



Air Resources Board



Matthew Rodriquez
Secretary for
Environmental Protection

Mary D. Nichols, Chair
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

June 15, 2017

Mr. Ken Alex, Director
Office of Governor Edmund G. Brown, Jr.
Office of Planning and Research
State Capitol
1400 10th Street
Sacramento, California 95814

Dear Mr. Alex:

The Jobs and Economic Improvement through Environmental Leadership Act (Assembly Bill 900, statutes of 2011) authorizes the Governor to certify a leadership project for streamlining under the California Environmental Quality Act (CEQA) if the project meets certain conditions. One condition for certification is that the project does not result in any net additional emissions of greenhouse gases (GHG), including GHG emissions from employee transportation, as determined by the California Air Resources Board (CARB).

On April 10, 2017, Riley Realty, L.P. (the Applicant) submitted an application to CARB with its proposed GHG quantification methodologies and supporting documentation for the proposed Yucca Argyle project (proposed project), as required by the Governor's Guidelines for Streamlining Judicial Review under CEQA. CARB staff conducted an evaluation of the GHG emission estimates and voluntary improvement measures submitted by the Applicant, and confirmed that the Applicant's methodology, calculations, and documentation are adequate. Based on the documentation submitted by the Applicant, CARB has determined the proposed project does not result in any net additional GHG emissions for purposes of certification under AB 900.

CARB staff's evaluation and an Executive Order noting CARB's determination are enclosed.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Ken Alex, Director
June 15, 2017
Page 2

If you have any questions regarding the evaluation or determination, please contact Ms. Karen Magliano, Chief, Air Quality Planning and Science Division at (916) 322-5350, or by email at karen.magliano@arb.ca.gov.

Sincerely,



Richard W. Corey
Executive Officer

Enclosures

Electronic cc:

Paul Bauer, Mercury LLC
PBauer@mercuryllc.com

Kyndra Joy Casper, Liner Law
kcasper@linerlaw.com

Greg Beck, Champion Real Estate Company
gbeck@championdev.com

Mike Harden, Environmental Science Associates
MHarden@esassoc.com

Alan Sako, Environmental Science Associates
ASako@esassoc.com

Scott Morgan, Governor's Office of Planning and Research
Scott.Morgan@OPR.CA.GOV

Karen Magliano, Chief Air Quality Planning and Science Division
Karen.Magliano@arb.ca.gov

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER G-07-044

**Relating to Determination of No Net Additional Greenhouse Gas Emissions
Under Public Resources Code section 21183, subdivision (c)
for
6220 West Yucca Street Project**

WHEREAS, in September 2011, Governor Brown signed the "Jobs and Economic Improvement through Environmental Leadership Act" (AB 900);

WHEREAS, under AB 900, the Governor may certify certain projects for judicial streamlining under the California Environmental Quality Act (CEQA) if certain conditions are met;

WHEREAS, under California Public Resources Code section 21183, subdivision (c), one condition for the Governor's certification is that the project does not result in any net additional emission of greenhouse gases (GHG), as determined by the California Air Resources Board (CARB);

WHEREAS, the Governor's Guidelines for Streamlining Judicial Review under the California Environmental Quality Act require for purposes of CARB's determination on GHG emissions that an applicant submit electronically to CARB a proposed methodology for quantifying the project's net additional GHG emissions and documentation that the project does not result in any net additional GHG emissions;

WHEREAS, pursuant to the Governor's Guidelines, Riley Realty, L.P. (the Applicant) submitted its initial proposed GHG quantification methodologies and documentation to CARB on the proposed 6220 West Yucca Street Project (proposed project) on April 10, 2017, and clarifying documentation submitted on June 12, 2017, when the application was deemed complete;

WHEREAS, the application submitted for the proposed project estimates the project's net additional GHG emissions as follows:

1. Construction GHG Emissions: Additional 2,245 metric tons CO₂e emissions from project construction and demolition activities. Construction-generated GHG emissions were estimated from equipment used for construction activities and from both on-site and off-site vehicles and equipment;
2. Operation-Related GHG Emissions: Additional 4,405 metric tons CO₂e emissions during the first full year of project operation (2021) and declining operational emissions in future years over the lifetime of the project.

WHEREAS, in the application, the applicant proposes to secure 2,245 metric tons of one-time carbon credits to offset emissions generated during construction and to secure 103,669 metric tons of carbon credits on a net present value basis to offset the net increase in emissions generated during project operation through a voluntary carbon credits market from a qualified GHG emissions broker to fully offset these identified construction and operational GHG emissions;

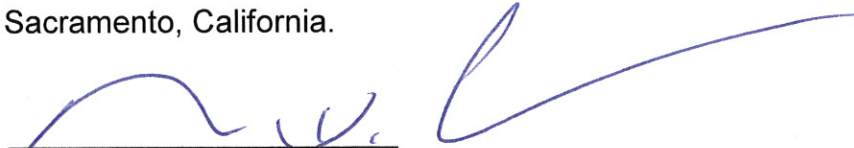
WHEREAS, CARB staff reviewed and evaluated the application in consultation with the lead agency (the City of Los Angeles);

WHEREAS, CARB staff conducted an evaluation of the GHG emission estimates and voluntary mitigation included in the application submitted by the applicant and confirmed the documentation provides an adequate technical basis for estimating total GHG emissions and voluntary mitigation for the proposed project;

WHEREAS, CARB's review and determination on the proposed project's GHG emissions is for the limited purpose of the Governor's findings and certification under AB 900 and should not be construed as meeting any other requirement under State or federal law, including CEQA; the lead agency remains responsible for full CEQA compliance for this project;

NOW, THEREFORE, based on CARB Staff's Evaluation (Attachment 1) of the documentation submitted by the Applicant (Attachment 2), I determine that the 6220 West Yucca Street Project does not result in any net additional GHG emissions pursuant to Public Resources Code section 21183, subdivision (c) for purposes of certification under AB 900.

Executed this 15th day of June 2017, at Sacramento, California.



Richard W. Corey
Executive Officer

Attachments

1. CARB Staff Evaluation of AB 900 Application for 6220 West Yucca Street Project
2. 6220 West Yucca Street Project Greenhouse Gas Emissions Methodology Documentation for AB 900 Application

ATTACHMENT 1

ARB Staff Evaluation of AB 900 Application for

6220 West Yucca Street Project

CARB Staff Evaluation of AB 900 Application for 6220 West Yucca Street Project

June 15, 2017

I. Introduction

Riley Realty, L.P. (the Applicant) proposes to redevelop an approximately 1.16-acre (net area) property on the south side of West Yucca Street between Argyle Avenue and Vista Del Mar Avenue, generally referenced as 6220 West Yucca Street (project site), with a mixed-use residential, hotel, and commercial/restaurant project (the project). The property is located within the Hollywood community of the City of Los Angeles. There are currently 44 residential units on the project site, all of which would be demolished and removed to allow development of the project. The City of Los Angeles is the Lead Agency, and the developer is the Applicant seeking certification for the project under Assembly Bill 900 (AB 900), the Jobs and Economic Improvement through Environmental Leadership Act.

AB 900 provides for streamlined judicial review under the California Environmental Quality Act (CEQA) if certain conditions are met. One condition is that the proposed project does not result in any net additional greenhouse gas (GHG) emissions as determined by the California Air Resources Board (CARB). This is the only condition that involves a determination by CARB. CARB staff prepared this technical evaluation of the GHG emissions from the proposed project as part of its determination.

This evaluation includes an executive summary, an overview of the AB 900 zero net additional GHG emissions requirement, a brief description of the proposed project, a technical review and assessment of GHG emissions information provided by the Applicant in its AB 900 application, and CARB staff's recommendation on the AB 900 GHG emissions determination for the proposed project.

II. Executive Summary

CARB staff reviewed the projected GHG emissions provided by the Applicant and confirmed the GHG emission factors used to estimate construction and operational emissions. Staff concurs with the GHG quantification in the Applicant's proposal (Attachment 2).

Based on an evaluation of the documentation provided by the Applicant, CARB staff concludes that, with commitments to purchase voluntary carbon credits documented in Attachment 2, the proposed project would not result in any net additional GHG emissions relative to the baseline as summarized in Tables 1 and 2 below. CARB staff

confirms that the proposed project would meet the GHG emissions requirements of the Jobs and Economic Improvement through Environmental Leadership Act. (Pub. Resources Code, §21178 et seq.) A detailed description of emissions by source is reviewed in subsequent sections.

Table 1 shows project GHG emissions generated by construction activities. Project construction is expected to be completed over two to three years, with demolition activities beginning as early as 2018. The Applicant has committed to offset the GHG emissions generated during project construction. No later than six months after the issuance of a Temporary Certificate of Occupancy for the project, the applicant will provide to the lead agency, the City of Los Angeles, a calculation of the net additional emissions resulting from the construction of the project, calculated in accordance with the methodology agreed upon by CARB in connection with the AB 900 certification of the project. The applicant will provide courtesy copies of the calculations to CARB and the Governor's Office promptly following transmittal of the calculations to the City of Los Angeles. Additionally, the applicant has agreed to enter into one or more contracts to purchase voluntary carbon credits from a qualified GHG emissions broker in an amount sufficient to offset the Construction Emissions and submit copies of executed contracts for purchased carbon credits to CARB and the Governor's Office.

Table 1: Project Construction-Generated GHG Emissions¹

Construction Year	GHG Emissions (MT CO₂e/year)
2018-2019	1,466
2020	779
Total	2,245
GHG Credits Required²	2,245
Notes: GHG = greenhouse gas; MT CO ₂ e = Metric tons carbon dioxide equivalent; ¹ Source: as documented in Attachment 2, and confirmed by CARB staff. ² Applicant committed to purchase carbon credits in an amount sufficient to offset net increase in construction-related GHG emissions. The project would obtain offsets using the following prioritization: (1) project design feature/on-site reduction measures; (2) off-site within neighborhood; (3) off-site within South Coast Air Quality Management District jurisdiction; (4) off-site within the State; and (5) off-site out of State.	

Table 2 summarizes the net increase in project operation related GHG emissions through the lifetime of the proposed project, which the Applicant has defined as 30 years. The continued operation of the existing land uses that would be demolished under the proposed project serves as the reference point for the purpose of defining a baseline. The Applicant has committed to execute one or more contracts to offset the net increase in GHG emissions generated during project operation for any building in

the project prior to issuance of any Certificate of Occupancy for that building. The Applicant will purchase voluntary carbon credits for the net increase in operational emissions on a net-present value basis. The Applicant has agreed to submit copies of executed contracts for purchased carbon credits to CARB and the Governor's Office. The commitment to enter into contracts to offset net additional GHG emissions will be a condition of project approval, which represents a binding and enforceable agreement between the applicant, or its successor, and the lead agency, the City of Los Angeles.

Table 2: Comparison of Baseline and Project Operation-Related GHG Emissions¹

Year ²	GHG Emissions (MT CO ₂ e/year)			
	Baseline	Proposed Project	Difference	GHG Credits Required ³
2021	626	5,031	4,405	4,405
2022	626	4,926	4,300	4,300
2023	626	4,805	4,179	4,179
2024	626	4,632	4,006	4,006
2025	626	4,527	3,901	3,901
2026	626	4,439	3,813	3,813
2027	626	4,299	3,673	3,673
2028	626	4,231	3,605	3,605
2029	626	4,171	3,545	3,545
2030	626	4,060	3,434	3,434
2031	626	4,017	3,391	3,391
2032	626	3,977	3,351	3,351
2033	626	3,943	3,317	3,317
2034	626	3,914	3,288	3,288
2035	626	3,891	3,265	3,265
2036	626	3,873	3,247	3,247
2037	626	3,859	3,233	3,233
2038	626	3,848	3,222	3,222
2039	626	3,840	3,214	3,214
2040	626	3,834	3,208	3,208
2041	626	3,830	3,204	3,204
2042	626	3,828	3,202	3,202
2043	626	3,827	3,201	3,201
2044	626	3,828	3,202	3,202
2045	626	3,829	3,203	3,203
2046	626	3,831	3,205	3,205
2047	626	3,834	3,208	3,208
2048	626	3,837	3,211	3,211
2049	626	3,841	3,215	3,215
2050	626	3,847	3,221	3,221
Total				103,669

Notes: GHG = greenhouse gas; MT CO₂e = Metric tons carbon dioxide equivalent.

¹ Source: as documented in Attachment 2, and confirmed by CARB staff.

² Applicant estimates a useful life of project of 30 years with first year of occupancy as early as 2021

³ Applicant commits to purchase carbon credits in an amount sufficient to offset net increase in operation-related GHG emissions. The project would obtain offsets using the following prioritization: (1) project design feature/on-site reduction measures; (2) off-site within neighborhood; (3) off-site within South Coast Air Quality Management District jurisdiction; (4) off-site within the State; and (5) off-site out of State.

III. Overview of AB 900

AB 900, as amended by SB 743 (2013) and SB 734 (2016) provides streamlined judicial review for development projects if, among other conditions, the “project does not result in any net additional emission of greenhouse gases, including greenhouse gas emissions from employee transportation, as determined by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.” (Pub. Resources Code, §21183, subd. (c).)

The Governor’s Guidelines for AB 900 applications require applicants to submit a proposed methodology for quantifying the project’s GHG emissions and documentation that the project will not result in any net additional GHG emissions. The documentation must quantify direct and indirect GHG emissions associated with the project’s construction and operation, including GHG emissions from employee transportation, and the net emissions of the project after accounting for any mitigation measures. The project’s net emissions, after mitigation, must be monitored and enforced consistent with Public Resources Code section 21183, subdivision (d).

The role of CARB in reviewing AB 900 applications for purposes of the Governor’s certification is limited to an evaluation of the quantification methods and documentation submitted by the Applicant to determine whether the project would result in no net additional emissions of GHG emissions. CARB staff evaluated the technical elements of the project application, including existing emissions in the absence of the project (i.e., baseline), input data and assumptions used for emissions and mitigation calculations, quantification methods, and an estimate of the project’s net GHG emissions after any mitigation.

IV. Existing Conditions

The proposed project site is located within the Hollywood community of the City of Los Angeles. There are currently one single family residence, one duplex with a detached garage and studio apartment over garage, and three, two-story apartment buildings and associated carports and paved surface parking areas. Overall, there are a total of 44 residential units on the project site.

V. Proposed Project Description

The proposed project would involve construction of a mixed-use development including 210 multi-family residential units in 202,545 square feet, 136 hotel rooms in 58,540 square feet, and approximately 12,500 square feet of commercial/restaurant uses in two buildings. Building 1, up to 20 stories tall on the southeast corner of Argyle Avenue and Yucca Street, would include all three uses and would be built over six levels of parking,

including two fully subterranean levels, two semi-subterranean levels, and two levels above ground. Building 2, located on the southwest corner of Vista Del Mar and Yucca Street would include three residential levels over a two-level podium parking structure (including one subterranean level and one at-grade level). Building 2 would be a total of four stories above ground and would contain only residential uses. In total, the Project would be approximately 273,585 square feet. The baseline and proposed land uses are summarized in Table 3.

Table 3: Baseline and Proposed Land Uses

Land Use Type	Baseline Land Uses to be Demolished	Proposed Land Uses
Residential/Apartments	20,319 sf (44 du)	202,500 sf (210 du)
Hotel	-	58,500 sf
Retail	-	3,500 sf
Restaurant	-	9,100 sf
Fitness Center	-	2,500 sf
Pool/Deck/Spa	-	4,800 sf
Open Space/Amenities	-	18,500 sf
Enclosed Parking	-	89,200 sf
Unenclosed Parking	28,000 sf	100,500 sf
Notes: du = dwelling units, sf = square feet Source: as documented in Attachment 2, and confirmed by CARB staff.		

Construction is proposed to begin as early as 2018 and conclude in 2020. The proposed project was assumed to become operational as early as 2021.

The Applicant is seeking Leadership in Energy and Environmental Design (LEED) Silver certification for energy efficiency for the proposed project, and would install a minimum of 30 kilowatt (kW) photovoltaic (PV) system, which would generate approximately 1.7 percent of the project's annual electrical demand on-site.

In addition, the project would be located within a 0.25 mile walking distance to multimodal transportation choices, including the existing Metro Red Line (Hollywood and Vine Station) and bus lines. The project would provide short- and long-term bicycle parking and showers for bicycle commuters to facilitate "last mile" connectivity to transit options. Additionally, the project would provide electric vehicle charging stations and preferential parking for alternative fueled vehicles. A transportation demand management (TDM) program will be implemented to reduce the project's single

occupant vehicles trips and increase the trips arriving via alternative modes of transportation (e.g., walking, bicycle, carpool, vanpool, and transit). The TDM program would include design features, transportation services, education, and incentives intended to reduce the amount of single occupant vehicles during commuter peak hours.

VI. Technical Review and Assessment

Environmental Science Associates, on behalf of the Applicant, prepared a GHG emissions assessment for the proposed project to demonstrate that the requirements of AB 900 can be met. A full copy of this proposal can be found in Attachment 2.

The Applicant relied upon a variety of sources for activity data and emission factors to quantify GHG emissions. This CARB staff evaluation is focused on reviewing the data sources, emission factors, emission calculations, and assumptions used for the application, and determining whether these sources and assumptions are reasonable.

