

Communication from Public

Name:

Date Submitted: 08/16/2022 03:25 PM

Council File No: 21-1269

Comments for Public Posting: Part 1 of 2 On behalf of Appellant Citizens Protecting San Pedro, please find the attached objection letter.

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August 16, 2022

VIA ELECTRONIC MAIL

Los Angeles City Council
Honorable President Nury Martinez
Los Angeles City Hall
Los Angeles, CA 90012
Via Email and Online Portal

**Re: Appeal of Conditional Use, Density Bonus and Site Plan Review at 2111-2139
S. Pacific Ave; CPC-2019-4884-CU-DB-SPR-RDP and ENV-2019-4885-CE;
Appeal Case No. CPC-2019-4884-CU-DB-SPR-1A**

Honorable Councilmembers:

This firm represents Appellant Citizens Protecting San Pedro ("CPSP") in its appeal of the City Planning Commission's approval of the Conditional Use Permit, Density Bonus incentives and waiver, and Site Plan Review for the Project at 2111 South Pacific Avenue in the San Pedro Community. This letter supplements the August 1st objections and responds to the applicant's reply dated August 2nd. Appellant respectfully requests that the Council grant the appeal and deny the Project.

I. INADEQUATE NOTICE MANDATES POSTPONEMENT OF THE HEARING

The LAMC establishes mandatory notice and posting procedures which must be satisfied prior to a hearing. LAMC Section 12.24-D.3 requires posting for ten days prior to the hearing consistent with rules adopted by the Director of Planning in Form CP-7762. The Applicant's latter vaguely suggests, with no foundation whatsoever, that the Appellant has removed on-site notices to sabotage Project approval. Appellant takes strong exception to this accusation. Rather

than implausibly shift blame to the Appellant, the Applicant would be well advised to review Form CP-7762 which establishes that “it is always the responsibility of the applicant/owner to assure that the notice is firmly attached, legible, and remains in that condition throughout the entire posting period[.]”

The procedural requirements in Section 12.24-D.3 and Form CP-7762 operate irrespective of specific prejudice to members of the public because the plain language of the regulations allows the City to conduct a public hearing and act on the application only after proper notice has been provided. In unambiguous terms, Section 12.24-D.3 provides that the notice “shall be posted in a conspicuous place on the property involved at least ten days prior to the date of the meeting” with Form CP-7762 establishing that these terms require *continuously maintained posting throughout the notice period*. Here, the Applicant has not only failed to comply with these standards, it has not even made token efforts to properly maintain site posting as the Pacific Avenue frontage remained unposted through the public hearing as documented in photographs attached to Appellant’s August 1st letter. The City may not approve the Project without conducting a hearing in compliance with LAMC notice requirements.

II. THE PROJECT CONFLICTS WITH COASTAL ACT ACCESS POLICIES RESULTING IN SIGNIFICANT LAND USE IMPACTS

As established in the Appellant’s August 1st letter, the Project will exacerbate a lack of on-street parking usable by members of the public seeking to access Coastal Zone resources including businesses and recreational facilities, thereby violating core Coastal Act policies ensuring the preservation of public access by maintaining adequate parking in and around Coastal Zone resources. The Project is located just feet from the Coastal Zone and the Coastal Act requires that the City ensure that developments outside the Coastal Zone do not impact coastal resources. Appellants have submitted two letters from residents who have lived in the Project vicinity for nearly twenty years articulating the nature and severity of these impacts attached as **Exhibit 1**. In particular, the letters note the following observations:

- On weekdays, there are virtually no available on-street parking spaces, especially during street cleaning days and after 5 p.m.
- On weekends, the lack of parking is even more acute as members of the public visit Coastal Zone resources, becoming so severe that residents have witnessed threats of physical violence and damage to vehicles. In particular, vehicles have been observed driving around blocks searching for parking when trying to patronize Rex’s Café.
- The lack of adequate parking causes delivery vehicles and private vehicles to illegally double-park on side streets, alleys and in the center turn lane on Pacific Avenue, including within the Coastal Zone, during both day and night.
- Marina and public park users rely on parking near Pacific Avenue to access businesses in the Coastal Zone, including the only market near the Marina and the closest breakfast and lunch restaurant. A further deficiency of on-street parking, and

the lack of off-street parking for these businesses, would prevent members of the public from utilizing these coastal resources.

- Work-from-home trends have continued since the Covid pandemic began in 2020, forcing more residents to rely on on-street parking.
- The Project's lack of adequate parking spaces and its inefficient tandem configuration will result in scores of additional vehicles occupying on-street parking otherwise available to Coastal Zone visitors. Based on the reasonable assumptions in the August 14th letter from Danial Nord in **Exhibit 1**, the Project would result in the loss of 62 on-street parking spaces as residents would rely on on-street parking. Furthermore, because each parking space lost displaces multiple visitors to the Coastal Zone, the Project would deprive 124 persons of the ability to access Coastal Zone resources on a daily, continuing basis.

In addition to the testimony of long-time residents, Appellant prepared a survey of available parking in the Project vicinity on August 3rd attached as **Exhibit 2**. The survey analyzes the availability of on-street parking on streets in the Project vicinity, including in the Coastal Zone, and photographed the conditions to document the findings. The survey validates the testimony of Appellants, as the photographic evidence demonstrates that virtually no parking spaces are available either on Pacific Avenue itself or on residential side streets. Based on this uncontroverted testimony of residents writing on matters that are well within the proper scope of lay testimony, the Project would cause a permanent deprivation of on-street parking usable for Coastal Zone visitors in an area that is already highly impacted by a lack of parking in violation of Coastal Act Section 30200(a). Proper consideration of the Project's impacts on Coastal Zone resources would require the imposition of conditions or mitigation measures requiring additional parking spaces and limiting the use of tandem parking to ensure the Project does not displace publicly accessible parking and reduce Coastal Zone access.

The Project's further conflicts with the Coastal Act are detailed in Appellant's letter attached as **Exhibit 3**. Coastal Act Section 30250 provides that new development shall be located in areas with adequate public services to ensure the Project will not have a significant adverse effect, individually or cumulatively, on coastal resources. Section 30253 provides that new development shall minimize risks to life in areas subject to flood hazards. The Project is fundamentally incompatible with these policies by locating an oversized development with inadequate parking on a tsunami route, clogging streets and risking severe impacts by obstructing evacuation routes. Section 30251 provides that new development shall be visually compatible with the surrounding areas. In stark conflict with this policy, the Project develops a four-story monolith in an otherwise low-rise neighborhood. Even buildings associated with institutional uses, such as those on the Fort MacArthur, are modest scaled in comparison to the Project. Coastal Act Section 30252 provides that new development must provide adequate parking facilities, which the Project manifestly fails to do.

III. THE PROJECT REQUIRES A NEW EIR

Not only does the Project result in direct violations of the Coastal Act, but its approval would also result in significant environmental impacts due to conflicts with land use policies precluding CEQA streamlining. The Project improperly relies on CEQA Guidelines Sections 15168 and 15162 to tier CEQA review off the San Pedro Community Plan. However, the Project does not meet the criteria to allow such streamlining.

To begin, the impacts of inadequate parking on access to Coastal Zone resources were never analyzed in the Community Plan or its EIR. The only acknowledgement of reduced parking for Density Bonus or other cases is in the *Population, Housing and Employment* section but does not describe the potential impact of reduced parking on the Coastal Zone.¹ Because the EIR for the Community Plan did not address the impacts of developments such as the Project, which are located outside the Coastal Zone and not subject to the San Pedro Specific Plan, the Project is ineligible to tier analysis of these impacts off the Community Plan EIR pursuant to CEQA Guidelines Section 15168(c)(1) which requires a new initial study leading to a negative declaration or EIR. As demonstrated above, the impacts to Coastal Zone resources results in a significant land use impact due to its inconsistency with Coastal Act policies, requiring preparation of an EIR.

Furthermore, the Project may not tier off the Community Plan EIR because the conditions in CEQA Guidelines Section 15162(a) are satisfied, precluding reliance on the Community Plan EIR pursuant to CEQA Guidelines Section 15168(c)(2) which allows tiering only when the lead agency “finds that pursuant to Section 15162, no subsequent EIR would be required[.]” In violation of CEQA Guidelines Section 15162(a)(2), since approval of the Community Plan and adoption of its EIR, there have been substantial changes with respect to the circumstances under which the Project is undertaken which will require major revisions to the previous EIR due to new significant environmental impacts.

Specifically, since approval of the Community Plan EIR in 2017, the Covid-19 pandemic beginning in 2020 has caused a dramatic increase in remote work and employees working from home. As described in articles attached as **Exhibit 4**, this increase in remote work is permanent and will continue expanding as employers seek to reduce office overhead and improve employee retention:

- Forbes projects that up to 25 percent of professional jobs in the North America will be remote by the end of 2022 with remote work increasing across the workforce through 2023.

¹ Final EIR for San Pedro Community Plan, SCH. No. 2008021004, p. 10-92. Available at: <<https://planning.lacity.org/eir/SanPedro/feir/files/AdditionsandCorrections.pdf>>

- The World Economic Forum estimated that, while only 5 percent of jobs could have been performed remotely before the pandemic, up to 20 percent of all jobs could be remote even after the pandemic fully ends.
- According to the LA Times, the *average* worker in the Los Angeles metro area will work only 3.4 days per week on-site, down from 4.4 days per week before the pandemic and accounting for over a 20 percent decrease in days at the office.

The drastic increase in work-from-home has contributed to a parking crisis in communities within and adjacent to the Coastal Zone, as evidenced by Appellants' testimony. As a result, there has been a significant change in the circumstances under which the Community Plan is being undertaken which causes new significant environmental impacts as a result of conflicts with Coastal Act policies requiring preservation of public access to Coastal Zone resources. The circumstances arose after 2017 and exacerbate the impacts of parking-deficient developments such as the Project on Coastal Zone resources. Based on Appellant's analysis, the Project will result in tens of vehicles from Project tenants relying on on-street parking.

In addition, as argued in the August 1st letter, the West Harbor Modification Plan will cause significant changes in the circumstances under which the Project is being undertaken that will cause new significant and more intense environmental impacts. As documented in the Initial Study/Notice of Preparation attached as **Exhibit 5**, the West Harbor Modification Plan includes a radical transformation of publicly accessible parking lots to a 6,200-seat amphitheater while resulting in a reduction of parking. Given the orientation of the amphitheater, members of the public would be able to observe performances from several public parks and streets, resulting in a dramatic increase in "tailgating" and further obstructing public access to the Coastal Zone. Members of the public have identified several public parks and streets from which members of the public would likely congregate during performances, including San Pedro Plaza Park and Block Field Park. Public comments noting the likelihood of spillover parking and tailgating impacts are attached as **Exhibit 6**. The Amphitheater and both parks are located within 0.7 miles of the Project site, so it is inevitable that Project residents occupying on-street parking will displace members of the public from being able to access Coastal Zone resources during Amphitheater events.

In addition to the arguments above, the Soil/Water/Air Protection Enterprise ("SWAPE") letter attached as **Exhibit 7** presents further rationales why the Project may not rely on streamlining pursuant to CEQA Guidelines Section 15168 and 15162 and is not eligible for a Class 32 Categorical Exemption. Finally, a Noise Impact Review prepared by RK Engineering Group, Inc. is attached as **Exhibit 8** demonstrating that the Project will result in significant noise impacts and is not eligible for the Class 32 Categorical Exemption.

IV. CONCLUSION

Appellant respectfully requests that the Council postpone the hearing until notice can be provided in compliance with the mandatory procedures of the LAMC. The Project further violates core Coastal Act policies and requires a supplemental EIR to analyze and fully mitigate its environmental impacts.

I may be contacted at 310-982-1760 or at jamie.hall@channellawgroup.com if you have any questions, comments or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie T. Hall", written in a cursive style.

Jamie T. Hall

EXHIBIT 1

Danial Nord
2130 South Pacific Avenue
San Pedro CA 90731

August 14, 2022

Los Angeles City Council 200 N. Spring Street
Los Angeles, CA 90012

RE: 2111–2139 South Pacific Avenue, San Pedro
CPC-2019-4884-CU-DB-SPR-RDP and ENV-2019-4885-CE

To Honorable City Council Members,

I am a resident in the coastal zone in San Pedro, directly across the street and within 500 feet of the site of the proposed project at 2111–2139 South Pacific Avenue. The construction of a four-story mixed-use residential building with 100 dwelling units and 1,800 square feet of ground floor retail, with inadequate parking that is noncompliant with applicable law (see expert report prepared by Infrastructure Group, Inc.) will have an extreme negative impact on the already insufficient parking resources in the coastal zone and on residents like me who live here.

The Project provides only 80 parking spaces for the 100 dwelling units, nearly half of which are tandem spaces, which renders 20 of the spaces dysfunctional. In addition, the project proposes to unbundle parking for 90% of the units, incentivizing residents to forego on-site parking and rely on street parking. The Project includes many two-bedroom units which will likely include households with more than one vehicle. Thus, the project is extremely deficient in parking spaces, as it provides approximately one half of a usable (individually accessible) parking space per dwelling unit. Residents will be forced to compete for nonexistent parking in the nearby streets, which include those in the coastal zone that begins in the middle of Pacific Avenue, just twenty feet from the project.

I have lived on the coastal zone side of Pacific Avenue between 21st and 22nd street for almost twenty years. Below are my personal observations, based on fact, about the current parking problems in the coastal zone near the proposed project (as of August 14, 2022):

- There are virtually NO street parking spaces throughout most of the day on weekdays, and parking to accommodate all existing residents in the evenings after 5pm is not available.
- Alternate side of the street parking requirements for street sweeping causes additional competition for any available parking spaces.
- On weekends, when more people come to the coastal zone, the situation is even more acute and the lack of parking is impossible to navigate. I have personally witnessed fights over parking spaces that include threats of violence and damage to vehicles.
- Delivery and private vehicles are frequently double parked on the side streets in the coastal zone because of the insufficient parking.

- Vehicles park day and night in the nearby alleys in the coastal zone due to insufficient parking. Access to my own on-site parking is often blocked by parked vehicles parked in the alley.
- There is often no available street parking for guests to my home or others nearby in the coastal zone. This is worse on weekends when more people visit the coastal zone.
- Delivery vehicles frequently park in the center (turn) lanes on Pacific Avenue because of insufficient parking.
- The only market serving the marina entrance and public park on 22nd street, as well as a popular breakfast + lunch restaurant, are at 22nd street and Pacific avenue - within 500 feet of the proposed project. Street parking for these small businesses serving visitors to the coastal zone will be even more impossible if the proposed project does not have adequate parking for its tenants.
- The parking problems in the coastal zone have become noticeably worse during the past five years, as new development has increased. Since 2020, when more people began to work from home due to the COVID pandemic, the lack of parking and the related negative impacts in the coastal zone have become even more pronounced. These new negative parking impacts have continued to date.

City of Los Angeles Ordinance 179681 Density Bonus Parking Option 1 requires parking spaces at the following ratios: 1 space per unit containing 0 to 1 bedroom, 2 spaces per unit containing 2 to 3 bedrooms, and 2.5 spaces per unit containing 4 or more bedrooms. The Project will provide 19 studio loft units, 24 studios, 36 one-bedroom units, and 21 two-bedroom units, so the minimal number of residential parking spaces required for the Project is 121.

However, as discussed, the Project Applicant requested an off-menu incentive to allow only 80 residential parking spaces in lieu of the 121 residential parking spaces that would otherwise be required.

It is normal in Los Angeles for working couples inhabiting 1 bedroom apartments to have two cars. But even if we use the unrealistic/underestimated number of 121 cars for the 100 unit project, and there are only 59 individually accessible parking spaces (21 are blocked by other cars because of tandem parking), it follows that a minimum of 62 additional cars will be parked on the streets near the project.

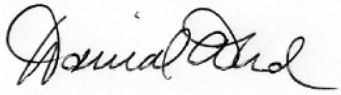
These 62 additional cars parked will likely displace 62 carloads of people who depend on free street parking to access the coastal zone. So if one car carries an average of two people, then it would follow that 124 people will be displaced from accessing the coastal zone and related activities due to the inadequate parking in the Project.

The addition of 100 insufficiently parked dwelling units and two new retail businesses (with a total of only four parking spaces for all retail) - combined with the cumulative negative impact on parking of the developer's nearby 102 unit project proposed for 1309-1331 Pacific, will have an extreme negative impact on residents like me in the coastal zone, and on those who visit the area.

Parking is already deficient here, and developments that seek waivers from compliance with applicable parking laws in lieu of providing adequate spaces for tenants will make the existing parking problems in San Pedro's coastal zone far worse.

Thank you for your consideration of this critical matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Danial Nord", written in a cursive style.

Danial Nord

Fran Siegel
2128-2130 South Pacific Avenue
San Pedro CA 90731

August 15, 2022

Los Angeles City Council
200 N. Spring Street
Los Angeles, CA 90012

RE: 2111–2139 South Pacific Avenue, San Pedro
CPC-2019-4884-CU-DB-SPR-RDP and ENV-2019-4885-CE

Honorable City Council Members,

I have been a resident at 2128-2130 South Pacific Avenue in San Pedro for almost twenty years. This is within 500 feet of the site of the proposed project at 2111–2139 South Pacific Avenue. I live in the coastal zone which is directly across the street from the proposed project. The conditions of the coastal zone would be extremely negatively impacted by this proposed project, but this has not yet been addressed.

Below are my personal observations, based on fact, about the current parking problems in the coastal zone, which begins at the center of Pacific Avenue just twenty feet from the proposed project:

- There are virtually no street parking spaces available in the evening, weekends and throughout most weekdays.
- There is often no available street parking for guests to my home or others nearby in the coastal zone. I have had visitors report that they have driven around for more than 30 minutes trying to find spaces.
- It is especially tight on weekends when people come to the coastal zone for recreation.
- Also, during weekend brunch hours at Rex's Café, people drive around in circles looking for spots.
- Delivery vehicles frequently park in the center lanes on Pacific Avenue because of insufficient parking.
- Delivery and private vehicles are frequently double parked on the side streets in the coastal zone because of insufficient parking.
- Vehicles park at all hours in the nearby alleys in the coastal zone due to the lack of parking. Access to my own on-site parking is often blocked by parked vehicles parked in the alley.
- Traffic moving westward on 22nd street is often so clogged at the intersection of Pacific that vehicles need to wait several traffic light cycles before being able to pass through. Not only is access IN to the coastal zone critical for the public but access OUT could be a life or death matter as Pacific Avenue is an official coastal Tsunami evacuation route.

- The parking problems have increased during the past few years as development has increased. Since COVID-19 began in 2020, the situation has become exponentially worse, and these recent negative impacts on coastal zone parking have not subsided because many residents continue to work from home.

The construction of a four-story mixed-use residential building with 100 dwelling units and 1,800 square feet of ground floor retail, with inadequate parking that is noncompliant with municipal codes + regulations will have an extreme negative impact on the already insufficient parking resources in the coastal zone, and on residents like me who live here.

The proposed project would only provide 80 parking spaces for the 100 dwelling units, nearly half of which are tandem spaces, which renders 20 of the spaces dysfunctional. In addition, the project proposes to unbundle parking for 90% of the units, which would encourage residents to forego on-site parking altogether and rely on street parking. Also the Project includes many two-bedroom units which will likely include households with more than one vehicle. Thus, the project is extremely deficient in parking spaces, as it provides approximately one half of a usable (individually accessible) parking space per dwelling unit. Residents will be forced to compete for nonexistent parking in the nearby streets which are already overburdened and would include those in the coastal zone that begins in the middle of Pacific Avenue, just twenty feet from the project.

The addition of 100 insufficiently parked dwelling units and two retail businesses (with a total of only four parking spaces for all retail) - combined with the cumulative negative impact on parking of the developer's nearby 102 unit project proposed for 1309-1331 Pacific, will have an extreme negative impact on residents like me in the coastal zone, and on those who visit the area.

Parking is already deficient here, and developments that seek waivers from compliance with applicable parking laws in lieu of providing adequate spaces for tenants will make the existing parking problems in San Pedro's coastal zone far worse.

Thank you for your consideration of this important matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Fran Siegel", written over a horizontal line.

Fran Siegel

EXHIBIT 2

Twenty-Second, Twenty-First, Twentieth,
Nineteenth Streets, plus some Mesa and
Pacific Avenues.

Photos taken August 3, around 5:00 p.m.
before the evening scramble for parking
spaces.

19th & Pacific, NE



19th btwn Pacific & Mesa



20th btwn Pac & Mesa, double-parking



20th btwn Pacific & Mesa, trash barrels



21st & Pacific SE, only 5 garages.



21st & Pacific, NE & SE, multiunits



21st & Pacific, NE, multiunit no parking



21st between Mesa & Pacific



21st between Mesa & Pacific



21st btwn Mesa & Pacific, trash barrels in street



21st btwn Mesa & Pacific



423 19th St. multiunit with 1 garage



Alley parking



Alley parking btwn 22nd & 21st, so. of Pacific



Bungalows 2, parking in red



Bungalows, Another View



Bungalows Three Deep from Street



Bungalows, Mesa btwn 19th & 20th, no parking



Flats at 22nd and Mesa, SW, no parking



Fort Mac restrictions on parking, beginning on east side of Pacific at Hamilton Ave., extending south to Steven M. White Dr., except for a few spots around post office. West side of Pacific limited because of Fort and red curbs that start about 100' before Hamilton, extending south to about 26th Street.



Ft. Mac - no parking on Pacific



20th btwn Mesa & Crescent



EXHIBIT 3

Noel Gould
728 W. Paseo del Mar
San Pedro, CA 90731

August 14, 2022

Los Angeles City Council
200 N. Spring Street
Los Angeles, CA 90012

RE: 211102139 South Pacific Avenue, San Pedro
CPA-2019-4884-CU-DB-SPR-RDP and ENV-2019-4885-CE

Honorable City Council Members,

I've been a resident of San Pedro since 1992 and have lived in the Coastal Zone the entire time. Not only is much of San Pedro located in the Coastal Zone, but San Pedro's Coastal Zone has the rare additional designation of being a Special Coastal Community, a designation reserved for places like Venice and Carmel, and while all communities located in the Coastal Zone receive the protection of the California Coastal Act, Special Coastal Communities require and receive protection above and beyond the normal protective measures because of their unique characteristics and visitor serving aspects.

There are no "by right" projects, for example, in the Coastal Zone as any project planned needs to go through the process of acquiring a Coastal Development Permit (CDP) from the City of LA and additionally from the Coastal Commission if a project is located in the Dual Jurisdiction Zone delineated in the San Pedro Specific Plan. The proposed project at 2111-2139 S. Pacific Ave is directly across the street from the Single Jurisdiction of the Coastal Zone and one block from the Dual Jurisdiction of the Coastal Zone.

Furthermore, Coastal Act section 30200 states in part that:

"All public agencies carrying out or supporting activities outside the coastal zone that could have a direct impact on resources within the coastal zone ***shall*** consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved."

I have dedicated a good portion of my volunteer activities over the years to seeing that Coastal Act policies are preserved and protected when new projects are considered, and adequate parking to support either new businesses or businesses increasing the intensity of their use is always required by the Coastal Act, so much so, that the authors found it important enough to include section 30200 to make certain that even projects outside the Coastal Zone would have to consider their potential impacts within the Coastal Zone. Additionally, compatibility with Character, Mass, and Scale of the surrounding community is also required.

The following sections of Chapter 3 of the Coastal Act are also pertinent and applicable to this project:

Section 30250

Location; existing developed area

(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas ***able to accommodate it*** or, where such areas are not able to accommodate it, in other areas ***with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.*** In addition, land divisions, other than leases

for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

(b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.

(c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.
(Amended by Ch. 1090, Stats. 1979.)

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. ***Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas***, to minimize the alteration of natural land forms, ***to be visually compatible with the character of surrounding areas***, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30252 Maintenance and enhancement of public access

The location and amount of new development should maintain and enhance public access to the coast by

- (1) ***facilitating the provision or extension of transit service***,
- (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads,
- (3) providing non-automobile circulation within the development,
- (4) ***providing adequate parking facilities*** or providing substitute means of serving the development with public transportation,
- (5) ***assuring the potential for public transit for high intensity uses such as high-rise office buildings***, and by
- (6) ***assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.***

Section 30253 Minimization of adverse impacts

New development shall:

(1) ***Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(3) ***Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.***

(4) Minimize energy consumption and vehicle miles traveled.

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30250 is clear that new development located in close proximity to existing developed areas, which this is, be able to accommodate it (the new development) and that adequate public services be available where it will not have significant adverse effects, either individually or cumulatively, on Coastal resources.

Section 30251 requires that:

Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, ***to be visually compatible with the character of surrounding areas.***

This project is a massive 45-foot 5-inch monolith that is completely out of character with the surrounding area and will block residents' views of the harbor, marina, and sunsets over the coastal hills. These adverse impacts will be endured not only by residents living in the Coastal Zone but also residents adjacent to the Coastal Zone who are currently able to view the coast from their homes but will no longer be able to if this project is built. This is clearly a violation of the Coastal Act.

Section 30252 requires:

(1) ***facilitating the provision or extension of transit service***,
which this project does not.

(4) ***providing adequate parking facilities or providing substitute means of serving the development with public transportation***,

This project does NOT provide adequate parking facilities! There are 100 units with 80 parking spaces, half of which are tandem without the required shuffling spaces making them unusable, and 90% of the parking is unbundled meaning that people who don't even live in the building will be able to rent parking spaces further reducing the parking available to the residents. I have

driven the area over ten blocks in all directions, both in the Coastal Zone section and the non-Coastal Zone section, and my personal observations based on fact conclude that parking is extremely scarce if available at all. There are at least five sit down restaurants in the immediate vicinity of the proposed projects in addition to a number of other businesses, all which require parking, and there are a number of Coastal visitor serving destinations close by, all of which will be impacted by a decisive lack of street parking which the applicant calls irrelevant.

Section 30252 further calls for:

(5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by

(6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

The developer has not assured the potential for public transit, but has instead relied on inaccurate Transit Oriented Community maps which suggest that there is adequate public transportation during peak transit times which the Council Office has admitted is not accurate, and which we have confirmed by timing the bus frequency.

In addition, this developer has done nothing to correlate the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Section 30253 Minimization of adverse impacts

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

The first requirement of Section 30253 to minimize risks to life and property in areas of high geologic, flood, and fire hazard is completely ignored by this developer as Pacific Avenue and 22nd Street are Tsunami evacuation routes, and this project will cause both of these streets to be regularly jammed with traffic due to people fighting over parking spaces, double parking of residents, and regular and consistent double parking by vehicles from Amazon, UPS, FedEx, USPS, and other delivery trucks. It is noted that the project does NOT provide an adequate loading zone and has, in fact, requested relief therefrom.

In addition, the project takes up the entire block of Pacific Avenue between 21st and 22nd streets up to the alley where the adjacent one-story homes begin. The required setback/step-back is NOT met, and the project adds to the hazard that already exists when busses turn from Pacific Avenue west onto 22nd street and are forced to drive into the lane of eastbound oncoming traffic. I was nearly hit by a bus making that exact turn. Furthermore, I was in a car accident at the corner of Pacific and 22nd street when a car darted left in front of me to turn from Pacific onto 22nd street, and I was unable to stop. These are common occurrence.

Section 30253 also requires that the project:

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Clearly this project, which is located a mere fifteen feet from the Coastal Zone will have direct impacts regarding pollution that will affect the Coastal Zone. There have been many arguments put forward by the applicant about how these density bonus projects pre-empt local zoning laws including the San Pedro Community Plan, the CPIO, and the Pacific Corridor Re-development Plan, however, the California Coastal Act trumps all the local laws and is required to be harmonized with the State Density Bonus Law, and the requirements of the Coastal Act ***shall*** be followed, which as seen in these numerous examples, this project does not but MUST!

Finally, on another but pertinent note, one of our appellants who lives on 21st street adjacent to the project site texted me the other day to say, " Hello Noel, sorry to bother you to think you can still help me with the problem I have about the parking. I just got into it with the neighbor, and he told me the next time something could happen to my truck. I'm just done if I call the cops. They don't do nothing. It's so sad."

I followed up with her today, and she replied:" It's ok, yesterday I got shot with a pellet gun in my neck and missed my main arteries. Had surgery and I just got out of the hospital. They made a report from LAPD and investigators are going to get ahold of me. I'll keep you updated. Thank you for getting back to me."

This entire situation has been over parking...someone parking their truck in her spot in front of her house. It's been going on for a few months, and now she's been shot.

I don't know how anyone in good conscience could call this street parking situation irrelevant.

Sincerely,
Noel Gould
310-625-1157
aquarianstudios@hotmail.com

EXHIBIT 4

CAREERS

Remote Work Is Here To Stay And Will Increase Into 2023, Experts Say

Bryan Robinson, Ph.D. Contributor ⓘ

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Feb 1, 2022, 06:24am EST

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Experts predict a remote work force is a permanent fixture in the coming years. GETTY

While some companies continue to thumb their noses at The Great Resignation and insist that employees come back into the office, data scientists at [Ladders](#) insist that the writing is on the wall.

Remote work is here to stay. According to their projections, 25% of all professional jobs in North America will be remote by the end of 2022, and remote opportunities will continue to increase through 2023. Researchers from [Ladders](#) have been carefully tracking remote work availability from North America's largest 50,000 employers since the pandemic began. Remote opportunities leapt from under 4% of all high paying jobs before the pandemic to about 9% at the end of 2020, and to [more than 15% today](#). "This change in

working arrangements is impossible to overhype. As big as it is, it's even bigger than people think," said Ladders CEO [Marc Cenedella](#), who says it's the largest societal change in America since the end of World War II. "Hiring practices typically move at a glacial pace, but the pandemic turned up the heat so we're seeing a rapid flood of change in this space. It's really rather amazing."

The Downstream Effects of Job Burnout

As the workplace headed into 2022—the third year of the pandemic—the rise of job burnout jumped to an all-time high. [The American Psychological Association's](#) Work and Well-Being survey found that 79% of the 1,501 employees experienced work-related stress in the month before the survey. Three in five workers said work-related stress caused them to have a lack of interest, motivation and energy at work. A total of 36% had cognitive weariness, 32% emotional exhaustion and 44% physical fatigue—a 38% jump from 2019.

According to the report, issues like the politicization of masks and vaccines and feelings of lack of support from the government and workplaces have caused workers—especially those in public-facing jobs—to become cynical about their jobs and about the public in general. "This kind of cynicism is powerful because it undermines the people's feelings about the value of their work, which can help motivate them during hard times," said organizational psychologist, Michael Leiter, honorary professor of organizational psychology at Melbourne's Deakin University. The report stated that because pandemic-related stressors won't stop anytime soon, stress-reducing measures should be top of mind for employers and legislators. And Christina Maslach, professor emerita of psychology at University of California, Berkeley added, "As demands increase, organizations need to focus on maintaining balance, taking things off the plate when they add something new. That's especially

important in health care settings where attrition rates are especially high.”

BETA

Remote Work Is A Permanent Fixture

According to the 2021 State of Remote Work Report from [Owl Labs](#), 2021 was the year the world stayed remote, and 90% of the 2,050 full-time remote workers surveyed said they were as productive or more productive working remotely, compared to when they toiled in the office. Another 74% said after the pandemic, working from home is better for their mental health, and 84% reported that working remotely after the pandemic would make them happier, with many even willing to take a pay cut.

A January 2022 survey of 1,000 full-time workers from [Ergotron](#) corroborates the Owl Labs study, revealing that as workers have become more acclimated to hybrid and remote office environments since the onset of the pandemic, they are experiencing benefits to their physical and mental well-being. Taken together these two findings indicate that American businesses listen up and look beyond today to build more progressive workplace policies that will help employees thrive. The report concluded that leaders must rethink their workplace culture to be more inclusive of remote and hybrid work—this is the new normal.

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Still, several big banks and tech companies have remained resistant to having a permanently remote workforce throughout the pandemic, with one firm referring to the idea as a "temporary

aberration." Companies like [Goldman Sachs](#) and [Chase](#) have now retreated, joining competitors in announcing flexible work from home policies as the number of Covid-19 cases rise. Ragu Bhargava, CEO at [Global Upside](#), agrees with the latest research that employees will continue to resign in record numbers if companies don't evolve with the needs of their employees. Ragu suggests that those who still view remote work as temporary or unorthodox—instead of a complete transformation in how we work and continue the “old way of doing things”—risk losing staff and no longer being competitive as the workplace evolves around them.





BETA

Ragu Bhargava, CEO at Global Upside ©BEN KRANTZ STUDIO



“There’s this clinging narrative of a ‘return to normalcy’ that many employers are holding onto, when in fact, the world of work will never truly return to the way it was before,” Ragu said. “The pandemic revolutionized the workplace and expedited an already growing need for remote workers. The pandemic served as a massive wake-up call, teaching us not only that work was more than capable of being completed from home, but showing the need for flexibility for employees to take control of their own schedules—a necessity for those with long commutes, pricey childcare arrangements and those who simply wanted to spend more time with their families.”

Ragu cites the mind-boggling statistic that [4.5 million people](#) employees voluntarily quit their jobs in November, 2021 alone as evidence that the American workforce is waking up to their

collective bargaining power, and hard-nosed employers are getting left behind in the dust. “With The Great Resignation and Covid-19 still playing a role in our day-to-day lives, companies who choose to revert to the ‘old way of doing things’ will risk losing their staff and witness a changing job market that evolves around them, eventually moving on entirely,” Ragu concluded.

Everyone Will Be Affected By The Societal Shift

Cenedella foresees that the increases in remote working will make a huge societal shift and will impact everyone. It will free employees from being stuck to a large city so Cenedella expects we will continue to see smaller cities and towns grow. Cities that have appealing lifestyle elements but historically lacked access to great professional jobs will see significant growth. Cenedella notes, “Those cities will see an influx of high-earning, well-educated professionals, which will change their school boards, their planning commissions and even the services offered to residents. Remote work at this scale will transform some communities completely.”

Between April and September 2021, more than 24 million American workers quit their jobs according to the U.S. Bureau of Labor Statistics. As we enter the new year [Workhuman's](#) January, 2022 Human Workplace Index insists the decisions employers make will be critical to their team, and 81.5% of workers feel more empowered to hold their leaders accountable for a better workplace in 2022. Over half (56%) said they would only wait 30 to 60 days for employers to make needed changes before they consider leaving.

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BUSINESS

More evidence that bosses want you back to work in the office despite COVID's endless grip



Los Angeles Times

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Downtown offices, like these around L.A.'s Pershing Square, were particularly hard hit by the pandemic, as people across the country avoided high-rises and the public transportation they rode to work. One downtown L.A. landlord said about half of workers have returned to his office buildings at least a few days a week. But other buildings are emptier. (Gary Coronado / Los Angeles Times)

BY ROGER VINCENT | STAFF WRITER

JULY 20, 2022 5 AM PT



Most bosses remain steadfast in their desire to see their white-collar employees in the office despite many workers' desire to stay home most of the time.

About 85% of companies say they want employees to spend half or more of their work time there, according to a recent national real estate brokerage survey.

But [rising and waning surges of COVID-19](#) keep injecting caution into employers' attitudes about enforcing in-person work, which are still evolving as leaders and

workers try to figure out how much time they want to spend in the office and how much room they'll need to do their jobs when they are together.

Office leasing patterns in Los Angeles County in the second quarter revealed uncertainties about how working from home will change office use in the years ahead.

L.A.-area office buildings remain less than half as populated as they were before the pandemic, real estate industry observers said.

Yet some businesses are making big commitments to their offices and signing long leases for large blocks of space, according to second-quarter leasing numbers from real estate brokerage CBRE. [Amazon, for instance, said in May](#) that it will rent 200,000 square feet at the Water Garden office complex in Santa Monica to add corporate and tech jobs.

ADVERTISING



Amazon plans to create more than 1,000 new corporate and tech jobs in Santa Monica over the coming years and has signed a lease for a 200,000-square-foot space at the Water Garden. (CBRE)

Many other employers keep paying the rent on their underused offices while pondering whether they'll need more or less space when their leases are up. Some companies — [including Netflix](#), Yahoo and Verizon — pay the rent but have put unneeded offices on the market for sublease, helping drive up overall vacancy to a high 25% in L.A. County, CBRE data show.

Netflix recently [laid off 300 workers](#) after reporting its first decline in subscribers in more than a decade but remains the world's largest streamer and the largest office tenant in Hollywood.

Although people have been adapting to it for more than two years, working from home is a long way from a settled practice for employers. Most of them plan to permanently

adopt some kind of hybrid model of working at home some days and in the office on others, but its form is still evolving.

“It’s really early in the ballgame,” CBRE real estate broker Jeff Pion said. “I think we’re in the second inning of this. Companies are still trying to figure out what’s best for them.”

So although 85% of companies responding to [a CBRE survey](#) said they want employees in the office at least half the time, there is little consensus about how to achieve this goal. Bosses are almost evenly split about whether the required number of days in the office should be decided by the company alone or in consultation with employees.

Economists at the brokerage predict that U.S. workers will spend an average of 3.4 days per workweek in the office, down from 4.4 days a week before the pandemic.

CALIFORNIA

Coronavirus cases soar at L.A. County workplaces, complicating back-to-office push

July 16, 2022

Employees may want fewer days in the office, even if it involves a salary reduction or a new job.

Just over half of U.S. workers want to work remotely more often than they currently do, a recent survey by human resources consulting firm OperationsInc found.

Nearly half said they would even be willing to take a pay cut to increase or retain their remote work arrangements. Others plan to be proactive — 40% said they will look for a new job in the next six months so that they can work remotely more often or every day.

The June [survey revealed](#) tension around employee desires and expectations, however, as 56% acknowledged they will probably have to go to the office more frequently in the next six months, perhaps every day. Three-fourths of workers said their direct supervisor has expressed a desire to see them in person more often.

But many bosses hope that being around other people will be appealing, the way it often is in recreational settings.

“I can make coffee in my house. I can watch a movie in my house. I can watch baseball, football and basketball,” Pion said, and yet people make an effort to do those things with others. “We’re social animals.”

Improvements in technology have been gradually liberating workers from the need to be at their desks for years, but remote work forced by the pandemic accelerated the push away from assigned seating. Technology may hold keys to making the office more appealing.

BUSINESS

Inside Frank Gehry’s latest Los Angeles mega-project

June 30, 2022

Most employers expect to increase their use of alternatives such as activity-based seating, which might entail workers with laptops and cellphones using a private room or cubicle for focused work, or staffers gathering in “huddle rooms” for group projects or setting up a laptop in a lounge or coffee bar. Some work locations may be reserved electronically.

Such configurations may require ample space, which wouldn’t reduce companies’ office footprints and rent — a goal for many.

“Hotdesking,” the practice of having employees grab an open desk when they show up, can reduce space needs, and a majority of employers expect to use it more as they settle in post-pandemic.

CBRE said 52% of its survey respondents intend to reduce their office space over the next three years, mostly to eliminate space they expect to be freed up by remote work and more efficient use. That’s up from 44% in last year’s survey.

Other firms are growing, as 39% of companies say they plan to expand their office portfolios over the next three years, mostly because of hiring and business growth. That’s up from 29% that said last year that they expected expansion.

Examples of shifts in Los Angeles County last quarter include First Republic Bank, which expanded to occupy five floors in Century City when it renewed its lease at 1888 Century Park East.

Century City and the rest of the Westside “has continued to be a very popular place for people to be,” Pion said, led by companies in entertainment and technology.

In downtown Los Angeles, which has had an oversupply of offices for decades, asset manager TCW Group agreed to a new lease that will reduce its space by more than 20% when it moves its headquarters to another building in January 2025.

“Although the space we are taking is smaller in square footage than our current space, the greatly improved use of space and design will provide for a collaborative work environment and the ability to continue to grow our business and employee numbers,” Chief Operating Officer Liz Kraninger said in a memo to employees, according to real estate data provider CoStar.

BUSINESS

Look inside ‘League of Legends’ creator Riot Games’ L.A. home. It’s cooler than where you work

May 9, 2022

Downtown offices across the country were hit particularly hard by the pandemic, as people avoided high-rises and the public transportation they rode to work.

The pace of returning workers grew in June, according to the most recent pedestrian traffic report by [tracking service Springboard](#). Cameras in big cities picked up more people walking around, which Springboard said appears to be a consequence of more people returning to the office.

Weekday pedestrian traffic in U.S. downtowns strengthened in June to 26% below the pre-pandemic level of 2019, compared with 42% below that mark in January, Springboard reported.

“The gap between now and 2019 has narrowed quite a lot,” said [Diane Wehrle](#), Springboard’s director of marketing and insights.

The daytime bounce-back is most pronounced during breakfast and lunch hours, indicating that the shift back to the office has accelerated, Springboard said.

The company, which is based near London, does not publicly break out individual cities, but Los Angeles traffic follows U.S. norms, Wehrle said.

BUSINESS**Beverly Hills’ historic Saks Fifth Avenue complex set for development into offices and apartments**June 23, 2022

Downtown office landlord [Christopher Rising](#) of Rising Realty Partners said his

buildings on Bunker Hill are more than 50% populated Tuesday through Thursday, the most popular days for in-office labor.

Downtown “has been through a tough couple of years,” Rising said, but it stands to benefit from an influx of residents coming to billions of dollars’ worth of residential projects completed in recent years, including the \$1-billion [Grand LA complex](#) and the planned \$1.6-billion [Angels Landing](#) project.

According to [Kastle Systems](#), which provides key-card entry systems used by many companies and tracks patterns of workers’ card swipes, the average U.S. office population hit a low of 14.6% in mid-April 2020. Last week it was at 44.1%, about the same as at the end of June. Los Angeles was below average at 41.8%.

Vacancy in Class A Los Angeles County office buildings (not including sublease space) was 17.5% in the second quarter, slightly lower than it was both a year earlier and in the first quarter. Landlords’ average monthly asking rents of \$3.88 per square foot also changed little from the previous periods.

Tenants have the upper hand in rent negotiations, real estate brokerage Savills said, even though the Los Angeles regional economy has fully reopened since the pandemic started and the labor market is historically tight.

“While these strong underlying fundamentals would normally result in higher leasing activity and decreasing availability,” Savills said, “the continued widespread adoption of hybrid workplace strategies and the return of uncertainty in the overall economy will keep the Los Angeles office market tenant-favorable for the foreseeable future.”

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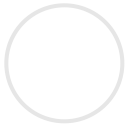
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WORKFORCE AND EMPLOYMENT

New study shows how much more productive a hybrid workforce can be

Jul 9, 2021

This article first appeared on **The NBER Digest.**





Workers have invested time and money into their home office setups. Image: unsplash/Mikey Harris

Steve Maas

Contributing Writer, The National Bureau of Economic Research

- Just 5% of people worked from home in the US before the pandemic.
- It's expected that up to 20% of the US entire workforce will continue to work from home permanently.
- On average, workers invested 15 hours of time and \$560 to upgrade their home work spaces.
- Estimates say that a hybrid workforce will boost productivity by 4.6%, mainly due to the reduction in commuting.

After the COVID-19 pandemic ends, 20 percent of all labor in the United States may be satisfied by remote workers, up from 5 percent before the virus struck, according to Why Working from Home Will Stick (NBER Working Paper [28731](#)) by [Jose Maria Barrero](#), [Nicholas Bloom](#), and [Steven J. Davis](#). The researchers estimate that productivity will increase and that spending in city centers will decrease relative to pre-COVID levels.

The findings are based on interviews with major employers and on monthly surveys from May 2020 to March 2021 of persons aged 20–64 who earned at least \$20,000 in 2019. Respondents report better-than-expected work-from-home experiences, along with higher productivity.

Workers invested an average of 15 hours of time and \$560 to upgrade their home work spaces, equivalent in aggregate terms to an estimated 0.7 percent of annual GDP, the researchers find. Added to that are investments made by employers in cloud computing and other technology to accommodate remote workers. The number of patents for technological innovations to accommodate a home-based workforce more than doubled from January to September 2020. Innovative

regulatory policies, such as those allowing a wide range of health workers to work remotely, will also change the post-COVID-19 workplace.

Individuals' Desire to Work from Home Post Pandemic

Share of respondents
35%



Source: Researchers' calculations using data from the Survey of Working Arrangements and Attitudes

up to 20% of the US entire workforce will continue to work from home permanently. Image: NBER

Based on respondents' self-assessments, the researchers estimate that the hybrid workforce will boost productivity in the post-pandemic economy by 4.6 percent. Most of that gain will come from a reduction in commuting time.

Fewer than 30 percent of respondents say they will return fully to pre-COVID activities; the rest remain wary of mass transit, crowded elevators, and indoor dining. The researchers estimate that the drop in the number of commuters will result in a 5 to 10 percent drop in spending on meals, entertainment, and personal services in

major city centers. That spending will be redirected to business establishments

closer to workers' homes.

Have you read?

- **4 things we need to consider to make hybrid working a success**
 - **9 out of 10 organizations are switching to hybrid working, according to a McKinsey survey**
 - **Remote working: how can we enable employees to 'disconnect'?**
-

While workers across all demographic groups express a desire to continue working from home, the highly educated and high earners will have a much greater opportunity to do so. The share of survey respondents who worked from home ranged from 10 percent for those without high school degrees to 50 percent for those with graduate degrees. The share was more than twice as large among those who earned above \$150,000 than among those in the \$20,000–\$50,000 range. Respondents were more likely to work from home if they worked in the service sector, were raising children, and lived in Democratic-leaning states.

The study projects that overall, 20 percent of full workdays will be supplied from home after the pandemic ends. Remote work is feasible for half of the employees, and the typical business plan calls for that half to spend two days — 40 percent — of the work week at home. Business leaders told the researchers that they wanted employees on site at least three days a week for reasons involving motivation, collaboration, and workplace culture.

“For most workers, the post-pandemic economy will entail more WFH [work from home] than in the pre-COVID economy but considerably less than they would like,” the researchers conclude. “The benefits of a persistent shift to WFH will be broadly felt but flow mainly to the better-educated and the highly paid.”

