>LONG BEACH CA 90802</u>	ZIP: <u>90802</u>

OWNER: <u>HOME SAVINGS OF AMERICA</u>	STATE LIC. NO. <u>213 437-1234</u>
MAILING ADDRESS: <u>4900 RIVERGRADE RD</u>	TEL. NO. <u>818 8147404</u>
CITY: <u>IRVING, CA</u>	ZIP: <u>91706</u>

DESCRIPTION OF WORK

NEW ☐	ADDN ☐	ALTER ☒	REPAIR ☐	DEMOLISH ☐
FLOOR AREA INCR. OR DECR. (SQ. FT.)	NO. OF STORIES	NO. OF DWELLING UNITS		
PRESENT BLDG USE <u>OFFICE BLDG</u>		PROPOSED BLDG USE		

DESCRIBE WORK TO BE DONE: CUT NEW OPENING IN PARKING

STRUCTURE WALL - WIDEN DRIVEWAY

LOT WIDTH: <u>207</u>	LOT DEPTH: <u>280</u>	NO. OF EXISTING BLDGS ON LOT: <u>1 + PARKING STRUT</u>
-----------------------	-----------------------	--

NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF THIS COPY ONLY

VALUATION	NOTE: Include Wiring, Plumb., Heat, Etc.	\$ <u>30,000</u>
-----------	--	------------------

WORKERS COMPENSATION EXPIRE DATE

MAP BK. <u>14</u>	PAGE <u>18</u>	PARCEL # <u>31</u>	SEC. SH. <u>28</u>	UBC Ed
LOT NO. <u>21</u>	BLOCK NO. <u>93</u>	TRACT. <u>+ MCNITT</u>		
USE ZONE <u>ER-1</u>	FIRE ZONE <u>3</u>	OCCUPANCY	TYPE OF CONSTR.	OCC LOAD
REQ'D SET BACKS	FRONT	RIGHT SIDE	LEFT SIDE	REAR
		<u>N/A</u>		
CITY ENGINEER EASEMENT				PKG SPC
DIST. FACE OF CURB TO P.L. _____ FT.				SEWER
				YES NO GRADING
PUBLIC SERVICE				PLANNING
WATER _____ ELECTRIC _____				
P.C. FEE _____		PERM. PLAN ☐ CHECKER'S APPROVAL		
PERMIT FEE _____		W/OUT PLAN <u>8</u>		

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Driver's License No. _____ Signature of Applicant: Joe Kelly Date: 12 MAR '91

PERMANENT

NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESCRIBED HEREIN.

5/16
2-88728014-06/06/91T07L-181-74

Date 12-1-77Certificate No. 702**CERTIFICATE OF USE AND OCCUPANCY****FOR NEW STRUCTURE OR BUILDING
CITY OF GLENDALE**Name None - 100% cash loanUse & Occupancy Address 620 E. Grand Ave.Use Office Building Occupancy N-2 Type Bldg. I

THIS CERTIFIES THAT SO FAR AS ASCERTAINED BY OR MADE KNOWN TO THE BELOW NAMED PARTIES, THE BUILDING AT THE ABOVE ADDRESS COMPLIES WITH THE APPLICABLE REQUIREMENTS OF THE STATE HOUSING ACT, ALL BUILDING, PLUMBING AND ELECTRICAL ORDINANCES, THE FIRE PREVENTION CODE, AND THE ZONING APPENDIX OF THE GLENDALE MUNICIPAL CODE, AND THAT ALL FLOOR LOAD AND ROOM CAPACITY SIGNS HAVE BEEN INSTALLED.

CLYDE A. BLODGETT
Superintendent of Buildings

WYLIE H. EATON
Zoning Administrator

HISTORIC RESOURCES GROUP

12 S. Fair Oaks Avenue, Suite 200
Pasadena, CA 91105

Tel 626-793-2400
historicresourcesgroup.com

June 2, 2022

Jay Platt
Senior Urban Designer
Glendale Community Development Department
633 E. Broadway, Rm. 103
Glendale, CA 91206

RE: Home Savings and Loan, 620 N. Brand Blvd.

Dear Mr. Platt:

This letter provides clarification of the methodology applied by HRG in our 2017 South Glendale Historic Resources Survey finding for the former Home Savings and Loan building located at 620 N. Brand Boulevard. We found the building eligible for listing in the Glendale Register under local Criterion 1 as an example of commercial development associated with the post-World War II growth of Glendale, and under local Criterion 3 as a good example of Corporate Modern commercial architecture.

Our finding applies only to the six-story office building constructed in 1969 and does not include the adjacent surface parking lot and parking structure. Although designed and constructed almost concurrently with the tower, the parking lot and parking structure are standard features of late-20th century commercial development, virtually identical to similar features on any number of contemporary properties. They are not essential elements of a distinctive site composition and do not have a formal relationship to the office building or to each other; they are simply ancillary, utilitarian features located as needed on the property.

The parking structure's exterior has a pattern of vertical fins that were added to mimic the mullions of the bank building but is otherwise a standard, utilitarian parking structure. National Park Service guidance states that a building is not representative of a particular style, and therefore is not eligible for historic designation, if it has some detailing of the style only as a surface application, rather than fully integrated with the overall design. The parking structure's minimal exterior detailing was clearly applied to resemble

the design of the adjacent Corporate Modern office building, but it is otherwise a typical parking structure; the essential features of Corporate Modern architecture are not fully integrated into its overall design.

The parking structure therefore does not possess high artistic value, does not embody the distinctive characteristics of Late Modern architecture, and does not express Home Savings and Loan's unique use of architecture to identify and build their brand in communities across Southern California in the 1960s. For these reasons we determined that the parking structure and surface parking lot do not contribute to the historic character and significance of the property, and that only the six-story bank building is eligible for designation. If the parking structure were to be demolished, the historic integrity and significance of the bank building would be unimpaired and the property would remain eligible for designation.

Please do not hesitate to contact me if you have any questions or need any additional information.

Sincerely,

A handwritten signature in dark ink, reading "Christine Lazzaretto". The signature is fluid and cursive, with the first name "Christine" being more prominent than the last name "Lazzaretto".

Christine Lazzaretto
Managing Partner

The Chase Building was found to be significant because it was an office tower built directly adjacent to the then-new 134 Freeway. This served as a signpost to passing motorists not only for Home Savings & Loan but also for the growth of Glendale's commercial sector, helping to establish today's downtown skyline. The parking garage is not visible from the freeway and does not contribute to this aspect of the office tower's significance. Despite the commenter's claim that the parking garage "matches" the Chase Building, both its design and material palette reflect a much more modest, visually superficial take on the tower's Corporate Modern/New Formalist design to the point that it was not found to be a significant feature of the site in either the Survey or the Historic Report.

As defined in *Preservation Brief No. 17: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*, character-defining features are the architectural components that contribute to a building's sense of time and place. The Brief explains even when buildings are historically rather than architecturally significant, like the Chase Building, it is the tangible elements that embody the associations with specific events that are character defining and it is those tangible elements both on the exterior and interior that should be preserved.⁴³ The parking garage is not a character-defining feature of the Chase Building because it does not convey the historic associations with postwar commercial development. The parking garage has some of the same visual qualities as the Chase Building but none of the historic associations as a high-rise office building oriented toward the freeway. The parking garage is not individually eligible as a historical resource because it does not meet any of the established criteria for significance under national, State, or local historic registers.

As discussed further in Response to Comment 3-5 below, the Secretary of the Interior's Standards for Rehabilitation (Standards) provide guidance for the analysis of historical resources under CEQA; however, while the Standards are a series of best practices for the rehabilitation of historical resources, the Standards are not identified or recognized in CEQA or the CEQA Guidelines as the thresholds for determining significant impacts on historical resources.

As discussed in Responses to Comments 3-16 through 3-19, below, the proposed Project conforms with all applicable goals, policies, and standards in the Downtown Specific Plan.

As the parking garage does not meet the CEQA definition of a historical resource because it is not listed and has not been determined to be eligible for listing under national, State, or local historic registers, its demolition would not result in a significant impact as stated in the Historic Report and SCEA. Based on

⁴³ Lee H. Nelson, "Preservation Brief #17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character," US Department of the Interior, National Park Service, Cultural Resources, 1.

this analysis, the proposed Project would not result in a potentially significant impact on historical resources, and therefore the use of a SCEA for the proposed Project is appropriate under CEQA.

As discussed in Section 5.1, Aesthetics, in the SCEA, the available views in the vicinity of the Project site are largely constrained by existing high-rise buildings surrounding the site, including the six-story Chase Building located on the Project site to the northwest and the 21-story commercial office building located to the south of the Project site. Photographs were taken showing the current views of the Project site, Verdugo Mountains, and Griffith Park. Griffith Park is not currently visible from the portion of downtown Glendale where the Project site is located. The Verdugo Mountains are partially obstructed and only clearly visible along Brand Boulevard in the vicinity of the Project site. As there are no currently unobstructed views of the Verdugo Mountains or Griffith Park from the portion of downtown Glendale where the Project site is located, proposed Project development would not result in a substantial effect on any existing scenic vista.⁴⁴ For these reasons, the SCEA concluded the proposed Project would result in less than significant impacts to available scenic vistas or the visual character of the area.

Response to Comment 3-2

The Glendale Historical Society (TGHS) suggests the parking garage is a character-defining feature of the Chase Building because it is functionally related. “Functionally related” is a National Park Service (NPS) term from guidelines for reviewing applications for federal rehabilitation tax credits. Even though this is not a tax credit project, the term “functionally related” still has meaning in that the garage was built to provide parking for the Chase Building. This relationship, however, does not automatically connote significance. As discussed in Response to Comment 3-1, the functionally-related parking garage does not contribute to the historic significance of the site and is an ancillary feature rather than a character defining feature that contributes to the historical meaning of the Chase Building.

TGHS states their evaluation was conducted by Francesca Smith, who meets the Secretary of the Interior’s Professional Qualification Standards in History and Architectural History. The Historic Report was prepared by Teresa Grimes of Teresa Grimes Historic Preservation, who also meets the Secretary of the Interior’s Professional Qualification Standards in History and Architectural History (see resume in Appendix F to the SCEA⁴⁵). Jay Platt, the City’s Principal Planner, also meets these qualifications.

⁴⁴ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-5. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁴⁵ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

Under Public Resources Code Section 21155.2, a SCEA is subject to the substantial evidence standard as defined in CEQA Guidelines Section 15384 as follows:

- (a) *“Substantial evidence” as used in these guidelines mean enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence.*
- (b) *Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.⁴⁶*

The SCEA and the Historic Report, the latter prepared by Teresa Grimes, provided facts, reasonable assumptions based on facts and Ms. Grimes’ opinion supported by facts that the parking garage is not a contributor to, or a significant part of, the Chase Building as a historical resource defined by CEQA. The City can rely on this substantial evidence to support its determination, even if other opinions are offered by others.⁴⁷ While Ms. Grimes and Francesca Smith can offer their opinions on the parking garage as discussed above and in Responses to Comments 3-1 through 3-21, where TGHS’s and Francesca Smith’s conclusions are not supported by facts or reasonable assumptions predicated upon facts these conclusions are not considered substantial evidence.

TGHS and Francesca Smith indicate their belief that the parking garage is a “contributor to or significant part of the historical resource.” To make this case, they first claim as a “fact” the date of the parking garage’s construction and its design by the architect of the Chase Building. It is a fact that the construction dates of the office tower and the parking garage are not identical (see Response to Comment 3-1). Even if they were, the fact that they were built close in same time and designed by the same person does not unequivocally establish historic significance. TGHS and Francesca Smith next claim significance for the parking garage with a “reasonable assumption predicated on facts” that “if the main building is significant under the theme of Post-World War II Commercial Development (1945-1969), then so too is its *matching, functionally-related* Parking Garage.” [commenter’s emphasis] This conditional relationship is

⁴⁶ CEQA Guidelines Section 15384. Available at: https://www.califaep.org/statute_and_guidelines.php. Accessed March 2022.

⁴⁷ *National Parks & Conserv. Ass’n v County of Riverside* (1999) 71 CA4th 1341, 1364 (EIR’s methodology for analyzing environmental impact must be upheld if supported by substantial evidence in record even though difference of opinion among experts exists).

unsubstantiated and is not borne out in historic preservation practice: a functionally-related ancillary building does not *ipso facto* contribute to the significance of a site's primary building, especially where, as here, there is no evidence the Chase Building's historicity will be materially impaired by demolition of the parking garage for the Project.

The commenter continues with the assertion that the expert opinion of Francesca Smith demonstrates that demolition of the parking garage will have a substantial adverse change on the historical resource. To make this case, the commenter cites Smith's assertion that the garage was designed to "correspond to the design of the main building," going on to mention several design similarities. As discussed in Response to Comment 3-1, the parking garage was clearly designed to be visually consistent with the Chase Building – which is a historical resource - but both the design and material palette of the garage reflect a much more modest, visually superficial take on the Chase Building's Corporate Modern/New Formalist design. Aside from the presence of vertical fins at two facades and a cornice band that are evocative of the Chase Building, the parking garage is not a "matching" garage. TGHS's and Francesca Smith's focus on visual similarities do not provide any facts or reasonable assumptions based on fact that the garage provides the site with any historic significance beyond that found at the Chase Building, and they do not show that demolition of the garage would cause a significant adverse change to that significance or materially impair the ability of the Chase Building to qualify for listing in national, state, or local historic registers.

Response to Comments 3-3

These comments note the similarities of some design features in the Chase Building and the parking garage. However, the comments do not demonstrate what gives these similarities any historic significance. The table the commenter provides contains a factual error: the vertical fins at the garage are not built of precast concrete units (which implies a stronger similarity to the fins at the Chase Building) but are instead formed from stucco on metal lath. The Historic Report acknowledges that the design of the parking garage is visually consistent to the Chase Building; however, the salient point is that the parking garage does not contribute to the significance of the Chase Building. The Chase Building was determined to be significant under Criterion A/1/1 as an important commercial property type that represents the growth of downtown Glendale. The parking garage has some of the same visual qualities as the Chase Building, but none of the historic associations with high-rise construction along the freeway,

as discussed in the Historic Report (Appendix F to the SCEA) and the SCEA and elaborated in Response to Comment 3-4.^{48 49}

Response to Comment 3-4

The comment addresses the period of significance of 1969, as identified in the Historic Report, alleging it is “unjustifiably narrow”. Single-year periods of significance are not uncommon.⁵⁰ The Chase Building was identified in the Historic Report as significant for its association with the development of Glendale’s commercial downtown. In this case a single-year period of significance is appropriate as it marks the singular moment when the Chase Building was a new commercial tower built adjacent to the then-new freeway, signaling new downtown growth to passersby. *Id.* This meaning did not change over time and expanding the period of significance to capture the construction of the parking garage, which the Historic Report has determined is not a character-defining feature of the site, would not be appropriate. Even if the parking garage were an exact contemporary of the office tower, its construction during the latter’s period of significance would not automatically render it significant. According to the Los Angeles County Office of the Assessor, the Chase Building was completed in 1969; however, the Certificate of Occupancy was not issued until March 10, 1970.⁵¹ Whether the year is 1969 or 1970 is irrelevant. The period of significance is the date the Chase Building was completed.⁵²

Based on the in-depth analysis in the Historic Report as supported by the 2017-2018 Survey and 2014 South Glendale Historic Context, the parking garage does not meet the CEQA definition of a historical resource as an individual resource, its demolition would not therefore result in a significant impact. Even if the parking garage was a character-defining feature of the Chase Building and the integrity of setting was partially lost by its demolition, the Chase Building would retain the other six aspects of integrity, along with other aspects of its setting, and continue to convey its significance as an example of a postwar commercial property type and, therefore, would continue to be an eligible historical resource. For this

⁴⁸ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Pg. 33. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

⁴⁹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-55. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁵⁰ Page 44 of *National Register Bulletin #16A* states: “Some periods of significance are as brief as a single year.” “Base the period of significance on specific events directly related to the significance of the property, for example, the date of construction for a building significant for its design or the length of time a mill operated and contributed to local history.” McClelland, Linda, Carol D. Shull, James Charleton, et al. *National Register Bulletin #16A: How to Complete the National Register Registration Form*. Washington D.C.: U.S. Department of Interior, 1997, page 44.

⁵¹ See Appendix C to this Responses to Comments.

⁵² McClelland, Linda, Carol D. Shull, James Charleton, et al. *National Register Bulletin #16A: How to Complete the National Register Registration Form*. Washington D.C.: U.S. Department of Interior, 1997, page 44. Page 44 of Bulletin #16A states: “Some periods of significance are as brief as a single year.” “Base the period of significance on specific events directly related to the significance of the property, for example, the date of construction for a building significant for its design or the length of time a mill operated and contributed to local history.”

reason, the proposed Project's change to the setting of the Chase Building would not constitute a significant impact as defined by CEQA and the CEQA Guidelines.

The urban environment surrounding the Chase Building is already characterized by high-rise buildings and the addition of the proposed Project would not result in substantial adverse change to the setting of the Chase Building because its ability to qualify for listing in national, state, and local historic registers would not be materially impaired. As discussed in Response to Comment 3-2, the SCEA and the Historic Report provided facts, reasonable assumptions based on facts and Ms. Grimes' expert opinion supported by facts that conclude the parking garage is not a character defining feature or significant contributing element of the Chase Building. Furthermore, the SCEA is not an MND subject to the fair argument standard. The City can rely on this substantial evidence to support its determination in the SCEA, like in an EIR, even if other opinions are offered. *National Parks & Conserv. Ass'n v County of Riverside* (1999) 71 CA4th 1341, 1364 (EIR's methodology for analyzing environmental impact must be upheld if supported by substantial evidence in record even though difference of opinion among experts exists).

Response to Comment 3-5

This comment suggests that the proposed Project must comply with the Standards, which is not the case. While the Standards provide guidance for the analysis of historical resources under CEQA, the Standards are not identified or recognized in CEQA or the CEQA Guidelines as the thresholds for determining significant impacts on historical resources. Section 15064.5(b) of the CEQA Guidelines states a project would normally have a significant impact on a historical resource if it would result in a substantial adverse change in the significance of the historic resource and whether a project would materially alter in an adverse manner those physical characteristics of the historical resource that convey its significance. The Historic Report utilized this threshold and, thus, correctly applied the thresholds for significant impacts on historical resources as identified in the CEQA Guidelines. The Historic Report concludes the Chase Building would not be materially impaired by the proposed Project because the Chase Building would continue to convey the significance that justifies its eligibility for inclusion in national, state, and local historic registers. The commenter's conclusion that the Project would result in substantial adverse change to the Chase Building is predicated on the erroneous premise that the thresholds for significant impacts on historical resources are the Standards.

Response to Comment 3-6

This comment asserts the Standards are the best measurement to gauge the potential impacts of a project and are always applicable for a project involving a historical resource under CEQA and the fact that the Standards are not the threshold for impacts is not relevant. The Standards are not directly applicable

because they are not the threshold for significant impacts to historical resources as defined in the CEQA Guidelines. The threshold is whether the proposed Project would materially alter in an adverse manner those physical characteristics of the historical resource that convey its significance. The analysis in the SCEA and the Historic Report (Appendix F to the SCEA) support the conclusion that the proposed Project would not materially alter the Chase Building in an adverse manner.^{53,54} The Chase Building would be preserved, and no physical alterations are proposed by the Project.

Response to Comment 3-7

This comment states the Staff Report (it does not refer to the SCEA analysis specifically) does not address the setting of the Chase Building as a historical resource or changes proposed to the setting. It is assumed this comment is referring to the Staff Report for the Historic Preservation Commission hearing on January 20, 2022. It should be noted that this hearing and the Staff Report for this hearing are not directly related to the CEQA analysis.

The historical resource's setting and the changes proposed to the setting were addressed in the Historic Report and SCEA. The proposed Project would introduce a new visual element to the broad setting of the Chase Building. The SCEA states that the immediate setting of the Chase Building remains intact from the period of significance, but the broad setting has been changed over time since the Chase Building was completed by the development of taller high-rise office buildings on Brand Boulevard.⁵⁵ The setting immediately surrounding the Chase Building is comprised of grass lawns with minimal landscaping on all four sides that create a buffer between the sidewalk on the west, SR-134 on-ramp on the north, driveway on the east, and surface parking on the south. The broad setting includes the SR-134 to the north. The immediate setting of the Chase Building would not be negatively affected by the Project. It will continue to be a freestanding building surrounded by a landscaped buffer and open space to the south.

The broad setting, however, has changed significantly since 1969, the period of significance for the Chase Building, with many high-rise office buildings constructed in subsequent decades. Although the parking garage and surface parking lots are part of the setting of the Chase Building now they are not character-defining features of the Chase Building as a historical resource. As discussed in Responses to Comments 3-1 through 3-4, they do not contribute to its significance. The setting of the Chase Building would not be

⁵³ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-56. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁵⁴ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Pg. 41. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

⁵⁵ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-49. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

diminished by the Project because it is intended be seen and oriented toward Brand Boulevard and SR-134 to the west and north. For this reason, the east viewshed is not as character-defining as the west and north viewsheds and there are already high-rise buildings in these other viewsheds.⁵⁶ In addition, the viewshed from the south will be largely unaltered.

Response to Comment 3-8

This comment discusses Standard 1 and its application to the proposed Project. As discussed in Responses to Comments 3-5 and 3-6, the Standards are not the threshold for significant impacts on historical resources as defined by CEQA. Thus, this comment does not pertain to the analysis of project impacts under CEQA.

Nevertheless, the Project complies with Standard 1 because the Chase Building will continue to be used as an office building and will continue to have the same spatial relationship to Brand Boulevard and the freeway. As no alterations are proposed to the Chase Building, the distinctive materials, features, and spaces will be preserved. As discussed in the SCEA and Historic Report, the parking garage and surface parking lot do not contribute to the significance of the Chase Building as a historical resource and for this reason Standard 1 would not preclude its demolition. The commenter has not shown that the modifications to the site will materially impair the ability of the Chase Building to qualify for national, state, and local historic registers and, therefore, has not established the Project will result in a significant impact on the historical resource.

Response to Comment 3-9

This comment discusses Standard 2 and its application to the proposed Project. Standard 2 is not applicable because no physical alterations to the Chase Building are proposed. As discussed in Responses to Comments 3-5 and 3-6, the Standards are not the threshold for significant impacts on historical resources as defined by CEQA. Thus, this comment does not pertain to the analysis of project impacts under CEQA.

Response to Comment 3-10

This comment discusses Standard 4 and its application to the proposed Project. Standard 4 is not applicable because no physical alterations to the Chase Building are proposed. As discussed in Responses to Comments 3-5 and 3-6, the Standards are not the threshold for significant impacts on historical resources. Thus, this comment does not pertain to the analysis of project impacts under CEQA. The

⁵⁶ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-56. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

comment also is premised on the erroneous statement that the parking garage is a character-defining feature of the Chase Building, which is not supported by the building permit and occupancy records. As discussed in Responses to Comments 3-1 to 3-6, the parking garage is not a significant historic feature of the site. Instead it is an ancillary building of complementary, though inferior, design and Standard 4 is, therefore, inapplicable.

Response to Comment 3-11

Standard 5 is not applicable because no physical alterations to the Chase Building are proposed. As discussed in Responses to Comments 3-5 and 3-6, the Standards are not the threshold for significant impacts on historical resources. Thus, this comment does not pertain to the analysis of project impacts under CEQA. In addition, this comment mischaracterizes the materials used to build the parking garage. Its most notable exterior feature, the vertical fins and horizontal cornice, are constructed of stucco on metal lath, not precast concrete as the commenter suggests. The poured-in-place concrete used for the support columns and parking decks display poor workmanship (showing the results of out-of-plumb plywood formwork and poorly-worked joints) that is not in keeping with the higher quality materials and construction techniques still visible at the Chase Building. The stacked-bond concrete masonry units used at the north, south and portions of the west walls of the garage are utilitarian in nature, do not relate to any aspect of the office tower's design or material palette and are not distinctive features or examples of craftsmanship that characterize the property.

Response to Comment 3-12

This comment discusses Standard 9 and its application to the proposed Project. The Historic Report analyzed the proposed Project for compliance with Standard 9 because it provides guidance on the relationship between new construction and historic buildings. Thus, it is relevant but not determinative in analyzing significant impacts on historical resources as discussed in Responses to Comments 3-5 and 3-6. However, the Standards are not prescriptive and are intended to manage change to protect the character of historic properties, not to prevent change. As discussed in the SCEA and Historic Report, the parking garage does not contribute to the significance of the Chase Building as a historical resource and for this reason Standard 9 would not preclude its demolition.

Response to Comment 3-13

This comment discusses Standard 10 and its application to the proposed Project. The Historic Report did not apply Standard 10 because the proposed Project does not propose any physical alterations to the Chase Building. Since the parking garage does not contribute to the significance of the Chase Building as a historical resource based on the analysis in the SCEA and Historic Report, its demolition complies with

Standard 10. As the proposed new construction would be separated from the Chase Building by an existing driveway, the Chase Building would remain unimpaired if the new construction was removed in the future.

Response to Comment 3-14

This comment asserts that the potential for vibration-related damage to historic properties during and in the years immediately following construction have not been addressed. Potential vibration impacts, including potential impacts to the Chase Building, were analyzed in Section 5.13, Noise of the SCEA and the Noise Study (Appendix D of the SCEA). The SCEA identified the potential for vibration levels to exceed the building damage significance threshold of 0.12 PPV for the Chase Building from use of vibratory rollers, large bulldozers, caisson drilling, and loaded trucks. Implementation of **Mitigation Measure MM NOI-1** and **MM NOI-2** would require the Applicant to retain a vibration monitor to ensure construction-induced vibration levels do not expose the existing Chase Building to vibration levels of 0.12 ppv in/sec or greater. A monitoring plan would be required consisting of measures to reduce vibration levels such as, but not limited to, utilizing quiet pile driving technology (auger displacement installation) to reduce friction thus making penetration for a large range of soils less vibration intensive. It is feasible to assume loaded trucks would not be located 15 feet from the Chase Building as they would be located along local streets to haul materials in and out of the Project site. Utilizing pile driving technology, a fairly standard practice now, indicates vibration inducing equipment, such as bulldozers and vibratory rollers would not be utilized, which would ensure avoidance of significant impacts related to vibration at the Chase Building. The monitoring would also ensure that those noise levels would remain below the significance thresholds. Implementation of these measures would reduce potential vibration impacts to less than significant.⁵⁷

Operation of the proposed Project would include typical commercial-grade stationary mechanical and electrical equipment, such as air handling units, condenser units, and exhaust fans, which could produce vibration. Ground-borne vibration generated by each of the above-mentioned activities would generate approximately up to 0.005 inches per second PPV adjacent to the Project site.⁵⁸ As such, vibration levels at other sensitive receptors would result in vibration levels below perceptible levels of human annoyance.⁵⁹ Therefore, vibration-related impacts were analyzed in the SCEA and Noise Study and were determined to be less than significant with mitigation.

⁵⁷ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-162. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁵⁸ FTA, Transit Noise and Vibration Impact Assessment Manual, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-andvibration-impact-assessment-manual-fta-report-no-0123_0.pdf, Accessed January 2020.

⁵⁹ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-164. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

Response to Comment 3-15

This comment claims the proposed Project does not comply with the Standards based on the analysis reviewed by Francesca Smith. As discussed in Responses to Comments 3-5 through 3-13, the Standards are not the threshold for determining significant impacts on historical resources under CEQA. Thus, this comment does not pertain to the analysis of project impacts under CEQA.