The Applicant relied upon Version 2016.3.1 of the California Emissions Estimator Model (CalEEMod), a widely-used emissions quantification tool developed in coordination with local air districts to quantify criteria pollutant and GHG emissions from land use development projects in California. CalEEMod uses widely-accepted sources for emission estimates combined with appropriate default data that can be used if site-specific information is not available. CalEEMod is populated with data from the United States Environmental Protection Agency AP-42 emission factors, CARB's on-road and off-road equipment emission models such as the Emission Factor 2014 model (EMFAC2014), and the Off-road Emissions Inventory Program model (OFFROAD). The Applicant used the latest CalEEMod version including correction factors to account for compliance with the 2016 Title 24 Building Standards Code, in combination with project-specific data and CARB's EMFAC 2014 mobile-source emission factors, to calculate GHG emissions from construction and operational emissions.

VII. Project Construction Emissions

Construction-related GHG emissions, including demolition-related emissions, are one-time, direct emissions and would occur over an approximately two to three-year construction period. The Applicant estimated GHG emissions associated with project construction by using the CalEEMod tool. With some exceptions, the Applicant used CalEEMod default settings to generate construction-related GHG emissions. The Applicant estimates a total of 2,245 metric tons carbon dioxide equivalent (MT CO₂e) over the project construction period, as shown in Table 1. Construction-related GHG emissions reflect the types of equipment expected and the number of hours of operation

anticipated over the construction schedule. This includes heavy-duty equipment, such as refuse hauling trucks, excavators, cranes, and conventional work vehicles.

CARB staff concluded that the methodology and estimated GHG emissions provided by the Applicant for construction are appropriate.

VIII. Baseline Operational Emissions

Operational emissions from land uses at the existing project site that would be demolished and removed as part of the project represent baseline conditions.

Operational emissions in year 2015 serves as the baseline for purposes of this analysis, which represents existing conditions at the time the Notice of Preparation was issued for the project. GHG emissions were quantified for mobile, electricity, natural gas, area, solid waste, water, and wastewater-related sources. The application states that GHG emissions associated with existing conditions in 2015 are estimated as 626 MT CO₂e.

CARB staff evaluated the Applicant's GHG emission estimations, demand factors, and assumptions used in the Applicant's baseline calculations, summarized in Table 2 above. CARB staff concluded that the methodology and estimated baseline GHG emissions provided by the Applicant are appropriate.

IX. Proposed Project Operational Emissions

Operational GHG emission sources from the proposed project include mobile, electricity, natural gas, area, stationary, solid waste, water, and wastewater sources. Operational GHG emissions from the proposed project were assumed to begin in 2021.

The proposed project is seeking LEED Silver certification for energy efficiency and would include an on-site solar PV system with minimum 30 kW of renewable electricity generation capacity.

The Applicant used GHG emission factors for electricity from Los Angeles Department of Water and Power, that will change over time due to the California Renewable Portfolio Standard (RPS), a program designed to require 33 percent of grid electricity to come from renewable sources by 2020, and 50 percent renewable sources by 2030. Additionally, mobile-source emission factors used were based on the CARB EMFAC2014 on-road inventory. Declining mobile-source emission factors were used to estimate GHG emissions from vehicles over the project's lifetime, which reflect additional improvements in fleet fuel economy due to CARB's Advanced Clean Cars regulations, and were not reflected in CalEEMod.

CalEEMod default emission factors and calculation methods were also used to estimate GHG emissions from natural gas, solid waste disposal, water consumption, and area sources. The Applicant did not use CalEEMod to estimate stationary GHG emission sources (emergency generators). Emergency generators are permitted by the SCAQMD and regulated under SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines). Maintenance and testing would not occur daily, but rather periodically, up to 50 hours per year per Rule 1470.

The Applicant's assumptions and inputs are reasonably conservative, and represent an upper-bound for the net increase in GHG emissions that could occur. CARB staff evaluated the proposed project's emission calculations, demand factors, and assumptions used to estimate operational GHG emissions and concluded that the methodology and estimated operational GHG emissions provided by the Applicant are appropriate.

Based on the Applicant's proposal, annual project operational emissions would exceed baseline throughout the lifetime of the project, as summarized in Table 2.

X. Method to Offset Emissions

Under the GHG quantification methodology used by the Applicant, the proposed project would result in a one-time net GHG emissions increase of 2,245 MT CO₂e during project construction, and an estimated net increase of 4,405 MT CO₂e during the first year of full project operation (2021).

Operational emissions would be on-going for the duration of the project life (defined as 30 years), and would be expected to decline over the life of the project as emission factors decline associated with adoption of lower-GHG-emitting vehicle technologies and renewable sources of electricity. The Applicant has agreed to meet the requirement set forth in California Public Resources Code section 21183, subdivision (c) to demonstrate that the proposed project would result in no net additional GHG emissions through the purchase of voluntary carbon credits sufficient to offset all projected additional GHG emissions, as detailed in Attachment 2. The project would obtain offsets using the following prioritization: (1) project design feature/on-site reduction measures; (2) off-site within neighborhood; (3) off-site within South Coast Air Quality Management District jurisdiction; (4) off-site within the State; and (5) off-site out of State, following direction provided in South Coast Air Quality Management District's Governing Board Agenda Item 31, December 5, 2008, and consistent with policy recommendations included in CARB's Proposed 2017 Climate Change Scoping Plan Update. The Applicant will purchase voluntary carbon credits for the net increase in

construction and operational emissions prior to issuance of any Certificate of Occupancy for the project. The commitments to enter into contracts to offset net additional GHG emissions will be incorporated as condition of project approval, which represents a binding and enforceable agreement between the Applicant and the lead agency, the city of Los Angeles. The Applicant has agreed to submit copies of executed contracts for purchased carbon credits to CARB and the Governor's Office as evidence that this condition has been met.

XI. Conclusions and Recommendations

Based on an evaluation of the documentation provided by the Applicant and its commitment to purchase voluntary carbon credits, CARB staff concludes that the proposed project would not result in any net additional GHG emissions relative to the baseline.

ATTACHMENT 2

**Greenhouse Gas Emissions Methodology Documentation for Environmental
Leadership Development Project Application**

6220 West Yucca Street Project

(Originally Submitted April 10, 2017 and Revised June 12, 2017)

GREENHOUSE GAS EMISSIONS METHODOLOGY AND DOCUMENTATION FOR THE 6220 WEST YUCCA PROJECT

Application for CEQA Streamlining Under the “Jobs and Economic Improvement through Environmental Leadership Act”
(Public Resources Code Section 21178 et seq.)

Prepared for
Champion Real Estate Company
11620 Wilshire Boulevard
Suite 1150
Los Angeles, CA 90028

June 2017



GREENHOUSE GAS EMISSIONS METHODOLOGY AND DOCUMENTATION FOR THE 6220 WEST YUCCA PROJECT

Application for CEQA Streamlining Under the “Jobs and Economic Improvement through Environmental Leadership Act”
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Suite 1150
Los Angeles, CA 90028

June 2017

2121 Alton Parkway
Suite 100
Irvine, CA 92606
949.753.7001
www.esassoc.com



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OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

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1.0

Executive Summary

ESA has been retained to conduct a comprehensive greenhouse gas (GHG) emissions assessment for the Yucca Mixed-Use project (“the project”) and to demonstrate that the project meets the requirements of the Jobs and Economic Improvement Through Environmental Leadership Act (“the Act”) (Public Resources Code Section 21178 et seq.), also referred to as Assembly Bill (AB) 900. In September 2011, the Governor signed the Act, which required the Governor to establish procedures for applying for streamlined environmental review under the California Environmental Quality Act (CEQA) for projects that meet certain requirements. In 2016, Senate Bill (SB) 734 was signed, which extend the authority of the Governor to certify a project to January 1, 2018 and provides that the certification expires and is no longer valid if the lead agency fails to approve a certified project before January 1, 2019. The Office of Planning and Research (OPR) has provided approved guidelines for submitting applications for streamlined environmental review pursuant to the Act. With respect to GHG emissions, a project must demonstrate that it would not result in any net additional GHGs including GHG emissions from employee transportation in accordance with Public Resources Code Section 21183(c).

The project is located at 6220 West Yucca Street in the Hollywood community of the City of Los Angeles. The approximately 1.16-acre project site occupies a parcel on Yucca Street (“the project site”). The property currently contains two single-family residences (one single-family residence operates as a multi-family duplex) and three, two-story apartment buildings (for a total of one single-family and 43 multi-family residences) and associated carports and paved surface parking areas. The existing uses would be demolished and removed from the site.

The proposed mix of uses would be developed within two buildings: Building 1 with a mix of residential, hotel and commercial/restaurant uses; and Building 2 with only residential uses. Each building would provide parking for its proposed uses. The total development would include 197,750 net square feet of residential uses (or approximately 240,450 gross square feet of residential uses – including common areas, corridors, and shafts) within 210 multi-family residential units; approximately 57,740 net square feet of hotel use (or approximately 80,335 gross square feet of hotel uses) with 136 hotel rooms; and 12,500 square feet or commercial/restaurant uses. Parking for Building 1 would be provided within a six-level parking structure housed within the podium structure of Building 1 and a two-level parking structure housed within Building 2. The project would also provide 402 bicycle parking spaces, which is consistent with that required by Los Angeles Municipal Code (LAMC) Section 12.21.A.16. Construction of the project would be completed over approximately two years.

Under the Baseline Condition, the site generates approximately 625 metric tons of carbon dioxide equivalents (MTCO₂e) per year. This excludes any one-time construction GHG emissions that were generated when the existing uses and related infrastructure were originally built.

Construction of the project would generate one-time GHG emissions of approximately 1,466 MTCO₂e, during the first year, and 779 MTCO₂e during the second year. At project buildout, emissions of approximately 5,031 MTCO₂e would be generated during the first full year of operation. Compared to the Baseline Condition, the project's operational GHG emissions represent a net increase in GHG emissions from the site of approximately 4,405 MTCO₂e during the first full year of operation. The net project operational GHG emissions would decline in future years primarily as a result of vehicle fleet turnover and as utilities provide a greater percentage of electricity from renewable sources. However, the project will obtain GHG offsets that would allow the project to have no net increase in GHG emissions. Future year emissions would decline as a greater percentage of motor vehicles meet more stringent emissions standards, including the Pavley Phase I and Phase II emissions standards, and the a greater percentage of electricity is provided by renewable sources in accordance with the Renewables Portfolio Standard, which requires 50 percent renewable electricity by 2030. As a result, the project would generate decreased GHG emissions in future years and would require decreased offsets to achieve no net increase in GHG emissions.

Based on this assessment, the project would not result in any net additional GHGs including GHG emissions from employee transportation in accordance with Public Resources Code Section 21183(c). Therefore, the project would meet the GHG emissions requirements for streamlined environmental review under CEQA.

2.0

Introduction

2.1 Purpose

ESA has been retained to conduct a comprehensive greenhouse gas (GHG) emissions assessment for the project and to demonstrate that the project meets the requirements of the Jobs and Economic Improvement Through Environmental Leadership Act (“the Act”) (Public Resources Code Section 21178 et seq.). This assessment describes the methodology used to estimate the GHG emissions from baseline and project conditions, provides an estimate of the net change in GHG emissions for the project as compared to baseline conditions, and describes the methodology used to quantify GHG emission reductions from project design features and mitigation measures. The following baseline and project-related emission sources have been evaluated:

- Construction Activities – Fossil fueled on- and off-road vehicles and equipment needed for demolition, mass and fine grading, building construction, paving, and architectural coating;
- Direct Emission Sources – Consumption of natural gas on-site for cooking, space heating and water heating, combustion of fossil fuels for lawn care and maintenance activities, and motor vehicles including employee transportation; and
- Indirect Emission Sources – Off-site electricity generation, wastewater treatment and water conveyance, and solid waste disposal.

2.2 Site Location, Existing Uses, and Project Description

The project is located at 6220 West Yucca Street in the Hollywood community of the City of Los Angeles approximately five miles northwest of Downtown Los Angeles. The 1.16-acre project site occupies a parcel on Yucca Street. The project site is bounded by Yucca Street, the Argyle Hotel project construction site, and 3-story residential lofts to the north; North Vista Del Mar Avenue and 1- and 2-story single-family residences and duplexes to the east; vacant land (former Little Country Church of Hollywood) and 1- and 2-story single-family residences and duplexes followed by a 5-story mixed-use residential and commercial development to the south; and Argyle Avenue and commercial uses to the west. The property currently contains two single-family residences (one single-family residence operates as a multi-family duplex) and three, two-story apartment buildings (for a total of one single-family and 43 multi-family residences) and

associated carports and paved surface parking areas. The existing uses would be demolished and removed from the site.

The project would consist of two buildings over a single podium structure: one, 20-story high-rise tower as measured from Yucca Street (Building 1) and one, 4-story building along Yucca Street and Vista Del Mar Avenue (Building 2). Building 1, located on the corner of Yucca Street and Argyle Avenue, would include a mix of residential, hotel and commercial/restaurant uses while the adjoining Building 2 would contain residential uses. The total development would include 197,750 net square feet of residential uses (or approximately 240,450 gross square feet of residential uses – including common areas, corridors, and shafts) within 210 multi-family residential units; approximately 57,740 net square feet of hotel use (or approximately 80,335 gross square feet of hotel uses) with 136 hotel rooms; and 12,500 square feet of commercial/restaurant uses. Parking would be provided on-site within the six-level parking structure housed within the podium structure of Building 1 and the two-level parking structure housed within Building 2. The project would also provide 402 bicycle parking spaces, which is consistent with that required by Los Angeles Municipal Code (LAMC) Section 12.21.A.16

Construction of the project would be completed over an approximately two-year period. The project would export approximately 120,000 cubic yards of soil and generate approximately 5,000 cubic yards of demolition debris (asphalt, interior and exterior building demolition, and general construction debris).

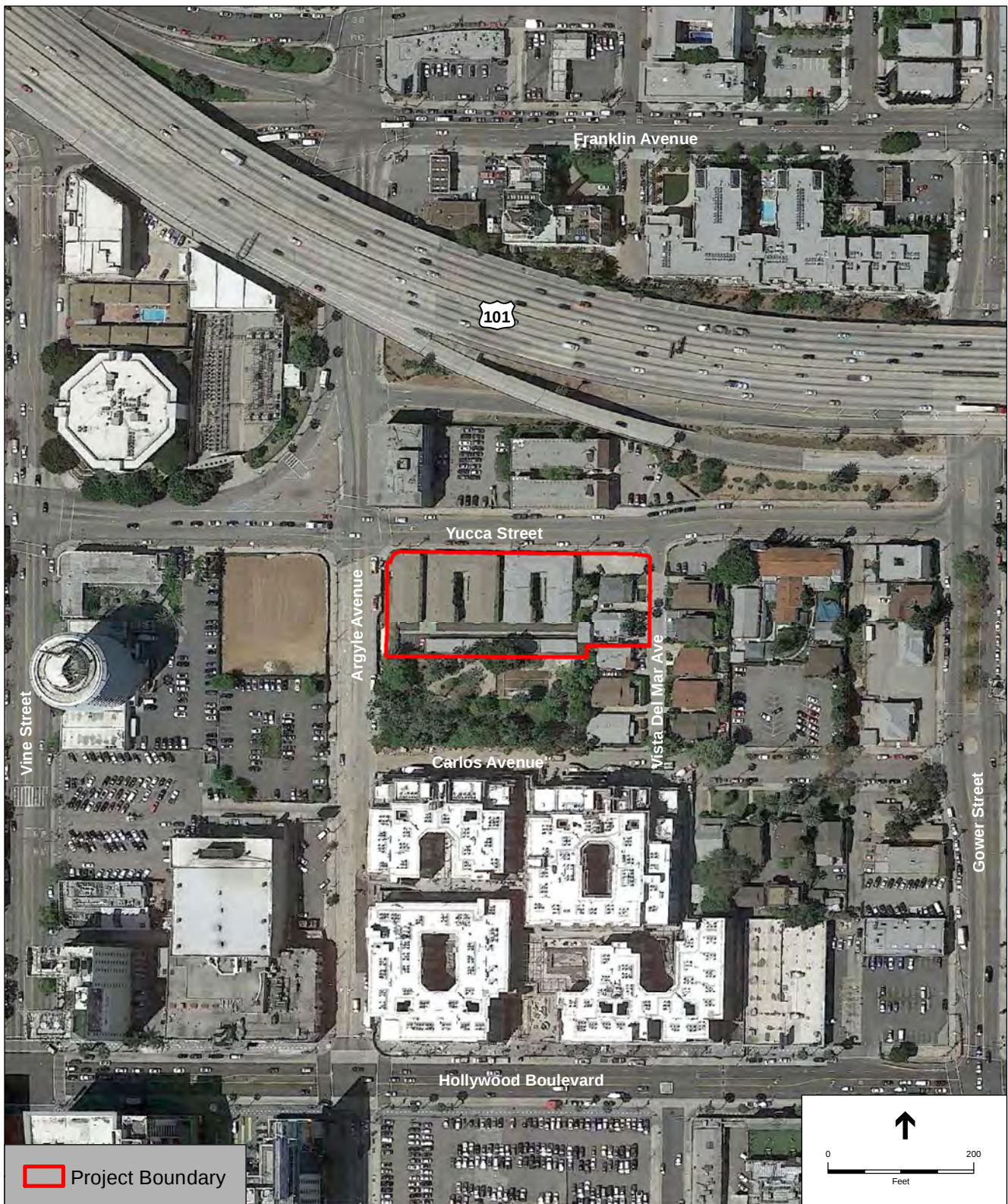
The project site and surrounding uses are shown in **Figure 1**. The site plan for the project is provide in **Figure 2**.