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Council File No: 21-1269

Comments for Public Posting: Part 2 of 2 On behalf of Appellant Citizens Protecting San Pedro,
please find the attached objection letter

EXHIBIT 5

WEST HARBOR MODIFICATION PROJECT INITIAL STUDY/ NOTICE OF PREPARATION

**APP#190529-080
SCH No: 2005061041**

PREPARED FOR:

Environmental Management Division
Los Angeles Harbor Department
425 S. Palos Verdes Street
San Pedro, CA 90731

WITH ASSISTANCE FROM:

ICF
49 Discovery, Suite 250
Irvine, CA 92618

April 2022



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Acronyms and Abbreviations

2016 SPPM Addendum	Addendum to the SPW EIS/EIR for the SPPM Project
2019 SPPM Addendum	Second Addendum to the SPW EIS/EIR for the SPPM Project
AB	Assembly Bill
Amphitheater	6,200-seat outdoor amphitheater and entertainment lawn venue
BMP	best management practice
Board	Board of Harbor Commissioners
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CO ₂ e	carbon dioxide equivalent
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
GHG	greenhouse gas
GWh	gigawatt-hour
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LAPD	City of Los Angeles Police Department
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LID	low-impact development
MMRP	Mitigation Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NAHC	Native American Heritage Commission
NOP	Notice of Preparation
PMP	Port Master Plan
Port	Port of Los Angeles
PRC	Public Resources Code
project	West Harbor Modification Project
RWQCB	Regional Water Quality Control Board
S.P. Slip	Southern Pacific Slip
SCAQMD	South Coast Air Quality Management District
SEIR	Supplemental Environmental Impact Report
SLF	Sacred Lands File
SPPM	San Pedro Public Market
SPW	San Pedro Waterfront
SWPPP	Stormwater Pollution Prevention Plan
Tower Attraction	tower attraction/observation deck

1.0 Project Overview and Background

1.1 Project Overview

The Los Angeles Harbor Department (LAHD), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this Notice of Preparation (NOP) to inform responsible and trustee agencies, public agencies, and the public that a Supplemental Environmental Impact Report (SEIR) to the San Pedro Waterfront (SPW) Project Environmental Impact Statement/Environmental Impact Report (EIS/EIR), which was certified on September 29, 2009 (SCH# 2005061041), is being prepared for a proposed modification to the San Pedro Public Market (SPPM) Project, now known as the West Harbor Project, previously approved in May 2016. The proposed modification would include a 6,200-seat outdoor amphitheater and entertainment lawn venue (Amphitheater), and it would replace the previously analyzed 100-foot diameter Ferris wheel with a tower attraction/observation deck approximately 150 feet tall by 50 feet wide (Tower Attraction). In addition, modifications to previously approved mitigation measures are also being proposed to update certain requirements to current regulatory standards and to assess their effectiveness and need.

Enacted in 1970, CEQA (Public Resources Code [PRC] Section 21000, *et seq.*) and its implementing guidelines (State CEQA Guidelines, 14 California Code of Regulations [CCR] Section 15000, *et seq.*) require that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. As authorized by Section 15050 of the State CEQA Guidelines, LAHD will serve as the lead agency for the environmental review.

An Initial Study Checklist is included with this NOP and has been prepared in accordance with current *City of Los Angeles Guidelines for the Implementation of the California Environmental Quality Act of 1970* (Article I), the State CEQA Guidelines, and CEQA, to assess the potential environmental impacts associated with the proposed modifications to the previously analyzed and approved SPPM Project and modifications to the previously approved mitigation measures.

In May 2016, LAHD approved an Addendum to the SPW EIS/EIR for the SPPM Project (2016 SPPM Addendum). A second Addendum was approved by LAHD in November 2019 (2019 SPPM Addendum). Since that time, the developer (Applicant) has proposed to expand the 500-seat outdoor amphitheater to 6,200 seats and also use the Amphitheater area as an entertainment lawn venue for public and private events and as a passive open park space when not otherwise programmed. In addition, the Applicant has proposed a Tower Attraction in lieu of the Ferris wheel and other entertainment attractions in the Discovery Sea Amusement Area previously analyzed in the 2016 SPPM Addendum. LAHD has also determined that certain mitigation measures approved in the Mitigation Monitoring and Reporting Program (MMRP) for the 2009 SPW EIS/EIR and 2016 SPPM Addendum may need to be updated or reanalyzed to determine their effectiveness and need in the areas of air quality, utilities and public services, and transportation.

1.2 Background and Previous Environmental Documentation

A Final EIS/EIR for the SPW Project was certified by the Board of Harbor Commissioners (Board) on September 29, 2009 (SCH No. 2005061041). It addressed potential impacts associated with implementation of the redevelopment of the SPW area. In May 2016, the Board approved the 2016 SPPM Addendum. The proposed West Harbor Modification Project, as more particularly described below, represents changes to the SPPM Project and SPW Project previously reviewed in accordance with CEQA. No changes are proposed that would affect any federal permits or require any federal approvals. Therefore, no National Environmental Policy Act (NEPA) evaluation is required for the proposed West Harbor Modification Project.

One of the primary objectives of the SPW Project was to provide enhanced visitor-serving commercial opportunities within the Ports O' Call area along the main channel. Many of the potentially significant environmental impacts identified in the SPW EIS/EIR were determined to be less than significant or were reduced to a less-than-significant level through either the adoption of mitigation measures or the incorporation of project revisions. Impacts related to aesthetics, air quality and meteorology, biological resources, geology, noise, recreation, ground transportation and circulation, and water quality sediments and oceanography, however, were identified as significant and unavoidable. For those impact areas, LAHD adopted a Statement of Overriding Considerations and an MMRP containing 91 mitigation measures to address these impacts, both during construction and operation of the SPW Project.

The SPPM Project included a more specific concept for the former Ports O' Call Village site. In May 2016, LAHD prepared the 2016 SPPM Addendum to address development of a smaller building area, the inclusion of a portion of the Town Square originally evaluated in the SPW EIS/EIR, reconfiguration of the waterfront promenade, extension of the proposed lease term from 30 years to 50 years, and possible modifications to the U.S. Army Corps of Engineers permits. The 2016 SPPM Addendum found that the SPPM Project would not result in any new significant impacts or a substantial increase in the severity of previously identified impacts that were analyzed in the SPW EIS/EIR. A revised MMRP identifying 28 mitigation measures that apply specifically to the SPPM Project was incorporated into the 2016 SPPM Addendum. The 2019 SPPM Addendum was prepared to extend the duration of the lease for an additional 16 years.

1.2.1 Previous Environmental Documents Incorporated by Reference

Consistent with State CEQA Guidelines Section 15150, the following documents were used in preparation of this NOP and Initial Study and are incorporated herein by reference.

- Port of Los Angeles. 2008. *San Pedro Waterfront Project Draft EIS/EIR* (SCH No. 2005061041). September.
- Port of Los Angeles. 2009a. *San Pedro Waterfront Project Findings of Fact and Statement of Overriding Considerations*. September.

- Port of Los Angeles. 2009b. *San Pedro Waterfront Project Mitigation Monitoring Report and Program*. September.
- Port of Los Angeles. 2009c. *San Pedro Waterfront Project Final EIS/EIR (SCH No. 2005061041)*. September.
- Port of Los Angeles. 2016. *EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market Project (SCH No. 2005061041)*. May.
- Port of Los Angeles. 2019. *EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market 2 (SCH No. 2005061041)*. November.

1.3 Purpose and Use of a Supplemental EIR

Because the West Harbor Modification Project and modifications to previously approved mitigation measures represent changes to a project previously reviewed and approved under CEQA, the LAHD must determine whether additional environmental documentation is necessary to address the proposed changes. The LAHD has reviewed the application in accordance with Sections 15162 and 15163 of the State CEQA Guidelines to determine whether the proposed changes are within the scope of the previously certified SPW EIS/EIR, the 2016 SPPM Addendum, and the 2019 SPPM Addendum, or whether a subsequent or supplemental EIR may be required.

LAHD has determined that a supplemental EIR shall be prepared to address potentially significant environmental impacts associated with the proposed changes to the SPW and SPPM Projects.

Pursuant to CEQA, the LAHD will serve as the lead agency for the preparation of a Supplemental EIR for its consideration of the West Harbor Modification Project within its jurisdiction. Pursuant to CEQA Guidelines Section 15163, a supplement to an EIR need only contain the information necessary to make the previous EIR adequate for the project as revised. The Supplemental EIR shall be given the same kind of notice and public review as is given to a draft EIR under Section 15087 and may be circulated by itself without recirculating the previous Draft or Final EIR or Addendums (i.e., the 2009 SPW EIS/EIR, the 2016 SPPM Addendum, and the 2019 SPPM Addendum).

The LAHD has prepared, as part of this Initial Study/NOP, an Environmental Checklist in support of the Supplemental EIR documentation to identify the resource areas to be reanalyzed, in accordance with the current City of Los Angeles Guidelines for the Implementation of the California Environmental Quality Act of 1970, (Article I); the State CEQA Guidelines (Title 14, California Code of Regulations); and the California Public Resources Code (Section 21000, *et seq.*). The Supplemental EIR will contain only the information necessary to make the previously approved 2009 Final EIR adequate for the West Harbor Modification Project. When the agency decides whether to approve the project, the decision-making body, in this case the Board of Harbor Commissioners and LAHD, shall consider the previous EIR as revised by the supplemental EIR and shall make findings under Section 15091 for each significant effect shown in the previous EIR as revised (CEQA Guidelines Section 15163(e)).

2.0 Project Description

2.1 Project Objectives

Project objectives include enhancement and revitalization of the existing San Pedro Waterfront (SPW) area by including an outdoor concert amphitheater and entertainment lawn venue and Tower Attraction (hereinafter referred to as the West Harbor Modification Project) to attract visitors to the SPW area, thereby increasing the positive public visibility of San Pedro in general and the waterfront specifically. Additionally, the proposed West Harbor Modification Project has an objective to update previously adopted mitigation measures to reflect changes since their consideration.

2.2 Project Location

2.2.1 Regional Setting

The proposed West Harbor Modification Project is within the Port of Los Angeles (Port), which is in the San Pedro Bay in the city of Los Angeles, approximately 20 miles south of downtown Los Angeles. The Port is adjacent to the communities of San Pedro to the west, Wilmington to the north, the Port of Long Beach to the east, and the Pacific Ocean to the south. In total, the Port encompasses approximately 7,300 acres of land and water along 43 miles of waterfront. Figure 1 shows the regional location of the proposed West Harbor Modification Project area.

The West Harbor Modification Project is located in the southern portion of the West Harbor Project site, which comprises a total of approximately 42 acres, formerly the site of the Ports O' Call Village, located between the Los Angeles Harbor's Main Channel and Harbor Blvd. from Berths 73-Z to 83 within the Port (see Figure 1 for the project location).

2.2.2 Surrounding and Nearby Land Uses

The proposed West Harbor Modification Project site is within the SPW area. Steep bluffs to the northwest provide a natural physical edge between portions of the San Pedro community and the West Harbor Modification Project site. There are residences approximately 1,450 feet west of the West Harbor Modification Project site. Just southwest of the West Harbor Modification Project site, in the Southern Pacific Slip (S.P. Slip), is an active commercial fishing fleet. For over 100 years, the Port has been a premier location for commercial fishing. Today, although smaller than it once was, the commercial fishing fleet at the Port is intact, providing fresh fish to both U.S. and Asian markets. The Municipal Fish Market at Berth 72, and adjacent to the S.P. Slip, is associated with these fishing operations.

The Los Angeles Maritime Museum is located at Berth 84. Berths 91 to 93 to the north of the West Harbor Modification Project site are currently used by the World Cruise Center, which has been active at the Port for over 50 years (Port of Los Angeles 2020). The World Cruise Center comprises of two terminal buildings in an 18-acre dedicated cruise facility.

2.2.3 Existing General Plan Designation

The West Harbor Modification Project site lies within an area covered by the City of Los Angeles General Plan (General Plan), Port of Los Angeles Plan. The plan provides an official 20-year guide to continued development and operation of the Port. The West Harbor Modification Project site has a General Plan designation of General/Bulk Cargo - Non-Hazardous (Industrial/Commercial). General Cargo includes container, unit, break-bulk, neo-bulk, passenger facilities, and related uses (City of Los Angeles 1982). Industrial uses pertain to those lands that are either owned or leased by institution activities and related uses or federal, state, and city governments. Commercial uses allowed under the designation include restaurants and tourist attractions (i.e., Ports O' Call), office facilities, retail facilities, and related uses.

2.2.4 Port of Los Angeles Master Plan

The West Harbor Modification Project site is within Planning Area 1 of the Port of Los Angeles Port Master Plan (PMP) (Port of Los Angeles 2018). Planning Area 1 encompasses the SPW area, from the breakwater to the Vincent Thomas Bridge along the western boundary of the Port. The area extends from Berths 19 to 95 and includes cruise operations, institutional uses, and recreational activities. Planning Area 1 primarily includes land uses focused on public access to the waterfront, but also has limited cargo operations and commercial fishing activities. Planning Area 1 emphasizes waterfront access through a waterfront promenade, parks, museums, academic uses, and visitor-serving commercial uses and attractions. Within Planning Area 1, the West Harbor Modification Project site is designated as Visitor-Serving Commercial. The PMP defines this designation as a visitor-serving commercial use for the public and lists examples of this use as community centers/conference centers, visitor-serving retail, and exhibit space, among others. Figure LU-1 of the PMP shows the PMP land use designations for the West Harbor Project site and surrounding area.

2.2.5 Existing Zoning Designations

The West Harbor Modification Project site is zoned [Q]M2-1, Light Industrial, according to the City of Los Angeles Zoning Code (City of Los Angeles 2019a).

2.3 Proposed Modifications

The West Harbor Modification Project involves a modification of the proposed redevelopment of a portion the Ports O' Call area as described in the SPW EIS/EIR and as further defined in the 2016 and 2019 SPPM Addenda. The West Harbor Modification Project site is located on approximately 2.5 acres of the West Harbor Project site within the previously approved 6.4-acre Discovery Sea Amusement Area (as described in the 2016 SPPM Addendum).

As more particularly described below, the West Harbor Modification Project would create an outdoor Amphitheater. The Amphitheater would occupy approximately 108,000 square feet, including an over 50,000-square-foot area consisting of a sloped and terraced artificial lawn

with an approximately 35,000-square-foot stage, backstage, and box office area; an approximately 22,000-square-foot space accommodating concessions and restrooms located south of the lawn; and circulation space located east and west of the lawn area. Amphitheater capacity would be up to 6,200 seats. The artificial lawn would be cleaned (e.g., power washed) as needed and would be a permeable surface to promote infiltration.

Additionally, the West Harbor Modification Project would include a 150-foot-tall Tower Attraction. A conceptual plan of the Tower Attraction estimates that the foundation would be approximately 5,000 square feet and would be located between Buildings 1A and 1B on the southern portion of the West Harbor Project site.

With approval of the West Harbor Modification Project, no other amusement park attractions previously approved for the Discovery Sea Amusement Area would be developed, which included a 100-foot-diameter Ferris wheel, carousel, and a previously approved 500-seat amphitheater in the southern area of the West Harbor Project site. The West Harbor Modification Project would maintain other elements and uses previously approved for the 6.4-acre Discovery Sea Amusement Area, including new building improvements, green spaces, and garden areas on the remaining approximately 4 acres. Other previously analyzed project elements—such as the retail, restaurant, and commercial uses—would remain the same under the West Harbor Modification Project as described and analyzed for the SPPM Project in the 2016 and 2019 SPPM Addenda. A detailed description of the West Harbor Modification Project features is provided below. Table 1 compares previously analyzed project elements.

Table 1. Comparison of Project Features

Project Features	SPW EIS/EIR	2016 and 2019 SPPM Addenda	Proposed West Harbor Modification Project
Total development square footage	375,000 total square feet (sf): 125,000 sf restaurant space 175,000 sf commercial 75,000 sf conference center	300,000 total sf: 100,000 sf restaurant 38,600 sf retail 30,000 sf maritime-related office uses 131,400 sf of retail, restaurant, or commercial uses	No changes proposed to build out of city park and marketplace.
City park	Formerly Fisherman's Park, with 3 acres of lawn, including a 500-seat amphitheater.	4.3-acre multi-purpose plaza with landscaping, hardscape, outdoor furniture, and lighting.	The lawn and amphitheater would be relocated to the proposed 6,200-seat amphitheater location. The children's play area and other park space would remain in the City Park area (renamed North Park).

Project Features	SPW EIS/EIR	2016 and 2019 SPPM Addenda	Proposed West Harbor Modification Project
Discovery Sea Amusement Area	Not included.	6.4-acre amusement area with playground facilities, Ferris wheel, carousel, entertainment attractions, gardens, and a 500-seat amphitheater.	On approximately 2.5 acres, an Amphitheater that includes an outdoor entertainment lawn with seating for up to 6,200 patrons would replace the previously approved 500-seat amphitheater and the Discovery Sea Amusement Area previously analyzed in the 2016 SPPM Addendum. A 150-foot tall Tower Attraction would replace the 100-foot-diameter Ferris wheel. Buildings and green space and garden areas would remain.
Parking	2,638 spaces	1,909 spaces. Phase 2 with total spaces to be determined based on land use mix. The surface parking lot at 22 nd Street and Sampson Way with 256 spaces was completed in 2009.	The parking previously designated for the SPPM project would be used for the West Harbor Modification Project. Other parking lots within the Port area may be used on certain days when events occur at the amphitheater. Additional parking requirements, if any, will be discussed further in the Draft SEIR.
Visitor trip generation	Weekday daily: 8,632 trips Weekend daily: 8,517 trips	Weekday daily: 5,798 trips Weekend daily: 6,285 trips	Estimated visitor trip generation to be included in the Draft SEIR analysis.
Terms of lease	Through 2037	Through 2082 (per the 2019 SPPM Addendum).	No change.

2.3.1 Amphitheater Changes

The West Harbor Modification Project is located on approximately 2.5 acres within the previously approved 6.4-acre Discovery Sea Amusement Area (as described in the 2016 SPPM Addendum) on the southern portion of the West Harbor Project site (refer to Figure 2 for the overall site plan).

The approximately 2.5-acre Amphitheater site plan is shown in Figure 3 and would include the creation of an approximately 50,000-square-foot sloped and terraced lawn area to be used as an outdoor amphitheater and entertainment venue. The Amphitheater area would

include an approximately 35,000-square-foot stage, backstage, and box office area; an approximately 22,000-square foot space accommodating concessions and restrooms located south of the lawn; and circulation space located east and west of the lawn area. The back-of-house facilities and stage would be on the north end of the Amphitheater site, with the stage, bandshell, speakers, video screens, and stage lighting directed toward the southeast. Temporary seats placed on the sloped and terraced lawn areas would face north toward the stage and overlook the Port waterfront. Figures 4A, 4B, and 4C show a rendering of the Amphitheater and entertainment lawn looking north.

Functional Area Breakdowns and Details (all dimensions and areas are approximate)

Back-of-House and Stage Facilities

- 6,600-square-foot raised (4 to 6 feet) stage
- Show semi-truck load-in/load-out area consisting of loading docks and covered canopies on either side of the stage plus bus and equipment staging areas
- Dressing and green room areas
- Electric, lighting, and sound system infrastructure
- Permanent restrooms, some with showers
- Offices and back-of-house support space
- 825-square-foot box office

Entertainment Lawn/Amphitheater Seating Area

- 40-foot-tall, 10,000-square-foot bandshell
- Sloped 23,000-square-foot lawn area directly in front of the stage
- 28,000-square-foot terraced seating area immediately behind the sloped seating
- Six 30-foot-tall speaker and stage lighting pylon structures
- 370-square-foot mixing board location in the center-rear portion of the sloped lawn

Concession/Storage Area with Patron Restrooms

- 4,000-square-foot indoor storage and catering facility area located below the southern portion of the terraced lawn area
- An outdoor hardscaped area for food trucks and small food and beverage service structures
- Temporary, portable restrooms behind the outdoor concession area on show nights

All seats would be temporary, as they would be set up for show nights and taken down shortly after the show. Approximately 35-foot-high video screens would flank both sides of the stage. The backstage area would be secured by fixed perimeter fencing, and access to the Amphitheater area would be controlled by removable fencing on event-related days for paid events.

The Amphitheater would host approximately 100 paid concert and major events per year, generally from April through November (outdoor concert season). The venue also could host smaller, local community, and sponsored events year-round.



Figure 2
Overall Site Plan
West Harbor Modification Project

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Figure 3
Amphitheater Layout
West Harbor Modification Project



Figure 4A
Project Rendering of Amphitheater
West Harbor Modification Project



Figure 4B
Project Rendering of Amphitheater
West Harbor Modification Project



Figure 4C
Project Rendering of Amphitheater
West Harbor Modification Project

2.3.2 Construction

Project construction is expected to last approximately 10 to 12 months. A maximum of fifty construction workers may be needed on-site on any given day. Construction tasks are expected to include the following: constructing the sloped and terraced lawn; constructing stage and concession areas; installing fencing, lighting, and sound system; and building out the backstage structures and hardscape area, including a loading dock/truck and bus staging area.

2.3.3 Operations

The Amphitheater would host approximately 100 paid events annually, generally from April through November. No more than one event per day is expected. Concerts would typically start between 7:00 p.m. and 8:00 p.m. and last approximately 3 hours. Where possible, sustainable products and practices, such as biodegradable confetti, would be used during events, and care would be taken to direct the spray away from the main channel. This material, along with other trash, would be cleaned up after each event to prevent debris from entering the storm drain system and ocean. Pyrotechnics may also occur at certain events. Fireworks may be launched from a barge at approximately 25 events per year and may last up to 10 minutes. Each event would undergo appropriate permitting from the U.S. Coast Guard, as necessary. The Amphitheater location also could be used for community, charity, and sponsored events, which could be held year-round.

Although exact routes and locations have not been determined at this time, shuttle services are expected to be available for patrons using off-site parking lots during events at the amphitheater, if needed.

Tower Attraction

The West Harbor Modification Project would include the construction and operation of a Tower Attraction in the heart of the southern portion of the West Harbor Project site. Figures 5 and 6 show a conceptual plan and image of the Tower Attraction. The Tower Attraction's construction would include a spiral tubular steel tower structure up to 150 feet tall and up to 50 feet in diameter, a 10-foot-tall by 23-foot-diameter balloon-like lit feature, and a passenger gondola for seating. In the center of the gondola would be a beverage and snack service bar. The Tower Attraction would allow up to 15 passengers to enjoy a panoramic view of an operating Port environment from approximately 115 feet in the air. Each ride would last approximately 15 minutes. The tubular steel structure would allow for minimal obstruction of views from the ground level. Additionally, it would allow for the attraction's balloon to remain visible throughout the duration of the attraction's ascent and descent. The attraction's balloon would have integrated light-emitting diode (LED) lighting as well as ultraviolet ray and rain protection. (Aerophile 2014.)

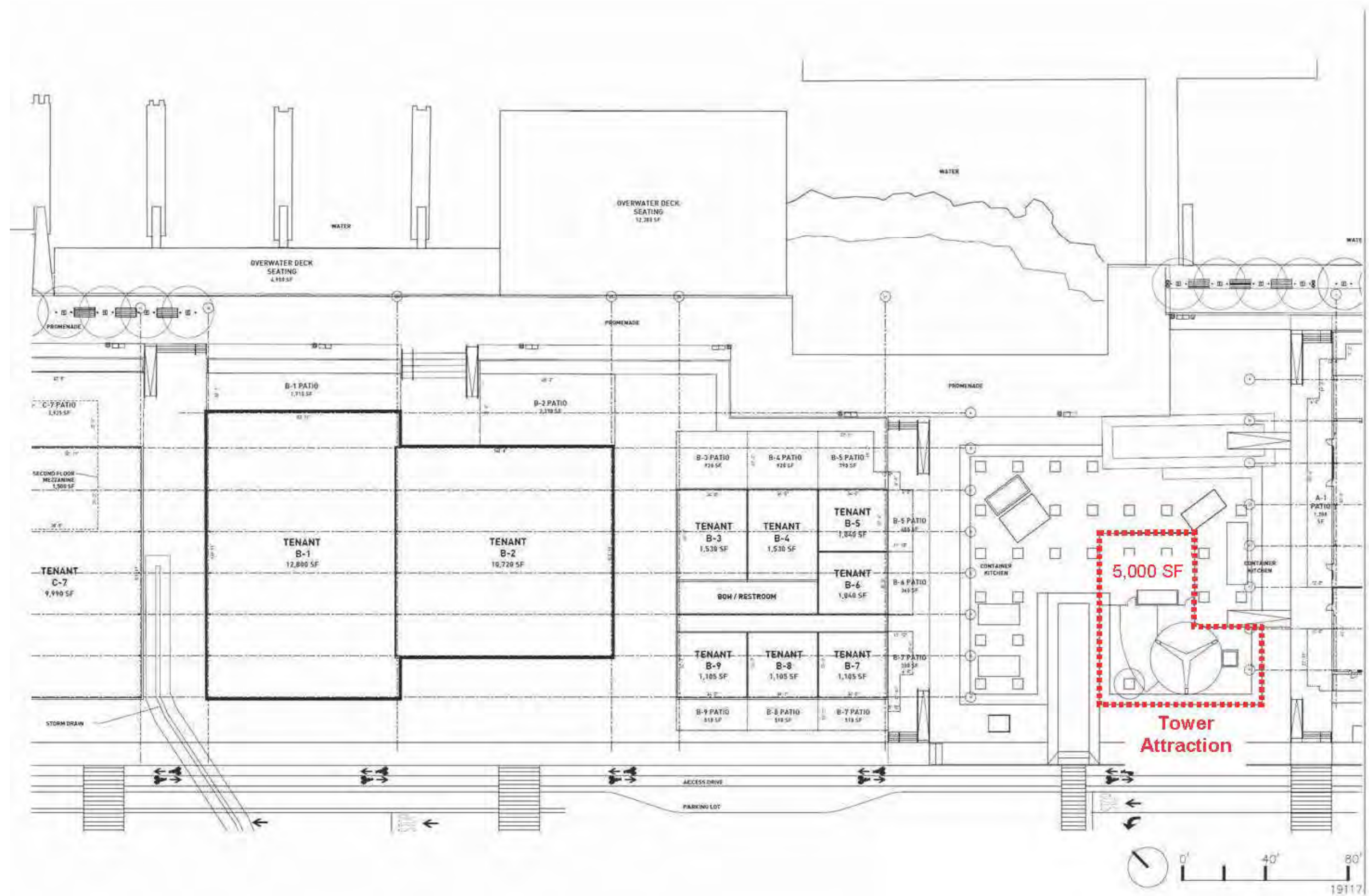


Figure 5
Project Rendering of Amphitheater
West Harbor Modification Project



Figure 6
Example Tower Attraction Renderings
West Harbor Modification Project

Tower Attraction Construction

Construction of the Tower Attraction would be expected to last approximately 2 to 6 months. A maximum of 20 construction workers per day may be needed for tower assembly and construction. Construction tasks are expected to include the following: installation of concrete piles and foundation, connection to electric utilities, installation, assembly of tower components, and commissioning of the device.

Tower Attraction Operations

The Tower Attraction's gondola would travel vertically at a speed of 0.5 meters/second, with a full ride completed in approximately 15 minutes. The fan and lighting on the attraction would use electrical power supply, which would be recharged at the end of the operational day. Rides can occur in most weather conditions, including rain and when wind speeds are less than 44 miles per hour.

2.3.4 Mitigation Measure Changes

The Draft SEIR will also evaluate modifications to the previously approved MMRP for the 2009 SPW Project EIS/EIR and the revised MMRP for the 2016 SPPM Addendum. These modifications are necessary to update previous mitigation measures to current regulatory standards or modify them based on their effectiveness and need. Mitigation measures proposed for modification in this Initial Study/NOP are listed below for air quality and utilities and public services. Changes to transportation-related mitigation measures are not analyzed in this Initial Study/NOP and will be addressed in the transportation chapter of the Draft SEIR. Proposed modifications to these mitigation measures are provided in ~~strike-out~~ and underline format.

Air Quality

MM AQ-25: Recycling.

This mitigation measure is proposed to be removed because the implementation dates have passed and the measure is duplicative of another adopted mitigation measure, MM PS-4: Comply with AB 939, which also has mandatory recycling rates. Since certification of the SPW EIS/EIR in 2009, Assembly Bill (AB) 341 was passed, requiring commercial businesses to separate recyclable materials from solid waste and subscribe to recycling services. Additionally, AB 341 went into effect on July 1, 2012. It requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place, to be coordinated by the RecycLA program within the City of Los Angeles. AB 341 also set forth a "policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020." Finally, LA's *Green New Deal Sustainable City pLAN*, released in 2019, includes a target goal to increase landfill diversion rate to 90 percent by 2025; 95 percent by 2035; and 100 percent by 2050. Therefore, the original intent of the previously approved mitigation measure has been met with existing regulatory requirements and goals.

~~MM AQ-25: Recycling.~~

~~The terminal buildings shall achieve a minimum recycling rate of 40% by 2012 and 60% by 2015. Recycled materials shall include:~~

- ~~• white and colored paper;~~
- ~~• Post-it notes;~~
- ~~• magazines;~~
- ~~• newspaper;~~
- ~~• file folders;~~
- ~~• all envelopes, including those with plastic windows;~~
- ~~• all cardboard boxes and cartons;~~
- ~~• all metal and aluminum cans;~~
- ~~• glass bottles and jars; and~~
- ~~• all plastic bottles.~~

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to cruise ship lines, the cruise terminal, Catalina Express, tug companies, and Ports O'Call tenants during operation.

Because this measure is proposed to be removed per the above discussion, the relevant language in the West Harbor Modification Project MMRP will be modified to reflect this proposed removal.

MM AQ-27: Compact Fluorescent Light Bulbs.

This proposed modification would allow for the use of more energy-efficient light-emitting diode (LED) light bulbs instead of the now obsolete compact fluorescent light bulbs. Proposed modifications are shown below.

MM AQ-27: Compact-Fluorescent Light-Emitting Diode (LED) Light Bulbs.

All interior terminal buildings shall use compact ~~fluorescent~~ LED light bulbs.

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to LAHD during building construction. The West Harbor Modification Project will revise this mitigation measure to also apply to the developer.

MM AQ-28: Energy Audit.

This mitigation measure is proposed to be removed as the proposed buildings are anticipated to be compliant with the Port of Los Angeles Green Building Policy (POLA 2007), which was certified by the Board of Harbor Commissioners in 2007. This policy is based on the Leadership in Energy and Environmental Design (LEED) Certification Rating System, and focuses on sustainability, energy efficiency, and water efficiency. This policy also requires the LAHD to use energy and water efficiency elements on their construction

projects. In 2008, the City of Los Angeles adopted Ordinance No. 179820, the first amendment to the Los Angeles Municipal Code, Chapter 1. Sections 16.10 and 16.11, which established the Green Building Program (City of Los Angeles 2008). The Green Building Program focuses on sustainable building practices and addresses five key areas: site, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality. In 2020, the 2019 California Green Building Standards Code (California Building Standards Commission 2019) and the 2019 Building Energy Efficiency Standards (California Energy Commission 2019) came into effect. The California Green Building Standards Code encourages sustainable construction practices for five main categories: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. The Building Energy Efficiency Standards include updates to many key areas regarding energy efficiency of newly constructed and altered builds, including the introduction of photovoltaic into the prescriptive package. By complying with these policies, sustainability, energy efficiency, water efficiency and innovation is considered during building construction. Additionally, Title XXIV of the California Code of Regulations has been updated multiple times since this mitigation measure was created and includes additional requirements than the version that was in effect at the time of adoption. In 2019 L.A.'s Green New Deal was released, which includes targets for carbon neutral buildings and reduced energy consumption that would be followed, as applicable regulations are implemented. Current policies, plans, and design standards require more sustainable construction than was available at the time the MMRP for the 2009 SPW EIS/EIR was certified. Therefore, the original intent of the previous mitigation measure has been met through current design regulations and existing state and local ordinances, policies and plans.

Therefore, the intent of the original mitigation measure is met with the implementation of local and state ordinances and policies.

~~MM AQ-28: Energy Audit~~

~~The tenant shall conduct a third-party energy audit every 5 years and install innovative power-saving technology where feasible, such as power-factor correction systems and lighting power regulators. Such systems help maximize usable electric current and eliminate wasted electricity, thereby lowering overall electricity use.~~

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to cruise ship lines, the cruise terminal, Catalina Express, tug companies, and Ports O' Call tenants during operation.

Because this measure is proposed for removal per the above discussion, the relevant language in the West Harbor Modification Project MMRP will be modified to reflect this proposed removal.

Utilities and Public Services

MM PS-4: Comply with AB 939.

This mitigation measure is proposed for removal because compliance with AB 939 is required by legislature. Proposed modifications are shown below.

~~MM PS-4: Comply with AB 939.~~

~~LAHD and Port tenants will implement a Solid Waste Management including the following measures to achieve a 50% reduction of current waste generation percentages by 2037 and ensure compliance with the California Solid Waste Management Act (AB 939).~~

- ~~a. Provide space and/or bins for storage of recyclable materials on the project site. All garbage and recycle bin storage space will be enclosed and plans will show equal area availability for both garbage and recycle bins in storage spaces.~~
- ~~b. Establish a recyclable material pick-up area for commercial buildings.~~
- ~~c. Participate in a curbside recycling program to serve the new development.~~
- ~~d. Develop a plan for accessible collection of materials on a regular basis.~~
- ~~e. Develop source reduction measures that indicate the method and amount of expected reduction.~~
- ~~f. Implement a program to purchase materials that have recycled content for project construction and operation (e.g., lumber, plastic, office supplies).~~
- ~~g. Provide a resident tenant/employee education pamphlet to be used in conjunction with available Los Angeles County and federal source reduction educational materials. The pamphlet will be provided to all commercial tenants by the leasing/property management agency.~~
- ~~h. Include lease language requiring tenant participation in recycling/waste reduction programs, including specification that janitorial contracts support recycling.~~

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to cruise ship lines, the cruise terminal, Catalina Express, and tug companies during operation. The 2016 SPPM Addendum MMRP revised this measure to apply to the SPPM developer.

Because this measure is proposed for removal per the above discussion, the relevant language in the West Harbor Modification Project MMRP will be modified to reflect this proposed removal.

MM PS-5: Water Conservation and Wastewater Reduction.

This proposed modification is necessary because there is no supply source available or proposed, according to the *City of Los Angeles Recycled Water Master Planning* document prepared by the Los Angeles Department of Water and Power (LADWP) and Department of Public Works (2012). If the project is constructed with specific recycled water hook-up capabilities, and once recycled water is available, that water will be used for irrigation and toilet flushing. Proposed modifications are shown below.

MM PS-5: Water Conservation and Wastewater Reduction.

LAHD and Port tenants will implement the following water conservation and wastewater reduction measures to further reduce impacts on water demand and wastewater flows.

- a. The landscape irrigation system will be designed, installed, and tested to provide uniform irrigation coverage for each zone. Sprinkler head patterns will be adjusted to minimize overspray onto walkways and streets. Each zone (sprinkler valve) will water plants having similar watering needs (i.e., shrubs, flowers, and turf will not be in the same watering zone). Automatic irrigation timers will be set to water landscaping during early morning or late evening hours to reduce water losses from evaporation. Irrigation run times will be adjusted for all zones seasonally, reducing length and frequency of watering in the cooler months (i.e., fall, winter, spring). Adjust sprinkler timer run time to avoid water runoff, especially when irrigating sloped property. Sprinkler times will be reduced once drought tolerant plants have been established.
- b. Drought-tolerant, low water consuming plant varieties will be used to reduce irrigation water consumption.
- c. Recycled water will be used for irrigation and toilet flushing (dual-flushing) upon notification from LADWP that recycled water is available and upon notification from Port Engineering that necessary connections are available prior to construction.
- d. Ultra-low-flush toilets, ultra-low-flush urinals, and water-saving showerheads must be installed in both new and replacement construction ~~and when remodeling~~. Low flow faucet aerators will be installed on all sink faucets.
- e. Significant opportunities for water savings exist in air conditioning systems that utilize evaporative cooling (i.e., employ cooling towers). LADWP will be contacted for specific information of appropriate measures.
- f. Re-circulating or point-of-use hot water systems will be installed to reduce water waste in long piping systems where water must be run for considerable period before heated water reaches the outlet.

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to the cruise ship lines, cruise terminal, Catalina Express, and tug companies during operation. The 2016 SPPM Addendum MMRP revised this measure to apply to the SPPM developer.

MM PS-6: Employ Energy Conservation Measures.

The proposed buildings are required to comply with the Port of Green Building Policy, which is based on the LEED Certification Rating System and focuses on sustainability, energy efficiency, and water efficiency. This policy also requires the LAHD to use energy and water efficiency elements on their construction projects. In 2008, the City of Los Angeles adopted Ordinance no. 179820, the first amendment to the Los Angeles Municipal Code, Chapter 1, Sections 16.10 and 16.11, which established the Green Building Program (City of Los Angeles 2008). The Green Building Program focuses on sustainable building practices and addresses five key areas: site, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality. In 2020, the 2019 California Green Building Standards Code (California Building Standards Commission 2019) and the 2019 Building Energy Efficiency Standards (California Energy Commission 2019) came into effect. The California Green Building Standards Code encourages sustainable construction practices for five main categories: planning and design; energy efficiency; water efficiency and

conservation; material conservation and resource efficiency; and environmental quality. The Building Energy Efficiency Standards include updates to many key areas regarding energy efficiency of newly constructed and altered builds, including the introduction of photovoltaic into the prescriptive package. By complying with these policies, sustainability, energy efficiency, water efficiency and innovation is considered during building construction. Additionally, Title XXIV of the California Code of Regulations has been updated multiple times since this mitigation measure was created and includes additional requirements than the version that was in effect at the time of adoption. In 2019 L.A.'s Green New Deal was released, which includes targets for carbon neutral buildings and reduced energy consumption that would be followed, as applicable regulations are implemented. Current policies, plans, and design standards require more sustainable construction than was available at the time the MMRP for the 2009 SPW EIS/EIR was certified. Therefore, this mitigation measure is proposed for removal because the original intent of the previous mitigation measure has been met through current design regulations and existing state and local policies and plans. Proposed modifications are shown below.

~~MM-PS-6: Employ energy conservation measures.~~

~~During the design process, LAHD will consult with LADWP's Efficiency Solutions Business Group regarding possible energy efficiency measures. LAHD and its tenants will incorporate measures to meet or, if possible, exceed minimum efficiency standards for Title XXIV of the California Code of Regulations, such as:~~

- ~~a. Built-in appliances, refrigerators, and space-conditioning equipment will exceed the minimum efficiency levels mandated in the California Code of Regulations.~~
- ~~b. High-efficiency air conditioning will be installed that is controlled by a computerized energy-management system in office and retail spaces and provides the following: a variable air volume system that results in minimum energy consumption and avoids hot water energy consumption for terminal reheat, a 100% outdoor air-economizer cycle to obtain free cooling in appropriate climate zones during dry climatic periods, sequentially staged operation of air-conditioning equipment in accordance with building demands, the isolation of air conditioning to any selected floor or floors, and considers the applicability of the use of thermal energy storage to handle cooling loads.~~
- ~~c. Ventilation air will be cascaded from high-priority areas before being exhausted, thereby decreasing the volume of ventilation air required. For example, air could be cascaded from occupied space to corridors and then to mechanical spaces before being exhausted.~~
- ~~d. Lighting system heat will be recycled for space heating during cool weather. While exhaust lighting system heat will be recycled from the buildings, via ceiling plenums, to reduce cooling loads in warm weather.~~
- ~~e. Low and medium static pressure terminal units will be installed, as well as ductwork to reduce energy consumption by air distribution systems.~~

- f. ~~Buildings must be well sealed to prevent outside air from infiltrating and increasing interior space conditioning loads. Where applicable, design building entrances with vestibules to restrict infiltration of unconditioned air and exhausting of conditioned air.~~
- g. ~~A performance check of the installed space conditioning system will be completed by the developer/installer prior to issuance of the certificate of occupancy to ensure that energy efficiency measures incorporated into the proposed Project operate as designed.~~
- h. ~~Exterior walls will be finished with light-colored materials and high emissivity characteristics to reduce cooling loads. Interior walls will be finished with light-colored materials to reflect more light and, thus increase light efficiency.~~
- i. ~~White reflective material will be used for roofing meeting California standards for reflectivity and emissivity to reject heat.~~
- j. ~~Thermal insulation that exceeds requirements established by the California Code of Regulations will be installed in walls and ceilings.~~
- k. ~~Window systems will be designed to reduce thermal gain and loss, thus reducing cooling loads during warm weather and heating loads during cool weather.~~
- l. ~~Heat-rejecting window treatments will be installed, such as films, blinds, draperies, or others on appropriate exposures.~~
- m. ~~Fluorescent and high-intensity discharge lamps that give the highest light output per watt of electricity consumed will be installed wherever possible, including all street and parking lot lighting, to reduce electricity consumption. Reflectors will be used to direct maximum levels of light to work surfaces.~~
- n. ~~Photosensitive controls and dimmable electronic ballasts will be installed to maximize the use of natural daylight available and reduce artificial lighting load.~~
- o. ~~Occupant-controlled light switches and thermostats to permit individual adjustment of lighting, heating, and cooling will be installed to avoid unnecessary energy consumption.~~
- p. ~~Time-controlled interior and exterior public area light will be installed, limited to that which is necessary for safety and security.~~
- q. ~~Mechanical systems (HVAC and lighting) in the building will be controlled with timing systems to prevent accidental or inappropriate conditioning or lighting of unoccupied space.~~
- r. ~~Windowless walls or passive solar inset of windows will be incorporated, where feasible, in building design.~~
- s. ~~Project will focus pedestrian activity within sheltered outdoor areas.~~

The 2009 SPW Project EIS/EIR MMRP specifies that this measure applies to cruise ship lines, the cruise terminal, Catalina Express, and tug companies during operation. The 2016 SPPM Addendum MMRP revised this measure to apply to the SPPM developer.

Because this measure is proposed for removal per the above discussion, the relevant language in the West Harbor Modification Project MMRP will be modified to reflect this proposed removal.

3.0 Anticipated Project Approvals and Permits

The approvals or permits that could be required for the proposed West Harbor Project are anticipated to include, but not be limited, to:

- City of Los Angeles building, occupancy, electrical, and mechanical permits
- Los Angeles Fire Department (LAFD): approval of fire suppression system
- LAHD: issuance of a Harbor Engineer Permit, Coastal Development Permit or Coastal Development Permit amendment, and site lease amendments (as necessary)
- South Coast Air Quality Management District (SCAQMD): permit for emergency generator
- State Water Resources Control Board: Construction General Permit

4.0 Environmental Checklist – Initial Study

1. **Project Title:** West Harbor Modification Project
2. **Lead Agency Name and Address:** Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes Street
San Pedro, CA 90731
3. **Contact Person and Phone Number:** Nicole Enciso
310.732.3615
4. **Project Location:** Port of Los Angeles, from Berths 73-Z to 83
San Pedro, CA 90731
5. **Project Sponsor's Name and Address:** Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes Street
San Pedro, CA 90731
6. **General Plan Designation:** Visitor-Serving Commercial
7. **Zoning:** [Q]M2-1, Light Industrial
Enterprise Zone/Employment and Economic
Incentive Program Area (EZ) No. 2130

8. Description of Project:

LAHD is proposing modifications to the West Harbor Modification Project involving development of an approximately 108,000-square-foot, 6,200-seat outdoor amphitheater and entertainment lawn venue, as well as an approximately 150-foot tall by 50-foot wide Tower Attraction that would replace the previously analyzed 100-foot diameter Ferris wheel. The modifications would occur on approximately 2.5 acres within the previously approved 6.4-acre Discovery Sea Amusement Area of the site formerly known as the San Pedro Public Market, which is between the Main Channel and Harbor Boulevard from Berths 73-Z to 83 within the Port. The Amphitheater would replace the previously approved Discovery Sea Amusement Area and 500-seat amphitheater. The other entertainment attractions previously proposed within the Discovery Sea Amusement Area included playground facilities and entertainment attractions such as various temporary and permanent rides (i.e., a Ferris wheel, a carousel, and arcade-style games). LAHD is also proposing modifications to mitigation measures in the SPW Project MMRP and the 2016 SPPM Addendum MMRP in the areas of air quality, utilities and public services, and transportation.

9. Surrounding Land Uses and Setting:

The West Harbor Modification Project is within the Port, which is in San Pedro Bay within the city of Los Angeles, approximately 20 miles south of downtown Los Angeles. The Port is adjacent to the community of San Pedro to the west, the Wilmington community to the north, the Port of Long Beach to the east, and the Pacific Ocean to the south. In total, the Port encompasses approximately 7,300

acres of land and water along 43 miles of waterfront. The proposed West Harbor Modification Project site is within the SPW area and involves development modifications to approximately 2.5 acres within the 6.4-acre Discovery Sea Amusement Area in the southern portion of the SPPM. The West Harbor comprises a total of approximately 45 acres, including the former site of Ports O'Call Village, located between the Los Angeles Harbor's Main Channel and Harbor Boulevard from Berths 73-Z to 83. Steep bluffs to the northwest provide a natural physical edge between portions of the San Pedro community and the project site. There are residences approximately 1,450 feet west of the project site. Just southwest of the project site, in the S.P. Slip, is an active commercial fishing fleet. The Municipal Fish Market at Berth 72, adjacent to the S.P. Slip, is associated with these fishing operations. Berths 91 to 93 to the north of the project site are currently used by the World Cruise Center.

10. Other Public Agencies Whose Approval Is Required:

- City of Los Angeles building, occupancy, electrical, and mechanical permits
- LAFD: approval of fire suppression system
- LAHD: issuance of a Harbor Engineer Permit, Coastal Development Permit or Coastal Development Permit amendment, and site lease amendments (as necessary)
- SCAQMD: permit for emergency generator
- State Water Resources Control Board: approval of Construction General Permit

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts on tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see PRC § 21083.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

LAHD sent certified AB 52 letters on January 8, 2020, to the Gabrieleno Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino/Tonga Nation, Gabrielino Tongva Indians of California Tribal Council, and Gabrielino-Tongva Tribe. No responses were received within the 30-day consultation request period, which ended on February 7, 2020.

Environmental Factors Potentially Affected

The environmental factors checked below could be affected by this project (i.e., the project would involve at least one impact that is a “Potentially Significant Impact”), as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agricultural and Forestry Resources	☒ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils/ Paleontological Resources	☒ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☒ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☒ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and a SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have an impact on the environment that is “potentially significant” or “potentially significant unless mitigated” but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards; and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed on the project, nothing further is required.