As discussed in Response to Comment 3-2, the SCEA and the Historic Report provided facts, reasonable assumptions based on facts and TGHP's expert opinion supported by facts, that conclude the parking garage is not a character defining feature or a significant part of the Chase Building as a historical resource defined by CEQA. TGHS and Francesca Smith have provided their own opinions on the parking garage. However, as discussed above and in Responses to Comments 3-1 through 3-21, TGHS and Francesca Smith's conclusions are not supported by facts and reasonable assumptions predicated upon facts that constitute substantial evidence as defined by CEQA, and even if there is a difference of opinion, the City's conclusion will be upheld if supported by substantial evidence. (See Response to Comment 3-4.) *National Parks & Conserv. Ass'n v County of Riverside* (1999) 71 CA4th 1341, 1364 (EIR's methodology for analyzing environmental impact must be upheld if supported by substantial evidence in record even though difference of opinion among experts exists).

Response to Comment 3-16

This comment asserts the proposed building does not conform to the Downtown Specific Plan (DSP) Standard B, which calls for the bulk of buildings to be reduced through the articulation of building massing and building facades. The three-story podium of the proposed building will be set back approximately 32 feet from the rear façade of 625 N. Brand and the upper residential floors, beginning at the fourth floor, will be set back by approximately 47.5 feet. In addition, the decorative screen of the Brand façade entry is setback approximately 20 feet and the podium is approximately 34 feet from the rear façade of 600 N. Brand, and approximately 80 feet above the fourth floor.

Expert review of City staff and the Design Review Board found the Project would meet the DSP Standards. The three-part breakdown of the building form – podium base, repetitive residential floors, and dramatic roof trellises signaling the building's termination – are reflective of how Classical forms influenced early high-rise construction with a base-shaft-capital configuration and adds to the visual character of the building. This three-part design establishes an appropriate base, with closely spaced vertical fins, and termination at the roof, with more widely spaced vertical columns that support the high trellis garages. The subtle echo between these elements, which share similar heights but produce strikingly different effects, provides interest in the design. The interplay of the "gridded" walls, with an interweaving of horizontal and vertical elements, with the sections with curtain-wall cladding, which are more monolithic

in appearance, provides scalar shifts that ultimately produce a harmonious, yet complex, façade patterning that would distinguish the proposed building from the surrounding buildings. Despite TGHS's design opinions to the contrary, the Project's design has been determined by the City to be consistent with DSP Standard B.

Response to Comment 3-17

This comment discusses DSP Standard D, which calls for substantial modulation or change of materials every 150 feet in length for high-rise facades and claims the proposed building design does not comply with the standard. The tower features offset volumes that are each less than 150 feet in length, connected at the vertical circulation core, creating a zigzagged floorplate between the north and south half of each floor. This is best seen in the floor plans for levels 5 – 24 and in the aerial perspective drawings (not readily apparent in the building elevation plans). The proposed Project complies with this standard because the modulation occurs at the 60-foot-high podium level, after which the tower steps back 20 feet. After the 19th floor, which is 137' from the podium (197 feet in total height), the floorplan is constricted/narrowed on the north and south ends, thereby reducing the size of the floorplate by the required 15%. This narrowing of the building form as the garage rises helps to reduce the overall massing of the project, which is consistent with Section C of the DSP. The approximately 250-foot-long west and east elevations feature the required change in material and modulation, which is enhanced by the offset of the volume of the tower that create a zigzagged floorplate between the north and south half of each floor, which connect at the vertical circulation core.

The massing of the proposed building is divided into three basic volumes, both vertically and horizontally. Vertically, the project features a classic tripartite division: base, middle and top. Composed of the lobby and the two commercial parking levels, the three-story podium, which extends the entire length of the project site from north to south, is the rectangular base. Above this, Levels 4 – 22 act as the middle, while the tall, open-air rooftop terraces ("loggias") and photovoltaic panels serve as the crowning top to the garage. The tripartite divisions are somewhat less pronounced horizontally: the west and east elevations feature two, expansive, grid-patterned sections, composed of vision glass and blue and white metal panels set within white frames, that are set off from a completely different central volume - a swath of vision glass and gray metal panels that are color-matched to read as one uniform center. This same gray-on-gray treatment is used at levels 4 and 5 to differentiate the base podium from the shaft of the main middle above. For these reasons, the proposed building the City determined the Project conforms to DSP Standard D.

Response to Comment 3-18

This comment states the proposed Project does not respond to the more modest scale of the existing historical resource or Standard G of the DSP, but admits the Project does incorporate some features to address the relationship between the buildings. This subsection, requiring that new buildings respond to the scale and placement of design features of earlier buildings adjacent to them in order to improve the consistency of scale on the street, is specifically intended for when buildings are directly adjacent to one another. In that case, a street wall is formed and the concept of reflecting existing patterns, such as ground-floor heights, window patterns, colonnades, and material palettes, at an infill façade becomes important. The project block does not have any consistent pattern or even street front setback. With the new building set back over 140 feet from the street front property line, design consistency along the street wall is not an issue.

Response to Comment 3-19

This comment states the proposed building would not conform to DSP Standard K as it would not “step down” to align with the existing cornices. Subsection K, calling for taller buildings to step down to meet the height of lower adjacent buildings at the street wall, does not apply to the Project for reasons similar to those discussed in Subsection G above. The intent of this section is to guide designs of buildings that share a street wall with existing buildings. This is not the case at the subject property and no stepping of the building mass or alignment of adjoining cornices is required.

This comment also states that the proposed building and the Chase Building would be fewer than 15 feet apart and uses excerpted and annotated plans in an attempt to illustrate its point. In fact, at the ground level, the proposed building would be physically separated from the Chase Building by approximately 32 feet, not 15. The massing of the proposed building steps away from the east façade of the historic building beginning at the fourth and fifth stories to increase the physical separation from the historical resource by another 17 feet. By comparison, the typical width of a residential street with two-way traffic and parking is 40 to 50 feet. Thus, the difference in size and scale is diminished by the distance between the two buildings by 47 feet above the fourth story.

Response to Comment 3-20

This comment incorrectly states that the proposed Project does not qualify for review through the preparation of a SCEA because it is expected to cause impacts to historical resources. As discussed in Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report, the proposed Project would not cause a significant impact to the Chase Building as a historical resource as defined by CEQA and the parking garage is not a character defining feature of the Chase Building as a historical resource. Therefore, the proposed Project will not cause impacts to historical resources and review through the preparation of a SCEA is consistent with CEQA.

Response to Comment 3-21

This comment emphasizes that the proposed Project is detrimental to current historical resources, including the parking garage. As discussed in Response to Comment 3-20, Responses to Comments 3-1 through 3-21, the SCEA, and the Historic Report the proposed Project would not cause a significant impact to the Chase Building as a historical resource as defined by CEQA and the parking garage is not a character defining feature of the Chase Building as a historical resource. For these reasons, the proposed Project is not detrimental to current historical resources.

FRANCESCA SMITH

March 10, 2022

Ms. Vilia Zemaitaitis
Community Development Department, Planning Division Office
633 East Broadway, Room 103,
Glendale, CA 91206
Sent via e-mail

RE: Comments on Draft Sustainable Communities Environmental Assessment
for the Lucia Park Project

Dear Vilia,

Thank you for the opportunity to comment again on this important project. The Glendale Historical Society (TGHS) previously submitted comments regarding the proposed project to the Design Review Board (DRB) and Historic Preservation Commission (DRB), as well as to City Council for a previous design. The remarks in this letter are consistent with those comments but include specific responses to the Sustainable Communities Environmental Assessment (SCEA) which was only made publicly available one day prior to the January 22, 2022 HPC meeting.

Previous letters from TGHS and its members regarding this project contain comments on the proposed project, most of which still apply to the SCEA. Those are: TGHS letter to City Council, January 20, 2021 (Attachment 2), Francesca Smith letter to City Council, January 21, 2021 (Attachment 3), TGHS letter to DRB (January 13, 2022, incorporated herein by reference) and my letter to HPC January 19, 2022 (Attachment 4). Please carefully consider the comments in those letters as they apply to the project Sustainable Communities Environmental Assessment (SCEA) as applicable.

As a qualified Architectural Historian under the Secretary of the Interior's Professional Qualifications Standards (36 Code of Federal Regulations Part 61) and Principal Architectural Historian Professionally Qualified Staff for the State of California, I reviewed the SCEA prepared for the proposed project referenced above and have the following comments. Principal issues that TGHS and I have previously raised, and the Lead Agency has not appropriately addressed are:

- Not considering the Home Savings of America property (620 North Brand Boulevard or subject property) Parking Garage to be a contributing resource to that California Environmental Quality Act (CEQA)-defined "historical resource;"
- The improper use of an SCEA for environmental clearance when historic resource impacts expected to be caused by the proposed project have not properly addressed or analyzed, without adequate mitigation measures proposed that would reduce or avoid those impacts.

Home Savings & Loan Property Parking Garage and Setting

The historic significance of the Home Savings & Loan property Parking Garage has been both asserted and proven by TGHS but has been repeatedly repudiated by City staff and denied by the project historic consultant. TGHS's and my position that the Parking Garage is a contributing resource to the historical resource was confirmed by Jay Correia, California Office of Historic Preservation staff in an e-mail message on February 8, 2022. The message to which he responded had the City's evaluation of the property prepared in 2017 as well as my updated evaluation for TGHS dated January 10, 2022 appended for his review. In my e-mail, I asked him whether the property at 620 North Brand Boulevard should be nominated for listing in the California Register *with* its Parking Garage.

4-1

4-2

4-3

Comments on Draft SCEA for the Lucia Park Project
May 10, 2022

2

His response was unambiguous:

By definition, this [620 North Brand Boulevard] is a single property *with two contributing resources*. For National Register and California Register purposes there is no question in this regard.

According to National Register Bulletin 16A (Page 16), “A contributing building, site, structure... adds to the historic associations...for which a property is significant because: it was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or is capable of yielding important information about the period” (use of the automobile and growth of automobile culture southern California, for example).

Under “Rules for Counting Resources” on Page 17 of Bulletin 16A, the first rule states: “Count all buildings, structures, sites, and objects located within the property's boundaries that are substantial in size and scale...”

So, as we can see, the parking garage cannot be ignored or dismissed. We would require that it be included in any nomination or evaluation for environmental review (emphasis added, e-mail message from staff Supervisor of the Cultural Resources Programs Registration and Project Review Units at the California Office of Historic Preservation to Francesca Smith, February 8, 2022, see Attachment 1).

4-3

Based on this impartial opinion and direction provided by Mr. Correia, California Office of Historic Preservation staff in charge of the Registration Unit, **the Parking Garage must be considered a contributing resource for the purposes of this project environmental review** and any others.

The project “Historic Resources Technical Report” (Historic Report, SCEA Appendix F), prepared by a consultant in January 2022, provided an intensive level survey and found that the “Chase Building” appeared eligible for listing in the National Register of Historic Places, California Register of Historical Resources and the Glendale Register of Historic Resources without the Parking Garage. That conclusion is inaccurate: **the 620 North Brand Boulevard property, in total, including its concurrently designed and built Parking Garage must be considered the historic resource**, not merely the main building.

Based on the professional opinion of California Office of Historic Preservation staff, as well as other expert opinion was previously provided to the lead Agency by independent qualified Architectural Historians who corroborated the Parking Garage’s significance, including Sonnier Francisco and Daniel Paul (January 19 and 20, 2022 respectively, Attachment 5), the entire property at 620 North Brand Boulevard with the Parking Garage is eligible for California Register designation. There is no defensible or demonstrable reason that registration requirements for the Glendale Register of Historic Resources would exclude the Parking Garage or somehow be interpreted to be more rigorous in its requisites than state or federal registration requirements. The Lead Agency must treat the historic resource as significant based on the information previously provided and the information provided in this letter. The preponderance of evidence demonstrates that the Lead Agency and their consultants previously made clear errors by not considering the Parking Garage a contributing resource of the Home savings property.

4-4

Impact Analysis

The SCEA states that “A transit priority project may be approved if it has been determined that the project will not result in significant and unavoidable environmental impacts” on page 1.0-3. The project, as currently proposed would cause both “significant” and “unavoidable” environmental impacts to a historic resource, Home Savings & Loan property located at 620 North Brand Boulevard including its Parking Garage which contributes to its historic significance.

4-5

Comments on Draft SCEA for the Lucia Park Project
May 10, 2022

3

Because the historic resources identification process was prepared in error, the historic resources Impact Analysis presented in the SCEA must be set aside and re-analyzed based on new information, the fact that the Parking Garage is a contributing resource to the subject property historic resource based the information provided in this letter, Attachment 1 and the referenced and appended previous letters.

As proposed, the Project would have cause direct impacts on historical resources: both the Parking Garage and the immediate setting at 620 North Brand Boulevard would be demolished, destroyed and altered for the project. “Substantial adverse change” is of course, defined as “Physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (PRC Section 5020.1(q)). The proposed demolition of the contributing Parking Garage would clearly qualify as substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (*e.g.* its character-defining features) can be considered to materially impair the significance of the resource.

4-5

Historic significance is “materially impaired” when a project “demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance” and that justify its inclusion in the California Register, local register or historic resource survey.” The significance of the subject property, its ability to impart its full history would be materially impaired by the demolition of the corresponding 1970 Parking Garage on which its continued use has been dependent for more than half a century.

CEQA further contains a substantive mandate: “it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects...” (PRC Section 21002). No such mitigation measures are proposed that would reduce the expected effects in built environment historical resources.

In this letter and its numerous attachments, the Lead Agency has been provided with a fair argument, which is the legal standard for determining the significance of impacts. The fair argument is that substantial adverse change in physical conditions would occur by implementation of the proposed project. This fair argument is backed by substantial evidence that the Parking Garage is a contributing resource to the Home Saving property and that its demolition would cause substantial adverse change in the significance of the historic resource. It includes facts, reasonable assumption predicated upon facts, and expert opinions supported by facts.

4-6

Because the SCEA for this project is based on findings made in error, and because it is expected to cause significant adverse change in the significance of historic resources, the proposed project does not qualify for the CEQA streamlining exemption and additional environmental clearance documents must prepared to appropriately analyze, and hopefully fully mitigate those historical resources impacts.

CEQA Statute Section 21084.1 states that “A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Because the proposed project would cause a change in the significance of the subject property historic resource, I remind the Lead Agency that the proposed project does not qualify for the CEQA streamlining exemption. It is expected to cause impacts to historic resources, as is the case for this project and demonstrated in this comment letter.

Conclusion

I am grateful for the opportunity to comment and participate in review of this project. The subject property parcel may be able accommodate a redesigned, far smaller project that would be more deferential in its design, detailing, height and size to the Home Savings Building including its Parking Garage, setting and the Fidelity Savings Building. In addition, a qualified Historic Preservation Architect should be a collaborative and meaningful part of the team designing any future iterations of this project to

4-7

Comments on Draft SCEA for the Lucia Park Project
May 10, 2022

4

ensure conformance with the Standards for Rehabilitation. Please ensure that this letter with all its attachments is included in the administrative record for this project.

↑
4-7

Very truly yours,
Francesca Smith
Francesca Smith
Architectural Historian

cc: Aram Adjemian, City Clerk
Roubik Golanian, City Manager

Attachments (5)

ATTACHMENT 1

From: [Correia, Jay@Parks](mailto:Correia_Jay@Parks)
To: [Smith, Francesca@DOT](mailto:Smith_Francesca@DOT)
Subject: RE: Home Savings & Loan: 620 N. Brand Bl., Glendale, CA
Date: Tuesday, 8 February, 2022 5:11:23 PM

EXTERNAL EMAIL. Links/attachments may not be safe.

Dear Francesca,

Thank you for the inquiry. The description on the primary record form begins by stating that the resource, or “subject *property*” (my italics) is a six story midrise office building *with* (again, my italics) a separate two story parking garage.” By definition, this is a single property with two contributing resources. For National Register and California Register purposes there is no question in this regard.

4-8

According to National Register Bulletin 16A (Page 16), “A contributing building, site, structure...adds to the historic associations...for which a property is significant because: it was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or is capable of yielding important information about the period” (use of the automobile and growth of automobile culture southern California, for example).

4-9

Under “Rules for Counting Resources” on Page 17 of Bulletin 16A, the first rule states: “Count all buildings, structures, sites, and objects located within the property's boundaries that are substantial in size and scale...”

4-10

So, as we can see, the parking garage cannot be ignored or dismissed. We would require that it be included in any nomination or evaluation for environmental review.

4-11

I hope that this helps with your project to nominate the Home Savings and Loan Building.

It is very nice hearing from you.

Sincerely,

Jay

Jay Correia
Supervisor, Cultural Resources Programs
Registration and Project Review Units
California Office of Historic Preservation
(916) 445-7008

From: Smith, Francesca@DOT <francesca.smith@dot.ca.gov>
Sent: Monday, February 7, 2022 11:41 AM
To: Correia, Jay@Parks <Jay.Correia@parks.ca.gov>
Cc: Francesca Smith <smith-zzz@sbcglobal.net>
Subject: Home Savings & Loan: 620 N. Brand Bl., Glendale, CA

Dear Mr. Correia:

I hope you are staying safe. All is well here.

The Glendale Historical Society is considering nominating our local Home Savings & Loan property to the California Register. The property was found in a recent reconnaissance survey to be locally eligible, but the preparers did not notice the functionally related Parking Garage that was completed the same year as the building.

Attached to this message is the City's evaluation ("Brand Blvd, 620 N.pdf") which was prepared in 2017.

The update that I recently prepared is also attached for your review ("620 N Brand DPR Update.pdf"). Because we are considering the property's nomination to the California Register, our real question is whether it should be nominated, as we assume, with the Parking Garage. We know that additional high resolution photographs and other materials would be required as well.

I cc-ed my personal e-mail.

Thanks, in advance for taking a look at this. I look forward to hearing from you.

Sincerely,

Francesca Smith

PQS Principal Architectural Historian

Caltrans District 7

100 S. Main St., MS I6A

Los Angeles, CA 90012

New cell 213-266-3790

4-12

4-13

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings

Page of Resource Name or #:

P1. Other Identifier

*P2. Location:

*a. County and (P2c, P2e, and P2b or P2d. Attach a Location Map as Necessary.)

*b USGS 7.5' Quad Date T ; R ; of of Sec B. M.

c. Address City Zip

d. UTM: Zone , mE/ mN e. Other Locational Data: APN:

*P3a. Description

Character-defining Features

- ☒ Five-story height
- ☒ Rectangular plan, simple massing, symmetrical composition, vertical emphasis
- ☒ Flat roof with parapet
- ☒ Fixed, metal framed, vertical strip windows and spandrels between continuous precast concrete piers
- ☒ Entrances sheltered by cantilevered rectangular canopies and accessed by wide, shallow concrete steps
- ☒ Two pairs of fully glazed metal doors
- ☒ Fixed, metal framed, vertical strip windows and spandrels
- ☒ Wide frieze around top of building

Alterations

ATMs added; awnings added

Integrity

The property retains integrity of location, design, setting, materials, workmanship, feeling, and association.

P5a. Photograph or Drawing (Photograph required for buildings, structure, and objects.)



*P3b. Resource Attributes:

HP7. 3+ story commercial building

*P4. Resources Present ☒ Building

*P5b. Description of Photo

View Northeast, 2017

*P6. Date Constructed/Age and Source

1969, LA County Tax Assessor

*P7. Owner and Address

*P8. Recorded by:

Historic Resources Group
12 S Fair Oaks Ave, Suite 200
Pasadena, CA 91105

*P9. Date Recorded

*P10. Survey Type

*P11. Report Citation:

*Attachments: ☒ Building, Structure, and Object Record

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary #

HRI #

Page 2 of 2

NRHP Status Code 553

*Resource Name or #: 620 N Brand Blvd

B1. Historic Name: Home Savings and Loan

B2. Common Name: Chase Bank

B3. Original Use: Commercial

B4. Present Use: Commercial

*B5. Architectural Style: Corporate Modern

*B6. Construction History:

No permits available.

Owner History:

Address not listed in available city directories.

*B7. Moved No

Date:

Original Location

*B8. Related Features

B9a. Architect: Heusel, Homolka and Associates

b. Builder:

B10. Significance: Commercial Development (1919-2000) : Post-World War II Commercial Development (1945-1969); Architecture and Design: Post-World War II Modernism: Corporate Modern

Area South Glendale

Period of Significance: 1969

Property Type: Commercial

Applicable Criteria: 1; 3

This property was evaluated during the 2017 South Glendale historic resources survey. It is eligible for listing in the Glendale Register under local Criterion 1 as an example of post-World War II commercial development and under local Criterion 3 as a good example of Corporate Modern commercial architecture by architectural firm Heusel, Homolka and Associates. This property retains character-defining features of its original design, including its five-story height, flat roof with parapet, and vertical strips of fixed metal frame windows and spandrels between continuous precast concrete piers.

Like all Southern California cities, the end of World War II meant a population surge for Glendale as returning GI's married, started families and came in search of the California lifestyle. Postwar prosperity also drove demand for consumer goods with a ripple effect on retail sales of everything from automobiles to home goods. As a result, existing commercially-zoned parcels were quickly developed after the war. New postwar low-rise commercial buildings began to populate the established commercial corridors of Pacific Avenue and Central Avenue, then gradually expanded southward to streets such as Colorado Street and Chevy Chase Drive. Transportation advancements, including significant development of the freeway system in and around Glendale, along with the further development of Route 66 as an important tourist attraction, also influenced commercial growth in South Glendale in the postwar era.

The city's second oldest commercial high-rise building was erected by Home Savings and Loan (1969, Huesel, Holmoka and Associates) at 620 N. Brand Boulevard. Home Savings Towers reflect the company's use of architecture to build their brand in communities across Southern California. These structures were typically high-rise buildings, visible from freeways and did not have the characteristic Millard Sheets artwork of the branches. In addition to Glendale, Home Savings Towers were located in Pomona, Covina, and Long Beach (1979, Frank Homolka and Associates, AIA). Each tower expressively used concrete to emphasize strength and permanence, with space at the top for the brand name and usually a place for the Home Savings Shield on the side of the building. Home Savings and Loan Building in operation at this address by 1970.

Long Beach-based Heusel, Homolka and Associates consisted of Frank Homolka, AIA (1922-2008) and Francis J. Heusel (1906-1968). The firm was the precursor to what became Frank Homolka and Associates after Heusel's passing. The firm's focus areas included banking and financial services, schools, offices and warehouses. Homolka was the architect for the towers for Home Savings and Loan. In 1969, the firm received an award from the Southern California Ready Mixed Concrete Association for the "creative use of concrete."

B11. Additional Resource Attributes:

*B12. References

Historic Resources Group, City of Glendale South Glendale Historic Context Statement, September 30, 2014.
City of Glendale Building Permits.
Glendale City Directories.
Sanborn Fire Insurance Maps.

B13. Remarks:

*B14. Evaluator: Christine Lazzaretto; Robby Aranguren

*Date of Evaluation: December 2017



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # UPDATE
HRI #
Trinomial
NRHP Status Code 5S3

Other Listings South Glendale Survey
Review Code 5S3 Reviewer HRG for City of Glendale

Date 2017

Page 1 of 8 Resource name(s) or number (assigned by recorder) Home Savings of America Building and Parking Garage

P1. Other Identifier: 620 N. Brand Bl. Building and Parking Garage

***P2. Location:** ☐ Not for Publication ☒ Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Burbank **Date:** 1966, revised 1994

c. Address: 620 N. Brand Bl.

City: Glendale Zip: 91203

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: Assessor's Parcel Number 5643-018-032

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)
The subject property is a six-story, midrise office building (Building) with a separate two-story parking garage (Parking Garage). The buildings are located on an irregularly, C-shaped parcel, which occupies about half a city block. The reinforced concrete, main building is configured in a rectangle, is three bays wide on each side and has a flat, parapeted roof. The main features are continuous, deep fillets which form vertical window bays that span the full height of the Building and creates the appearance of incalculable height. A wide frieze wraps around the top. The Building is Corporate Modern in style, characterized by its box-shaped volume, the visible concrete and glass materials, flat roof, lack of applied ornament, deep vertical concrete fillets, articulated ground story, integral surface parking lot, landscaped plaza and plantings at pedestrian level (HRG 2017). The Building has a simple base, "Mo-sai" exposed concrete aggregate panels that compose the articulated shaft's deep fillets, with long narrow windows and a stylized, continuous capital. The very slightly raised, three-sided base is comprised of two tone aggregate concrete slabs, accessed by wide, slab treads with no risers, which was typical of the style. The shaft has vertically grouped, deeply inset windows separated at each floor by dark integrally colored, Alucobond spandrel panels. Deep, quarter radius sills at the ground and top floors visually connect the otherwise vertical composition with the ground and sign band. The concrete exterior has been partially overpainted (date unknown). The ground floor and sign band are each 1.5 stories in height which impart simple, understated formality and establish the distinct building scale. First floor set-in, full height windows are butted glass, which enhances the simplicity of the design. All windows are tinted. The central bay axes of the north and south facades are notably finished in book-matched Carrera marble with incised ghost signs. That set-in marble bay was a character-defining feature of Home Savings building program, and was intended to imply luxury and permanence, as befitting a financial institution. (See Continuation Sheet, page 3)

4-15

***P3b. Resource Attributes:** (list attributes and codes) HP7. 3+story commercial building

***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Photo: (view and date)
View northeast 2019.

Age and Sources: ☒ historic
Building - 1970 (Inspection Record).
Parking Garage-1970.

***P7. Owner and Address:**
unknown

***P8. Recorded by:**
Francesca Smith for TGH
PO Box 4173
Glendale CA 91202

***P9. Date Recorded:**
January 10, 2022

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Updated Evaluation of 620 N. Brand Bl., The Glendale Historical Society, 2022.

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (list)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 8

*NRHP Status Code 5S3

*Resource Name or # Home Savings of America Building and Parking Garage

- B1. Historic name: Home Savings of America Building and Parking Garage
B2. Common name: Washington Mutual (1998-2001), Chase Bank and Coldwell Banker Building (2001-present)
B3. Original Use: retail and office B4. Present use: retail and office

*B5. Architectural Style: Corporate Modern (Neo Formalist)

*B6. Construction History: (Construction date, alterations, and date of alterations) Building, Parking Garage completed 1970 (Building Permit #42816 and Inspection Record). Alterations: entrance doors on east side with security doors and armed panic hardware at west entrance (1977); monument sign (1987); "auto teller" (1988, Homolka); ATM (1990, with removal and replacement of ground floor windows, replaced 1998); light post to match existing (1993); seismic repair (1994); new signs (1999, Chase Bank 2000, Coldwell Banker 2001, aluminum ATM awning and various other signs 2012); ADA modifications and signs (2014). Parking garage completed 1970 (letters to abutting property owner from City and architect 1970). Alterations: carport added (1995). All sources: City of Glendale building permits unless otherwise noted.

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: Original Location:

*B8. Related Features: 2-story parking garage (see Continuation Sheet 3).

B9a. Architect: Building- Heusel, Holmolka and Associates, Parking Garage-Holmolka and Associates

b. Builder: Home Savings & Loan

*B10. Significance: Theme: Commercial Development, Post-World War II Commercial Development, Architecture & Design: Post-World War II Modernism (1919-2000) Area: Glendale Period of Significance: 1970-1998 Property Type: Commercial Mid-Rise and Parking Garage Applicable Criteria: C

The Home Savings of America Building at 602 North Bland Boulevard was designed by Long Beach-based architects Heusel, Holmolka and Associates and was completed in 1970. The main building was one of a quartet of mid-rise towers built for Home Savings of America. The others were in Pomona (Millard Sheets, 1963), Covina (Heusel, Holmolka *et al.* 1969) and Long Beach (Frank Homolka and Assoc., 1982). The original building permit valued the subject property tower at \$950,000 (December 11, 1968). Following Heusel's death in 1968, the successor firm, Holmolka and Associates designed the Parking Garage which also completed in 1970. With the Parking Garage, the complex was estimated shortly after its completion to be worth \$1.3 mm (Snyder 1971).