2.3 Jobs and Economic Improvement Through Environmental Leadership Act

In September 2011, the Governor signed the Act, which required the Governor to establish procedures for applying for streamlined environmental review under the California Environmental Quality Act (CEQA) for projects that meet certain requirements. The Office of Planning and Research (OPR) has provided approved guidelines for submitting applications for streamlined environmental review pursuant to the Act. With respect to GHG emissions, a project must demonstrate that it would not result in any net additional GHGs including GHG emissions from employee transportation in accordance with Public Resources Code Section 21183(c). For purposes of California Public Resources Code Section 21183(c) the following process applies:

1. The applicant shall submit electronically to AB900ARBsubmittals@arb.ca.gov a proposed methodology for quantifying the project's net additional GHG emissions. The CARB will review and comment on the methodology, at its discretion, within 30 days of submission.
2. At the same time, the applicant shall submit to AB900ARBsubmittals@arb.ca.gov documentation that the project does not result in any net additional GHG emissions. The documentation must at least quantify:

- a. Both direct and indirect GHG emissions associated with the project's construction and operation, including emissions from the project's projected energy use and transportation related emissions; and
 - b. The net emissions of the project after accounting for any mitigation measures that will be monitored and enforced consistent with Public Resources Code section 21183(d).
3. Within 60 days of receiving the documentation (in 2. above), the CARB will determine whether the condition specified in Public Resources section 21183(c) has been met or, if more time is needed, notify the applicant of the expected completion date.
4. The CARB will determine and report to the Governor in writing that a project does not result in any net additional emissions of greenhouse gases if the project demonstrates through a combination of project design features, compliance with (or exceeding minimum requirements of) existing regulations, and mitigation that it would result in zero additional greenhouse gas emissions.

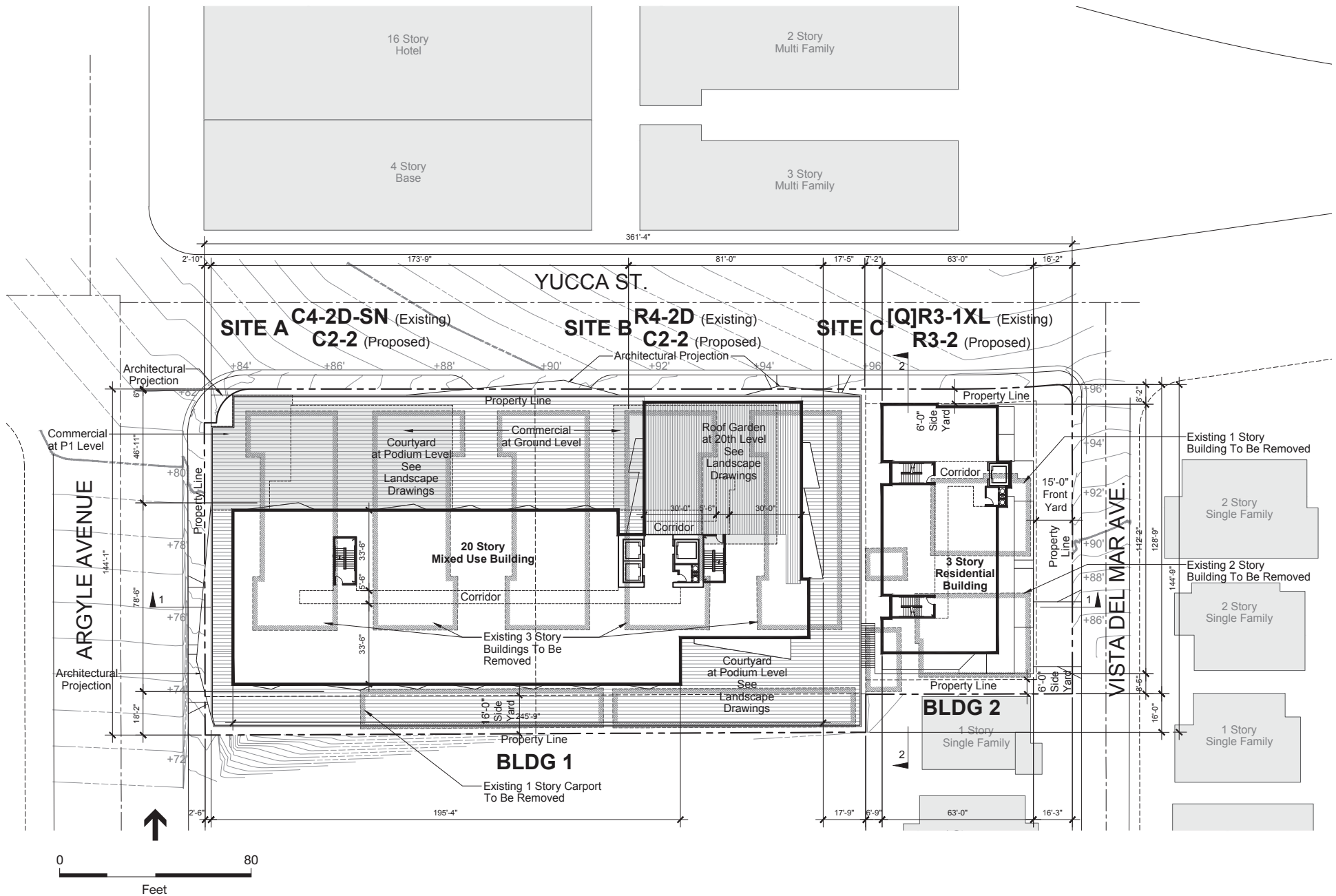


SOURCE: Google Earth, 2014-04-23 (Aerial)

6220 West Yucca Project

Figure 1

Aerial Photograph of Project Site and Vicinity



SOURCE: Togawa Smith Martin, Inc., 2017

6220 West Yucca Project

Figure 2
Proposed Site Plan

3.0

Greenhouse Gas Emissions

3.1 Global Climate Change and Greenhouse Gases

The natural process through which heat is retained in the troposphere¹ is called the “greenhouse effect.” The greenhouse effect traps heat in the troposphere through a three-fold process as follows: (1) short wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation re-emitted by the Earth; and (3) GHGs in the atmosphere absorbing or trapping the long-wave radiation and re-emitting it back towards the Earth and into space. This third process is the focus of global climate change actions.

The most commonly emitted GHG from anthropogenic (i.e., human) activities is carbon dioxide (CO₂). Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO₂e). Mass emissions are calculated by converting pollutant-specific emissions to CO₂e emissions by applying the proper global warming potential (GWP) value.² These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC’s Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 are currently in use by the State of California for official GHG emission inventory purposes. By applying the GWP ratios, project-related CO₂e emissions can be tabulated in metric tons of CO₂e (MTCO₂e) per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline. The CO₂e values are calculated for construction years as well as existing and project build-out conditions in order to generate a net change in GHG emissions for construction and operation. Compounds that are regulated as GHGs are discussed below.

- **Carbon Dioxide (CO₂):** CO₂ is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO₂ is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

¹ The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers.

² GWPs and associated CO₂e values were developed by the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC’s Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) has begun reporting GHG emission inventories for California, starting with the 2012 inventory, using the GWP values from the IPCC AR4.

- Methane (CH₄): CH₄ is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH₄ is 21 in the IPCC SAR and 25 in the IPCC AR4.
- Nitrous Oxide (N₂O): N₂O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N₂O is 310 in the IPCC SAR and 298 in the IPCC AR4.
- Hydrofluorocarbons (HFCs): HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWPs of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 to 14,800 in the IPCC AR4.
- Perfluorocarbons (PFCs): PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.
- Sulfur Hexafluoride (SF₆): SF₆ is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF₆ has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.

The Climate Registry (TCR) has prepared the General Reporting Protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities.³ No specific protocols are available for land use development projects; however, the General Reporting Protocol has been adapted to address the land use development GHG emissions in this assessment. The information provided in this assessment is generally consistent with the General Reporting Protocol minimum reporting requirements. The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include:

- Scope 1: Direct GHG emissions from human activity (e.g., stationary combustion of fuels, mobile combustion of fuels in transportation).
- Scope 2: Indirect GHG emissions associated with activities of the reporting entity but occur at sources controlled by another entity (e.g., purchased electricity or purchased steam).
- Scope 3: Indirect emissions associated with other emissions sources, such as employee commute and business travel and waste disposal.

According to the California Air Resources Board (CARB), the consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: “As facilities

³ The Climate Registry, General Reporting Protocol, Version 2.1, (2016).

consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information” to CARB to be considered for future strategies by the industrial sector.⁴ Additionally, the Office of Planning and Research directs lead agencies to “make a good-faith effort, based on available information, to calculate, model, or estimate...GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.”⁵ Therefore, direct and indirect emissions are considered in this assessment.

3.2 Baseline Operational Emissions

3.2.1 Description of Baseline Condition

The project site encompasses approximately 1.16 acres of land area currently occupied by two single-family residences and three, two-story apartment buildings and associated carports, as shown in Figure 1. The majority of the buildings were originally constructed between 1915 and the 1950s and some repair work was completed in the 1970s. The project would demolish and removed the existing structures and associated infrastructure from the project site and the existing uses would be vacated prior to construction and would cease to operate. Therefore, the GHG emissions from the existing site uses would not occur contemporaneously with either project construction emissions or project operational emissions. The square footage for these existing land uses are provided in **Table 1**.

TABLE 1
BASLINE CONDITION FLOOR AREA

Land Use	Number of Units	Square Feet (sqft)
Multi-Family Residential	43	18,952
Single-Family Residential	1	1,367
Parking Lot/Hardscape Areas	—	28,000

SOURCE: Champion Real Estate Company / Togawa Smith Martin, Inc., 2016.

⁴ California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), (2007).

⁵ Office of Planning and Research, Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, (2008) 5.

3.2.2 GHG Emission Sources and Calculation Methodology

Construction

The project site is currently built-out. Construction of the buildings and associated parking areas and infrastructure resulted in one-time GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O from heavy-duty construction equipment, haul trucks, and worker vehicles. However, sufficient detail is not available with respect to the construction schedule, equipment usage, and number of haul trips to provide a quantitative construction GHG emissions assessment for the Baseline Condition. Therefore, construction-related GHG emissions are not included for the Baseline Condition. This is a conservative approach since, by excluding the Baseline Condition construction-related GHG emissions, the project would need to provide slightly greater GHG reductions in order to meet the requirements of AB 900 of no net additional GHG emissions.

Operational Energy – Electricity

The generation of electricity in California is achieved through the combustion of fossil fuels, primarily natural gas, using steam boilers, internal combustion engines, and combustion turbines. A portion of the electricity in California is imported from outside the state and is derived from the combustion of coal and other non-gaseous fossil fuels. The combustion of fossil fuels to produce electricity results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. These emissions occur due to the electrical demand of the existing land uses that currently operate on the project site. The electricity generation occurs off-site; therefore, electricity use results in GHG emissions that are considered to be indirect.

Emissions of GHGs associated with the Baseline Condition energy demand are based on the size of the hospital, administration, and supporting land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual electricity GHG emissions in units of MTCO₂e are generally calculated as follows:

Electricity:

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_E \times EF_E \times \text{GWP})_i) \div 2204.62 \quad \text{[Equation 1]}$$

Where:	Units	=	Number of land use units (same land use type) [dwelling unit (DU) or 1000 sqft]
	D _E	=	Electrical demand factor [megawatt-hour (MWh)/DU or 1000 sqft/year]
	EF _E	=	GHG emission factor [pounds per megawatt-hour (MWh)]
	GWP	=	Global warming potential [CO ₂ = 1, CH ₄ = 25, N ₂ O = 298]
	2204.62	=	Conversion factor [pounds/MT]
	i	=	Summation index

Electrical demand is based on data from the California Energy Commission (CEC) *California Commercial End Use Survey* (CEUS), which lists energy demand by building type,⁶ as incorporated into the California Emissions Estimator Model (CalEEMod).⁷ The data from the CEUS is from 2002. Since 1978, the CEC has established building energy efficiency standards, which are updated periodically. CalEEMod (version 2016.3.1) incorporates correction factors to account for the 2013 Title 24 Building Energy Efficiency Standards. The existing buildings on the project site were built in the 1900s (as early as 1915 through the 1950s with some repair work in the 1970s). Thus, the building electricity usage rates are adjusted to account for the prior 2001 Title 24 Building Energy Efficiency Standards.⁸ This is considered a conservative adjustment because the existing buildings were built prior to implementation of the 2001 Standards and thus would have been built to a less stringent energy standard and data is not readily available to adjust usage factors prior to the 2001 Standards. Parking lot and hardscape areas result in electricity usage due to lighting needs and were included as sources.

The Los Angeles Department of Water and Power (LADWP) provides electric service to the project site. Emission factors for GHGs due to electrical generation to serve the electrical demands of the Baseline Condition were obtained from the LADWP 2016 Draft Power Integrated Resource Plan, which provides a CO₂ intensity of 1,132 pounds of CO₂ per MWh in 2015 (the most recent year for which data is provided).⁹ LADWP has achieved average renewable energy sales of approximately 20 percent for the 2010 through 2013 period.¹⁰ Emission factors for CH₄ and N₂O were obtained from CalEEMod.¹¹

The estimated annual emissions from electrical demand from the Baseline Condition are provided in **Table 2**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 2
BASELINE CONDITION ELECTRICAL DEMAND GREENHOUSE GAS EMISSIONS

Land Use	Units (1000 sqft)	Annual Electrical Demand Factor, D _E (MWh/year) ^a	Emission Factor, EF _E (pounds/MWh)			Annual GHG Emissions (MTCO ₂ e/year) ^d
			CO ₂ ^b	CH ₄ ^c	N ₂ O ^c	
Existing Site						
Multi-Family	18.95	157.69	1,132	0.029	0.0062	81.1
Single-Family	1.37	7.28	1,132	0.029	0.0062	3.7
Parking/Hardscape	28.00	24.64	1,132	0.029	0.0062	12.7
Subtotal						98

⁶ California Energy Commission, California Commercial End-Use Survey, <http://capabilities.itron.com/CeusWeb/ChartsSF/Default2.aspx>. Accessed January 2017

⁷ See: <http://www.caleemod.com>.

⁸ California Air Resources Board, CalEEMod User's Guide, Appendix D, Section 5, September 2016, <http://caleemod.com/>. Accessed January 2017. Factors for the prior Title 24 standard are extrapolated based on the technical source documentation.

⁹ Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) C-13.

¹⁰ Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) ES-1.

¹¹ California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

NOTES:

- ^a California Air Resources Board, CalEEMod User's Guide, Appendix D, Section 5, September 2016, <http://caleemod.com/>. Accessed January 2017. Factors are extrapolated based on the technical source documentation.
- ^b Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) C-13.
- ^c California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.
- ^d Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix A**.

SOURCE: ESA 2017.

Operational Energy – Natural Gas

The existing land uses under the Baseline Condition utilize natural gas primarily for heating needs. Natural gas is also used for cooking. The combustion of natural gas results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. The combustion of natural gas occurs on-site; therefore, the associated GHG emissions are considered to be direct.

The emissions of GHGs associated with natural gas combustion under the Baseline Condition are based on the size of the existing land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted. Annual natural gas GHG emissions in units of MTCO₂e are generally calculated as follows:

Natural Gas:

$$\text{Annual Emissions [MTCO}_2\text{e]} = \left(\sum_i (\text{Units} \times D_{\text{NG}} \times \text{EF}_{\text{NG}} \times \text{GWP})_i \right) \div 2204.62 \quad \text{[Equation 2]}$$

Where:	Units	=	Number of land use units (same land use type) [DU or 1000 sqft]
	D _{NG}	=	Natural gas combustion factor [MMBtu/DU or 1000 sqft/year]
	EF _{NG}	=	GHG emission factor [pounds/MMBtu]
	GWP	=	Global warming potential [CO ₂ = 1, CH ₄ = 25, N ₂ O = 298]
	2204.62	=	Conversion factor [pounds/MT]
	i	=	Summation index

Similar to the electricity calculations, natural gas demand is based on data from the CEUS, which lists energy demand by building type, as incorporated into CalEEMod. As discussed previously, the existing buildings on the project site were built in the 1900s (as early as 1918 through the 1950s with some repair work in the 1970s). Thus, the building natural gas usage rates are adjusted to account for the prior 2001 Title 24 Building Energy Efficiency Standards. This is considered a conservative adjustment because the existing buildings were built prior to implementation of the 2001 Standards and thus would have been built to a less stringent energy standard and data is not readily available to adjust usage factors prior to the 2001 Standards. Parking lot and hardscape areas do not result in natural gas combustion and were excluded as sources.

The combustion of natural gas results in relatively equal amounts of GHG emissions per unit of gas combusted in the state. Emission factors for GHGs due to natural gas combustion to serve the heating and cooking demands of the Baseline Condition were obtained from CalEEMod, which provides statewide emission factors.