Signature

Chris Cannon, Director
Environmental Management Division
City of Los Angeles Harbor Department

04-07-2022

Date

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers, except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less than Significant with Mitigation Incorporated” applies when the incorporation of mitigation measures has reduced an effect from a “Potentially Significant Impact” to a “Less-than-Significant Impact.” The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from Earlier Analyses, as described in #5, below, may be cross referenced.)
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures, based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less than Significant with Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

I. Aesthetics

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☒	☐	☐	☐

Discussion

Would the project:

a. Have a substantial adverse effect on a scenic vista?

No Impact. The West Harbor Modification Project site is not within or near any protected or designated scenic vistas. Therefore, there would be no impact, and this issue will not be addressed further in the SEIR.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?

No Impact. The West Harbor Modification Project site is not near an eligible or designated scenic highway. Therefore, the proposed project would not have the potential to damage scenic resources within a state scenic highway. The California Department of Transportation is responsible for official nomination and designation of eligible scenic highways. The nearest officially designated State Scenic Highway is approximately 21 miles north of the proposed project (State Route 1, from Venice Boulevard to the city boundary of Santa Monica) (Caltrans 2019). The West Harbor Modification Project site is not visible from this location; therefore, proposed West Harbor Modification Project activities would not affect the quality of scenic views from this location.

No scenic trees or rock outcroppings exist at the West Harbor Modification Project site. Demolition activities proposed at the project site would be consistent with the existing visual context of a working port. Therefore, there would be no impacts on scenic resources and this issue will not be addressed further in the SEIR.

The amphitheater stage and associated scaffolding would be approximately 45 feet and display screens would not exceed approximately 35 feet in height. Grandstand seating would increase in height, with the front row starting at approximately 7 feet above ground level and the back row reaching approximately 35 feet above ground level. Development of the West Harbor Modification Project would not obstruct critical public views from a designated scenic highway or within recognized or valued views. Therefore, there would be no impact, and this issue will not be addressed further in the SEIR.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact. Development of the West Harbor Modification Project would not conflict with applicable zoning or other regulations governing scenic quality. Its construction would also be subject to and comply with the San Pedro Waterfront and Promenade Design Guidelines (Port of Los Angeles 2014). These guidelines were developed to provide the framework for quality and appropriate design to ensure that SPW features would not adversely affect visual quality by introducing highly contrasting, inharmonious, or unsuitably scaled architecture. LA Waterfront Design Guidelines (Port of Los Angeles 2014b) related to maintaining views and building heights include the following:

- Buildings should protect upland views to the water and adhere to the existing scale of development in Wilmington and San Pedro.
- The maximum building height for development should comply with the City of Los Angeles Zoning Ordinance. Where deemed appropriate by the Port, however, buildings can exceed this height through a variance.
- Roof elements such as poles and masts and other structures that occupy no more than 10% of the roof area are exempt from building height limits.
- Buildings should generally decrease in height as they approach the waterfront, with taller buildings away from the water and shorter buildings nearer the promenade.
- Tower elements or those portions of a building over 60 feet should be designed as slender structures to minimize view obstructions from inland areas and maintain upland views and east-west view corridors from existing streets.

In addition, LA Waterfront Design Guidelines (Port of Los Angeles 2014) related to signage include the following:

- Signs should be scaled based on their environment and intended user. For example, larger signs should be used for drivers moving at faster speeds while smaller signs should be used for pedestrians.
- Signs should be located where most effective in terms of decision points and information needs. They should be located for prominence and readability.

- Signs should be illuminated uniformly and use appropriate contrasting backgrounds to ensure visibility and legibility, even during night hours. Glare and reflection should be minimized.

These design standards were determined to result in visual improvements to the current facilities at Ports O'Call. The West Harbor Modification Project would adhere to standards associated with the above-referenced design guidelines to ensure that the existing visual character or quality of public views of the site and its surroundings are not adversely degraded. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Potentially Significant Impact. The West Harbor Modification Project could create a new source of substantial light or glare due to lighting and screens being used during concert events. Therefore, this issue will be evaluated in the SEIR.

II. Agricultural and Forestry Resources

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Discussion

Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation's Farmland Mapping and Monitoring Program develops maps and statistical data for analyzing impacts on California's agricultural resources. The Farmland Mapping and Monitoring Program categorizes agricultural land according to soil quality and irrigation status; the best land is identified as Prime Farmland. According to the Farmland Mapping and Monitoring Program, the West Harbor Modification Project site is an area that has been designated as Urban and Built-Up Land, which is defined as land with structures that have a variety of uses, including industrial, commercial, institutional, and railroad or other transportation uses (California Department of Conservation 2018). There is no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance in the West Harbor Modification Project vicinity or on the project site. Therefore, the West Harbor Modification Project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance to nonagricultural use. Consequently, no impacts would occur, and this issue will not be addressed further in the SEIR.

b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

No Impact. The West Harbor Modification Project site is zoned for light industrial uses ([Q]M2-1). There are no agricultural zoning designations or agricultural uses within the project limits or adjacent areas. The Williamson Act applies to parcels with at least 20 acres of Prime Farmland or at least 40 acres of land that is not designated as Prime Farmland. The project site is not within a Prime Farmland designation and does not consist of more than 40 acres of farmland (California Department of Conservation 2018). No Williamson Act contracts apply to the West Harbor Modification Project site. As such, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, no impacts would occur, and this issue will not be addressed further in the SEIR.

c. Conflict with existing zoning for, or cause rezoning of forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The West Harbor Modification Project site is currently zoned as for light industrial uses ([Q]M2-1) (City of Los Angeles 2019a). It does not support timberland or forestland. Therefore, the West Harbor Modification Project would not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timberland zoned Timberland Production. As such, no impact would occur, and this issue will not be addressed further in the SEIR.

d. Result in the loss of forestland or conversion of forestland to non-forest use?

No Impact. The West Harbor Modification Project would not result in a loss of forestland or the conversion of forestland to non-forest use. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

e. Involve other changes in the existing environment that, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

No Impact. As discussed above, no farmland or forestland occurs within the surrounding area or at the West Harbor Modification Project site. The project would not disrupt or damage the existing environment or result in the conversion of farmland to non-agricultural use or conversion of forestland to non-forest use. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

III. Air Quality

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation	Less-than- Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

Discussion

Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. The West Harbor Modification Project could result in increased emissions of criteria air pollutants due to possible higher trip generation. Therefore, this issue will be evaluated in the SEIR.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?

Potentially Significant Impact. The West Harbor Modification Project could result in a cumulatively considerable net increase in a criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard due to potentially higher trip generation rates. Therefore, this issue will be evaluated in the SEIR.

c. Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. The West Harbor Modification Project could expose sensitive receptors to substantial pollutant concentrations due to additional vehicle traffic during concert events. Therefore, this issue will be evaluated in the SEIR.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Potentially Significant Impact. The West Harbor Modification Project could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people due to the use of pyrotechnics and fireworks during events. Therefore, this issue will be evaluated in the SEIR.

IV. Biological Resources

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetland (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

Would the project:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Impact. No candidate, sensitive, or special-status species are known to occur on the West Harbor Modification Project site, and there is no federally

designated critical habitat in the harbor area. The West Harbor Modification Project would construct an outdoor venue hosting concerts and other special events. The project would include an amplified sound system, fireworks, and lighting displays. Noise from the sound system, audiences attending the events, and fireworks could propagate into the surrounding community and be audible to nearby species, such as marine mammals in the channel and endangered California least terns (*Sternula antillarum*) at the Pier 400 Nesting site. The installation and operation of the Tower Attraction will also be included in this assessment for its potential for perching and nesting and impacts from lighting. As a result, the West Harbor Modification Project could create a substantial adverse effect on marine mammals and the California least tern colony. Therefore, this issue will be evaluated in the SEIR.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. There is no riparian habitat at the West Harbor Modification Project site or in the vicinity; therefore, no impact on riparian habitats would occur. Neither construction nor operation of the amphitheater would involve any in-water or over-water work. Therefore, no impacts on any other sensitive natural communities such as eelgrass would occur and this issue will not be addressed further in the SEIR.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The West Harbor Modification Project would not affect federally protected wetlands (as defined by Section 404 of the Clean Water Act) because there are no federally protected wetlands in the area. Implementation of the project would not affect riparian habitat or require in-water or over-water work. Therefore, no impact would occur and this issue will not be addressed further in the SEIR.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less-than-Significant Impact. No known wildlife migration corridors are present at the West Harbor Modification Project site. Further, if construction is to occur between February 15 and September 1, a qualified biologist will conduct surveys for the presence of species protected under the Migratory Bird Treaty Act, such as black-crowned night herons, and blue herons within Berth 78-Ports O'Call or other appropriate and known locations within the study area that contain potential nesting bird habitat, consistent with Mitigation Measure BIO-2. Therefore, the project would have a less-than-significant impact and this issue will not be addressed further in the SEIR.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The only biological resources protected by City of Los Angeles ordinance (City of Los Angeles 2006) are certain tree species, none of which are present on the West Harbor Modification Project site. Therefore, the project would not conflict with any local

policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. As such, no impact would occur, and this issue will not be addressed further in the SEIR.

f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

No Impact. Neither the West Harbor Modification Project site nor any adjacent areas are included as part of an adopted natural communities conservation plan or habitat conservation plan. Therefore, project would not adversely affect any areas identified in an adopted plan. The project would not conflict with the provisions of an adopted community conservation, habitat conservation, or other plan. As such, no impact would occur, and this issue will not be addressed in the SEIR.

V. Cultural Resources

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

Discussion

Would the project:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact. The West Harbor Modification Project would not require the demolition or removal of any structures. Therefore, no impacts on historical resources would occur, and this issue will not be addressed further in the SEIR.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less-than-Significant Impact. The Ports O'Call area overlies land that includes artificial fill (U.S. Department of Agriculture 2022). Because of the highly disturbed nature of the site and the minimal ground disturbance anticipated as a part of the West Harbor Modification Project, interaction with archaeological resources is unlikely. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact. No prehistoric sites or cemeteries have been identified in the West Harbor Modification Project site or within a 0.25-mile radius of the site. Based on the results of the cultural resource records search and Native American consultation process, there is no evidence of any human remains, including those interred outside of dedicated cemeteries, within the West Harbor Modification Project site that would be affected by the proposed project. Furthermore, as this location is on artificial fill, impacts on buried human remains would be unlikely.

Therefore, no impacts on any human remains would occur, and this issue will not be addressed further in the SEIR.

VI. Energy

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Discussion

Would the project:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Less-than-Significant Impact. The West Harbor Modification Project would not use nonrenewable energy resources in a wasteful or inefficient manner during construction or operation. The project would require the use of diesel and gasoline to operate equipment during construction and for construction worker vehicles. Gasoline for worker and patron vehicles would be the primary energy resources needed during operation. In addition, diesel would be needed for the trucks and emergency generator, natural gas for food vendors, and electricity for concert operations.

During construction, diesel would be used to operate onsite construction equipment and offsite delivery and hauling vehicles. Gasoline would be used in construction worker vehicles. Electricity would be used to operate minor electrical equipment, such as lighting. Substantial electricity use would not occur during construction activities because construction would occur primarily during daylight hours, thus limiting the need for lighting. Construction of the proposed project would consume an estimated 26,677 gallons of fuel (23,639 gallons diesel, 3,038 gallons gasoline). Energy expenditures during construction would be short in duration, lasting approximately 10 to 12 months.

During operation, propane fuels would be used to operate onsite food vendors. Gasoline fuel would be used to operate worker and patron automobiles, as well as for an emergency generator for the Tower Attraction. Electricity would be used to operate onsite lighting, sound equipment, the Tower Attraction, and other concert-related equipment. Operation of the project would annually consume an estimated 393,879 gallons of fuel (8,075 gallons diesel, 246,915 gallons of gasoline), 750,000 cubic feet per year of natural gas, and 1 gigawatt-hour (GWh) of electricity. The electricity demand in 2020 was 65,650 GWh for Los Angeles County (CEC 2020a). Natural gas consumption in Los Angeles County in 2020

was 2,937 million British thermal units (CEC 2020b). Therefore, due to the limited amount of electricity and natural gas use compared to that available for use, the project would not result in a wasteful use of energy. In 2017, 3,659 million gallons of gasoline and 301 million gallons of diesel were sold in Los Angeles County (County of Los Angeles 2019).

Based on the maximum projected use of fuels for this project as compared to overall sales in the county, the project would not result in a wasteful use of energy. Therefore, these energy uses do not constitute wasteful, inefficient, or unnecessary consumption and impacts would be less than significant. This issue will not be addressed further in the SEIR.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The West Harbor Modification Project would incorporate energy conservation measures in compliance with the California Building Standards Code, CCR Title 24, and any other applicable local, state, and federal energy efficiency requirements. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and no impact would occur. This issue will not be addressed further in the SEIR.

VII. Geology and Soils

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
2. Strong seismic ground shaking?	☐	☐	☒	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
4. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion

Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- 1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less-than-Significant Impact. The Palos Verdes Fault Zone traverses the Port in a northwest-to-southeast manner from the West Turning Basin to Pier 400 and beyond. The Palos Verdes Fault Zone roughly encompasses a 50-mile-long area that travels through the communities of San Pedro, Palos Verdes Estates, Torrance, and Redondo Beach (USGS 2022). According to Figure 2, *Palos Verdes Fault Zone*, of the 2018 PMP, the Palos Verdes fault crosses the project area. In addition to the Palos Verdes Fault Zone, the northern terminus of the Wilmington blind thrust fault line is immediately adjacent to and just northeast of the project. According to the 2017 *Activity and Earthquake Potential of the Wilmington Blind Thrust, Los Angeles, CA Final Technical Report* submitted to the U.S. Geological Survey, the fault line is between Cannery Street and the project site (Wolfe et al. 2017). The West Harbor Modification Project would not include the addition of any new structures meant for human occupancy (consequently, potential impacts on people and structures would be negligible) and would not contain features that would directly or indirectly cause or intensify effects associated with fault rupture. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

- 2. Strong seismic ground shaking?**

Less-than-Significant Impact. The West Harbor Modification Project area lies near the Palos Verdes Fault Zone; therefore, potential hazards exist because of seismic activity associated with active faults and the presence of engineered fill¹ throughout the area. The exposure of people to seismic ground shaking is a potential risk with or without the project. The risk of seismic hazards such as ground shaking cannot be avoided. Building and construction design codes are meant to minimize structural damage resulting from a seismic event. The West Harbor Modification Project would comply with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code. Emergency planning and coordination would also contribute to reducing injuries to onsite personnel and patrons during seismic activity. With incorporation of emergency planning and compliance with current regulations and standard engineering practices, this impact would be less than significant and will not be addressed further in the SEIR.

¹ According to the 2018 PMP, the Port has been physically modified through past dredge-and-fill projects. The Natural Resources Conservation Service's Web Soil Survey identifies soils in the project area as Urban Land, 0 to 2 percent slopes, dredged fill substratum.

3. Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. Liquefaction occurs when saturated, low-density loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. Liquefaction most often occurs in areas underlain by silts and fine sands and where shallow groundwater exists. Similar to Threshold XIX(a)(2), above, the harbor area, including the SPPM and West Harbor Modification Project site, is identified as an area that is susceptible to liquefaction, per the California Geological Survey's Earthquake Zones of Required Investigation (1999). This is due to the presence of engineered fill and shallow groundwater at the West Harbor Modification Project site. The exposure of people to liquefaction is a potential risk with or without the proposed project. The risk of seismic hazards such as liquefaction cannot be avoided. Building and construction design codes are meant to minimize structural damage resulting from a seismic event. The West Harbor Modification Project would comply with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code. Emergency planning and coordination would also contribute to reducing injuries to onsite personnel and patrons during seismic activity. With incorporation of emergency planning and compliance with current regulations and standard engineering practices, this impact is considered less than significant, and will not be addressed further in the SEIR. In addition, per the California Supreme Court in its *California Building Industry Association v. Bay Area Air Quality Management District* decision, "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." The proposed West Harbor Modification Project would not change or exacerbate the potential to expose people or structures to seismic hazards. This impact would be less than significant and will not be addressed further in the SEIR.

4. Landslides?

No Impact. Topography in the vicinity of the West Harbor Modification Project site is flat and not subject to landslides. As described in the 2009 Final SPW EIS/EIR, a slope that ranges from 0 to approximately 20 feet in height is approximately 1,500 feet northwest of the proposed project near South Harbor Boulevard and 11th Street. Because of the relatively small size of the slope, the potential for a landslide to occur on this slope is considered low. In addition, the project site is not in an area susceptible to earthquake-induced landslides (California Geological Survey 1999). Therefore, no impacts related to landslides would occur, and this issue will not be addressed further in the SEIR.

b. Result in substantial soil erosion or the loss of topsoil?

No Impact. The West Harbor Modification Project site is currently covered with permeable and impermeable surfaces that drain to harbor waters; implementation of the project would not modify the site's existing drainage patterns. Project construction would occur under the General Construction Activity Stormwater Permit (2009-0009-DWQ, as amended) issued by the State Water Resources Control Board. This permit requires preparation of and compliance with a Storm Water Pollution Prevention Plan (SWPPP) and associated best management practices (BMPs) to prevent pollutants in stormwater discharges from causing

or contributing to violations of water quality objectives. The proposed West Harbor Modification Project would also comply with the City of Los Angeles' low-impact development (LID) ordinance. Operations would occur in compliance with the Municipal Separate Storm Sewer System (MS4) permit (R4-2012-0175-A01 and future iterations). Therefore, no impacts related to soil erosion or loss of topsoil would occur, and this issue will not be addressed further in the SEIR.

c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact. As discussed above, the West Harbor Modification Project area is near the active Palos Verdes fault and within liquefaction-prone engineered fill. The exposure of people to liquefaction is a potential risk with or without the project. The risk of seismic hazards such as liquefaction cannot be avoided. Building and construction design codes are meant to minimize structural damage resulting from a seismic event. The West Harbor Modification Project would comply with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code. The project site is also flat and not subject to landslides. The closest landslide zone to the project site is approximately 1,500 feet away. Through compliance with current regulations and standard engineering practices, this impact would be less than significant and will not be addressed further in the SEIR.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact. The West Harbor Modification Project would be designed and constructed consistent with implementation of Chapter IX, Building Regulations, of the Los Angeles Municipal Code, in conjunction with criteria established by LAHD, and would not result in substantial direct or indirect risks to life or property. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

No Impact. The use of septic tanks is not proposed as part of the West Harbor Modification Project. Restroom facilities would either be connected directly to the sewer system or portable facilities would be used, which would be removed and treated, as needed. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact. As mentioned in Section V, *Cultural Resources*, the Ports O'Call area overlies land that includes artificial fill (U.S. Department of Agriculture 2022). Because of the highly disturbed nature of the site and the minimal ground disturbance anticipated as a part of the West Harbor Modification Project, interaction with paleontological resources is unlikely. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

Would the project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The West Harbor Modification Project could generate greenhouse gas (GHG) emissions due to combustion sources associated with the proposed project during both construction and operation that may have a significant impact. Therefore, this issue will be evaluated in the SEIR.

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. State CEQA Guidelines Section 15064.4(b) provides that one factor to be considered in assessing the significance of GHG emissions on the environment is “the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.”

Several state, regional, and local plans have been developed that set goals for the reduction of GHG emissions over the next few years and decades. Some of these plans and policies (notably, Executive Order S-3-05 and AB 32) were taken into account by SCAQMD in developing the threshold of 10,000 metric tons per year of carbon dioxide equivalent (CO₂e). However, no regulations or requirements have been adopted by relevant public agencies to implement those plans for specific projects within the meaning of State CEQA Guidelines Section 15064.4(b)(3). (See *Center for Biological Diversity v. Cal. Dept. of Fish and Wildlife [Newhall Ranch]* [2015] 62 Cal.4th 204, 223.). For the purpose of disclosure, LAHD has considered whether the proposed West Harbor Modification Project’s activities and features would be consistent with federal, state, or local plans, policies, or regulations for the reduction of GHG emissions, as set forth below.

The State of California is leading the way in the United States with respect to GHG reductions. Several legislative and municipal targets for reducing GHG emissions below 1990 levels have been established. Key examples include:

- Senate Bill 32
 - 1990 levels by 2020
 - Forty percent below 1990 levels by 2030
- AB 32
 - Eighty percent below 1990 levels by 2050
- City of Los Angeles Sustainable City pLAn
 - Forty percent below 1990 levels by 2030
 - Eighty percent below 1990 levels by 2050
- City of Los Angeles Green New Deal (4-Year Update to the Sustainable City pLAn)
 - Reduce Port-related GHG emissions by 80 percent by 2050

LAHD has been tracking GHG emissions, in terms of CO₂e, since 2005 through the LAHD municipal GHG inventory and the annual inventory of air emissions. Port-related GHG emissions started making significant reductions in 2006, reaching a maximum reduction in CO₂e of 15 percent below 1990 levels in 2013 (Figure 7). Subsequently, 2014 and 2015 saw GHG levels rise due to a period of Port congestion that arose from circumstances outside of the control of either LAHD or its tenants. Emissions have dropped slightly since the 2015 peak, despite record-breaking cargo throughput over the last few years. As of 2018, Port-related GHG emissions are 3 percent below 1990 levels. Figure 8 presents a visual representation of current GHG emissions compared to future compliance with Senate Bill 32, AB 32, and the City of Los Angeles Green New Deal.

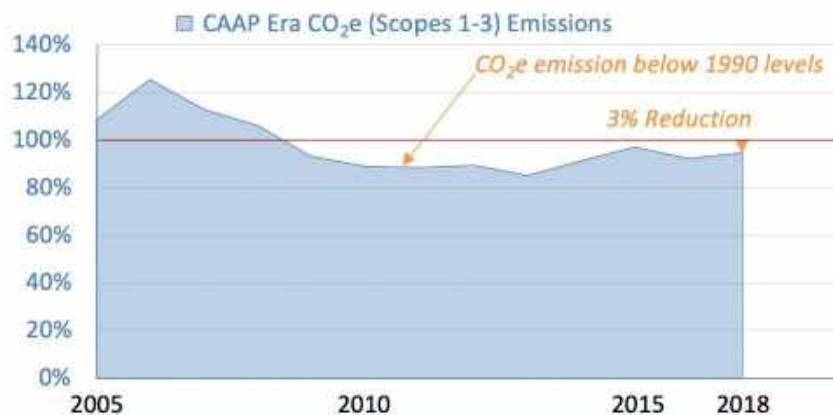


Figure 7 GHG Emissions, 2005–2018



Figure 8 Actual GHG Emissions, 2005–2018 and 2018 GHG Compliance Trajectory

LAHD and its tenants have initiated a number of wide-ranging strategies to reduce Port-related GHGs, which include the benefits associated with the Clean Air Action Plan, Zero Emission Roadmap, Energy Management Action Plan, operational efficiency improvements, and land use and planning initiatives. Looking toward 2050, there are several unknowns that will affect future GHG emission levels. These unknowns include grid power portfolios; the goods movement industry's preferences of power sources and fuel types for ships, harbor craft, terminal equipment, locomotives, and trucks; advances in cargo movement efficiencies; the locations of manufacturing centers for products and commodities moved; and increasing consumer demand for goods. The key relationships that have led to operational efficiency improvements to date are the cost of energy, current and upcoming regulatory programs, and the competitive nature of the goods movement industry. LAHD anticipates these relationships will continue to produce benefits with regard to GHG emissions for the foreseeable future.

Nevertheless, with the very aggressive targets shown on Figure 8 above and the interconnected nature of GHG emissions, it is not possible at this time to determine whether Port-wide emissions or any particular project applicant will be able to meet the compliance trajectory shown. Compliance will depend on future regulations or requirements that may be adopted, future technologies that have not been identified or fully developed at this time, or any other Port-wide GHG reduction strategies that may be established. Although it is unclear if the Port-wide GHG reduction goals and timeline can be met due to future regulations or requirements that may be adopted or future technologies that have not been identified or fully developed at this time, the proposed West Harbor Modification Project is not expected to conflict with any GHG reduction initiative that is developed to help the City of Los Angeles and LAHD meet the above GHG reduction goals. The impact would be less than significant, and this issue will not be addressed further in the SEIR.

IX. Hazards and Hazardous Materials

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site that 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?	☐	☐	☐	☒
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

Discussion

Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less-than-Significant Impact. The West Harbor Modification Project would not involve the routine transport, use, or disposal of hazardous materials. Fireworks would occasionally be delivered to the site for use in pyrotechnic displays during concerts. Therefore, the impacts would be less than significant, and this issue will not be addressed further in the SEIR.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. As mentioned above, the West Harbor Modification Project would not include the transport, use, or disposal of hazardous materials. Therefore, no upset conditions would be expected. No impact would occur, and this issue will not be addressed further in the SEIR.

c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The West Harbor Modification Project location is not within one-quarter mile of an existing or proposed school. No impact would occur, and this issue will not be addressed further in the SEIR.

d. Be located on a site that 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?

No Impact. The West Harbor Modification Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (California Department of Toxic Substances Control 2020; State Water Resources Control Board 2020). As such, the proposed project would not create a significant hazard to the public or the environment. No impact would occur, and this issue will not be addressed further in the SEIR.

e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The West Harbor Modification Project is not within an airport land use plan area or within 2 miles of a public airport or public use airport. The closest airport, Torrance Municipal Airport – Zamperini Field, is approximately 5 miles to the northwest of the West Harbor Modification Project site. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. The West Harbor Modification Project operations would be required to adhere to all Homeland Security, Port Police, and LAFD and other applicable local, state, and federal emergency response and evacuation regulations. Therefore, a less-than-significant impact would occur, and this issue will not be addressed further in the SEIR.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The West Harbor Modification Project is not in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (2021). The project site is in a developed area and would not have a substantial risk of wildland fires. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

X. Hydrology and Water Quality

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
1. Result in substantial erosion or siltation on or off site;	☐	☐	☐	☒
2. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site;	☐	☐	☐	☒
3. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
4. Impede or redirect flood flows?	☐	☐	☐	☒
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion

Would the project:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less-than-Significant Impact. The West Harbor Modification Project would not violate any water quality standards or waste discharge requirements. Project construction would occur

under the General Construction Activity Stormwater Permit (2009-0009-DWQ, as amended) issued by the State Water Resources Control Board. This permit requires the preparation of and compliance with a SWPPP and associated BMPs to prevent pollutants from the West Harbor Modification Project from mobilizing through stormwater, or run-off, which may cause or contribute to violations of water quality objectives. The proposed West Harbor Modification Project would also comply with the City of Los Angeles' LID ordinance. Operations would occur in compliance with the MS4 permit (R4-2012-0175-A01 and future iterations). In addition, standard Port permit conditions would require the provision of adequate onsite waste collection, contained trash enclosures, and minimization of waste from concessions through compliance with city ordinances for single-use items and food recycling. Standard BMPs would also be part of the permit conditions to ensure trash is picked up and the entire site would be cleaned after each event to minimize mobilization of pollutants from concert events. Where possible, sustainable practices and products, such as biodegradable confetti, would be used during events and care would be taken to direct the spray away from the main channel. This material, along with other trash, would be cleaned up after each event to prevent debris from entering the storm drain system and ocean. Therefore, impacts related to water quality standards and waste discharge requirements would be less than significant, and this issue will not be addressed further in the SEIR.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact. The West Harbor Modification Project would not deplete groundwater supplies or interfere substantially with groundwater recharge. Currently, the proposed project area is predominantly paved. Construction will result in increased permeable surfaces and increased infiltration. This design will also decrease the urban heat island effect. The City of Los Angeles LID ordinance will be followed to allow stormwater and other allowable non-stormwater discharges to flow through the appropriate BMPs.

Groundwater in the harbor area is south of the Dominguez Gap Barrier and is generally affected by saltwater intrusion (salinity); therefore, it is unsuitable for use as drinking water. Furthermore, the West Harbor Modification Project site is not used or designated for groundwater recharge. The project site does not support groundwater recharge; therefore, implementation of the proposed project would not have an effect on groundwater recharge. In addition, development of the West Harbor Modification Project would not have an effect on groundwater supplies. As such, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

1. Result in substantial erosion or siltation on or off site?

No Impact. The West Harbor Modification Project site is currently covered with permeable and impermeable surfaces that drain to harbor waters, and implementation of the project would not modify the site's existing drainage patterns. Stormwater runoff at the site would comply with applicable LID requirements. The site would be paved, so

additional erosion is not expected to result from implementation of the West Harbor Modification Project. No soil known to contain silt (i.e., rock and mineral particles larger than clay, but smaller than sand) (National Geographic 2021) are on or near the proposed outdoor concert venue location. Therefore, siltation (silt runoff) is not expected to result from construction and implementation of the West Harbor Modification Project. While undergoing construction, the project area would be required to comply with the SWPPP and all associated BMPs, including those related to erosion and sediment control and water quality standards. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

2. *Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?*

No Impact. The West Harbor Modification Project would not modify the site's existing drainage patterns conditions. During construction, drainage patterns are not significantly altered. Similar to existing conditions, the project site would remain predominantly paved. Green spaces and garden areas would minimize stormwater runoff rates and volume and would treat stormwater runoff through biological uptake. Stormwater runoff at the site would comply with applicable LID requirements. No impacts related to alteration of drainage patterns, resulting in flooding, would occur. Impacts would be no greater than previously assessed in the SPW EIS/EIR and 2016 SPPM Addendum. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

3. *Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

No Impact. The project site is currently composed of mostly impervious surfaces that drain to harbor waters. The proposed West Harbor Modification Project would comply with the City of Los Angeles's LID ordinance and the MS4 permit (R4-2012-0175-A01 and future iterations). Stormwater would be treated using appropriate LID methods. Patron vehicles would be parked off site at existing designated parking lots. Parking lot construction and associated impacts were analyzed in the original SPW EIS/EIR and 2016 SPPM Addendum. The West Harbor Modification Project site as proposed is not larger than the site previously analyzed. The West Harbor Modification Project would have no impact with respect to exceeding capacity of the stormwater drainage system, nor would it be a substantial source of polluted runoff. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

4. *Impede or redirect flood flows?*

No Impact. The West Harbor Modification Project site is not within a special flood hazard area and would experience a moderate to low risk of being flooded. However, as mentioned above, implementation of the project would not increase the potential for flooding or significantly alter the existing drainage on site. The West Harbor Modification Project would not impede or redirect flood flows. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less-than-Significant Impact. According to Flood Hazard Map FM06037C2032F, the entire project site occurs within Zone X, Other Flood Areas, which is defined as including areas of 0.2 percent annual chance flood (500-year flood); areas of 1 percent annual chance flood (also known as the base flood) with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood (Federal Emergency Management Agency 2008). However, the West Harbor Modification Project does not involve the construction of habitable structures. Also, the project would not increase risks associated with tsunami or seiche. Seiches are seismically induced water waves that surge back and forth in an enclosed basin. Seiches could occur in the harbor as a result of earthquakes. A Port Complex model that assessed tsunami and seiche scenarios determined that impacts from a tsunami were equal to or more severe than those from a seiche in each case modeled (Moffatt and Nichol 2007). Therefore, the discussion below refers to tsunami as the worst-case scenario for potential impacts. Potential impacts related to seiche would be the same as or less than those identified below.

The amphitheater is not designed for use as a habitable structure that would be subject to inundation by tsunami. Project contractors and tenants would be required to adhere to all Homeland Security, Port Police, and LAFD emergency response and evacuation regulations, ensuring compliance with existing emergency response plans. Therefore, implementation of the West Harbor Modification Project would not substantially interfere with an existing emergency response or evacuation plan or increase the risk of injury or death, and impacts were found to be less than significant.

In addition, the potential for spilled hazardous materials from the West Harbor Modification Project during a tsunami is expected to be relatively low and of a manageable amount to clean up that would not result in significant environmental impacts. Therefore, implementation of the project would not result in a substantially increased public health and safety concern as a result of the accidental release, spill, or explosion of hazardous materials due to a tsunami, and impacts were found to be less than significant. Furthermore, because the amount of hazardous materials to be used during construction and operational activities is relatively minor, implementation of the proposed project would not result in a substantial increase in the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action, and impacts were found to be less than significant.

Therefore, there would be a less-than-significant impact associated with the risk of release of pollutants from project inundation due to a flood hazard, tsunami, or seiche. This issue will not be addressed further in the SEIR.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The West Harbor Modification Project site currently complies with water quality requirements, including the MS4 permit and City of Los Angeles' LID ordinance, as described under Impact (a). As part of compliance with permit requirements, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial

uses of surface and groundwater, as defined in the applicable regional water quality control plan. No groundwater management plans are in place for the site because no groundwater suitable for human use exists below the site. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XI. Land Use and Planning

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Discussion

Would the project:

a. Physically divide an established community?

No Impact. The West Harbor Modification Project is at the former Ports O'Call area and does not contain any established communities. The project would not physically divide an established community. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The West Harbor Modification Project would be at the Port of Los Angeles, within an area covered by the City of Los Angeles General Plan, Port of Los Angeles Plan (City of Los Angeles 1982), City of Los Angeles Zoning Code, and PMP (Port of Los Angeles 2018). The project site has a PMP designation of Visitor-Serving Commercial. Visitor-Serving Commercial includes uses for the public, such as restaurants, maritime-related office, visitor-serving retail, harbor tour vessels, sport fishing, museums, community centers/conference centers, and exhibit space (Port of Los Angeles 2018).

The West Harbor Modification Project is consistent with the PMP, which includes goals to provide enhanced public access to the waterfront and visitor-serving facilities including retail, restaurants, museums, and parks. Specifically, the Ports O'Call/SPPM area in Planning Area 1 emphasizes waterfront access through a waterfront promenade, parks, museums, academic uses, and visitor-serving commercial uses and attractions. Therefore, the West Harbor Modification Project is expected to continue to provide these opportunities and would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As such, no impact would occur, and this issue will be not be addressed further in the SEIR.

XII. Mineral Resources

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion

Would the project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The West Harbor Modification Project area is not in an aggregate resource zone or oil field drilling area, and no mineral resource extraction occurs on site or in the larger SPPM area. There are no active oil wells on or near the project site (California Department of Conservation 2020). Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. As described above, there are no active oil wells on or near the project site. The West Harbor Modification Project would not result in the loss of availability of a mineral resource recovery site. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XIII. Noise

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☒	☐	☐	☐
b. Generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. Be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

Would the project:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Potentially Significant Impact. The West Harbor Modification Project would construct an outdoor venue hosting concerts and other special events. The project would include an amplified sound system. Noise from the sound system, as well as from audiences attending the events, could propagate into the surrounding community and would be audible at nearby noise-sensitive land uses. As a result, the West Harbor Modification Project could increase ambient noise levels in the vicinity. Therefore, this issue will be evaluated in the SEIR.

b. Generate excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. The West Harbor Modification Project does not propose high-impact construction techniques such as pile driving or blasting. The project also does not propose any operational elements that would generate high groundborne vibration levels, such as railroad operations or heavy industrial machinery. In addition, the project site is over 1,000 feet from the nearest residential buildings. The West Harbor Modification Project would not generate excessive groundborne vibration or groundborne noise levels. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

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

No Impact. The West Harbor Modification Project site is not within a 2-mile radius of any airport. The closest airport, Torrance Municipal Airport – Zamperini Field, is approximately 5 miles to the northwest of the West Harbor Modification Project site. Additionally, the project site is not in the vicinity of a private airstrip. As a result, the project would not expose people residing or working in the project area to excessive noise related to airports or private airstrips. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XIV. Population and Housing

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

Would the project:

a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

No Impact. The West Harbor Modification Project would not induce substantial population growth or contribute to direct or indirect population growth because it would not involve the development of transportation system improvements. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

b. Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. No existing residential units are within the West Harbor Modification Project area. Therefore, implementation of the project would not result in the displacement of any people or housing. As such, no impact would occur, and this issue will not be addressed in the SEIR.

XV. Public Services

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion

Would the project:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection?

Less-than-Significant Impact. LAFD currently provides fire protection and emergency services to the West Harbor Modification Project site and surrounding area. LAFD facilities in the Port include land-based fire stations and fireboat companies. The nearest station with direct fireboat access is Fire Station No. 112 in the Main Channel, about 0.9 mile west of the Project site. The approximate travel distance to the West Harbor Modification Project site is about 2.5 miles. The closest station with land access is Fire Station No. 40, to the north at 330 Ferry Street. The approximate travel distance to the West Harbor Modification Project site is approximately 1 mile. This station is on Terminal Island and equipped with a single engine company, an assessment engine, a rescue ambulance, and a rehab air tender. This station would provide fire service by land.

Furthermore, construction would occur within the West Harbor Modification Project site and harbor and would not affect service ratios, response times, or other performance objectives of LAFD. Moreover, implementation of the project would remove safety and fire hazards from the site. Although some emergency medical technician personnel would be available during concerts and events, this impact would not be significant enough to warrant construction or additional fire department facilities. Therefore, impacts would be less-than-significant, and this issue will not be addressed further in the SEIR.

Police protection?

Less-than-Significant Impact. The City of Los Angeles Police Department (LAPD) and Port Police provide police services at the Port, with the latter being the primary law enforcement agency within the Port. Specifically, Port Police officers are responsible for patrol and surveillance within the Port's boundaries, including Port-owned properties in the communities of Wilmington, San Pedro, and Harbor City. Port Police officers maintain 24-hour land and water patrols and enforce federal, state, and local public safety statutes, Port tariff regulations, and environmental and maritime safety regulations. The Port Police headquarters is at 330 South Centre Street in San Pedro.

Although Port Police are the first responders in an emergency, LAPD is also responsible for police services in the project vicinity because the Port is part of the city of Los Angeles. The LAPD Harbor Division is at 2175 John S. Gibson Boulevard in San Pedro, which is approximately 2.1 miles northwest of the project site. The Harbor Division is responsible for patrols throughout San Pedro, Harbor City, and Wilmington.

The West Harbor Modification Project would be the same distance from service providers as the existing facilities and, therefore, would not increase emergency response times. It would not substantively alter terminal activities, increase long-term employment, or result in indirect growth such that additional police protection would be necessary. In addition, implementation of the West Harbor Modification Project would remove safety and attractive nuisance hazards from the site that could attract unlawful activity. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

Schools?

No Impact. No residential uses are associated with the West Harbor Modification Project, and operation of the project would not affect school enrollment. San Pedro High School is located approximately 1 mile from the project. However, due to distance, construction impacts would not occur. Concert activity associated with the project would not occur during the same time school is in session, thus operational impacts would not impact school activities. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

Parks?

No Impact. The West Harbor Modification Project includes construction of a park area, as well as an up to 6,200-seat outdoor concert venue. Therefore, no impacts on current parks are expected and the project would not create a need for any new parks. Consequently, no impact would occur, and this issue will not be addressed further in the SEIR.

Other public facilities?

No Impact. The West Harbor Modification Project would not result in impacts on any public facilities and this issue will not be addressed further in the SEIR.

XVI. Recreation

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

Would the project:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The West Harbor Modification Project would not directly or indirectly result in physical deterioration of parks or other recreational facilities. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The West Harbor Modification Project would not include recreational facilities or new residential development that would require construction or expansion of recreational facilities. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XVII. Transportation

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐
b. Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c. Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d. Result in inadequate emergency access?	☐	☐	☒	☐

Discussion

Would the project:

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Potentially Significant Impact. Implementation of the West Harbor Modification Project could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities as a result of increased trips, and could require transportation management and event control. Therefore, this issue will be evaluated in the SEIR.

b. Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?

Potentially Significant Impact. Implementation of the West Harbor Modification Project could conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) as a result of increased trips and vehicle miles traveled from concerts and special events. Therefore, this issue will be evaluated in the SEIR.

c. Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The West Harbor Modification Project does not involve or require any changes to the geometric design of any streets within the project area. In addition, as mentioned under Section IV, *Biological Resources*, no in-water work is proposed or required as part the project and it would not alter marine transportation operations. The West Harbor Modification Project would not increase ground or marine transportation hazards. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

d. Result in inadequate emergency access?

Less-than-Significant Impact. Emergency access to the site would be provided via proposed driveways constructed as part of the SPPM Project and on roads within the West Harbor Modification Project area. As part of the West Harbor Modification Project, fire and law enforcement services would have access to all areas of the project site. Also, as part of the project approval process, LAFD would review and approve all project plans to ensure that they comply with all applicable access requirements. Therefore, a less-than-significant impact would occur, and this issue will not be addressed further in the SEIR.

XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?***

No Impact. A request for a check of the Sacred Lands File (SLF) was made to the California Native American Heritage Commission (NAHC), and a response was received on December 30, 2019. The NAHC reported that there are no known tribal cultural resources at the project site.

On January 8, 2020, LAHD provided notification of the West Harbor Modification Project, pursuant to the provisions of AB 52 and PRC Section 21080.3.1(d). No responses were received within the 30-day consultation request period, which ended on February 7, 2020.

No impacts on tribal cultural resources, as defined in PRC Section 21074, are anticipated as a result of the West Harbor Modification Project. The project would not cause a change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources, as defined in PRC Section 5020.1(k). Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

No Impact. No tribal cultural resources have been identified in or within a 0.25-mile radius of the project site. As discussed above, the NAHC responded that a SLF records search was negative. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XIX. Utilities and Service Systems

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation	Less-than- Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

Would the project:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact. The West Harbor Modification Project would not generate significant increases in water or wastewater demand. Based on information provided by the applicant, on event days, if full restrooms are built, the project would require approximately 23,000 gallons of water per day and generate approximately 19,000 gallons of wastewater per day. By comparison, the City of Los Angeles uses approximately 355,333,491 gallons of water per day (or approximately 87 gallons per capita per day) and generates approximately 400 million gallons of wastewater per day (or approximately 98 gallons per capita per day)

(Pacific Institute 2020; City of Los Angeles 2022). As such, the West Harbor Modification Project would intermittently generate approximately 0.005 percent of the daily water and wastewater generation in the city. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact As discussed in Threshold XIX(a) above, the West Harbor Modification Project is not anticipated to require a significant additional amount of water usage within the city of Los Angeles or Southern California in general. Current water supplies are expected to be sufficient even in dry years. Anticipated water demand is outlined in item (a) above. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less-than-Significant Impact. As discussed in Threshold XIX(a) above, the West Harbor Modification Project is not anticipated to result in a significant additional amount of wastewater discharge within the city of Los Angeles or Southern California in general. Current wastewater discharge is not expected to exceed the capabilities of local wastewater treatment providers. Please see response (a) above. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact. The West Harbor Modification Project would comply with all applicable codes pertaining to solid waste disposal including Port-wide standard conditions of approval requiring recycling of construction materials. Construction of the project would generate a relatively small amount of construction debris, because the project site would already be graded and all utilities installed prior to initiation of construction. In addition, operation of the West Harbor Modification Project would comply with the City of Los Angeles's Green New Deal Sustainable City pLAn (City of Los Angeles 2019), which includes a target to reduce municipal solid waste by 15 percent by 2030 and phase out single-use plastics (plastic straws, plastic utensils, plastic take-out containers, and polystyrene) by 2028. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-than-Significant Impact. The West Harbor Modification Project would be required to comply with all applicable codes pertaining to solid waste disposal, including AB 939, the California Solid Waste Management Act, and AB 341, which establish waste stream diversion and recycling goals. Therefore, impacts would be less than significant, and this issue will not be addressed further in the SEIR.

XX. Wildfire

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Discussion

If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The West Harbor Modification Project site is not within a designated Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (2011). The project site is in a developed area and would not have a substantial risk of wildland fires. As such, no impact would occur, and this issue will not be addressed further in the SEIR.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The West Harbor Modification Project site is not in or near a fire hazard severity zone. The project site is within a fully developed portion of the Port, and no wildlands occur

within or adjacent to the project site. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?

No Impact. As mentioned above, the West Harbor Modification Project site is not in or near a fire hazard zone. The project site would be in an already developed area of the SPPM. Implementation of the West Harbor Modification Project would not require the installation or maintenance of additional infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that would exacerbate fire risk or result in temporary or ongoing impacts on the environment. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The West Harbor Modification Project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes due to wildfires. As discussed in the analyses above, the West Harbor Modification Project site is flat and has no significant natural or graded slopes. It is not within a California Geological Survey–designated landslide zone or a Very High Fire Hazard Severity Zone. Additionally, the project would not change drainage patterns that would increase flood risks. Therefore, no impact would occur, and this issue will not be addressed further in the SEIR.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less-than- Significant Impact with Mitigation	Less-than- Significant	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Discussion

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The West Harbor Modification Project has the potential to result in significant impacts on biological resources. Therefore, this issue will be evaluated in the SEIR.

b. Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. The West Harbor Modification Project, in conjunction with other related projects, has the potential to result in significant cumulative impacts. Therefore, this issue will be evaluated in the SEIR.

c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. The West Harbor Modification Project could result in adverse impacts on human beings, either directly or indirectly, related to aesthetics, air quality, biological resources, GHG emissions, noise, and transportation. Therefore, this issue will be evaluated in the SEIR.

5.0 References

- Aerophile. 2014. Aerobar General Information. December. Paris, France; Orlando, FL.
- California Building Standards Commission. 2013. 2013 California Green Building Standards Code. California Code of Regulations, Title 24, Part 11. ISBN 978-1-60983-462-3. Sacramento, CA.
- . 2019. 2019 California Building Standards Code (Cal. Code Regs., Title 24). July 2019. Available: <https://www.dgs.ca.gov/BSC/Codes>. Accessed: April 10, 2020.
- California Department of Conservation. 2011. *Farmland Mapping Monitoring Program*. Available: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/los10.pdf>.
- . 2020. DOGGR. *Well Finder*. Available: <https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.94276/37.12009/6>.
- California Department of Forestry and Fire Protection. 2011. *Fire Hazard Severity Zones*. Available: <https://osfm.fire.ca.gov/media/7280/losangelescounty.pdf>.
- California Department of Transportation (Caltrans). 2019. August. List of eligible and officially designated state scenic highways. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>
- California Department of Toxic Substances Control. 2020. EnviroStor. Available: <http://www.envirostor.dtsc.ca.gov/?surl=hmmqc>. Accessed: February 25, 2020.
- California Energy Commission (CEC). 2020a. Electricity Consumption by County. Available: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>.
- . 2020b. Gas Consumption by County. Available: <https://ecdms.energy.ca.gov/gasbycounty.aspx>.
- California Geological Survey. 1999. *Earthquake Zones of Required Investigation, San Pedro Quadrangle*. Available: https://gmw.conservation.ca.gov/SHP/EZRIM/Maps/SAN_PEDRO_EZRIM.pdf. Accessed: February 24, 2020.
- City of Los Angeles. 1982. *City of Los Angeles General Plan, Port of Los Angeles Plan*.
- . 2006. Los Angeles City Ordinance No. 177404. March 13. Available: http://cityplanning.lacity.org/Code_Studies/Other/ProtectedTreeOrd.pdf. Accessed: February 7, 2020.
- . 2008. Los Angeles City Ordinance No. 179820. Los Angeles Municipal Code Chapter 1, Sections 16.10 and 16.11 Green Building Program. Available: http://clkrep.lacity.org/onlinedocs/2007/07-0705_ord_179820.pdf. Accessed April 10, 2020.
- . 2019. *L.A.'s Green New Deal Sustainable City pLAn*.