The subject property Home Savings Main Building and Parking Garage complex were built nearly a decade after Millard Sheets departed from his role establishing the exceptional modern design program for the growing regional financial institution. Sheets was an artist and designer who became their corporate architect beginning in 1946. He was responsible establishing the distinctive Home Savings Style, which was interpreted by Alan Hess as blending "old, new Modern and Traditional" which clearly describes this property (Arenson 2018). Mr. Sheets abruptly resigned in 1963 while the Pomona tower was under construction (ibid).

(See Continuation Sheet 3)

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References: (See Continuation Sheet 7)

B13. Remarks:

*B14. Evaluator:

*Date of Evaluation:

Sketch Map subject property in red, no scale ↑ N



DPR 523B (1/95)

*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 3 of 8

*Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage

*Recorded by: F. Smith

*Date: January 10, 2022

☒ Continuation Sheet

*P3a. Description: (Continued from page 1)

The central bays on each side are flanked by full-height, checkered motif bronze screens on three sides, and marked by simple cantilevered entrance canopies. The simplified, continuous "capital" or frieze punctuates the composition in the stripped classicist, wide sign band, with a stepped out, quarter radius cornice and architrave. At the corners, the simple inverted base shapes mimic the radiused sill and header forms. The Building is set back on three sides by a nearly uniform perimeter with lawn and low plantings. The low-rise, multi-story building appears to be much higher than its six floors. Its vertical orientation is exaggerated by the filleted, continuous appearing dark window bays and wide central spines. The prim base and lightly detailed horizontal capital provide simple punctuation to the otherwise soaring composition. The resulting Corporate Modern (New Formalist) tower is an unmistakably modern and elegant reinterpretation of the classical column.

The two-story Parking Garage is a wide, low rectangle in plan and mass (Photographs 1 and 2). The ground floor has two parking decks above with an open tope deck. It is a simple, concrete composition with exterior fillets that mimic the Building in simplified forms. The exposed concrete exterior closely mirrors the filleted exterior design treatment of the mid-rise Main Building was constructed to serve. The relationship of solids to voids in the east and west sides are expressed in the fillet columns and fitted metal, full-height screens in place pace of windows. Stepped out, simple frames mark the openings with the second floor parking deck discretely masked behind. At the flat top, a simplified, reduced scale version of the Building's frieze forms the wide, full-length sign band. The Parking Garage is the same shape and has the same visual quantities as the Building, executed at a lower height, in smooth-finished concrete. The Building can be compared to a full-height column and the Parking Garage to a low column. The interior has stacked bond, concrete masonry unit endwall and distinctive, geometrical mushroom-type columns with four sided, connected supports.

4-15



Photograph 1: Home Savings Parking Garage, view east. Note the vertical fins, understated entrance and continuous sign band at top. Photograph courtesy of J. Wilson, January 2022.

The west side of the Parking Garage faces Maryland Avenue and possesses the same features as the east façade (Photograph 2). It has a symmetrical facade, with simple, stepped-out frames that note entrances on either side.

Photograph 2: Home Savings Parking Garage, panoramic view west. The same vertical fins, understated entrance and continuous sign band are that the top. The Building is on right with same sign band. Photograph J. Wilson.



DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 4 of 8

*Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage

*Recorded by: F. Smith

*Date: January 10, 2022

☒ Continuation Sheet

*P3a. Description: (Continued from page 3)

The Building was constructed using the distinctive, rich blend of materials that Sheets established specifically for the Home Savings building program. Explaining the program, he said "I was concerned about using good materials, using everything from travertine to marble and granite..." The Building, its landscaped front, side and rear yards and corresponding Parking Garage with paved, parking lots and other landscaping are located a reasonably level, irregularly rectangular property that faces both Brand Boulevard and Maryland Avenue. A separate building at 625 N. Maryland Ave. is on the lot north of the Parking Garage.

*B10. Significance: (Continued from page 2)

The subject property building contains each of those materials. The costly building finishes were intended to exemplify "timelessness, security and tradition" to retail consumers (Arenson 2018). The Building was aptly described as "present[ing] and aura of strength..." and having a "sleek and orderly appearance" in *Long Beach Architecture* (Murillo and Volland 2004).

In *Banking on Beauty*, the author interpreted the significance of the Home Savings' office building program, of which the subject property is a part, stating that the corporation "embraced its new office tower as a symbol of the business as a whole" (ibid). The architects, Francis J. Heusel (1908-1968) and Frank Homolka, Jr. (1922-2008) were professionally associated in the 1960s as Heusel and Homolka Associates. Other known work by the partners individually and as associates include Marine Officers House, West Los Angeles (1946); California Federal Savings & Loan Association (CalFed) branch, Reseda (1954); residence, Long Beach (1954); CalFed branch, Rancho Park (1955, demolished 1980s); Bixby Knolls Gardens, Long Beach (1957); Pearson House, Long Beach (1962); CalFed office building, Anaheim (1963, demolished 1996); Harbor General Hospital, now Harbor-UCLA, Torrance (1962, no longer extant); Guaranty Bank, Torrance (1963); CalFed office building (now CitiBank), Los Angeles (1964); Colwell Co., Los Angeles (1965, no longer extant); CalFed office building (now CitiBank), Echo Park (1966); Belmont Plaza Olympic Pool/Beach Center, Long Beach (1967, demolished 2014); Long Beach Water Department Administration Building (1967); Mission Viejo Recreation Center (1967); Pasadena Financial Center, Pasadena (1969); Home Savings, Studio City (1968); Sunset Hills Country Club, Thousand Oaks (1969); Ahmanson Bank & Trust, Westwood (1971); Cal Fed, Westwood (1975); Home Savings & Loan, Encino (1976); Long Beach Civic Center and Long Beach Convention and Entertainment Center, Long Beach (1977, with Allied Architects). Allied Architects is described as "composed of a number of noteworthy modernist firms. Headed by Hugh and Donald Gibbs..., its members included Homolka & Associates, Killingsworth, Brady & Associates and Kenneth S. Wing and Associates (LA Conservancy 2020). As part of the consortium with other local architects Long Beach Civic Center included at least three buildings credited partially to Heusel and Homolka Associates: Superior Courts of Los Angeles (1960, addition 1971, demolished 2016), Long Beach Public Safety Building (1960, demolished 2016) and Long Beach City Hall which also included a parking garage (1976, demolished 2020). Of the known projects listed above, at least seven are no longer extant. Heusel and Homolka Associates had an accomplished and successful shared practice until Mr. Heusel's death in 1968.

The distinctive exterior concrete panels of the tower are notably "Mo-Sai," exposed aggregate concrete architectural panels, pre-cast in custom, dimensional shapes on metal armatures. The panels formed deep, vertical fillets that nearly span the height of the tower. The decorative concrete aggregate panels were first made popular by John J. Earley (1881-1945), a Washington, D.C. based artisan, designer and builder. The material may have reached its popularity height in the 1960s and '70s. It was widely used in Corporate Modern, Brutalist and Neo Formalist applications. Mo-sai achieved different appearances according to the size and color the exposed stones, as well as how much of the stones were exposed and the color of the concrete. In the subject property example, the Mo-Sai panels add depth and dimension to the Building, creating striking shadow effects that alternate with window bays.

Adam Arenson described the Building: "it was nice that the towers could be their own Home Savings icons. These towers reflect the work of Frank Homolka for Home Savings, and their uniformity, with the space for the proud Home Savings name at the top and the shield along the shaft, created their own... recognition" (Arenson 2018). He described the design as "a pared-down modernist aesthetic."

Other than Home Savings & Loan, which was the original ground floor user in the tower, major tenants in the tower have included Washington Mutual (1998-2008), Coldwell Banker (2001-present) and Chase Bank (estimated 2008-present). A variety of smaller, upper office lessors enumerated in tenant improvement permits have included Baskin & Robbins, IBM, US Gypsum, Adelphia Properties and numerous financial and medical-related businesses.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 5 of 8

*Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage

*Recorded by: F. Smith

*Date: January 10, 2022

☒ Continuation Sheet

*B10. Significance (Continued from Page 4)

The South Glendale Historic Context Statement described the subject property:

The city's second oldest commercial high-rise building was erected by... Home Savings and Loan (1969 [sic], Huesel, Holmoka and Associates)... Home Savings Towers were part of the company's use of architecture to build their brand in communities across Southern California. Unlike the branch offices, these structures were typically high-rise buildings, visible from freeways and did not have the characteristic Millard Sheets artwork of the branches. In addition to Glendale, Home Savings Towers were located in Pomona [Millard Sheets, 1963], Covina [1969], and Long Beach [1982](1979, Frank Homolka and Associates, AIA). Each tower, designed in the New Formalist style [sic, elsewhere described in the document as Corporate Modern], expressively used concrete to emphasize strength and permanence, with space at the top for the brand name and usually a place for the Home Savings [s]hield on the side of the building (HRG 2014).

In a long footnote, the subject property architects were described

Long Beach-based Heusel, Holmoka and Associates consisted of Frank Homolka, AIA (1922-2008) and Francis J. Heusel (1906-1968). The firm was the precursor to what became Frank Homolka and Associates after Heusel's passing. The firm's focus areas included banking and financial services, schools, offices and warehouses. Homolka was the architect for the towers for Home Savings and Loan. In 1969, the firm received an award fro[m] the Southern California Ready Mixed Concrete Association for the "creative use of concrete." (*Los Angeles Times*, March 30, 1969, Footnote 296).

That award was not related to the subject property.

4-15

The South Glendale Survey and its separate Context Statement did not mention the Home Savings of America Parking Garage which shares the property, likely by mistake. That evaluation of 620 S. Brand also stated that "No permits [were] available," when hundreds of pages of building permits and related information are publicly accessible. All building permits for the subject property were reviewed for this evaluation. Those building permits are the purview of City of Glendale, the agency that commissioned South Glendale Survey for which the property was evaluated. The exclusion of the parking garage should be considered an omission of fact rather than a fully-considered finding. The evaluator did not review building permits and entirely missed the Home Savings of America Parking Garage, although it is included in the property's photograph in the evaluation.

Parking Garage

When Home Savings & Loan established a building committee in the 1960s it was to oversee their numerous construction projects to ensure that their unique requirements were satisfied. Those criteria included site visibility and "centrality," each of which was met by the subject property's location at the intersection of Glendale's main business street with the new State Route 134 freeway (Arenson 2018). The subject property exemplified the prerequisite for "easy parking and surface parking lots, 'because... of hesitancy on the part of women to go underground for parking' " (Arenson 2018). The resulting, two-story, reinforced concrete Parking Garage completed in 1970 is a convenient, surprisingly open structure, expressed in stripped down reinterpretation of the Building's vertical fillets and frieze to respond to the overall design motif.

Home Savings Parking Garage may be the oldest, extant multi-story parking garage in Glendale. One of numerous late 1960s *Los Angeles Times* articles regarding the issue of parking in the Central Business District, where the subject property was included, one stated "The City has one-multi-deck parking garage in the district on Orange Ave between Broadway and Wilson Avenue" ("Off-Street" 1969). That parking garage is no longer extant; it was replaced by the Glendale Galleria (completed in 1976), which makes the subject property Parking Garage the oldest known property of its type in in Glendale.

The Parking Garage is functionally related to the Building and its property. National Park Service guidance on the subject directs that "Buildings may be functionally related historically if they ...were located on the same property historically, ...were designed as an overall composition around a common landscape feature,are reasonably proximate, had a common entrance through a... single driveway... off the street, [and] were owned and operated/managed by one organization" (2007).

It is not unheard of for a parking garage to be historically significant. There are parking garages that are separately listed in the National Register, including 816 Grand Avenue (built in 1924, listed in 2004) in Los Angeles; Pickwick Hotel, Office Building, Parking Garage and Bus Terminal (built 1930, listed in 2005) in Missouri; Knightley's Parking Garage, Kansas (built 1949, listed 2016). Other have been found individually eligible for listing in the California Register, Tinker-Toy Parking Garage #1/Parking Lot 17, Los Angeles (built 1969, demolished 2018 and are locally significant. Colombo's Parking Garage, Los Angeles, (built 1925, California Office of Historic Preservation 2014). For significant properties with functionally related parking garages, those parking garages contribute to the historic significance of the historic resources or historic properties.

DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 6 of 8

*Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage

*Recorded by: F. Smith

*Date: January 10, 2022

☒ Continuation Sheet

*B10. Significance (Continued from Page 5)

The Parking Garage is not the only vehicle-focused part of the setting that contributes to the significance of the subject property. In a recent paper, The National Council of Public History recently contended that: "Although the parking lots were considered part of the cultural and historic landscape... planners recommended treatment for the property that privileged preservation of the buildings only... This omission challenges decades of preservation practices that require preservationists to consider the *tout ensemble*—the entire scene." In the *Vernacular Architecture Forum*, Timothy Davis reasoned that "parking lots— should be treated as mid-twentieth century commercial landscapes" (Davis 1997). While the Parking Garage contributes to the significance of the subject property, the surface parking lot and landscaping are less important, but nonetheless are part of the setting, or the physical environment of the historic resource. The setting refers to the character of the place in which the property played its historical role. The setting, including the main parking lot and its landscaping are related to how the property was historically used, in addition to the way the larger property is situated and its relationship to surrounding features and open space.

The HRG evaluation described "none" under the Related Features category (B8.), which is a factual error. Other inaccuracies in that evaluation are the number of stories, described as "five story height," when it is six; "Two pairs of fully glazed metal doors" when there is no glazing (it is push-in rubber), there are three sets, two of which are Herculite (estimated to have been added in 2011) as well as the ridiculous assertion that ATMs and awnings with no dates are the only alterations. The addition of the ATM alone in 1990 required removal and infill of a full bay of windows, at what had until then, been the Branch Manager's office. That evaluation asserts under owner history "Address not listed in available city directories." The original owner, Home Savings of America is, in fact, listed on page 129, at 6102 N. Brand Bl. under the "Savings & Loan Associations" heading in *Polk's Glendale (Los Angeles County Calif.) City Directory* the year after its completion in 1971.

4-15

The City's consultant found the subject property eligible for listing in the Glendale Register in The South Glendale Survey under local Criterion 1 as an example of "post-World War II commercial development" and under local Criterion 3 as a good example of Corporate Modern commercial architecture by architectural firm Heusel, Homolka and Associates. This property retains character-defining features of its original design, including its five-story height [*sic*], flat roof with parapet, and vertical strips of fixed metal frame windows and spandrels between continuous precast concrete piers" (HRG 2017). The Parking Garage shares the same significance.

The architect-designed Parking Garage is also an example of postwar commercial development and is a rare example of a Corporate Modern detailed structure designed by Heusel, Homolka and Associates. It is the oldest parking garage building remaining in Glendale. This Parking Garage was notably detailed to correspond to the Building design, and retains those unique details. The City sponsored survey found the Building locally eligible, but made no mention of the related Parking Garage, without which, the building could not have been used for retail or office, based on parking requirements at the time, as well as now.

As described in the City of Glendale "South Glendale Historic Resources Survey" (2017) under the Commercial Development Sub-Theme: Corporate Modern, requisite character-defining features of Corporate Modern style are part of the Parking Garage

- Box-shaped form
- Flat roofs, either with flush eaves or cantilevered slabs
- Constructed of concrete, steel and glass
- Lack of applied ornament
- Articulated ground story, often double-height and set back behind columns or pilots
- Integral parking lot, either subterranean above grade
- Landscaped plaza or integral plantings at ground floor

The Parking Garage is a box-shaped form, shape and volume.

The Parking Garage has a nearly flat top deck as its roof. It has no eaves.

The Parking Garage is concrete, with rebar or other reinforcing metal, and fitted metal screens at openings. There is no glass because its use is unlike the office building it was built to serve.

The Parking Garage design does not have applied ornament.

Its exterior structure, the entry frames and sign band mimicking the main building are its only adornments.

The Parking Garage ground story is behind the simple vertical fins, which act as columns.

The Parking Garage is the integral parking lot (other than the limited surface parking, and is at and above-grade.

The very simple landscaped exterior and surface parking lot are part of the setting of the larger Home Savings complex. The Parking Garage is painted in lawn, like the Main Building and has mature, trimmed trees, planted at equal intervals.

DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 7 of 8

*Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage

*Recorded by: F. Smith

*Date: January 10, 2022

☒ Continuation Sheet

*B10. Significance (Continued from Page 6)

The Parking Garage possesses each of the described Corporate Modern character-defining features as demonstrated on page 6. It would be a futile exercise, based on these facts to make an attempt to justify the Parking Garage not possessing those Corporate Modern character defining features as well as not being an essential component of the larger historic resource.

There is limited state or local direction on establishing periods of significance. California instructions state that a period of significance "refers to a chronological period as it relates to the historic context and is defined as a year or range of years (California "Instructions for Preparing Documentation for Nominating Historical Resources to the California Register of Historical Resources August 1997). The applicable historic contexts identified in the South Glendale Historic Context are Commercial Development, Post-World War II Commercial Development, Architecture & Design: Post-World War II Modernism (1919-2000), The *Glendale Municipal Code* states in the Historic Preservation Ordinance under 15.20.035 "Identification of character-defining features" that

there is a rebuttable presumption that features that conform to the definition of "character-defining feature" included in Section 15.20.020 of this chapter and that date to the property's original construction and/or to any subsequent historically-significant alteration, will be treated as character-defining features and will be identified as such ...pursuant to Section 1520.30 of this chapter" (emphasis added, Ord. 5931 Section 4, 2019).

The Parking Garage date is 1970, the property's original construction. The period of significance for the property is from 1970 when the Home Savings Building and Parking Garage were completed and closed in 1998 when Washington Mutual acquired Home Savings & Loan. The Parking Garage and larger property retain more than adequate integrity to be recognizable to its period of significance. The only change is the identity of businesses on the signs. Integrity is defined the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. The limits of the historic resource are the assessor's boundaries historically associated with the subject property.

The subject property including the Parking Garage is eligible for the Glendale Register under Criterion C. The Building and Parking Garage embody the distinctive and exemplary characteristics of the Corporate Modern style, the identified Mid-Century Commercial Development, Post-World War II Commercial Development and Architecture & Design: Post-World War II Modernism themes, the commercial mid-rise building and concrete parking garage types, the Commercial Development, Post-World War II Commercial Development and Architecture & Design: Post-World War II Modernism (1919-2000) periods, and the property including its setting retains high integrity.

*B12. References: (Continued from page 2)

Arenson, Adam. *Banking on Beauty: Millard Sheets and Midcentury Commercial Architecture in California*. (Austin: University of Texas Press) 2018.

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Glendale City of. Building Permit #42816, October 8, 1968.

Glendale City of. Inspection Record, Final Inspection March 10, 1970.

Glendale City of. Certificate Use and Occupancy, month and date illegible, 1970.

Historic Resources Group for Glendale, City of. "South Glendale Community Plan, South Glendale Historic Context" Appendix A.1, 2014.

Historic Resources Group for Glendale, City of. "South Glendale Community Plan, South Glendale Historic Resource Survey" Appendix G, 2017.

Los Angeles Conservancy. "Explore LA: Historic Places" 2000. <https://www.laconservancy.org/locations/long-beach-civic-center>

Mullio, Cara and Jennifer M. Volland. *Long Beach Architecture: The Unexpected Metropolis*. (Los Angeles: Hennessy & Ingalls) 2004.

"New Design" Los Angeles Times, March 1, 1970: K18. Photograph of Home Savings Building in Glendale.

National Park Service. Technical Preservation Services. "Functionally Related Structures – General Criteria" 2007.

DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # UPDATE
HRI#

CONTINUATION SHEET

Page 8 of 8 *Resource Name or # (Assigned by recorder) Home Savings of America Building and Parking Garage
*Recorded by: F. Smith *Date: January 10, 2022 ☒ Continuation Sheet

4-15

***B12. References:** (Continued from page 7)

"Off-Street Parking Program Considered: Glendale Council Agrees To Spend \$11,400 For Central District Survey" *Los Angeles Times*. September 29 1967.

Rotenstein, David. "Blacktop History: the Case for Preserving Parking Lots" *National Council on Public History* June 2014.
<https://ncph.org/history-at-work/blacktop-history/>

Snyder, Don. "Mini Wall Street Springing Up on North Brand Bl." *Los Angeles Times*. 8 August 1971.

ATTACHMENT 2



P.O. Box 4173 Glendale CA 91202
www.GlendaleHistorical.org

January 20, 2020

Mayor Ara Najarian and Members of the Glendale City Council
613 E. Broadway
Glendale, CA 91206

Re: 620 N. Brand Boulevard and 625 N. Maryland Avenue — Stage I Design Review (Case No. PDR 1729008)

Dear Honorable Mayor Najarian and council members:

Regarding the subject project, The Glendale Historical Society is disappointed to learn that the Stage I Design Review of this significant building has been scheduled by Council for 3pm on a Tuesday afternoon, with little notification, and at a time when most of the public are unavailable to attend. The importance of the initial review cannot be overstated: this proposed development at 620 N. Brand Boulevard will alter Glendale's appearance and skyline, and would impact the City for years to come. During Stage 1 review Council gives the developer direction about what it thinks will meet with final approval. It is that much harder for the public to have an impact at a second hearing, because to some degree, the die has been cast.

4-16

The Staff Report fails to acknowledge that the property in question is a historic resource. Section 4.1.1 Historic Preservation / Adaptive Reuse states "not applicable." But the Historic Resources Survey undertaken as part of the South Glendale Community Plan indicates that the building at 620 N. Brand Boulevard is in fact a historic resource with a preliminary status code of 5S3 (appears to be individually eligible for local listing of designation through survey evaluation). Even though CEQA review is not part of this initial process, it is a mistake to discount the fact that this property is a historic resource under the California Environmental Quality Act (CEQA) as part of the review. The property's status should be corrected in the Staff Report.

4-17

Further, and due to its recognized historic significance, the building along with the entire property should be evaluated for historic resources impacts according to the requirements in CEQA. We note that under the Secretary's Standards and preservation practice, setting is essential to a historic property's significance, and that incompatible new construction on a site may diminish a historic property's ability to convey its historic significance. As such, we note

4-18

The Glendale Historical Society (TGHS) advocates for the preservation of important Glendale landmarks, supports maintaining the historic character of Glendale's neighborhoods, educates the public about and engages the community in celebrating and preserving Glendale's history and architectural heritage, and operates the Doctors House Museum. TGHS is a tax-exempt, not-for-profit 501(c)(3) organization, and donations to TGHS are tax-deductible to the extent permitted by law.

the following points are applicable from the Secretary of the Interior's Standards for Rehabilitation, Standard 9 in particular and National Park Service guidance regarding New Construction Within the Boundaries of Historic Properties assert:

- New construction needs to be built in a manner that protects the integrity of the historic building(s) and the property's setting.
- The massing, size, scale, and architectural features of new construction on the site of a historic building must be compatible with those of the historic building. When visible and in close proximity to historic buildings, the new construction must be subordinate to these buildings.

4-18

The current design of the proposed project shows minimal, if any deference to the design and setting of the 1969 Home Savings and Loan Building (currently the Chase Bank Building). Clearly the proposed project would overwhelm the historic building, rather than it being subordinate as directed in the Standards, but, understandably, a project of this scale will to some degree dominate the much smaller adjacent building. We would suggest that opportunities be explored which might include additional step backs at the 6-story building and further articulation at areas near that building. This building, with its prominent location at the freeway, will become a part of Glendale's identity for years to come. Taking cues from the directness, simplicity and symmetrical Corporate Modern design of the Home Savings Building should enhance the compatibility of the new building with its historic property.

4-19

Because the South Glendale Survey did not include the preparation of survey forms, we do not know if the 2-story parking garage on the property, detailed to match the larger building, contributes to the historic significance of the property. If it does, and the proposed project required its demolition, we assume that the City will require preparation of an environmental review document to analyze the effects to the historic property. Our brief attached review of the project demonstrates that this project would affect the integrity of the property, which must be considered in a more robust CEQA evaluation of historical resource impacts.

4-20

Sincerely,

Steve Hunt

Steve Hunt
President, The Glendale Historical Society

cc: Ardy Kassakhian, City Clerk
Yasmin Beers, City Manager
Jay Platt, Senior Urban Designer

ATTACHMENT

Integrity Analysis

National Register guidance, which is the only available direction on this subject defines integrity as “the ability of a property to convey its significance.” It asserts “To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance (National Park Service “How to Apply National Register Criteria for Evaluation” https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf).

The defined aspects of integrity are listed in the table below with brief analyses on whether or not the proposed project would retain those aspects of integrity.

Aspect	Definition (as defined by the National Park Service)	Analysis	Retained
Location	Location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened.	The proposed project is not expected to affect the location of the historic resource Home Savings Building at 620 N Brand Ave.	YES
Design	Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape. It also applies to the way in which buildings, sites, or structures are related: for example, spatial relationships between major features; visual rhythms in a streetscape or landscape plantings; the layout and materials of walkways and roads; and the relationship of other features...	The design of the proposed project would not directly affect the design of the Home Savings Building, but the proposed project's enormous proportions, strangely grouped scale and proposed treatment at inside corners, the ornamentation and use of materials demonstrate no respect for the historic building or to the larger property. The proposed project's fenestration pattern; the smooth [surfaces] and proposed colors of [those] surface materials; the type, amount, and style of that ornamental detailing bear no resemblance to the extremely symmetrical, vertically oriented historic building or its [Parking G]arage. None of the historic materials would be used proposed building, other than glass, which is a given. Corporate Modernism is generally defined by large expanses of glass, with strong horizontal and in this case, masonry vertical divisions. Its character-defining features include its box-shaped form, the exterior masonry (including the Carrera marble accents), its flat continuous roof, the lack of applied ornament, articulated ground story, the integral parking garage, and the landscaped plaza at the ground floor. The proposed site planning, arrangement and type of plantings in the extant landscape are not paid any homage in the proposed complex or its site planning. The extant two-story parking garage building would be demolished, obliterating the spatial relationship between the Home Savings Building and	NO

Aspect	Definition (as defined by the National Park Service)	Analysis	Retained
		its related parking garage-office building, which was completed in 1969, according to the County Assessor. The proposed round-framed, horizontally oriented design would not be subordinate to the historic property, if anything, the new design would be what is considered “intentional opposition,” deliberately dissimilar to the Corporate Modern Home Savings Building and its property.	
Setting	Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.	The proposed project would destroy the related parking garage-office building (completed in 1969) and thus directly impair the connection between the two resources. Its wrap-around plan would negate the Home Savings Building’s orientation from all sides except the west, change its setting and most of its general environment. The extant related parking garage-office building, which may very well be a contributing building, is compatible with the extant design. The new asymmetrical, 20-story-high, building’s rounded design horizontal orientation and proposed placement are not compatible with the property’s significance and would require destroying the historic resource setting. The landscaped surface parking of the Home Saving Building would be demolished and replaced by a wide fire lane and a linear water feature for the proposed project. Thus its character-defining parking lot and landscaping would be lost, as well as the connection to those planting and the convenience of surface parking.	NO
Materials	Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.	The new complex would not reflect, echo or mirror the any of Home Saving Building’s unique materials. While the building would remain, as currently proposed the proposed project would necessitate demolition, or material impairment as defined in CEQA of the extant, related 1969 parking garage building.	NO
Workmanship	Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing.	While the workmanship of the Home Saving Tower would remain, nothing in the proposed project design would demonstrate any design, massing or planning subservience to the Corporate Modern style historic resource.	YES

Aspect	Definition (as defined by the National Park Service)	Analysis	Retained
Feeling	Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.	With the proposed removal of the parking garage and the proposed placement of a 20-story building enveloping the Home Savings Building, a large percentage of the physical features, which taken together, convey the property's historic character would be lost. The Home Savings Building would be shoe-horned into a much larger project, which would take visual precedence, and hence contravene the feeling of the small, prim 6-story building.	NO
Association	Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character.	The proposed demolition of the parking garage and the proposed placement of a 20-story building wrapping around the Home Savings Building, the presence of the remaining physical features that convey the property's historic character would be lost.	NO

4-21

The historic resource would not retain integrity if the proposed project were built as currently proposed.