The estimated annual emissions from natural gas combustion from the Baseline Condition are provided in **Table 3**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 3
BASELINE CONDITION NATURAL GAS GREENHOUSE GAS EMISSIONS

Land Use	Units (1000 sqft)	Annual Electrical Demand Factor, D _{NG} (MMBtu/year) ^a	Emission Factor, EF _{NG} (pounds/MMBtu)			Annual GHG Emissions (MTCO ₂ e/year) ^c
			CO ₂ ^b	CH ₄ ^b	N ₂ O ^b	
Existing Site						
Multi-Family	18.95	706.30	117.65	0.0023	0.0022	37.9
Single-Family	1.37	36.50	117.65	0.0023	0.0022	2.0
Subtotal						40

NOTES:

^a California Air Resources Board, CalEEMod User's Guide, Appendix D, Section 5, September 2016, <http://caleemod.com/>. Accessed January 2017. Factors are extrapolated based on the technical source documentation.

^b California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

^c Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix A**.

SOURCE: ESA 2017.

Operational Mobile

Mobile source emission calculations associated with the Baseline Condition are calculated using vehicle miles traveled (VMT) from the traffic analysis prepared for the project.¹² The estimated VMT in the traffic analysis is based on average trip lengths for each land use were determined using CalEEMod. The trip type describes the purpose of the trip generated at each land use, such as residential trips and commercial trips. Residential trips include home-work (H-W), home-shop (H-S), and home-other (H-O). Commercial trips include commercial-customer (C-C), commercial-work (C-W), and commercial-nonwork (C-NW). The trip lengths are based on the location and urbanization of the project area. The average trip length of each land use is the sum of the trip length of each trip type multiplied by the percentage of trip type and accounting for applicable reductions from proximity to transit and other VMT-reducing land use characteristics.

The analysis is also based on the CARB on-road vehicle emissions factor model (EMFAC). EMFAC2014 “represents ARB's current understanding of motor vehicle travel activities and their

¹² Gibson Transportation Consulting Inc., AB 900 Traffic Assessment for the 6220 West Yucca Project Hollywood, California. January 2017.

associated emission levels.”¹³ Emissions of GHGs associated with mobile sources under the Baseline Condition are based on the average daily trip rate, trip distance, the GHG emission factors for the mobile sources, and the GWP values for the GHGs emitted. The types of vehicles that visit the project site include all vehicle types including automobiles, light-duty trucks, delivery trucks, and waste haul trucks. Modeling for the Baseline Condition was conducted using the vehicle fleet mix for the South Coast Air Basin for all vehicle types as provided in EMFAC2014.

Emission factors were obtained from EMFAC2014, which was run in the emissions mode (also referred to as the “Burden” mode) and used to generate South Coast Air Basin-specific vehicle fleet emission factors in units of grams or metric tons per mile, which is the same methodology used by CalEEMod. Emissions of GHGs from motor vehicles are dependent on model years and the specific types of vehicles that are used to travel to and from the existing project site. The emissions were calculated using a representative motor vehicle fleet mix for year 2015 as provided in EMFAC2014. Mobile source emissions are the product of the CalEEMod estimated VMT and the EMFAC2014 emission factors. The estimated annual emissions from mobile sources from the Baseline Condition are provided in **Table 4**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 4
BASILINE CONDITION MOBILE SOURCE GREENHOUSE GAS EMISSIONS

Land Use	Fleet Mix	Estimated Annual VMT ^a	Annual GHG Emissions (MTCO ₂ e/year)
Existing Site			
Multi- and Single-Family	South Coast Air Basin Fleet Mix (Existing Conditions)	939,145	454
Subtotal			454
NOTES:			
^a Gibson Transportation Consulting Inc., AB 900 Traffic Assessment for the 6220 West Yucca Project Hollywood, California. January 2017. Based on the estimated daily VMT multiplied by 365 days per year.			
SOURCE: ESA 2017.			

Operational Solid Waste

The existing land uses under the Baseline Condition generate municipal solid waste (MSW) from day-to-day operational activities, which generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, paper, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills

¹³ California Air Resources Board, Mobile Source Emissions Inventory, <http://www.arb.ca.gov/msei/categories.htm#emfac2014>. Accessed January 2017.

results in GHG emissions of CO₂ and CH₄ from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal under the Baseline Condition are calculated using CalEEMod. The emissions are based on the size of the existing land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of MTCO₂e are generally calculated in CalEEMod as follows:

Solid Waste:

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_{\text{MSW}} \times EF_{\text{MSW}} \times \text{GWP})_i) \div 1.1023$$

[Equation 3]

Where:	Units	=	Number of land use units (same land use type) [DU or 1000 sqft]
	D _{MSW}	=	Waste disposal rate [tons/DU or 1000 sqft/year]
	EF _{MSW}	=	GHG emission factor [tons/ton waste]
	GWP	=	Global warming potential [CO ₂ = 1, CH ₄ = 25, N ₂ O = 298]
	1.1023	=	Conversion factor [tons/MT]
	i	=	Summation index

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. Annual waste disposal rates used in CalEEMod are based on data from the California Department of Resources Recycling and Recovery (CalRecycle).¹⁴ The total amount of waste disposed was reduced by the diversion rate for the City of Los Angeles of approximately 76 percent, according to the most recent data available.¹⁵ The GHG emission factors, particularly for CH₄, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, are used in this assessment.

The estimated annual emissions from solid waste disposal from the Baseline Condition are provided in **Table 5**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 5
BASELINE CONDITION SOLID WASTE DISPOSAL GREENHOUSE GAS EMISSIONS

Land Use	Waste Diversion Rate ^a	Waste Disposal after Diversion, D _{MSW} (tons/year) ^b	Annual GHG Emissions (MTCO ₂ e/year) ^c
Existing Site			
Multi-Family	76%	23.03	11.58

¹⁴ CalRecycle, Estimated Solid Waste Generation Rates. Available <http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/default.htm>. Accessed January 2017.

¹⁵ City of Los Angeles, Bureau of Sanitation, Zero Waste Progress Report, (2013).

Single-Family	76%	0.54	0.27
Subtotal			12

NOTES:

- ^a City of Los Angeles, Bureau of Sanitation, Zero Waste Progress Report, (2013).
- ^b Waste generation factors for the land uses are from the CalRecycle (formerly Integrated Waste Management Board), Estimated Solid Waste Generation Rates, Available <http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/default.htm>. Accessed October 2015.
- ^c Emissions are based on CalEEMod default values for landfill gas capture and flaring for the South Coast Air Basin region. Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix A**.

SOURCE: ESA 2017.

Operational Water and Wastewater

Water and wastewater generated from the existing land uses under the Baseline Condition requires energy to supply, distribute and treat. The combustion of fossil fuels to produce electricity results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. The electricity generation occurs off-site; therefore, the electricity use from water and wastewater results in GHG emissions that are considered to be indirect. Wastewater also results in emissions of GHGs from wastewater treatment systems (e.g., septic, aerobic, or lagoons) as well as from solids that are digested either through an anaerobic digester or with co-generation from combustion of digester gas.

The emissions of GHGs associated with water demand and wastewater generation under the Baseline Condition are calculated using CalEEMod. The emissions are based on the size of the existing land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual water demand and wastewater GHG emissions due to electricity are generally calculated in CalEEMod as follows for indoor and outdoor water demand:

Water Supply, Treatment, and Distribution; Wastewater Treatment (electricity):

$$\text{Annual Emissions [MTCO}_2\text{e]} = \left(\sum_i (\text{Units} \times D_w \times (EI_w \div 1000) \times EF_w \times GWP)_i \right) \div 2204.62$$

[Equation 4]

Where:	Units	=	Number of land use units (same land use type) [DU or 1000 sqft]
	D _w	=	Water demand factor [million gallons (Mgal)/DU or 1000 sqft/year]
	EI _w	=	Electricity intensity factor [kilowatt-hours (kWh)/Mgal]
	1000	=	Conversion factor [kWh/MWh]
	EF _w	=	GHG emission factor [pounds/MWh]
	GWP	=	Global warming potential [CO ₂ = 1, CH ₄ = 25, N ₂ O = 298]
	2204.62	=	Conversion factor [pounds/MT]
	i	=	Summation index

The estimated water demand is based on usage factors from the City of Los Angeles Bureau of Engineering, Sewer Capacity Availability Request (SCAR) report.¹⁶ Parking lot and hardscape areas typically result outdoor water usage for cleaning purposes and were included as sources.

The CEC's estimate for energy intensity of the water use cycle in Southern California, as provided in the 2006 CEC report Refining Estimates of Water-Related Energy Use in California, is used to calculate the energy usage related to water supply, treatment, and distribution and wastewater treatment.¹⁷ The same electricity GHG emissions factors discussed under the **Operational Energy – Electricity** subheading are used for water and wastewater energy usage.

The emissions of GHGs associated with wastewater treatment process emissions are also calculated using CalEEMod. The emissions are based on the type of treatment (e.g., aerobic, facultative lagoons, septic systems). The emissions are calculating using the default settings in CalEEMod for the type of wastewater treatment. Calculation formulas are described in detail in the California Emissions Estimator Model User's Guide, Appendix A.¹⁸ As stated in the User's Guide, the GHGs emitted from each type of wastewater treatment are based on the CARB's Local Government Operations Protocol (LGOP),¹⁹ which are in turn based on United States Environmental Protection Agency (USEPA) methodologies.²⁰ The default CalEEMod settings for wastewater treatment are: 10.33 percent septic tank, 87.46 percent aerobic, 2.21 percent facultative lagoons and 100 percent anaerobic combustion of gas.

The estimated annual emissions from water and wastewater from the Baseline Condition are provided in **Table 6**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 6
BASELINE CONDITION WATER AND WASTEWATER GAS GREENHOUSE GAS EMISSIONS

Land Use	Water Demand, D _w (gal/year) ^a	Electricity Intensity Factor, El _w (kWh/Mgal) ^b				Annual GHG Emissions (MTCO ₂ e/year) ^c
		Supply	Treat	Distribute	Treatment	
Existing Site						
Multi-Family	2,336,730	9,727	111	1,272	1,911	17.9
Single-Family	81,030	9,727	111	1,272	1,911	0.6
Parking/Hardscape	245,280	9,727	111	1,272	1,911	1.4
Subtotal						20

¹⁶ City of Los Angeles, Bureau of Engineering, Sewer Capacity Availability Request (SCAR), January 2017.

¹⁷ California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).

¹⁸ California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, (2016).

¹⁹ California Air Resources Board, Local Government Operations Protocol, Chapter 10: Wastewater Treatment Facilities, (2008).

²⁰ United States Environmental Protection Agency, Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006, Chapter 8: Waste, (2008).

NOTES:

- ^a City of Los Angeles, Department of Public Works, Bureau of Sanitation, Sewerage Facilities Charge, Sewage Generation Factors for Residential and Commercial Categories. Provided in the L.A. CEQA Thresholds Guide, (2006) M.2-22-M.2-26. Water demand rates are derived based on the wastewater generation rates.
- ^b California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).
- ^c Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix A**.

SOURCE: ESA 2017.

Operational Area and Stationary

Area sources of GHG emissions resulting from the operation of the existing land uses at the project site under the Baseline Condition include equipment used to maintain landscaping, such as lawnmowers and trimmers. The combustion of fossil fuels to operate these equipment results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. The emissions occur on-site and are a direct result of activity from the existing land uses; therefore, the GHG emissions are considered to be direct. There are no other substantial stationary sources on-site, such as generators or industrial sized boilers.

The emissions of GHGs associated with operational area sources under the Baseline Condition are calculated using CalEEMod. The emissions for landscaping equipment are based on the size of the hospital, administrative, and support land uses, the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted. Annual GHG emissions from landscaping equipment in units of MTCO₂e are generally calculated in CalEEMod as follows:

Landscaping Equipment:

$$\text{Annual Emissions [MTCO}_2\text{e]} = \left(\sum_i (\text{Units} \times \text{EF}_{\text{LE}} \times \text{A}_{\text{LE}} \times \text{GWP})_i \right) \div 10^6 \quad \text{[Equation 5]}$$

Where:	Units	=	Number of land use units (same land use type) [DU or 1000 sqft]
	EF _{LE}	=	GHG emission factor [grams (g)/DU or 1000 sqft/day]
	A _{LE}	=	Landscaping equipment operating days per year [day/year]
	GWP	=	Global warming potential [CO ₂ = 1, CH ₄ = 25, N ₂ O = 298]
	10 ⁶	=	Conversion factor [g/MT]
	i	=	Summation index

CalEEMod uses landscaping equipment GHG emission factors from the CARB off-road equipment emissions factor model (OFFROAD) and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.²¹ CalEEMod estimates that landscaping equipment operate for 250 days per year in the South Coast Air Basin.

²¹ California Air Resources Board, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, (6/13/2003),

The estimated annual emissions from area and stationary sources under the Baseline Condition are provided in **Table 7**. Detailed emissions calculations are provided in **Appendix A**.

TABLE 7
BASELINE CONDITION AREA AND STATIONARY SOURCE GREENHOUSE GAS EMISSIONS

Land Use	Source	Annual GHG Emissions (MTCO ₂ e/year) ^c
Existing Site		
Multi- and Single-Family	Landscaping Equipment	2
Subtotal		2

SOURCE: ESA 2017.

Summary of Baseline Condition GHG Emissions

A summary of the GHG emissions under the Baseline Condition is provided in **Table 8**.

TABLE 8
BASELINE CONDITION SUMMARY OF ANNUAL GREENHOUSE GAS EMISSIONS

Source	Annual GHG Emissions (MTCO ₂ e/year) ^a
Existing Site	
Electricity	98
Natural Gas	40
Mobile	454
Solid Waste	12
Water and Wastewater	20
Area and Stationary	2
Total	626

NOTES:

^a Totals may not add up exactly due to rounding in the modeling calculations.

SOURCE: ESA 2017.

http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_act.pdf. Accessed January 2017.

3.3 Project Construction and Operational Emissions

3.3.1 Description of Project Condition

The project would demolish all existing buildings and surface parking/hardscape on the site (approximately 20,319 square feet of building floor area and approximately 28,000 square feet of surface parking/hardscape). The project would construct approximately 197,750 net square feet of residential uses (or approximately 240,450 gross square feet of residential uses – including common areas, corridors, and shafts) within 210 multi-family residential units; approximately 57,740 net square feet of hotel use (or approximately 80,335 gross square feet of hotel uses) with 136 hotel rooms; and 12,500 square feet of commercial/restaurant uses.

For the purposes of this assessment, in order to provide a comparison of the project's GHG emissions with the Baseline Condition, and to assess future GHG emissions trends of the project, emissions of GHGs are estimated for the project's construction and operational lifetime. Within the project's operational lifetime, there are several key milestone years. The milestone years correspond to the following circumstances:

- 2021: Expected initial operational year (electric utilities, including LADWP, are expected to supply a minimum of 33 percent of electricity via renewable sources during this year);
- 2024: The year in which electric utilities, including LADWP, are expected to supply a minimum of 40 percent of electricity via renewable sources;
- 2025: The year in which the model year 2017-2025 light-duty vehicle GHG emissions and Corporate Average Fuel Economy standards are to be fully implemented for new vehicles;
- 2027: The year in which electric utilities, including LADWP, are expected to supply a minimum of 45 percent of electricity via renewable sources;
- 2030: The year in which electric utilities, including LADWP, are expected to supply a minimum of 50 percent of electricity via renewable sources.

3.3.2 GHG Emission Sources and Calculation Methodology

Construction

Construction of the project would result in one-time GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O from heavy-duty construction equipment, haul trucks, and worker vehicles. Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the off-road and on-road emissions factors. The emissions are estimated using the CalEEMod tool, which incorporates the CARB off-road equipment emissions factor model (OFFROAD) and on-road vehicle emissions factor model (EMFAC). The output values used in this analysis are adjusted to be project-specific based on equipment types and the construction schedule. These values are applied to the construction phasing assumptions to generate GHG emissions values for

each construction year. The CalEEMod tool provides options for specifying equipment, horsepower ratings, load factors, and operational hours per day. Since a construction contractor(s) has not yet been retained for the project, specific equipment specifications are not yet known. Therefore, recommended default equipment and vehicle horsepower ratings and load factors provided in CalEEMod are used in this assessment. This assessment also assumes equipment would operate for 8 hours during a workday.

Construction of the project would occur over a number of phases and include activities such as demolition, debris and soil hauling, building construction, architectural coating, and paving. Information regarding the activities that would occur during these phases is provided below:

- **Demolition:** This first phase is anticipated to begin as early as 2018 and last for just under one month (approximately three weeks). If construction commences at a later date, this assessment would be considered conservative as future year emission factors tend to decline in future years. Construction equipment would include an excavator, dozers, concrete saw, tractors/loaders/backhoes, haul trucks, and other construction equipment.
- **Site Preparation:** This phase is anticipated to begin after the demolition phase and last for approximately one to two weeks. Construction equipment would include tractors/loaders/backhoes and rubber tired dozers.
- **Grading and Excavation:** This phase is anticipated to begin after the site preparation phase and last for approximately four months. Construction equipment would include a drill rig, excavators, dozer, loader, scraper, tractors/loaders/backhoes, haul trucks, and other equipment. Up to approximately 120,000 cubic yards of soil, based on conservative measurements, would be excavated and exported.
- **Building Construction:** This phase is anticipated to begin after grading and last for approximately 17 months. During this phase, the parking structure and residential and commercial buildings would be constructed. Construction equipment would include forklifts, crane, tractors/loaders/backhoes, generator, welders, concrete pump, concrete trucks, and other construction equipment.
- **Paving:** This activity is anticipated to last for approximately four months and occur during the building construction phase. During this activity, paving materials would be poured during construction of the buildings and related features and the surfaces would be paved. Construction equipment would include concrete trucks, paving equipment, and other equipment.
- **Architectural Coating:** This activity is anticipated to last for approximately four months and occur during the building construction phase. During this activity, the interior and exterior coating would be applied to the residential and commercial buildings. Specific coating equipment would include an air compressor.