- . 2022. Sewers. Available: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-s?_adf.ctrl-state=2mgeyob6l_5&_afLoop=5820041677504748#!. Accessed: March 27, 2020.
- County of Los Angeles. 2019. LA County Energy Consumption (2010–2017). Updated December 6, 2019. Available: <https://data.lacounty.gov/Sustainability/LA-County-Energy-Consumption-2010-2017-/6nji-3e9d>.
- Federal Emergency Management Agency. 2008. *Flood Insurance Rate Map, Los Angeles County, California*. Map Number 06037C2032F.
- Los Angeles Department of Water and Power (LADWP) and Department of Public Works (Public Works). 2012. *City of Los Angeles Recycled Water Master Planning*. October. Prepared by RMC and CDM Smith.
- Moffatt and Nichol. 2007. *Tsunami Hazard Assessment for the Ports of Long Beach and Los Angeles*. Final report prepared for Port of Long Beach. April.
- National Geographic. 2021. Resource Library Encyclopedic Entry: Silt. Available: <https://www.nationalgeographic.org/encyclopedia/silt/>. Accessed: November 2, 2021.
- Pacific Institute. 2020. California Urban Water Use Data. Available: <http://www2.pacinst.org/gpcd/table/>. Accessed: March 27, 2020.
- Port of Los Angeles. 2007. Port of Los Angeles Green Building Policy. Resolution 6493. Certified August 2007.
- . 2008. *San Pedro Waterfront Project Draft EIS/EIR* (SCH No. 2005061041). September.
- . 2009a. *San Pedro Waterfront Project Findings of Fact and Statement of Overriding Considerations*. September.
- . 2009b. *San Pedro Waterfront Project Mitigation Monitoring Report and Program*. September.
- . 2009c. *San Pedro Waterfront Project Final EIS/EIR* (SCH No. 2005061041). September.
- . 2014. *LA Waterfront Design Guidelines*. Version 2. February 2014.
- . 2016. *EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market Project* (SCH No. 2005061041). May.
- . 2018. *Port Master Plan*. September. Available: https://kentico.portoflosangeles.org/getmedia/adf788d8-74e3-4fc3-b774-c6090264f8b9/port-master-plan-update-with-no-29_9-20-2018.
- . 2019. *EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market 2* (SCH No. 2005061041). November.
- . 2020. *About the Port of Los Angeles*. Available: <https://www.portoflosangeles.org/about>. Accessed: February 4, 2020.

- State Water Resources Control Board. 2020. GeoTracker. Available:
https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000001906&cmd=ltcpreport&ltcp_id=114861. Accessed: February 25, 2020.
- U.S. Department of Agriculture. 2022. *SoilWeb: An Online Soil Survey Browser*. Available:
<https://casoilresource.lawr.ucdavis.edu/gmap>. Accessed: April 5, 2022.
- U.S. Geological Survey (USGS). 2022. Geologic Map Database. Available:
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>. Accessed: April 5, 2022.
- Franklin Wolfe, John H. Shaw, and Andreas Plesch, Department of Earth & Planetary Sciences, Harvard University, Cambridge, MA, 2017. Activity and earthquake potential of the Wilmington blind thrust.
https://earthquake.usgs.gov/cfusion/external_grants/reports/G17AP00008.pdf

EXHIBIT 6

From: J Campeau
Sent: Monday, June 13, 2022 5:30 PM
To: ceqacomment@portla.org; Cannon, Chris <CCannon@portla.org>
Subject: West Harbor Modification Project

Dear Mr. Cannon,

The entire scope of the proposed, huge out-of-scale 6200 seat Amphitheater project that was added to the new West Harbor development from a 2009 original 500 seat plan, is a disaster for our San Pedro residential and business community. To think such a bad plan can really work, without the use of common sense or practical considerations, is an illusion no matter if all the boxes are checked in the SEIR to come.

The people responsible for designing this misplaced Amphitheater have no idea what or who will be affected, or perhaps they don't care. This begins with the direction of the sound speakers; it is totally wrong. All speakers must face EAST towards Terminal Island which is industrial. The Amphitheater may conduct some sound tests that will only apply during certain atmospheric conditions, they will never be able to mitigate noise pollution to our community as long as the speaker sound system does not face east in direction.

And then what happens when the frequent Santa Ana winds blow in from the east? Fog and humidity as well as many other atmospheric rapidly changing factors will play tricks with the source of sound and decibels in our San Pedro community. Sound travels unpredictably, recoils and bounces all around our hillside community that faces East. Often harbor seals can be heard from the old Port's O'Call out to lands' end in Point Fermin. We can hear trains banging in the north harbor or even at Pier 400 on Terminal Island.

The proposed Amphitheater design has a noise blast scheduled for over 100 nights per year to all of San Pedro residents and businesses south and south west of the proposed project. Then they want to add 25 Pyrotechnics events per year, along with all the added light blight from new light installations around this project.

On top of all of this are the off nights that will be scheduled during the year, there will be an undetermined amount of additional sponsored events during the year, using the same sound system. In addition, there will be 100-200 nights of unregulated, unsupervised noise events that will be given Temporary Entry & Use Permits (TEUP), producing noise ordinance violations, cause disruption, and extra traffic. And these permits are being issued without including San Pedro's three neighborhood councils that represent our community's majority stakeholders, that can advise on how to best control the unruly element of such big events.

A most recent example of just such a mess was last weekend's event, June 11-12, 2022, at Pier 45-49 outer harbor. Unacceptable, unbelievable loud noise till midnight! As usual, the community had to bear the burden with all of the disruptions from another badly planned event. Residents had to call in to complain because their late evening was being disrupted by violations of noise ordinance curfew hours. Luckily, the complaints helped mitigate the repeat of Saturday's noise pollution disaster on Sunday, 6/12/22. But changes always happen after the fact because of poor planning and approval for many events like this. When the community is caught by surprise again, they have to take action and complain to then affect changes in noise and light pollution. Nowhere mentioned in the TEUP for this last event were noise ordinance compliance regulations of 10pm curfew or sound decibel thresholds! It's just left up to the event manager? They went to midnight!!

Is the Port Police really going to shut down a concert in violation of curfew hours and noise from a 6200 seat Amphitheater? And how many times per year will the neighbors have to complain? What are the penalties for violations? Just warnings? Who's watching out for our many San Pedro Community residents when these permits are issued that are in violation of noise ordinance law?

The Port doesn't include San Pedro's community 3 neighborhood councils for event planning discussions, nor do they require that event applicants receive endorsement from neighborhood councils. The Port issues TEUP's without informing the San Pedro community nor do they ask for endorsements of upcoming events.

The Amphitheater is said to have biodegradable confetti at their concerts. Will biodegradable confetti be blowing into the water? Who will clean it up from the water at night? How will fish, mammals and wildlife be affected as it is introduced into the food chain? And how can the fluids from washing down the Astroturf with cleaning solvents be prevented from going into the water right next to it?

And then the element of all the free party concert goers than can have many good views of the Amphitheater stage along San Pedro Plaza Park from Beacon Street, and along Miner Street, Block Field Park and Sampson Way. What bathrooms will those people use? Where will they throw their trash? Where will they park? Will San Pedro be protected with all the increased party scene in our streets and parks by private security, or do the taxpayers have to pay for all this with increased staff from LAPD and Port Police and Fire department?

BUSINESS: How will the surrounding businesses compete with their own ambience and vibe including music and outdoor dining during the SOUND BLAST hours from the Amphitheatre? Will these businesses have to close down during those hours? No matter what anyone from the Chamber of Commerce might say, it's not good for surrounding businesses to have no control of their ambience and vibe of their place of business, while the noise of huge concerts is blaring throughout San Pedro from the new Amphitheater.

For example, how can the new Trani's Dockside restaurant located at 22nd St. and Sampson Way deal with the noise pollution on their dining patio? How can they create ambience and conduct business while they are be blasted out of the water by this new Amphitheater? What of our new Brouwerij West Brewery with their indoor/outdoor ambience, including music, or the 22nd Street Landing Seafood Grill and Bar, also indoor/outdoor, as well as the Double Tree by Hilton Hotel.

What about all of the new restaurants and bars at the new West Harbor development area? Those new businesses will have indoor/outdoor seating. They won't be able to create any ambience and vibe, or be able to conduct business while concerts are going on at the Amphitheater. And who wants to eat outside near the Amphitheater with the stench of all the portable toilets for 6200 people plus staff, stage personal, and security personal?

How is it fair that most of the San Pedro Residents who live near the ocean with windows open for fresh air, will now have to close their windows indefinitely because of all the noise?

All the clean-up noise and traffic after each concert will go into early am hours!

What about the effect to the marine and land wildlife that lives here with us?

Unmanageable more traffic, inhibit cruise terminal vehicle traffic, no parking, crime, speeding, vehicle street take-overs, road rage, new light blight pollution and air pollution, police response sirens, helicopters, fire department and ambulances.

This all should be addressed in the SEIR to come from the proposed 6200 seat Amphitheater. It will have far more than a significant impact. It will be unmanageable. The new proposed Amphitheater has a long term quality of life cost to bear for the residents of San Pedro. It is an unnecessary added element to the West Harbor New Development.

Thank you,

James Campeau



Doug Epperhart
President

Dean Pentcheff
Vice President

**Sheryl
Akerblom**
Treasurer

1840 S Gaffey St., Box 34 • San Pedro, CA 90731 • (310) 918-8650
cspnclive@gmail.com

May 17, 2022

Christopher Cannon, Director
Los Angeles Harbor Department
Environmental Management Division
425 Palos Verdes Street
San Pedro, CA 90731

Sent via Email to: cegacomments@portla.org

Subject: **Comments on Initial Study/Notice of Preparation for the West Harbor Modification Project on the L.A. Waterfront**

Whereas, the proposed 6,200 seat amphitheater would be generating volume levels far in excess of trains, containers, and sea lions, and

Whereas, the residents have a right to the quiet enjoyment of their dwelling places, and

Whereas, there is a significant concern regarding noise that will impact the surrounding community.

Resolved, Coastal San Pedro Neighborhood Council is concerned that the new amphitheater project as proposed is inappropriate and insists that the NOP includes a discussion of reasonable alternatives, as required by CEQA, such as the original 2009 plan for a 500-seat amphitheater.

Further Resolved, the Coastal San Pedro Neighborhood Council provides the following comments on the West Harbor Modification Project Notice of Preparation:

Noise:

We strongly recommend sonic testing under a variety of atmospheric conditions to determine the impact on the community of amphitheater concerts to be included in the Draft Supplemental Environmental Impact Report and that the applicant consult with the Neighborhood Councils in designing the tests. The tests should include the impacts of temperature inversion on sound transmission.

We suggest that the Draft Supplemental Environmental Impact Report include an analysis of the impacts of people outside of the proposed concert venue gathering on City and Port lands and waters and elsewhere to listen to the proposed concerts.

Transportation:

Provide a plan to ensure adequate security both in the venue and the surrounding areas.

Biological Resources/Water Quality:

Provide a plan to utilize recyclable and biodegradable materials to avoid pollution into Port waters including microplastics.

The project should incorporate the principles of the San Pedro Urban Greening Plan.

Thank you for the opportunity to submit comments

Sincerely,

A handwritten signature in black ink that reads "Douglas Epperhart". The signature is fluid and cursive, with a long horizontal stroke at the end.

Doug Epperhart, President
On behalf of the Coastal San Pedro Neighborhood Council Board

Councilmember.Buscaino@lacity.org

Alison.Becker@lacity.org

Amy.Gebert@lacity.org

From: Noel Gould aquarianstudios@hotmail.com
Subject: CEQA comments for proposed amphitheater expansion
Date: June 15, 2022 at 5:17 PM
To: ceqacomment@portla.org
Cc: June Smith burling102@aol.com, Robin Rudisil wilrud@mac.com



Dear Mr. Cannon,

I'm writing to express my concern regarding a number of issues with the proposed 6,200 seat amphitheater in the new West Harbor Development.

1. Noise pollution throughout the entire San Pedro Community from music and fireworks
2. People gathering throughout the community to "tailgate" and hear concerts for free.
3. Inadequate infrastructure to support the additional traffic in and out of San Pedro.
4. Tremendous increase in pollution from standing vehicles.
5. Food trucks spewing diesel fumes into the air.
6. So called biodegradable confetti used at the concerts that will end up blowing into the harbor.
7. People throwing their trash into the harbor.
8. Inadequate parking.
9. Insufficient hotel space for people coming to concerts.
10. zero light rail service to San Pedro.
11. Harm to marine life due to many of the above.

It's vital that the DSEIR address all these issues in detailed ways using real world testing conditions and not simply virtually modeling. The effects of temperature inversion, which occur +/- several hours at dusk and dawn cause sound to carry much further than at other times throughout the day. This is one of the reasons sea lions can be heard barking a mile away and trains and containers can be heard in the Port all the way up the hill, yet rock concert volumes are much louder than these other sound sources. The direction the speakers are pointed won't provide much mitigation for these issues since sound, especially bass which is non-directional, travels throughout the community once it's propagated.

Many references have been made to Nederlander Concerts' experience running the Greek Theater, however, the Greek, even after it's 2015 expansion, is only 5,900 seats and sits in the middle of the 3,000 plus acre Griffith Park and is NOT located in a residential community. Still, great emphasis is made after concerts by the promoters for people leaving in their cars to be conscious that they're traveling THROUGH a residential community and to do so quietly. There is acknowledgement that even the noise from car stereos and talking is disruptive to residential communities, and yet, here in San Pedro, the powers that be are trying to push an amphitheater 300 seats larger than the Greek a mere 1,400 feet from the edge of a quiet residential community in which the right to quiet peace and enjoyment of their homes will be forever destroyed by such a project.

This will hurt local businesses as well which will be inundated with the sound and pollution from this project and would likely eliminate the desire for outdoor dining.

Please be sure all of these issues will be deeply analyzed and addressed in the DSEIR and that the Community will be heard regarding solutions to these issues, or that if no adequate mitigation solutions are possible, that the new proposal will not move forward.

Sincerely,
Noel Gould
Point Fermin Resident
310-625-1157
aquarianstudios@hotmail.com

EXHIBIT 7

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Annual

2111 South Pacific Avenue Future
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Annual

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	0.0575	0.7682	0.5411	2.2000e-003	0.0864	0.0175	0.1038	0.0213	0.0162	0.0375	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307
2023	0.2665	0.1185	0.1581	3.6000e-004	0.0147	5.1200e-003	0.0198	3.9200e-003	4.7400e-003	8.6600e-003	0.0000	32.1391	32.1391	5.4900e-003	0.0000	32.2765
Maximum	0.2665	0.7682	0.5411	2.2000e-003	0.0864	0.0175	0.1038	0.0213	0.0162	0.0375	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307

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	0.0575	0.7682	0.5411	2.2000e-003	0.0614	0.0175	0.0788	0.0152	0.0162	0.0314	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307
2023	0.2665	0.1185	0.1581	3.6000e-004	8.9100e-003	5.1200e-003	0.0140	2.5100e-003	4.7400e-003	7.2500e-003	0.0000	32.1391	32.1391	5.4900e-003	0.0000	32.2764
Maximum	0.2665	0.7682	0.5411	2.2000e-003	0.0614	0.0175	0.0788	0.0152	0.0162	0.0314	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307

	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	30.43	0.00	24.88	29.86	0.00	16.33	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8610	0.8610
2	12-1-2022	2-28-2023	0.4965	0.4965
		Highest	0.8610	0.8610

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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Energy	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	393.1015	393.1015	9.0600e-003	2.5800e-003	394.0983
Mobile	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Waste						0.0000	0.0000		0.0000	0.0000	9.7212	0.0000	9.7212	0.5745	0.0000	24.0840
Water						0.0000	0.0000		0.0000	0.0000	2.1093	74.1404	76.2497	0.2184	5.4800e-003	83.3421
Total	0.5043	0.8049	3.1949	8.8500e-003	0.7347	0.0171	0.7518	0.1969	0.0166	0.2135	11.8306	1,268.8442	1,280.6747	0.8411	8.4600e-003	1,304.2235

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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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Energy	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	393.1015	393.1015	9.0600e-003	2.5800e-003	394.0983
Mobile	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Waste						0.0000	0.0000		0.0000	0.0000	9.7212	0.0000	9.7212	0.5745	0.0000	24.0840
Water						0.0000	0.0000		0.0000	0.0000	2.1093	74.1404	76.2497	0.2184	5.4800e-003	83.3421
Total	0.5043	0.8049	3.1949	8.8500e-003	0.7347	0.0171	0.7518	0.1969	0.0166	0.2135	11.8306	1,268.844 2	1,280.674 7	0.8411	8.4600e-003	1,304.223 5

	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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.56

Acres of Paving: 0

Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					0.0169	0.0000	0.0169	2.5600e-003	0.0000	2.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	0.0169	1.6900e-003	0.0186	2.5600e-003	1.6100e-003	4.1700e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.2 Demolition - 2022**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	1.1500e-003	0.0338	9.1400e-003	1.1000e-004	2.7500e-003	1.1000e-004	2.8600e-003	7.5000e-004	1.1000e-004	8.6000e-004	0.0000	11.2473	11.2473	7.2000e-004	0.0000	11.2652
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	2.0000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774
Total	1.3500e-003	0.0340	0.0109	1.2000e-004	3.3000e-003	1.1000e-004	3.4100e-003	9.0000e-004	1.1000e-004	1.0100e-003	0.0000	11.7244	11.7244	7.3000e-004	0.0000	11.7426

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					0.0169	0.0000	0.0169	2.5600e-003	0.0000	2.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	0.0169	1.6900e-003	0.0186	2.5600e-003	1.6100e-003	4.1700e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.2 Demolition - 2022**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	1.1500e-003	0.0338	9.1400e-003	1.1000e-004	1.8000e-003	1.1000e-004	1.9100e-003	5.2000e-004	1.1000e-004	6.3000e-004	0.0000	11.2473	11.2473	7.2000e-004	0.0000	11.2652
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	2.0000e-004	1.5000e-004	1.7400e-003	1.0000e-005	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774
Total	1.3500e-003	0.0340	0.0109	1.2000e-004	2.1300e-003	1.1000e-004	2.2400e-003	6.1000e-004	1.1000e-004	7.3000e-004	0.0000	11.7244	11.7244	7.3000e-004	0.0000	11.7426

3.3 Site Preparation - 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2022**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2022**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239

3.4 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					2.1800e-003	0.0000	2.1800e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	2.1800e-003	3.4000e-004	2.5200e-003	6.2000e-004	3.2000e-004	9.4000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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3.4 Grading - 2022**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	0.0115	0.3670	0.0912	1.0900e-003	0.0246	1.0300e-003	0.0256	6.7400e-003	9.8000e-004	7.7300e-003	0.0000	107.5991	107.5991	7.4400e-003	0.0000	107.7851
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	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0954	0.0954	0.0000	0.0000	0.0955
Total	0.0115	0.3671	0.0915	1.0900e-003	0.0247	1.0300e-003	0.0257	6.7700e-003	9.8000e-004	7.7600e-003	0.0000	107.6945	107.6945	7.4400e-003	0.0000	107.8806

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					2.1800e-003	0.0000	2.1800e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	2.1800e-003	3.4000e-004	2.5200e-003	6.2000e-004	3.2000e-004	9.4000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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3.4 Grading - 2022**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	0.0115	0.3670	0.0912	1.0900e-003	0.0161	1.0300e-003	0.0171	4.6600e-003	9.8000e-004	5.6400e-003	0.0000	107.5991	107.5991	7.4400e-003	0.0000	107.7851
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	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0954	0.0954	0.0000	0.0000	0.0955
Total	0.0115	0.3671	0.0915	1.0900e-003	0.0161	1.0300e-003	0.0172	4.6800e-003	9.8000e-004	5.6600e-003	0.0000	107.6945	107.6945	7.4400e-003	0.0000	107.8806

3.5 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	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0547	37.0547	0.0120	0.0000	37.3543
Total	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0547	37.0547	0.0120	0.0000	37.3543

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3.5 Building Construction - 2022**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	1.7300e-003	0.0555	0.0150	1.5000e-004	3.7300e-003	1.0000e-004	3.8300e-003	1.0800e-003	1.0000e-004	1.1800e-003	0.0000	14.4644	14.4644	8.6000e-004	0.0000	14.4860
Worker	0.0130	9.7400e-003	0.1122	3.4000e-004	0.0353	2.8000e-004	0.0356	9.3700e-003	2.6000e-004	9.6300e-003	0.0000	30.7142	30.7142	8.5000e-004	0.0000	30.7354
Total	0.0147	0.0653	0.1272	4.9000e-004	0.0390	3.8000e-004	0.0394	0.0105	3.6000e-004	0.0108	0.0000	45.1787	45.1787	1.7100e-003	0.0000	45.2214

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	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0546	37.0546	0.0120	0.0000	37.3542
Total	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0546	37.0546	0.0120	0.0000	37.3542

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3.5 Building Construction - 2022**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	1.7300e-003	0.0555	0.0150	1.5000e-004	2.5200e-003	1.0000e-004	2.6200e-003	7.8000e-004	1.0000e-004	8.8000e-004	0.0000	14.4644	14.4644	8.6000e-004	0.0000	14.4860
Worker	0.0130	9.7400e-003	0.1122	3.4000e-004	0.0212	2.8000e-004	0.0215	5.9200e-003	2.6000e-004	6.1800e-003	0.0000	30.7142	30.7142	8.5000e-004	0.0000	30.7354
Total	0.0147	0.0653	0.1272	4.9000e-004	0.0237	3.8000e-004	0.0241	6.7000e-003	3.6000e-004	7.0600e-003	0.0000	45.1787	45.1787	1.7100e-003	0.0000	45.2214

3.5 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	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324
Total	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324

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3.5 Building Construction - 2023**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	4.5000e-004	0.0147	4.7200e-003	5.0000e-005	1.3100e-003	2.0000e-005	1.3300e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	4.9230	4.9230	2.7000e-004	0.0000	4.9297
Worker	4.2900e-003	3.1000e-003	0.0362	1.1000e-004	0.0124	1.0000e-004	0.0125	3.2900e-003	9.0000e-005	3.3800e-003	0.0000	10.3966	10.3966	2.7000e-004	0.0000	10.4033
Total	4.7400e-003	0.0178	0.0410	1.6000e-004	0.0137	1.2000e-004	0.0138	3.6700e-003	1.1000e-004	3.7700e-003	0.0000	15.3196	15.3196	5.4000e-004	0.0000	15.3330

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	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324
Total	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324

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3.5 Building Construction - 2023**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	4.5000e-004	0.0147	4.7200e-003	5.0000e-005	8.8000e-004	2.0000e-005	9.0000e-004	2.7000e-004	2.0000e-005	2.9000e-004	0.0000	4.9230	4.9230	2.7000e-004	0.0000	4.9297
Worker	4.2900e-003	3.1000e-003	0.0362	1.1000e-004	7.4500e-003	1.0000e-004	7.5500e-003	2.0800e-003	9.0000e-005	2.1700e-003	0.0000	10.3966	10.3966	2.7000e-004	0.0000	10.4033
Total	4.7400e-003	0.0178	0.0410	1.6000e-004	8.3300e-003	1.2000e-004	8.4500e-003	2.3500e-003	1.1000e-004	2.4600e-003	0.0000	15.3196	15.3196	5.4000e-004	0.0000	15.3330

3.6 Paving - 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	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

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3.6 Paving - 2023**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	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139
Total	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139

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	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

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3.6 Paving - 2023**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	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139
Total	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139

3.7 Architectural Coating - 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					
Archit. Coating	0.2512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	0.2517	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393

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3.7 Architectural Coating - 2023**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	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909
Total	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909

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	0.2512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	0.2517	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393

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3.7 Architectural Coating - 2023**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	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909
Total	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	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	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Unmitigated	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartment Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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
Apartment Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	343.7589	343.7589	8.1200e-003	1.6800e-003	344.4624
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	343.7589	343.7589	8.1200e-003	1.6800e-003	344.4624
NaturalGas Mitigated	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.5000e-004	9.0000e-004	49.6359
NaturalGas Unmitigated	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.5000e-004	9.0000e-004	49.6359

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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 Mid Rise	921694	4.9700e-003	0.0425	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	49.1851	49.1851	9.4000e-004	9.0000e-004	49.4774
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
Strip Mall	2952	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1575	0.1575	0.0000	0.0000	0.1585
Total		4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.4000e-004	9.0000e-004	49.6359

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 Mid Rise	921694	4.9700e-003	0.0425	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	49.1851	49.1851	9.4000e-004	9.0000e-004	49.4774
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
Strip Mall	2952	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1575	0.1575	0.0000	0.0000	0.1585
Total		4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.4000e-004	9.0000e-004	49.6359

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	396008	220.5612	5.2100e-003	1.0800e-003	221.0126
Enclosed Parking with Elevator	196896	109.6635	2.5900e-003	5.4000e-004	109.8879
Strip Mall	24300	13.5342	3.2000e-004	7.0000e-005	13.5619
Total		343.7589	8.1200e-003	1.6900e-003	344.4624

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	396008	220.5612	5.2100e-003	1.0800e-003	221.0126
Enclosed Parking with Elevator	196896	109.6635	2.5900e-003	5.4000e-004	109.8879
Strip Mall	24300	13.5342	3.2000e-004	7.0000e-005	13.5619
Total		343.7589	8.1200e-003	1.6900e-003	344.4624

6.0 Area Detail

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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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Unmitigated	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680

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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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2838					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1800e-003	0.0187	7.9400e-003	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6123	21.6123	4.1000e-004	4.0000e-004	21.7408
Landscaping	0.0311	0.0119	1.0319	5.0000e-005		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	1.6867	1.6867	1.6200e-003	0.0000	1.7272
Total	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0300e-003	4.0000e-004	23.4680

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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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2838					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1800e-003	0.0187	7.9400e-003	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6123	21.6123	4.1000e-004	4.0000e-004	21.7408
Landscaping	0.0311	0.0119	1.0319	5.0000e-005		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	1.6867	1.6867	1.6200e-003	0.0000	1.7272
Total	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0300e-003	4.0000e-004	23.4680

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	76.2497	0.2184	5.4800e-003	83.3421
Unmitigated	76.2497	0.2184	5.4800e-003	83.3421

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	6.5154 / 4.10754	74.7348	0.2140	5.3700e-003	81.6850
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.133331 / 0.0817187	1.5149	4.3800e-003	1.1000e-004	1.6571
Total		76.2497	0.2184	5.4800e-003	83.3421

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	6.5154 / 4.10754	74.7348	0.2140	5.3700e-003	81.6850
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.133331 / 0.0817187	1.5149	4.3800e-003	1.1000e-004	1.6571
Total		76.2497	0.2184	5.4800e-003	83.3421

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.7212	0.5745	0.0000	24.0840
Unmitigated	9.7212	0.5745	0.0000	24.0840

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	46	9.3376	0.5518	0.0000	23.1335
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.89	0.3837	0.0227	0.0000	0.9505
Total		9.7212	0.5745	0.0000	24.0840

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	46	9.3376	0.5518	0.0000	23.1335
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.89	0.3837	0.0227	0.0000	0.9505
Total		9.7212	0.5745	0.0000	24.0840

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

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11.0 Vegetation

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2111 South Pacific Avenue Future

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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	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

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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	12.0844	362.4033	96.7738	1.1130	27.2714	1.3603	28.6317	7.4940	1.3010	8.7951	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481
2023	100.7537	7.7490	10.4213	0.0246	1.0749	0.3289	1.4038	0.2874	0.3027	0.5901	0.0000	2,447.7401	2,447.7401	0.4032	0.0000	2,457.8204
Maximum	100.7537	362.4033	96.7738	1.1130	27.2714	1.3603	28.6317	7.4940	1.3010	8.7951	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481

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	12.0844	362.4033	96.7738	1.1130	18.5390	1.3603	19.8993	5.3506	1.3010	6.6516	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481
2023	100.7537	7.7490	10.4213	0.0246	0.6524	0.3289	0.9814	0.1837	0.3027	0.4864	0.0000	2,447.7401	2,447.7401	0.4032	0.0000	2,457.8204
Maximum	100.7537	362.4033	96.7738	1.1130	18.5390	1.3603	19.8993	5.3506	1.3010	6.6516	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481

	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	32.30	0.00	30.48	28.88	0.00	23.94	0.00	0.00	0.00	0.00	0.00	0.00

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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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Total	3.0562	5.6849	21.2035	0.0594	4.1161	0.2206	4.3367	1.1014	0.2181	1.3195	0.0000	7,100.4355	7,100.4355	0.2829	0.0404	7,119.5488

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Total	3.0562	5.6849	21.2035	0.0594	4.1161	0.2206	4.3367	1.1014	0.2181	1.3195	0.0000	7,100.4355	7,100.4355	0.2829	0.0404	7,119.5488

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	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	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0.56****Acres of Paving: 0****Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)****OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.2 Demolition - 2022**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	0.2294	6.4907	1.8088	0.0229	0.5589	0.0224	0.5813	0.1532	0.0214	0.1746		2,489.1796	2,489.1796	0.1569		2,493.1018
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	0.2695	6.5173	2.1804	0.0240	0.6706	0.0233	0.6939	0.1828	0.0222	0.2050		2,599.0509	2,599.0509	0.1599		2,603.0489

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

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3.2 Demolition - 2022**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	0.2294	6.4907	1.8088	0.0229	0.3644	0.0224	0.3868	0.1054	0.0214	0.1269		2,489.1796	2,489.1796	0.1569		2,493.1018
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		109.8712	109.8712	3.0300e-003		109.9470
Total	0.2695	6.5173	2.1804	0.0240	0.4315	0.0233	0.4547	0.1241	0.0222	0.1463		2,599.0509	2,599.0509	0.1599		2,603.0489

3.3 Site Preparation - 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2022**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
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
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2022**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
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
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735

3.4 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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.4 Grading - 2022**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	11.3349	355.9629	88.9328	1.0999	24.9791	1.0219	26.0010	6.8473	0.9777	7.8250		119,484.7344	119,484.7344	8.0827		119,686.8009
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	11.3750	355.9895	89.3044	1.1010	25.0908	1.0228	26.1136	6.8769	0.9785	7.8554		119,594.6056	119,594.6056	8.0857		119,796.7480

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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.4 Grading - 2022**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	11.3349	355.9629	88.9328	1.0999	16.2913	1.0219	17.3132	4.7149	0.9777	5.6925		119,484.7344	119,484.7344	8.0827		119,686.8009
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		109.8712	109.8712	3.0300e-003		109.9470
Total	11.3750	355.9895	89.3044	1.1010	16.3584	1.0228	17.3812	4.7335	0.9785	5.7120		119,594.6056	119,594.6056	8.0857		119,796.7480

3.5 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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652

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3.5 Building Construction - 2022**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
Vendor	0.0456	1.4773	0.3842	4.0800e-003	0.1024	2.7800e-003	0.1052	0.0295	2.6600e-003	0.0322		435.9774	435.9774	0.0250		436.6029
Worker	0.3493	0.2315	3.2329	9.5900e-003	0.9725	7.6100e-003	0.9801	0.2579	7.0100e-003	0.2649		955.8797	955.8797	0.0264		956.5393
Total	0.3950	1.7088	3.6172	0.0137	1.0749	0.0104	1.0853	0.2874	9.6700e-003	0.2971		1,391.857 1	1,391.857 1	0.0514		1,393.142 2

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.939 3	1,103.939 3	0.3570		1,112.865 2
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.939 3	1,103.939 3	0.3570		1,112.865 2

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3.5 Building Construction - 2022**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
Vendor	0.0456	1.4773	0.3842	4.0800e-003	0.0689	2.7800e-003	0.0716	0.0213	2.6600e-003	0.0239		435.9774	435.9774	0.0250		436.6029
Worker	0.3493	0.2315	3.2329	9.5900e-003	0.5836	7.6100e-003	0.5912	0.1624	7.0100e-003	0.1695		955.8797	955.8797	0.0264		956.5393
Total	0.3950	1.7088	3.6172	0.0137	0.6524	0.0104	0.6628	0.1837	9.6700e-003	0.1934		1,391.857 1	1,391.857 1	0.0514		1,393.142 2

3.5 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.608 9	1,104.608 9	0.3573		1,113.540 2
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.608 9	1,104.608 9	0.3573		1,113.540 2

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3.5 Building Construction - 2023**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
Vendor	0.0339	1.1209	0.3470	3.9400e-003	0.1024	1.2900e-003	0.1037	0.0295	1.2400e-003	0.0307		422.2519	422.2519	0.0222		422.8062
Worker	0.3280	0.2095	2.9773	9.2400e-003	0.9725	7.4000e-003	0.9799	0.2579	6.8100e-003	0.2647		920.8793	920.8793	0.0238		921.4740
Total	0.3619	1.3304	3.3243	0.0132	1.0749	8.6900e-003	1.0836	0.2874	8.0500e-003	0.2954		1,343.1312	1,343.1312	0.0460		1,344.2802

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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0339	1.1209	0.3470	3.9400e-003	0.0689	1.2900e-003	0.0702	0.0213	1.2400e-003	0.0225		422.2519	422.2519	0.0222		422.8062
Worker	0.3280	0.2095	2.9773	9.2400e-003	0.5836	7.4000e-003	0.5910	0.1624	6.8100e-003	0.1693		920.8793	920.8793	0.0238		921.4740
Total	0.3619	1.3304	3.3243	0.0132	0.6524	8.6900e-003	0.6611	0.1837	8.0500e-003	0.1917		1,343.1312	1,343.1312	0.0460		1,344.2802

3.6 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498
Total	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		190.5268	190.5268	4.9200e-003		190.6498
Total	0.0679	0.0433	0.6160	1.9100e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		190.5268	190.5268	4.9200e-003		190.6498

3.7 Architectural Coating - 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					
Archit. Coating	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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3.7 Architectural Coating - 2023**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
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
Worker	0.0641	0.0409	0.5818	1.8100e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		179.9419	179.9419	4.6500e-003		180.0581
Total	0.0641	0.0409	0.5818	1.8100e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		179.9419	179.9419	4.6500e-003		180.0581

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	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

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3.7 Architectural Coating - 2023**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
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
Worker	0.0641	0.0409	0.5818	1.8100e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		179.9419	179.9419	4.6500e-003		180.0581
Total	0.0641	0.0409	0.5818	1.8100e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		179.9419	179.9419	4.6500e-003		180.0581

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

	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	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Unmitigated	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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 Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
NaturalGas Unmitigated	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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 Mid Rise	2525.19	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	8.08767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

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 Mid Rise	2.52519	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	0.00808767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

6.0 Area Detail

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Unmitigated	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

7.0 Water Detail**7.1 Mitigation Measures Water****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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

2111 South Pacific Avenue Future

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	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	12.3627	366.4717	101.9148	1.0937	27.2714	1.3762	28.6477	7.4940	1.3163	8.8103	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080
2023	100.7613	7.7662	10.1873	0.0240	1.0749	0.3290	1.4039	0.2874	0.3027	0.5901	0.0000	2,382.5419	2,382.5419	0.4030	0.0000	2,392.6175
Maximum	100.7613	366.4717	101.9148	1.0937	27.2714	1.3762	28.6477	7.4940	1.3163	8.8103	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080

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	12.3627	366.4717	101.9148	1.0937	18.5390	1.3762	19.9152	5.3506	1.3163	6.6669	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080
2023	100.7613	7.7662	10.1873	0.0240	0.6524	0.3290	0.9814	0.1837	0.3027	0.4864	0.0000	2,382.5419	2,382.5419	0.4030	0.0000	2,392.6175
Maximum	100.7613	366.4717	101.9148	1.0937	18.5390	1.3762	19.9152	5.3506	1.3163	6.6669	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080

	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	32.30	0.00	30.46	28.88	0.00	23.90	0.00	0.00	0.00	0.00	0.00	0.00

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.756 4	1,920.756 4	0.0508	0.0349	1,932.439 6
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.693 8	4,648.693 8	0.2257		4,654.335 7
Total	3.0273	5.7744	20.5573	0.0570	4.1161	0.2207	4.3368	1.1014	0.2182	1.3196	0.0000	6,867.482 7	6,867.482 7	0.2822	0.0404	6,886.578 9

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.756 4	1,920.756 4	0.0508	0.0349	1,932.439 6
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.693 8	4,648.693 8	0.2257		4,654.335 7
Total	3.0273	5.7744	20.5573	0.0570	4.1161	0.2207	4.3368	1.1014	0.2182	1.3196	0.0000	6,867.482 7	6,867.482 7	0.2822	0.0404	6,886.578 9

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

	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	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0.56****Acres of Paving: 0****Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)****OffRoad Equipment**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.2 Demolition - 2022**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	0.2323	6.6370	1.8594	0.0227	0.5589	0.0226	0.5814	0.1532	0.0216	0.1748		2,466.375 2	2,466.375 2	0.1599		2,470.371 9
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	0.2771	6.6665	2.1986	0.0237	0.6706	0.0234	0.6941	0.1828	0.0224	0.2052		2,569.832 2	2,569.832 2	0.1627		2,573.900 0

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.902 5	1,147.902 5	0.2119		1,153.200 1
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348	0.0000	1,147.902 5	1,147.902 5	0.2119		1,153.200 1

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3.2 Demolition - 2022**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	0.2323	6.6370	1.8594	0.0227	0.3644	0.0226	0.3869	0.1054	0.0216	0.1270		2,466.375 2	2,466.375 2	0.1599		2,470.371 9
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		103.4570	103.4570	2.8500e-003		103.5282
Total	0.2771	6.6665	2.1986	0.0237	0.4315	0.0234	0.4549	0.1241	0.0224	0.1465		2,569.832 2	2,569.832 2	0.1627		2,573.900 0

3.3 Site Preparation - 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641
Total	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641

3.4 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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.4 Grading - 2022**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	11.6085	360.0284	94.1063	1.0806	24.9791	1.0378	26.0169	6.8473	0.9929	7.8402		117,396.5208	117,396.5208	8.3584		117,605.4798
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	11.6533	360.0579	94.4454	1.0817	25.0908	1.0387	26.1295	6.8769	0.9937	7.8707		117,499.9778	117,499.9778	8.3612		117,709.0079

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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

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3.4 Grading - 2022**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	11.6085	360.0284	94.1063	1.0806	16.2913	1.0378	17.3292	4.7149	0.9929	5.7078		117,396.5208	117,396.5208	8.3584		117,605.4798
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		103.4570	103.4570	2.8500e-003		103.5282
Total	11.6533	360.0579	94.4454	1.0817	16.3584	1.0387	17.3971	4.7335	0.9937	5.7273		117,499.9778	117,499.9778	8.3612		117,709.0079

3.5 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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652

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3.5 Building Construction - 2022**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
Vendor	0.0479	1.4733	0.4252	3.9600e-003	0.1024	2.8700e-003	0.1053	0.0295	2.7400e-003	0.0322		423.9525	423.9525	0.0266		424.6186
Worker	0.3896	0.2563	2.9508	9.0300e-003	0.9725	7.6100e-003	0.9801	0.2579	7.0100e-003	0.2649		900.0754	900.0754	0.0248		900.6950
Total	0.4376	1.7295	3.3761	0.0130	1.0749	0.0105	1.0854	0.2874	9.7500e-003	0.2972		1,324.0279	1,324.0279	0.0514		1,325.3136

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652

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3.5 Building Construction - 2022**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
Vendor	0.0479	1.4733	0.4252	3.9600e-003	0.0689	2.8700e-003	0.0717	0.0213	2.7400e-003	0.0240		423.9525	423.9525	0.0266		424.6186
Worker	0.3896	0.2563	2.9508	9.0300e-003	0.5836	7.6100e-003	0.5912	0.1624	7.0100e-003	0.1695		900.0754	900.0754	0.0248		900.6950
Total	0.4376	1.7295	3.3761	0.0130	0.6524	0.0105	0.6629	0.1837	9.7500e-003	0.1935		1,324.0279	1,324.0279	0.0514		1,325.3136

3.5 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0356	1.1158	0.3779	3.8400e-003	0.1024	1.3600e-003	0.1038	0.0295	1.3000e-003	0.0308		410.7861	410.7861	0.0235		411.3725
Worker	0.3671	0.2318	2.7124	8.7000e-003	0.9725	7.4000e-003	0.9799	0.2579	6.8100e-003	0.2647		867.1469	867.1469	0.0223		867.7048
Total	0.4027	1.3476	3.0902	0.0125	1.0749	8.7600e-003	1.0837	0.2874	8.1100e-003	0.2955		1,277.9330	1,277.9330	0.0458		1,279.0773

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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0356	1.1158	0.3779	3.8400e-003	0.0689	1.3600e-003	0.0702	0.0213	1.3000e-003	0.0226		410.7861	410.7861	0.0235		411.3725
Worker	0.3671	0.2318	2.7124	8.7000e-003	0.5836	7.4000e-003	0.5910	0.1624	6.8100e-003	0.1693		867.1469	867.1469	0.0223		867.7048
Total	0.4027	1.3476	3.0902	0.0125	0.6524	8.7600e-003	0.6612	0.1837	8.1100e-003	0.1918		1,277.9330	1,277.9330	0.0458		1,279.0773

3.6 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251
Total	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		179.4097	179.4097	4.6200e-003		179.5251
Total	0.0759	0.0480	0.5612	1.8000e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		179.4097	179.4097	4.6200e-003		179.5251

3.7 Architectural Coating - 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					
Archit. Coating	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2023**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
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
Worker	0.0717	0.0453	0.5300	1.7000e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		169.4425	169.4425	4.3600e-003		169.5515
Total	0.0717	0.0453	0.5300	1.7000e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		169.4425	169.4425	4.3600e-003		169.5515

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	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2023**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
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
Worker	0.0717	0.0453	0.5300	1.7000e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		169.4425	169.4425	4.3600e-003		169.5515
Total	0.0717	0.0453	0.5300	1.7000e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		169.4425	169.4425	4.3600e-003		169.5515

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

	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	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.6938	4,648.6938	0.2257		4,654.3357
Unmitigated	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.6938	4,648.6938	0.2257		4,654.3357

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartment Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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
Apartment Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
NaturalGas Unmitigated	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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 Mid Rise	2525.19	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	8.08767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

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 Mid Rise	2.52519	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	0.00808767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

6.0 Area Detail

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Unmitigated	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

7.0 Water Detail**7.1 Mitigation Measures Water****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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.0171
Daily Emissions (lbs/day)	0.09369863
Total DPM (lbs)	34.2
Emission Rate (g/s)	0.000491918
Release Height (meters)	3
Total Acreage	0.56
Max Horizontal (meters)	67.32
Min Horizontal (meters)	33.66
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	3,849,297

Start date and time 08/11/22 13:49:32

AERSCREEN 21112

2139 South Pacific Avenue Operation

2139 South Pacific Avenue Operation

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

METRIC

ENGLISH

** AREADATA **

Emission Rate: 0.492E-03 g/s 0.390E-02 lb/hr

Area Height: 3.00 meters 9.84 feet

Area Source Length: 67.32 meters 220.87 feet

Area Source Width: 33.66 meters 110.43 feet

Vertical Dimension: 1.50 meters 4.92 feet

Model Mode: URBAN

Population: 3849297

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:

2022.08.11_2139SouthPacificAvenue_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 08/11/22 13:50:54

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 08/11/22 13:51:01

REFINE started 08/11/22 13:51:01

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

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

*** NONE ***

REFINE ended 08/11/22 13:51:02

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

Ending date and time 08/11/22 13:51:09

Concentration	Distance	Elevation	Diag	Season/Month	Zo sector	Date	H0	U*	W*	DT/DZ	ZICNV
ZIMCH M-O LEN	Z0 BOWEN	ALBEDO	REF WS	HT REF TA	HT						
0.25793E+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							
0.31836E+01	25.00	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							
* 0.33296E+01	35.00	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							
0.19068E+01	50.00	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							
0.98236E+00	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							
0.63334E+00	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							
0.45590E+00	125.00	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							
0.35048E+00	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							
0.28120E+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							
0.23281E+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							
0.19719E+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							
0.17011E+00	250.00	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							
0.14893E+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							
0.13198E+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							
0.11811E+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							
0.10658E+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							
0.96814E-01	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							
0.88507E-01	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							
0.81365E-01	425.00	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							
0.75168E-01	450.00	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							
0.69748E-01	475.00	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							
0.64973E-01	500.00	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							
0.60738E-01	525.00	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							
0.56961E-01	550.00	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							
0.53573E-01	575.00	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							
0.50521E-01	600.00	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									
0.47872E-01			625.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.45353E-01			650.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.43056E-01			675.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.40952E-01			700.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.39021E-01			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									
0.37242E-01			750.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.35599E-01			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									
0.34077E-01			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									
0.32665E-01			825.00	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									
0.31351E-01			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									
0.30126E-01			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									
0.28982E-01			900.00	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									
0.27911E-01			925.00	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									
0.26906E-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									
0.25963E-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									
0.25075E-01			1000.00	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									
0.24239E-01			1025.00	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									
0.23450E-01			1050.00	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									
0.22704E-01			1075.00	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									
0.21998E-01			1100.00	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									
0.21330E-01			1125.00	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									
0.20696E-01			1149.99	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									
0.20094E-01			1175.00	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									
0.19521E-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									
0.18976E-01			1225.00	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									
0.18457E-01			1249.99	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									
0.17962E-01			1275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.17490E-01			1300.00	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									
0.17039E-01			1325.00	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									
0.16608E-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									
0.16195E-01			1375.00	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									
0.15799E-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									
0.15420E-01			1425.00	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									
0.15057E-01			1450.00	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									
0.14708E-01			1475.00	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									
0.14373E-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									
0.14050E-01			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									
0.13741E-01			1550.00	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									
0.13442E-01			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									
0.13155E-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									
0.12878E-01			1625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.12612E-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									
0.12354E-01			1675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.12106E-01			1700.00	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									
0.11866E-01			1725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11634E-01			1750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11410E-01			1775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11194E-01			1800.00	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									
0.10984E-01			1825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10781E-01			1850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10585E-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									
0.10394E-01			1900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10210E-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									
0.10031E-01			1950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.98571E-02			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									
0.96887E-02			2000.00	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									
0.95252E-02			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									
0.93664E-02			2050.00	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									
0.92122E-02			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									
0.90623E-02			2100.00	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									
0.89166E-02			2124.99	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									
0.87749E-02			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									
0.86371E-02			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									
0.85030E-02			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									
0.83725E-02			2224.99	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									
0.82453E-02			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									
0.81216E-02			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									
0.80010E-02			2300.00	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									
0.78835E-02			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									
0.77690E-02			2350.00	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									
0.76573E-02			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									
0.75484E-02			2400.00	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									
0.74421E-02			2425.00	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									
0.73383E-02			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									
0.72370E-02			2475.00	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									
0.71381E-02			2500.00	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									
0.70415E-02			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									
0.69471E-02			2550.00	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									
0.68549E-02			2575.00	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									
0.67648E-02			2600.00	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									
0.66767E-02			2625.00	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									
0.65906E-02			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									
0.65064E-02			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									
0.64240E-02			2700.00	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									
0.63435E-02			2725.00	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									
0.62647E-02			2750.00	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									
0.61875E-02			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									
0.61120E-02			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									
0.60381E-02			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									
0.59657E-02			2850.00	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									
0.58947E-02			2875.00	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									
0.58253E-02			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									
0.57572E-02			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									
0.56905E-02			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									
0.56252E-02			2975.00	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									
0.55611E-02			3000.00	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									
0.54983E-02			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									
0.54367E-02			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									
0.53763E-02			3075.00	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									
0.53170E-02			3100.00	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									
0.52588E-02			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									
0.52018E-02			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									
0.51458E-02			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									
0.50909E-02			3199.99	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									
0.50369E-02			3225.00	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									
0.49839E-02			3250.00	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									
0.49319E-02			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									
0.48809E-02			3300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.48307E-02			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									
0.47814E-02			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									
0.47330E-02			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									
0.46855E-02			3400.00	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									
0.46387E-02			3425.00	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									
0.45928E-02			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									
0.45476E-02			3475.00	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									
0.45032E-02			3500.00	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									
0.44596E-02			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									
0.44166E-02			3550.00	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									
0.43744E-02			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									
0.43329E-02			3600.00	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									
0.42920E-02			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									
0.42518E-02			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									
0.42123E-02			3675.00	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									
0.41734E-02			3700.00	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									
0.41351E-02			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									
0.40975E-02			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									
0.40604E-02			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									
0.40238E-02			3800.00	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									
0.39879E-02			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									
0.39525E-02			3849.99	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									
0.39176E-02			3875.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.38833E-02			3900.00	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									
0.38495E-02			3925.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.38162E-02			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									
0.37834E-02			3975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.37511E-02			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									
0.37192E-02			4025.00	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									
0.36879E-02			4050.00	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									
0.36569E-02			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									
0.36265E-02			4100.00	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									
0.35964E-02			4125.00	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									
0.35668E-02			4149.99	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									
0.35376E-02			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									
0.35088E-02			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									
0.34805E-02			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									
0.34525E-02			4250.00	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									
0.34249E-02			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									
0.33977E-02			4300.00	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									
0.33708E-02			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									
0.33444E-02			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									
0.33182E-02			4375.00	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									
0.32925E-02			4400.00	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									
0.32670E-02			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									
0.32419E-02			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									
0.32172E-02			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									
0.31928E-02			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									
0.31686E-02			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									
0.31449E-02			4550.00	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									
0.31214E-02			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									
0.30982E-02			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									
0.30753E-02			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									
0.30527E-02			4650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

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Technical Consultation, Data Analysis and
Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

**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 – 2014, 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., Fukunaga, 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 Cleanup 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
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Paul Rosenfeld, Ph.D.