Attachment 3

1 of 4

----- Forwarded Message -----

From: Francesca Smith <smith-zzz@sbcglobal.net>

To: anajarian@glendaleca.gov <anajarian@glendaleca.gov>; Paula Devine <pdevine@glendaleca.gov>; vagajanian@glendaleca.gov <vagajanian@glendaleca.gov>; Vartan Gharpetian <vggharpetian@glendaleca.gov>; fquintero@glendaleca.gov <fquintero@glendaleca.gov>; Ardashes Kassakhian <akassakhian@glendaleca.gov>

Cc: Philip Lanzafame <planzafame@glendaleca.gov>; lucinda.woodward@parks.ca.gov <lucinda.woodward@parks.ca.gov>

Sent: Tuesday, January 21, 2020, 12:17:50 PM PST

Subject: 620 N. Brand Boulevard and 625 N. Maryland Avenue, Glendale — Stage I Design Review (Case No. PDR 172900)

Dear Hon Mayor Najarian and councilpersons,

Please vote to deny approval of the Stage I Design Submission and direct a redesign of the project. The City seriously erred in not considering the historic status of the 620 N. Brand Ave. property. In the South Glendale Survey, the findings of which were adopted by City Council in 2018, the property at 620 N Brand Ave. was found eligible for listing in the local register (See Appendix B, page 8 “Individually Eligible Properties”

at <https://www.glendaleca.gov/home/showdocument?id=42130>).

In the proposed project Staff Report, page 3 under 4.1.1. Historic Preservation/Adaptive Reuse, it curiously states "Not Applicable." This is a confounding assertion, because the entire property, not just the main building should be considered a historical resource for the purposes of CEQA and otherwise. There is no mention of any future CEQA review in the Staff Report, when as proposed, the expected historical resources impacts should trigger preparation of an Environmental Impact Report. No mitigation measures are proposed to reduce those expected impacts, thus far.

The proposed project would demolish the 2-story parking garage (completed in 1969, according the County Assessor) on the property, as well as the landscaped surface parking lot. The parking garage is detailed to match the Corporate Modern style building and like the landscaped parking lot, should be considered contributing features to the historical resource. The property was found to be locally significant in the City's survey for the main building's design. The historic resource is the property, not merely the main building. See Figure 1 [on the following page] below.

4-22



Figure 1: Excerpt from County Assessor Property Portal. Aerial photograph of 620 N. Brand Bl. property with the historic property boundaries in yellow. North is toward top of page, no scale.

[Contributing Parking Garage is in red, dashed outline.]

4-23

Attachment 2

2 of 4

No impacts are identified in the Staff Report that would be associated with the proposed demolitions, or caused by the far too-large, too tall, incompatibly designed proposed project.

4-23

The National Park Service provides guidance on "New Construction within the Boundaries of Historic Properties" (<https://www.nps.gov/tps/standards/applying-rehabilitation/successful-rehab/new-construction.htm>). [Absent more specific local guidelines There are no equivalent local or state guidelines to address this common issue. The Park Service asserts "It is possible to add new construction within the boundaries of historic properties *if site conditions allow and if the design, density, and placement of the new construction respect the overall character of the site* (emphasis added)." As proposed, the project under review necessitates demolition of at least two contributing features, which are not considered in the Staff Review. In addition, the proposed design is intentionally opposed to the historically significant Corporate Modern style, rather than respecting the character of the property or its established design. At 20 stories in height, the proposed project would be approximately three times larger than the historical resource, its only nod toward deference would be the floor heights (which are reasonably standard) and the curiously rounded band proposed to align with the mid-rise, rectilinear historic building.

4-24

According to the Secretary of the Interior's Standards for Rehabilitation – Standard 9 in particular – and the *Guidelines for Rehabilitating Historic Buildings*, new construction needs to be built in a manner that protects the integrity of the historic building(s) and the property's setting. No evidence of protection of the integrity of the main building or of the character of the setting of the property is provided in the proposed design.

The Park Service directs that the following points must be considered (indented and quoted below):

"Related new construction – including buildings, driveways, parking lots, landscape improvements and other new features – must not alter the historic character of a property. A property's historic function must be evident even if there is a change of use."

The proposed project would crowd, and overhang the main building, demolish the parking garage and landscaped parking lot, altering the historic character of the property.

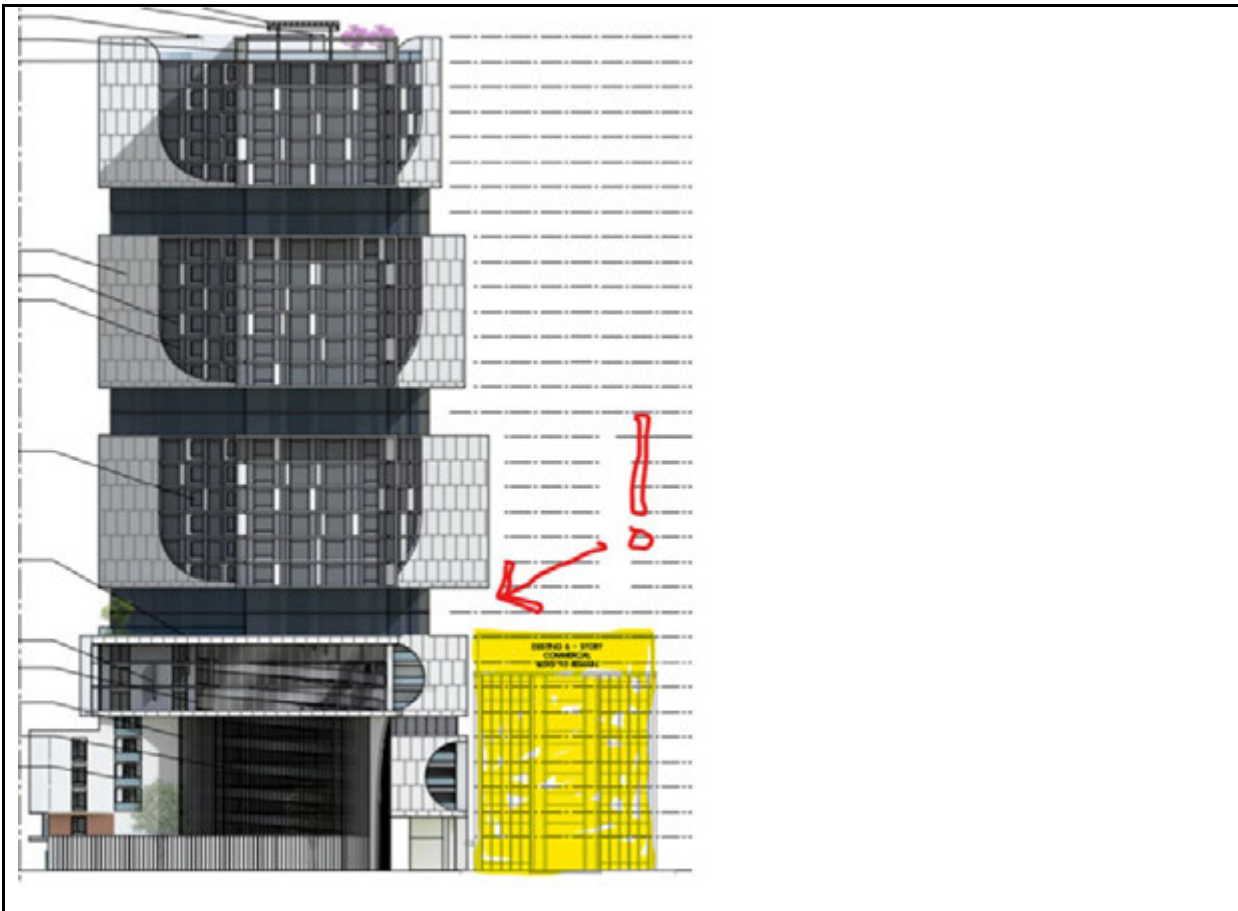
"The location of new construction should be considered carefully in order to follow the setbacks of historic buildings and to avoid blocking their primary elevations. *New construction should be placed away from or at the side or rear of historic buildings and must avoid obscuring, damaging, or destroying character-defining features of these buildings or the site*" (emphasis added).

4-25

The historic tower would only be visible from the west as currently designed. The proposed project as designed is too close, and would loom over the main building (see Figure 2).

Attachment 2

3 of 4



4-25

Figure 2: Excerpt from north elevation of [previously] proposed project. Annotation shows historic resource in yellow, with less than a window bay's width separating the over-scaled new tower, and its 9-11th floors overhanging the historic property at the red arrow.

Protecting the historic setting and context of a property, *including the degree of open space and building density, must always be considered when planning new construction on an historic site.* This entails identifying the formal or informal arrangements of buildings on the site, and whether they have a distinctive urban, suburban, or rural character. For example, a historic building traditionally surrounded by open space must not be crowded with dense development.

The proposed project demonstrates no evidence of such considerations. It uses nearly every square inch of land, and would demolish the existing open space, including the landscaped surface parking lot, replacing them with a fire lane and a linear water feature, where none historically existed.

“In properties with multiple historic buildings, the historic relationship between buildings must also be protected. Contributing buildings must not be isolated from one another by the insertion of new construction.”

The proposed project would obliterate the relationship between the parking garage and the main historic building. The contributing structure would not be protected, nor would its relationship to the mid-rise historic building.

4-26

Attachment 2

4 of 4

“As with new additions, the massing, size, scale, and architectural features of new construction on the site of a historic building must be compatible with those of the historic building. When visible and in close proximity to historic buildings, the new construction must be subordinate to these buildings. New construction should also be distinct from the old and must not attempt to replicate historic buildings elsewhere on site and to avoid creating a false sense of historic development.”

As proposed, neither the massing, the giant size, inordinate scale nor architectural features of the new construction proposed on the property could be considered compatible with those of the historic building. The proposed project is too large, too tall, and its rounded, framed briefly trendy faux mid-Century design is not compatible with the low-rise, rectilinear Corporate Modern historic building. The proposed design intentionally opposes the established design: it would not honor its tenets, materials, scale or features in any perceptible way.

4-27

“The limitations on the size, scale, and design of new construction may be less critical the farther it is located from historic buildings.”

Because the proposed project would be so close to the historic mid-rise building, and would overhang it from the north as described above, limitations on giant size, lack of scale and intentionally opposed design of the new construction are essential. It is part of the purpose of environmental review of historic resource impacts, which seem not to have been addressed in this case.

Please vote to deny this case based on these reasons. Ask staff for clarification on the property’s historic status as well as future environmental review for this case. I apologize for not attending this meeting. Its scheduled time, during working hours ensures little, if any attendance, by working professionals. I recommend that future special meetings of this type be held after 5 PM to allow and ensure public participation.

4-28

Thank you for your time and for your service to our city.

Sincerely,

Francesca Smith

Brockmont Park Historic District, Glendale



P.O. Box 4173 Glendale CA 91202
www.GlendaleHistorical.org

January 17, 2022

Chair Chris Cragnotti
Historic Preservation Commission
City of Glendale
613 East Broadway
Glendale, CA 91206

Re: Item 8. A. 620 N. Brand Boulevard and 625 N. Maryland Avenue — Advisory Design Review (Case No. PDR 2119308)

Dear Chair Cragnotti and Commissioners:

Thank you for the opportunity to comment again on this important project. We submitted a slightly different version of these ideas to the Design Review Board a few days ago. We have not yet had time to closely review the technical report, which only appeared on the City's website on Friday, but we do note that the consultant finds the subject property eligible for listing in the National, California, and Glendale registers.

TGHS and its members have previously commented on this project to City Council. Two letters are attached that contain the organization's and a member's comments on the first iteration of the proposed project, many of which still apply. See Attachment 1, TGHS Letter to City Council, January 20, 2021 and Attachment 2, Francesca Smith Letter to City Council, January 21, 2021.

We are pleased to see the Staff Report now correctly identifies the adjacent Fidelity Savings Building at 600 North Brand Boulevard as a historic resource (it was not previously mentioned), but we observe with disappointment that the 620 North Brand Boulevard Parking Garage (Parking Garage), which is an original component of the larger Home Savings & Loan property (Home Savings), and is both functionally related to the main building and was designed specifically by the architects to reflect features of the larger commercial building and to serve the office building, is proposed for demolition as part of the project without any mention or recognition of historic resource impacts.

The main issues are: ignoring that the Home Savings Parking Garage is a character-defining feature of the 620 N. Brand Boulevard historic resource, the proposed project's lack of conformance with the Secretary of the Interior's Standards for Rehabilitation, the fact that it is not consistent

The Glendale Historical Society (TGHS) advocates for the preservation of important Glendale landmarks, supports maintaining the historic character of Glendale's neighborhoods, educates the public about and engages the community in celebrating and preserving Glendale's history and architectural heritage, and operates the Doctors House Museum. TGHS is a tax-exempt, not-for-profit 501(c)(3) organization, and donations to TGHS are tax-deductible to the extent permitted by law.

4-29

with the current requirements in the Downtown Specific Plan, and the use of a Sustainable Communities Environmental Assessment (SCEA), of which not even a draft has been completed.

↑
4-29

Parking Garage

The proposed project would destroy the setting of the property and importantly demolish the functionally related, matching Parking Garage at 620 North Brand, which must be considered a contributing feature of the Home Savings property.

TGHS believes that the Parking Garage is “functionally related” to the main Home Savings Building. The National Park Service directs “Buildings may be functionally related historically if they “...were located on the same property historically (thus, lack of individual lot lines historically could indicate a relationship); were designed as an overall composition around a common landscape feature and are reasonably proximate” (Technical Preservation Services, National Park Service, Functionally Related Structures – General Criteria 2007). The Parking Garage meets each of these stated general criteria.

TGHS notes that the City of Glendale, to date, has not considered the Parking Garage a contributor to or a significant part of the historical resource. However, the Home Savings Parking Garage is part of, and contributes to, the significance of the historical resource. This assertion is based on facts (*e.g.* the date of the Parking Garage construction and as the project architect’s design), reasonable assumption predicated on facts (if the main building is significant under the themes Commercial Development, Post-World War II Commercial Development, Architecture & Design: Post-World War II Modernism (1919-2000), Post-World War II Commercial Development (1945-1969), then so is its *matching, functionally-related* Parking Garage) and expert opinion supported by facts. The evaluation was made by Francesca Smith, who meets the Secretary of the Interior’s Professional Qualification Standards in History and Architectural History and has a substantial design review record. Demolition of the Parking Garage at 620 North Brand Boulevard is expected to cause substantial adverse change to the significance of the National Register-eligible historical resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired (California Public Resources Code Section 5020.1(q)). The Parking Garage was specifically designed to correspond to the design of the main building, which since its completion has relied on the Parking Garage for the retail and office uses. Its low-scale concrete-finished exterior reflects the filleted exterior design of the larger building. Both have cornices, and the Parking Garage exterior even corresponds to the effect of the vertical exterior window arrangement.

4-30



Figure 1: Parking Garage at 620 North Brand Boulevard, view east. Note the simple base, filleted shaft separated by screens and the bracketed, wide upper frieze. The stepped out, framed entry portal on the right-hand side further echoes the Corporate Modern design style of the main building it was constructed to serve. Photograph January 2022.

We note the close correspondence in the Character Defining Features section, Overall Visual Character and Exterior Materials and Craftsmanship between the Home Savings Building and its Parking Garage using the consultant-prepared Historical Resource Technical Report (January 2022, p. 32). In the table below, review of the Overall Visual Character of the Home Savings Building and the Parking Garage reveals that the Parking Garage shares the main building's most important characteristics and materials. "Yes" in the tables below means that a concept applies to the Parking Garage as well:

Overall Visual Character

Home Savings Building

- Proximity to freeway
- Setback from west property line that continues around the office building
- Six story height
- Rectangular form
- Vertical orientation
- Symmetrical composition of each façade
- Flat roof with parapet

Home Savings Building Parking Garage

- YES**
- Not applicable (NA), but consistent setbacks on east and west sides**
- NA two-story height, executed in proportion**
- YES**
- YES despite its low height**
- YES on Maryland side, one of two primary facades**
- YES flat top deck with flat parapet**

4-31

4-32

- | | | |
|-------------------------------|---|-----------|
| • Wide frieze | YES | ↑
4-32 |
| • Narrow window bays | YES narrow openings with screens | |
| • Centrally located entrances | NO but symmetrical entrances on Maryland side | |

Exterior Materials and Craftsmanship

Home Savings Building

- Precast exposed concrete aggregate piers and paving

- Metal framed doors and windows

- Two-toned window and spandrel glass

Home Savings Building Parking Garage

- YES precast exposed concrete piers and vertical fillets**
Concrete paving is normally poured-in-place

NA

NA

4-33

The consultant states the garage is not part of the resource because it was built outside the period of significance, which is 1969, the year the Home Savings Building was completed. Let us leave aside the unjustifiably narrow period of significance that excludes a functionally related and more-over *matching* structure. The Parking Garage was built in 1970, and was designed Homolka and Associates, who were associated with the construction of the main building, which was designed by Heusel, Homolka and Associates. The senior partner, Francis J. Heusel died in 1968.

The Home Savings Building itself was not completed until 1970. The Inspection Record establishes final inspection completed by a Glendale City Building Inspector bearing the initials “AUR” on March 10, 1970 (Building Permit No. 40497, Inspection Record). It makes even less sense to consider the functionally related Parking Garage that was completed in 1970 not historically significant on the grounds it was completed *after* the main building, which was completed the same year. The consultant further erred in evaluating the Parking Garage separately, as though it were not an integral part of and moreover a contributor to the larger Home Savings property.

Based on these facts and our evaluation prepared by a qualified architectural historian, the Parking Garage is part of, and contributes to, the significance of the historic resource. Because of the proposed Parking Garage demolition and the setting impacts, the proposed project is expected to cause a significant effect on the environment, which should have been the conclusion by the Lead Agency.

Substantial adverse change in the significance of a historical resource *is* considered a significant impact on the environment (CEQA Guidelines Section 15064.5(b).). Substantial adverse changes means demolition, destruction, relocation or alteration of the resource or its immediate surroundings resulting in the significance of the resource being materially impaired. Significance of a resource materially impaired when the physical characteristics that convey its historical significance and that justify its designation as a historical resource are demolished or materially altered in an adverse manner.

4-34

The Lead Agency must prepare an Environmental Impact Report when substantial evidence in the record demonstrates that a project may have a significant effect on the environment.

↑
4-34

Compliance with the Secretary of the Interior's Standards for Rehabilitation

TGHS was dismayed to note that the consultant and the Staff reports prepared for the project applied only one of ten of the Secretary of the Interior's Standards for Rehabilitation (Standards) to the proposed project, which is a serious oversight, a procedural omission and is absolutely necessary for any proposed project that would be built on the property of and abutting other historic resources. The cursory reference in the consultant's report to Standard 9, with the puzzling equivocation that "the project *could be* considered 'related new construction'" (p. 45, emphasis added), as though that were not precisely what a 24-story building would be, is simply not adequate and does not make sense (p. 41).

4-35

Nor does the assertion that the Standards "are not directly applicable because they are not the threshold for impacts" (p. 41). The Standards are codified both in the Glendale Municipal Code under definitions (Chapter 15.20 Historic Preservation, Section 15.20.020) as well as in the California Environmental Quality Act (CEQA). Indeed, rehabilitation projects that meet the Standards are generally, but not always considered categorically exempt from CEQA review. The Standards are nationally recognized and used as the best measurement to gauge potential impacts of a project, are always applicable for a project involving a historic resource under CEQA. Whether or not the Standards are the "threshold for impacts" is irrelevant. This project does not meet the Standards *because* it would result in substantial adverse impacts to a historic resource, not the other way around.

4-36

We note that nothing in the Staff Report addresses either historical resources' setting or the massive changes proposed to those settings.

Absent a local or state definition for setting, it is a term of art specifically defined in National Register guidance as:

the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.

Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences.

The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as...vegetation; simple manmade features (paths or fences); and *relationships between buildings and other features or open space*.

These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings (National Park Service "How to Apply the National Register Criteria for Evaluation" 1990, revised 1995, emphasis added).

4-37

The current proposed project would permanently destroy the character of the property, including but not limited to its relationship to surrounding contributing features and its integral internal open space.

While each of the Standards applies to the proposed project, Standards 1, 2, 4, 5, 9 and 10 are particularly germane and, as demonstrated below, would not be met or followed in the proposed project:

1. A property will be used as it was historically or be given a new use that requires minimal change to the distinctive materials, features, spaces, and spatial relationships.

4-38

The Home Savings Building and its property include the landscaped surface parking lot and its functionally related, original, and matching Parking Garage (Parking Garage). Elements of the Home Savings Building's property (Assessor's Parcel No. 5643-018-032) and its distinctive matching contributing garage would be subject to demolition, which would clearly alter not only the Parking Garage itself, but the spaces between buildings, landscaping, parking lot and spatial relationships associated with the property. Each of those characteristics would be permanently lost by the construction of the out-of-scale new project.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

4-39

Likewise, the currently proposed project would demolish both the extant open space and its original, functionally related, coordinated Parking Garage which clearly cannot be understood as retaining or preserving those contributing and character-defining features.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

4-40

Despite the consultant's suggestions to the contrary, the Parking Garage is an original feature of the Home Savings property. While there is no clear known record of the landscaping in the related parking lot, its current planting plan and arrangements of lawn, foundation planting and trees with low, stepped stacked Roman blocks or bricks should be considered the historic baseline.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property will be preserved.

4-41

The Parking Garage's distinctive features, as well as the concrete exterior features and finishes, including the board-formed concrete mushroom interior columns' construction techniques, the stack bond concrete masonry unit end walls as well as other examples of that craftsmanship which characterize the Home Savings Parking Garage would be permanently lost.



Figure 2: Parking Garage interior view north. Note the fitted screens in the exterior openings (left) archaic stack bond endwalls (center and right), and square, full height support columns at center and right with yellow bases. Photograph January 2022.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the historic integrity of the property and its environment.

The proposed more than 460,000 square-foot (SF) new “addition” would certainly be related new construction. It would demolish, thereby destroying, the historic materials that characterize the property including the landscaped parking lot and the functionally-related Parking Garage.

10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

4-42

4-43

The latest design for the proposed nearly half-a million SF “new addition,” which is both adjacent and undeniably related new construction, would require that all of Home Savings integral parking be destroyed. If the more than 460,000 SF addition was removed in the future, the essential form and integrity of the Home Saving Building property and its environment would be more than impaired; they would have more than four-story below-grade pits. The Home Savings Building would have no parking whatsoever, and worse, its related setting including the Parking Garage would be forever lost.

4-43

Another important historic resource impact we see has not been addressed is the very real potential for vibration-related damage to both historic properties (including differential settlement) during and in the immediate years following construction. Protection from other construction-related activities, such as equipment and vehicles striking buildings, over-spray of various materials, over-excavation of the soil and pile driving depths and methods will present a serious threat to the historic properties. Without a complete study by a qualified structural engineer who has a demonstrated specialty in the protection of historic buildings before and during construction directed by clear, concise mitigation measures that would ensure structural investigations, pre-construction surveys, continuous vibration monitoring with related stop-work orders that would trigger less vibration-intense equipment or methods, we can only assume that damage may well occur to the historic resources, which would be extremely close to the proposed project, its subterranean garage and whatever types of pilings will be proposed. This concern was voiced by Design Review Board Caro Minas, CE, GE, a geotechnical engineer, in the DRB meeting on January 13.

4-44

For these reasons, we believe this project as currently proposed does not comply with even the most basic principles in the Standards for Rehabilitation. This analysis was thoroughly reviewed for adequacy and accuracy by former Board of Directors and former Design Review Board member Francesca Smith, who meets and exceeds the Secretary of the Interior’s Professional Qualification Standards.

4-45

Downtown Specific Plan Compliance

The Glendale Downtown Specific Plan (DSP) contains Standards that direct:

B. The bulk of buildings shall be reduced through the articulation of building massing and building facades.

Articulation emphasizes the different visible aspects of the various parts of a building. Sometimes the effect completely obscures the sense of the whole, breaking it down into too many pieces, but in most cases, articulation creates a balance between the two. Articulation can also be expressed in recessed bays, which require giving up small amounts of valuable real estate. The modest articulation in the following figures emphasize the proposed building's nearly indefinable parts (Figure 1). There are three basic components, the base, equal and repetitive “grid” bay types on the left and right sides and the off-center, top and far left bays proposed as “dark gray spandrel glass.” The only visible proposed enunciation of components, other than the obvious differences in materials, is in the difference in heights at the top floors of the proposed project, see Figures 3, 4, 5 and 6.

4-46

We also note that the proposed differences in color on the exterior of a high-rise, which is generally a difficult long-term maintenance choice, does not provide the necessary articulation. The proposed busy color scheme would provide some animation at an unnecessary long-term cost, but not the necessary articulation of massing required. Note that the differences in color are nearly lost at the scale depicted in the figures below.

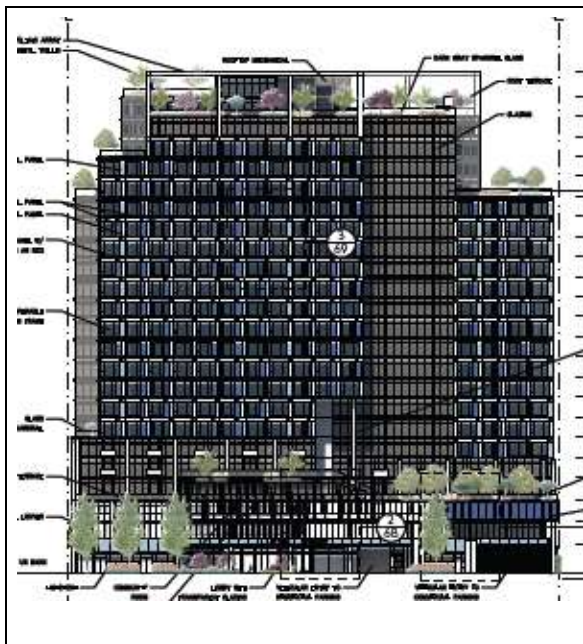


Figure 3: Excerpt from East Elevation, page 57. Note the parsimonious difference in heights on the left and right three bays. Source: Lucia Park 625 Maryland Ave, Glendale CA Stage II Design Review by John Freidman Alice Kimm Architects, 2019, not for publication (Lucia Park).



Figure 4: Excerpt from South Elevation, page 58. Note the limited heights on the left and right bases (one or two bays). There is no recognition of the Home Savings Building's frieze or of its termination in lower middle section of the addition. The Fidelity Savings Building at 600 North Brand Boulevard, a historic resource which is six stories high is not depicted. Source: Lucia Park.

D. High-rise facades (as defined in Chapter 30.33 of the Zoning Code) shall provide a substantial modulation or change of materials every 150 feet in length.

The material presented does not clearly show 150 foot intervals nor does it provide adequate scale to determine those measurements. Based on our 150 foot estimates used in review of elevations, the proposed design does not comply with the standard for the required substantial modulation in continuous walls or the requisite differences in materials.