The emissions of GHGs associated with construction of the project were calculated for each year of construction activity. Detailed emissions calculations are provided in **Appendix B**. Results of the GHG emissions calculations are presented in **Table 9**, *Estimated Unmitigated Project Construction Greenhouse Gas Emissions*. Although GHGs are generated during construction and are accordingly considered one-time emissions, it is important to them when assessing all of the long-term GHG emissions associated with a project.

TABLE 9
ESTIMATED UNMITIGATED PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS

Emission Source	Annual GHG Emissions ^a
Construction Year 1	1,466
Construction Year 2	779

NOTES:

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

SOURCE: ESA 2017.

Operational Energy – Electricity

Electricity-related emissions of GHGs associated with operation of the project are based on the size of the commercial, retail, restaurant, and residential land uses (including residential amenities such as the private pool and pool deck), the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual electricity GHG emissions are calculated using the general formula shown previously as **Equation 1**. For residential land uses, emission factors are specified in units of dwelling units (DU). For nonresidential land uses, emission factors are specified in units of 1,000 square feet. This assessment also includes electricity-related GHG emissions from the proposed enclosed parking structure, which would include elevators, lighting, and a ventilation system.

Electricity demand is based on data from the CEUS, which lists energy demand by building type.²² However, since the data from the CEUS is from 2002, CalEEMod incorporates correction factors to account for compliance with the 2013 Title 24 Building Standards Code. Since the project would be required to meet the Title 24 standards in effect at the time of building permit application, this analysis incorporates an additional correction factor to account for the updated 2016 Title 24 Building Standards Code, which went into effect on January 1, 2017. The additional Title 24 regulated energy correction factor applies a 5 percent increased energy efficiency for nonresidential land uses and a 28 percent increased efficiency for residential land uses compared to the 2013 Title 24 Building Standards Code.²³

The project would be designed to incorporate Project Design Features (PDFs) that would reduce its energy demand with the goal of achieving or exceeding the requirements of the State of California Green Building Standards (CALGreen) Code, the City of Los Angeles Green Building Code, and the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver rating. The project would also include a minimum of 30

²² California Energy Commission, California Commercial End-Use Survey, <http://capabilities.itron.com/CeUSWeb/ChartsSF/Default2.aspx>. Accessed January 2017.

²³ The current version of CalEEMod (version 2016.3.1) includes electricity and natural gas correction factors for the 2013 version of the Title 24 building standards. According to the CEC, the 2016 version of the Title 24 building standards use 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2013 standards (see California Energy Commission, Building Energy Efficiency Standards, Frequently Asked Questions, http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf). Accessed January 2017.

kilowatts of photovoltaic panels on the project site,²⁴ which would be estimated to provide approximately 47,478 kilowatt-hours of electricity per year, based on region-specific data from the United States Department of Energy, National Renewable Energy Laboratory (NREL).²⁵ Therefore, electricity provided by 30 kilowatts of on-site photovoltaic panels would provide approximately 47,478 kilowatt-hours of renewable electricity per year, which would offset approximately 1.72 percent of the project's estimated annual electricity demand of 2,754,321 kilowatt-hours per year. Thus, the project would reduce its electricity demand as compared to the default electricity factors in CalEEMod. The PDFs were accounted for in CalEEMod by selecting the appropriate options in the "mitigation measures" section of the model or applying the appropriate reductions after modeling (i.e., reducing the annual GHG emissions from electricity demand by approximately 1.72 percent from 30 kilowatt photovoltaic panels). Green building measures that would result in quantifiable reductions in GHG emissions would include, but are not limited to the following:

Green Building Measures: The project would be designed and operated to meet or exceed the applicable requirements of the State of California Green Building Standards Code and the City of Los Angeles Green Building Code. Green building measures would include, but are not limited to the following:

- The project would implement a construction waste management plan to recycle and/or salvage a minimum of 50 percent of nonhazardous construction debris.
- The project would be designed to optimize energy performance and reduce building energy cost by a minimum of 5 percent for new construction compared to the Title 24 Building Energy Efficiency Standards (2016).
- The project would be designed to optimize energy performance and reduce building energy cost by installing energy efficient appliances that meet the USEPA ENERGY STAR rating standards or equivalent.
- The project shall provide a minimum of 30 kilowatts of photovoltaic panels on the project site, unless additional kilowatts of photovoltaic panels become feasible due to additional area being added to the project site.
- The residential units within the project shall not include the use of natural gas-fueled fireplaces.
- The project would include double-paned windows to keep heat out during summer months and keep heat inside during winter months.
- The project would include lighting controls with occupancy sensors to take advantage of available natural light.

²⁴ The amount of solar photovoltaic panels (30 kilowatts) is estimated based on the available physical roof space taking into account space dedicated for rooftop amenities, decks/pool areas, and space required for rooftop equipment, such as heating, ventilation, and air conditioning units.

²⁵ U.S. Department of Energy, National Renewable Energy Laboratory, PVWatts Calculator. Available: <http://pvwatts.nrel.gov/pvwatts.php>. Accessed March 2017.

- The project would reduce outdoor potable water use by a minimum of 20 percent compared to baseline water consumption. Reductions would be achieved through drought-tolerant/California native plant species selection, irrigation system efficiency, alternative water supplies (e.g., stormwater retention for use in landscaping), and/or smart irrigation systems (e.g., weather-based controls).
- The project would reduce indoor potable water use by a minimum of 20 percent compared to baseline or standard water consumption by installing water fixtures that exceed applicable standards.
- The project would provide on-site recycling areas, consistent with City of Los Angeles strategies and ordinances, with the goal of achieving 70 percent waste diversion by 2020, and 90 percent by 2025.
- To encourage carpooling and the use of electric vehicles by project residents and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.

The LADWP provides electric service to the project site. Currently, LADWP provides 20 percent of electricity via renewable sources.²⁶ LADWP is required to provide an increasing percentage from renewable sources in compliance with the Renewables Portfolio Standard with 33 percent by 2020, 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. During calendar year 2015, 37 percent of the energy delivered to LADWP customers was generated from two coal-fired generating stations: the Intermountain Power Project (IPP), located in Utah, and the Navajo Generating Station (NGS), located in Arizona. These stations provide base load generation to Los Angeles; however, they emit about twice as much CO₂ as energy generated from natural gas.²⁷ On July 1, 2016, LADWP sold its 477 MW share in NGS to Salt River Project, three and a half years before the operating agreement and land lease expires in December 2019.²⁸ The reduction in LADWP's CO₂ intensity from this sale is not reflected in the 2015 CO₂ intensity factor above. LADWP continues to focus on early coal replacement options as a means to lower LADWP's CO₂ emission levels and increase renewable sources in accordance with the Renewables Portfolio Standard.

Based on data obtained from CARB staff, “[i]f an applicant would like to use an EF [emission factor] that represents the state’s Renewable Portfolio Standard (RPS) law and growth in electricity demand, the EF of 595 [pounds] CO₂/MWh may be used.”²⁹ According to CARB staff, the “EF represents a ‘marginal’ supply profile for new generation that will be added to the grid in the years 2020 and beyond, and is consistent with the methodology used in state emission

²⁶ Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) ES-1.

²⁷ Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) ES-8.

²⁸ Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) ES-8.

²⁹ California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects, January 2017. The emission factor of 595 pounds CO₂/MWh is from the California LEV III Initial Statement Of Reasons (ISOR, Dec. 7, 2011), <http://www.arb.ca.gov/regact/2012/leviiiighg2012/leviiiighg2012.htm>, based on analysis with CA-GREET model. This document is provided in **Appendix C**.

rule impact assessments.”³⁰ Therefore, consistent with the CARB staff recommendation, a CO₂ intensity factor of 595 pounds of CO₂ per MWh was used for electricity emissions for years 2020 through 2023. Future year CO₂ intensity factors were scaled proportionately based on the future year renewable energy targets of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. Emission factors for CH₄ and N₂O were obtained from CalEEMod.³¹

The estimated annual emissions from electrical demand from the project’s land uses during the opening year are provided in **Table 10**, *Project Electrical Demand Greenhouse Gas Emissions*. Detailed emissions calculations are provided in **Appendix B**.

TABLE 10
PROJECT ELECTRICAL DEMAND GREENHOUSE GAS EMISSIONS

Land Use	Units (1000 sqft)	Annual Electrical Demand Factor, D _E (MWh/year) ^a	Emission Factor, EF _E (pounds/MWh)			Annual GHG Emissions (MTCO ₂ e/year) ^d
			CO ₂ ^b	CH ₄ ^c	N ₂ O ^c	
2021-2023						
Apartment ^e	202.5	758.4	595	0.029	0.0062	205.5
Hotel	58.5	594.7	595	0.029	0.0062	161.2
Retail	3.5	45.3	595	0.029	0.0062	12.3
Restaurant	9.1	394.2	595	0.029	0.0062	106.8
Fitness Center	2.5	27.6	595	0.029	0.0062	7.5
Pool/Deck/Spa	4.8	14.7	595	0.029	0.0062	4.0
Other Open Space/Amenities	18.5	46.3	595	0.029	0.0062	12.6
Enclose Parking with Elevator	89.2	555.3	595	0.029	0.0062	150.5
Unenclosed Parking with Elevator	100.5	270.3	595	0.029	0.0062	73.3
Subtotal						734
2024-2026						
Apartment ^e	202.5	758.4	533	0.029	0.0062	184.2
Hotel	58.5	594.7	533	0.029	0.0062	144.5
Retail	3.5	45.3	533	0.029	0.0062	11.0
Restaurant	9.1	394.2	533	0.029	0.0062	95.8
Fitness Center	2.5	27.6	533	0.029	0.0062	6.7
Pool/Deck/Spa	4.8	14.7	533	0.029	0.0062	3.6
Other Open Space/Amenities	18.5	46.3	533	0.029	0.0062	11.3
Enclose Parking with Elevator	89.2	555.3	533	0.029	0.0062	134.9
Unenclosed Parking	100.5	270.3	533	0.029	0.0062	65.7

³⁰ California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects, January 2017.

³¹ California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

Land Use	Units (1000 sqft)	Annual Electrical Demand Factor, D _E (MWh/year) ^a	Emission Factor, EF _E (pounds/MWh)			Annual GHG Emissions (MTCO ₂ e/year) ^d
			CO ₂ ^b	CH ₄ ^c	N ₂ O ^c	
with Elevator						
Subtotal						658
2027-2029						
Apartment ^e	202.5	758.4	488	0.029	0.0062	168.7
Hotel	58.5	594.7	488	0.029	0.0062	132.3
Retail	3.5	45.3	488	0.029	0.0062	10.1
Restaurant	9.1	394.2	488	0.029	0.0062	87.7
Fitness Center	2.5	27.6	488	0.029	0.0062	6.1
Pool/Deck/Spa	4.8	14.7	488	0.029	0.0062	3.3
Other Open Space/Amenities	18.5	46.3	488	0.029	0.0062	10.3
Enclose Parking with Elevator	89.2	555.3	488	0.029	0.0062	123.6
Unenclosed Parking with Elevator	100.5	270.3	488	0.029	0.0062	60.1
Subtotal						602
2030-2050						
Apartment ^e	202.5	758.4	444	0.029	0.0062	153.6
Hotel	58.5	594.7	444	0.029	0.0062	120.4
Retail	3.5	45.3	444	0.029	0.0062	9.2
Restaurant	9.1	394.2	444	0.029	0.0062	79.8
Fitness Center	2.5	27.6	444	0.029	0.0062	5.6
Pool/Deck/Spa	4.8	14.7	444	0.029	0.0062	3.0
Other Open Space/Amenities	18.5	46.3	444	0.029	0.0062	9.4
Enclose Parking with Elevator	89.2	555.3	444	0.029	0.0062	112.5
Unenclosed Parking with Elevator	100.5	270.3	444	0.029	0.0062	54.7
Subtotal						548

NOTES:

^a California Air Pollution Control Officers Association, California Emissions Estimator Model, Climate Zone 11, <http://www.caleemod.com/>. Accessed January 2017. The current version of CalEEMod (version 2016.3.1) includes electricity and natural gas correction factors for the 2013 version of the Title 24 building standards. According to the CEC, the 2016 version of the Title 24 building standards use 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2013 standards (see California Energy Commission, Building Energy Efficiency Standards, Frequently Asked Questions, http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf Accessed January 2017. Demand factor accounts for a 5 percent reduction in Title 24 energy demand per PDF-GHG-1.

^b California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects, January 2017.

^c California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

^d Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

^e For emissions modeling purposes, the electricity and associated GHG reductions from the 30 kilowatt photovoltaic panels (approximately 47,478 kilowatt-hours per year) were applied to the Apartment land use.

SOURCE: ESA 2017.

Land Use	Units (1000 sqft)	Annual Electrical Demand Factor, D _E (MWh/year) ^a	Emission Factor, EF _E (pounds/MWh)			Annual GHG Emissions (MTCO ₂ e/year) ^d
			CO ₂ ^b	CH ₄ ^c	N ₂ O ^c	

Operational Energy – Natural Gas

Natural gas-related emissions of GHGs associated with operation of the project are based on the size of the commercial, retail, restaurant, and residential land uses (including residential amenities such as the private pool and pool deck), the natural gas demand factors for the land uses, the GHG emission factors for the natural gas combustion, and the GWP values for the GHGs emitted. Annual natural gas GHG emissions are calculated using the general formula shown previously as **Equation 2**. For residential land uses, emission factors are specified in units of DU. For nonresidential land uses, emission factors are specified in units of 1,000 square feet.

Natural gas demand is based on data from the CEUS, which lists energy demand by building type.³² However, since the data from the CEUS is from 2002, CalEEMod incorporates correction factors to account for compliance with the 2013 Title 24 Building Standards Code. The 2013 Title 24 Building Standards Code electricity demand factors are obtained from CalEEMod, which already has the correction factors applied. Since the project would also be required to meet the Title 24 standards in effect at the time of building permit application, this analysis incorporates an additional correction factor to account for the amended 2016 Title 24 Building Standards Code, which went into effect on January 1, 2017. The additional Title 24 regulated energy correction factor applies a 5 percent increased energy efficiency for nonresidential land uses and a 28 percent increased efficiency for residential land uses compared to the 2013 Title 24 Building Standards Code.³³ The project would be designed to incorporate PDFs that would reduce its energy demand with the goal of achieving or exceeding the requirements of the CALGreen Code, the City of Los Angeles Green Building Code, and the USGBC LEED Silver rating. Thus, the project would reduce its natural gas demand as compared to the default electricity factors in CalEEMod. The PDFs were accounted for in CalEEMod by selecting the appropriate options in the “mitigation measures” section of the model. A summary of the energy-efficiency PDFs is provided above in PDF-GHG-1.

The combustion of natural gas results in relatively equal amounts of GHG emissions per unit of gas combusted in the state. Emission factors for GHGs due to natural gas combustion to serve the heating and cooking demands of the project were obtained from CalEEMod, which provides

³² California Energy Commission, California Commercial End-Use Survey, <http://capabilities.itron.com/CeUSWeb/ChartsSF/Default2.aspx>. Accessed January 2017.

³³ The current version of CalEEMod (version 2016.3.1) includes electricity and natural gas correction factors for the 2013 version of the Title 24 building standards. According to the CEC, the 2016 version of the Title 24 building standards use 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2013 standards (see California Energy Commission, Building Energy Efficiency Standards, Frequently Asked Questions, http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf. Accessed January 2017.

statewide emission factors.³⁴ The emissions of GHGs due to natural gas demand would be relatively steady for the years assessed.

The estimated annual emissions from natural gas combustion from the project are provided in **Table 11, Project Natural Gas Combustion Greenhouse Gas Emissions**. Detailed emissions calculations are provided in **Appendix B**.

TABLE 11
PROJECT NATURAL GAS COMBUSTION GREENHOUSE GAS EMISSIONS

Land Use	Units (1000 sqft)	Annual Natural Gas Demand Factor (MMBtu/unit/year) ^a	Emission Factor (pounds/MMBtu)			Annual GHG Emissions (MTCO ₂ e/year) ^c
			CO ₂ ^b	CH ₄ ^b	N ₂ O ^b	
2021-2050						
Apartment	202.5	1923.6	117.65	0.0023	0.0022	103.3
Hotel	58.5	1777.8	117.65	0.0023	0.0022	95.4
Retail	3.5	5.3	117.65	0.0023	0.0022	0.3
Restaurant	9.1	2052.2	117.65	0.0023	0.0022	110.2
Fitness Center	2.5	42.5	117.65	0.0023	0.0022	2.3
Pool/Deck/Spa	4.8	59.9	117.65	0.0023	0.0022	3.2
Other Open Space/Amenities	18.5	0	117.65	0.0023	0.0022	0
Enclose Parking with Elevator	89.2	0	117.65	0.0023	0.0022	0
Unenclosed Parking with Elevator	100.5	0	117.65	0.0023	0.0022	0
Subtotal						315

NOTES:

^a California Air Pollution Control Officers Association, California Emissions Estimator Model, Climate Zone 11, <http://www.caleemod.com/>. Accessed January 2017. The current version of CalEEMod (version 2016.3.1) includes electricity and natural gas correction factors for the 2013 version of the Title 24 building standards. According to the CEC, the 2016 version of the Title 24 building standards use 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2013 standards (see California Energy Commission, Building Energy Efficiency Standards, Frequently Asked Questions, http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf. Accessed January 2017. Demand factor accounts for a 5 percent reduction in Title 24 energy demand per PDF-GHG-1.