Principal Environmental Chemist

Chemical Fate and Transport & Air Dispersion Modeling

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., Sellev, 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. 0i9-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 Cuntly of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix 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
Jaeanette 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

EXHIBIT 8

April 14, 2021

Mr. Jamie Hall
CHANNEL LAW GROUP, LLP
8383 Wilshire Boulevard, Suite 750
Beverly Hills, CA 90211

**Subject: 1309-1331 South Pacific Avenue and 2111-2139 South Pacific Avenue
Noise Impact Review, City of Los Angeles**

Dear Mr. Hall:

Introduction

RK ENGINEERING GROUP, INC. (RK) is pleased to provide this review of potential environmental noise impacts from the 1309-1331 South Pacific Avenue and the 2111-2139 South Pacific Avenue residential projects. This review is based upon the information provided in the City of Los Angeles Notice of Exemption, ENV-2019-4909-CE (Notice of Exemption) and the 1331 South Pacific Avenue Project Noise Technical Report, prepared by DKA Planning, November 2019 (Noise Study).

The purpose of this letter is to review the Notice of Exemption and Noise Study from a noise impact standpoint and provide comments to help ensure that all potential impacts from the project are adequately identified and the effects mitigated to the maximum extent feasible. While this review letter is primarily focused on the technical analysis of the 1331 South Pacific Avenue Project, many of the same technical noise analysis inaccuracies and omissions noted for the 1309-1331 project are also applicable to the 2111-2139 South Pacific Avenue project.

The proposed 1309-1331 South Pacific Avenue project consists of constructing and operating a 4-story residential building with 102 dwelling units and 127 parking spaces in 2 subterranean levels. The project will involve the grading of approximately 2,500 cubic yards of soil, export of approximately 20,000 cubic yards of soil, and the demolition and removal of 3 existing commercial structures and 30 mature trees.

RK specializes in environmental planning and acoustics for governmental agencies, private sector businesses, and community associations. The firm principals have over 70 years of combined engineering and planning experience throughout Southern California. RK has prepared hundreds of noise impact studies, and we are fully aware of the complexity of data gathering, modeling, and the possibility for error within these technical documents.

Comments

The following comments are offered with respect to the City of Los Angeles Notice of Exemption, ENV-2019-4909-CE (Notice of Exemption) and the 1331 South Pacific Avenue Project Noise Technical Report, prepared by DKA Planning, November 2019 (Noise Study).

1. General Comment. The Notice of Exemption and Noise Study have not evaluated environmental noise impacts pursuant to the L.A. CEQA Thresholds Guide, City of Los Angeles, 2006 (L.A. CEQA Guide). According to Page I.1-2 of the L.A. CEQA Guide, the noise screening criteria for determining whether an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required includes the following:

- Would construction activities occur within 500 feet of a noise sensitive use?

The Noise Study identifies multiple sensitive uses adjacent to the project site, including residential homes within 10 feet of areas where construction activity will occur. Therefore, per the City's own CEQA policy, the presence of sensitive uses within 500 feet of the proposed construction site indicates that the potentiality for significant environmental impacts exists and an expanded CEQA review should be provided.

2. Noise Study, Pages 8-9, Existing Conditions. The Noise Study does not recognize several key noise sensitive land uses surrounding the project site where noise impacts may occur. For example, the Noise Study fails to identify and evaluate noise impacts at the existing 501 West 14th Street residences, located approximately 60 feet from the project site and directly across West 14th Street. The Noise Study does not recognize or evaluate noise impacts at the existing 1318 Pacific Avenue residences, located directly across Pacific Avenue and within approximately 75 feet of the project site. The Noise Study does not identify or evaluate impacts at the San

Pedro City Ballet School, located on the corner of Pacific Avenue and 13th Street, less than 150 feet from the project site. The Noise Study also does not identify or evaluate impacts at the 15th Street Elementary School, located approximately 600 feet from the project site. All of these immediately surrounding land uses are considered key noise sensitive receptors that should be included in the evaluation of impacts. The Noise Study is therefore flawed and not supported by substantial evidence.

3. Noise Study, Pages 8-9, Existing Conditions. The Noise Study provides a narrow and insufficient account of the existing ambient noise environment near the site, and states, without substantial evidence, that “noise levels are consistent with General Plan Noise Element guidelines for residential neighborhoods”. However, the Noise Study only evaluates the existing ambient noise environment based on four 15-minute noise level measurements during daytime hours, which is not enough to get the full picture of ambient conditions, especially during the more sensitive nighttime and early morning hours. The Noise Study should disclose 24-hour CNEL noise levels and hourly average noise levels (Leq) at all surrounding noise sensitive uses to provide an accurate assessment of baseline conditions. Given that the proposed project will operate 24-hours a day, and construction activities have the potential to occur as early as 7 A.M. and last until 9 P.M., a fifteen minute sample of noise during the middle of the day does not provide a sufficient baseline by which impacts should be evaluated. San Pedro residences near the project site are exposed to 24-hour noise from multiple sources; including the Port of Los Angeles (POLA), multiple arterial roadways bisecting residential neighborhoods, and several auto body repair and tire shops located near the site and adjacent to key sensitive receptors. By failing to adequately establish baseline conditions, the full extent of potential impacts cannot be determined and additional noise impacts will almost certainly occur during morning, evening and nighttime hours. The Noise Study is not supported by substantial evidence.
4. Noise Study, Pages 9-13, On-Site Construction Noise Impacts. The Noise Study inaccurately analyzes on-site construction noise impacts at 50 feet from the property line. However, as identified in the Noise Study, the residences at 524 West 14th Street are located immediately adjacent to the project site, less than 10 feet from where major construction activity would occur. The project would include multiple building and construction elements that will generate substantial noise less than 50 feet from adjacent residential homes that would presumably last more than 10

days. This would include construction of proposed 2-level subterranean parking structure that directly abuts the adjacent residential property line and the proposed building which has a setback of less than 20 feet. Therefore, the analysis of construction noise impacts at 50 feet grossly underestimates the potential noise level impacts to the adjacent residential homes.

5. Noise Study, Pages 9-13, Off-Site Construction Activities – Haul Trucks. The Noise Study does not adequately account for the impact of heavy trucks loading, staging and circulating near the site. The project is expected to export 20,000 cubic yards of material that will be hauled from the site during the excavation of the 2-level subterranean structure, plus it will require the removal of a significant amount of debris from the demolition of the three existing on-site buildings and removal of 30 trees. It is estimated that over 2,500 heavy truck hauling trips will be required to excavate the site alone. As these trucks enter and exit the site they are no longer considered off-site noise sources and the analysis should take into account the on-site/stationary noise impact of all hauling dump trucks at loading and staging areas. Dumps trucks can generate noise levels up to 84 dBA at 50 feet¹. The Noise Study does not show how the hauling trips were calculated, distributed or where loading/staging areas will be located. Heavy truck activity on or adjacent to the site would be subjected to the Los Angeles Municipal Code (LAMC) enforcement standards for on-site construction activity. The impact has not been adequately evaluated and additional impacts would result from construction trucks and hauling activity.
6. Noise Study, Page 13, Table 4, Maximum Construction Noise Levels. The Noise Study asserts that construction best practices can reduce noise levels by 20 dBA. This assumption is entirely unsubstantiated and practically infeasible. This much noise reduction would not be expected even with the most substantial physical barriers that shield adjacent sensitive receptors from line of sight of construction activity. Given that the project will construct a 4-story/45-foot high building, it would be practically infeasible to build a screening wall high enough to block that much construction noise. Adjacent sensitive residential buildings are also multiple stories high, thus further reducing any potential noise reduction from line of sight screening.

¹ FHWA. Construction Noise Handbook. Chapter 9.4. 2006.

7. Noise Study, Page 13, Table 4, Maximum Construction Noise Levels. The findings of significance shown in Table 4 are misleading, as they do not take into consideration the existing ambient noise levels at the adjacent sensitive receptors. The L.A. CEQA Guide has established that a project would normally have a significant impact on noise levels from construction if;

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

By not analyzing changes in the existing environment, the Noise Study has not disclosed the full impact of the project. For example, as shown in Table 3, residential receptors located at 524 West 14th Street currently experience existing noise levels of 55.9 dBA. When compared to the projected construction noise levels in Table 4, the project would result in an increase in ambient conditions by approximately 9 dBA, almost double the recommended threshold in the L.A. CEQA Guide. The impact would be even more pronounced if the Noise Study were to accurately report impacts during early morning or evening hours, model noise sources at the appropriate distances, and not artificially reduce noise levels by 20 dBA.

8. Noise Study, Page 9-17, Construction Vibration Impacts. The Noise Study makes no mention of vibration impacts that may result from the construction of the project. The project will be constructing a 2-level subterranean structure that will likely require deep foundations. These types of structures are often constructed using pile driving and/or drilling which is a known source of significant vibration. Given the close proximity to adjacent structures, it is likely that significant vibratory impacts may occur and additional analysis and mitigation should be provided.
9. Noise Study, Page 18, Mechanical Equipment. The analysis of potential noise impacts from rooftop mechanical equipment is inadequate. As described in the Noise Study, the mechanical equipment would generate a sound pressure level of approximately 81.9 dBA Leq at five feet. The Noise Study goes on to conclude that it is unlikely that noise from the Project's HVAC systems would be audible at off-site locations. Yet no substantial evidence is provided to support this finding. RK performed a conservative calculation of potential mechanical equipment noise at the adjacent residential property to the east and found that noise levels have the

potential to exceed 50 dBA², which would be audible. Furthermore, since HVAC equipment operates 24-hours per day, noise levels should be compared to both daytime and nighttime ambient conditions to determine impact. The Noise Study did not measure nighttime noise levels, therefore, the Presumed Ambient Noise Levels are established in accordance with LAMC Section 111.03. For residential land uses, the Presumed Ambient Noise Level is 40 dBA during nighttime hours. Therefore, the rooftop HVAC equipment has the potential to increase ambient noise levels by more than 10 dBA, causing a potential noise violation per LAMC Section 112.02 and resulting in a significant impact under CEQA.

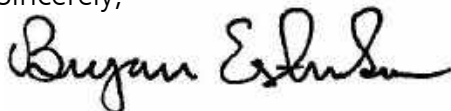
Conclusions

Based upon this review, several inaccuracies and omissions have been found within the analysis of potential environmental noise impacts from the 1309-1331 South Pacific Avenue project. Given the substantial amount of construction and excavation activities that are proposed to take place, the new rooftop HVAC equipment, and the close proximity to adjacent homes and sensitive receptors, the project would cause a significant impact to noise. Hence, the project should provide additional CEQA review and mitigation to reduce impacts to the maximum extent feasible.

Many of the same technical noise analysis inaccuracies and omissions noted for the 1309-1331 project were also observed in the technical noise report for the 2111-2139 South Pacific Avenue project. Given the findings of this letter, the 2111-2139 South Pacific Avenue project would also be expected to result in significant impacts to noise, and additional CEQA review and mitigation should be provided.

RK appreciates the opportunity to work with the CHANNEL LAW GROUP, LLP in reviewing the 1309-1331 and 2111-2139 South Pacific Avenue Projects. If you have any questions please give call at (949) 474-0809.

Sincerely,



Bryan Estrada, AICP, PTP
Principal

² See Attachment A for HVAC noise calculations.

Attachment A

HVAC Noise Calculation Worksheet

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	1331 PACIFIC AVENUE RESIDENTIAL NOISE REVIEW	JOB #:	2954-2021-02
SOURCE:	ROOFTOP HVAC	DATE:	11-Feb-21
LOCATION:	RESIDENTIAL P/L (EAST OF PROJECT SITE)	BY:	B. ESTRADA

NOISE INPUT DATA

OBS DIST=	50.0		
DT WALL=	25.0		
DT W/OB=	25.0	BARRIER+	
HTH WALL=	45.0	TOPO SHIELDING =	-15.10
BARRIER =	0.0 (0=WALL,1=BERM)	NOISE HTH EL=	50.0
OBS HTH=	5.0		
NOISE HTH=	50.0		
OBS EL =	0.0		
NOISE EL =	0.0		
DROP-OFF=	15.0		

DROP OFF COEFFICENTS

(10 = 3.0 dBA PER DOUBLING OF DISTANCE)
(15 = 4.5 dBA PER DOUBLING OF DISTANCE)
(20 = 6.0 dBA PER DOUBLING OF DISTANCE)

NOISE OUTPUT DATA (dBA)

	DIST (FT)	Leq
REF LEVEL	5	81.9
PROJ LEVEL	50	66.9
SHIELDING	50	-15.1
ADJ PROJ LEVEL	50	51.8

NOISE LEVEL REDUCTION DUE TO DISTANCE = -15

TOTAL NOISE LEVEL (dBA)

	Leq
AMBIENT LEVEL	40.0
ADJ PROJ LEVELS	51.8
TOTAL NOISE LEVEL W/ PROJECT	52.1

Communication from Public

Name:

Date Submitted: 08/16/2022 05:24 PM

Council File No: 21-1269

Comments for Public Posting: Please find attached the cover letter for Exhibit 7 of the prior correspondence which was inadvertently omitted from the previous submittal.



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August 16, 2022

Jamie T. Hall
Channel Law Group, LLP
8383 Wilshire Blvd., Suite 750
Beverly Hills, CA 90211

Subject: Comments on the 2111-2139 South Pacific Avenue Project

Dear Mr. Hall,

We have reviewed the July 2022 Applicant's Response to Appeal ("Response"), October 2021 City Planning Commission Letter of Determination ("Letter of Determination"), and September 2021 Department of City Planning Recommendation Report ("Recommendation Report") for the 2111-2139 South Pacific Avenue Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to demolish the existing 1,490-square-foot ("SF") bar and construct a 77,945-SF residential building with 100 dwelling units, 1,800-SF of retail space, and 84 parking spaces on the 0.56-acre site.

Our review concludes that the Letter of Determination fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result of our findings, the proposed Project is not consistent with the April 2017 San Pedro New Community Plan Final Environmental Impact Report ("Program EIR") pursuant to CEQA Guidelines § 15168 and 15162. Furthermore, the Project does not qualify for a Class 32 Categorical Exemption under the California Environmental Quality Act ("CEQA") and 14 Cal. Code of Regs. 1500 et seq. ("CEQA Guidelines") and, therefore, a subsequent EIR must be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the Project will have on the environment.

Air Quality

Incorrect Reliance on CEQA Guidelines § 15162

The Letter of Determination claims that no further environmental review is required for the Project pursuant to CEQA Guidelines § 15168 and 15162. The City claims:

“Found, based on the independent judgment of the decision-maker, after consideration of the whole of the administrative record, that the Project is within the scope of the San Pedro New Community Plan ENV-2009-1558-EIR (Program EIR), pursuant to CEQA Guidelines Sections 15168 and 15162” (p. 1).

According to CEQA Guidelines § 15162:

“(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following: [...]

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.”

As demonstrated above, a subsequent EIR should be prepared if there are mitigation measures that are considerably different from those analyzed in the previous EIR that would substantially reduce one or more significant effects on the environment. Here, regarding applicable mitigation measures, the Letter of Determination states:

“[T]he environmental effects of the Project were covered in the Program EIR and no new environmental effects not identified in the Program EIR will occur and no new mitigation is required; and the City has incorporated all feasible mitigation measures from the Program EIR on the Project” (p. 1).

As demonstrated above, the Letter of Determination claims that the City incorporated all feasible mitigation measures from the Program EIR. However, review of the Program EIR’s Mitigation Monitoring Program (“MMP”) demonstrates that there are certainly new available mitigation measures

“considerably different from those analyzed in the previous EIR [that] would substantially reduce one or more significant effects on the environment.” As such, additional feasible mitigation measures are suggested in the section of this letter titled “Feasible Mitigation Measures Available to Reduce Emissions.” As a result, the Project must not be approved until a subsequent EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels, pursuant to CEQA Guidelines § 15162.

Incorrect Reliance on Class 32 Categorical Exemption

In addition to claiming that the Project is within the scope of the Program EIR, the City claims that the Project is categorically exempt pursuant to CEQA Guidelines § 15332. The Letter of Determination states:

“Determined, that based on the whole of the administrative record, the Project is exempt from CEQA pursuant to State CEQA Guidelines, Article 19, Section 15332, Class 32, and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies” (p. 1).

According to § 15332 of the CEQA Guidelines, a project can only be characterized as an in-fill development and qualify for a Class 32 Categorical Exemption if “approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.” The Letter of Determination claims that the Project would result in less-than-significant air quality impacts (p. F-24). However, this claim is unsubstantiated, as the Project’s air quality analysis is insufficient for the following four reasons:

- (1) The Project relies upon an incorrect and unsubstantiated air model;
- (2) SWAPE’s updated analysis indicates a significant air quality impact;
- (3) The Project fails to adequately evaluate diesel particulate matter emissions; and
- (4) SWAPE’s screening-level HRA indicates a potentially significant health risk impact.

1) Incorrect and Unsubstantiated Air Model

The Project’s air quality analysis relies on emissions calculated with the California Emissions Estimator Model (“CalEEMod”) Version 2016.3.2 (Letter of Determination, p. F-24).¹ 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 emissions and make known which default values are changed as well as provide justification for the values selected.

¹ “CalEEMod Version 2020.4.0.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/download-model>.

When reviewing the Project's CalEEMod output files, provided in the November 2019 Air Quality Technical Report ("AQ Report") as Exhibit D5 to the Recommendation Report, we found that several model inputs were not consistent with information disclosed in the Project documents. As a result, model inputs were unreasonable to apply to the Project and the Project's construction and operational emissions are underestimated. A full CEQA analysis must be prepared in a subsequent EIR 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.

Underestimated Land Use Sizes

According to Letter of Determination:

"Development of a new four-story, 45-foot and five-inch-tall mixed-use residential building comprised of 100 dwelling units (including 11 units restricted to Very Low-Income Households) with 1,800 square feet of ground floor retail space. The Project will provide 84 vehicular parking spaces in two subterranean parking levels, and 75 long-term and eight short-term bicycle parking spaces. The Project will be 77,945 square feet in floor area" (p. 1).

As such, the model should have included 76,145-SF of residential space² and 84 parking spaces. However, review of the CalEEMod output files demonstrates that the "2111 South Pacific Avenue Future" model includes only 66,629-SF of "Apartments Mid Rise" and 63 spaces of "Parking Lot" (see excerpt below) (Exhibit D5, pp. 313, 332, 355).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Enclosed Parking with Elevator	63.00	Space	0.00	25,200.00
Apartments Mid Rise	101.00	Dwelling Unit	0.55	66,629.00
Strip Mall	1.80	1000sqft	0.01	1,800.00

As such, the proposed residential and parking land uses are unreasonable to apply to the Project and are underestimated by 9,516-SF and 21 spaces, respectively.^{3, 4} These underestimations present a serious deficiency, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. Furthermore, land use square footage is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).⁵ Thus, by underestimating the size of the proposed residential and parking land uses, the model underestimates the Project's construction and operational emissions and must not be relied upon to determine Project significance.

² Calculated: (77,945-SF total floor area) – (1,800-SF of retail space) = 76,145-SF of residential space.

³ Calculated: (76,145-SF proposed residential space) – (66,629-SF modeled residential space) = 9,516-SF underestimated residential space.

⁴ Calculated: (84 proposed parking spaces) – (63 modeled parking spaces) = 21 underestimated parking spaces.

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. 28.

Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes several changes to the default individual construction phase lengths (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	87.00
tblConstructionPhase	NumDays	100.00	361.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	22.00

As a result of these changes, the model includes the following construction schedule (see excerpt below) (Exhibit D5, pp. 317, 336-337, 359):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Demolition	Demolition	5/1/2020	6/1/2020	5	22
2	Grading	Grading	6/15/2020	7/14/2020	5	22
3	Building Construction	Building Construction	7/15/2020	12/1/2021	5	361
4	Architectural Coating	Architectural Coating	4/1/2021	8/1/2021	5	87

As you can see in the excerpt above, the demolition phase is increased by 120%, from the default value of 10 to 22 days; the grading phase is increased by 1,000%, from the default value of 2 to 22 days; the building construction phase is increased by 261%, from the default value of 100 to 361 days; and the architectural coating is increased by 1,640%, from the default value of 5 to 87 days. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.⁶ According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

“Developer information” (Exhibit D5, pp. 313, 332, 355).

Furthermore, the AQ Report states:

“Project specific information was provided describing the schedule of construction activities and the equipment inventory required from the Applicant. Details pertaining to the schedule and equipment can be found in the attached Appendix” (p. 17).

Finally, the AQ Report provides the following potential construction schedule (see excerpt below) (p. 31, Table 5):

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. 1, 14.

Table 5
Potential Construction Schedule

Phase	Duration	Notes
Demolition	Month 1	1,581 tons of debris hauled up to 41 miles away
Grading	Months 2-3.5	20,000 cubic yards of soil export hauled up to 41 miles away
Building Construction	Months 3.5-19	
Architectural Coatings	Months 11-15	
Source: DKA Planning, 2019		

However, these changes remain unsupported for two reasons.

First, the Project documents fail to include the above-mentioned developer information or the purported Applicant-provided information describing the schedule of construction activities. 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."⁷

Here, as the Project documents fail to provide substantial evidence to support the revised individual construction phase lengths, we cannot verify the changes. Lacking a valid justification to vary from default inputs, the model's inputs are unreasonable to apply to the Project.

Second, the source provided for the Project's potential construction schedule, DKA Planning, is the CalEEMod output files themselves. This is incorrect, as the Project documents must substantiate the changes included in the CalEEMod model, not vice versa. Thus, the source is inadequate and the revised individual construction phase lengths remain unsubstantiated and unreasonable to apply to the Project.

These unsubstantiated changes present another serious 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).⁸

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. 13-14.

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. 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.

Thus, by disproportionately altering and extending some of the individual construction phase lengths without proper justification, the model assumes there are a greater number of days to complete the construction activities required by the prolonged phases. As such, there will be less construction activities required per day and, consequently, less pollutants emitted per day. As a result, the model underestimates the peak daily emissions associated with some phases of construction and must not be relied upon to determine Project significance.

Unsubstantiated Reduction to Number of Gas Fireplaces

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes several reductions to the default gas fireplace values (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	85.85	0.00
tblFireplaces	NumberNoFireplace	10.10	101.00

As demonstrated in the excerpt above, the models assume that the Project would not include any gas fireplaces. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.⁹ According to the “User Entered Comments & Non-Default Data” table, the justification provided for this assumption is:

“Developer information” (Exhibit D5, pp. 314, 333, 356).

However, this justification is insufficient, as the Project documents fail to mention or substantiate the number of gas fireplaces included in the Project design whatsoever. As previously discussed, this is incorrect. According to the CalEEMod User’s Guide:

⁹ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/cal-eemod/user-s-guide>, p. 1, 14.

“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.”¹⁰

Here, as the Project documents fail to provide substantial evidence to support the assumption that no gas fireplaces would be included in the Project design, we cannot verify the changes.

This potential underestimation presents an issue, as CalEEMod uses the number of gas fireplaces to calculate the Project’s area-source operational emissions.¹¹ Thus, by including unsubstantiated reductions to the gas fireplace values, the model underestimates the Project’s area-source operational emissions and must not be relied upon to determine Project significance.

Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes changes to the default off-road construction equipment unit amount and usage hour values (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.¹² According to the “User Entered Comments and Non-Default Data” table, the justification provided for these changes is:

“Developer information” (Exhibit D5, pp. 313, 332, 355).

Furthermore, the AQ Report states:

“Project specific information was provided describing the schedule of construction activities and the equipment inventory required from the Applicant. Details pertaining to the schedule and equipment can be found in the attached Appendix” (p. 17).

However, these changes remain unsupported for two reasons.

First, the Project documents fail to provide the above-mentioned developer information or the purported Applicant-provided information describing the equipment inventory. As previously discussed, this is incorrect. According to the CalEEMod User’s Guide:

¹⁰ “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.

¹¹ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 40-41.

¹² “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.

“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.”¹³

Here, as the Project documents fail to provide substantial evidence to support the revised off-road construction equipment unit amount and usage hours, we cannot verify the changes and the model inputs are unreasonable to apply to the Project.

Second, the claim that “[d]etails pertaining to the schedule and equipment can be found in the attached Appendix” is insufficient. Upon further review, the attached Appendix is the CalEEMod output files themselves. This is incorrect, as the Project documents must substantiate the changes included in the CalEEMod model, not vice versa. Thus, the source is inadequate, and the revised construction equipment input parameters remain unsubstantiated.

These unsubstantiated changes present an additional issue, as CalEEMod uses the off-road construction equipment input parameters to calculate the emissions associated with off-road construction equipment.¹⁴ By including unsubstantiated changes to the default off-road construction equipment unit amount and usage hours, the model drastically underestimates the Project’s construction-related emissions and must not be relied upon to determine Project significance.

Unsubstantiated Reductions to Worker Trip Numbers

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes two reductions to the worker trip numbers (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblTripsAndVMT	WorkerTripNumber	25.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	10.00

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.¹⁵ According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

“Developer information. Assumes 14 CY haul truck capacity” (Exhibit D5, pp. 314, 333, 356).

However, this justification is insufficient, as the Project documents fail to discuss the number of worker trips expected during Project construction or justify these reductions whatsoever. As such, we cannot verify the revised worker trip numbers are accurate and the model inputs are unreasonable to apply to the Project.

¹³ “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.

¹⁴ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 33-34.

¹⁵ “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.

These underestimations present a further issue, as CalEEMod uses the worker trip numbers to estimate the construction-related emissions associated with on-road vehicles.¹⁶ Thus, by including unsubstantiated reductions to the default worker trip numbers, the model woefully underestimates the Project's mobile-source construction-related emissions and cannot reasonably be relied upon to determine Project significance.

Underestimated Number of Sunday Operational Vehicle Trips

According to the Traffic Impact Analysis ("TIA"), provided as Exhibit D3 to the Recommendation Report, the proposed Project is expected to generate 602 daily operational vehicle trips (see excerpt below) (pp. 117, Table 3).

Table 3
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
<i><u>Proposed Use</u></i>								
Apartments [3]	89 DU	485	8	24	32	24	15	39
Affordable Housing [4]	12 DU	49	2	4	6	2	2	4
Retail [5]	1,800 GLSF	68	1	1	2	3	4	7
<i>Subtotal Proposed Use</i>		602	11	29	40	29	21	50
<i><u>Existing Use</u></i>								
Bar [6]	(1,490) GSF	(170)	Nom.	Nom.	Nom.	(11)	(6)	(17)
<i>Subtotal Existing Uses</i>		(170)	0	0	0	(11)	(6)	(17)
NET INCREASE		432	11	29	40	18	15	33

As such, the Project's model needed to include trip rates that accurately reflect the estimated number of average daily vehicle trips. However, review of the CalEEMod output files demonstrates that the "2111 South Pacific Avenue Future" model includes approximately 571 Sunday operational vehicle trips (see excerpt below) (Exhibit D5, pp. 327, 347, 369).

Land Use	Average Daily Trip Rate		
	Weekday	Saturday	Sunday
Apartments Mid Rise	534.29	534.29	534.29
Enclosed Parking with Elevator	0.00	0.00	0.00
Strip Mall	67.95	67.95	36.77
Total	602.24	602.24	571.06

¹⁶ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 35.

As demonstrated above, the Sunday vehicle trips are underestimated by approximately 31 trips.¹⁷ As such, the trip rates inputted into the model are underestimated and inconsistent with the information provided by the TIA, and therefore are unreasonable to apply to the Project.

These inconsistencies present a further issue, as CalEEMod uses the operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.¹⁸ Thus, by including underestimated operational daily vehicle trips, the model underestimates the Project's mobile-source operational emissions and must not be relied upon to determine Project significance.

2) Updated Analysis Indicates a Significant Air Quality Impact

In an effort to more accurately estimate the Project's construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the Project documents. In our updated model, we included the correct land use sizes and number of Sunday operational vehicle trips, as well as omitted the unsubstantiated changes to the individual construction phase lengths, number of gas fireplaces, off-road construction input parameters, and worker trip numbers.

Our updated analysis estimates that the VOC and NO_x emissions associated with Project construction drastically exceed the applicable South Coast Air Quality Management District ("SCAQMD") thresholds of 75- and 100-pounds per day ("lbs/day"), respectively (see table below).¹⁹

SWAPE Criteria Air Pollutant Emissions		
Construction	VOC (lbs/day)	NO _x (lbs/day)
AQ Report	7.2	83.5
SWAPE	100.8	366.5
% Increase	1,300%	339%
SCAQMD Threshold	75	100
Exceeds?	Yes	Yes

As demonstrated above, construction-related VOC and NO_x emissions, as estimated by SWAPE, have a massive increase of approximately 1,300% and 339%, respectively, and far exceed the applicable SCAQMD significance thresholds. Thus, our updated modeling demonstrates that the Project would result in an extremely significant air quality impact that was not previously identified or addressed by the Letter of Determination and associated documents. As a result, the Project is clearly ineligible for a Class 32 Categorical Exemption and a full CEQA analysis in a subsequent EIR must be prepared to

¹⁷ Calculated: 602 proposed daily trips – 571.06 modeled Sunday trips = 30.94 underestimated Sunday trips.

¹⁸ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 36.

¹⁹ "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>.

adequately assess and mitigate the air quality impacts that the Project ~~may~~ will have on the environment.

3) Diesel Particulate Matter Emissions Inadequately Evaluated

The January 2022 Construction Health Risk Analysis (“HRA Report”), provided as Exhibit D to the Response, conducts a health risk assessment (“HRA”) evaluating impacts as a result of exposure to diesel particulate matter (“DPM”) emissions from off-road construction equipment. Specifically, the HRA Report estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project construction would be 0.9 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (see excerpt below) (p. 7, Table 2).

Table 2
Carcinogenic Risk / Maximum Exposed Residential Receptor

Age Group	Risk
Third Trimester	5.4E-08
0 to 2 years	8.4E-07
Total	9.0E-07

Note: 9.0E-07 denotes an excess case of cancer of 0.09 in one hundred thousand (100,000) individuals exposed.

However, the HRA Report fails to discuss the toxic air contaminant (“TAC”) emissions associated with Project operation or conduct a quantitative operational HRA whatsoever. As such, the evaluation of the Project’s potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for six reasons.

First, the HRA Report states:

“Air Quality Dynamics has prepared a health risk assessment (HRA) to quantify the impact of diesel particulate matter (DPM), which is identified as a toxic air contaminant pursuant to California Code of Regulations Section 93001, associated with the generation of off-road equipment emissions during construction of the proposed project” (p. 1).

As demonstrated above, the construction HRA only accounts for emissions generated by off-road equipment during Project construction. This is woefully insufficient, as the Project expects to generate heavy-duty hauling truck trips throughout construction. The AQ Report indicates that “[s]ources of air pollutant emissions associated with construction activities include heavy-duty offroad diesel equipment and vehicular traffic to and from the Project construction site” (p. 18). Specifically, the AQ Report accounts for 156- and 2,857-hauling truck trips during Project demolition and grading, respectively, which would travel 41 miles and generate diesel exhaust, a known toxic air contaminant (“TAC”). Thus, by failing to account for the Project’s anticipated truck traffic, the construction HRA and associated cancer risk are underestimated and cannot reasonably form the basis for impact analysis.

Second, the Project’s construction HRA is incorrect, as it relies upon emissions estimates from a flawed air model, as discussed above. The HRA Report states:

“For this assessment, the off-road PM10 exhaust estimates reported by CalEEMod were used as a surrogate for DPM emissions which assumed diesel-powered construction equipment will meet EPA-certified Tier 4 emission standards” (p. 2).

As discussed above, when we reviewed the Project's CalEEMod output files, provided AQ Report as Exhibit D5 to the Recommendation Report, we found that several of the values inputted into the model are not consistent with information disclosed in the Project documents. Specifically, the construction schedule and off-road construction equipment list are unsubstantiated. Moreover, the air model utilized for the construction HRA assumes that the Project would use Tier 4 equipment. This is incorrect, as not only do the Project documents fail to mention Tier 4 emissions standards whatsoever, but the use of Tier 4 construction equipment was not included as a formal mitigation measure. According to the Association of Environmental Professionals (“AEP”) *CEQA Portal Topic Paper* on Mitigation Measures:

“While not ‘mitigation’, a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact.”²⁰

As demonstrated above, design features that are not formally included in a mitigation monitoring and reporting program (“MMRP”) may be eliminated from the Project’s design altogether. Thus, as the use of Tier 4 construction equipment is not formally included as a mitigation measure, nor mentioned in the Project documents whatsoever, we cannot guarantee that these standards would be implemented, monitored, and enforced on the Project site. Thus, the model artificially reduces the Project’s expected particulate matter emissions by incorrectly incorporating Tier 4 mitigation, and the HRA utilizes a greatly underestimated DPM concentration to calculate the health risk associated with Project construction. As such, the construction HRA and resulting cancer risk cannot reasonably be relied upon to determine Project significance.

Third, the construction HRA utilizes incorrect Fraction of Time At Home (“FAH”) values. Specifically, the HRA Report utilizes a FAH value of 0.85 for the third trimester (age -0.25 to 0) and infant (age 0 to 2) receptors (Attachment A, Table A1, Table A2). However, the FAH values used for the third trimester and infant receptors are incorrect, as SCAQMD guidance states:

“For Tiers 1, 2, and 3 screening purposes, the FAH is assumed to be 1 for ages third trimester to 16. As a default, children are assumed to attend a daycare or school in close proximity to their home and no discount should be taken for time spent outside of the area affected by the

²⁰ “CEQA Portal Topic Paper Mitigation Measures.” AEP, February 2020, *available at*: <https://cegaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 6.

facility's emissions. People older than age 16 are assumed to spend only 73 percent of their time at home."²¹

As such, per SCAQMD guidance, the HRA Report should have used an FAH of 1 for the third trimester and infant receptors. Thus, by utilizing incorrect FAH values, the HRA Report dramatically underestimates the cancer risk posed to nearby, existing sensitive receptors as a result of Project construction.

Fourth, by failing to prepare a quantified operational HRA, the Project is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences."²² As previously discussed, the TIA indicates that operation of the Project is anticipated to generate 602 average daily vehicle trips, which would generate additional exhaust emissions and expose nearby sensitive receptors to DPM emissions (pp. 117, Table 3). However, the HRA Report fails to evaluate the TAC emissions associated with Project operation or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's operational TAC emissions to the potential health risks posed to nearby receptors, the Project is inconsistent with CEQA's requirement to correlate the Project-generated emissions with potential adverse impacts on human health.

Fifth, 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. This guidance document describes the types of projects that warrant the preparation of an HRA. Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.²³ Furthermore, according to OEHHA:

"Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."²⁴

OEHHA also recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk at the maximally exposed individual resident ("MEIR").²⁵ While the Project documents fail to provide the expected lifetime of the proposed Project, we can reasonably assume that the Project would operate for at least 30 years, if not more. Thus, operation of the Project exceeds the 2-month and 6-month requirements set forth by OEHHA and must be evaluated for the entire 30-year

²¹ "Risk Assessment Procedures." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

²² "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>.

²³ "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>, p. 8-18.

²⁴ "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>, p. 8-18.

²⁵ "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>, p. 2-4.

residential exposure duration, as indicated by OEHHA guidance. These recommendations reflect the most recent state health risk policies, and as such, a full CEQA analysis must be prepared in a subsequent EIR to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

Sixth, while the HRA Report evaluates the Project's health risk impacts to nearby, existing receptors as a result of Project construction, the HRA fails to evaluate the combined lifetime cancer risk as a result of Project construction and operation together. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."²⁶ However, the HRA Report fails to sum each age bin to evaluate the combined cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis is necessary to quantify and sum the entirety of the Project's construction and operational health risks together to compare to the SCAQMD threshold of 10 in one million.

4) Screening-Level Analysis Demonstrates Potentially Significant Health Risk Impact

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.²⁷ The model replaced SCREEN3, and AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").^{28, 29} 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 are 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.

We prepared a preliminary HRA of the Project's operational health risk impact to nearby sensitive receptors using the Project's annual PM₁₀ exhaust estimates from the AQ Report's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. Subtracting the 579-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 28.41 years, approximately. The AQ Report's annual CalEEMod output file indicates that operational activities will generate approximately 34 pounds of DPM per year throughout operation.³⁰ The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and

²⁶ "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf> p. 8-4

²⁷ "AERSCREEN Released as the EPA Recommended Screening Model," U.S. EPA, April 2011, *available at*: http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

²⁸ "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>.

²⁹ "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at*: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

³⁰ See Attachment B for calculations.

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

$$\text{Emission Rate} \left(\frac{\text{grams}}{\text{second}} \right) = \frac{34.2 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.000492 \text{ g/s}}$$

Using this equation, we estimated an operational emission rate of 0.000492 g/s. Construction and operational activity was simulated as a 0.56-acre rectangular area source in AERSCREEN with approximate dimensions of 67- by 34-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 Los Angeles was obtained from U.S. 2020 Census data.³¹

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. United States Environmental Protection Agency (“EPA”) guidance suggests that in screening procedures, the annualized average concentration of an air pollutant to be estimated by multiplying the single-hour concentration by 10%.³² According to the HRA, the nearest sensitive receptors are multi-family residential buildings and single family dwellings surrounding the Project site (p. 3.2-13). However, review of the AERSCREEN output files demonstrates that the MEIR is located approximately 25 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project operation is approximately 3.184 µg/m³ DPM at approximately 25 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3184 µg/m³ for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD.³³ Guidance from OEHHA and the California Air Resources Board (“CARB”) recommends the use of a standard point estimate approach, including high-point estimate (i.e. 95th percentile) breathing rates and age sensitivity factors (“ASF”), in order to account for the increased sensitivity to carcinogens during early-in-life exposure and accurately assess risk for susceptible subpopulations such as children. The residential exposure parameters, such as the daily breathing rates (“BR/BW”), exposure duration (“ED”), age sensitivity factors (“ASF”), fraction of time at home (“FAH”), and exposure frequency (“EF”) utilized for the various age groups in our screening-level HRA are as follows:

³¹ “Los Angeles.” U.S. Census Bureau, 2020, available at: <https://datacommons.org/place/geoid/0644000>.

³² “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised.” U.S. EPA, October 1992, available at: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

³³ “AB 2588 and Rule 1402 Supplemental Guidelines.” SCAQMD, October 2020, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19>, p. 2.

Exposure Assumptions for Residential Individual Cancer Risk

Age Group	Breathing Rate (L/kg-day)³⁴	Age Sensitivity Factor³⁵	Exposure Duration (years)	Fraction of Time at Home³⁶	Exposure Frequency (days/year)³⁷	Exposure Time (hours/day)
3rd Trimester	361	10	0.25	1	350	24
Infant (0 - 2)	1090	10	2	1	350	24
Child (2 - 16)	572	3	14	1	350	24
Adult (16 - 30)	261	1	14	0.73	350	24

For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor (“CPF”) in units of inverse dose expressed in milligrams per kilogram per day (mg/kg/day⁻¹) to derive the cancer risk estimate. Therefore, to assess exposures, we utilized the following dose algorithm:

$$Dose_{AIR, per\ age\ group} = C_{air} \times EF \times \left[\frac{BR}{BW} \right] \times A \times CF$$

where:

Dose_{AIR} = dose by inhalation (mg/kg/day), per age group
C_{air} = concentration of contaminant in air (µg/m³)
EF = exposure frequency (number of days/365 days)
BR/BW = daily breathing rate normalized to body weight (L/kg/day)
A = inhalation absorption factor (default = 1)
CF = conversion factor (1x10⁻⁶, µg to mg, L to m³)

To calculate the overall cancer risk, we used the following equation for each appropriate age group:

³⁴ “Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics ‘Hot Spots’ Information and Assessment Act.” SCAQMD, October 2020, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19>, p. 19; see also “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>.

³⁵ “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>, p. 8-5 Table 8.3.

³⁶ “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>, p. 5-24.

³⁷ “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>, p. 5-24.

$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

where:

Dose_{AIR} = dose by inhalation (mg/kg/day), per age group

CPF = cancer potency factor, chemical-specific (mg/kg/day)⁻¹

ASF = age sensitivity factor, per age group

FAH = fraction of time at home, per age group (for residential receptors only)

ED = exposure duration (years)

AT = averaging time period over which exposure duration is averaged (always 70 years)

Consistent with the 579-day construction schedule, the annualized averaged concentration for operation was used for the latter 0.66 years on the infant stage of life (0 – 2 years) as well as the entire child (2 – 16 years) and adult (16 – 30 years) stages of life. The results of our calculations are shown in the table below.

The Maximally Exposed Individual at an Existing Residential Receptor				
Age Group	Emissions Source	Duration (years)	Concentration (ug/m3)	Cancer Risk
3rd Trimester	Construction	0.25	*	*
	<i>Construction</i>	<i>1.34</i>	<i>*</i>	<i>*</i>
	<i>Operation</i>	<i>0.66</i>	<i>0.3184</i>	<i>3.45E-05</i>
Infant (0 - 2)	Total	2		3.45E-05
Child (2 - 16)	Operation	14	0.3184	1.15E-04
Adult (16 - 30)	Operation	14	0.3184	1.28E-05
Lifetime		30		1.626E-04

As demonstrated in the table above, the excess cancer risks to infants, children, and adults at the MEIR located approximately 25 meters away, over the course of Project operation, are approximately 34.5, 115, and 12.8 in one million, respectively. The excess cancer risk associated with the Project operation over the course of a residential lifetime is approximately 162.6 in one million. When summing the Project's operational cancer risk, as estimated by SWAPE, with the HRA Report's underestimated construction-related cancer risk of 0.9 in one million, we estimate an excess cancer risk of approximately 163.5 in one million over the course of a residential lifetime (30 years) (p. 7, Table 2).³⁸ As such, the

³⁸ Calculated: 162.6 in one million + 0.9 in one million = 163.5 in one million.

lifetime cancer risks dramatically exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the Project documents.

Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. According to the U.S. EPA:

“EPA’s Exposure Assessment Guidelines recommend completing exposure assessments iteratively using a tiered approach to ‘strike a balance between the costs of adding detail and refinement to an assessment and the benefits associated with that additional refinement’ (U.S. EPA, 1992).

In other words, an assessment using basic tools (e.g., simple exposure calculations, default values, rules of thumb, conservative assumptions) can be conducted as the first phase (or tier) of the overall assessment (i.e., a screening-level assessment).