G. To improve the consistency of scale on the streets, new buildings shall respond to the scale and placement of design features of earlier buildings adjacent to them. Such design features include but are not limited to cornice lines, colonnades, fenestration, and materials.

Review of the full design packet as well as Exhibit 1 and Figures 3, 4 and 5 reveals that that the project, as currently proposed, does not respond to the modest scale of the existing historic resources. The Home Savings Building has, among other character-defining features:

- a prominent cornice line,
- a raised, continuous exterior podium with low open, wide stairs,

- deep, full height exterior fins,
- a Parking Garage designed as a miniature interpretation of the main building, and
- an existing open parking lot.

Although the proposed design does incorporate some features of the Home Savings Building, there are opportunities to strengthen the connection with additional modifications.

K. Projects built adjacent to historic structures that are smaller in scale shall step down at the street wall to align with the existing cornice.

We see inadequate evidence in the proposed 24-story building design of any such response to the existing, established low-rise scale on the subject property block. To that end, little human scale is expressed in the proposed design.

Because the proposed cornice lines would not align with the historic buildings on either side, the proposed window bay rhythm and fenestration bear no relation to the existing, elegantly modulated Home Savings Building.

The proposed building at 24 stories would not “step down” as described to align with the existing cornices (see Figure 6). A string course or “a horizontal band... in a building forming a part of the design” is not a step, except on three bays at the slim north side which notably faces the freeway (*Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/stringcourse>. Accessed 9 Jan. 2022). In the section entitled “Building Design: Massing and Scale,” the Downtown Specific Plan directs in a diagram that “High rise massing should be divided to reduce overall bulk and step gracefully down towards lower adjacent structures” (page 4-11). We see little stepping and no demonstrated evidence of design courtesy or deference toward the existing, low-rise historic resources.

4-48

4-49

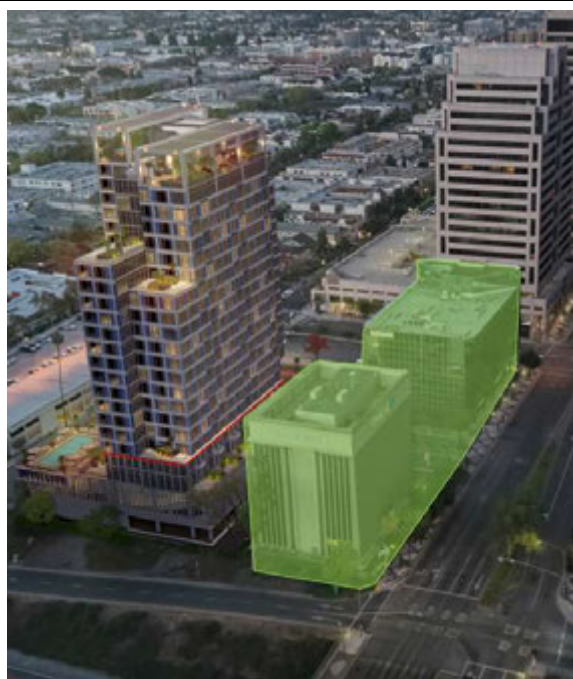


Figure 6: Annotated excerpt from page 8 of Exhibit 1, Stage II Final Design Review Packet. Proposed project string course is highlighted in a dashed red, the historic buildings at 600 and 620 North Brand in green. Note that the building immediately south of the proposed project (top right) has stepped volumes at beginning at the base which diminish in size sequentially from the wide base to the top floors, thus allowing the much taller, larger building to fit into the existing low-rise context. Source: “high aerial from northwest- looking south on Brand Blvd” Lucia Park 625 Maryland Ave, Clendale CA Stage II Design Review by John Freidman Alice Kimm Architects, 2019, not for publication.

The project Staff Report asserts “The project effectively utilizes off-set building forms, step-backs, façade modulations and floor plate reductions to lessen the appearance of its mass. The end volumes also step down at their outside corners in order to break down their overall massing, similar to several taller commercial buildings just to the south on the same side of Brand Boulevard (400-550 N. Brand, [Figure 7]).” The project provides the absolute minimum step-backs and doesn’t compare to those in the block to the immediate south.

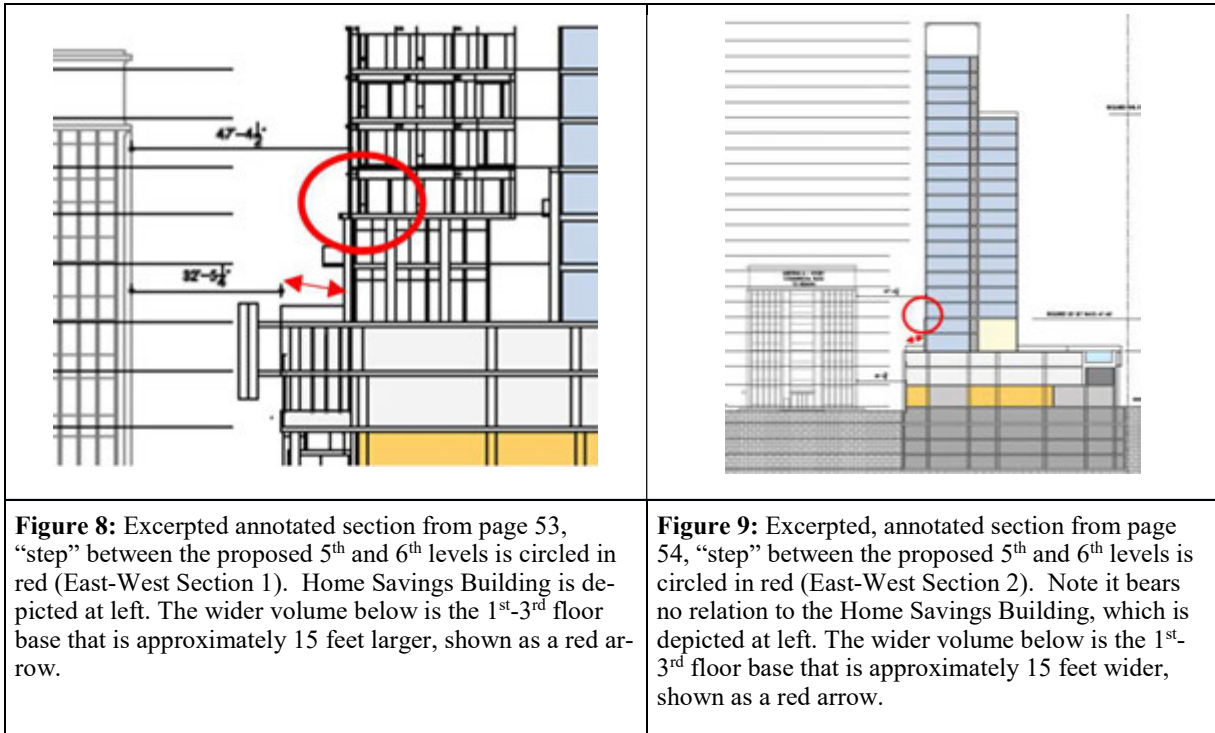
4-49

Figure 7: Rendering of 550 N Brand Boulevard, a 21-story building designed by HOK, Inc. and completed in 1989. It is located on the block immediately south of the proposed project. Note the five generous major steps in the design, as well as the different window rhythms, shapes and sizes of openings, the inverted entrance and corners that reduce the perceived mass of the Post-Modernist style building. Not for publication.



Additional details of the proposed “step” in the proposed project In Figures 8 and 9, and on pages 53, 56 and 57 of Exhibit 1, Stage II Final Design Review Packet reveal that the step it is no more than a difference in materials, applied at the same depths, embellished by a horizontal band. The proposed step is more window dressing than a demonstrable difference in dimension.

4-49



What review of the design packet reveals is that the proposed project steps “away” from the Home Savings Building by fewer than 15 feet, which is less than the length of standard parking spaces (red arrows, Figures 8 and 9). What the proposed project would actually “step back” from are the low-rise buildings on the east side of Maryland Avenue, by 20 feet (just 2 feet longer than a standard parking space).

4-49

Is the Proposed Project Eligible for a SCEA?

TGHS cannot determine whether the proposed project is being considered a Transit Priority Project under Senate Bill 375 (SB 375) and that would be the reason the Lead Agency is preparing a SCEA instead of an Environmental Impact Report (EIR). SB 375 provides several CEQA reform provisions, including streamlined review and analysis of residential or mixed-use projects consistent with the Sustainable Communities Strategy (SCS); modified review and analysis, through an expedited SCEA for Transit Priority Projects (TPPs) that are consistent with the SCS; and a complete CEQA exemption for TPPs that are consistent with the SCS and meet a specific list of other requirements. A project does not qualify for the CEQA streamlining exemption if it can be expected to cause impacts to historic resources, as is the case here.

4-50

Conclusion

We are grateful for the opportunity to comment. We at TGHS are not opposed to this new development as the city desperately needs new housing options for its residents. We do believe that the

4-51

current proposal is detrimental to current historical resources, including but not limited to demolishing the Home Savings garage that was developed and designed as part of the bank building.

The Staff Report indicates that the role of the Commission is “to manage change, not to prevent it.” By recommending against approval of the proposed project as Historic Preservation Commission members you would not be obstructing change but rather working toward making change successful. The project needs to respect the historic fabric surrounding it. As currently proposed, it would not.

↑
4-51
↓

Sincerely,

John Schwab-Sims
Vice President, Advocacy
The Glendale Historical Society

cc: Aram Adjemian, City Clerk
 Roubik Golanian, City Manager
 Jay Platt, Senior Urban Designer
 Kasey Conley, Associate Planner
 Steve Hunt, President - The Glendale Historical Society

Attachments (2) see Attachments 2 and 3 to SCEA comment letter

ATTACHMENT 5

Contents

E-mail to Historic Preservation Commission from Sonnier Francisco,

E-mail to Historic Preservation Commission from Daniel Paul with attached letter.

----- Forwarded Message -----

From: Sonnier Francisco <sonnierfrancisco@hotmail.com>

To: historicpreservationcommission@glendaleca.gov

<historicpreservationcommission@glendaleca.gov>

Sent: Wednesday, January 19, 2022, 02:54:18 PM PST

Subject: Historic Preservation Commission Meeting 1/20/22, Item 8. A. 620 N. Brand Boulevard and 625 N. Maryland Avenue - Advisory Design Review (Case No. PDR 2119308)

To the honorable Historic Preservation Chair and commissioners,

Kindly advise the Glendale City Council not to approve the latest design for the above-referenced project at 620 N Brand Blvd and 625 N Maryland Ave. I am dismayed to learn that the proposed project would demolish Home Savings & Loan's parking garage, a resource that clearly contributes to the historic significance of the subject historic property. The parking garage was designed by the successor firm of the main tower building, and was completed in 1970, in the same year as the tower (per the Final Inspection Record for 620 N Brand tower) and was uniquely designed as a small addition of the tower that fits the period of significance, design, and style of the Home Savings and Loan property.

4-53

Please ensure that this e-mail becomes part of the Admin Record.

I am qualified under the *Secretary of the Interior's (SOI) Professional Qualification Standards* as an Architectural Historian and as an Historian, and have over 12 years of professional experience providing architectural history services throughout the United States, and throughout the State of California, including projects in Glendale, CA. I would like to take this time to point out some of the oversight in the evaluation of the Parking Garage, which has not adequately considered the following aspects that substantiate its historical significance. The parking garage structure should not have been only evaluated on an individual basis. It should also have been evaluated for its context with respect to the Home Savings Building as it was designed as part of and contributes to a larger ensemble of Home Savings buildings with a Mid-Century landscaped setting. Furthermore, the integrity of the location, setting, design, workmanship, materials, and feeling remain intact. The tower could not function without the parking garage, nor would the parking garage have a reason to be there without the tower for which it was built. The period of significance for the property is 1969, when the Home Savings overall project commenced and ends in 1998 when the commissioning business entity, Home Savings & Loan ceased to exist. The parking garage must be considered part of the larger historic resource and property.

As an SOI-professionally qualified Architectural Historian, I am disheartened to see staff support for a project that does not comply with the *Secretary of the Interior's Standards*. I have reviewed a letter by The Glendale Historical Society (TGHS) commenting on the above referenced project. I agree with TGHS' letter to your commission, as their assessment is correct. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstruction Historic Buildings* are specific regarding Rehabilitation in Building Sites:

Recommended- Identifying, retaining, and preserving features of the building that are important in defining its overall historic character. Site features may include walls, fences, or steps; circulation systems, such as walks, paths or roads; vegetation, such as trees, shrubs, grass... which are also important to the site.

Not Recommended- Removing or substantially changing buildings and their features or site features which are important in defining the overall historic character of the property so that, as a result, the character is diminished (137)

Recommended-

Retaining the historic relationship between buildings and the landscape.

Not Recommended- Removing... buildings or landscape features, thereby destroying the historic relationship between buildings and the landscape. Removing... buildings on a site or in a complex of related historic structures (such as a mill complex or farm), thereby diminishing the historic character of the site or complex (138).

4-55

In Alterations and Additions for a New Use, the guidance is also unambiguous:

Recommended- Designing new exterior additions to historic buildings or adjacent new construction that are compatible with the historic character of the site and preserves the historic relationship between the building or buildings and the landscape.

4-56

Not Recommended- Introducing new construction on the building site which is visually incompatible in terms of size, scale, design, material, or color, which destroys historic relationships on the site, or which damages or destroys important landscape features... (142)

The proposed project, as presented, does not comply with or remotely follow the *Standards for Rehabilitation* or any of the quoted direction for retaining and protecting historic settings and building sites, for compatible size and design, or for proposed additions.

4-57

My review of the Downtown Specific Plan shows that the project does not comply with your adopted *Standards A, B, F, G or K in 4.2 Building Design, 4.2.1 Massing & Scale: Tall Buildings*.

4-58

The *Sustainable Communities Environmental Assessment* for the project has not been made public for review, which is a serious problem at this stage of development when you are being asked to make recommendations to City Council.

4-59

Finally, I see that projects that are expected to impact historic resources are not eligible for SCEAs; they require CEQA review, and this project thus far has unmitigable impacts to the parking garage, by the inappropriately massive size of the project and its insensitive design and disruption of the existing property setting. From the beginning, the project architects should have included a creditable, qualified Historic Architect as a part of their team.

4-60

It is for these clearly stated reasons that I ask each of you to vote in your advisory review not to approve the current design for the proposed project.

4-61

Thank you for your attention to my serious concerns on the above proposed project, and of the prepared findings of the subject property historical



evaluation.

Sincerely,

Sonnier F. Francisco, EIT, M.Arch, LEED AP

4-61

From: [Francesca Smith](#)
To: [Smith, Francesca@DOT](#)
Subject: ~~Fw: Agenda Item 8.A, Historic Preservation Commission meeting 012022 (Home Savings and Lucia Park)~~
Date: ~~Thursday, 10 March, 2022 3:34:09 PM~~
Attachments: ~~[Home Savings and Lucia Park Agenda Item 8.A 012022.docx](#)~~

EXTERNAL EMAIL: Links/attachments may not be safe.

----- Forwarded Message -----

From: Daniel Paul <danielpaul@gmail.com>
To: "historicpreservationcommission@glendaleca.gov"
<historicpreservationcommission@glendaleca.gov>
Sent: Thursday, January 20, 2022, 09:51:16 AM PST
Subject: Agenda Item 8.A, Historic Preservation Commission meeting 012022 (Home Savings and Lucia Park)

Please see the attached letter, which I respectfully ask be entered into the administrative record for the agenda item mentioned in the subject line.

Thank You,

Daniel

Daniel D. Paul, Architectural Historian
3938 Vista Court
Glendale - La Crescenta, CA
91214

+1 213 215 4161
danielpaul@gmail.com

4-62

DANIEL D. PAUL, ARCHITECTURAL HISTORIAN
3938 VISTA COURT GLENDALE- LA CRESCENTA, CA 91214

January 20, 2022

Historic Preservation Commission, City of Glendale, CA
via email: historicpreservationcommission@glendaleca.gov

SUBJECT: 620 N. Brand Boulevard, and 625 N. Maryland Avenue. (Historic Preservation Committee Meeting January 20, 2022, Item 8.A)

To Whom It May Concern,

My name is Daniel Paul, and I am a 36 CFR Part 61 federally qualified architectural historian, with over 25 years' experience in historic preservation. I am a Glendale resident, Crescenta Highlands neighborhood, address: 3938 Vista Court. The following comments pertain to case PDR# 2119308.

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4-63

Regarding the Lucia Park Project Historical Resource Technical Report, it is awkward that the Home Savings parking structure was evaluated as a separate property apart from Home Savings office building, which the technical report determined National Register of Historic Places (NRHP) eligible. Provided a National Register of Historic Places nomination is completed for Home Savings office building, knowing its parking structure is present, and of such strong integrity and design symbiosis with the tower, I can't imagine that the California Office of Historic Preservation (OHP): the NRHP nomination's reviewers, would *not* want it counted as a contributing building to the eligible property. A garage is a "related feature" to larger property according to the California Instructions for Recording Historical Resources ([OHP, 1995: 3, 11](#)). According to federal guidance, "Classify a property having a main resource and a small number of secondary resources by the main resource," in which case, this eligible property is a building that includes a garage ([U.S. Department of the Interior, 1997: 14](#)).

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4-64

Our professional qualification as architectural historians affords us the opportunity, through our expert judgment, to define what constitutes the property being evaluated. I'm sure neither the City's historic preservation staff nor your consultant- who is knowledgeable and experienced- would evaluate a standalone garage separate from a single-family residence, even if the subject garage was completed one year later or on a separate but adjacent parcel. I'm not clear why that methodology changes on account of scale, building type, or property value. Clearly the parking garage is an element of the larger historic property. To not analyze these two resources as one property is a contortion. Regarding the identification of the historic boundary, "Select boundaries that encompass the entire resource, with historic and contemporary additions. Include any surrounding land historically associated with the resource that retains its historic

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integrity and contributes to the property's historic significance" ([U.S. Department of the Interior, 1997: 56](#)).

4-65

+

The Home Savings Office Building is National Register of Historic Places eligible for the reasons your consultant has strongly justified. I respectfully ask that it's parking structure be afforded the same status, since both are one property.

4-66

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Thank You for your time.



Daniel Paul

SOURCES:

California Office of Historic Preservation. "Instructions for Recording Historical Resources." Sacramento, CA: Office of Historic Preservation, 1995.

U.S. Department of the Interior, National Park Service, Cultural Resources. "How to Complete the National Register Registration Form" (Bulletin 16A), 1997.

COMMENT LETTER NO. 4:

Francesca Smith
March 10, 2022

Response to Comment 4-1

This comment provides information on the comments previously submitted by TGHS and requests that the three attachments included with the comment letter (Attachment 2, Attachment 3, and Attachment 4) be carefully considered as they apply to the SCEA. The comments in Attachments 2, 3, and 4 are responded to below (Responses to Comments 4-8 through 4--57).

Response to Comment 4-2

This comment presents the qualifications of the author and identifies two primary comments: 1) the parking garage was not identified as a character-defining feature of the Chase Building as a historical resource and 2) the use of a SCEA.

As a threshold matter, the lead agency determines whether a building, garage, etc. is or is not a historical resource. In making its determination the City considers whether any of buildings on the project site are mandatory, presumptive, and/or discretionary historical resources.⁶⁰ Whether any of the buildings qualify as mandatory historical resources is based on whether the building has been determined to be eligible for listing in the California Register of Historical Resources.⁶¹ The mandatory eligibility determination rests solely with the State Historical Resources Commission pursuant to its authority under PRC §5024.1. The commenter provides no evidence or argument that the parking garage is a historical resource, either listed in or determined to be eligible for listing in the California Register of Historical Resources by the State Historical Resources Commission.

Next, the lead agency also considers whether any of the buildings are presumptive historical resources – included in a local register of historical resources -- as defined in PRC section 5020.1(k).⁶² Here, there is no evidence that the parking garage (or surface parking lot) are included in a local register of historical resources. Further, the parking garage could be considered a presumptive historical resource if deemed significant pursuant to PRC §5024.1(g), which requires the building to be identified as significant in a historical resource survey, as long as a survey older than five years has been updated. PRC section 21084.1 specifies that a survey five or more years old at the time of a survey's nomination for inclusion in the

⁶⁰ Public Resources Code (PRC) §21084.1.

⁶¹ CEQA Guidelines §15064.5(a)(1); PRC §21084.1.

⁶² See also, PRC §21084.1.

California Register should be updated. Here, the Chase Building was identified in the 2017-18 South Glendale Historic Resource Survey intensive-level survey, but not the parking garage.

A building that does not meet the mandatory or presumptive status as a historical resource can nevertheless be deemed a historical resource at the discretion of the lead agency but only if supported by substantial evidence.⁶³ There is no requirement the lead agency must deem a building as significant or determine it is a character-defining feature of a historical resource, where the evidence indicates it is not. In fact, a lead agency's voluntary and discretionary determination to consider a resource to be historical must be supported by substantial evidence in light of the whole record. Guidelines §15064.5(a)(3); PRC § 1084.1; see also *Friends of Willow Glen Trestle v City of San Jose* (2016) 2 Cal. App. 5th 457, 468 (holding lead agency discretion under final sentence of PRC §21084.1 imposes no presumption and sets no standard for the lead agency's decision). Accordingly, the City as the lead agency has the legal discretion to determine whether the parking garage is a character defining feature of the Chase Building or a historical resource in and of itself, and such determination will be upheld so long as it is supported by substantial evidence, even where there is a difference of opinion. As previously noted in these Responses to Comments SCEAs, like EIRs, are based on the substantial evidence standard, not the fair argument standard. Pub Res C §21155.2(b); standards. See *National Parks & Conserv. Ass'n v County of Riverside* (1999) 71 CA4th 1341, 1364 (EIR's methodology for analyzing environmental impact must be upheld if supported by substantial evidence in record even though difference of opinion among experts exists).

As discussed in Responses to Comments 3-1 through 3-4, the SCEA, and the Historic Report, the parking garage is not a character-defining feature of the Chase Building as a historical resource. As discussed in Responses to Comments 3-1 and 3-21, above, the proposed Project would not result in any significant impacts, including no potentially significant impact to historical resources. Therefore, review through the preparation of a SCEA is consistent with CEQA.

Response to Comment 4-3

This comment asserts that the parking garage is a contributing building to a larger historical resource on the Project site (the Chase Building) and that this opinion is supported by the California Office of Historic Preservation (OHP). An email is referenced and attached to the comment letter.

OHP has no jurisdiction with regard to the proposed Project. It is the responsibility of the City as the lead agency to ensure compliance with CEQA, identify historical resources on the Project site, and analyze impacts on any identified historical resources.

⁶³ PRC §21084.1; Guidelines §15064.5(a)(3-4).

The email from to OHP misrepresented the facts associated with the Project site. This comment states in the email to OHP (Attachment 1): “The property was found in a recent reconnaissance survey to be locally eligible, but the preparers did not notice the functionally related Parking Garage that was completed the same year as the building.”

In fact, the 2017-18 South Glendale Historic Resource Survey was an hybrid-level survey and not a reconnaissance survey, meaning, properties were researched, evaluated, and recorded on inventory forms. The City stated in the Historic Preservation Commission hearing on January 20, 2020, prior to the date of this email, that the preparers of the 2017-18 South Glendale Historic Resource Survey considered the parking garage and determined it was not a character-defining feature of the Chase Building as a historical resource. In other words, the parking garage was fully considered in a qualified survey. Finally, and as previously indicated (see Response to Comment 3-1), the parking garage was not completed in the same year as the Chase Building. The construction history of the Project site is documented by the building permit and County Assessor records; the Chase Building construction began in 1968, was completed in 1969, and Certificate of Occupancy issued in 1970, while the parking garage construction began in 1970 and was completed in 1971. Copies of these permits are provided in Appendix H to the SCEA, Appendix C to this Responses to Comments, and also provided on the pages 33 to 43 of these responses.

Regardless of the email from OHP, which is not an individualized analysis of the Project, based on incorrect information, and only intended to address a question about a potential California Register nomination, a “property” would be defined in a California Register nomination using the same guidelines that apply to a National Register nomination, which are contained in National Register Bulletin 16A.⁶⁴ The Bulletin states the reasons for selecting the boundary “should be based upon the property’s historic significance and integrity.”⁶⁵ The Bulletin also provides guidelines for selecting boundaries. For all properties, the nomination should “carefully select boundaries to encompass, but not exceed, the full extent of the significant resources and land area making up the property.”⁶⁶ “The area to be registered should be large enough to include all historic features of the property but should not include ‘buffer zones’ or acreage not directly contributing to the significance of the property.”⁶⁷ Features used in the delineation of boundaries in urban areas may include legally recorded boundary lines, natural topographical features, and manmade features. For buildings, boundaries should encompass the entire resource including any land historically

⁶⁴ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Pg. 29. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

⁶⁵ National Register Bulletin 16A, 55.

⁶⁶ Ibid, 56.

⁶⁷ Ibid.

associated with the resources that contributes to the property's historic significance. In urban areas, legal recorded parcel numbers or lot lines are recommended as boundaries.

Based upon these guidelines in the Bulletin the "property" would include Lots 24, 25, and 26 of Tract No. 93, which would be the legal lots occupied by the Chase Building and the setbacks from Brand Boulevard on the west, the freeway on the north, the internal driveway on the east, and the surface parking lot on the south. The fact that legal lots are sometimes tied together for property tax purposes does not mean extraneous lots should be included with the boundary of a property when listed in the National Register. As discussed in the SCEA and Historic Report, the Chase Building is significant as an important commercial property type that represents the growth of downtown Glendale. While the parking garage has some of the same visual qualities as the Chase Building, it does not have the historic association with high-rise construction along the freeway or the growth of downtown Glendale.^{68,69} Furthermore, the parking garage, unlike the Chase Building, was not at the forefront of high-rise development oriented toward the freeway. Since the parking garage is secondary and ancillary to the Chase Building and does not contribute to the significance of the "property" there would be no requirement to include it in a California or National Register nomination. There would be no justification for the nomination of APN 5643-018-032, which contains the parking garage, which would exceed the extent of the land area associated with the significant historical resource.

Response to Comment 4-4

This comment notes previously provided opinions asserting that the parking garage is a character-defining feature of the Chase Building as a historical resource. As discussed in Response to Comment 4-3, the parking garage does not contribute to the significance of the "property". Additionally, as discussed in Response to Comment 3-2, the SCEA and the Historic Report provided facts, reasonable assumptions based on facts and Ms. Grimes' expert opinion supported by facts that conclude the parking garage is not a contributor to or a significant part of the Chase Building as a historical resource defined by CEQA. As discussed above and in Responses to Comments 3-1 through 3-21, TGHS and Francesca Smith's conclusions are not supported by facts and reasonable assumptions predicated upon facts that would constitute substantial evidence under CEQA. Smith states that "the Lead Agency must treat the historic resource [garage] as significant based on the information previously provided and the information provided in this letter. This issue was addressed in Response to Comments 3-2 as follows:

⁶⁸ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-55. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁶⁹ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Page 33. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

[TGHS and Francesca Smith] indicate the belief that the parking garage is a “contributor to or significant part of the historical resource.” To make this case, they first claim as a “fact” the date of the parking garage’s construction and its design by the architect of the Chase Building. It is a fact that the construction dates of the Chase Building and the garage not identical (see Response to Comment 3-1). Even if they were, the mere fact that they were built at the same time and designed by the same person (which is undisputed) does not establish historic significance. They go on to claim significance for the parking garage with a “reasonable assumption predicated on facts” that “if the main building is significant under the themes Commercial Development, Post-World War II Modernism (1919 [sic]-2000), Post-World War II Commercial Development (1945-1969), then so too is its *matching, functionally-related* Parking Garage.” (Emphasis in original)

This conditional relationship is unsubstantiated and is not borne out in historic preservation practice: a functionally-related ancillary building or garage does not *ipso facto* contribute to the significance of a site’s primary building. The document continues with the assertion that the expert opinion supported by facts of Francesca Smith demonstrates that demolition of the garage will have a substantial adverse change on the historic resource. To make this case, the document cites Smith’s assertion that the garage was designed to “correspond to the design of the main building,” going on to mention several design similarities. As discussed in Response to Comment 3-1, the parking garage was clearly designed to visually complement the Chase Building, but that both its design and material palette reflect a much more modest, superficial take on the Chase Bank building’s Corporate Modern/New Formalist design. Aside from the presence of vertical fins at two facades and a cornice band, which themselves only visually recall the appearance of the bank building, the parking garage is not a “matching” garage. TGHS’s and Francesca Smith’s focus on visual similarities does not provide any facts or reasonable assumptions based on fact that the garage provides the site with any historic significance beyond that found at the Chase Building, or that demolition of the garage would cause a significant adverse change to that significance, or material impair the ability of the Bank Building to qualify for the California or local register.