^b California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

^c Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

SOURCE: ESA 2017.

Operational Mobile

Mobile source emission calculations associated with the project are calculated using the VMT from the traffic analysis prepared for the project.³⁵ The estimated VMT in the traffic analysis is

³⁴ California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.

based on average trip lengths for each land use were determined using CalEEMod. The trip type describes the purpose of the trip generated at each land use, such as residential trips and commercial trips. Residential trips include home-work (H-W), home-shop (H-S), and home-other (H-O). Commercial trips include commercial-customer (C-C), commercial-work (C-W), and commercial-nonwork (C-NW). The trip lengths are based on the location and urbanization of the project area. The average trip length of each land use is the sum of the trip length of each trip type multiplied by the percentage of trip type.

The analysis is also based on the EMFAC2014 model. Emissions of GHGs associated with mobile sources from operation of the project are based on the average daily VMT and GHG emission factors for the mobile sources, and the GWP values for the GHGs emitted. The types of vehicles that would visit the site include all vehicle types including automobiles, light-duty trucks, delivery trucks, and waste haul trucks. Modeling for the project was conducted using the vehicle fleet mix for the South Coast Air Basin as provided in EMFAC2014.

The project is considered an “infill” project, as it is replacing existing residential uses with a high-density, mixed-use development. The project proposes higher density, consistent with compact growth, on a parcel of infill urban land accessible to and well served by public transit including frequent and comprehensive transit services provided by the nearby Metro Red Line, which provides convenient access to locations within North Hollywood, Universal City, Hollywood and Downtown Los Angeles and direct connections to the Metro Gold, Purple, and Expo lines that provide transit service to a multitude of locations through the Los Angeles region. The project would be located within a quarter-mile of public transportation, including existing Metro bus routes (e.g., 180/181, 217, 2/302, Dash Beachwood, Dash Hollywood). New housing and job growth, as a result of the completed project, is focused in a high-quality transit area (HQTa), which the Southern California Association of Governments (SCAG) defines as an area within a half mile of a well-served transit stop. These land use characteristics are analyzed below to demonstrate that the project would result in reduced vehicle trips, VMT, and associated transportation-related GHG emissions, as well as air pollutant emissions, compared to the statewide and South Coast Air Basin average.

The California Air Pollution Control Officers Association (CAPCOA) has provided guidance for mitigating or reducing emissions from land use development projects. In September 2010, CAPCOA released a guidance document titled *Quantifying Greenhouse Gas Mitigation Measures*, which provides emission reduction values for recommended reduction measures.³⁵ The CAPCOA guidance document was utilized in this analysis for quantifying reductions due to land use characteristics and Project Design Features in CalEEMod. The land use characteristics of the project listed below are consistent with those shown in the CAPCOA guidance document to reduce vehicle trips to and from the project site compared to the statewide and South Coast Air Basin average. They would, therefore, result in a corresponding reduction in VMT and associated GHG and air pollutant emissions.

³⁵ Gibson Transportation Consulting Inc., AB 900 Traffic Assessment for the 6220 West Yucca Project Hollywood, California. January 2017.

³⁶ California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, (2010).

- Increased Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services. This characteristic corresponds to CAPCOA guidance measure LUT-1.³⁷ According to CAPCOA, the reduction in VMT from this measure applies to urban and suburban settings for residential, retail, office, industrial, and mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. The project would increase the project site density to approximately 181 dwelling units per acre.
- Location Efficiency:** Location efficiency describes the location of the project relative to the type of urban landscape such as an urban area, compact infill, or suburban center. In general, compared to the statewide average, a project could realize VMT reductions up to 65 percent in an urban area, up to 30 percent in a compact infill area, or up to 10 percent in a suburban center for land use/location strategies. This measure corresponds to CAPCOA guidance measure LUT-2.³⁸ According to CAPCOA, the reduction in VMT from this measure applies to urban and suburban settings for residential, retail, office, industrial, and mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this measure include the geographic location of the project within the region. The project site represents an urban/compact infill location within the Hollywood community of the City of Los Angeles. The project site is served by existing public transportation located within a quarter-mile. The project site is within an active urban center with many existing off-site commercial and residential buildings. The location efficiency of the project site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide and South Coast Air Basin average and would result in corresponding reductions in transportation-related emissions.
- Increased Land Use Diversity and Mixed-Uses:** Locating different types of land uses near one another can decrease VMT since trips between land use types are shorter and could be accommodated by alternative modes of transportation, such as public transit, bicycles, and walking. This measure corresponds to CAPCOA guidance measure LUT-3.³⁹ According to CAPCOA, the reduction in VMT from this measure applies to urban and suburban settings (also potentially for rural master-planned communities) for mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this measure include the percentage of each land use type in the project. The project would co-locate complementary commercial and residential land uses in close to proximity to existing off-site commercial and residential uses. The project would include on-site retail and residential land uses and would be located within a quarter-mile of off-site commercial and residential uses. The increases in land use diversity and mix of uses on the project

³⁷ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 155-158.

³⁸ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 159-161.

³⁹ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 162-166.

site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, which would result in corresponding reductions in transportation-related emissions.

- **Increased Destination Accessibility:** This characteristic corresponds to CAPCOA guidance measure LUT-4.⁴⁰ According to CAPCOA, the reduction in VMT from this measure applies to urban and suburban settings for residential, retail, office, industrial, and mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this measure include the distance to downtown or major job center. The project would be located in an area that offers access to multiple other nearby destinations including restaurant, bar, studio/production, office, entertainment, movie theater, and residential uses. The project site is also located near other job centers in the region, which include Downtown Los Angeles (easily accessible via the Metro Red Line station located within a quarter mile of the site), Beverly Hills, Century City, Westwood, and the Hollywood area itself. The access to multiple destinations in close proximity to the project site would reduce vehicle trips and VMT compared to the statewide and South Coast Air Basin average and encourage walking and non-automotive forms of transportation and would result in corresponding reductions in transportation-related emissions.
- **Increased Transit Accessibility:** Locating a project with high density near transit facilitates the use of transit by people traveling to or from the project site. This measure corresponds to CAPCOA guidance measure LUT -5.⁴¹ According to CAPCOA, the reduction in VMT from this measure applies to urban and suburban settings (also potentially for rural settings adjacent to a commuter rail station with convenient access to a major employment center) for residential, retail, office, industrial, and mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this measure include the distance to transit stations near the project. The project would be located within a quarter-mile of public transportation, including existing Metro bus routes (e.g., 180/181, 217, 2/302, Dash Beachwood, Dash Hollywood) and the Metro Red Line, which provides convenient access to North Hollywood, Universal City, Hollywood, and Downtown Los Angeles. The project would provide access to on-site uses from existing pedestrian pathways. The project would also provide parking for approximately 402 bicycles on-site to encourage utilization of alternative modes of transportation. The increased transit accessibility would reduce vehicle trips and VMT versus the statewide and South Coast Air Basin average, encourage walking and non-automotive forms of transportation, and would result in corresponding reductions in transportation-related emissions.
- **Provide Pedestrian Network Improvements:** Providing pedestrian access that minimizes barriers and links the project site with existing or planned external streets encourages people to walk instead of drive. This measure corresponds to CAPCOA

⁴⁰ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 167-170.

⁴¹ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 171-175.

guidance measure SDT-1.⁴² According to CAPCOA, the reduction in VMT from this measure applies to urban, suburban, and rural settings for residential, retail, office, industrial, and mixed-use projects. The project is located in an urban/compact infill location and is mixed-use; therefore, this measure applies to the project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this measure include pedestrian access connectivity within the project and to/from off-site destinations. The project would improve the street-level pedestrian environment and connectivity to the surrounding Hollywood area, with pedestrian access to commercial/restaurant uses provided from various at-grade sidewalks and steps equipped with café tables, parkway planters, and bike parking along Argyle Avenue, Yucca Street, and Vista Del Mar Avenue. In summary, the project would provide an internal pedestrian network for project visitors and residents that links to the existing off-site pedestrian network including existing off-site sidewalks, and would therefore result in a small reduction in VMT and associated transportation-related emissions.

The VMT reductions from the project's land use characteristics are supported by area-specific data in the Health Atlas for the City of Los Angeles (Health Atlas), published by the City in June 2013.⁴³ Data collected by the City in support of its Health Atlas for the City of Los Angeles demonstrates that the project would be located in an area that would substantially reduce mobile source VMT and GHG emissions relative to the Citywide and statewide averages. The Health Atlas includes a number of findings related to land use mix and diversity, employment density, walkability, access to public transit, and other land use transportation findings organized by Community Plan Area. The project is located in the Hollywood Community Plan Area. A summary and analysis of the Health Atlas findings relative to the Hollywood Community Plan Area are provided below.

- Land Use Mix and Land Use Diversity:** According to the Health Atlas, a “mix of land uses can increase walking and other physical activity” and “offer more destinations for non-automobile trips.”⁴⁴ The Health Atlas evaluates land use mix based on a Dissimilarity Index for each census tract and each Community Plan Area. The Dissimilarity Index quantifies the area of six different land uses: single family residential, multifamily residential, retail, entertainment, office, and institutional or community serving. Values were normalized on a scale of 0 to 1, with 1 representing an even distribution of the six uses within an area. The Hollywood Community Plan Area scored the highest out of the 35 Community Plan Areas indicating that the area has the highest number of different types of amenities available in the Community Plan Area. The data indicates that the Hollywood Community Plan Area has a high potential for walkability and offers a high number of destinations available for non-motorized trips. These findings are substantiated by the CAPCOA guidance, Quantifying Greenhouse Gas Mitigation Measures. CAPCOA measure LUT-3 (Increase Diversity of Urban and Suburban Developments [Mixed Use]) states that “different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be

⁴² California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 186-189.

⁴³ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013), <http://planning.lacity.org/cwd/framwk/healthwellness/healthwellness.htm>. Accessed January 2017.

⁴⁴ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 86-87.

accommodated by non-auto modes of transport.”⁴⁵ The high scores for walkability and number of destinations available for non-motorized trips within the Hollywood Community Plan Area supports the expectation that projects located in the area would achieve substantial reductions in VMT and associated mobile source emissions relative to the Citywide average. It also follows that projects located in the area would be expected to achieve substantial reductions in VMT and associated mobile source emissions relative to the statewide average since the City of Los Angeles is more urbanized and has a higher mix and diversity of land uses than the state as a whole.

- Employment Density:** The Health Atlas recognizes that “[h]igher levels of employment density, particularly retail job densities, are associated with more walking trips” as they “allow for more frequent and comprehensive transit service.”⁴⁶ In turn, “[d]enser employment districts which are rich in transit service typically result in more walking and transit use ... and makes jobs more accessible to all residents.”⁴⁷ The Health Atlas evaluates employment density as the number of jobs per square mile. The Hollywood Community Plan Area has the 9th highest employment density of the 35 Community Plan Areas in the City with approximately 4,200 jobs per square mile. The Citywide average employee density is approximately 1,185 jobs per square mile.⁴⁸ The data indicates that the Hollywood Community Plan Area has a high potential for walkability and making use of frequent and comprehensive transit services, such as the Metro Red Line and connecting bus lines. These findings are substantiated by the CAPCOA guidance measure LUT-1 (Increase Density), which states that “[i]ncreased densities affect the distance people travel and provide greater options for the mode of travel they choose.”⁴⁹ Measure LUT-1 also states that increased densities “provides a foundation for implementation of many other strategies which would benefit from increased densities” such as “enhanced transit service.”⁵⁰ The high employment density of the Hollywood Community Plan Area supports the expectation that projects located in the area would have high levels of walkability and high potential for transit usage. As a result, the project would be expected to achieve substantial reductions in VMT and associated mobile source emissions relative to the Citywide and statewide average.
- Walkability:** The Health Atlas provides a direct quantitative analysis of the walkability of each Community Plan Area using a Walkability Index based on four components: land use mix, residential density, retail density, and intersection density. Higher scores represent more walkable areas. The Hollywood Community Plan Area has the 9th highest Walkability Index of the 35 Community Plan Areas in the City.⁵¹ These findings are substantiated by the CAPCOA guidance measure LUT-9 (Improve Design of Development), which indicates that design elements that enhance walkability and connectivity, such as intersection density, reduced VMT and associated GHG emissions. The high Walkability Index of the Hollywood Community Plan Area supports the expectation that projects located in the area would have a highly walkable environment.

⁴⁵ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 162.

⁴⁶ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 90.

⁴⁷ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 90.

⁴⁸ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 102.

⁴⁹ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 155.

⁵⁰ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 155.

⁵¹ City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 86.

As a result, the project would be expected to achieve substantial reductions in VMT and associated mobile source emissions relative to the Citywide and statewide average.

- Workers Commuting by Walking, Biking, and Public Transportation:** The Health Atlas indicates that the Hollywood Community Plan Area has a high percentage of workers that commute to work by walking, biking, and public transportation. The Hollywood Community Plan Area has the 9th highest percentage of workers that commute to work by walking, biking, and public transportation at about 22 percent for the area as a whole based on 2010 data.⁵² The statewide percentage of workers that commute to work by walking, biking, and public transportation is approximately 9 percent based on census data for the 2010 to 2014 period.⁵³ As discussed previously, the Hollywood Community Plan Area is a high walkable area and the area is also well served by frequent and comprehensive transit including the Metro Red Line, which provides convenient access to Downtown Los Angeles, and multiple bus lines. Thus, the data indicates that the Hollywood Community Plan Area substantially exceeds the statewide average for the percentage of workers that commute to work by walking, biking, and public transportation. The Health Atlas findings are further substantiated by the CAPCOA guidance measures LUT-1, LUT-3, and LUT-9, as discussed previously, and also by LUT-5 (Increase Transit Accessibility), which indicates that “high density near transit will facilitate the use of transit by people.”⁵⁴ The high level of workers that commute to work by walking, biking, and public transportation in the Hollywood Community Plan Area supports the expectation that projects located in the area would be accessible to alternative forms of transportation. As a result, the project would be expected to achieve substantial reductions in VMT and associated mobile source emissions relative to the Citywide and statewide average.

The above data from the City’s Health Atlas supports the VMT reduction findings in this analysis. The project’s specific location in close proximity to high-quality transit, including the Metro Red Line and multiple bus routes, its close proximity to other off-site retail, restaurant, entertainment, commercial, and job destinations, and its highly walkable environment support the finding in this analysis that the project would achieve a reduction in VMT greater than the Hollywood Community Plan Area average and better than the City and statewide average.

Emissions of GHGs from motor vehicles are dependent on model years and the specific types of vehicles that are used to travel to and from the existing project site. The national policy for fuel efficiency and emissions standards for the United States auto industry requires that new passenger cars and light-duty trucks achieve an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO₂ per mile by model year 2016 (Phase I standards), based on USEPA calculation methods. In August 2012, more stringent phased-in standards were adopted for new model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO₂ per mile (Phase II standards). By 2025, new vehicles are

⁵² City of Los Angeles, Health Atlas for the City of Los Angeles, (2013) 112.

⁵³ U.S. Census Bureau, American FactFinder, Data Set B08301 (Means of Transportation to Work, California, 2010-2014), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_B08301&prodType=table. Accessed January 2017.

⁵⁴ California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010) 171.

required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile (Phase II standards). All vehicle types would visit the project site. Therefore, this assessment uses the fleet average calendar year emissions factors from EMFAC2014 to estimate mobile source GHG emissions.

The estimated annual emissions from mobile sources from the project are provided in **Table 12**, *Project Mobile Source Greenhouse Gas Emissions*. Detailed emissions calculations are provided in **Appendix B**.

TABLE 12
PROJECT MOBILE SOURCE GREENHOUSE GAS EMISSIONS

Fleet Mix Year (All Vehicle Classes)	Estimated Annual VMT ^a	CO ₂ Emission Factor (grams/mile) ^b	Annual GHG Emissions (MTCO ₂ e/year)
2021-2050			
2021	8,950,895	417.9	3,741
2022	8,950,895	406.2	3,636
2023	8,950,895	392.7	3,515
2024	8,950,895	382.7	3,426
2025	8,950,895	371.0	3,321
2026	8,950,895	361.2	3,233
2027	8,950,895	352.5	3,155
2028	8,950,895	344.9	3,087
2029	8,950,895	338.2	3,027
2030	8,950,895	332.4	2,976
2031	8,950,895	327.7	2,933
2032	8,950,895	323.3	2,893
2033	8,950,895	319.4	2,859
2034	8,950,895	316.2	2,830
2035	8,950,895	313.6	2,807
2036	8,950,895	311.6	2,789
2037	8,950,895	310.0	2,775
2038	8,950,895	308.8	2,764
2039	8,950,895	307.9	2,756
2040	8,950,895	307.2	2,750
2041	8,950,895	306.8	2,746
2042	8,950,895	306.5	2,744
2043	8,950,895	306.5	2,743
2044	8,950,895	306.5	2,744
2045	8,950,895	306.6	2,745
2046	8,950,895	306.9	2,747
2047	8,950,895	307.2	2,750

Fleet Mix Year (All Vehicle Classes)	Estimated Annual VMT ^a	CO ₂ Emission Factor (grams/mile) ^b	Annual GHG Emissions (MTCO ₂ e/year)
2048	8,950,895	307.6	2,753
2049	8,950,895	308.0	2,757
2050	8,950,895	308.6	2,763

NOTES:

^a Gibson Transportation Consulting Inc., AB 900 Traffic Assessment for the 6220 West Yucca Project Hollywood, California. January 2017. Based on the estimated daily VMT multiplied by 365 days per year.