The exposure assessor or risk manager can then determine whether the results of the screening-level assessment warrant further evaluation through refinements of the input data and exposure assumptions or by using more advanced models.”

As demonstrated above, screening-level analyses warrant further evaluation in a refined modeling approach. Thus, as our screening-level HRA demonstrates that construction and operation of the Project would result in a potentially significant health risk impact, a full CEQA analysis must be prepared in a subsequent EIR, including a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

As discussed above, the Letter of Determination fails to demonstrate that the Project would result in less-than-significant air quality and health risk impacts. Thus, the Letter of Determination’s claim that the Project is exempt pursuant to CEQA Guidelines § 15332 must not be relied upon. As a result, a full CEQA analysis must be prepared in a subsequent EIR evaluating the Project’s potential greenhouse gas (“GHG”) emissions.

In an effort to determine the significance of the Project’s GHG impacts, we recommend comparing the Project’s GHG emissions estimates to the SCAQMD 2035 efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year (“MT CO₂e/SP/year”), which was calculated by applying a 40% reduction to the 2020 targets.³⁹ When applying this threshold, the Project’s air model indicates a potentially significant GHG impact.

The Project’s CalEEMod output files, provided AQ Report as Exhibit D5 to the Recommendation Report, disclose the Project’s mitigated emissions, which include approximately 825 MT CO₂e/year of total

³⁹ “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.

construction emissions (sum of 2020 and 2021) and approximately 1,330 MT CO₂e/year of net annual operational emissions (sum of area-, energy-, mobile-, waste, and water-related emissions). When amortizing the Project's construction-related GHG emissions over a period of 30 years and summing them with the Project's operational GHG emissions, we estimate annual GHG emissions of approximately 1,358 MT CO₂e/year. Furthermore, according to CAPCOA's *CEQA & Climate Change* report, service population ("SP") is defined as "the sum of the number of residents and the number of jobs supported by the project."⁴⁰ The AQ Report estimates that the Project would include 246 residents and 4 employees (p. 27). As such, we calculated a SP of 250 people.⁴¹ When dividing the Project's GHG emissions (amortized construction + operational) by a SP value of 250 people, we find that the Project would emit approximately 5.4 MT CO₂e/SP/year (see table below).⁴²

Annual Greenhouse Gas Emissions	
Project Phase	Proposed Project
<i>Total Construction</i>	<i>825.09</i>
Construction (amortized over 30 years)	27.50
<i>Area</i>	<i>1.74</i>
<i>Energy</i>	<i>369.33</i>
<i>Mobile</i>	<i>850.47</i>
<i>Waste</i>	<i>24.32</i>
<i>Water</i>	<i>84.16</i>
Annual Operational	1,330.02
Total Annual GHG Emissions (MT CO₂e/year)	1,357.52
Service Population	250
Service Population Efficiency (MT CO₂e/SP/year)	5.4
SCAQMD 2035 Target	3.0
<i>Exceeds?</i>	Yes

As demonstrated above, the Project's service population efficiency value, as estimated by the Exemption's net annual GHG emissions and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO₂e/SP/year, thus resulting in a potentially significant impact. As such, a full CEQA analysis must be prepared in a subsequent EIR to adequately assess and mitigate the potential GHG impacts that the Project ~~may~~ will have on the environment.

⁴⁰ CAPCOA (Jan. 2008) *CEQA & Climate Change*, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

⁴¹ Calculated: 246 residents + 4 employees = 250 service population.

⁴² Calculated: (1,357.52 MT CO₂e/year) / (250 service population) = (5.4 MT CO₂e/SP/year).

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

The Program EIR incorporates the following three air quality and GHG mitigation measures:

“MM4.2-1 The CPIO District shall include regulations for construction that require the following or comparable best management practices be included in contract specifications and/or printed on plans:

- Use properly tuned and maintained equipment.
- Construction contractors shall enforce the idling limit of five minutes as set forth in the California Code of Regulations.
- Use diesel-fueled construction equipment to be retrofitted with after treatment products (e.g. engine catalysts) to the extent they are readily available and feasible.
- Use heavy duty diesel-fueled equipment that uses low NOX diesel fuel to the extent it is readily available and feasible.
- Use construction equipment that uses low polluting fuels (i.e. compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent available and feasible.
- Maintain construction equipment in good operating condition to minimize air pollutants.
- Construction contractors shall utilize materials that do not require painting, as feasible.
- Construction contractors shall use pre-painted construction materials, as feasible.
- Construction contractors shall provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Construction contractors shall provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, as feasible.
- Construction contractors shall reroute construction trucks away from congested streets or sensitive receptor areas, as feasible.
- Construction contractors shall appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

MM4.2-2 The CPIO District shall include regulations that require construction projects greater than 5 acres to submit an air quality study that discuss the project’s potential emissions for the following: CO, NOX, PM10, and PM2.5.

MM4.2-3 [MM 4.6-1] The CPIO District shall include regulations that require the following greenhouse gas reduction measures be incorporated into the project design:

- For non-residential projects: all outdoor lighting systems shall be directed away from the window of any residential uses and shall comply with the non-residential Light Pollution Reduction standards in the Green Building Code of the Municipal Code.

- For non-residential projects: whenever new fixtures are installed, all water closets, urinals, shower heads, faucets and dishwashers shall be High Efficiency fixtures installed in accordance with the regulations of the City's Water Conservation Ordinance.
- For Multi-family and Commercial Projects: parking facilities shall have five (5) percent of the total parking spaces, but not less than one (1) space, capable of supporting future Electric Vehicle Supply Equipment (EVSE) charging locations” (p. 11-3 – 11-4).

Regardless, the Program EIR concludes a significant-and-unavoidable air quality and GHG impact (p. 8-7). Our analysis demonstrates that there are new available mitigation measures considerably different from those analyzed in the Program EIR that would substantially reduce the Project’s significant air quality and GHG impacts. As such, the Project cannot be approved until a full CEQA analysis in a subsequent EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels, pursuant to CEQA Guidelines § 15162.

We identified several mitigation measures that are applicable to the proposed Project. First, to reduce the Project’s emissions, we recommend consideration of SCAG’s 2020 RTP/SCS PEIR’s Air Quality Project Level Mitigation Measures (“PMM-AQ-1”) and Greenhouse Gas Project Level Mitigation Measures (“PMM-GHG-1”), as described below:⁴³

SCAG RTP/SCS 2020-2045	
Air Quality Project Level Mitigation Measures – PMM-AQ-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:	
a) Minimize land disturbance.	
b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.	
c) Cover trucks when hauling dirt.	
d) Stabilize the surface of dirt piles if not removed immediately.	
e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.	
f) Minimize unnecessary vehicular and machinery activities.	
g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.	
h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.	

⁴³ “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>.

j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.
m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
o) Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.
q) Require projects within 500 feet of residences, hospitals, or schools to use Tier 4 equipment for all engines above 50 horsepower (hp) unless the individual project can demonstrate that Tier 4 engines would not be required to mitigate emissions below significance thresholds.
r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD "SOON" funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles.
s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects.
t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs.
u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors).
y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit.
z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters.
aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities.
bb) The following criteria related to diesel emissions shall be implemented on by individual project sponsors as appropriate and feasible: - Diesel nonroad vehicles on site for more than 10 total days shall have either (1) engines that meet EPA on road emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85% - Diesel generators on site for more than 10 total days shall be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%. - Nonroad diesel engines on site shall be Tier 2 or higher. - 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.

- Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
- Diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.
- The construction contractor shall maintain a list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:
 - i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.
 - ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
 - iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
- The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
- The contractor shall maintain a monthly report that, for each on road diesel vehicle, nonroad construction equipment, or generator onsite, includes:
 - i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
 - ii. Any problems with the equipment or emission controls.
 - iii. Certified copies of fuel deliveries for the time period that identify:
 - 1. Source of supply
 - 2. Quantity of fuel
 - 3. Quantity of fuel, including sulfur content (percent by weight)

cc) Project should exceed Title-24 Building Envelope Energy Efficiency Standards (California Building Standards Code). The following measures can be used to increase energy efficiency:

- Provide pedestrian network improvements, such as interconnected street network, narrower roadways and shorter block lengths, sidewalks, accessibility to transit and transit shelters, traffic calming measures, parks and public spaces, minimize pedestrian barriers.
- Provide traffic calming measures, such as:
 - i. Marked crosswalks
 - ii. Count-down signal timers
 - iii. Curb extensions
 - iv. Speed tables
 - v. Raised crosswalks
 - vi. Raised intersections
 - vii. Median islands
 - viii. Tight corner radii
 - ix. Roundabouts or mini-circles
 - x. On-street parking
 - xi. Chicanes/chokers
- Create urban non-motorized zones
- Provide bike parking in non-residential and multi-unit residential projects
- Dedicate land for bike trails
- Limit parking supply through:
 - i. Elimination (or reduction) of minimum parking requirements
 - ii. Creation of maximum parking requirements
 - iii. Provision of shared parking
- Require residential area parking permit.
- Provide ride-sharing programs

i. Designate a certain percentage of parking spacing for ride sharing vehicles ii. Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles iii. Providing a web site or messaging board for coordinating rides iv. Permanent transportation management association membership and finding requirement.
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:
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; 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.

Furthermore, we reviewed the December 2010 Public Review Draft Program Environmental Impact Report for the City of Long Beach Downtown Plan (SCH No. 2009071006). The City of Long Beach Downtown Plan, published over a decade ago, incorporates several exhaustive mitigation measures to combat the Plan's significant air quality and GHG impacts. The Downtown Plan reveals how inadequate the San Pedro Community Plan's mitigation measures are, especially considering the Community Plan was adopted years later and thus should be more modern. Therefore, to reduce the Project's emissions, we recommend consideration of the following measures, as described below: ⁴⁴

City of Long Beach Downtown Plan Program Environmental Impact Report	
Air Quality Program Level Mitigation Measures	
<i>Impact/Potential Impact</i>	<i>Mitigation Measure</i>
Construction and operational activities would generate air pollutant emissions of VOCs, NOX, PM ₁₀ , and PM _{2.5} .	AQ-1(a) To reduce short-term construction emissions, the City shall require that all construction projects that would require use of heavy-duty (50 horsepower [hp] or more) offroad vehicles to be used during construction shall require their contractors to implement the Enhanced Exhaust Control Practices (listed below) or whatever mitigation measures are recommended by SCAQMD at the time individual portions of the site undergo construction. <u>Enhanced Exhaust Control Practices</u> The project applicant shall provide a plan for approval by the City, demonstrating that the heavy-duty (50 hp or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NO_x reduction, 20 percent VOC reduction, and 45 percent particulate reduction compared to the 2011 ARB fleet average, as contained in the URBEMIS output sheets in Appendix C. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. SCAQMD, which is the resource agency for air quality in the Project area, can be used in an advisory role to demonstrate fleet-wide reductions.

⁴⁴ "Mitigation Monitoring And Reporting Program." City of Long Beach, *available at*: <https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/approvedcertified-part-2/new-civic-center-project/9-0-mmprp>, p. 9-4 – 9-12; 9-20 – 9-27.

	SCAQMD's mitigation measures for off-road engines can be used to identify an equipment fleet that achieves this reduction (SCAQMD 2007b). • The project applicant shall submit to the City a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the hp rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of heavy-duty off-road equipment, the project representative shall provide the City with the anticipated construction timeline including start date and name and phone number of the project manager and onsite foreman. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed and the dates of each survey. SCAQMD staff and/or other officials may conduct periodic site inspections to determine compliance. • If, at the time of construction, SCAQMD, CARB, or the EPA has adopted a regulation or new guidance applicable to construction emissions, compliance with the regulation or new guidance may completely or partially replace this mitigation if it is equal to or more effective than the mitigation contained herein, and if the City so permits. Such a determination must be supported by a project-level analysis and be approved by the City.
Construction and operational activities would generate air pollutant emissions of VOCs, NO _x , PM ₁₀ , and PM _{2.5} .	AQ-2 Mitigation to reduce mobile source emissions due to implementation of the Plan addresses reducing the number of motor vehicle trips and reducing the emissions of individual vehicles under the control of the project applicant(s). The following measures shall be implemented by project applicant(s) unless it can be demonstrated to the City that the measures would not be feasible. • The project applicant(s) for all project phases shall require the commercial development operator(s) to operate, maintain, and promote a ride-share program for employees of the various businesses. • The project applicant(s) for all project phases shall include one or more secure bicycle parking areas within the property and encourage bicycle riding for both employees and customers. • The proposed structures shall be designed to meet current Title 24 + 20 percent energy efficiency standards and shall include photovoltaic cells on the rooftops to achieve an additional 25 percent reduction in electricity use on an average sunny day. • The City shall ensure that all new commercial developments include or have access to convenient shower and locker facilities for employees to encourage bicycle, walking, and jogging as options for commuting. • The project applicant(s) for all project phases shall require that all equipment operated by the businesses within the facility be electric or use non-diesel engines.

	• All truck loading and unloading docks shall be equipped with one 110/208-volt power outlet for every two-dock door. Diesel trucks shall be prohibited from idling more than 5 minutes and must be required to connect to the 110/208-volt power to run any • auxiliary equipment. Signs outlining the idling restrictions shall be provided. • If, at the time of construction, SCAQMD, CARB, or EPA has adopted a regulation or new guidance applicable to mobile and area-source emissions, compliance with the regulation or new guidance may completely or partially replace this mitigation if it is equal to or more effective than the mitigation contained herein, and if the City so permits. Such a determination shall be supported by a project-level analysis that is approved by the City.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-4(a) The following measures shall be implemented to reduce exposure of sensitive receptors to operational emissions of TACs: • Proposed commercial land uses that have the potential to emit TACs or host TAC-generating activity (e.g., loading docks) shall be located away from existing and proposed onsite sensitive receptors such that they do not expose sensitive receptors to TAC emissions that exceed an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0. • Where necessary to reduce exposure of sensitive receptors to an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0, proposed commercial and industrial land uses that would host diesel trucks shall incorporate idle-reduction strategies that reduce the main propulsion engine idling time through alternative technologies such as IdleAire, electrification of truck parking, and alternative energy sources for TRUs to allow diesel engines to be completely turned off. • Signs shall be posted in at all loading docks and truck loading areas to indicate that diesel-powered delivery trucks must be shut off when not in use for longer than 5 minutes on the premises. This measure is consistent with the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling, which was approved by the California Office of Administrative Law in January 2005. • Proposed facilities that would require the long-term use of diesel equipment and heavy-duty trucks shall develop a plan to reduce emissions, which may include • such measures as scheduling activities when the residential uses are the least occupied, requiring equipment to be shut off when not in use, and prohibiting heavy trucks from idling. • When determining the exact type of facility that would occupy the proposed commercial space, the City shall take into consideration its toxic-producing potential. • Commercial land uses that accommodate more than 100 trucks per day, or 40 trucks equipped with TRUs, within 1,000 feet of sensitive receptors (e.g., residences or schools) shall perform a site-specific project-level HRA in accordance with SCAQMD guidance for projects generating or attracting vehicular trips, especially heavy-duty diesel fueled vehicles (SCAQMD 2003b). If the incremental increase in cancer risk determined by the HRA exceeds the threshold of significance recommended by SCAQMD or ARB at

	the time (if any), then all feasible mitigation measures shall be employed to minimize the impact.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-4(b) The City shall verify that the following measures are implemented by new developments to reduce exposure of sensitive receptors to emissions of TACs from POLB and stationary sources in the vicinity of the Downtown Plan Project area: • All proposed residences in the Downtown Plan Project area shall be equipped with filter systems with high Minimum Efficiency Reporting Value (MERV) for removal of small particles (such as 0.3 micron) at all air intake points to the home. All proposed residences shall be constructed with mechanical ventilation systems that would allow occupants to keep windows and doors closed and allow for the introduction of fresh outside air without the requirement of open windows. • The heating, ventilation, and air conditioning (HVAC) systems shall be used to maintain all residential units under positive pressure at all times. • An ongoing education and maintenance plan about the filtration systems associated with HVAC shall be developed and implemented for residences. • To the extent feasible, sensitive receptors shall be located as far away from the POLB as possible.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-5 The following additional guidelines, which are recommended in ARB's <i>Land Use Handbook: A Community Health Perspective</i> (ARB 2005) shall be implemented. The guidelines are considered to be advisory and not regulatory: • Sensitive receptors, such as residential units and daycare centers, shall not be located in the same building as dry-cleaning operations that use perchloroethylene. Dry-cleaning operations that use perchloroethylene shall not be located within 300 feet of any sensitive receptor. A setback of 500 feet shall be provided for operations with two or more machines.
Greenhouse Gas Program Level Mitigation Measures	
Impact/Potential Impact	Mitigation Measure
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-1(a) Implement Mitigation Measure AQ-1. Implementation of the mitigation measures described in Section 4.2, Air Quality, of this PEIR, which would reduce construction emissions of criteria air pollutants and precursors, would also act to reduce GHG emissions associated with implementation of the Project. The construction mitigation measures for exhaust emissions are relevant to the global climate change impact because both criteria air pollutant and GHG emissions are frequently associated with combustion byproducts.
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-1(b) Implement Additional Measures to Control Construction-Generated GHG Emissions. To further reduce construction generated GHG emissions, the project applicant(s) of all public and private developments shall implement all feasible measures for reducing GHG emissions associated with construction that are recommended by the City and/or SCAQMD at the time individual portions of the site undergo construction. Such measures may reduce GHG exhaust emissions from the use of onsite equipment, worker commute trips, and truck trips carrying materials and equipment to and from the project site, as well as GHG emissions embodied in the materials selected for construction (e.g., concrete). Other measures may pertain to the materials used in construction. Prior to the construction of each development phase, the project applicant(s) shall obtain the most current list of GHG-reduction measures that are recommended by the City and/or SCAQMD and stipulate that these measures be implemented during the appropriate construction phase. The project applicant(s) for any particular development phase may submit to the City a report that substantiates why specific

	measures are considered infeasible for construction of that particular development phase and/or at that point in time. The report, including the substantiation for not implementing particular GHG reduction measures, shall be approved by the City. The City's recommended measures for reducing construction-related GHG emissions at the time of writing this PEIR are listed below and the project applicant(s) shall, at a minimum, be required to implement the following: • Improve fuel efficiency from construction equipment: ○ reduce unnecessary idling (modify work practices, install auxiliary power for driver comfort), ○ perform equipment maintenance (inspections, detect failures early, corrections), ○ train equipment operators in proper use of equipment, ○ use the proper size of equipment for the job, and ○ use equipment with new technologies (repowered engines, electric drive trains). • Use alternative fuels for electricity generators and welders at construction sites such as propane or solar, or use electrical power. • Use an ARB-approved low-carbon fuel, such as biodiesel or renewable diesel for construction equipment (emissions of NOX from the use of low carbon fuel must be reviewed and increases mitigated). Additional information about low-carbon fuels is available from ARB's Low Carbon Fuel Standard Program (ARB 2010a). • Encourage and provide carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes. • Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones. • Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75 percent by weight). • Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials, and based on volume for roadway, parking lot, sidewalk, and curb materials). • Minimize the amount of concrete used for paved surfaces or use a low carbon concrete option. • Produce concrete onsite if determined to be less emissive than transporting ready mix. • Use EPA-certified SmartWay trucks for deliveries and equipment transport. Additional information about the SmartWay Transport Partnership Program is available from ARB's Heavy-Duty Vehicle GHG Measure (ARB 2010b) and EPA (EPA 2010). • Develop a plan to efficiently use water for adequate dust control. This may consist of the use of non-potable water from a local source.
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-2(a) Implement Mitigation Measure AQ-3. Implementation of the mitigation measures described in Section 4.2, which would reduce operational emissions of criteria air pollutants and precursors, would also act to reduce GHG emissions associated with implementation of the Project. The operational mitigation measures for exhaust emissions are relevant to the global climate change impact because both criteria air pollutant and GHG emissions are frequently associated with combustion byproducts.
	GHG-2(b) Implement Additional Measures to Reduce Operational GHG Emissions. For each increment of new development within the Project area requiring a discretionary approval (e.g., tentative subdivision map, conditional use permit,

	improvement plan), measures that reduce GHG emissions to the extent feasible and to the extent appropriate with respect to the state's progress at the time toward meeting GHG emissions reductions required by the California Global Warming Solutions Act of 2006 (AB 32) shall be imposed, as follows: • The project applicant shall incorporate feasible GHG reduction measures that, in combination with existing and future regulatory measures developed under AB 32, will reduce GHG emissions associated with the operation of future project development phases and supporting roadway and infrastructure improvements by an amount sufficient to achieve the goal of 6.6 CO₂e/SP/year, if it is feasible to do so. The feasibility of potential GHG reduction measures shall be evaluated by the City at the time each phase of development is proposed to allow for ongoing innovations in GHG reduction technologies and incentives created in the regulatory environment. • For each increment of new development, the project applicant shall obtain a list of potentially feasible GHG reduction measures to be considered in the development design from the City. The City's list of potentially feasible GHG reduction measures shall reflect the current state of the regulatory environment, which will continuously evolve under the mandate of AB 32. The project applicant(s) shall then submit to the City a mitigation report that contains an analysis demonstrating which GHG reduction measures are feasible for the associated reduction in GHG emissions, and the resulting CO₂e/SP/year metric. The report shall also demonstrate why measures not selected are considered infeasible. The mitigation report must be reviewed and approved by the City for the project applicant(s) to receive the City's discretionary approval for the applicable increment of development. In determining what measures should appropriately be imposed by a local government under the circumstances, the following factors shall be considered: ○ The extent to which rates of GHG emissions generated by motor vehicles traveling to, from, and within the Project site are projected to decrease over time as a result of regulations, policies, and/or plans that have already been adopted or may be adopted in the future by ARB or other public agency pursuant to AB 32, or by EPA; ○ The extent to which mobile-source GHG emissions, which at the time of writing this PEIR comprise a substantial portion of the state's GHG inventory, can also be reduced through design measures that result in trip reductions and reductions in trip length; ○ The extent to which GHG emissions emitted by the mix of power generation operated by SCE, the electrical utility that will serve the Project site, are projected to decrease pursuant to the Renewables Portfolio Standard required by SB 1078 and SB 107, as well as any future regulations, policies, and/or plans adopted by the federal and state governments that reduce GHG emissions from power generation; ○ The extent to which replacement of CCR Title 24 with the California Green Building Standards Code or other similar requirements will result in new buildings being more energy efficient and consequently more GHG efficient;

	○ The extent to which any stationary sources of GHG emissions that would be operated on a proposed land use (e.g., industrial) are already subject to regulations, policies, and/or plans that reduce GHG emissions, particularly any future regulations that will be developed as part of ARB's implementation of AB 32, or other pertinent regulations on stationary sources that have the indirect effect of reducing GHG emissions; ○ The extent to which the feasibility of existing GHG reduction technologies may change in the future, and to which innovation in GHG reduction technologies will continue, effecting cost-benefit analyses that determine economic feasibility; and ○ Whether the total costs of proposed mitigation for GHG emissions, together with other mitigation measures required for the proposed development, are so great that a reasonably prudent property owner would not proceed with the project in the face of such costs. ● In considering how much, and what kind of, mitigation is necessary in light of these factors, the following list of options shall be considered, though the list is not intended to be exhaustive, as GHG-emission reduction strategies and their respective feasibility are likely to evolve over time. These measures are derived from multiple sources including the Mitigation Measure Summary in Appendix B of the California Air Pollution Control Officer's Association (CAPCOA) white paper, CEQA & Climate Change (CAPCOA 2008); CAPCOA's Model Policies for Greenhouse Gases in General Plans (CAPCOA 2009); and the California Attorney General's Office publication, The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level (California Attorney General's Office 2010). Energy Efficiency ○ Include clean alternative energy features to promote energy self-sufficiency (e.g., photovoltaic cells, solar thermal electricity systems, small wind turbines). ○ Design buildings to meet CEC Tier II requirements (e.g., exceeding the requirements of Title 24 [as of 2007] by 20 percent). ○ Site buildings to take advantage of shade and prevailing winds and design landscaping and sun screens to reduce energy use. ○ Install efficient lighting in all buildings (including residential). Also install lighting control systems, where practical. Use daylight as an integral part of lighting systems in all buildings. ○ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes. Water Conservation and Efficiency ○ With the exception of ornamental shade trees, use water-efficient landscapes with native, drought-resistant species in all public area and commercial landscaping. Use water-efficient turf in parks and other turf-dependent spaces. ○ Install the infrastructure to use reclaimed water for landscape irrigation and/or washing cars. ○ Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.

	○ Design buildings and lots to be water efficient. Only install water-efficient fixtures and appliances. ○ Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff. Prohibit businesses from using pressure washers for cleaning driveways, parking lots, sidewalks, and street surfaces. These restrictions should be included in the Covenants, Conditions, and Restrictions of the community. ○ Provide education about water conservation and available programs and incentives. ○ To reduce storm water runoff, which typically bogs down wastewater treatment systems and increases their energy consumption, construct driveways to single-family detached residences and parking lots and driveways of multi-family residential uses, with pervious surfaces. Possible designs include Hollywood drives (two concrete strips with vegetation or aggregate in between) and/or the use of porous concrete, porous asphalt, turf blocks, or pervious pavers. Solid Waste Measures ○ Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). ○ Provide interior and exterior storage areas for recyclables and green waste at all buildings. ○ Provide adequate recycling containers in public areas, including parks, school grounds, golf courses, and pedestrian zones in areas of mixed-use development. ○ Provide education and publicity about reducing waste and available recycling services. Transportation and Motor Vehicles ○ Promote ride-sharing programs and employment centers (e.g., by designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading zones and waiting areas for ride-share vehicles, and providing a website or message board for coordinating ride-sharing). ○ Provide the necessary facilities and infrastructure in all land use types to encourage the use of low- or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations). ○ At industrial and commercial land uses, all forklifts, “yard trucks,” or vehicles that are predominately used onsite at non-residential land uses shall be electric-powered or powered by biofuels (such as biodiesel [B100]) that are produced from waste products, or shall use other technologies that do not rely on direct fossil fuel consumption.

Furthermore, we identified several mitigation measures from the June 2022 Public Review Draft Subsequent Environmental Impact Report for the City of Huntington Beach 2021-2029 Housing Element Update Implementation Program (SCH No. 2021080104) and the August 2017 Final Program

City of Huntington Beach	
Air Quality Mitigation Measures	
<i>Impact/Potential Impact</i>	<i>Mitigation Measure</i>
Impact AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	GPU PEIR MM 4.2-1 Project applicants shall require by contract specifications that all diesel-powered equipment used will be retrofitted with after-treatment products (e.g., engine catalysts). Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-2 Project applicants shall require by contract specifications that all heavy-duty diesel-powered equipment operating and refueling at the project site use low nitrogen oxides diesel fuel to the extent that it is readily available and cost effective in the Basin (this does not apply to diesel-powered trucks traveling to and from the project site). Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-3 Project applicants shall require by contract specifications that construction equipment engines be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-4 Project applicants shall require by contract specifications that construction operations rely on the electricity infrastructure surrounding the construction site rather than electrical generators powered by internal combustion engines. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-5 As required by South Coast Air Quality Management District Rule 403—Fugitive Dust, all construction activities that are capable of generating fugitive dust are required to implement dust control measures during each phase of project development to reduce the amount of particulate matter entrained in the ambient air. These measures include the following: (1) Application of soil stabilizers to inactive construction areas (2) Quick replacement of ground cover in disturbed areas (3) Watering of exposed surfaces three times daily

⁴⁵ [https://www.huntingtonbeachca.gov/government/departments/planning/environmental-reports/files/2021-2029-Housing-Element-Update-Subsequent-Environmental-Impact-Report-\(1-of-3\).pdf](https://www.huntingtonbeachca.gov/government/departments/planning/environmental-reports/files/2021-2029-Housing-Element-Update-Subsequent-Environmental-Impact-Report-(1-of-3).pdf).

- (4) Watering of all unpaved haul roads three times daily
- (5) Covering all stock piles with tarp
- (6) Reduction of vehicle speed on unpaved roads
- (7) Post signs on-site limiting traffic to 15 miles per hour or less
- (8) Sweep streets adjacent to the project site at the end of the day if visible soil material is carried over to adjacent roads
- (9) Cover or have water applied to the exposed surface of all trucks hauling dirt, sand, soil, or other loose materials prior to leaving the site to prevent dust from impacting the surrounding areas
- (10) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads to wash off trucks and any equipment leaving the site each trip

GPU PEIR MM 4.2-6

Project applicants shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. Diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds shall be turned off when not in use for more than 5 minutes. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-7

Project applicants shall require by contract specifications that construction parking be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-8

Project applicants shall require by contract specifications that temporary traffic controls are provided, such as a flag person, during all phases of construction to facilitate smooth traffic flow. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-9

Project applicants shall require by contract specifications that construction activities that affect traffic flow on the arterial system be scheduled to off-peak hours (10:00 a.m. to 4:00 p.m.). Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-10

Project applicants shall require by contract specifications that dedicated on-site and off-site left-turn lanes on truck hauling routes be utilized for movement of construction trucks and equipment on-site and off-site to the extent feasible during construction activities. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-11

Upon issuance of building or grading permits, whichever is issued earlier, notification shall be mailed to owners and occupants of all developed land uses within 300 feet of a project site providing a schedule for major

	construction activities that will occur through the duration of the construction period. In addition, the notification will include the identification and contact number for a community liaison and designated construction manager that would be available on-site to monitor construction activities. The construction manager shall be responsible for complying with all project requirements related to PM₁₀ generation. The construction manager will be located at the on-site construction office during construction hours for the duration of all construction activities. Contract information for the community liaison and construction manager will be located at the construction office, City Hall, the police department, and a sign on site. GPU PEIR MM 4.2-12 Project applicants shall require by contract specifications that the architectural coating (paint and primer) products used would have a volatile organic compound rating of 50 grams per liter or less. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach. GPU PEIR MM 4.2-13 Project applicants shall require by contract specifications that materials that do not require painting be used during construction to the extent feasible. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach. GPU PEIR MM 4.2-14 Project applicants shall require by contract specifications that pre-painted construction materials be used to the extent feasible. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach.
Impact AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?	MM AQ-1 During the site-specific entitlement and/or the design review process, the City of Huntington Beach Community Development Department shall that a project-specific Health Risk Assessment shall be conducted for future residential development proposed within 500 feet of the I-405 freeway right of-way, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. The Health Risk Assessment shall evaluate a project per the following SCAQMD thresholds: • Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million. • Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of one in one million. The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a “hazard index,” expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. If projects are found to exceed the SCAQMD’s Health Risk Assessment thresholds, mitigation measures, such as requiring MERV 13 air filters in all dwelling units, shall be incorporated to reduce impacts to below SCAQMD thresholds. MM AQ-2

	During the site-specific entitlement and/or the design review process, the City of Huntington Beach Community Development Department shall ensure that residential development shall not be located closer than 1,000 feet from any existing or proposed distribution center/warehouse facility which generates a minimum of 100 heavy truck trips per day, or 40 truck trips with transport refrigeration units (TRUs) per day, or TRU operations exceeding 300 hours per week, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. If future residential development cannot meet this setback, a project-specific Health Risk Assessment shall be prepared to evaluate a project for the SCAQMD thresholds (i.e., carcinogenic risk equals or exceeds 10 in one million; acute non-carcinogenic hazard index equals or exceeds one; and/or if chronic non-carcinogenic hazard index equals or exceeds one, as outlined above). If projects are found to exceed the SCAQMD's Health Risk Assessment thresholds, mitigation measures, such as requiring MERV 13 air filters in all dwelling units, shall be incorporated to reduce impacts to below SCAQMD thresholds.

As demonstrated above, while the San Pedro Community Plan incorporates some of the same mitigation measures as the City of Huntington Beach General Plan Update, the Housing Plan Element incorporates MM AQ-1 and MM AQ-2, which pertain to future health risks. As previously discussed, the proposed Project results in a potentially significant health risk impacts. The Program EIR should have accounted for the health risk to future and existing sensitive receptors but failed to do so.

Furthermore, as demonstrated above, the City of Long Beach and Huntington both offer examples of plans and projects that incorporate mitigation measures that the Program EIR failed to consider. 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. The Program EIR's MMP lack of substantial measures to reduce the Project's impact on the environment is clearly negligent. As such, a full CEQA analysis must be prepared in a subsequent EIR to include all feasible mitigation measures, as well as include updated air quality, health risk, and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The subsequent 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.

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.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matt Hagemann".

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

A handwritten signature in blue ink, appearing to read "Paul Rosenfeld".

Paul E. Rosenfeld, Ph.D.

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

Communication from Public

Name: Jamie T. Hall

Date Submitted: 08/17/2022 08:35 AM

Council File No: 21-1269

Comments for Public Posting: This firm represents Appellant Citizens Protecting San Pedro (“CPSP” or “Appellant”)) in its appeal of the City Planning Commission’s approval of the Conditional Use Permit, Density Bonus incentives and waiver, and Site Plan Review for the Project at 2111 South Pacific Avenue in the San Pedro Community. CPSP submitted a letter and attachments on August 16th in support of the appeal. Due to a technical error, a portion of Exhibit 7 was not included in Appellant’s correspondence. A correct version of Exhibit 7 is attached hereto. Appellant respectfully requests that the Council grant the appeal and deny the Project.

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August 17, 2022

VIA ELECTRONIC MAIL

Los Angeles City Council
Honorable President Nury Martinez
Los Angeles City Hall
Los Angeles, CA 90012
Via Email and Online Portal
Via Email: clerk.plumcommittee@lacity.org

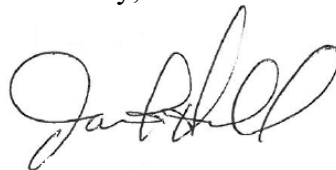
**Re: Appeal of Conditional Use, Density Bonus and Site Plan Review at 2111-2139
S. Pacific Ave; CPC-2019-4884-CU-DB-SPR-RDP and ENV-2019-4885-CE;
Appeal Case No. CPC-2019-4884-CU-DB-SPR-1A; 00610-Citizens Protecting San
Pedro**

Honorable Councilmembers:

This firm represents Appellant Citizens Protecting San Pedro ("CPSP" or "Appellant")) in its appeal of the City Planning Commission's approval of the Conditional Use Permit, Density Bonus incentives and waiver, and Site Plan Review for the Project at 2111 South Pacific Avenue in the San Pedro Community. CPSP submitted a letter and attachments on August 16th in support of the appeal. Due to a technical error, a portion of Exhibit 7 was not included in Appellant's correspondence. A correct version of Exhibit 7 is attached hereto. Appellant respectfully requests that the Council grant the appeal and deny the Project.

I may be contacted at 310-982-1760 or at jamie.hall@channellawgroup.com if you have any questions, comments or concerns.

Sincerely,



Jamie T. Hall

Corrected Exhibit 7



Technical Consultation, Data Analysis and
Litigation Support for the Environment

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August 16, 2022

Jamie T. Hall
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Beverly Hills, CA 90211

Subject: Comments on the 2111-2139 South Pacific Avenue Project

Dear Mr. Hall,

We have reviewed the July 2022 Applicant's Response to Appeal ("Response"), October 2021 City Planning Commission Letter of Determination ("Letter of Determination"), and September 2021 Department of City Planning Recommendation Report ("Recommendation Report") for the 2111-2139 South Pacific Avenue Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to demolish the existing 1,490-square-foot ("SF") bar and construct a 77,945-SF residential building with 100 dwelling units, 1,800-SF of retail space, and 84 parking spaces on the 0.56-acre site.

Our review concludes that the Letter of Determination fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result of our findings, the proposed Project is not consistent with the April 2017 San Pedro New Community Plan Final Environmental Impact Report ("Program EIR") pursuant to CEQA Guidelines § 15168 and 15162. Furthermore, the Project does not qualify for a Class 32 Categorical Exemption under the California Environmental Quality Act ("CEQA") and 14 Cal. Code of Regs. 1500 et seq. ("CEQA Guidelines") and, therefore, a subsequent EIR must be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the Project will have on the environment.

Air Quality

Incorrect Reliance on CEQA Guidelines § 15162

The Letter of Determination claims that no further environmental review is required for the Project pursuant to CEQA Guidelines § 15168 and 15162. The City claims:

“Found, based on the independent judgment of the decision-maker, after consideration of the whole of the administrative record, that the Project is within the scope of the San Pedro New Community Plan ENV-2009-1558-EIR (Program EIR), pursuant to CEQA Guidelines Sections 15168 and 15162” (p. 1).

According to CEQA Guidelines § 15162:

“(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following: [...]

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.”

As demonstrated above, a subsequent EIR should be prepared if there are mitigation measures that are considerably different from those analyzed in the previous EIR that would substantially reduce one or more significant effects on the environment. Here, regarding applicable mitigation measures, the Letter of Determination states:

“[T]he environmental effects of the Project were covered in the Program EIR and no new environmental effects not identified in the Program EIR will occur and no new mitigation is required; and the City has incorporated all feasible mitigation measures from the Program EIR on the Project” (p. 1).

As demonstrated above, the Letter of Determination claims that the City incorporated all feasible mitigation measures from the Program EIR. However, review of the Program EIR’s Mitigation Monitoring Program (“MMP”) demonstrates that there are certainly new available mitigation measures

“considerably different from those analyzed in the previous EIR [that] would substantially reduce one or more significant effects on the environment.” As such, additional feasible mitigation measures are suggested in the section of this letter titled “Feasible Mitigation Measures Available to Reduce Emissions.” As a result, the Project must not be approved until a subsequent EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels, pursuant to CEQA Guidelines § 15162.

Incorrect Reliance on Class 32 Categorical Exemption

In addition to claiming that the Project is within the scope of the Program EIR, the City claims that the Project is categorically exempt pursuant to CEQA Guidelines § 15332. The Letter of Determination states:

“Determined, that based on the whole of the administrative record, the Project is exempt from CEQA pursuant to State CEQA Guidelines, Article 19, Section 15332, Class 32, and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies” (p. 1).

According to § 15332 of the CEQA Guidelines, a project can only be characterized as an in-fill development and qualify for a Class 32 Categorical Exemption if “approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.” The Letter of Determination claims that the Project would result in less-than-significant air quality impacts (p. F-24). However, this claim is unsubstantiated, as the Project’s air quality analysis is insufficient for the following four reasons:

- (1) The Project relies upon an incorrect and unsubstantiated air model;
- (2) SWAPE’s updated analysis indicates a significant air quality impact;
- (3) The Project fails to adequately evaluate diesel particulate matter emissions; and
- (4) SWAPE’s screening-level HRA indicates a potentially significant health risk impact.

1) Incorrect and Unsubstantiated Air Model

The Project’s air quality analysis relies on emissions calculated with the California Emissions Estimator Model (“CalEEMod”) Version 2016.3.2 (Letter of Determination, p. F-24).¹ 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 emissions and make known which default values are changed as well as provide justification for the values selected.

¹ “CalEEMod Version 2020.4.0.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/download-model>.

When reviewing the Project's CalEEMod output files, provided in the November 2019 Air Quality Technical Report ("AQ Report") as Exhibit D5 to the Recommendation Report, we found that several model inputs were not consistent with information disclosed in the Project documents. As a result, model inputs were unreasonable to apply to the Project and the Project's construction and operational emissions are underestimated. A full CEQA analysis must be prepared in a subsequent EIR 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.

Underestimated Land Use Sizes

According to Letter of Determination:

"Development of a new four-story, 45-foot and five-inch-tall mixed-use residential building comprised of 100 dwelling units (including 11 units restricted to Very Low-Income Households) with 1,800 square feet of ground floor retail space. The Project will provide 84 vehicular parking spaces in two subterranean parking levels, and 75 long-term and eight short-term bicycle parking spaces. The Project will be 77,945 square feet in floor area" (p. 1).

As such, the model should have included 76,145-SF of residential space² and 84 parking spaces. However, review of the CalEEMod output files demonstrates that the "2111 South Pacific Avenue Future" model includes only 66,629-SF of "Apartments Mid Rise" and 63 spaces of "Parking Lot" (see excerpt below) (Exhibit D5, pp. 313, 332, 355).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Enclosed Parking with Elevator	63.00	Space	0.00	25,200.00
Apartments Mid Rise	101.00	Dwelling Unit	0.55	66,629.00
Strip Mall	1.80	1000sqft	0.01	1,800.00

As such, the proposed residential and parking land uses are unreasonable to apply to the Project and are underestimated by 9,516-SF and 21 spaces, respectively.^{3, 4} These underestimations present a serious deficiency, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. Furthermore, land use square footage is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).⁵ Thus, by underestimating the size of the proposed residential and parking land uses, the model underestimates the Project's construction and operational emissions and must not be relied upon to determine Project significance.

² Calculated: (77,945-SF total floor area) – (1,800-SF of retail space) = 76,145-SF of residential space.

³ Calculated: (76,145-SF proposed residential space) – (66,629-SF modeled residential space) = 9,516-SF underestimated residential space.

⁴ Calculated: (84 proposed parking spaces) – (63 modeled parking spaces) = 21 underestimated parking spaces.

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. 28.

Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes several changes to the default individual construction phase lengths (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	87.00
tblConstructionPhase	NumDays	100.00	361.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	22.00

As a result of these changes, the model includes the following construction schedule (see excerpt below) (Exhibit D5, pp. 317, 336-337, 359):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Demolition	Demolition	5/1/2020	6/1/2020	5	22
2	Grading	Grading	6/15/2020	7/14/2020	5	22
3	Building Construction	Building Construction	7/15/2020	12/1/2021	5	361
4	Architectural Coating	Architectural Coating	4/1/2021	8/1/2021	5	87

As you can see in the excerpt above, the demolition phase is increased by 120%, from the default value of 10 to 22 days; the grading phase is increased by 1,000%, from the default value of 2 to 22 days; the building construction phase is increased by 261%, from the default value of 100 to 361 days; and the architectural coating is increased by 1,640%, from the default value of 5 to 87 days. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.⁶ According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

“Developer information” (Exhibit D5, pp. 313, 332, 355).

Furthermore, the AQ Report states:

“Project specific information was provided describing the schedule of construction activities and the equipment inventory required from the Applicant. Details pertaining to the schedule and equipment can be found in the attached Appendix” (p. 17).

Finally, the AQ Report provides the following potential construction schedule (see excerpt below) (p. 31, Table 5):

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. 1, 14.

Table 5
Potential Construction Schedule

Phase	Duration	Notes
Demolition	Month 1	1,581 tons of debris hauled up to 41 miles away
Grading	Months 2-3.5	20,000 cubic yards of soil export hauled up to 41 miles away
Building Construction	Months 3.5-19	
Architectural Coatings	Months 11-15	
Source: DKA Planning, 2019		

However, these changes remain unsupported for two reasons.

First, the Project documents fail to include the above-mentioned developer information or the purported Applicant-provided information describing the schedule of construction activities. 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."⁷

Here, as the Project documents fail to provide substantial evidence to support the revised individual construction phase lengths, we cannot verify the changes. Lacking a valid justification to vary from default inputs, the model's inputs are unreasonable to apply to the Project.

Second, the source provided for the Project's potential construction schedule, DKA Planning, is the CalEEMod output files themselves. This is incorrect, as the Project documents must substantiate the changes included in the CalEEMod model, not vice versa. Thus, the source is inadequate and the revised individual construction phase lengths remain unsubstantiated and unreasonable to apply to the Project.

These unsubstantiated changes present another serious 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).⁸

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. 13-14.

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. 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.

Thus, by disproportionately altering and extending some of the individual construction phase lengths without proper justification, the model assumes there are a greater number of days to complete the construction activities required by the prolonged phases. As such, there will be less construction activities required per day and, consequently, less pollutants emitted per day. As a result, the model underestimates the peak daily emissions associated with some phases of construction and must not be relied upon to determine Project significance.

Unsubstantiated Reduction to Number of Gas Fireplaces

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes several reductions to the default gas fireplace values (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	85.85	0.00
tblFireplaces	NumberNoFireplace	10.10	101.00

As demonstrated in the excerpt above, the models assume that the Project would not include any gas fireplaces. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.⁹ According to the “User Entered Comments & Non-Default Data” table, the justification provided for this assumption is:

“Developer information” (Exhibit D5, pp. 314, 333, 356).

However, this justification is insufficient, as the Project documents fail to mention or substantiate the number of gas fireplaces included in the Project design whatsoever. As previously discussed, this is incorrect. According to the CalEEMod User’s Guide:

⁹ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/cal-eemod/user-s-guide>, p. 1, 14.

“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.”¹⁰

Here, as the Project documents fail to provide substantial evidence to support the assumption that no gas fireplaces would be included in the Project design, we cannot verify the changes.

This potential underestimation presents an issue, as CalEEMod uses the number of gas fireplaces to calculate the Project’s area-source operational emissions.¹¹ Thus, by including unsubstantiated reductions to the gas fireplace values, the model underestimates the Project’s area-source operational emissions and must not be relied upon to determine Project significance.

Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes changes to the default off-road construction equipment unit amount and usage hour values (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.¹² According to the “User Entered Comments and Non-Default Data” table, the justification provided for these changes is:

“Developer information” (Exhibit D5, pp. 313, 332, 355).

Furthermore, the AQ Report states:

“Project specific information was provided describing the schedule of construction activities and the equipment inventory required from the Applicant. Details pertaining to the schedule and equipment can be found in the attached Appendix” (p. 17).

However, these changes remain unsupported for two reasons.

First, the Project documents fail to provide the above-mentioned developer information or the purported Applicant-provided information describing the equipment inventory. As previously discussed, this is incorrect. According to the CalEEMod User’s Guide:

¹⁰ “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.

¹¹ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 40-41.

¹² “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.

“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.”¹³

Here, as the Project documents fail to provide substantial evidence to support the revised off-road construction equipment unit amount and usage hours, we cannot verify the changes and the model inputs are unreasonable to apply to the Project.

Second, the claim that “[d]etails pertaining to the schedule and equipment can be found in the attached Appendix” is insufficient. Upon further review, the attached Appendix is the CalEEMod output files themselves. This is incorrect, as the Project documents must substantiate the changes included in the CalEEMod model, not vice versa. Thus, the source is inadequate, and the revised construction equipment input parameters remain unsubstantiated.

These unsubstantiated changes present an additional issue, as CalEEMod uses the off-road construction equipment input parameters to calculate the emissions associated with off-road construction equipment.¹⁴ By including unsubstantiated changes to the default off-road construction equipment unit amount and usage hours, the model drastically underestimates the Project’s construction-related emissions and must not be relied upon to determine Project significance.