Response to Comment 4-5

This comment incorrectly states that the proposed Project would cause both significant and unavoidable environmental impacts to historical resources. As discussed in Response to Comment 3-20, Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. Therefore, the proposed Project will not cause impacts to historical resources and the preparation of a SCEA is consistent with CEQA.

The Historic Report accurately identified the Chase Building as the only historical resource on the Project site. As the parking garage was not identified as an individual historical resource its demolition would not result in a significant impact on historical resources.

As discussed in Response to Comment 3-2, even if the parking garage were a character-defining feature of the historical resource, the demolition of the parking garage and the construction of the proposed building would not meet the threshold for a significant impact on the historical resource under CEQA. To retain integrity, a historical resource will possess most, but not necessarily all, seven aspects: location, setting, design, workmanship, materials, feeling, and association. Determining which of these aspects are essential, requires an understanding of why, where, and when the resource is significant. The *South Glendale Historic Context* established the integrity considerations for associated property types. For property types, like the Chase Building, associated with the Post-World War II Commercial Development Theme, the *South Glendale Historic Context* states a commercial property from this period should retain integrity of location, design, workmanship, materials, and feeling, at a minimum. Integrity of setting and association were not identified as essential aspects of integrity. Setting is defined as the physical environment of a historical resource, while association is the direct link between an important event or person and a historical resource. The Historic Report concludes the historical resource currently retains all aspects of integrity including setting and association, even though setting and association are not essential according to the *South Glendale Historic Context*.

Response to Comment 4-6

This comment states that CEQA mandates public agencies should not approve projects if there are feasible alternatives or feasible mitigation measures available to substantially lessen significant environmental effects. As demonstrated in Responses to Comments 3-1 through 3-21, the SCEA, and the Historic Report, the proposed Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. For this reason, demolition of the parking garage would not result in a significant impact to a historical resource under CEQA.

This comment also states that the comment letter and its attachments provide the Lead Agency with a “fair argument”, which the commenter asserts is the legal standard for determining the significance of impacts. The commenter is incorrect. As discussed in Response to Comment 3-2, Under Public Resources Code Section 21155.2, a *SCEA is reviewed under the substantial evidence standard and not the fair argument standard*.

As such, the SCEA for the proposed Project and the Historic Report are subject to the substantial evidence standard. The SCEA and the Historic Report, prepared by Teresa Grimes, a historic resources expert, provided facts, reasonable assumptions based on facts and Ms. Grimes's opinion supported by facts that the parking garage is not a character-defining feature of or a significant part of the Chase Building as a historical resource defined by CEQA. As discussed above and in Responses to Comments 3-1 through 3-21, TGHS and Francesca Smith's conclusions are not supported by facts and reasonable assumptions predicated upon facts that constitute substantial evidence as defined by CEQA. Smith states that "the Lead Agency must treat the historic resource [garage] as significant based on the information previously provided and the information provided in this letter. This issue was addressed in Response to Comments 3-2 as follows:

[TGHS and Francesca Smith] indicate the belief that the parking garage is a "contributor to or significant part of the historical resource." To make this case, they first claim as a "fact" the date of the parking garage's construction and its design by the architect of the Chase Building. It is a fact that the construction dates of the Chase Building and the garage not identical (see Response to Comment 3-1). Even if they were, the mere fact that they were built at the same time and designed by the same person (which is undisputed) does not establish historic significance. They go on to claim significance for the parking garage with a "reasonable assumption predicated on facts" that "if the main building is significant under the themes Commercial Development, Post-World War II Modernism (1919 [sic]-2000), Post-World War II Commercial Development (1945-1969), then so too is its *matching, functionally-related* Parking Garage." (Emphasis in original)

This conditional relationship is unsubstantiated and is not borne out in historic preservation practice: a functionally-related ancillary building or garage does not *ipso facto* contribute to the significance of a site's primary building. The document continues with the assertion that the expert opinion supported by facts of Francesca Smith demonstrates that demolition of the garage will have a substantial adverse change on the historic resource. To make this case, the document cites Smith's assertion that the garage was designed to "correspond to the design of the main building," going on to mention several design similarities. As discussed in Response to Comment 3-1, the parking garage was clearly designed to visually complement the Chase Building, but that both its design and material palette reflect a much more modest, superficial take on the Chase Bank building's Corporate Modern/New Formalist design. Aside from the presence of vertical fins at two facades and a cornice band, which themselves only visually recall the appearance of the bank building, the parking garage is not a "matching" garage. TGHS's and Francesca Smith's focus on visual similarities does not provide any facts or reasonable assumptions based on fact that the garage provides the site with any historic significance beyond that found at the Chase Building, or

that demolition of the garage would cause a significant adverse change to that significance, or material impair the ability of the Bank Building to qualify for the California or local register.

This comment claims the SCEA is based on findings made in error because it is expected to cause significant adverse changes in the significance of the historical resource and, therefore, the proposed Project does not qualify as a transit priority project or for environmental review through the preparation of a SCEA. Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate that the proposed Project would not cause a significant impact to the Chase Building as a historical resource as defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. Therefore, the proposed Project will not cause impacts to historical resources and the preparation of a SCEA is appropriate.

Response to Comment 4-7

This comment concludes by stating the proposed Project should be redesigned as a far smaller project that would be more deferential to the Chase Building and its parking garage, setting, and the Fidelity Savings Building. As discussed in Responses to Comments 3-18, the proposed building incorporates design elements, including the step backs, vertical projecting fins, curtain wall sections, and a rooftop trellis garage that respond to the scale and design of the Chase Building. Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed Project would not cause a significant impact to the Chase Building as a historic resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. In addition, Response to Comment 3-7 discusses the setting and cites to the analysis in the SCEA and Historic Report that discuss and define why the setting of the Chase Building would not be diminished by views of the proposed Project.

This comment also states a qualified Historic Preservation Architect should design any future iterations of the proposed Project to ensure conformance with the Standards. As discussed in Responses to Comments 3-5 and 3-13, consistency with the Standards is not required by CEQA and the Standards are not the threshold for determining significant impacts on historical resources. Section 15064.5(b) of the CEQA Guidelines states a project would normally have a significant impact on historical resources if it would result in a substantial adverse change in the significance of a historical resource and whether a project would materially alter in an adverse manner those physical characteristics of the historical resource that convey its significance.

The analysis in the SCEA and the Historic Report support the conclusion that the proposed Project would not materially alter the Chase Building in an adverse manner, and it would continue to convey its significance that justifies its eligibility for inclusion in national, state, and local historic registers.

Response to Attachment No. 1 to Comment Letter No. 4 – February 8, 2022 Email from Jay Correia

Responses to Comments 4-8 through 4-15

The email from Jay Correia, Supervisor in the Cultural Resources Programs, Registration and Project Review Units, addresses a question posed by Francesca Smith about a hypothetical California Register nomination submitted for the Chase Bank property at 620 N. Brand Boulevard. Specifically, the inquiry focuses on whether the parking garage should be included in such a nomination. Mr. Correia responded affirmatively, quoting some guidance from the NPS. He concluded (without analysis) that the parking garage cannot be ignored or dismissed in any nomination or environmental evaluation. Since his response is about a potential nomination and SHPO has no role in the present environmental evaluation, his opinion is not relevant to the present analysis. However, it should be pointed out that Francesca Smith's email to Mr. Correia was misleading, in that it suggested that the garage had not been noticed in the 2017-18 South Glendale Historic Resource Survey. As discussed in Response to Comments 3-1, the garage was in fact noted and the Survey consultant found the garage to not be a significant feature of the property. The survey consultant has submitted a letter to verify this finding that is provided in Appendix I to the SCEA, Appendix D to this Responses to Comments and provided on page 44 of these responses.

Response to Attachment No. 2 to Comment Letter No. 4 - January 20, 2022 Letter to City Council from TGHS re: Stage I Design Review Hearing

Response to Comment 4-16

This comment states the proposed Project would alter Glendale's appearance and skyline and would impact the City. As discussed in Section 5.1, Aesthetics, in the SCEA, a significant impact may occur if the proposed Project introduces incompatible visual elements within a field of view containing a scenic vista or substantially alters a view of a scenic vista. The available views in the vicinity of the Project site are largely constrained by existing high-rise buildings surrounding the site, including the six-story Chase Building located on the Project site to the northwest and the 21-story commercial office building located to the south of the Project site. Photographs were taken showing the current views of the Project site, Verdugo Mountains, and Griffith Park. Griffith Park is not currently visible from the portion of downtown Glendale where the Project site is located. The Verdugo Mountains are partially obstructed and only clearly visible along Brand Boulevard in the vicinity of the Project site. As there are no currently unobstructed views of the Verdugo Mountains or Griffith Park from the portion of downtown Glendale

where the Project site is located, proposed Project development would not result in a substantial effect on any existing scenic vista.⁷⁰ For these reasons, the SCEA concluded the proposed Project would result in less than significant impacts to available scenic vistas or the visual character of the area.

Response to Comment 4-17

This comment states the Staff Report for the January 21, 2020, City Council hearing regarding the Stage I design review failed to acknowledge the property is a historical resource in its analysis of the Project under Section 4.1.1 of the Downtown Specific Plan (DSP) and that it is a mistake to discount the property as a historical resource under CEQA.—The “not applicable” response to Section 4.1.1 Historic Preservation / Adaptive Reuse in the Stage I design review memo was not in error because the Project itself does not include the “Rehabilitation of a historic resource” (DSP 4.1.1.A) or the “Reuse of older buildings that are not historic resources” (DSP 4.1.1.B), and therefore, this DSP section does not apply. The City has consistently stated that the Chase Building is a historical resource under CEQA in multiple documents relating to the Project. It should be noted that the referenced hearing and associated staff report are not directly related to the CEQA analysis. The SCEA and the Historic Report clearly and consistently state the Chase Building is a historical resource as defined by CEQA.

Response to Comment 4-18

The Historic Report correctly analyzed impacts on the identified historical resource, i.e., the Chase Building, using the thresholds in the CEQA Guidelines. The entire “property” or Project Site does not meet the CEQA definition of a historical resource.

See Responses to Comments 3-2 and 4-5 for more information on the Standards and setting.

Response to Comment 4-19

This comment states that the current design of the proposed Project shows minimal if any deference to the design and setting of the Chase Building. This comment suggests that opportunities be explored which might include additional step backs at the level of the 6-story building and further articulation at areas near that building. As discussed in Response to Comment 3-18, the proposed building incorporates design elements, including the vertical projecting fins, curtain wall sections, and rooftop trellis garage that respond to the scale of the Chase Building. Additionally, as discussed in Responses 3-16 through 3-19, the proposed building would conform to the DSP standards, including the requirements for step backs. Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed

⁷⁰ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-5. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. In addition, Response to Comment 3-7 discusses the setting cites the analysis in the SCEA and Historic Report that the setting of the Chase Building would not be diminished by the view of the proposed Project.

Response to Comment 4-20

This comment inaccurately states that survey forms were not prepared as part of the 2017-18 South Glendale Historic Resource Survey and, for this reason, the question of whether the parking garage contributes to the historic significance of the Chase Building has not been addressed.

As discussed in Response to Comment 4-3, the 2017-18 South Glendale Historic Resource Survey was an intensive-level survey that included field work, research, analysis, and preparation of survey forms. The South Glendale Survey considered but determined the parking garage was not a character-defining feature of the Chase Building as a historical resource. The survey consultant has submitted a letter to verify this finding that is provided in Appendix I to the SCEA, Appendix D to this Responses to Comments, and also provided on page 44 of these responses. Additionally, the Historic Report re-evaluated the parking garage and came to the same conclusion.⁷¹

Response to Attachment No. 2-6Comment - 4-21

This comment provides an integrity analysis. The analysis of integrity provided by TGHS is not relevant because it assumes the parking garage is contributing to the historic significance of the Chase Building, which is not the case as demonstrated in Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report.

Response to Attachment No. 3 to Comment Letter No. 4 – January 21, 2020 Email from Francesca Smith to City Council re: Stage I Design Review Hearing

Response to Comment 4-22

This comment is nearly identical to the one addressed in Response to Comment 4-17, stating that the Staff Report for the January 21, 2020, City Council hearing regarding the Stage I design review failed to acknowledge the Chase Bank property a historical resource in its analysis of the project under Section 4.1.1 of the Downtown Specific Plan (DSP) and that it is a mistake to discount the property as a historical

⁷¹ Teresa Grimes Historic Preservation. *Lucia Park Project, Glendale California, Historical Resources Technical Report*. January 2022. Appendix F. Executive Summary. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65601/637781192094970000>. Accessed March 2022.

resource under CEQA. The SCEA and the Historic Report clearly and consistently state the Chase Building is a historical resource as defined by CEQA.

Response to Comment 4-23

This comment states the property was found to be locally significant in the City's survey and, therefore, the whole property is the historical resource, not just the Chase Building. This comment misrepresents the findings of the 2017-18 South Glendale Historic Resource Survey. The South Glendale Survey considered the parking garage but determined it was not as a character-defining feature of the Chase Building as a historical resource. The survey consultant has submitted a letter to verify this finding that is provided in Appendix I to the SCEA, Appendix D to this Responses to Comments, and provided on the page 44 of these responses.

Although the South Glendale Survey was based upon data from the County of Los Angeles, which is organized by Assessor Parcel Numbers, that does not necessarily mean that identified historical resources included the entire parcel. Parcel information is simply the common tool for zoning and land management systems and thus historical resource surveys. Also see Response to Comment 4-3 for additional discussion of the "property".

Response to Comment 4-24

This comment cites the NPS guidance on historic properties and the Standards. As discussed in Responses to Comments 3-5 and 3-13, the proposed Project is not subject to the Standards; thus, the comment is not pertinent to the CEQA analysis.

Response to Comment 4-25

It should be noted that this comment was made regarding the Stage I design proposal, which has been significantly changed. It is presumed, however, that the comment stating the proposed Project would crowd, overhang, and be too close to the Chase Building and demolish the parking garage and landscaped parking lot, altering the historic character of the property. This comment also cites the Standards. At the ground level, the proposed building would be physically separated from the Chase Building by approximately 32 feet and will be located to the rear of the historic building and will not block its primary elevations, as is suggested in the guidance quoted from the NPS. The massing of the proposed building steps away from the east (rear) façade of the historic building beginning at the fourth and fifth stories to increase the physical separation from the historical resource by another 17 feet. By comparison, the typical width of a residential street with two-way traffic and parking is 40 to 50 feet. Thus, the difference in size and scale is diminished by the distance between the two buildings by 47.5 feet above the fourth

story. Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building. As discussed in Responses to Comments 3-5 and 3-13, the proposed Project is not subject to the Standards; thus, the comment is not pertinent to the CEQA analysis.

This comment also states that the proposed Project would demolish the existing open space, including the landscaped surface parking lot. While the proposed Project would demolish these existing uses, the proposed Project includes 15,844 square feet of common open space, 6,994 square feet of public accessible open space, and 1,595 square feet of landscaping on the first level as well as 41,625 square feet of residential development open space and 7,064 square feet of landscape area throughout the residential building.⁷²

Response to Comment 4-26

This comment cites the Standards and states the proposed Project would eliminate the relationship between the parking garage, a contributing garage, and the Chase Building. As discussed in Responses to Comments 3-5 and 3-6, the proposed Project is not subject to the Standards; thus the comment is not pertinent to the CEQA analysis. Responses to Comment 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature contributing to the historic significance of the Chase Building.

Response to Comment 4-27

This comment cites the Standards. As discussed in Responses to Comments 3-5 and 3-6, the proposed Project is not subject to the Standards; thus, the comment is not pertinent to the CEQA analysis.

This comment also states the massing, size, scale, and architectural features of the proposed building are not compatible with the Chase Building. This comment reiterates that the proposed Project would be too close to the Chase Building. As discussed in Response to Comments 3-18, the proposed building incorporates design elements, including the vertical projecting fins, curtain wall sections, and rooftop trellis garage that respond to the scale of the Chase Building. Additionally, as discussed in Responses 3-18 through 3-21, the proposed building would conform to the DSP standards. At the ground level, the proposed building would be physically separated from the Chase Building by approximately 30 feet. The

⁷² City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 1.0-2. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

massing of the proposed building steps away from the east façade of the historic building beginning at the fourth and fifth stories to increase the physical separation from the historical resource by another 17 feet. By comparison, the typical width of a residential street with two-way traffic and parking is 40 to 50 feet. Thus, the difference in size and scale is diminished by the distance between the two buildings by 47.5 feet above the fourth story.

This comment also claims environmental review of historical resource impacts have not been addressed. Historical resource impacts were addressed in the SCEA and Historic Report. Responses to Comments 3-1 through 3-21, the SCEA, and the Historic Report demonstrate the proposed Project would not cause a significant impact to the Chase Building as a historical resource defined by CEQA and the parking garage is not a character defining feature of the Chase Building. For these reasons, the proposed Project is not detrimental to current historical resources.

Response to Comment 4-28

This comment asks the City to not approve the Project and for clarification on the environmental review. The SCEA, the appropriate CEQA document for the proposed Project, was released for public review on January 18, 2022. The deadline for comments was extended beyond the 30-day review period defined in CEQA with the public review period closing on March 10, 2022.

Response to Attachment No. 4 to Comment Letter No. 4 – January 17, 2022 Letter from TGHS to the Historic Preservation Commission re: Advisory Design Review Hearing

Response to Comment 4-29

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-1.

Response to Comment 4-30

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-2.

Response to Comment 4-31

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-3.

Response to Comment 4-32

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-3.

Response to Comment 4-33

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-3.

Response to Comment 4-34

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-4.

Response to Comment 4-35

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-5.

Response to Comment 4-36

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-6.

Response to Comment 4-37

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-7.

Response to Comment 4-38

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-8.

Response to Comment 4-39

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-9.

Response to Comment 4-40

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-10.

Response to Comment 4-41

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-11.

Response to Comment 4-42

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-12.

Response to Comment 4-43

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-13.

Response to Comment 4-44

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-14.

Response to Comment 4-45

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-15.

Response to Comment 4-46

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-16.

Response to Comment 4-47

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-17.

Response to Comment 4-48

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-18.

Response to Comment 4-49

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-19.

Response to Comment 4-50

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-20.

Response to Comment 4-51

This comment letter is identical to Comment Letter No. 3. Please see Response to Comment 3-21.

Response to Attachment No. 5 to Comment Letter No. 4 – January 19, 2022 Email from Sonnier Francisco to the Historic Preservation Commission

Response to Comment 4-52

The comment states the concern that the Project will demolish the parking garage, which the commenter believes contributes to the historic significance of the property because it was designed by the successor firm of the primary building's architect, was completed in 1970, and was uniquely designed as a small addition to the tower that fits the period of significance, design, and style of the Chase Building.

The Historic Report found that the parking garage is not a significant character defining feature of the property or an individually eligible historic resource because the garage is an ancillary garage that does not contribute to the reasons for which the Chase Bank building was determined to be historically significant in the developmental history of downtown Glendale or as a good example of the Corporate Modern/New Formalist architectural style. Please see Responses to Comments 3-1 and 3-2.

Response to Comment 4-53

The comment states that the parking garage should have been evaluated in the context of the entire site because it was designed as part of, and contributes to, the larger site and its setting. The commenter notes that the Chase Bank building could not function without the parking garage and the garage exists only to serve the office tower.

This comment is very similar to some included in Comment Letters No. 3 and No. 4. Please see Responses to Comments 3-7 and 4-3.

Response to Comment 4-54

The comment states the Project does not meet Downtown Specific Plan Standards A, B, F, G, or K.

The commenter does not provide any evidence or commentary beyond, or in support of, this assertion. Similar, but more detailed, assertions are also made in Comment Letter No. 3 and discussed in Responses to Comments 3-16 to 3-19.

Response to Comment 4-55

The comment states that it was a serious problem that the SCEA was not available for public review at the time of the Historic Preservation Commission (HPC) advisory design review hearing held on January 20, 2022.

The Draft SCEA was circulated between January 18, 2022 and March 10, 2022 in fulfillment of the legally-required comment period required under CEQA. The commenter did not submit any comments regarding the SCEA during that period.

Response to Comment 4-56

The comment states that projects that may have an impact on historic resources are not eligible for review under a SCEA. The commenter believes the Project will have unmitigable impacts because of the proposed demolition of the parking garage, the size and design of the project, and its disruption of the existing property setting.

This is incorrect. The Project qualifies for review through the preparation, review and consideration of a SCEA because it will not have a significant adverse impact on the Chase Bank building or its setting, and the parking garage is not a historic resource. Please see Response to Comment 3-21.

Response to Attachment No. 5b to Comment Letter No. 4 –January 20, 2022 email from Daniel Paul to the Historic Preservation Commission

Response to Comment 4-57

The comment states the concern that the Historic Report analyzed the parking garage as a separate property from the Chase Bank building instead of considering it as an element of the larger property, which the commenter believes is appropriate.

The Historic Report acknowledged and analyzed the parking garage as part of the Chase Bank property and its relationship with the Chase Building. Because the SCEA and the Historic Report find that the parking garage is not a historically significant component of the larger site, only the parcels of this multi-parcel property that are associated with the Chase Building were identified as the appropriate boundary for the historic resource. Please see Response to Comments 4-3.

COMMENT LETTER NO. 5:

Burt Culver

Response to Comment 5-1

Leanna Williams

From: Zemaitaitis, Vilia <VZemaitaitis@Glendaleca.gov>
Sent: Tuesday, February 22, 2022 3:47 PM
To: Rodney Khan; Ralph Cimmarusti; Tony Locacciatto; Leanna Williams
Subject: FW: Objection to 625 N. Maryland Avenue

From: Burt Culver <ballast@gmail.com>
Sent: Tuesday, February 22, 2022 8:52 AM
To: Zemaitaitis, Vilia <VZemaitaitis@Glendaleca.gov>
Cc: Brotman, Daniel <dbrotman@Glendaleca.gov>; Devine, Paula <PDevine@Glendaleca.gov>; Kassakhian, Ardashes <AKassakhian@Glendaleca.gov>; Agajanian, Vrej <VAgajanian@Glendaleca.gov>
Subject: Objection to 625 N. Maryland Avenue

CAUTION: This email was delivered from the Internet. Do not click links, open attachments, or reply if you are unsure as to the sender.

Ms. Zemaitaitis,

Per the [published notice of intent](#), I'm writing to object to the proposed project at 625 N. Maryland Avenue. At this time in our battle against climate change, we must limit new gas infrastructure in our city. Allowing a building with 294 residential units to be piped for gas creates a significant pollution source in our city. That's 294 natural gas water heaters, furnaces, stoves, ovens and clothes dryers. Each of these may make a minor amount of pollution, but cumulatively, it is a significant amount. Electric heat pump water heaters, heat pump space heaters, induction stoves, electric convection ovens, and heat pump clothes dryers would make this building much more livable and would fit into Glendale's [Greener Glendale Plan](#).

5-1

Not only is natural gas bad for the environment, burning it indoors creates a significant health hazard for the occupants. Especially, in new, tightly sealed buildings, the PM2.5, NOx, CO, and Formaldehyde produced by burning natural gas in stove and ovens leads to [long term health consequences to the residents](#). As per the research quoted in the article, rates of asthma, heart disease, and premature mortality increase dramatically in homes with natural gas appliances.

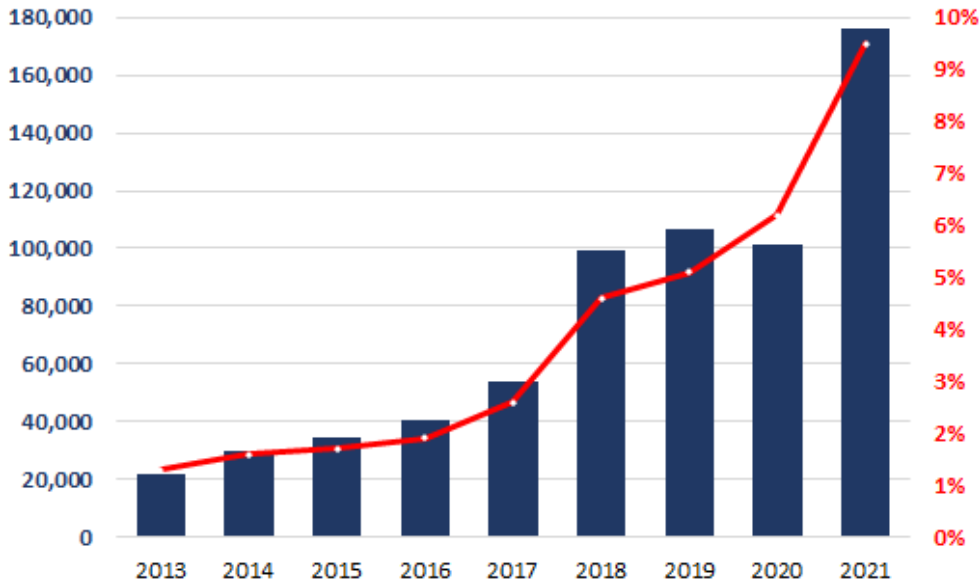
5-2

Also, of note is that the project doesn't seem to include any electric car charging capabilities for residents or visitors. The percentage of new cars that are sold is now over 10% in California and most likely even higher in the Los Angeles area. Any building built today must take this into account and provide tenants and visitors with facilities to charge their vehicles.

5-3

EV Registrations in California: Number of EVs

% share of total registrations



Source: CNCDA

WOLFSTREET.com

5-3

Please, for the future of Glendale and its citizens, do not allow natural gas in this building and design it for our electrified future by providing electric car charging stations for every parking space.

5-4

Regards,

Burt

The comment expresses concern with allowing the proposed Project to use gas as the commenter asserts it would create a significant pollution source to the City. The SCEA and Air Quality and Greenhouse Gas Study (Appendix A to the SCEA) analyzed potential impacts related to pollutants. Specifically, the commenter determined the proposed Project would add a considerable cumulative contribution to Federal or State nonattainment pollutants, which would result in a significant impact. SCAQMD's CalEEMod program was used to calculate regional area, energy, mobile source, and stationary emissions.^{73,74} Natural gas usage is also included in CalEEMod. Operational emissions associated with the proposed Project would not exceed the SCAQMD's emission thresholds. As such, operational impacts would be less than significant.