^b EMFAC2014 Emission Factors.

SOURCE: ESA 2017.

Operational Waste

The project would generate MSW from day-to-day operational activities, which generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills results in GHG emissions of CO₂ and CH₄ from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal under the project are calculated using CalEEMod. The emissions are based on the size of the commercial, retail, restaurant, and residential land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of MTCO₂e are generally calculated in CalEEMod using the general formula shown previously as **Equation 3**.

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. Annual waste disposal rates used in CalEEMod are based on waste generation data for applicable residential and nonresidential land uses from CalRecycle. The total amount of waste disposed was reduced by the diversion rate for the City of Los Angeles of 76 percent, according to the most recent data available.⁵⁵ The GHG emission factors, particularly for CH₄, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, are used in this assessment.

The estimated annual emissions from solid waste disposal from the project are provided in **Table 13, Project Solid Waste Disposal Greenhouse Gas Emissions**. The emissions of GHGs due to

⁵⁵ City of Los Angeles, Bureau of Sanitation, Zero Waste Progress Report, (2013).

waste generation would be relatively steady for the years assessed. Detailed emissions calculations are provided in **Appendix B**.

TABLE 13
PROJECT SOLID WASTE DISPOSAL GREENHOUSE GAS EMISSIONS

Land Use ^a	Waste Diversion ^b	Waste Disposal Rate After Diversion (tons/year)	Landfill gas (no capture)	Landfill Gas (capture with flaring)	Annual GHG Emissions (MTCO ₂ e/year) ^c
2021-2050					
Apartment	76%	112.5	6%	94%	56.6
Hotel	76%	27.3	6%	94%	13.7
Retail/Restaurant	76%	2.7	6%	94%	1.4
Subtotal					72

NOTES:

^a Waste generation factors provided by the CalRecycle website: Estimated Solid Waste Generation Rates. Available <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed January 2017. Waste generation is associated with the project's residential, hotel, and retail/restaurant uses.

^b City of Los Angeles, Bureau of Sanitation, Zero Waste Progress Report, (2013).

^c Emissions are based on CalEEMod default values for landfill gas capture and flaring for the South Coast Air Basin region. Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

SOURCE: ESA 2017.

Operational Water and Wastewater

Water and wastewater generated from the existing land uses under the project would require energy to supply, distribute and treat. Emissions of GHGs would result from the combustion of fossil fuels to produce electricity as well as the wastewater treatment process itself, which results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O.

The emissions of GHGs associated with water demand and wastewater generation under the project are calculated using CalEEMod. The emissions are based on the size of the commercial, retail, restaurant, and residential land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual water demand and wastewater GHG emissions due to electricity are generally calculated in CalEEMod using the general formula shown previously as **Equation 4**.

CalEEMod calculates water demand based on annual rates in the Pacific Institute *Waste Not Want Not* report.⁵⁶ CalEEMod provides options to account for the use of water saving features such as

⁵⁶ Gleick, P.H.; Haasz, D.; Henges-Jeck, C.; Srinivasan, V.; Cushing, K.K.; Mann, A. 2003. *Waste Not, Want Not: The Potential for Urban Water Conservation in California*. Published by the Pacific Institute for Studies in Development, Environment, and Security. Full report available online at: http://www.pacinst.org/reports/urban_usage/waste_not_want_not_full_report.pdf. Appendices available online at: http://www.pacinst.org/reports/urban_usage/appendices.htm.

the use of low-flow water fixtures (e.g., low-flow faucets, low-flow toilets). The project would incorporate PDFs to reduce indoor and outdoor water usage, as summarized previous in PDF-GHG-1. Implementation of these PDFs would reduce indoor water usage by approximately 35 percent compared to typical usage values for developments meeting the minimum requirements. These water reduction factors have been accounted for in CalEEMod.

The CEC's estimate for energy intensity of the water use cycle in Southern California, as provided in the 2006 CEC report *Refining Estimates of Water-Related Energy Use in California*, is used to calculate the energy usage related to water supply, treatment, and distribution and wastewater treatment.⁵⁷ The same electricity GHG emissions factors discussed under the **Operational Energy – Electricity** subheading are used for water and wastewater energy usage.

The emissions of GHGs associated with wastewater treatment process emissions are also calculated using CalEEMod. The emissions are based on the type of treatment (e.g., aerobic, facultative lagoons, septic systems). The emissions are calculating using the default settings in CalEEMod for the type of wastewater treatment. Calculation formulas are described in detail in the *California Emissions Estimator Model User's Guide, Appendix A*.⁵⁸ As stated in the *User's Guide*, the GHGs emitted from each type of wastewater treatment are based on the CARB's *Local Government Operations Protocol* (LGOP),⁵⁹ which are in turn based on United States Environmental Protection Agency (USEPA) methodologies.⁶⁰ The default CalEEMod settings for wastewater treatment are: 10.33 percent septic tank, 87.46 percent aerobic, 2.21 percent facultative lagoons and 100 percent anaerobic combustion of gas.

The estimated annual emissions from water and wastewater from the project are provided in **Table 14, Project Water and Wastewater Greenhouse Gas Emissions**. Detailed emissions calculations are provided in **Appendix B**.

TABLE 14
PROJECT WATER AND WASTEWATER GREENHOUSE GAS EMISSIONS

Land Use	Indoor Water Demand (gal/year)	Outdoor Water Demand (gal/year) ^a	Supply Water (kwh/Mgal)	Treat Water (kWh/Mgal)	Distribute Water (kWh/Mgal)	Wastewater Treatment (kWh/Mgal)	Annual GHG Emissions (MTCO ₂ e/year) ^d
2021-2023							
Apartment	8,111,760	1,622,352	9,727	111	1,272	1,911	44.5
Hotel	5,566,240	1,093,250	9,727	111	1,272	1,911	30.0
Retail	25,185	5,037	9,727	111	1,272	1,911	0.1
Restaurant	4,458,840	891,768	9,727	111	1,272	1,911	24.5

⁵⁷ California Energy Commission, *Refining Estimates of Water-Related Energy Use in California*, PIER Final Project Report, CEC-500-2006-118, (2006).

⁵⁸ California Air Pollution Control Officers Association, *California Emissions Estimator Model User's Guide*, (2016).

⁵⁹ California Air Resources Board, *Local Government Operations Protocol*, Chapter 10: Wastewater Treatment Facilities, (2008).

⁶⁰ United States Environmental Protection Agency, *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006*, Chapter 8: Waste, (2008).

Land Use	Indoor Water Demand (gal/year)	Outdoor Water Demand (gal/year) ^a	Supply Water (kwh/Mgal)	Treat Water (kWh/Mgal)	Distribute Water (kWh/Mgal)	Wastewater Treatment (kWh/Mgal)	Annual GHG Emissions (MTCO ₂ e/year) ^d
Fitness Center	193,421	38,684	9,727	111	1,272	1,911	1.1
Pool/Deck/ Spa	73,073	146,146	9,727	111	1,272	1,911	4.0
Other Open Space/ Amenities	0	0	9,727	111	1,272	1,911	0
Enclose Parking with Elevator	0	625,268	9,727	111	1,272	1,911	1.9
Unenclosed Parking with Elevator	0	704,185	9,727	111	1,272	1,911	2.1
Subtotal							108
2024-2026							
Apartment	8,111,760	1,622,352	9,727	111	1,272	1,911	41.1
Hotel	5,566,240	1,093,250	9,727	111	1,272	1,911	27.7
Retail	25,185	5,037	9,727	111	1,272	1,911	0.1
Restaurant	4,458,840	891,768	9,727	111	1,272	1,911	22.6
Fitness Center	193,421	38,684	9,727	111	1,272	1,911	1.0
Pool/Deck/ Spa	73,073	146,146	9,727	111	1,272	1,911	3.7
Other Open Space/ Amenities	0	0	9,727	111	1,272	1,911	0
Enclose Parking with Elevator	0	625,268	9,727	111	1,272	1,911	1.7
Unenclosed Parking with Elevator	0	704,185	9,727	111	1,272	1,911	1.9
Subtotal							100
2027-2029							
Apartment	8,111,760	1,622,352	9,727	111	1,272	1,911	38.6
Hotel	5,566,240	1,093,250	9,727	111	1,272	1,911	26
Retail	25,185	5,037	9,727	111	1,272	1,911	0.1
Restaurant	4,458,840	891,768	9,727	111	1,272	1,911	21.2
Fitness Center	193,421	38,684	9,727	111	1,272	1,911	1.0
Pool/Deck/ Spa	73,073	146,146	9,727	111	1,272	1,911	3.5
Other Open Space/ Amenities	0	0	9,727	111	1,272	1,911	0

Land Use	Indoor Water Demand (gal/year)	Outdoor Water Demand (gal/year) ^a	Supply Water (kWh/Mgal)	Treat Water (kWh/Mgal)	Distribute Water (kWh/Mgal)	Wastewater Treatment (kWh/Mgal)	Annual GHG Emissions (MTCO ₂ e/year) ^d
Enclose Parking with Elevator	0	625,268	9,727	111	1,272	1,911	1.5
Unenclosed Parking with Elevator	0	704,185	9,727	111	1,272	1,911	1.7
Subtotal							94
2030-2050							
Apartment	8,111,760	1,622,352	9,727	111	1,272	1,911	36.1
Hotel	5,566,240	1,093,250	9,727	111	1,272	1,911	24.3
Retail	25,185	5,037	9,727	111	1,272	1,911	0.1
Restaurant	4,458,840	891,768	9,727	111	1,272	1,911	19.8
Fitness Center	193,421	38,684	9,727	111	1,272	1,911	0.9
Pool/Deck/Spa	73,073	146,146	9,727	111	1,272	1,911	3.3
Other Open Space/ Amenities	0	0	9,727	111	1,272	1,911	0
Enclose Parking with Elevator	0	625,268	9,727	111	1,272	1,911	1.4
Unenclosed Parking with Elevator	0	704,185	9,727	111	1,272	1,911	1.6
Subtotal							88

NOTES:

^a California Air Resources Board, CalEEModOutput.^c California Air Pollution Control Officers Association, California Emissions Estimator Model, <http://www.caleemod.com/>. Accessed January 2017.^d Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

SOURCE: ESA 2017.

Operational Area and Stationary

Area sources of GHG emissions resulting from operation of the project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The combustion of fossil fuels to operate these equipment results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. There are no other substantial stationary sources on-site, such as generators or industrial sized boilers. Residential hearths would not be installed in the project's residential uses.

The emissions of GHGs associated with operational area sources under the project are calculated using CalEEMod. The emissions for landscaping equipment are based on the size of the

commercial, retail, restaurant, and residential land uses, the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted. Annual GHG emissions from landscaping equipment in units of MTCO₂e are generally calculated in CalEEMod using the general formula shown previously as **Equation 5**. CalEEMod uses landscaping equipment GHG emission factors from the CARB OFFROAD model and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.⁶¹ CalEEMod estimates that landscaping equipment operate for 250 days per year in the South Coast Air Basin.

Stationary sources would include on-site emergency generator capacity rated at approximately 250 kilowatts (335 horsepower), which would provide emergency power primarily for lighting and other emergency building systems. Emissions of GHGs would be generated during maintenance and testing operations and emissions were estimated separately outside of the CalEEMod software. Emergency generators are permitted by the SCAQMD and regulated under SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines). Maintenance and testing would not occur daily, but rather periodically, up to 50 hours per year per Rule 1470.

The estimated annual emissions from area and stationary sources under the project are provided in **Table 15**, *Project Area and Stationary Source Greenhouse Gas Emissions*. Detailed emissions calculations are provided in **Appendix B**.

TABLE 15
PROJECT AREA AND STATIONARY SOURCE GREENHOUSE GAS EMISSIONS

Emission Source	Annual GHG Emissions ^a
Landscaping Equipment	54
Emergency Generator	7
Total GHG Emissions	61

NOTES:

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix B**.

SOURCE: ESA 2017.

Summary of Project GHG Emissions

A summary of the GHG emissions under the project is provided in **Table 16**, *Summary of Annual GHG Emissions*.

TABLE 16
SUMMARY OF ANNUAL GHG EMISSIONS

Year	Annual GHG Emissions (MTCO ₂ e/year)							Total ^a
	Construc- tion	Electricity	Natural Gas	Mobile	Waste	Water and Waste Water	Area and Stationary	
Const yr 1	1,466	—	—	—	—	—	—	1,466
Const Yr 2	779	—	—	—	—	—	—	779
2021	—	734	315	3,741	72	108	61	5,031
2022	—	734	315	3,636	72	108	61	4,926
2023	—	734	315	3,515	72	108	61	4,805
2024	—	658	315	3,426	72	100	61	4,632
2025	—	658	315	3,321	72	100	61	4,527
2026	—	658	315	3,233	72	100	61	4,439
2027	—	602	315	3,155	72	94	61	4,299
2028	—	602	315	3,087	72	94	61	4,231
2029	—	602	315	3,027	72	94	61	4,171
2030	—	548	315	2,976	72	88	61	4,060
2031	—	548	315	2,933	72	88	61	4,017
2032	—	548	315	2,893	72	88	61	3,977
2033	—	548	315	2,859	72	88	61	3,943
2034	—	548	315	2,830	72	88	61	3,914
2035	—	548	315	2,807	72	88	61	3,891
2036	—	548	315	2,789	72	88	61	3,873
2037	—	548	315	2,775	72	88	61	3,859
2038	—	548	315	2,764	72	88	61	3,848
2039	—	548	315	2,756	72	88	61	3,840
2040	—	548	315	2,750	72	88	61	3,834
2041	—	548	315	2,746	72	88	61	3,830
2042	—	548	315	2,744	72	88	61	3,828
2043	—	548	315	2,743	72	88	61	3,827
2044	—	548	315	2,744	72	88	61	3,828
2045	—	548	315	2,745	72	88	61	3,829
2046	—	548	315	2,747	72	88	61	3,831
2047	—	548	315	2,750	72	88	61	3,834
2048	—	548	315	2,753	72	88	61	3,837
2049	—	548	315	2,757	72	88	61	3,841
2050	—	548	315	2,763	72	88	61	3,847

NOTES:

^a Totals may not add up exactly due to rounding in the modeling calculations.

SOURCE: ESA 2017.

Project GHG Emissions Offsets

Annual emissions of GHGs from the project will incorporate GHG emission offsets as necessary to achieve a net zero increase in site GHG emissions, relative to the baseline annual GHG emissions, for the estimated project lifetime. The project Applicant proposes to meet the requirement set forth in California Public Resources Code Section 21183 (c), which requires that the project demonstrate that it will not result in net additional emissions of GHG, through the acquisition of voluntary carbon credits sufficient to offset all projected additional emissions. the Applicant or its successor shall enter into one or more contracts to purchase carbon credits from a qualified GHG emissions broker (to be selected from an accredited registry), which contract, together with any previous contracts for the purchase of carbon credits, shall evidence the purchase of carbon credits in an amount sufficient to achieve a net zero increase in site GHG emissions. Consistent with SCAQMD's definition of the "life of the project" for CEQA GHG purposes, provided in SCAQMD's Governing Board Agenda Item 31, December 5, 2008, the project would be required to offset emissions over a 30-year lifetime. The SCAQMD recommends that offsets should have a 30-year project life, should be real, quantifiable, verifiable, and surplus and will be considered in the following prioritized manner: (1) project design feature/on-site reduction measures; (2) off-site within the neighborhood; (3) off-site within the SCAQMD jurisdiction; (4) off-site within the State; (5) off-site out-of-State. The project would obtain offsets following this prioritization. The necessary offsets are summarized below in **Section 4.0, Comparison of Project to Baseline Condition**. Offsets are estimated for a project useful lifetime of 30 years, which is recommended as a presumed project lifetime per SCAQMD guidance.⁶²

⁶² South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2). Accessed January 2017.

4.0

Comparison of Project to Baseline Condition

Table 17, *Evaluation of Net GHG Emissions for the Project*, provides a summary of the determination of net additional GHG emissions comparing the existing site GHG emissions and the project GHG emissions including the project's total construction-related GHG emissions. Based on these GHG emissions estimates, the project would not result in net additional contemporaneous GHG emissions compared to the baseline annual operational emissions at any time.

The project shall commit to obtaining GHG offsets to achieve no net increase in GHG emissions. As such, the project would not result in net contemporaneous GHG emissions compared to the Baseline Condition, taking into account GHG offsets. Therefore, this analysis demonstrates that the project meets the GHG emissions requirements of the “Jobs and Economic Improvement through Environmental Leadership Act” (Public Resources Code Section 21178 et seq.) and would result in no net GHG emissions.