Unsubstantiated Reductions to Worker Trip Numbers

Review of the CalEEMod output files demonstrates that the “2111 South Pacific Avenue Future” model includes two reductions to the worker trip numbers (see excerpt below) (Exhibit D5, pp. 314, 333, 356).

Table Name	Column Name	Default Value	New Value
tblTripsAndVMT	WorkerTripNumber	25.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	10.00

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.¹⁵ According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

“Developer information. Assumes 14 CY haul truck capacity” (Exhibit D5, pp. 314, 333, 356).

However, this justification is insufficient, as the Project documents fail to discuss the number of worker trips expected during Project construction or justify these reductions whatsoever. As such, we cannot verify the revised worker trip numbers are accurate and the model inputs are unreasonable to apply to the Project.

¹³ “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.

¹⁴ “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 33-34.

¹⁵ “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.

These underestimations present a further issue, as CalEEMod uses the worker trip numbers to estimate the construction-related emissions associated with on-road vehicles.¹⁶ Thus, by including unsubstantiated reductions to the default worker trip numbers, the model woefully underestimates the Project's mobile-source construction-related emissions and cannot reasonably be relied upon to determine Project significance.

Underestimated Number of Sunday Operational Vehicle Trips

According to the Traffic Impact Analysis ("TIA"), provided as Exhibit D3 to the Recommendation Report, the proposed Project is expected to generate 602 daily operational vehicle trips (see excerpt below) (pp. 117, Table 3).

Table 3
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
<u>Proposed Use</u>								
Apartments [3]	89 DU	485	8	24	32	24	15	39
Affordable Housing [4]	12 DU	49	2	4	6	2	2	4
Retail [5]	1,800 GLSF	68	1	1	2	3	4	7
<i>Subtotal Proposed Use</i>		602	11	29	40	29	21	50
<u>Existing Use</u>								
Bar [6]	(1,490) GSF	(170)	Nom.	Nom.	Nom.	(11)	(6)	(17)
<i>Subtotal Existing Uses</i>		(170)	0	0	0	(11)	(6)	(17)
NET INCREASE		432	11	29	40	18	15	33

As such, the Project's model needed to include trip rates that accurately reflect the estimated number of average daily vehicle trips. However, review of the CalEEMod output files demonstrates that the "2111 South Pacific Avenue Future" model includes approximately 571 Sunday operational vehicle trips (see excerpt below) (Exhibit D5, pp. 327, 347, 369).

Land Use	Average Daily Trip Rate		
	Weekday	Saturday	Sunday
Apartments Mid Rise	534.29	534.29	534.29
Enclosed Parking with Elevator	0.00	0.00	0.00
Strip Mall	67.95	67.95	36.77
Total	602.24	602.24	571.06

¹⁶ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 35.

As demonstrated above, the Sunday vehicle trips are underestimated by approximately 31 trips.¹⁷ As such, the trip rates inputted into the model are underestimated and inconsistent with the information provided by the TIA, and therefore are unreasonable to apply to the Project.

These inconsistencies present a further issue, as CalEEMod uses the operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.¹⁸ Thus, by including underestimated operational daily vehicle trips, the model underestimates the Project's mobile-source operational emissions and must not be relied upon to determine Project significance.

2) Updated Analysis Indicates a Significant Air Quality Impact

In an effort to more accurately estimate the Project's construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the Project documents. In our updated model, we included the correct land use sizes and number of Sunday operational vehicle trips, as well as omitted the unsubstantiated changes to the individual construction phase lengths, number of gas fireplaces, off-road construction input parameters, and worker trip numbers.

Our updated analysis estimates that the VOC and NO_x emissions associated with Project construction drastically exceed the applicable South Coast Air Quality Management District ("SCAQMD") thresholds of 75- and 100-pounds per day ("lbs/day"), respectively (see table below).¹⁹

SWAPE Criteria Air Pollutant Emissions		
Construction	VOC (lbs/day)	NO _x (lbs/day)
AQ Report	7.2	83.5
SWAPE	100.8	366.5
% Increase	1,300%	339%
SCAQMD Threshold	75	100
Exceeds?	Yes	Yes

As demonstrated above, construction-related VOC and NO_x emissions, as estimated by SWAPE, have a massive increase of approximately 1,300% and 339%, respectively, and far exceed the applicable SCAQMD significance thresholds. Thus, our updated modeling demonstrates that the Project would result in an extremely significant air quality impact that was not previously identified or addressed by the Letter of Determination and associated documents. As a result, the Project is clearly ineligible for a Class 32 Categorical Exemption and a full CEQA analysis in a subsequent EIR must be prepared to

¹⁷ Calculated: 602 proposed daily trips – 571.06 modeled Sunday trips = 30.94 underestimated Sunday trips.

¹⁸ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 36.

¹⁹ "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>.

adequately assess and mitigate the air quality impacts that the Project ~~may~~ will have on the environment.

3) Diesel Particulate Matter Emissions Inadequately Evaluated

The January 2022 Construction Health Risk Analysis (“HRA Report”), provided as Exhibit D to the Response, conducts a health risk assessment (“HRA”) evaluating impacts as a result of exposure to diesel particulate matter (“DPM”) emissions from off-road construction equipment. Specifically, the HRA Report estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project construction would be 0.9 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (see excerpt below) (p. 7, Table 2).

Table 2
Carcinogenic Risk / Maximum Exposed Residential Receptor

Age Group	Risk
Third Trimester	5.4E-08
0 to 2 years	8.4E-07
Total	9.0E-07

Note: 9.0E-07 denotes an excess case of cancer of 0.09 in one hundred thousand (100,000) individuals exposed.

However, the HRA Report fails to discuss the toxic air contaminant (“TAC”) emissions associated with Project operation or conduct a quantitative operational HRA whatsoever. As such, the evaluation of the Project’s potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for six reasons.

First, the HRA Report states:

“Air Quality Dynamics has prepared a health risk assessment (HRA) to quantify the impact of diesel particulate matter (DPM), which is identified as a toxic air contaminant pursuant to California Code of Regulations Section 93001, associated with the generation of off-road equipment emissions during construction of the proposed project” (p. 1).

As demonstrated above, the construction HRA only accounts for emissions generated by off-road equipment during Project construction. This is woefully insufficient, as the Project expects to generate heavy-duty hauling truck trips throughout construction. The AQ Report indicates that “[s]ources of air pollutant emissions associated with construction activities include heavy-duty offroad diesel equipment and vehicular traffic to and from the Project construction site” (p. 18). Specifically, the AQ Report accounts for 156- and 2,857-hauling truck trips during Project demolition and grading, respectively, which would travel 41 miles and generate diesel exhaust, a known toxic air contaminant (“TAC”). Thus, by failing to account for the Project’s anticipated truck traffic, the construction HRA and associated cancer risk are underestimated and cannot reasonably form the basis for impact analysis.

Second, the Project’s construction HRA is incorrect, as it relies upon emissions estimates from a flawed air model, as discussed above. The HRA Report states:

“For this assessment, the off-road PM10 exhaust estimates reported by CalEEMod were used as a surrogate for DPM emissions which assumed diesel-powered construction equipment will meet EPA-certified Tier 4 emission standards” (p. 2).

As discussed above, when we reviewed the Project's CalEEMod output files, provided AQ Report as Exhibit D5 to the Recommendation Report, we found that several of the values inputted into the model are not consistent with information disclosed in the Project documents. Specifically, the construction schedule and off-road construction equipment list are unsubstantiated. Moreover, the air model utilized for the construction HRA assumes that the Project would use Tier 4 equipment. This is incorrect, as not only do the Project documents fail to mention Tier 4 emissions standards whatsoever, but the use of Tier 4 construction equipment was not included as a formal mitigation measure. According to the Association of Environmental Professionals (“AEP”) *CEQA Portal Topic Paper* on Mitigation Measures:

“While not ‘mitigation’, a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact.”²⁰

As demonstrated above, design features that are not formally included in a mitigation monitoring and reporting program (“MMRP”) may be eliminated from the Project’s design altogether. Thus, as the use of Tier 4 construction equipment is not formally included as a mitigation measure, nor mentioned in the Project documents whatsoever, we cannot guarantee that these standards would be implemented, monitored, and enforced on the Project site. Thus, the model artificially reduces the Project’s expected particulate matter emissions by incorrectly incorporating Tier 4 mitigation, and the HRA utilizes a greatly underestimated DPM concentration to calculate the health risk associated with Project construction. As such, the construction HRA and resulting cancer risk cannot reasonably be relied upon to determine Project significance.

Third, the construction HRA utilizes incorrect Fraction of Time At Home (“FAH”) values. Specifically, the HRA Report utilizes a FAH value of 0.85 for the third trimester (age -0.25 to 0) and infant (age 0 to 2) receptors (Attachment A, Table A1, Table A2). However, the FAH values used for the third trimester and infant receptors are incorrect, as SCAQMD guidance states:

“For Tiers 1, 2, and 3 screening purposes, the FAH is assumed to be 1 for ages third trimester to 16. As a default, children are assumed to attend a daycare or school in close proximity to their home and no discount should be taken for time spent outside of the area affected by the

²⁰ “CEQA Portal Topic Paper Mitigation Measures.” AEP, February 2020, *available at*: <https://cegaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 6.

facility's emissions. People older than age 16 are assumed to spend only 73 percent of their time at home."²¹

As such, per SCAQMD guidance, the HRA Report should have used an FAH of 1 for the third trimester and infant receptors. Thus, by utilizing incorrect FAH values, the HRA Report dramatically underestimates the cancer risk posed to nearby, existing sensitive receptors as a result of Project construction.

Fourth, by failing to prepare a quantified operational HRA, the Project is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences."²² As previously discussed, the TIA indicates that operation of the Project is anticipated to generate 602 average daily vehicle trips, which would generate additional exhaust emissions and expose nearby sensitive receptors to DPM emissions (pp. 117, Table 3). However, the HRA Report fails to evaluate the TAC emissions associated with Project operation or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's operational TAC emissions to the potential health risks posed to nearby receptors, the Project is inconsistent with CEQA's requirement to correlate the Project-generated emissions with potential adverse impacts on human health.

Fifth, 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. This guidance document describes the types of projects that warrant the preparation of an HRA. Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.²³ Furthermore, according to OEHHA:

"Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."²⁴

OEHHA also recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk at the maximally exposed individual resident ("MEIR").²⁵ While the Project documents fail to provide the expected lifetime of the proposed Project, we can reasonably assume that the Project would operate for at least 30 years, if not more. Thus, operation of the Project exceeds the 2-month and 6-month requirements set forth by OEHHA and must be evaluated for the entire 30-year

²¹ "Risk Assessment Procedures." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

²² "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>.

²³ "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>, p. 8-18.

²⁴ "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>, p. 8-18.

²⁵ "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>, p. 2-4.

residential exposure duration, as indicated by OEHHA guidance. These recommendations reflect the most recent state health risk policies, and as such, a full CEQA analysis must be prepared in a subsequent EIR to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

Sixth, while the HRA Report evaluates the Project's health risk impacts to nearby, existing receptors as a result of Project construction, the HRA fails to evaluate the combined lifetime cancer risk as a result of Project construction and operation together. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."²⁶ However, the HRA Report fails to sum each age bin to evaluate the combined cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis is necessary to quantify and sum the entirety of the Project's construction and operational health risks together to compare to the SCAQMD threshold of 10 in one million.

4) Screening-Level Analysis Demonstrates Potentially Significant Health Risk Impact

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.²⁷ The model replaced SCREEN3, and AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").^{28, 29} 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 are 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.

We prepared a preliminary HRA of the Project's operational health risk impact to nearby sensitive receptors using the Project's annual PM₁₀ exhaust estimates from the AQ Report's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. Subtracting the 579-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 28.41 years, approximately. The AQ Report's annual CalEEMod output file indicates that operational activities will generate approximately 34 pounds of DPM per year throughout operation.³⁰ The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and

²⁶ "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf> p. 8-4

²⁷ "AERSCREEN Released as the EPA Recommended Screening Model," U.S. EPA, April 2011, *available at*: http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

²⁸ "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>.

²⁹ "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at*: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

³⁰ See Attachment B for calculations.

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

$$\text{Emission Rate} \left(\frac{\text{grams}}{\text{second}} \right) = \frac{34.2 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.000492 \text{ g/s}}$$

Using this equation, we estimated an operational emission rate of 0.000492 g/s. Construction and operational activity was simulated as a 0.56-acre rectangular area source in AERSCREEN with approximate dimensions of 67- by 34-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 Los Angeles was obtained from U.S. 2020 Census data.³¹

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. United States Environmental Protection Agency (“EPA”) guidance suggests that in screening procedures, the annualized average concentration of an air pollutant to be estimated by multiplying the single-hour concentration by 10%.³² According to the HRA, the nearest sensitive receptors are multi-family residential buildings and single family dwellings surrounding the Project site (p. 3.2-13). However, review of the AERSCREEN output files demonstrates that the MEIR is located approximately 25 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project operation is approximately 3.184 µg/m³ DPM at approximately 25 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3184 µg/m³ for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD.³³ Guidance from OEHHA and the California Air Resources Board (“CARB”) recommends the use of a standard point estimate approach, including high-point estimate (i.e. 95th percentile) breathing rates and age sensitivity factors (“ASF”), in order to account for the increased sensitivity to carcinogens during early-in-life exposure and accurately assess risk for susceptible subpopulations such as children. The residential exposure parameters, such as the daily breathing rates (“BR/BW”), exposure duration (“ED”), age sensitivity factors (“ASF”), fraction of time at home (“FAH”), and exposure frequency (“EF”) utilized for the various age groups in our screening-level HRA are as follows:

³¹ “Los Angeles.” U.S. Census Bureau, 2020, available at: <https://datacommons.org/place/geoid/0644000>.

³² “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised.” U.S. EPA, October 1992, available at: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

³³ “AB 2588 and Rule 1402 Supplemental Guidelines.” SCAQMD, October 2020, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19>, p. 2.

Exposure Assumptions for Residential Individual Cancer Risk

Age Group	Breathing Rate (L/kg-day)³⁴	Age Sensitivity Factor³⁵	Exposure Duration (years)	Fraction of Time at Home³⁶	Exposure Frequency (days/year)³⁷	Exposure Time (hours/day)
3rd Trimester	361	10	0.25	1	350	24
Infant (0 - 2)	1090	10	2	1	350	24
Child (2 - 16)	572	3	14	1	350	24
Adult (16 - 30)	261	1	14	0.73	350	24

For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor (“CPF”) in units of inverse dose expressed in milligrams per kilogram per day (mg/kg/day⁻¹) to derive the cancer risk estimate. Therefore, to assess exposures, we utilized the following dose algorithm:

$$Dose_{AIR, per\ age\ group} = C_{air} \times EF \times \left[\frac{BR}{BW} \right] \times A \times CF$$

where:

Dose_{AIR} = dose by inhalation (mg/kg/day), per age group
C_{air} = concentration of contaminant in air (µg/m³)
EF = exposure frequency (number of days/365 days)
BR/BW = daily breathing rate normalized to body weight (L/kg/day)
A = inhalation absorption factor (default = 1)
CF = conversion factor (1x10⁻⁶, µg to mg, L to m³)

To calculate the overall cancer risk, we used the following equation for each appropriate age group:

³⁴ “Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics ‘Hot Spots’ Information and Assessment Act.” SCAQMD, October 2020, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19>, p. 19; see also “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>.

³⁵ “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>, p. 8-5 Table 8.3.

³⁶ “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>, p. 5-24.

³⁷ “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>, p. 5-24.

$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

where:

Dose_{AIR} = dose by inhalation (mg/kg/day), per age group

CPF = cancer potency factor, chemical-specific (mg/kg/day)⁻¹

ASF = age sensitivity factor, per age group

FAH = fraction of time at home, per age group (for residential receptors only)

ED = exposure duration (years)

AT = averaging time period over which exposure duration is averaged (always 70 years)

Consistent with the 579-day construction schedule, the annualized averaged concentration for operation was used for the latter 0.66 years on the infant stage of life (0 – 2 years) as well as the entire child (2 – 16 years) and adult (16 – 30 years) stages of life. The results of our calculations are shown in the table below.

The Maximally Exposed Individual at an Existing Residential Receptor				
Age Group	Emissions Source	Duration (years)	Concentration (ug/m3)	Cancer Risk
3rd Trimester	Construction	0.25	*	*
	<i>Construction</i>	<i>1.34</i>	<i>*</i>	<i>*</i>
	<i>Operation</i>	<i>0.66</i>	<i>0.3184</i>	<i>3.45E-05</i>
Infant (0 - 2)	Total	2		3.45E-05
Child (2 - 16)	Operation	14	0.3184	1.15E-04
Adult (16 - 30)	Operation	14	0.3184	1.28E-05
Lifetime		30		1.626E-04

As demonstrated in the table above, the excess cancer risks to infants, children, and adults at the MEIR located approximately 25 meters away, over the course of Project operation, are approximately 34.5, 115, and 12.8 in one million, respectively. The excess cancer risk associated with the Project operation over the course of a residential lifetime is approximately 162.6 in one million. When summing the Project's operational cancer risk, as estimated by SWAPE, with the HRA Report's underestimated construction-related cancer risk of 0.9 in one million, we estimate an excess cancer risk of approximately 163.5 in one million over the course of a residential lifetime (30 years) (p. 7, Table 2).³⁸ As such, the

³⁸ Calculated: 162.6 in one million + 0.9 in one million = 163.5 in one million.

lifetime cancer risks dramatically exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the Project documents.

Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. According to the U.S. EPA:

“EPA’s Exposure Assessment Guidelines recommend completing exposure assessments iteratively using a tiered approach to ‘strike a balance between the costs of adding detail and refinement to an assessment and the benefits associated with that additional refinement’ (U.S. EPA, 1992).

In other words, an assessment using basic tools (e.g., simple exposure calculations, default values, rules of thumb, conservative assumptions) can be conducted as the first phase (or tier) of the overall assessment (i.e., a screening-level assessment).

The exposure assessor or risk manager can then determine whether the results of the screening-level assessment warrant further evaluation through refinements of the input data and exposure assumptions or by using more advanced models.”

As demonstrated above, screening-level analyses warrant further evaluation in a refined modeling approach. Thus, as our screening-level HRA demonstrates that construction and operation of the Project would result in a potentially significant health risk impact, a full CEQA analysis must be prepared in a subsequent EIR, including a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

As discussed above, the Letter of Determination fails to demonstrate that the Project would result in less-than-significant air quality and health risk impacts. Thus, the Letter of Determination’s claim that the Project is exempt pursuant to CEQA Guidelines § 15332 must not be relied upon. As a result, a full CEQA analysis must be prepared in a subsequent EIR evaluating the Project’s potential greenhouse gas (“GHG”) emissions.

In an effort to determine the significance of the Project’s GHG impacts, we recommend comparing the Project’s GHG emissions estimates to the SCAQMD 2035 efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year (“MT CO₂e/SP/year”), which was calculated by applying a 40% reduction to the 2020 targets.³⁹ When applying this threshold, the Project’s air model indicates a potentially significant GHG impact.

The Project’s CalEEMod output files, provided AQ Report as Exhibit D5 to the Recommendation Report, disclose the Project’s mitigated emissions, which include approximately 825 MT CO₂e/year of total

³⁹ “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.

construction emissions (sum of 2020 and 2021) and approximately 1,330 MT CO₂e/year of net annual operational emissions (sum of area-, energy-, mobile-, waste, and water-related emissions). When amortizing the Project's construction-related GHG emissions over a period of 30 years and summing them with the Project's operational GHG emissions, we estimate annual GHG emissions of approximately 1,358 MT CO₂e/year. Furthermore, according to CAPCOA's *CEQA & Climate Change* report, service population ("SP") is defined as "the sum of the number of residents and the number of jobs supported by the project."⁴⁰ The AQ Report estimates that the Project would include 246 residents and 4 employees (p. 27). As such, we calculated a SP of 250 people.⁴¹ When dividing the Project's GHG emissions (amortized construction + operational) by a SP value of 250 people, we find that the Project would emit approximately 5.4 MT CO₂e/SP/year (see table below).⁴²

Annual Greenhouse Gas Emissions	
Project Phase	Proposed Project
<i>Total Construction</i>	<i>825.09</i>
Construction (amortized over 30 years)	27.50
<i>Area</i>	<i>1.74</i>
<i>Energy</i>	<i>369.33</i>
<i>Mobile</i>	<i>850.47</i>
<i>Waste</i>	<i>24.32</i>
<i>Water</i>	<i>84.16</i>
Annual Operational	1,330.02
Total Annual GHG Emissions (MT CO₂e/year)	1,357.52
Service Population	250
Service Population Efficiency (MT CO₂e/SP/year)	5.4
SCAQMD 2035 Target	3.0
<i>Exceeds?</i>	Yes

As demonstrated above, the Project's service population efficiency value, as estimated by the Exemption's net annual GHG emissions and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO₂e/SP/year, thus resulting in a potentially significant impact. As such, a full CEQA analysis must be prepared in a subsequent EIR to adequately assess and mitigate the potential GHG impacts that the Project ~~may~~ will have on the environment.

⁴⁰ CAPCOA (Jan. 2008) *CEQA & Climate Change*, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

⁴¹ Calculated: 246 residents + 4 employees = 250 service population.

⁴² Calculated: (1,357.52 MT CO₂e/year) / (250 service population) = (5.4 MT CO₂e/SP/year).

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

The Program EIR incorporates the following three air quality and GHG mitigation measures:

“MM4.2-1 The CPIO District shall include regulations for construction that require the following or comparable best management practices be included in contract specifications and/or printed on plans:

- Use properly tuned and maintained equipment.
- Construction contractors shall enforce the idling limit of five minutes as set forth in the California Code of Regulations.
- Use diesel-fueled construction equipment to be retrofitted with after treatment products (e.g. engine catalysts) to the extent they are readily available and feasible.
- Use heavy duty diesel-fueled equipment that uses low NOX diesel fuel to the extent it is readily available and feasible.
- Use construction equipment that uses low polluting fuels (i.e. compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent available and feasible.
- Maintain construction equipment in good operating condition to minimize air pollutants.
- Construction contractors shall utilize materials that do not require painting, as feasible.
- Construction contractors shall use pre-painted construction materials, as feasible.
- Construction contractors shall provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Construction contractors shall provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, as feasible.
- Construction contractors shall reroute construction trucks away from congested streets or sensitive receptor areas, as feasible.
- Construction contractors shall appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

MM4.2-2 The CPIO District shall include regulations that require construction projects greater than 5 acres to submit an air quality study that discuss the project’s potential emissions for the following: CO, NOX, PM10, and PM2.5.

MM4.2-3 [MM 4.6-1] The CPIO District shall include regulations that require the following greenhouse gas reduction measures be incorporated into the project design:

- For non-residential projects: all outdoor lighting systems shall be directed away from the window of any residential uses and shall comply with the non-residential Light Pollution Reduction standards in the Green Building Code of the Municipal Code.

- For non-residential projects: whenever new fixtures are installed, all water closets, urinals, shower heads, faucets and dishwashers shall be High Efficiency fixtures installed in accordance with the regulations of the City's Water Conservation Ordinance.
- For Multi-family and Commercial Projects: parking facilities shall have five (5) percent of the total parking spaces, but not less than one (1) space, capable of supporting future Electric Vehicle Supply Equipment (EVSE) charging locations” (p. 11-3 – 11-4).

Regardless, the Program EIR concludes a significant-and-unavoidable air quality and GHG impact (p. 8-7). Our analysis demonstrates that there are new available mitigation measures considerably different from those analyzed in the Program EIR that would substantially reduce the Project’s significant air quality and GHG impacts. As such, the Project cannot be approved until a full CEQA analysis in a subsequent EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels, pursuant to CEQA Guidelines § 15162.

We identified several mitigation measures that are applicable to the proposed Project. First, to reduce the Project’s emissions, we recommend consideration of SCAG’s 2020 RTP/SCS PEIR’s Air Quality Project Level Mitigation Measures (“PMM-AQ-1”) and Greenhouse Gas Project Level Mitigation Measures (“PMM-GHG-1”), as described below:⁴³

SCAG RTP/SCS 2020-2045	
Air Quality Project Level Mitigation Measures – PMM-AQ-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:	
a) Minimize land disturbance.	
b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.	
c) Cover trucks when hauling dirt.	
d) Stabilize the surface of dirt piles if not removed immediately.	
e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.	
f) Minimize unnecessary vehicular and machinery activities.	
g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.	
h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.	

⁴³ “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>.

j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.
m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
o) Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.
q) Require projects within 500 feet of residences, hospitals, or schools to use Tier 4 equipment for all engines above 50 horsepower (hp) unless the individual project can demonstrate that Tier 4 engines would not be required to mitigate emissions below significance thresholds.
r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD "SOON" funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles.
s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects.
t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs.
u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors).
y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit.
z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters.
aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities.
bb) The following criteria related to diesel emissions shall be implemented on by individual project sponsors as appropriate and feasible: - Diesel nonroad vehicles on site for more than 10 total days shall have either (1) engines that meet EPA on road emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85% - Diesel generators on site for more than 10 total days shall be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%. - Nonroad diesel engines on site shall be Tier 2 or higher. - 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.

- Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
- Diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.
- The construction contractor shall maintain a list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:
 - i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.
 - ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
 - iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
- The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
- The contractor shall maintain a monthly report that, for each on road diesel vehicle, nonroad construction equipment, or generator onsite, includes:
 - i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
 - ii. Any problems with the equipment or emission controls.
 - iii. Certified copies of fuel deliveries for the time period that identify:
 - 1. Source of supply
 - 2. Quantity of fuel
 - 3. Quantity of fuel, including sulfur content (percent by weight)

cc) Project should exceed Title-24 Building Envelope Energy Efficiency Standards (California Building Standards Code). The following measures can be used to increase energy efficiency:

- Provide pedestrian network improvements, such as interconnected street network, narrower roadways and shorter block lengths, sidewalks, accessibility to transit and transit shelters, traffic calming measures, parks and public spaces, minimize pedestrian barriers.
- Provide traffic calming measures, such as:
 - i. Marked crosswalks
 - ii. Count-down signal timers
 - iii. Curb extensions
 - iv. Speed tables
 - v. Raised crosswalks
 - vi. Raised intersections
 - vii. Median islands
 - viii. Tight corner radii
 - ix. Roundabouts or mini-circles
 - x. On-street parking
 - xi. Chicanes/chokers
- Create urban non-motorized zones
- Provide bike parking in non-residential and multi-unit residential projects
- Dedicate land for bike trails
- Limit parking supply through:
 - i. Elimination (or reduction) of minimum parking requirements
 - ii. Creation of maximum parking requirements
 - iii. Provision of shared parking
- Require residential area parking permit.
- Provide ride-sharing programs

i. Designate a certain percentage of parking spacing for ride sharing vehicles ii. Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles iii. Providing a web site or messaging board for coordinating rides iv. Permanent transportation management association membership and finding requirement.
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:
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; 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.

Furthermore, we reviewed the December 2010 Public Review Draft Program Environmental Impact Report for the City of Long Beach Downtown Plan (SCH No. 2009071006). The City of Long Beach Downtown Plan, published over a decade ago, incorporates several exhaustive mitigation measures to combat the Plan's significant air quality and GHG impacts. The Downtown Plan reveals how inadequate the San Pedro Community Plan's mitigation measures are, especially considering the Community Plan was adopted years later and thus should be more modern. Therefore, to reduce the Project's emissions, we recommend consideration of the following measures, as described below: ⁴⁴

City of Long Beach Downtown Plan Program Environmental Impact Report	
Air Quality Program Level Mitigation Measures	
<i>Impact/Potential Impact</i>	<i>Mitigation Measure</i>
Construction and operational activities would generate air pollutant emissions of VOCs, NOX, PM ₁₀ , and PM _{2.5} .	AQ-1(a) To reduce short-term construction emissions, the City shall require that all construction projects that would require use of heavy-duty (50 horsepower [hp] or more) offroad vehicles to be used during construction shall require their contractors to implement the Enhanced Exhaust Control Practices (listed below) or whatever mitigation measures are recommended by SCAQMD at the time individual portions of the site undergo construction. <u>Enhanced Exhaust Control Practices</u> The project applicant shall provide a plan for approval by the City, demonstrating that the heavy-duty (50 hp or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NO_x reduction, 20 percent VOC reduction, and 45 percent particulate reduction compared to the 2011 ARB fleet average, as contained in the URBEMIS output sheets in Appendix C. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. SCAQMD, which is the resource agency for air quality in the Project area, can be used in an advisory role to demonstrate fleet-wide reductions.

⁴⁴ "Mitigation Monitoring And Reporting Program." City of Long Beach, *available at*: <https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/approvedcertified-part-2/new-civic-center-project/9-0-mmprp>, p. 9-4 – 9-12; 9-20 – 9-27.

	SCAQMD's mitigation measures for off-road engines can be used to identify an equipment fleet that achieves this reduction (SCAQMD 2007b). • The project applicant shall submit to the City a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the hp rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of heavy-duty off-road equipment, the project representative shall provide the City with the anticipated construction timeline including start date and name and phone number of the project manager and onsite foreman. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed and the dates of each survey. SCAQMD staff and/or other officials may conduct periodic site inspections to determine compliance. • If, at the time of construction, SCAQMD, CARB, or the EPA has adopted a regulation or new guidance applicable to construction emissions, compliance with the regulation or new guidance may completely or partially replace this mitigation if it is equal to or more effective than the mitigation contained herein, and if the City so permits. Such a determination must be supported by a project-level analysis and be approved by the City.
Construction and operational activities would generate air pollutant emissions of VOCs, NO _x , PM ₁₀ , and PM _{2.5} .	AQ-2 Mitigation to reduce mobile source emissions due to implementation of the Plan addresses reducing the number of motor vehicle trips and reducing the emissions of individual vehicles under the control of the project applicant(s). The following measures shall be implemented by project applicant(s) unless it can be demonstrated to the City that the measures would not be feasible. • The project applicant(s) for all project phases shall require the commercial development operator(s) to operate, maintain, and promote a ride-share program for employees of the various businesses. • The project applicant(s) for all project phases shall include one or more secure bicycle parking areas within the property and encourage bicycle riding for both employees and customers. • The proposed structures shall be designed to meet current Title 24 + 20 percent energy efficiency standards and shall include photovoltaic cells on the rooftops to achieve an additional 25 percent reduction in electricity use on an average sunny day. • The City shall ensure that all new commercial developments include or have access to convenient shower and locker facilities for employees to encourage bicycle, walking, and jogging as options for commuting. • The project applicant(s) for all project phases shall require that all equipment operated by the businesses within the facility be electric or use non-diesel engines.

	• All truck loading and unloading docks shall be equipped with one 110/208-volt power outlet for every two-dock door. Diesel trucks shall be prohibited from idling more than 5 minutes and must be required to connect to the 110/208-volt power to run any • auxiliary equipment. Signs outlining the idling restrictions shall be provided. • If, at the time of construction, SCAQMD, CARB, or EPA has adopted a regulation or new guidance applicable to mobile and area-source emissions, compliance with the regulation or new guidance may completely or partially replace this mitigation if it is equal to or more effective than the mitigation contained herein, and if the City so permits. Such a determination shall be supported by a project-level analysis that is approved by the City.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-4(a) The following measures shall be implemented to reduce exposure of sensitive receptors to operational emissions of TACs: • Proposed commercial land uses that have the potential to emit TACs or host TAC-generating activity (e.g., loading docks) shall be located away from existing and proposed onsite sensitive receptors such that they do not expose sensitive receptors to TAC emissions that exceed an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0. • Where necessary to reduce exposure of sensitive receptors to an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0, proposed commercial and industrial land uses that would host diesel trucks shall incorporate idle-reduction strategies that reduce the main propulsion engine idling time through alternative technologies such as IdleAire, electrification of truck parking, and alternative energy sources for TRUs to allow diesel engines to be completely turned off. • Signs shall be posted in at all loading docks and truck loading areas to indicate that diesel-powered delivery trucks must be shut off when not in use for longer than 5 minutes on the premises. This measure is consistent with the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling, which was approved by the California Office of Administrative Law in January 2005. • Proposed facilities that would require the long-term use of diesel equipment and heavy-duty trucks shall develop a plan to reduce emissions, which may include • such measures as scheduling activities when the residential uses are the least occupied, requiring equipment to be shut off when not in use, and prohibiting heavy trucks from idling. • When determining the exact type of facility that would occupy the proposed commercial space, the City shall take into consideration its toxic-producing potential. • Commercial land uses that accommodate more than 100 trucks per day, or 40 trucks equipped with TRUs, within 1,000 feet of sensitive receptors (e.g., residences or schools) shall perform a site-specific project-level HRA in accordance with SCAQMD guidance for projects generating or attracting vehicular trips, especially heavy-duty diesel fueled vehicles (SCAQMD 2003b). If the incremental increase in cancer risk determined by the HRA exceeds the threshold of significance recommended by SCAQMD or ARB at

	the time (if any), then all feasible mitigation measures shall be employed to minimize the impact.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-4(b) The City shall verify that the following measures are implemented by new developments to reduce exposure of sensitive receptors to emissions of TACs from POLB and stationary sources in the vicinity of the Downtown Plan Project area: • All proposed residences in the Downtown Plan Project area shall be equipped with filter systems with high Minimum Efficiency Reporting Value (MERV) for removal of small particles (such as 0.3 micron) at all air intake points to the home. All proposed residences shall be constructed with mechanical ventilation systems that would allow occupants to keep windows and doors closed and allow for the introduction of fresh outside air without the requirement of open windows. • The heating, ventilation, and air conditioning (HVAC) systems shall be used to maintain all residential units under positive pressure at all times. • An ongoing education and maintenance plan about the filtration systems associated with HVAC shall be developed and implemented for residences. • To the extent feasible, sensitive receptors shall be located as far away from the POLB as possible.
Toxic air contaminants from Port of Long Beach, offsite stationary sources, and onsite mobile sources would exceed Air Resources Board standards for health risk.	AQ-5 The following additional guidelines, which are recommended in ARB's <i>Land Use Handbook: A Community Health Perspective</i> (ARB 2005) shall be implemented. The guidelines are considered to be advisory and not regulatory: • Sensitive receptors, such as residential units and daycare centers, shall not be located in the same building as dry-cleaning operations that use perchloroethylene. Dry-cleaning operations that use perchloroethylene shall not be located within 300 feet of any sensitive receptor. A setback of 500 feet shall be provided for operations with two or more machines.
Greenhouse Gas Program Level Mitigation Measures	
Impact/Potential Impact	Mitigation Measure
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-1(a) Implement Mitigation Measure AQ-1. Implementation of the mitigation measures described in Section 4.2, Air Quality, of this PEIR, which would reduce construction emissions of criteria air pollutants and precursors, would also act to reduce GHG emissions associated with implementation of the Project. The construction mitigation measures for exhaust emissions are relevant to the global climate change impact because both criteria air pollutant and GHG emissions are frequently associated with combustion byproducts.
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-1(b) Implement Additional Measures to Control Construction-Generated GHG Emissions. To further reduce construction generated GHG emissions, the project applicant(s) of all public and private developments shall implement all feasible measures for reducing GHG emissions associated with construction that are recommended by the City and/or SCAQMD at the time individual portions of the site undergo construction. Such measures may reduce GHG exhaust emissions from the use of onsite equipment, worker commute trips, and truck trips carrying materials and equipment to and from the project site, as well as GHG emissions embodied in the materials selected for construction (e.g., concrete). Other measures may pertain to the materials used in construction. Prior to the construction of each development phase, the project applicant(s) shall obtain the most current list of GHG-reduction measures that are recommended by the City and/or SCAQMD and stipulate that these measures be implemented during the appropriate construction phase. The project applicant(s) for any particular development phase may submit to the City a report that substantiates why specific

	measures are considered infeasible for construction of that particular development phase and/or at that point in time. The report, including the substantiation for not implementing particular GHG reduction measures, shall be approved by the City. The City's recommended measures for reducing construction-related GHG emissions at the time of writing this PEIR are listed below and the project applicant(s) shall, at a minimum, be required to implement the following: • Improve fuel efficiency from construction equipment: ○ reduce unnecessary idling (modify work practices, install auxiliary power for driver comfort), ○ perform equipment maintenance (inspections, detect failures early, corrections), ○ train equipment operators in proper use of equipment, ○ use the proper size of equipment for the job, and ○ use equipment with new technologies (repowered engines, electric drive trains). • Use alternative fuels for electricity generators and welders at construction sites such as propane or solar, or use electrical power. • Use an ARB-approved low-carbon fuel, such as biodiesel or renewable diesel for construction equipment (emissions of NOX from the use of low carbon fuel must be reviewed and increases mitigated). Additional information about low-carbon fuels is available from ARB's Low Carbon Fuel Standard Program (ARB 2010a). • Encourage and provide carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes. • Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones. • Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75 percent by weight). • Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials, and based on volume for roadway, parking lot, sidewalk, and curb materials). • Minimize the amount of concrete used for paved surfaces or use a low carbon concrete option. • Produce concrete onsite if determined to be less emissive than transporting ready mix. • Use EPA-certified SmartWay trucks for deliveries and equipment transport. Additional information about the SmartWay Transport Partnership Program is available from ARB's Heavy-Duty Vehicle GHG Measure (ARB 2010b) and EPA (EPA 2010). • Develop a plan to efficiently use water for adequate dust control. This may consist of the use of non-potable water from a local source.
Emissions of carbon dioxide (CO ₂) and other greenhouse gases may result from construction of individual developments allowed by the proposed Project.	GHG-2(a) Implement Mitigation Measure AQ-3. Implementation of the mitigation measures described in Section 4.2, which would reduce operational emissions of criteria air pollutants and precursors, would also act to reduce GHG emissions associated with implementation of the Project. The operational mitigation measures for exhaust emissions are relevant to the global climate change impact because both criteria air pollutant and GHG emissions are frequently associated with combustion byproducts.
	GHG-2(b) Implement Additional Measures to Reduce Operational GHG Emissions. For each increment of new development within the Project area requiring a discretionary approval (e.g., tentative subdivision map, conditional use permit,

	improvement plan), measures that reduce GHG emissions to the extent feasible and to the extent appropriate with respect to the state's progress at the time toward meeting GHG emissions reductions required by the California Global Warming Solutions Act of 2006 (AB 32) shall be imposed, as follows: • The project applicant shall incorporate feasible GHG reduction measures that, in combination with existing and future regulatory measures developed under AB 32, will reduce GHG emissions associated with the operation of future project development phases and supporting roadway and infrastructure improvements by an amount sufficient to achieve the goal of 6.6 CO₂e/SP/year, if it is feasible to do so. The feasibility of potential GHG reduction measures shall be evaluated by the City at the time each phase of development is proposed to allow for ongoing innovations in GHG reduction technologies and incentives created in the regulatory environment. • For each increment of new development, the project applicant shall obtain a list of potentially feasible GHG reduction measures to be considered in the development design from the City. The City's list of potentially feasible GHG reduction measures shall reflect the current state of the regulatory environment, which will continuously evolve under the mandate of AB 32. The project applicant(s) shall then submit to the City a mitigation report that contains an analysis demonstrating which GHG reduction measures are feasible for the associated reduction in GHG emissions, and the resulting CO₂e/SP/year metric. The report shall also demonstrate why measures not selected are considered infeasible. The mitigation report must be reviewed and approved by the City for the project applicant(s) to receive the City's discretionary approval for the applicable increment of development. In determining what measures should appropriately be imposed by a local government under the circumstances, the following factors shall be considered: ○ The extent to which rates of GHG emissions generated by motor vehicles traveling to, from, and within the Project site are projected to decrease over time as a result of regulations, policies, and/or plans that have already been adopted or may be adopted in the future by ARB or other public agency pursuant to AB 32, or by EPA; ○ The extent to which mobile-source GHG emissions, which at the time of writing this PEIR comprise a substantial portion of the state's GHG inventory, can also be reduced through design measures that result in trip reductions and reductions in trip length; ○ The extent to which GHG emissions emitted by the mix of power generation operated by SCE, the electrical utility that will serve the Project site, are projected to decrease pursuant to the Renewables Portfolio Standard required by SB 1078 and SB 107, as well as any future regulations, policies, and/or plans adopted by the federal and state governments that reduce GHG emissions from power generation; ○ The extent to which replacement of CCR Title 24 with the California Green Building Standards Code or other similar requirements will result in new buildings being more energy efficient and consequently more GHG efficient;

	○ The extent to which any stationary sources of GHG emissions that would be operated on a proposed land use (e.g., industrial) are already subject to regulations, policies, and/or plans that reduce GHG emissions, particularly any future regulations that will be developed as part of ARB's implementation of AB 32, or other pertinent regulations on stationary sources that have the indirect effect of reducing GHG emissions; ○ The extent to which the feasibility of existing GHG reduction technologies may change in the future, and to which innovation in GHG reduction technologies will continue, effecting cost-benefit analyses that determine economic feasibility; and ○ Whether the total costs of proposed mitigation for GHG emissions, together with other mitigation measures required for the proposed development, are so great that a reasonably prudent property owner would not proceed with the project in the face of such costs. ● In considering how much, and what kind of, mitigation is necessary in light of these factors, the following list of options shall be considered, though the list is not intended to be exhaustive, as GHG-emission reduction strategies and their respective feasibility are likely to evolve over time. These measures are derived from multiple sources including the Mitigation Measure Summary in Appendix B of the California Air Pollution Control Officer's Association (CAPCOA) white paper, CEQA & Climate Change (CAPCOA 2008); CAPCOA's Model Policies for Greenhouse Gases in General Plans (CAPCOA 2009); and the California Attorney General's Office publication, The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level (California Attorney General's Office 2010). Energy Efficiency ○ Include clean alternative energy features to promote energy self-sufficiency (e.g., photovoltaic cells, solar thermal electricity systems, small wind turbines). ○ Design buildings to meet CEC Tier II requirements (e.g., exceeding the requirements of Title 24 [as of 2007] by 20 percent). ○ Site buildings to take advantage of shade and prevailing winds and design landscaping and sun screens to reduce energy use. ○ Install efficient lighting in all buildings (including residential). Also install lighting control systems, where practical. Use daylight as an integral part of lighting systems in all buildings. ○ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes. Water Conservation and Efficiency ○ With the exception of ornamental shade trees, use water-efficient landscapes with native, drought-resistant species in all public area and commercial landscaping. Use water-efficient turf in parks and other turf-dependent spaces. ○ Install the infrastructure to use reclaimed water for landscape irrigation and/or washing cars. ○ Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.

	○ Design buildings and lots to be water efficient. Only install water-efficient fixtures and appliances. ○ Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff. Prohibit businesses from using pressure washers for cleaning driveways, parking lots, sidewalks, and street surfaces. These restrictions should be included in the Covenants, Conditions, and Restrictions of the community. ○ Provide education about water conservation and available programs and incentives. ○ To reduce storm water runoff, which typically bogs down wastewater treatment systems and increases their energy consumption, construct driveways to single-family detached residences and parking lots and driveways of multi-family residential uses, with pervious surfaces. Possible designs include Hollywood drives (two concrete strips with vegetation or aggregate in between) and/or the use of porous concrete, porous asphalt, turf blocks, or pervious pavers. Solid Waste Measures ○ Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). ○ Provide interior and exterior storage areas for recyclables and green waste at all buildings. ○ Provide adequate recycling containers in public areas, including parks, school grounds, golf courses, and pedestrian zones in areas of mixed-use development. ○ Provide education and publicity about reducing waste and available recycling services. Transportation and Motor Vehicles ○ Promote ride-sharing programs and employment centers (e.g., by designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading zones and waiting areas for ride-share vehicles, and providing a website or message board for coordinating ride-sharing). ○ Provide the necessary facilities and infrastructure in all land use types to encourage the use of low- or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations). ○ At industrial and commercial land uses, all forklifts, “yard trucks,” or vehicles that are predominately used onsite at non-residential land uses shall be electric-powered or powered by biofuels (such as biodiesel [B100]) that are produced from waste products, or shall use other technologies that do not rely on direct fossil fuel consumption.

Furthermore, we identified several mitigation measures from the June 2022 Public Review Draft Subsequent Environmental Impact Report for the City of Huntington Beach 2021-2029 Housing Element Update Implementation Program (SCH No. 2021080104) and the August 2017 Final Program

City of Huntington Beach	
Air Quality Mitigation Measures	
<i>Impact/Potential Impact</i>	<i>Mitigation Measure</i>
Impact AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	GPU PEIR MM 4.2-1 Project applicants shall require by contract specifications that all diesel-powered equipment used will be retrofitted with after-treatment products (e.g., engine catalysts). Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-2 Project applicants shall require by contract specifications that all heavy-duty diesel-powered equipment operating and refueling at the project site use low nitrogen oxides diesel fuel to the extent that it is readily available and cost effective in the Basin (this does not apply to diesel-powered trucks traveling to and from the project site). Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-3 Project applicants shall require by contract specifications that construction equipment engines be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-4 Project applicants shall require by contract specifications that construction operations rely on the electricity infrastructure surrounding the construction site rather than electrical generators powered by internal combustion engines. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Huntington Beach prior to issuance of a grading permit. GPU PEIR MM 4.2-5 As required by South Coast Air Quality Management District Rule 403—Fugitive Dust, all construction activities that are capable of generating fugitive dust are required to implement dust control measures during each phase of project development to reduce the amount of particulate matter entrained in the ambient air. These measures include the following: (1) Application of soil stabilizers to inactive construction areas (2) Quick replacement of ground cover in disturbed areas (3) Watering of exposed surfaces three times daily

⁴⁵ [https://www.huntingtonbeachca.gov/government/departments/planning/environmental-reports/files/2021-2029-Housing-Element-Update-Subsequent-Environmental-Impact-Report-\(1-of-3\).pdf](https://www.huntingtonbeachca.gov/government/departments/planning/environmental-reports/files/2021-2029-Housing-Element-Update-Subsequent-Environmental-Impact-Report-(1-of-3).pdf).