Natural gas service would be provided to the Project site by Southern California Gas Company (SoCalGas).⁷⁵ Buildout of the proposed Project is projected to generate an on-site net demand for natural gas totaling 730,577 kBtu or 0.7 million cubic feet (MMcf) per year. Based on the 2020 California Gas Report, the California Energy and Electric Utilities estimates natural gas supply within SoCalGas' planning area will be approximately 1,253,775 million cubic feet (MMcf) per year in 2025.⁷⁶ The proposed Project would account for less than 0.01 percent of the 2025 annual forecasted supply in SoCalGas' planning area.

The comment also states that the use of electric appliances (water heaters, space heaters, induction stoves, etc.) within the proposed building would fit into the Greener Glendale Plan. As discussed in the SCEA, the proposed Project would comply with Title 24, Part 6 of the California Code of Regulations (CCR), also known as Building Energy Efficiency Standards, which regulates the design of building shells and building components. The Title 24 standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The CEC adopted the 2019 Building Energy Efficiency Standards (2019 Building Standards), effective January 1, 2020 with which the building will comply.⁷⁷ Moreover, the proposed Project would exceed California Energy Code standards by 15 percent per measures set forth in the Greener Glendale Plan and the City's Building Codes. The Greener Glendale Plan incorporates twelve (12) measures in addition to the mandatory Green Building

⁷³ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-24. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁷⁴ Meridian Consultants LLC. *Air Quality & Greenhouse Gas Technical Study for the Lucia Park Project 625 N. Maryland Avenue and 620 N. Grand Boulevard Glendale, California 91203*. December 2021. Appendix A. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65591/637781192050470000>. Accessed March 2022.

⁷⁵ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-25. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁷⁶ California Gas and Electric Utilities, 2020 California Gas Report, October 2020, https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.

⁷⁷ CEC, 2019 Building Energy Efficiency Standards, <https://www.energy.ca.gov/title24/2019standards/>, accessed August 2021.

Standards for new construction projects. The twelve (12) measures and their applicability to the proposed Project are provided in Table 5.8-7: Project Consistency with Greener Glendale Plan in Section 5.8, Greenhouse Gases of the SCEA.⁷⁸

Response to Comment 5-2

The comment states burning natural gas is a significant health hazard for occupants, especially in new, tightly sealed buildings, the PM_{2.5}, NO_x, CO, and formaldehyde produced by burning natural gas in stove and ovens leads to long term health consequences to the residents. The article cited in the comment says gas cooking produces PM 2.5, “nitrogen oxides (NO_x), including nitrogen oxide (NO) and nitrogen dioxide (NO₂), carbon monoxide (CO), and formaldehyde (CH₂O or HCHO). All of these pollutants are health risks if not properly managed.”⁷⁹ While not a CEQA issue, project inhabitants would be protected from potential internal air quality issues, as the proposed Project would be required to comply with CALGreen. The proposed Project would exceed California Energy Code standards by 15 percent per measures set forth in the Greener Glendale Plan and the City’s Building Codes. The Greener Glendale Plan incorporates twelve (12) measures in addition to the mandatory Green Building Standards for new construction projects, which would properly manage these pollutants should gas stoves and ovens be installed in the proposed building. The Air Quality and Greenhouse Gas Study (Appendix A to the SCEA) and the SCEA analyzed the potential impacts related to pollutants, including PM_{2.5}, NO_x, and CO. Specifically, they determined whether the proposed Project would add a considerable cumulative contribution to Federal or State nonattainment pollutants, which would result in a significant impact. SCAQMD’s CalEEMod program was used to calculate regional area, energy, mobile source, and stationary emissions.^{80,81} Natural gas usage is also included in CalEEMod. Operational emissions associated with the proposed Project would not exceed the SCAQMD’s emission thresholds. As such, operational impacts would be less than significant.

Should gas stoves or ovens be installed in the residential building, the US EPA and CARB has provided guidance on how to reduce formaldehyde exposure, including the use of air conditioners and

⁷⁸ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-86. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁷⁹ Roberts, David. Gas stoves can generate unsafe levels of indoor air pollution. Vox. Available at: <https://www.vox.com/energy-and-environment/2020/5/7/21247602/gas-stove-cooking-indoor-air-pollution-health-risks>. Accessed March 2022.

⁸⁰ City of Glendale, Community Development Department. *Draft Sustainable Communities Environmental Assessment for the Lucia Park Project*. SCH Number 2022010297. Page 5.0-24. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65609/637781200347330000>. Accessed March 2022.

⁸¹ Meridian Consultants LLC. *Air Quality & Greenhouse Gas Technical Study for the Lucia Park Project 625 N. Maryland Avenue and 620 N. Grand Boulevard Glendale, California 91203*. December 2021. Appendix A. Pages 30-31. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65591/637781192050470000>. Accessed March 2022.

dehumidifiers, increase of ventilation and use of range hoods.^{82,83} If a range hood is not installed, CARB also recommends opening of windows or exterior doors and use of wall or ceiling exhaust fans.⁸⁴ The proposed Project would comply with the most recent 2019 California Green Building Standards Code which requires HVAC systems would provide ventilation to the proposed building residential units. The residential units would also have windows and doors to improve ventilation. Should gas stoves or ovens be installed in the residential units, range hoods could be installed. These would assist in decreasing formaldehyde exposure from gas stoves or ovens. Additionally, the indoor formaldehyde concentrations and other pollutants produced by gas stoves and ovens are dependent on level of usage, temperature, humidity, and seasonal conditions which would be specific to the Project site and the residents. The level of usage of gas stoves and ovens by the residents is not required to be disclosed or analyzed under CEQA. This comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of the SCEA for their consideration in reviewing the proposed Project.

Response to Comment 5-3

The comment states the proposed Project does not seem to include any electric car charging and any building must account for electric charging capabilities.. City Building Code currently requires developers to “make ready” the infrastructure for EV chargers for a minimum of 5% of the required parking, though there is no requirement to install EV chargers at this time. While there is no requirement to have to install the chargers, the spaces are adaptable and the infrastructure is there to install at a later date.

The Applicant has made a commitment to make the building as green as they can. All appliances will be Energy Star-rated and will comply with City Building Code and CalGreen regarding the use of electric appliances in the proposed building. The Applicant has expressed a commitment to not only meet the building code but also install the chargers. It is assumed the number of installed chargers would be 5% of required parking or more.

Response to Comment 5-4

The comment asks for natural gas to not be allowed in the proposed building and to provide electric charging stations for every parking space. Please see Responses to Comments 5-1 through 5-3. This

⁸² United States EPA. Indoor Air Quality (IAQ), What should I know about formaldehyde and indoor air quality? Available at: <https://www.epa.gov/indoor-air-quality-iaq/what-should-i-know-about-formaldehyde-and-indoor-air-quality>. Accessed March 2022.

⁸³ CARB. Indoor Air Pollution from Cooking. Available at: <https://ww2.arb.ca.gov/resources/documents/indoor-air-pollution-cooking>. Accessed March 2022.

⁸⁴ CARB. Indoor Air Pollution from Cooking. Available at: <https://ww2.arb.ca.gov/resources/documents/indoor-air-pollution-cooking>. Accessed March 2022.

comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of the SCEA for their consideration in reviewing the proposed Project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 7
 100 S. MAIN STREET, MS 16
 LOS ANGELES, CA 90012
 PHONE (213) 266-3571
 FAX (213) 897-1337
 TTY 711
 www.dot.ca.gov



*Making Conservation
 a California Way of Life*

March 11, 2022

Vilia Zemaitaitis, AICP, Principal Planner
 Community Development Department
 Planning Division Office,
 633 East Broadway, Room 103,
 Glendale, CA 91206

RE: 620 N. Brand Blvd. and 625 N.
 Maryland Ave.
 Draft Sustainable Communities
 Environmental Assessment
 GTS # LA-2022-03830-SCEA

Dear Vilia Zemaitaitis:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced document. The Sustainable Communities Environmental Assessment proposes the construction of a new 294-unit, 24-story multi-family residential building on a 63,760 SF (1.48 acre) project site zoned DSP Gateway District. The proposed Floor Area Ratio is 7.25 and the building height is 266 feet (7.25 FAR and 275 feet maximum by right). The Project includes 373 subterranean parking spaces for the residential use and 129 above-ground, replacement parking spaces for existing commercial bank building, as well as a publicly accessible open space plaza fronting Brand Boulevard and residential amenity spaces throughout the project.

6-1

Caltrans provides the following comments:

1. Please include these two additional intersection locations for analysis
 WB On-Ramp for Central Ave
 EB Off-Ramp at Central Ave
2. Figure 1-1 **Vicinity Map**- Please provide entrance point to the project.
3. Figure 4-1 **Existing Lane Configurations**- Include weaving analysis between on/off ramps

6-2

6-3

6-4

- | | |
|---|-----|
| 4. Based on all the project on Table 7-1 Related Project List and Trip Generation- The annual average growth rate should be higher than a 1 % increase | 6-5 |
| 5. Please include traffic data for the Intersection in the following Figures:
Figure 6-1 Existing Traffic Volumes
Figure 7-2 Related Projects Traffic Volumes
Figure 7-3 Related Projects Traffic Volumes | 6-6 |
| 6. -Table 8-1 Project Trip Generation- Please indicate if numbers provided are assumed or from the traffic counts | 6-7 |
| 7. -Figure 8-1 Project Trip Distribution
Include % on ramp traffic data
Provide am and pm intersection analysis | 6-8 |
| 8. -Figure 8-4 Net New Project Traffic Volumes- Please clarify, the traffic volume does not add up at the 1 and 2 intersection | 6-9 |

Please be aware that any work performed within the State Right-of-way will require an Encroachment Permit from Caltrans. Any modifications to State facilities must meet all mandatory design standard and specifications.	6-10
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As a reminder, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods.	6-11
---	------

If you have any questions, please feel free to contact Ms. Miya Edmonson the project coordinator at (213) 266-3571 and refer to GTS # LA-2022-03830.

Sincerely,

Miya Edmonson

MIYA EDMONSON
LDR Branch Chief

COMMENT LETTER NO. 6:

California Department of Transportation, District 7
 Miya Edmonson
 LDR Branch Chief
 100 S. Main Street, MS 16
 Los Angeles, CA 90012

Response to Comment 6-1

This comment provides an understanding and description of the proposed Project. This comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of the SCEA for their consideration in reviewing the proposed Project.

Response to Comment 6-2

This comment requests analysis of two additional intersections. As discussed in Response to Comment 1 in **Appendix B**, Linscott, Law & Greenspan, Engineers (LLG) prepared the Transportation Impact Analysis (TIA; Appendix E to the SCEA) in conformance with the City of Glendale Transportation Impact Analysis Guidelines (Glendale TIA Guidelines) and in consultation with the City's Principal Traffic Engineer. The Glendale TIA Guidelines, provide the following requirements for study intersections:

- Project driveways
- Intersections at either end of the block on which the project is located or up to 500 feet from the primary project driveways, whichever is closer.⁸⁵

The two intersections requested, WB On-Ramp for Central Ave and EB Off-Ramp for Central Ave fall outside the recommended scope of analysis because they are not Project driveways, are not intersections at either end of the block on which the proposed Project is located, and are approximately 1,000 feet northwest and 975 feet west of the Project site, respectively. Additionally, prior to the commencement of the TIA, the City's Principal Traffic Engineer, Pastor Casanova, was consulted and confirmed the list of six study intersections to be analyzed within the TIA. The TIA found that none of the six study intersections would exceed the operations criteria with the addition of the forecast proposed Project traffic.⁸⁶ These six study intersections, which include the Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp and Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp, are closer to the Project site, are within 400 feet of the Project site and closer to the Project site than the two intersections requested. Therefore, the six

⁸⁵ City of Glendale, Transportation Impact Analysis Guidelines, October 30, 2020, <https://www.glendaleplan.com/transportation-guidelines>. Accessed March 2022.

⁸⁶ Linscott, Law & Greenspan, Engineers. *Transportation Impact Analysis 606 N. Maryland Avenue Residential Project City of Glendale, California*. June 22, 2021. Appendix E. Page 47. Available at: <https://www.glendaleca.gov/home/showpublisheddocument/65599/637781192080470000>. Accessed March 2022.

study intersections would experience more changes in traffic operations with the addition of the forecast proposed Project traffic than the two intersections requested. These six study intersections would not exceed the operations criteria with the addition of the forecast proposed Project traffic. The two intersections requested are farther at distances than the six study intersections, and, therefore, are expected to experience less change in traffic operations than the six study intersections. As the six study intersections would not exceed the operations criteria with the addition of the proposed Project traffic, the two intersections at farther distances experiencing less change in traffic operations than the six study intersections and would also not exceed the operations criteria with the addition of the proposed project traffic. For these reasons, no additional analysis is warranted.

Response to Comment 6-3

The comment asks to provide entrance points to the Project on Figure 1-1 of the TIA. Updated Figure 1-1 depicting the vehicular access points to the Project is attached to **Appendix B**.

Response to Comment 6-4

The comment requests the inclusion of a weaving analysis between on/off ramps. As discussed in Response to Comment 3 in **Appendix B**, the Glendale TIA Guidelines do not provide thresholds for preparing a weaving analysis. Caltrans also does not have any published guidelines providing recommendations for a weaving analysis. As shown in Figure 8-3 and 8-4 of the TIA, the proposed Project would generate approximately 10 or fewer net new peak hour trips on any freeway on-ramp in the proposed Project vicinity. Given the negligible addition of peak hour trips generated by the proposed Project, a weaving analysis is not required, and no further analysis is warranted.

Response to Comment 6-5

The comment asserts the annual average growth rate should be higher than a 1.0% increase in Table 7-1 of the TIA. Response to Comment 4 in **Appendix B** states Section 7.0 of the TIA discusses the forecast of on-street traffic conditions prior to occupancy of the proposed Project was prepared by incorporating potential trips associated with related projects in addition to the 1.0% annual average growth rate. This methodology provides an extremely conservative estimate of future traffic conditions prior to occupancy of the proposed Project. A higher annual traffic growth is not required, and no further analysis is warranted.

Response to Comment 6-6

The comment requests the inclusion of traffic data for intersections in Figures 6-1, 7-2, and 7-3 of the TIA. As discussed in Response to Comment 5 in **Appendix B**, Section 6.0 of the TIA states that new traffic count

data could not be collected at study intersections due to the Covid-19 pandemic. In consultation with City staff, historical data at the study intersections, with appropriate adjustments, was utilized to represent current (pre-pandemic) traffic volume conditions at the study intersections during the analyzed peak hours. A 1.0% annual traffic growth rate was applied to traffic count data through the year 2021 to estimate year 2021 traffic volumes. The manual traffic count data is provided in Appendix B of the TIA. Additionally, Figures 7-2 and 7-3 provide the forecast turning movement traffic volumes at the study intersections during the AP and PM peak hours, respectively. No further analysis is warranted.

Response to Comment 6-7

The comment asks to indicate if the numbers provided are assumed or from traffic counts. Response to Comment 6 in **Appendix B** explains traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using standard trip rates published in the ITE *Trip Generation Manual*.⁸⁷ This was indicated in Section 8.1 and in the footnotes of Table 8-1 in the TIA.

Response to Comment 6-8

The comment calls for inclusion of the percentage of on ramp traffic data and AM and PM intersection analysis to Figure 8-1 in the TIA. The percentage of trips that are assumed to utilize the nearby freeway on- and off-ramps were depicted in Figure 8-1 and 8-2 of the TIA, as discussed in Response to Comment 7 in **Appendix B**. An intersection analysis was prepared for the Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp and Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp intersections. The addition of proposed Project traffic is forecast to increase the overall delay by less than one second during both the weekday AM and PM peak hours under Opening Year Plus Project and Cumulative Plus Project conditions at the Brand Boulevard / Goode Avenue – SR-134 WB On-Ramp. An increase in delay is not anticipated with the addition of proposed Project traffic at the Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp. As indicated in Table 10-1 in the TIA, the addition of proposed Project traffic does not exceed the criteria set forth in the Glendale TIA Guidelines for signalized intersections. Please see Response to Comment 6-2 and Response to Comment 1 in **Appendix B** for a response related to the preparation of an intersection analysis for the Central Avenue / Goode Avenue – SR-134 WB On- Ramp and Brand Boulevard / Sanchez Drive – SR-134 EB Off-Ramp intersections.

Response to Comment 6-9

The comment asks to clarify the traffic volumes at Intersections 1 and 2 in Figure 8-4. As discussed in Response to Comment 8 in **Appendix B**, the traffic volumes at Intersection 1 and 2 add up. As stated in

⁸⁷ Institute of Transportation Engineers Trip Generation Manual, 10th Edition, Washington, D.C., 2017.

Section 8.2 of the TIA, the traffic volume assignments presented in Figure 8–4 reflect the traffic distribution characteristics shown in Figure 8–1 and Figure 8–2 applied to the proposed Project traffic generation forecast presented in Table 8–1. There are instances where volumes arriving/departing from one intersection may not add up with volumes arriving/departing at an adjacent intersection due to rounding, as well as differences in site access points between the existing site and the proposed Project.

Response to Comment 6-10

The comment states any work performed within the State Right-of-way will require an Encroachment Permit from Caltrans. The proposed Project would not require work performed within SR-134. No Encroachment Permit would be necessary for the proposed Project.

Response to Comment 6-11

This comment is a reminder that any transportation of heavy construction equipment and/or materials which require use of oversized-transport vehicles on State highways need a Caltrans transportation permit. Should transportation of heavy construction equipment or materials require the use of oversized-transport vehicles on SR-134 or another State highway, the Applicant or contractor will obtain a Caltrans transportation permit.

The comment also recommends large size truck trips be limited to off-peak commute periods. The Applicant and/or contractor will limit large size truck trips to off-peak commute periods as feasible.



APPENDIX A

Air Quality Response Memorandum



Los Angeles Office
706 S. Hill Street, 11th Floor
Los Angeles, CA 90014
(213) 335-3434

Westlake Village Office
920 Hampshire Road, Suite A5
Westlake Village, CA 91361
(805) 367-5720

Date: February 18, 2022

To: Vilia Zemaitaitis, AICP, Principal Planner
City of Glendale, Community Development Department
633 East Broadway, Room 103
Glendale, CA 91206

From: Christ Kirikian
Principal | Director of Air Quality & Acoustics

Subject: Lucia Park Project (Case Nos. PDR 2119308, PDA1806045)
Response to Re: Second Request for Immediate Access to Project Emissions Data for
Sustainable Communities Environmental Assessment

This memorandum responds to the Adams Broadwell Joseph & Cardazo (Adams Broadwell) letter dated February 16, 2022 requesting the City provide the unlocked emissions input files relied upon in the Sustainable Communities Environmental Assessment (“SCEA”) prepared for the Lucia Park project, Case No. PDR 2119308, PDA1806045 (“Project”) proposed by Cimmarusti Holdings, LLC (“Applicant”).

The Adams Broadwell letter incorrectly states that the City cannot rely on the CalEEMod emissions output files appended to the SCEA to support its findings on the significance of the air quality and greenhouse gas emissions the Project would generate, as the information provided in the SCEA document is sufficient to allow for all parties to review the emissions modeling as explained below.

The Air Quality/Greenhouse Gas (AQ/GHG) Technical Report included a detailed description on methodology and assumptions. Information disclosed included type and versions of modeling software used, project data used to estimate emissions, and all additional assumptions made in the absence of project-specific data. This information was provided for all phases of the Project analyzed including construction and operations.

For construction emissions, the AQ/GHG technical study identified anticipated start and end dates (Table 11 of AQ/GHG Study) the amount of export soil (in cubic yards), the type and number of pieces of equipment anticipated to be used during each sub-phase, and the assumed duration of use (refer to Table

12 of AQ/GHG Study). This information was input into the California Emissions Estimator Model (CalEEMod). The output files also identified the total number of truck trips assumed to be associated with occupancy and use of the Project, including vendor and haul trips, and worker trips. All modeling output files were provided as an appendix to the study.

All parties reviewing the SCEA can review this information to understand the methodology and assumptions used in the analysis. The CalEEMod output files provide a table showing changes to default model assumptions that includes the reason for each change from a default assumption in the model (Section 1.3 of the CalEEMod output files).

In addition, the AQ/GHG report identified data inputs for operational emissions, i.e., trip generator, and data sources and/or assumption used to estimate operational emissions. Adjustments to trip generation rate model inputs were made based on the traffic study prepared for the project, which is also appended to the SCEA. For these reasons, the unlocked input files are not required to review the emissions modeling to confirm or comment on the results.

Similarly, the methodology and technical study for the Mobile Health Risk Assessment identifies input parameters and specific citations for the sources for information used (e.g., annual average daily trips on SR-134 Freeway) and a description of the modeling methodology. The description of the modeling methodology identifies the models used, meteorological data sources, source treatment (e.g., line source for roadways), receptor treatment (i.e., receptor grid and number of receptors), and equations used to estimate cancer and non-cancer risk. The methodology and technical appendices include the modeling results including the data to support the results and findings of the analysis. The unlocked input files are not needed to complete a technical review of the modeling to confirm or comment on the modeling and the results of the modeling.



APPENDIX B

Responses to Caltrans Comments

MEMORANDUM

To:	Vilia Zemaitaitis, AICP City of Glendale	Date:	March 16, 2022
From:	David S. Shender, P.E. Jason A. Shender, AICP Linscott, Law & Greenspan, Engineers	LLG Ref:	5-17-0343-1
Subject:	Responses to Caltrans Comments Lucia Park Project 620 N. Brand Boulevard and 625 N. Maryland Avenue		

Linscott, Law & Greenspan, Engineers (LLG) is in receipt of comments¹ prepared by the California Department of Transportation (Caltrans) provided in response to the Transportation Impact Analysis² (TIA) prepared as part of the Sustainable Communities Environmental Assessment (SCEA) for the Lucia Park project (the “Project”) located at 620 N. Brand Boulevard and 625 N. Maryland Avenue in the City of Glendale (the “City”). This memorandum provides responses to the individual comments contained in the Caltrans letter. It is noted that none of the comments in the Caltrans letter relate to the Vehicle Miles Traveled (VMT) analysis provided in the TIA. As stated in the TIA, VMT is the primary metric used in the City of Glendale in evaluating potential transportation impacts of development projects under the California Environmental Quality Act (CEQA). As stated in the TIA, the Project’s transportation impacts are deemed to be less than significant based on the VMT analysis provided therein.

Provided below are the restated (or paraphrased) comments, followed by a response prepared by LLG:

Comment No. 1

Please include these two additional intersections locations for analysis:

- WB On-Ramp for Central Ave
- EB Off-Ramp for Central Ave

Response to Comment 1

The *City of Glendale Transportation Impact Analysis Guidelines*³ (the “TIA Guidelines”) provide the following requirements for study intersections:

- Project driveways
- Intersections at either end of the block on which the project is located or up to 500 feet from the primary project driveways, whichever is closer

¹ “620 N. Brand Blvd. and 625 N. Maryland Ave. Draft Sustainable Communities Environmental Assessment GTS # LA-2022-03830-SCEA,” Caltrans, March 11, 2022.

² *Transportation Impact Analysis for the 606 N. Maryland Avenue Residential Project*, LLG, June 21, 2021.

³ *City of Glendale Transportation Impact Analysis Guidelines*, City of Glendale, October 2020

The two intersections identified in the comment fall outside the recommended scope of analysis provided in the TIA Guidelines. Further, LLG consulted the City's Principal Traffic Engineer, Pastor Casanova, prior to the commencement of the TIA. The City confirmed the list of study intersections to be analyzed within the TIA.

Comment No. 2

Figure 1-1 (Vicinity Map) – Please provide entrance points to the Project.

Response to Comment 2

An updated Figure 1-1 (Vicinity Map) depicting the Project's vehicular access points is attached to this memorandum.

Comment No. 3

Figure 4-1 (Existing Lane Configurations) – Include weaving analysis between on/off ramps.

Response to Comments 3

The City's TIA Guidelines do not provide thresholds for the preparation of a weaving analysis. Further, Caltrans does not have any published guidelines providing recommendations for when a weaving analysis is to be prepared related to potential vehicular traffic generated by proposed development projects. As shown on Figure 8-3 (Net New Project Traffic Volumes – Weekday AM Peak Hour) and Figure 8-4 (Net New Project Traffic Volumes – Weekday PM Peak Hour), the Project is forecast to generate approximately 10 or fewer net new peak hour trips on any freeway on-ramp in the Project vicinity. The Project's effect on freeway operations would be de minimis, and therefore a weaving analysis is not required for this Project.

Comment No. 4

Based on all the projects on Table 7-1 (Related Projects List and Trip Generation), the annual average growth rate should be higher than a 1.0% increase.

Response to Comment 4

As described in Section 7.0 of the TIA, a forecast of on-street traffic conditions prior to occupancy of the Project was prepared by incorporating potential trips associated with the related projects, as well as application of a 1.0% annual average growth rate. The methodology utilized in the TIA provides an extremely conservative estimate of future traffic conditions prior to occupancy of the Project, and therefore a higher annual traffic growth rate is not required.

Comment No. 5

Please include the traffic data for the Intersection in the following Figures:

- Figure 6–1 (Existing Traffic Volumes – Weekday AM Peak Hour)
- Figure 7–2 (Related Projects Traffic Volumes – Weekday AM Peak Hour)
- Figure 7–3 (Related Projects Traffic Volumes – Weekday PM Peak Hour)

Response to Comment 5

As stated in Section 6.0 of the TIA, new traffic count data could not be collected at the study intersections due to the Covid-19 pandemic. In consultation with the City, with City staff, historical data at the study intersections, with appropriate adjustments, was utilized to represent current (pre-pandemic) traffic volume conditions at the study intersections during the analyzed peak hours. A 1.0% annual traffic growth rate was applied to traffic count data through the year 2021 to estimate year 2021 traffic volumes. The manual traffic count data is provided in Appendix B of the TIA.

LLG is unclear regarding the request for data related to Figures 7–2 and 7–3. The figures provide the forecast turning movement traffic volumes at the study intersections during the AM and PM peak hours, respectively.

Comment No. 6

Table 8–1 (Project Trip Generation) – Please indicate if numbers are provided are assumed or from the traffic counts.

Response to Comment 6

As indicated in Section 8.1 of the TIA and in the footnotes of Table 8–1 (Project Trip Generation), traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using standard trip rates published in the ITE *Trip Generation Manual*.⁴

Comment No. 7

Figure 8–1 (Project Trip Distribution – Existing Site)

- Include percentage of on ramp traffic data
- Provide AM and PM intersection analysis

Response to Comment 7

The percentage of trips that are assumed to utilize the nearby freeway on- and off-ramps are depicted in Figure 8–1 (Project Trip Distribution – Existing Site) and Figure 8–2 (Project Trip Distribution).

⁴ Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, Washington, D.C., 2017.

An intersection analysis was prepared for the Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp and Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp intersections (Study Intersection Nos. 1 and 2, respectively). As indicated in Table 10–1 (Summary of Delay Values and Levels of Service – Weekday AM and PM Peak Hours), the addition of Project traffic is forecast to increase the overall delay by less than one second during both the weekday AM and PM peak hours under Opening Year Plus Project and Cumulative Plus Project conditions at the Brand Boulevard / Goode Avenue – SR-134 WB On-Ramp. An increase in delay is not anticipated with the addition of Project traffic at the Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp intersection during both the weekday AM and PM peak hours under Opening Year Plus Project and Cumulative Plus Project conditions. As indicated in Table 10–1, the addition of Project traffic does not exceed the criteria set forth in the City’s TIA Guidelines for signalized intersections.

Please refer to the Response to Comment 1 for a response related to the preparation of an intersection analysis for the Central Avenue / Goode Avenue – SR-134 WB On-Ramp and Brand Boulevard / Sanchez Drive – SR-134 EB Off-Ramp intersections.

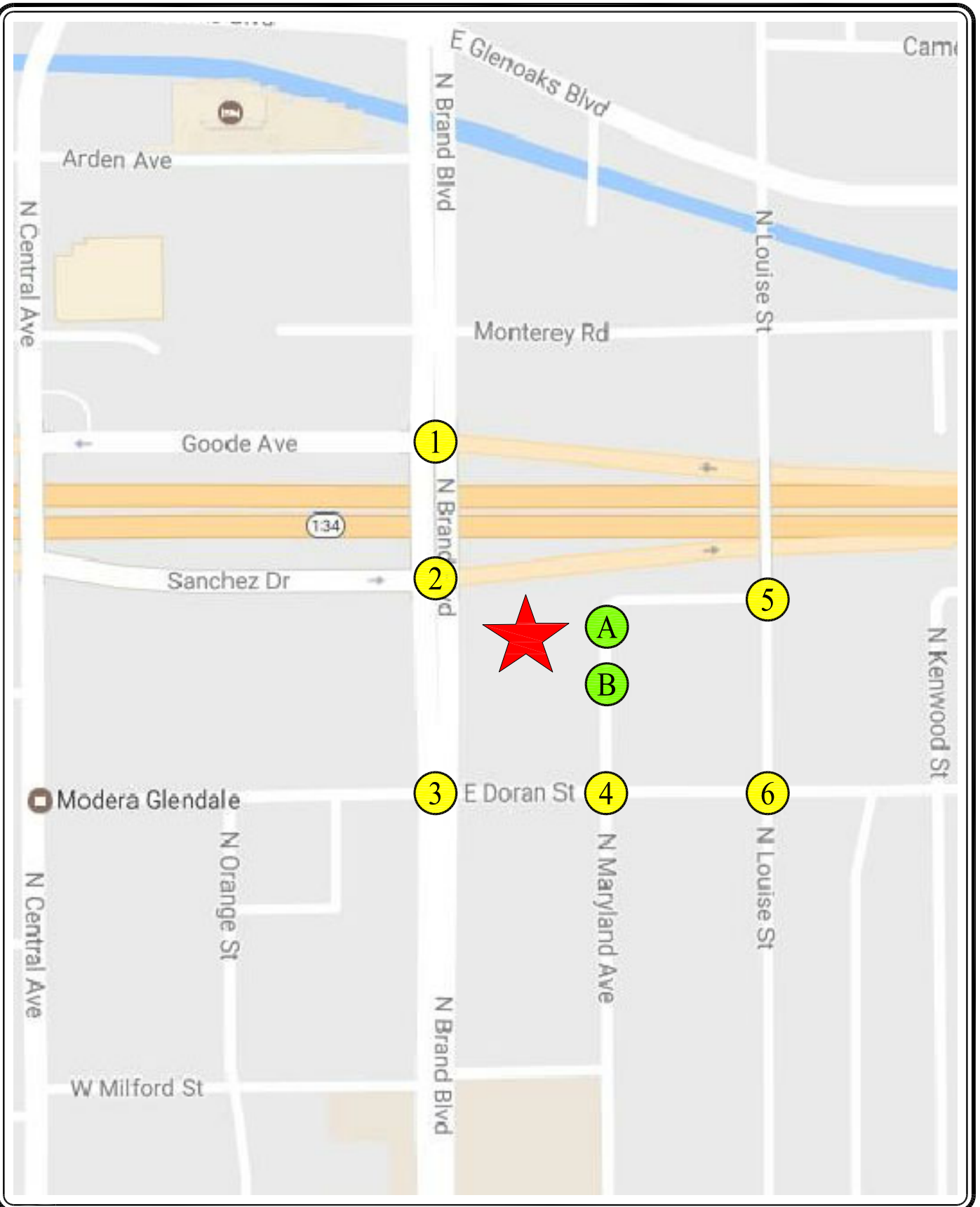
Comment No. 8

Figure 8–4 (Net New Project Traffic Volumes – Weekday PM Peak Hour) – Please clarify, the traffic volumes do not add up at Intersections 1 and 2.

Response to Comment 8

The traffic volumes at Intersection Nos. 1 and 2 do add up. As shown in Figure 8–4, a total of four (4) vehicles arrive at Intersection 1 from Intersection 2. Similarly, 16 vehicles arrive at Intersection 2 from Intersection 1. As stated in Section 8.2 of the TIA, the traffic volume assignments presented in Figure 8–4 reflect the traffic distribution characteristics shown in Figure 8–1 (Project Trip Distribution – Existing Site) and Figure 8–2 (Project Trip Distribution) applied to the Project traffic generation forecast presented in Table 8–1 (Project Trip Generation). There are instances where volumes arriving/departing from one intersection may not add up with volumes arriving/departing at an adjacent intersection due to rounding, as well as differences in site access points between the existing site and the Project.

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- MAP SOURCE: GOOGLE MAPS
- ★ PROJECT SITE
 - ① STUDY INTERSECTION
 - ⓐ PROJECT VEHICULAR ACCESS POINT

FIGURE 1-1
VICINITY MAP



APPENDIX C

Permits and Certificates of Occupancy

JOB ADDRESS: 247-5970

630 BRAND BLVD C.O.D

NUMBER

STREET

APPLICATION FOR A
BUILDING PERMIT

BUILDING SECTION, PUBLIC WORKS DIVISION
CITY OF GLENDALE, CALIFORNIA

CONTRACTOR HOME SAVINGS & LOAN	STATE LIC. NO.
MAILING ADDRESS 9229 WILSHIRE, BEVERLY HILLS	TEL. NO. CR 36666
ARCH. ☒ ENGR. HEUSEL HOMOLKA & ASSOC	STATE LIC. NO. C-25C
MAILING ADDRESS 666 E. OCEAN SUITE 1402 LONG BEACH	TEL. NO. 437-1234
OWNER HOME SAVINGS & LOAN	TEL. NO. CR 36666
MAILING ADDRESS 9229 WILSHIRE BEVERLY HILLS	

DESCRIPTION OF WORK

NEW ☒ ADD'N ☐ ALTER. ☐ REPAIR ☐ DEMOLISH ☐		
FLOOR AREA (SQ. FT.) 47909	NO. OF STORIES 6	NO. OF DWELLING UNITS NONE
PRES. BLDG. USE	PROPOSED BLDG. USE OFFICE BLDG	
DESCRIBE WORK TO BE DONE CONSTRUCT 6 STORY OFFICE BUILDING		

BUILDING

NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF ORIGINAL COPY ONLY

EXTERIOR WALL MATERIAL CONCRETE	ROOF FRAMING MATERIAL CONCRETE
PARTITIONING MATERIAL STL. STUDS & GYP. BO	ROOF COVERING MATERIAL COMPO & GRAVEL
LOT	NO. OF EXISTING BLDGS. ON LOT
WIDTH	DEPTH

VALUATION NOTE: Include Labor, Mat., Wiring, Plumb., Heat, Etc. **\$950,000.00**

INFORMATION PROVIDED BY BLDG. SECTION

USE ZONE F-2		FIRE ZONE 43		OCU. PANCY F-2	SEC. SH. 28
REQ'D SET BACKS	FRONT	RIGHT SIDE	LEFT SIDE	REAR	
TYPE OF CONSTR. I	SPECIAL CASE NO.		Driveway in place		
Approval & Information by Others CITY ENGINEER			EASEMENT None Engr		
DIST. FACE OF CURB TO P.L. 15 FT.			SEWER DRIVEWAY in place		
PUBLIC SERVICE			PLANNING		
WATER F.C.K. ELECTRIC and					
P.C. FEE 238.25		PERM. PLAN APPROVED ☒ CHECKERS APPROVAL			
PERMIT FEE 1076		W/OUS PLAN ☒			

I have carefully read and examined the above application and find the same to be true and correct. All provisions of the Laws and Ordinances governing building construction will be complied with whether specified herein or not. No person shall be employed in violation of the Labor Code of the State of California. I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.

HEUSEL, HOMOLKA & ASSOC.
by *Frederick S. Kinsale*
SIGNATURE OF OWNER OR AUTHORIZED AGENT

PERMANENT

CASH M.O. NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESCRIBED HEREIN.

40497 OCT 8 68 FC 53825A
42816 DEC 11 68 BP 1,076.50

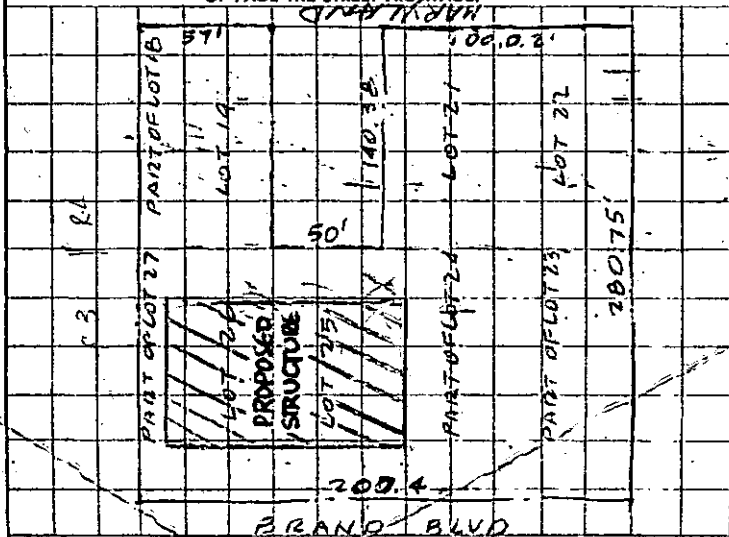
INSPECTION ~~ORD~~

ITEM	INSPECTOR	DATE
SET BACKS FRONT ☒ R/SIDE ☒ L/SIDE ☒ REAR ☒ FIELD CHECK FRONT ☒ R/SIDE ☒ L/SIDE ☒ REAR ☒		
TRENCHES: WIDTH <u>24"</u> DEPTH <u>12"</u>	<u>AWK</u>	<u>2/3/69</u>
1st FLOOR JOIST		
FRAMING		
FINAL	<u>AWK</u>	<u>3/10/76</u>

PARTIAL OR MISC. INSPECTIONS

Partial Pads	AWK	1/2/69
Partial Pads	AWK	1/9/69
Partial Beam	AWK	1/31/69
Steel as marked	AWK	2/7/69
Steel as marked	AWK	2/9/69
1st floor 1st slab	AWK	3/6/69
2nd floor Beam & steel	AWK	3/26/69
2nd floor Column steel	AWK	4/2/69
Interior steel	AWK	4/4/69
3rd floor steel	AWK	4/21/69
4th floor steel	AWK	5/14/69
4th floor steel	AWK	5/26/69
5th floor wall steel	AWK	6/11/69
6th floor steel	AWK	7/7/69

NOTE: LOCATE ALL STRUCTURES ON LOT, MAKE BOTTOM OF PAGE THE STREET FRONTAGE.



Date May 11, 1971Certificate No. 7777**CERTIFICATE OF USE AND OCCUPANCY**

FOR NEW STRUCTURE OR BUILDING

CITY OF GLENDALEName Home Savings & LoanUse & Occupancy Address 621 N. MarylandUse Parking Structure Occupancy F-3 Type Bldg. II

THIS CERTIFIES THAT SO FAR AS ASCERTAINED BY OR MADE KNOWN TO THE BELOW NAMED PARTIES, THE BUILDING AT THE ABOVE ADDRESS COMPLIES WITH THE APPLICABLE REQUIREMENTS OF THE STATE HOUSING ACT, ALL BUILDING, PLUMBING AND ELECTRICAL ORDINANCES, THE FIRE PREVENTION CODE, AND THE ZONING APPENDIX OF THE GLENDALE MUNICIPAL CODE, AND THAT ALL FLOOR LOAD AND ROOM CAPACITY SIGNS HAVE BEEN INSTALLED.

CLYDE A. BLODGETT
Superintendent of Buildings

WYLIE H. EATON
Zoning Administrator

612-623 NO. MARYLAND AVE
 NUMBER STREET

APPLICATION FOR A
BUILDING PERMIT C.O.I.

BUILDING SECTION, PUBLIC WORKS DIVISION
 CITY OF GLENDALE, CALIFORNIA

CONTRACTOR HOME SAVINGS & LOAN		CITY LIC. NO.
MAILING ADDRESS 9245 WILSHIRE BLVD BEVERLY HILLS		TEL. NO. 878-4455
☒ ARCH. ☐ ENGR. FRANK HOMOLKA		STATE LIC. NO. C1829
MAILING ADDRESS SUITE 1402		TEL. NO. HE 71234
OWNER HOME SAVINGS & LOAN		TEL. NO.
MAILING ADDRESS WILSHIRE BLVD LA		
CONSTRUCTION LENDER & BRANCH		
MAILING ADDRESS		

DESCRIPTION OF WORK

NEW ☒	ADD'N ☐	ALTER. ☐	REPAIR ☐	DEMOLISH ☐
FLOOR AREA (SQ. FT.) 37,800	NO. OF STORIES 2	NO. OF DWELLING UNITS 0		
PRESENT BLDG. USE -		PROPOSED BLDG. USE PARKING STRUCTURE		

DESCRIBE WORK
TO BE DONE **CONSTRUCT NEW PARKING**

STRUCTURE

LOT WIDTH 150	LOT DEPTH 140.66	NO. OF EXISTING BLDG. ON LOT 0
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NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF ORIGINAL COPY ONLY

VALUATION NOTE: Include Labor, Mat., Wiring, Plumb., Heat, Etc. **\$200,000**

MAP BK. 5644	PAGE 34	PARCEL # 6
LOT NO. 5143	BLOCK NO.	TRACT 9.3
USE ZONE PUR	FIRE ZONE 2	OCCU PANCY F-3
SEC. SH. 28		
REQ'D SET BACKS	FRONT 12'	RIGHT SIDE 0'
LEFT SIDE 0'	REAR	
TYPE OF CONSTR. II	SPECIAL CASE NO. 50344	GRADE Non-Driveway
Approval & Information by Others CITY ENGINEER NONE IN ENGR		
DIST. FACE OF CURB TO P.I. 10 FT. YES NO OVER		
PUBLIC SERVICE		PLANNING
WATER FCK ELECTRIC DFD		
P.C. FEE 163	PERM. PLAN APPROVED ☒	CHECKER'S APPROVAL R.P.H.
PERMIT FEE		

I have carefully read and examined the above application and find the same to be true and correct. All provisions of the Laws and Ordinances governing building construction will be complied with whether specified herein or not. No person shall be employed in violation of the Labor Code of the State of California. I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.

Frank Homolka
 SIGNATURE OF OWNER OR AUTHORIZED AGENT

PERMANENT

CASH. M.O. PLAN CHECK VALIDATION

NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESENTED HEREIN.

59284 MAY 19 70 PC
 60424 JUN 19 70 PC

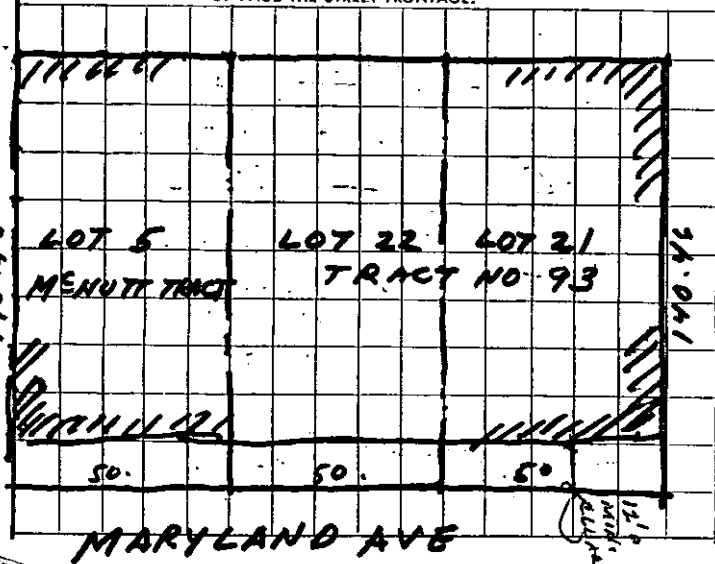
35 1.50
 35 1.50
 60425 JUN 19 70 BP

16325 R
 11250

ITEM

PARTIAL OR MISC. INSPECTIONS

NOTE: LOCATE ALL STRUCTURES ON LOT, MAKE BOTTOM OF PAGE THE STREET FRONTAGE.



City of GLENDALE

PLANNING DIVISION
JEFFREY HOLLAND
PLANNING DIRECTOR



CALIFORNIA

633 EAST BROADWAY
GLENDALE, CALIFORNIA 91205
TELEPHONE 244-4651
245-6871

April 17, 1970

Home Savings and Loan Association
9245 Wilshire Boulevard
Beverly Hills, California

Re: Case No. 5034-U

Gentlemen:

Pursuant to the provisions of Article IX, Appendix, Glendale Municipal Code, the Zoning Administrator on April 8, 1970, conducted and closed a hearing, taking under submission the application for Variance to Sections 304, 305, 407 and 806, Zoning Appendix, Glendale Municipal Code, to permit a two-story split level parking building with no side or rear yards and a 12-foot front setback on Lots 21 and 22, Tract No. 93, and Lot 5, McNutt Tract, being 613-623 No. Maryland Avenue, which is in the R4 Multiple Dwelling and P Automobile Parking Zones and No. 3 Fire Zone.

After considering the evidence presented with respect to this application, under the provisions of Section 900, Appendix, the Zoning Administrator has made the following findings:

- I. The strict application of the provisions of the ordinance would result in practical difficulties or unnecessary hardship inconsistent with the general purposes and intent of the ordinance in that the ~~zone would permit such a structure where provided~~ for a dwelling building or a hotel and would permit an open parking area for a commercial use but technically precludes concealment of the automobiles where provided for commercial uses.
- II. There are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood in that 63 per cent of the frontage in the block on the west side of Maryland

Home Savings and Loan Association

April 17, 1970

Avenue is already developed with public parking areas and 81 per cent of the entire block is developed commercially.

III. The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or neighborhood in which the property is located in that the buildings will be of pleasing design, well landscaped, set back 3 feet more than required for open parking areas and will help alleviate parking congestion caused by a rapid influx of new businesses into the area.

IV. The granting of the variance will not be contrary to the objectives of the ordinance in that the requirements of Article IX, Appendix, Glendale Municipal Code, have been found in favor of the application.

It is, therefore, the determination of the Zoning Administrator on April 17, 1970, that this application for variance be granted subject to compliance with the following conditions:

1. That all construction be substantially in accordance with the plot plan submitted;
2. That no openings be allowed on the side walls where the structure abuts other private properties;
3. That screening or walls be provided on the lower levels and a parapet wall be provided on the top deck of sufficient height to conceal the parked vehicles from general view from Maryland Avenue;
4. That the 12-foot deep setback area on Maryland Avenue be landscaped, including the installation of specimen trees and adequate watering devices;
5. That the building be of modern architecture and pleasing design;
6. That any lights not shine or reflect onto other properties;
7. That any signs on the Maryland Avenue frontage be approved by the Zoning Administrator and be kept to a minimum necessary for identification and directions;

Home Savings and Loan Association

April 17, 1970

8. That any requirements of the City Traffic Engineer be met with respect to ingress and egress;
 9. That vehicle "stop" signs be provided at each driveway exit; and
 10. That final plans, including a landscaping and watering device plan, be approved by the Zoning Administrator prior to issuance of a building permit.
-

Under the provisions of Article X, Appendix, the determination of the Zoning Administrator does not become effective for a fifteen-day period. This period of time is allowed for any person aggrieved by this determination to file a written appeal, in triplicate on forms which shall be provided upon request, to the Board of Zoning Adjustments.

The rights and privileges granted by this variance will expire one year from the date of this grant unless promptly commenced and used in full compliance with the law and all conditions of approval.

Yours very truly,

Robert C. Robertson,
Planning Director



W. H. Eaton, Zoning Administrator

WHE:BFF:ep

REGISTERED MAIL

cc: City Clerk; Building Section; Traffic Engineer; H. B. Sharp;
John M. Lawson



NUMBER	STREET
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued. (Sec. 3097, Civil Code.)	
CONSTRUCTION LENDER & BRANCH	
MAILING ADDRESS	
CITY	ZIP

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason: (Sec. 7011.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law, Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom, and the basis for the alleged exemption. Any violation of Section 7011.5 by any applicant for a permit, subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).)

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale. (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project. (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec. _____ B. & P. C. for this reason: _____

Signature: _____ Owner

33348014-83/12/91T07L-181-74

PLAN CHECK VALIDATION

WORKERS' COMPENSATION DECLARATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof. (Sec. 3800, Labor Code.)

Policy No. _____ Company _____

CERTIFICATE OF EXEMPTION FROM WORKERS' COMPENSATION INSURANCE
(This section need not be completed if the permit is for one hundred dollars (\$100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

NOTICE TO APPLICANT: If, after making this Certificate of Exemption you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

Applicant: _____ Date: _____

I agree not to occupy or allow occupancy of any building authorized by this permit until final building inspection has been received.

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Signature of Applicant: _____ Date: _____

PERMANENT

621 N. MARYLAND AVE.

NUMBER	STREET
APPLICATION FOR A BUILDING PERMIT	
BUILDING SECTION, PUBLIC WORKS DIVISION	
633 E. BROADWAY, CITY OF GLENDALE, CA 91206-4390 (818) 956-4835	

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license number is _____

CONTRACTOR	STATE LIC. NO.
FRANK HOMOLKA ASSC	370124
MAILING ADDRESS	TEL. NO.
800 E OCEAN BLVD #105	215 4371234
CITY	ZIP
LONG BEACH CA 90802	90802
OWNER	TEL. NO.
HOME SAVINGS OF AMERICA	213 437-1234
MAILING ADDRESS	
4900 RIVERGRADE RD	818 8147404
CITY	ZIP
IRVINGDALE, CA	91706

DESCRIPTION OF WORK

NEW ☐	ADDN ☐	ALTER ☒	REPAIR ☐	DEMOLISH ☐
FLOOR AREA INCR. OR DECR. (SQ. FT.)	NO. OF STORIES	NO. OF DWELLING UNITS		
PRESENT BLDG USE	PROPOSED BLDG USE			
OFFICE BLDG				

DESCRIBE WORK TO BE DONE: CUT NEW OPENING IN PARALLEL

STRUCTURE WALL - WIDEN DRIVEWAY

LOT WIDTH	LOT DEPTH	NO. OF EXISTING BLDGS ON LOT
207	280	1 + PARKING STRAFT

NOTE: PROVIDE PLOT PLAN ON BACK SIDE OF THIS COPY ONLY

VALUATION	NOTE: Include Wiring, Plumb., Heat, Etc.
	\$ 30,000

WORKERS COMPENSATION EXPIRE DATE

MAP BK. 14	PAGE 18	PARCEL # 31	SEC. SH. 28	UBC Ed
LOT NO. 21	BLOCK NO. 93	TRACT. MCNITT		
USE ZONE	FIRE ZONE	OCCUPANCY	TYPE OF CONSTR.	OCC LOAD
ER-1	3			
REQ'D SET BACKS	FRONT	RIGHT SIDE	LEFT SIDE	REAR
		N/A		
CITY ENGINEER EASEMENT				PKG SPC
DIST. FACE OF CURB TO P.L. _____ FT.				SEWER
				YES NO GRADING
PUBLIC SERVICE				PLANNING
WATER _____ ELECTRIC _____				
P.C. FEE _____		PERM. PLAN ☐ CHECKER'S APPROVAL		
PERMIT FEE _____		W/OUT PLAN ☒ _____		

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Driver's License No. _____ Signature of Applicant: Joe Kelly Date: 12 MAR '91

PERMANENT

NOTE: WHEN PROPERLY VALIDATED IN THIS SPACE, THIS FORM CONSTITUTES A BUILDING PERMIT TO DO THE WORK PRESCRIBED HEREIN.

88728014-06/06/91T07L

5/16 2 2653

Date 12-1-77Certificate No. 702**CERTIFICATE OF USE AND OCCUPANCY****FOR NEW STRUCTURE OR BUILDING
CITY OF GLENDALE**Name Home - 1211 S. 1st Ave.Use & Occupancy Address 625 S. 1st Ave.Use Office Building Occupancy N-2 Type Bldg. I

THIS CERTIFIES THAT SO FAR AS ASCERTAINED BY OR MADE KNOWN TO THE BELOW NAMED PARTIES, THE BUILDING AT THE ABOVE ADDRESS COMPLIES WITH THE APPLICABLE REQUIREMENTS OF THE STATE HOUSING ACT, ALL BUILDING, PLUMBING AND ELECTRICAL ORDINANCES, THE FIRE PREVENTION CODE, AND THE ZONING APPENDIX OF THE GLENDALE MUNICIPAL CODE, AND THAT ALL FLOOR LOAD AND ROOM CAPACITY SIGNS HAVE BEEN INSTALLED.

CLYDE A. BLODGETT
Superintendent of Buildings

WYLIE H. EATON
Zoning Administrator

APPENDIX D

2017-18 South Glendale Historic Resource Survey Consultant Letter

HISTORIC RESOURCES GROUP

12 S. Fair Oaks Avenue, Suite 200
Pasadena, CA 91105

Tel 626-793-2400
historicresourcesgroup.com

June 2, 2022

Jay Platt
Senior Urban Designer
Glendale Community Development Department
633 E. Broadway, Rm. 103
Glendale, CA 91206

RE: Home Savings and Loan, 620 N. Brand Blvd.

Dear Mr. Platt:

This letter provides clarification of the methodology applied by HRG in our 2017 South Glendale Historic Resources Survey finding for the former Home Savings and Loan building located at 620 N. Brand Boulevard. We found the building eligible for listing in the Glendale Register under local Criterion 1 as an example of commercial development associated with the post-World War II growth of Glendale, and under local Criterion 3 as a good example of Corporate Modern commercial architecture.

Our finding applies only to the six-story office building constructed in 1969 and does not include the adjacent surface parking lot and parking structure. Although designed and constructed almost concurrently with the tower, the parking lot and parking structure are standard features of late-20th century commercial development, virtually identical to similar features on any number of contemporary properties. They are not essential elements of a distinctive site composition and do not have a formal relationship to the office building or to each other; they are simply ancillary, utilitarian features located as needed on the property.

The parking structure's exterior has a pattern of vertical fins that were added to mimic the mullions of the bank building but is otherwise a standard, utilitarian parking structure. National Park Service guidance states that a building is not representative of a particular style, and therefore is not eligible for historic designation, if it has some detailing of the style only as a surface application, rather than fully integrated with the overall design. The parking structure's minimal exterior detailing was clearly applied to resemble

the design of the adjacent Corporate Modern office building, but it is otherwise a typical parking structure; the essential features of Corporate Modern architecture are not fully integrated into its overall design.

The parking structure therefore does not possess high artistic value, does not embody the distinctive characteristics of Late Modern architecture, and does not express Home Savings and Loan's unique use of architecture to identify and build their brand in communities across Southern California in the 1960s. For these reasons we determined that the parking structure and surface parking lot do not contribute to the historic character and significance of the property, and that only the six-story bank building is eligible for designation. If the parking structure were to be demolished, the historic integrity and significance of the bank building would be unimpaired and the property would remain eligible for designation.

Please do not hesitate to contact me if you have any questions or need any additional information.

Sincerely,

A handwritten signature in dark ink, reading "Christine Lazzaretto". The signature is fluid and cursive, with the first name "Christine" being more prominent than the last name "Lazzaretto".

Christine Lazzaretto
Managing Partner