- (4) Watering of all unpaved haul roads three times daily
- (5) Covering all stock piles with tarp
- (6) Reduction of vehicle speed on unpaved roads
- (7) Post signs on-site limiting traffic to 15 miles per hour or less
- (8) Sweep streets adjacent to the project site at the end of the day if visible soil material is carried over to adjacent roads
- (9) Cover or have water applied to the exposed surface of all trucks hauling dirt, sand, soil, or other loose materials prior to leaving the site to prevent dust from impacting the surrounding areas
- (10) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads to wash off trucks and any equipment leaving the site each trip

GPU PEIR MM 4.2-6

Project applicants shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. Diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds shall be turned off when not in use for more than 5 minutes. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-7

Project applicants shall require by contract specifications that construction parking be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-8

Project applicants shall require by contract specifications that temporary traffic controls are provided, such as a flag person, during all phases of construction to facilitate smooth traffic flow. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-9

Project applicants shall require by contract specifications that construction activities that affect traffic flow on the arterial system be scheduled to off-peak hours (10:00 a.m. to 4:00 p.m.). Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-10

Project applicants shall require by contract specifications that dedicated on-site and off-site left-turn lanes on truck hauling routes be utilized for movement of construction trucks and equipment on-site and off-site to the extent feasible during construction activities. Contract specifications shall be included in future project construction documents, which shall be approved by the City of Huntington Beach.

GPU PEIR MM 4.2-11

Upon issuance of building or grading permits, whichever is issued earlier, notification shall be mailed to owners and occupants of all developed land uses within 300 feet of a project site providing a schedule for major

	construction activities that will occur through the duration of the construction period. In addition, the notification will include the identification and contact number for a community liaison and designated construction manager that would be available on-site to monitor construction activities. The construction manager shall be responsible for complying with all project requirements related to PM₁₀ generation. The construction manager will be located at the on-site construction office during construction hours for the duration of all construction activities. Contract information for the community liaison and construction manager will be located at the construction office, City Hall, the police department, and a sign on site. GPU PEIR MM 4.2-12 Project applicants shall require by contract specifications that the architectural coating (paint and primer) products used would have a volatile organic compound rating of 50 grams per liter or less. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach. GPU PEIR MM 4.2-13 Project applicants shall require by contract specifications that materials that do not require painting be used during construction to the extent feasible. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach. GPU PEIR MM 4.2-14 Project applicants shall require by contract specifications that pre-painted construction materials be used to the extent feasible. Contract specifications shall be included in future project construction documents, which shall be reviewed and approved by the City of Huntington Beach.
Impact AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?	MM AQ-1 During the site-specific entitlement and/or the design review process, the City of Huntington Beach Community Development Department shall that a project-specific Health Risk Assessment shall be conducted for future residential development proposed within 500 feet of the I-405 freeway right of-way, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. The Health Risk Assessment shall evaluate a project per the following SCAQMD thresholds: • Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million. • Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of one in one million. The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a “hazard index,” expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. If projects are found to exceed the SCAQMD’s Health Risk Assessment thresholds, mitigation measures, such as requiring MERV 13 air filters in all dwelling units, shall be incorporated to reduce impacts to below SCAQMD thresholds. MM AQ-2

	During the site-specific entitlement and/or the design review process, the City of Huntington Beach Community Development Department shall ensure that residential development shall not be located closer than 1,000 feet from any existing or proposed distribution center/warehouse facility which generates a minimum of 100 heavy truck trips per day, or 40 truck trips with transport refrigeration units (TRUs) per day, or TRU operations exceeding 300 hours per week, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. If future residential development cannot meet this setback, a project-specific Health Risk Assessment shall be prepared to evaluate a project for the SCAQMD thresholds (i.e., carcinogenic risk equals or exceeds 10 in one million; acute non-carcinogenic hazard index equals or exceeds one; and/or if chronic non-carcinogenic hazard index equals or exceeds one, as outlined above). If projects are found to exceed the SCAQMD's Health Risk Assessment thresholds, mitigation measures, such as requiring MERV 13 air filters in all dwelling units, shall be incorporated to reduce impacts to below SCAQMD thresholds.

As demonstrated above, while the San Pedro Community Plan incorporates some of the same mitigation measures as the City of Huntington Beach General Plan Update, the Housing Plan Element incorporates MM AQ-1 and MM AQ-2, which pertain to future health risks. As previously discussed, the proposed Project results in a potentially significant health risk impacts. The Program EIR should have accounted for the health risk to future and existing sensitive receptors but failed to do so.

Furthermore, as demonstrated above, the City of Long Beach and Huntington both offer examples of plans and projects that incorporate mitigation measures that the Program EIR failed to consider. 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. The Program EIR's MMP lack of substantial measures to reduce the Project's impact on the environment is clearly negligent. As such, a full CEQA analysis must be prepared in a subsequent EIR to include all feasible mitigation measures, as well as include updated air quality, health risk, and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The subsequent 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.

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.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matt Hagemann".

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

A handwritten signature in blue ink, appearing to read "Paul Rosenfeld".

Paul E. Rosenfeld, Ph.D.

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

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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	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

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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	0.0575	0.7682	0.5411	2.2000e-003	0.0864	0.0175	0.1038	0.0213	0.0162	0.0375	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307
2023	0.2665	0.1185	0.1581	3.6000e-004	0.0147	5.1200e-003	0.0198	3.9200e-003	4.7400e-003	8.6600e-003	0.0000	32.1391	32.1391	5.4900e-003	0.0000	32.2765
Maximum	0.2665	0.7682	0.5411	2.2000e-003	0.0864	0.0175	0.1038	0.0213	0.0162	0.0375	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307

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	0.0575	0.7682	0.5411	2.2000e-003	0.0614	0.0175	0.0788	0.0152	0.0162	0.0314	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307
2023	0.2665	0.1185	0.1581	3.6000e-004	8.9100e-003	5.1200e-003	0.0140	2.5100e-003	4.7400e-003	7.2500e-003	0.0000	32.1391	32.1391	5.4900e-003	0.0000	32.2764
Maximum	0.2665	0.7682	0.5411	2.2000e-003	0.0614	0.0175	0.0788	0.0152	0.0162	0.0314	0.0000	208.3517	208.3517	0.0232	0.0000	208.9307

	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	30.43	0.00	24.88	29.86	0.00	16.33	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8610	0.8610
2	12-1-2022	2-28-2023	0.4965	0.4965
		Highest	0.8610	0.8610

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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Energy	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	393.1015	393.1015	9.0600e-003	2.5800e-003	394.0983
Mobile	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Waste						0.0000	0.0000		0.0000	0.0000	9.7212	0.0000	9.7212	0.5745	0.0000	24.0840
Water						0.0000	0.0000		0.0000	0.0000	2.1093	74.1404	76.2497	0.2184	5.4800e-003	83.3421
Total	0.5043	0.8049	3.1949	8.8500e-003	0.7347	0.0171	0.7518	0.1969	0.0166	0.2135	11.8306	1,268.8442	1,280.6747	0.8411	8.4600e-003	1,304.2235

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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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Energy	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	393.1015	393.1015	9.0600e-003	2.5800e-003	394.0983
Mobile	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Waste						0.0000	0.0000		0.0000	0.0000	9.7212	0.0000	9.7212	0.5745	0.0000	24.0840
Water						0.0000	0.0000		0.0000	0.0000	2.1093	74.1404	76.2497	0.2184	5.4800e-003	83.3421
Total	0.5043	0.8049	3.1949	8.8500e-003	0.7347	0.0171	0.7518	0.1969	0.0166	0.2135	11.8306	1,268.844 2	1,280.674 7	0.8411	8.4600e-003	1,304.223 5

	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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.56

Acres of Paving: 0

Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					0.0169	0.0000	0.0169	2.5600e-003	0.0000	2.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	0.0169	1.6900e-003	0.0186	2.5600e-003	1.6100e-003	4.1700e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.2 Demolition - 2022**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	1.1500e-003	0.0338	9.1400e-003	1.1000e-004	2.7500e-003	1.1000e-004	2.8600e-003	7.5000e-004	1.1000e-004	8.6000e-004	0.0000	11.2473	11.2473	7.2000e-004	0.0000	11.2652
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	2.0000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774
Total	1.3500e-003	0.0340	0.0109	1.2000e-004	3.3000e-003	1.1000e-004	3.4100e-003	9.0000e-004	1.1000e-004	1.0100e-003	0.0000	11.7244	11.7244	7.3000e-004	0.0000	11.7426

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					0.0169	0.0000	0.0169	2.5600e-003	0.0000	2.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	0.0169	1.6900e-003	0.0186	2.5600e-003	1.6100e-003	4.1700e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.2 Demolition - 2022**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	1.1500e-003	0.0338	9.1400e-003	1.1000e-004	1.8000e-003	1.1000e-004	1.9100e-003	5.2000e-004	1.1000e-004	6.3000e-004	0.0000	11.2473	11.2473	7.2000e-004	0.0000	11.2652
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	2.0000e-004	1.5000e-004	1.7400e-003	1.0000e-005	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774
Total	1.3500e-003	0.0340	0.0109	1.2000e-004	2.1300e-003	1.1000e-004	2.2400e-003	6.1000e-004	1.1000e-004	7.3000e-004	0.0000	11.7244	11.7244	7.3000e-004	0.0000	11.7426

3.3 Site Preparation - 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2022**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2022**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0239	0.0239	0.0000	0.0000	0.0239

3.4 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					2.1800e-003	0.0000	2.1800e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	2.1800e-003	3.4000e-004	2.5200e-003	6.2000e-004	3.2000e-004	9.4000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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3.4 Grading - 2022**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	0.0115	0.3670	0.0912	1.0900e-003	0.0246	1.0300e-003	0.0256	6.7400e-003	9.8000e-004	7.7300e-003	0.0000	107.5991	107.5991	7.4400e-003	0.0000	107.7851
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	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0954	0.0954	0.0000	0.0000	0.0955
Total	0.0115	0.3671	0.0915	1.0900e-003	0.0247	1.0300e-003	0.0257	6.7700e-003	9.8000e-004	7.7600e-003	0.0000	107.6945	107.6945	7.4400e-003	0.0000	107.8806

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					2.1800e-003	0.0000	2.1800e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	2.1800e-003	3.4000e-004	2.5200e-003	6.2000e-004	3.2000e-004	9.4000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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3.4 Grading - 2022**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	0.0115	0.3670	0.0912	1.0900e-003	0.0161	1.0300e-003	0.0171	4.6600e-003	9.8000e-004	5.6400e-003	0.0000	107.5991	107.5991	7.4400e-003	0.0000	107.7851
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	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0954	0.0954	0.0000	0.0000	0.0955
Total	0.0115	0.3671	0.0915	1.0900e-003	0.0161	1.0300e-003	0.0172	4.6800e-003	9.8000e-004	5.6600e-003	0.0000	107.6945	107.6945	7.4400e-003	0.0000	107.8806

3.5 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	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0547	37.0547	0.0120	0.0000	37.3543
Total	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0547	37.0547	0.0120	0.0000	37.3543

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3.5 Building Construction - 2022**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	1.7300e-003	0.0555	0.0150	1.5000e-004	3.7300e-003	1.0000e-004	3.8300e-003	1.0800e-003	1.0000e-004	1.1800e-003	0.0000	14.4644	14.4644	8.6000e-004	0.0000	14.4860
Worker	0.0130	9.7400e-003	0.1122	3.4000e-004	0.0353	2.8000e-004	0.0356	9.3700e-003	2.6000e-004	9.6300e-003	0.0000	30.7142	30.7142	8.5000e-004	0.0000	30.7354
Total	0.0147	0.0653	0.1272	4.9000e-004	0.0390	3.8000e-004	0.0394	0.0105	3.6000e-004	0.0108	0.0000	45.1787	45.1787	1.7100e-003	0.0000	45.2214

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	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0546	37.0546	0.0120	0.0000	37.3542
Total	0.0254	0.2600	0.2647	4.2000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	37.0546	37.0546	0.0120	0.0000	37.3542

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3.5 Building Construction - 2022**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	1.7300e-003	0.0555	0.0150	1.5000e-004	2.5200e-003	1.0000e-004	2.6200e-003	7.8000e-004	1.0000e-004	8.8000e-004	0.0000	14.4644	14.4644	8.6000e-004	0.0000	14.4860
Worker	0.0130	9.7400e-003	0.1122	3.4000e-004	0.0212	2.8000e-004	0.0215	5.9200e-003	2.6000e-004	6.1800e-003	0.0000	30.7142	30.7142	8.5000e-004	0.0000	30.7354
Total	0.0147	0.0653	0.1272	4.9000e-004	0.0237	3.8000e-004	0.0241	6.7000e-003	3.6000e-004	7.0600e-003	0.0000	45.1787	45.1787	1.7100e-003	0.0000	45.2214

3.5 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	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324
Total	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324

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3.5 Building Construction - 2023**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	4.5000e-004	0.0147	4.7200e-003	5.0000e-005	1.3100e-003	2.0000e-005	1.3300e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	4.9230	4.9230	2.7000e-004	0.0000	4.9297
Worker	4.2900e-003	3.1000e-003	0.0362	1.1000e-004	0.0124	1.0000e-004	0.0125	3.2900e-003	9.0000e-005	3.3800e-003	0.0000	10.3966	10.3966	2.7000e-004	0.0000	10.4033
Total	4.7400e-003	0.0178	0.0410	1.6000e-004	0.0137	1.2000e-004	0.0138	3.6700e-003	1.1000e-004	3.7700e-003	0.0000	15.3196	15.3196	5.4000e-004	0.0000	15.3330

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	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324
Total	8.2200e-003	0.0834	0.0923	1.5000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	13.0271	13.0271	4.2100e-003	0.0000	13.1324

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3.5 Building Construction - 2023**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	4.5000e-004	0.0147	4.7200e-003	5.0000e-005	8.8000e-004	2.0000e-005	9.0000e-004	2.7000e-004	2.0000e-005	2.9000e-004	0.0000	4.9230	4.9230	2.7000e-004	0.0000	4.9297
Worker	4.2900e-003	3.1000e-003	0.0362	1.1000e-004	7.4500e-003	1.0000e-004	7.5500e-003	2.0800e-003	9.0000e-005	2.1700e-003	0.0000	10.3966	10.3966	2.7000e-004	0.0000	10.4033
Total	4.7400e-003	0.0178	0.0410	1.6000e-004	8.3300e-003	1.2000e-004	8.4500e-003	2.3500e-003	1.1000e-004	2.4600e-003	0.0000	15.3196	15.3196	5.4000e-004	0.0000	15.3330

3.6 Paving - 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	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

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3.6 Paving - 2023**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	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139
Total	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139

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	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

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3.6 Paving - 2023**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	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139
Total	1.7000e-004	1.2000e-004	1.4400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.4137	0.4137	1.0000e-005	0.0000	0.4139

3.7 Architectural Coating - 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					
Archit. Coating	0.2512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	0.2517	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393

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3.7 Architectural Coating - 2023**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	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909
Total	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909

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	0.2512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	0.2517	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393

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3.7 Architectural Coating - 2023**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	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909
Total	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3907	0.3907	1.0000e-005	0.0000	0.3909

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	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	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312
Unmitigated	0.1571	0.7317	2.1368	8.4100e-003	0.7347	6.4200e-003	0.7411	0.1969	5.9600e-003	0.2029	0.0000	778.3032	778.3032	0.0371	0.0000	779.2312

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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 Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	343.7589	343.7589	8.1200e-003	1.6800e-003	344.4624
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	343.7589	343.7589	8.1200e-003	1.6800e-003	344.4624
NaturalGas Mitigated	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.5000e-004	9.0000e-004	49.6359
NaturalGas Unmitigated	4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.5000e-004	9.0000e-004	49.6359

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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 Mid Rise	921694	4.9700e-003	0.0425	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	49.1851	49.1851	9.4000e-004	9.0000e-004	49.4774
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
Strip Mall	2952	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1575	0.1575	0.0000	0.0000	0.1585
Total		4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.4000e-004	9.0000e-004	49.6359

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 Mid Rise	921694	4.9700e-003	0.0425	0.0181	2.7000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	49.1851	49.1851	9.4000e-004	9.0000e-004	49.4774
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
Strip Mall	2952	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1575	0.1575	0.0000	0.0000	0.1585
Total		4.9900e-003	0.0426	0.0182	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3426	49.3426	9.4000e-004	9.0000e-004	49.6359

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	396008	220.5612	5.2100e-003	1.0800e-003	221.0126
Enclosed Parking with Elevator	196896	109.6635	2.5900e-003	5.4000e-004	109.8879
Strip Mall	24300	13.5342	3.2000e-004	7.0000e-005	13.5619
Total		343.7589	8.1200e-003	1.6900e-003	344.4624

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	396008	220.5612	5.2100e-003	1.0800e-003	221.0126
Enclosed Parking with Elevator	196896	109.6635	2.5900e-003	5.4000e-004	109.8879
Strip Mall	24300	13.5342	3.2000e-004	7.0000e-005	13.5619
Total		343.7589	8.1200e-003	1.6900e-003	344.4624

6.0 Area Detail

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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	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680
Unmitigated	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0400e-003	4.0000e-004	23.4680

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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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2838					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1800e-003	0.0187	7.9400e-003	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6123	21.6123	4.1000e-004	4.0000e-004	21.7408
Landscaping	0.0311	0.0119	1.0319	5.0000e-005		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	1.6867	1.6867	1.6200e-003	0.0000	1.7272
Total	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0300e-003	4.0000e-004	23.4680

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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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2838					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1800e-003	0.0187	7.9400e-003	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6123	21.6123	4.1000e-004	4.0000e-004	21.7408
Landscaping	0.0311	0.0119	1.0319	5.0000e-005		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	1.6867	1.6867	1.6200e-003	0.0000	1.7272
Total	0.3422	0.0306	1.0399	1.7000e-004		7.2300e-003	7.2300e-003		7.2300e-003	7.2300e-003	0.0000	23.2990	23.2990	2.0300e-003	4.0000e-004	23.4680

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	76.2497	0.2184	5.4800e-003	83.3421
Unmitigated	76.2497	0.2184	5.4800e-003	83.3421

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	6.5154 / 4.10754	74.7348	0.2140	5.3700e-003	81.6850
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.133331 / 0.0817187	1.5149	4.3800e-003	1.1000e-004	1.6571
Total		76.2497	0.2184	5.4800e-003	83.3421

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	6.5154 / 4.10754	74.7348	0.2140	5.3700e-003	81.6850
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.133331 / 0.0817187	1.5149	4.3800e-003	1.1000e-004	1.6571
Total		76.2497	0.2184	5.4800e-003	83.3421

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.7212	0.5745	0.0000	24.0840
Unmitigated	9.7212	0.5745	0.0000	24.0840

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	46	9.3376	0.5518	0.0000	23.1335
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.89	0.3837	0.0227	0.0000	0.9505
Total		9.7212	0.5745	0.0000	24.0840

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	46	9.3376	0.5518	0.0000	23.1335
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.89	0.3837	0.0227	0.0000	0.9505
Total		9.7212	0.5745	0.0000	24.0840

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

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11.0 Vegetation

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

2111 South Pacific Avenue Future 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	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	12.0844	362.4033	96.7738	1.1130	27.2714	1.3603	28.6317	7.4940	1.3010	8.7951	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481
2023	100.7537	7.7490	10.4213	0.0246	1.0749	0.3289	1.4038	0.2874	0.3027	0.5901	0.0000	2,447.7401	2,447.7401	0.4032	0.0000	2,457.8204
Maximum	100.7537	362.4033	96.7738	1.1130	27.2714	1.3603	28.6317	7.4940	1.3010	8.7951	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481

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	12.0844	362.4033	96.7738	1.1130	18.5390	1.3603	19.8993	5.3506	1.3010	6.6516	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481
2023	100.7537	7.7490	10.4213	0.0246	0.6524	0.3289	0.9814	0.1837	0.3027	0.4864	0.0000	2,447.7401	2,447.7401	0.4032	0.0000	2,457.8204
Maximum	100.7537	362.4033	96.7738	1.1130	18.5390	1.3603	19.8993	5.3506	1.3010	6.6516	0.0000	120,742.5081	120,742.5081	8.2976	0.0000	120,949.9481

	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	32.30	0.00	30.48	28.88	0.00	23.94	0.00	0.00	0.00	0.00	0.00	0.00

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Total	3.0562	5.6849	21.2035	0.0594	4.1161	0.2206	4.3367	1.1014	0.2181	1.3195	0.0000	7,100.4355	7,100.4355	0.2829	0.0404	7,119.5488

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Total	3.0562	5.6849	21.2035	0.0594	4.1161	0.2206	4.3367	1.1014	0.2181	1.3195	0.0000	7,100.4355	7,100.4355	0.2829	0.0404	7,119.5488

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

	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	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0.56****Acres of Paving: 0****Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)****OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.2 Demolition - 2022**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	0.2294	6.4907	1.8088	0.0229	0.5589	0.0224	0.5813	0.1532	0.0214	0.1746		2,489.1796	2,489.1796	0.1569		2,493.1018
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	0.2695	6.5173	2.1804	0.0240	0.6706	0.0233	0.6939	0.1828	0.0222	0.2050		2,599.0509	2,599.0509	0.1599		2,603.0489

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

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3.2 Demolition - 2022**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	0.2294	6.4907	1.8088	0.0229	0.3644	0.0224	0.3868	0.1054	0.0214	0.1269		2,489.1796	2,489.1796	0.1569		2,493.1018
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		109.8712	109.8712	3.0300e-003		109.9470
Total	0.2695	6.5173	2.1804	0.0240	0.4315	0.0233	0.4547	0.1241	0.0222	0.1463		2,599.0509	2,599.0509	0.1599		2,603.0489

3.3 Site Preparation - 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735

3.4 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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396		1,147.9025	1,147.9025	0.2119		1,153.2001

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.4 Grading - 2022**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	11.3349	355.9629	88.9328	1.0999	24.9791	1.0219	26.0010	6.8473	0.9777	7.8250		119,484.7344	119,484.7344	8.0827		119,686.8009
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	11.3750	355.9895	89.3044	1.1010	25.0908	1.0228	26.1136	6.8769	0.9785	7.8554		119,594.6056	119,594.6056	8.0857		119,796.7480

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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.4 Grading - 2022**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	11.3349	355.9629	88.9328	1.0999	16.2913	1.0219	17.3132	4.7149	0.9777	5.6925		119,484.7344	119,484.7344	8.0827		119,686.8009
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
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		109.8712	109.8712	3.0300e-003		109.9470
Total	11.3750	355.9895	89.3044	1.1010	16.3584	1.0228	17.3812	4.7335	0.9785	5.7120		119,594.6056	119,594.6056	8.0857		119,796.7480

3.5 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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022**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
Vendor	0.0456	1.4773	0.3842	4.0800e-003	0.1024	2.7800e-003	0.1052	0.0295	2.6600e-003	0.0322		435.9774	435.9774	0.0250		436.6029
Worker	0.3493	0.2315	3.2329	9.5900e-003	0.9725	7.6100e-003	0.9801	0.2579	7.0100e-003	0.2649		955.8797	955.8797	0.0264		956.5393
Total	0.3950	1.7088	3.6172	0.0137	1.0749	0.0104	1.0853	0.2874	9.6700e-003	0.2971		1,391.857 1	1,391.857 1	0.0514		1,393.142 2

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.939 3	1,103.939 3	0.3570		1,112.865 2
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.939 3	1,103.939 3	0.3570		1,112.865 2

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022**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
Vendor	0.0456	1.4773	0.3842	4.0800e-003	0.0689	2.7800e-003	0.0716	0.0213	2.6600e-003	0.0239		435.9774	435.9774	0.0250		436.6029
Worker	0.3493	0.2315	3.2329	9.5900e-003	0.5836	7.6100e-003	0.5912	0.1624	7.0100e-003	0.1695		955.8797	955.8797	0.0264		956.5393
Total	0.3950	1.7088	3.6172	0.0137	0.6524	0.0104	0.6628	0.1837	9.6700e-003	0.1934		1,391.857 1	1,391.857 1	0.0514		1,393.142 2

3.5 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.608 9	1,104.608 9	0.3573		1,113.540 2
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.608 9	1,104.608 9	0.3573		1,113.540 2

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2023**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
Vendor	0.0339	1.1209	0.3470	3.9400e-003	0.1024	1.2900e-003	0.1037	0.0295	1.2400e-003	0.0307		422.2519	422.2519	0.0222		422.8062
Worker	0.3280	0.2095	2.9773	9.2400e-003	0.9725	7.4000e-003	0.9799	0.2579	6.8100e-003	0.2647		920.8793	920.8793	0.0238		921.4740
Total	0.3619	1.3304	3.3243	0.0132	1.0749	8.6900e-003	1.0836	0.2874	8.0500e-003	0.2954		1,343.1312	1,343.1312	0.0460		1,344.2802

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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0339	1.1209	0.3470	3.9400e-003	0.0689	1.2900e-003	0.0702	0.0213	1.2400e-003	0.0225		422.2519	422.2519	0.0222		422.8062
Worker	0.3280	0.2095	2.9773	9.2400e-003	0.5836	7.4000e-003	0.5910	0.1624	6.8100e-003	0.1693		920.8793	920.8793	0.0238		921.4740
Total	0.3619	1.3304	3.3243	0.0132	0.6524	8.6900e-003	0.6611	0.1837	8.0500e-003	0.1917		1,343.1312	1,343.1312	0.0460		1,344.2802

3.6 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498
Total	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.6 Paving - 2023**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
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
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		190.5268	190.5268	4.9200e-003		190.6498
Total	0.0679	0.0433	0.6160	1.9100e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		190.5268	190.5268	4.9200e-003		190.6498

3.7 Architectural Coating - 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					
Archit. Coating	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2023**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
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
Worker	0.0641	0.0409	0.5818	1.8100e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		179.9419	179.9419	4.6500e-003		180.0581
Total	0.0641	0.0409	0.5818	1.8100e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		179.9419	179.9419	4.6500e-003		180.0581

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	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2023**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
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
Worker	0.0641	0.0409	0.5818	1.8100e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		179.9419	179.9419	4.6500e-003		180.0581
Total	0.0641	0.0409	0.5818	1.8100e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		179.9419	179.9419	4.6500e-003		180.0581

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

	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	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055
Unmitigated	0.9125	3.8634	12.2131	0.0479	4.1161	0.0352	4.1514	1.1014	0.0328	1.1342		4,881.6466	4,881.6466	0.2264		4,887.3055

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartment Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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
Apartment Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
NaturalGas Unmitigated	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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 Mid Rise	2525.19	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	8.08767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

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 Mid Rise	2.52519	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	0.00808767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

6.0 Area Detail

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Unmitigated	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

7.0 Water Detail**7.1 Mitigation Measures Water****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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Summer

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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

2111 South Pacific Avenue Future 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	84.00	Space	0.00	33,600.00	0
Apartments Mid Rise	100.00	Dwelling Unit	0.55	76,145.00	286
Strip Mall	1.80	1000sqft	0.01	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the Project's air model.

Land Use - See SWAPE comments regarding "Underestimated Land Use Size" and "Unsubstantiated Reduction to Parking Land Use Size"

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

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Changes to Construction Off-Road Equipment Unit Amounts and Usage Hours"

Grading - Consistent with the Project's air model.

Demolition - Consistent with the Project's air model.

Trips and VMT - Hauling trip lengths and number consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reductions to Worker Trip Numbers"

Vehicle Trips - See SWAPE comment regarding "Underestimated Number of Sunday Vehicle Trips"

Woodstoves - Number of wood-burning stoves and fireplaces consistent with the Project's air model. See SWAPE comment regarding "Unsubstantiated Reduction to Number of Gas Fireplaces"

Energy Use -

Construction Off-road Equipment Mitigation - Consistent with the Project's air model.

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblFireplaces	NumberGas	85.00	90.00
tblFireplaces	NumberWood	5.00	0.00
tblGrading	AcresOfGrading	0.00	0.56
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	100,000.00	76,145.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	2.63	0.55
tblLandUse	LotAcreage	0.04	0.01
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripLength	20.00	41.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	5.29
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	5.86	5.29
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.65	5.29
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	5.00	0.00
tblWoodstoves	NumberNoncatalytic	5.00	0.00

2.0 Emissions Summary

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	12.3627	366.4717	101.9148	1.0937	27.2714	1.3762	28.6477	7.4940	1.3163	8.8103	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080
2023	100.7613	7.7662	10.1873	0.0240	1.0749	0.3290	1.4039	0.2874	0.3027	0.5901	0.0000	2,382.5419	2,382.5419	0.4030	0.0000	2,392.6175
Maximum	100.7613	366.4717	101.9148	1.0937	27.2714	1.3762	28.6477	7.4940	1.3163	8.8103	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080

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	12.3627	366.4717	101.9148	1.0937	18.5390	1.3762	19.9152	5.3506	1.3163	6.6669	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080
2023	100.7613	7.7662	10.1873	0.0240	0.6524	0.3290	0.9814	0.1837	0.3027	0.4864	0.0000	2,382.5419	2,382.5419	0.4030	0.0000	2,392.6175
Maximum	100.7613	366.4717	101.9148	1.0937	18.5390	1.3762	19.9152	5.3506	1.3163	6.6669	0.0000	118,647.8802	118,647.8802	8.5731	0.0000	118,862.2080

	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	32.30	0.00	30.46	28.88	0.00	23.90	0.00	0.00	0.00	0.00	0.00	0.00

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.756 4	1,920.756 4	0.0508	0.0349	1,932.439 6
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.693 8	4,648.693 8	0.2257		4,654.335 7
Total	3.0273	5.7744	20.5573	0.0570	4.1161	0.2207	4.3368	1.1014	0.2182	1.3196	0.0000	6,867.482 7	6,867.482 7	0.2822	0.0404	6,886.578 9

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.756 4	1,920.756 4	0.0508	0.0349	1,932.439 6
Energy	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
Mobile	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.693 8	4,648.693 8	0.2257		4,654.335 7
Total	3.0273	5.7744	20.5573	0.0570	4.1161	0.2207	4.3368	1.1014	0.2182	1.3196	0.0000	6,867.482 7	6,867.482 7	0.2822	0.0404	6,886.578 9

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

	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	9/1/2022	9/14/2022	5	10	
2	Site Preparation	Site Preparation	9/15/2022	9/15/2022	5	1	
3	Grading	Grading	9/16/2022	9/19/2022	5	2	
4	Building Construction	Building Construction	9/20/2022	2/6/2023	5	100	
5	Paving	Paving	2/7/2023	2/13/2023	5	5	
6	Architectural Coating	Architectural Coating	2/14/2023	2/20/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0.56****Acres of Paving: 0****Residential Indoor: 154,194; Residential Outdoor: 51,398; Non-Residential Indoor: 2,700; Non-Residential Outdoor: 900; Striped Parking Area: 2,016 (Architectural Coating – sqft)****OffRoad Equipment**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	4	10.00	0.00	156.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	41.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348		1,147.9025	1,147.9025	0.2119		1,153.2001

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.2 Demolition - 2022**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	0.2323	6.6370	1.8594	0.0227	0.5589	0.0226	0.5814	0.1532	0.0216	0.1748		2,466.375 2	2,466.375 2	0.1599		2,470.371 9
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	0.2771	6.6665	2.1986	0.0237	0.6706	0.0234	0.6941	0.1828	0.0224	0.2052		2,569.832 2	2,569.832 2	0.1627		2,573.900 0

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					3.3832	0.0000	3.3832	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.902 5	1,147.902 5	0.2119		1,153.200 1
Total	0.7094	6.4138	7.4693	0.0120	3.3832	0.3375	3.7207	0.5122	0.3225	0.8348	0.0000	1,147.902 5	1,147.902 5	0.2119		1,153.200 1

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.2 Demolition - 2022**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	0.2323	6.6370	1.8594	0.0227	0.3644	0.0226	0.3869	0.1054	0.0216	0.1270		2,466.375 2	2,466.375 2	0.1599		2,470.371 9
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		103.4570	103.4570	2.8500e-003		103.5282
Total	0.2771	6.6665	2.1986	0.0237	0.4315	0.0234	0.4549	0.1241	0.0224	0.1465		2,569.832 2	2,569.832 2	0.1627		2,573.900 0

3.3 Site Preparation - 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

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3.3 Site Preparation - 2022**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
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
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641
Total	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641

3.4 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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396		1,147.9025	1,147.9025	0.2119		1,153.2001

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3.4 Grading - 2022**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	11.6085	360.0284	94.1063	1.0806	24.9791	1.0378	26.0169	6.8473	0.9929	7.8402		117,396.5208	117,396.5208	8.3584		117,605.4798
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	11.6533	360.0579	94.4454	1.0817	25.0908	1.0387	26.1295	6.8769	0.9937	7.8707		117,499.9778	117,499.9778	8.3612		117,709.0079

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					2.1806	0.0000	2.1806	0.6171	0.0000	0.6171			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	2.1806	0.3375	2.5181	0.6171	0.3225	0.9396	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

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3.4 Grading - 2022**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	11.6085	360.0284	94.1063	1.0806	16.2913	1.0378	17.3292	4.7149	0.9929	5.7078		117,396.5208	117,396.5208	8.3584		117,605.4798
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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		103.4570	103.4570	2.8500e-003		103.5282
Total	11.6533	360.0579	94.4454	1.0817	16.3584	1.0387	17.3971	4.7335	0.9937	5.7273		117,499.9778	117,499.9778	8.3612		117,709.0079

3.5 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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652

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3.5 Building Construction - 2022**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
Vendor	0.0479	1.4733	0.4252	3.9600e-003	0.1024	2.8700e-003	0.1053	0.0295	2.7400e-003	0.0322		423.9525	423.9525	0.0266		424.6186
Worker	0.3896	0.2563	2.9508	9.0300e-003	0.9725	7.6100e-003	0.9801	0.2579	7.0100e-003	0.2649		900.0754	900.0754	0.0248		900.6950
Total	0.4376	1.7295	3.3761	0.0130	1.0749	0.0105	1.0854	0.2874	9.7500e-003	0.2972		1,324.0279	1,324.0279	0.0514		1,325.3136

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652

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3.5 Building Construction - 2022**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
Vendor	0.0479	1.4733	0.4252	3.9600e-003	0.0689	2.8700e-003	0.0717	0.0213	2.7400e-003	0.0240		423.9525	423.9525	0.0266		424.6186
Worker	0.3896	0.2563	2.9508	9.0300e-003	0.5836	7.6100e-003	0.5912	0.1624	7.0100e-003	0.1695		900.0754	900.0754	0.0248		900.6950
Total	0.4376	1.7295	3.3761	0.0130	0.6524	0.0105	0.6629	0.1837	9.7500e-003	0.1935		1,324.0279	1,324.0279	0.0514		1,325.3136

3.5 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0356	1.1158	0.3779	3.8400e-003	0.1024	1.3600e-003	0.1038	0.0295	1.3000e-003	0.0308		410.7861	410.7861	0.0235		411.3725
Worker	0.3671	0.2318	2.7124	8.7000e-003	0.9725	7.4000e-003	0.9799	0.2579	6.8100e-003	0.2647		867.1469	867.1469	0.0223		867.7048
Total	0.4027	1.3476	3.0902	0.0125	1.0749	8.7600e-003	1.0837	0.2874	8.1100e-003	0.2955		1,277.9330	1,277.9330	0.0458		1,279.0773

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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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3.5 Building Construction - 2023**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
Vendor	0.0356	1.1158	0.3779	3.8400e-003	0.0689	1.3600e-003	0.0702	0.0213	1.3000e-003	0.0226		410.7861	410.7861	0.0235		411.3725
Worker	0.3671	0.2318	2.7124	8.7000e-003	0.5836	7.4000e-003	0.5910	0.1624	6.8100e-003	0.1693		867.1469	867.1469	0.0223		867.7048
Total	0.4027	1.3476	3.0902	0.0125	0.6524	8.7600e-003	0.6612	0.1837	8.1100e-003	0.1918		1,277.9330	1,277.9330	0.0458		1,279.0773

3.6 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251
Total	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

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3.6 Paving - 2023**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
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
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		179.4097	179.4097	4.6200e-003		179.5251
Total	0.0759	0.0480	0.5612	1.8000e-003	0.1207	1.5300e-003	0.1223	0.0336	1.4100e-003	0.0350		179.4097	179.4097	4.6200e-003		179.5251

3.7 Architectural Coating - 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					
Archit. Coating	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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3.7 Architectural Coating - 2023**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
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
Worker	0.0717	0.0453	0.5300	1.7000e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		169.4425	169.4425	4.3600e-003		169.5515
Total	0.0717	0.0453	0.5300	1.7000e-003	0.1900	1.4500e-003	0.1915	0.0504	1.3300e-003	0.0517		169.4425	169.4425	4.3600e-003		169.5515

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	100.4979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	100.6896	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2023**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
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
Worker	0.0717	0.0453	0.5300	1.7000e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		169.4425	169.4425	4.3600e-003		169.5515
Total	0.0717	0.0453	0.5300	1.7000e-003	0.1140	1.4500e-003	0.1155	0.0317	1.3300e-003	0.0331		169.4425	169.4425	4.3600e-003		169.5515

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

	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	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.6938	4,648.6938	0.2257		4,654.3357
Unmitigated	0.8837	3.9529	11.5669	0.0456	4.1161	0.0354	4.1515	1.1014	0.0329	1.1343		4,648.6938	4,648.6938	0.2257		4,654.3357

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	529.00	529.00	529.00	1,806,580	1,806,580
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	67.95	67.95	67.95	129,281	129,281
Total	596.95	596.95	596.95	1,935,861	1,935,861

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 Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Strip Mall	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036
NaturalGas Unmitigated	0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4600e-003	299.8036

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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 Mid Rise	2525.19	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	8.08767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

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 Mid Rise	2.52519	0.0272	0.2327	0.0990	1.4900e-003		0.0188	0.0188		0.0188	0.0188		297.0811	297.0811	5.6900e-003	5.4500e-003	298.8465
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
Strip Mall	0.00808767	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9515	0.9515	2.0000e-005	2.0000e-005	0.9571
Total		0.0273	0.2335	0.0997	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.0326	298.0326	5.7100e-003	5.4700e-003	299.8036

6.0 Area Detail

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396
Unmitigated	2.1164	1.5880	8.8907	9.9700e-003		0.1664	0.1664		0.1664	0.1664	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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	0.1377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1747	1.4929	0.6353	9.5300e-003		0.1207	0.1207		0.1207	0.1207	0.0000	1,905.8824	1,905.8824	0.0365	0.0349	1,917.2081
Landscaping	0.2488	0.0951	8.2554	4.4000e-004		0.0457	0.0457		0.0457	0.0457		14.8740	14.8740	0.0143		15.2316
Total	2.1164	1.5880	8.8907	9.9700e-003		0.1665	0.1665		0.1665	0.1665	0.0000	1,920.7564	1,920.7564	0.0508	0.0349	1,932.4396

7.0 Water Detail**7.1 Mitigation Measures Water****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

2111 South Pacific Avenue Future - Los Angeles-South Coast County, Winter

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

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.0171
Daily Emissions (lbs/day)	0.09369863
Total DPM (lbs)	34.2
Emission Rate (g/s)	0.000491918
Release Height (meters)	3
Total Acreage	0.56
Max Horizontal (meters)	67.32
Min Horizontal (meters)	33.66
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	3,849,297

Start date and time 08/11/22 13:49:32

AERSCREEN 21112

2139 South Pacific Avenue Operation

2139 South Pacific Avenue Operation

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

METRIC

ENGLISH

** AREADATA **

Emission Rate: 0.492E-03 g/s 0.390E-02 lb/hr

Area Height: 3.00 meters 9.84 feet

Area Source Length: 67.32 meters 220.87 feet

Area Source Width: 33.66 meters 110.43 feet

Vertical Dimension: 1.50 meters 4.92 feet

Model Mode: URBAN

Population: 3849297

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:

2022.08.11_2139SouthPacificAvenue_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 08/11/22 13:50:54

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 08/11/22 13:51:01

REFINE started 08/11/22 13:51:01

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

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

*** NONE ***

REFINE ended 08/11/22 13:51:02

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

Ending date and time 08/11/22 13:51:09

Concentration	Distance	Elevation	Diag	Season/Month	Zo sector	Date	H0	U*	W*	DT/DZ	ZICNV
ZIMCH M-O LEN	Z0 BOWEN	ALBEDO	REF WS	HT REF TA	HT						
0.25793E+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							
0.31836E+01	25.00	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							
* 0.33296E+01	35.00	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							
0.19068E+01	50.00	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							
0.98236E+00	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							
0.63334E+00	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							
0.45590E+00	125.00	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							
0.35048E+00	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							
0.28120E+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							
0.23281E+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							
0.19719E+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							
0.17011E+00	250.00	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							
0.14893E+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							
0.13198E+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							
0.11811E+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							
0.10658E+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							
0.96814E-01	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							
0.88507E-01	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							
0.81365E-01	425.00	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							
0.75168E-01	450.00	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							
0.69748E-01	475.00	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							
0.64973E-01	500.00	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							
0.60738E-01	525.00	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							
0.56961E-01	550.00	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							
0.53573E-01	575.00	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							
0.50521E-01	600.00	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									
0.47872E-01			625.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.45353E-01			650.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.43056E-01			675.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.40952E-01			700.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.39021E-01			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									
0.37242E-01			750.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.35599E-01			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									
0.34077E-01			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									
0.32665E-01			825.00	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									
0.31351E-01			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									
0.30126E-01			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									
0.28982E-01			900.00	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									
0.27911E-01			925.00	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									
0.26906E-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									
0.25963E-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									
0.25075E-01			1000.00	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									
0.24239E-01			1025.00	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									
0.23450E-01			1050.00	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									
0.22704E-01			1075.00	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									
0.21998E-01			1100.00	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									
0.21330E-01			1125.00	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									
0.20696E-01			1149.99	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									
0.20094E-01			1175.00	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									
0.19521E-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									
0.18976E-01			1225.00	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									
0.18457E-01			1249.99	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									
0.17962E-01			1275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.17490E-01			1300.00	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									
0.17039E-01			1325.00	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									
0.16608E-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									
0.16195E-01			1375.00	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									
0.15799E-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									
0.15420E-01			1425.00	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									
0.15057E-01			1450.00	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									
0.14708E-01			1475.00	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									
0.14373E-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									
0.14050E-01			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									
0.13741E-01			1550.00	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									
0.13442E-01			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									
0.13155E-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									
0.12878E-01			1625.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.12612E-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									
0.12354E-01			1675.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.12106E-01			1700.00	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									
0.11866E-01			1725.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11634E-01			1750.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11410E-01			1775.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.11194E-01			1800.00	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									
0.10984E-01			1825.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10781E-01			1850.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10585E-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									
0.10394E-01			1900.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.10210E-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									
0.10031E-01			1950.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0									
0.98571E-02			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									
0.96887E-02			2000.00	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									
0.95252E-02			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									
0.93664E-02			2050.00	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									
0.92122E-02			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									
0.90623E-02			2100.00	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									
0.89166E-02			2124.99	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									
0.87749E-02			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									
0.86371E-02			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									
0.85030E-02			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									
0.83725E-02			2224.99	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									
0.82453E-02			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									
0.81216E-02			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									
0.80010E-02			2300.00	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									
0.78835E-02			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									
0.77690E-02			2350.00	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									
0.76573E-02			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									
0.75484E-02			2400.00	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									
0.74421E-02			2425.00	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									
0.73383E-02			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									
0.72370E-02			2475.00	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									
0.71381E-02			2500.00	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									
0.70415E-02			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									
0.69471E-02			2550.00	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									
0.68549E-02			2575.00	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									
0.67648E-02			2600.00	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									
0.66767E-02			2625.00	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									
0.65906E-02			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									
0.65064E-02			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									
0.64240E-02			2700.00	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									
0.63435E-02			2725.00	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									
0.62647E-02			2750.00	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									
0.61875E-02			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									
0.61120E-02			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									
0.60381E-02			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									
0.59657E-02			2850.00	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									
0.58947E-02			2875.00	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									
0.58253E-02			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									
0.57572E-02			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									
0.56905E-02			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									
0.56252E-02			2975.00	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									
0.55611E-02			3000.00	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									
0.54983E-02			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									
0.54367E-02			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									
0.53763E-02			3075.00	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									
0.53170E-02			3100.00	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									
0.52588E-02			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									
0.52018E-02			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									
0.51458E-02			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									
0.50909E-02			3199.99	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									
0.50369E-02			3225.00	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									
0.49839E-02			3250.00	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									
0.49319E-02			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									
0.48809E-02			3300.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21. 6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.48307E-02			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										
0.47814E-02			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										
0.47330E-02			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										
0.46855E-02			3400.00	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										
0.46387E-02			3425.00	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										
0.45928E-02			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										
0.45476E-02			3475.00	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										
0.45032E-02			3500.00	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										
0.44596E-02			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										
0.44166E-02			3550.00	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										
0.43744E-02			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										
0.43329E-02			3600.00	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										
0.42920E-02			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										
0.42518E-02			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										
0.42123E-02			3675.00	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										
0.41734E-02			3700.00	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										
0.41351E-02			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										
0.40975E-02			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										
0.40604E-02			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										
0.40238E-02			3800.00	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										
0.39879E-02			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										
0.39525E-02			3849.99	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										
0.39176E-02			3875.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.38833E-02			3900.00	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										
0.38495E-02			3925.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0
1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.38162E-02			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										
0.37834E-02			3975.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

1.000	1.50	0.35	0.50	10.0	310.0	2.0										
0.37511E-02			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										
0.37192E-02			4025.00	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										
0.36879E-02			4050.00	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										
0.36569E-02			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										
0.36265E-02			4100.00	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										
0.35964E-02			4125.00	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										
0.35668E-02			4149.99	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										
0.35376E-02			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										
0.35088E-02			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										
0.34805E-02			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										
0.34525E-02			4250.00	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										
0.34249E-02			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										
0.33977E-02			4300.00	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										
0.33708E-02			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										
0.33444E-02			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										
0.33182E-02			4375.00	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										
0.32925E-02			4400.00	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										
0.32670E-02			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										
0.32419E-02			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										
0.32172E-02			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										
0.31928E-02			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										
0.31686E-02			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										
0.31449E-02			4550.00	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										
0.31214E-02			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										
0.30982E-02			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										
0.30753E-02			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										
0.30527E-02			4650.00	0.00	0.0		Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0

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Technical Consultation, Data Analysis and
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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 – 2014, 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., Fukunaga, 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 Cleanup 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.

Principal Environmental Chemist

Chemical Fate and Transport & Air Dispersion Modeling

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., Sellev, 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. 0i9-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 Cuntly of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix 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
Jaeanette 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