TABLE 17
EVALUATION OF NET GHG EMISSIONS FOR THE PROJECT

Year	Baseline Annual Operations	Project Total	Estimated Offsets ^a	Net Change from Baseline
2021-2050				
Const yr 1	<u>0</u> 626	1,466	<u>1,466</u> 840	0
Const Yr 2	<u>0</u> 626	779	<u>779</u> 153	0
2021	626	5,031	4,405	0
2022	626	4,926	4,300	0
2023	626	4,805	4,179	0
2024	626	4,632	4,006	0
2025	626	4,527	3,901	0
2026	626	4,439	3,813	0
2027	626	4,299	3,673	0
2028	626	4,231	3,605	0
2029	626	4,171	3,545	0
2030	626	4,060	3,434	0
2031	626	4,017	3,391	0
2032	626	3,977	3,351	0
2033	626	3,943	3,317	0
2034	626	3,914	3,288	0
2035	626	3,891	3,265	0
2036	626	3,873	3,247	0
2037	626	3,859	3,233	0
2038	626	3,848	3,222	0
2039	626	3,840	3,214	0
2040	626	3,834	3,208	0
2041	626	3,830	3,204	0
2042	626	3,828	3,202	0
2043	626	3,827	3,201	0
2044	626	3,828	3,202	0
2045	626	3,829	3,203	0
2046	626	3,831	3,205	0
2047	626	3,834	3,208	0
2048	626	3,837	3,211	0
2049	626	3,841	3,215	0
2050	626	3,847	3,221	0

NOTES:

^a The quantity of GHG emissions offsets may be re-evaluated periodically to account for future reductions from the promulgation of state regulations, such as post-2025 model year vehicle emissions standards and post-2030 Renewables Portfolio Standard and other regulations that would reduce project-related operational GHG emissions but cannot be quantified at this time.

SOURCE: ESA 2017.

Yucca Argyle Project

Application for CEQA Streamlining

- Commitment Letter

Ms. Lezlie Kimura Szeto, Manager
Re: GHG Emissions Offset Approach for the Yucca Argyle Hollywood
Project February 23, 2017
Page 4

February 23, 2017

Ms. Terry Roberts, Manager
Sustainable Communities Policy and Planning Section
California Air Resource Board
9500 Telstar Avenue
El Monte, CA 91731

Re: Greenhouse Gas Emissions Offset Approach for the Yucca Argyle Project

Dear Ms. Roberts:

This letter is provided as a supplement to the application filed by Riley Realty, Ltd. (the "Project Applicant"), who proposes to develop the Yucca Argyle Project (the "Project") in the Hollywood Community Plan and the Hollywood Redevelopment Plan Project area of the City of Los Angeles.

As you know, the Project Applicant has applied for certification by the Governor as a leadership project under the Jobs and Economic Improvement Through Environmental Leadership Act of 2011, as amended (collectively, "AB 900" or the "Act"). The application includes projected emissions for the Project that show certain projected net additional emissions of greenhouse gases (GHG) as a result of the construction of the Project and as a consequence of Project operations. The Project Applicant proposes to meet the requirement set forth in California Public Resources Code Section 21183 (c), which requires that the Project demonstrate that it will not result in net additional emissions of GHG, through the acquisition of voluntary carbon credits sufficient to offset all projected additional emissions, in the following manner:

1. No later than six (6) months after the issuance of a Temporary Certificate of Occupancy for the Project, the Project Sponsor shall provide to the lead agency, the City of Los Angeles, a calculation of the net additional emissions resulting from the construction of the Project (the "Construction Emissions"), to be calculated in accordance with the methodology agreed upon by the Air Resources Board (ARB) in connection with the AB 900 certification of the Project (the "Agreed Methodology"). Project Sponsor shall provide courtesy copies of the calculations to the ARB and the Governor's Office promptly following transmittal of the calculations to the City of Los Angeles. Project Sponsor shall enter into one or more contracts to purchase voluntary carbon credits from a qualified GHG emissions broker in an amount sufficient to offset the Construction Emissions. The Project Sponsor shall provide courtesy copies of any such contracts to the ARB and the Governor's Office promptly following the execution of such contracts.

2. Prior to issuance of any Certificate of Occupancy for any building in the Project, the Applicant or its successor shall enter into one or more contracts to purchase carbon credits from a qualified GHG emissions broker (to be selected from an accredited registry), which contract, together with any previous contracts for the purchase of carbon credits, shall evidence the purchase of carbon credits in an amount sufficient to offset the Operational Emissions attributable to such building in the Project, as well as all previously constructed buildings in the Project and shall be calculated on a net present value basis for a 30-year useful life.

Prior to execution of the contract(s), the Applicant and its consultant shall calculate the Operational Emissions, in accordance with the methodology described in the Applicant's "Application for Environmental Leadership Development Project", specifically the "Greenhouse Gas Emissions Methodology and Documentation" prepared by Environmental Science Associates (ESA).

Once the City has had an opportunity to review and approve the methodology and associated calculations, the Applicant shall provide copies of the calculation methodology to the California Air Resources Board (CARB) and Governor's Office of Planning and Research (OPR), which is then subject to a determination signed by the Executive Officer of CARB pursuant to the procedures set forth in Section 6 of OPR's Guidelines. The City will issue a Certificate of Occupancy upon receipt of the following: (1) a fully executed copy of the carbon offset purchase agreement(s); (2) a final CARB Determination that the Project will not result in any net additional GHG emissions; and (3) a copy of OPR's Certification Letter for the Project.

3. The following project design features were accounted for in the AB 900 application for purposes of reducing GHG emissions and are, therefore, included as commitments in this letter.
 - A. The design of the new buildings shall incorporate features to be capable of achieving at least Silver certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED)-CS® or LEED-NC® Rating System as of January 1, 2011. Specific sustainability features that are integrated into the Project design to enable the Project to achieve LEED® Silver certification would include but not be limited to the following:
 - a. Exceeding Title 24, Part 6, California Energy Code baseline standard requirements by a minimum of 5 percent for energy efficiency, based on the 2016 Building Energy Efficiency Standards requirements.
 - b. Use of Energy Star-labeled products and appliances, including dishwashers in the residential units, where appropriate.
 - c. Use of light emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and

dimming controls, where appropriate, to reduce electricity use.

- d. The Project would reduce indoor water use by a minimum of 35 percent by installing water fixtures that meet Universal Plumbing Code standards.
 - e. The Project would reduce outdoor water use by a minimum of 50 percent from the calculated baseline at peak watering month by installing efficient irrigation.
- B. The residential units within the Project shall not include the use of natural gas-fueled fireplaces.
- C. The Project shall provide a minimum of 30 kilowatts of photovoltaic panels on the Project site, unless additional kilowatts of photovoltaic panels become feasible due to additional area being added to the Project Site.

The commitments outlined herein will be incorporated into the Project's Final Environmental Impact Report (FEIR) as a proposed improvement measure. The Project Sponsor will agree to comply with all improvement measures and mitigation measures contained in the FEIR through the Project's Mitigation Monitoring and Reporting Program, which represents a binding and enforceable agreement with the Project's lead agency, the City of Los Angeles.

Should you have any questions, please do not hesitate to call Greg Beck at (310) 312-8047.

Sincerely,

WL Yucca Argyle Owner A, LLC,
a Delaware limited liability company

By: WL Yucca Argyle Parent, LLC,
a Delaware limited liability
company, its sole member

By: Champion Yucca Argyle, LLC,
a Delaware limited liability
company, its managing member

By: _____ Name: Robert D Champion
Its: Authorized Signatory

Yucca Argyle Project

Application for CEQA Streamlining

- LEED Measures

Yucca Argyle Project

LEED Measures

The following list highlights the main sustainability strategies to be implemented into the Yucca Argyle Project in order to achieve the Gold Rating under LEED 2009 (v3) or the Silver Rating under LEED v4 rating system. This is in addition to the strategies needed to reduce the greenhouse gas (GHG) emissions, as required by the California Air Resources Board (ARB).

Design

- Prior to Project approvals, a preliminary LEED action plan will be submitted to the City of Los Angeles Department of City Planning. Prior to issuance of a building permit, conduct a preliminary LEED meeting with a minimum of four key Project team members and the owner or owner's representative. As part of the meeting, review a LEED action plan that, at a minimum (1) determines the LEED certification level to pursue (Certified, Silver, Gold, or Platinum); (2) selects the LEED credits to meet the targeted certification level; and (3) identifies the responsible parties, including but not limited to the Los Angeles Department of Building and Safety, the City of Los Angeles Department of City Planning, the City of Los Angeles Department of Public Works, Bureau of Engineering, to ensure the LEED requirements for each prerequisite and selected credit are met. Modifications to the selected criteria are permissible during construction as long as the LEED certification level continues to be met.

Site

- Implementation of an erosion and sedimentation plan for all construction activities.
- Provision of heat island mitigation strategies for 50 percent of hardscapes or provide 100 percent underground parking.
- Provision of heat island mitigation strategies for 75 percent of roof areas.
- Development of tenant design and construction guidelines, which applies to LEED Core & Shell certification only.

Transportation

- Installation of bike share facilities at the Project Site should a bike share program become available in Los Angeles.
- Allocation of preferred parking for alternative-fuel vehicles, low-emitting, and fuel-efficient and ride-sharing vehicles.
- Provision that 20 percent of parking spaces shall be electric vehicle-ready with 5 percent equipped with charging stations.
- Provide bicycle racks/storage for 5 percent of building users and shower/changing facilities for 0.5 percent of full-time equivalent (FTE) occupants.
- Provide additional bicycle storage and demarcated bike lanes/trails.

Water Quality

- Use of on-site storm water treatment in accordance with City standards.
- Installation of catch basin inserts and screens to provide runoff contaminant removal in accordance with City standards.
- Preparation and implementation of a Stormwater Pollution and Prevention Plan (SWPPP) and Standard Urban Stormwater Mitigation Plan (SUSMP), both of which would include Best Management Practices (BMPs) to control stormwater runoff, minimize pollutant loading and erosion effects during and after construction.

Energy Conservation and Efficiency

- Use of full-cutoff or fully shielded on-street lighting oriented to pedestrian areas/sidewalks so as to minimize overlighting, light trespass, and glare.
- Inclusion of outdoor air flow measuring devices, additional outdoor air ventilation, and use of low emitting materials to promote indoor environmental quality.
- Use of refrigerants that reduce ozone depletion.
- Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.

- Post-construction commissioning of building energy systems performed on an ongoing basis to ensure all systems are running at optimal efficiency.
- Purchase of renewable source power (“green power”) to minimize carbon emissions.
- Review of commissioning activities by an independent Commissioning Agency and development and implementation of commissioning plan.
- Implementation of building level energy meter to provide monthly tracking of energy consumption.
- Provision of metering for tenant space.

Solid Waste

- Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.
- Use of building materials with a minimum of 10 percent recycled-content by cost for Divisions 2 through 10 for the construction of the Project.
- Implementation of a construction waste management plan to recycle and/or salvage a minimum of 65 percent of nonhazardous construction debris.
- Diversion of construction materials from landfill. Diversion must include at least three material streams (e.g., recovery, reuse, and recycling).

Air Quality

- Employment of practices that prohibit the use of chlorofluorocarbons (CFCs) in heating, ventilation, and air conditioning (HVAC) systems.
- Installation of MERV 13 filtration at outside air intakes to improve indoor air quality (per Los Angeles Municipal Code Sections 99.04.504.6 and 99.05.504.5.3).
- Meeting applicable California and/or Los Angeles air emissions requirements for all heating or cogeneration equipment utilized at the Project Site.

- Installation of landscaping throughout the Project Site, including roof decks, pool decks, and terraces, to provide shading and capture carbon dioxide (CO₂) emissions.
- Use of adhesives, sealants, paints, finishes, carpet, and other materials that emit low quantities of volatile organic compounds (VOCs) and/or other air quality pollutants.
- Development of an Indoor Air Quality Management Plan for construction and pre-occupancy phases.
- Provision of individual control on thermostats to 50 percent of building occupants. For residential buildings, the credit can be achieved by providing access to operable windows. For commercial spaces, control must be provided to 50 percent of occupants in order to meet the intent of the credit.
- HVAC system design compliance to ASHRAE 55. The Core & Shell base building mechanical systems must allow for the tenant build-out to meet the requirement of this credit.

Appendix A

Baseline Operational Emissions



6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Greenhouse Gas Assessment

Existing Uses Electricity Demand Rates

Land Use	Climate Zone	T24 Standard	T24 Electricity (kWh/DU/year)	NT24 Electricity (kWh/DU/year)	Lighting Electricity (kWh/DU/year)	Total Electricity (kWh/DU/year)	Per Unit Annual Electricity Usage (MWh/DU/year)
Single-Family	11	2005	467.55	5,089.81	1,608.84	7,166.20	7.17
Single-Family	11	2001	582.98	5,089.81	1,608.84	7,281.63	7.28
Apartment Low-Rise	11	2005	170.99	2,630.88	810.36	3,612.23	3.61
Apartment Low-Rise	11	2001	225.88	2,630.88	810.36	3,667.12	3.67

Source: California Air Resources Board, CalEEMod User's Guide (CalEEMod v. 2016.3.1), Appendix E Section 5, September 2016, <http://caleemod.com/>. Accessed January 2017.

California Air Resources Board, CalEEMod User's Guide (CalEEMod v. 2013.2), Appendix E Section 5, July 2013, <http://caleemod.com/>. Accessed January 2017.

Factors for the Title 24 (2001) standard are extrapolated based on the technical source documentation.

Existing Uses Electricity Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Greenhouse Gas Assessment

Existing Uses Natural Gas Demand Rates

Land Use	Climate Zone	T24 Standard	T24 Natural Gas (kBtu/DU or sf/year)	NT24 Natural Gas (kBtu/DU or sf/year)	Total Natural Gas (kWh/DU/year)	Per Unit Annual Natural Gas Usage (MWh/DU/year)
Single-Family	11	2005	28,628.82	5,819.00	34,447.82	34.45
Single-Family	11	2001	30,684.69	5,819.00	36,503.69	36.50
Apartment Low-Rise	11	2005	11,673.00	2,578.64	14,251.64	14.25
Apartment Low-Rise	11	2001	13,846.98	2,578.64	16,425.62	16.43

Source: California Air Resources Board, CalEEMod User's Guide (CalEEMod v. 2016.3.1), Appendix E Section 5, September 2016, <http://caleemod.com/>. Accessed January 2017.

California Air Resources Board, CalEEMod User's Guide (CalEEMod v. 2013.2), Appendix E Section 5, July 2013, <http://caleemod.com/>. Accessed January 2017.

Factors for the Title 24 (2001) standard are extrapolated based on the technical source documentation.

Existing Uses Natural Gas Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 West Yucca Street Mixed Use Project
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Existing Uses Solid Waste Disposal Rates

Land Use	Project Units	Solid Waste Factor ^a (lbs/unit/day)	Solid Waste Before Diversion (tons/year)	Diversion Rate ^b (%)	Solid Waste After Diversion
Residential	44 DU	12.23	98.2	76%	23.6
Total Project					23.6

Notes:

- a. Generation factors provided by the CalRecycle website: Estimated Solid Waste Generation Rates. Available <http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/default.htm>. Accessed October 2015.
- b. City of Los Angeles, Zero Waste Progress Report, (March 2013) 3. According to the Report, the City achieved a landfill diversion rate of approximately 76% by year 2012.

Source: ESA 2017.

Existing Uses Solid Waste Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Greenhouse Gas Assessment

Existing Uses Water Demand Rates

Land Use	Units (DU, Rooms, or 1000 sqft)	Wastewater Generation ^a (gal/unit/day)	Water Demand ^b (gal/day)	Indoor Water Demand Rate (gal/year)	Outdoor Water Demand Rate (gal/year)	Indoor Water Reduction (%)	Reduced Indoor Water Demand Rate (gal/year)	Outdoor Water Reduction (%)	Reduced Outdoor Water Demand Rate (gal/year)
Multi-Family Residential	43		6,402	1,947,275	389,455	-	1,947,275	-	389,455
<i>Studio</i>	1	75	90						
<i>One Bedroom</i>	26	110	3,432						
<i>Two Bedroom</i>	16	150	2,880						
<i>Three Bedroom</i>	-	190	-						
Single-Family Residential	1	185	222	67,525	13,505	-	67,525	-	13,505
Parking/Asphalt/Hardscape	28	20	672	-	245,280	-	-	-	245,280
Total Water Demand				2,014,800	648,240		2,014,800		648,240

Notes:

- a. Wastewater generation factors obtained from City of Los Angeles Bureau of Engineering, Sewer Capacity Availability Request (SCAR), dated January 2017 and based on Los Angeles Department of Public Works, Bureau of Sanitation, Sewerage Facilities Charge Sewage Generation Factor for Residential and Commercial Categories, dated April 6, 2012.
- b. Water demand rates are calculated based on the wastewater generation rates and increasing the factor by 20% to account for absorption, evaporation, consumption, irrigation, and other losses.

Source: ESA 2017.

Existing Uses Water and Wastewater Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 West Yucca Street Mixed Use Project - Existing Site Operations - South Coast Air Basin, Annual

6220 West Yucca Street Mixed Use Project - Existing Site Operations

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	28.00	1000sqft	0.64	28,000.00	0
Apartments Low Rise	43.00	Dwelling Unit	0.80	18,952.00	87
Single Family Housing	1.00	Dwelling Unit	0.16	1,367.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2015
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1132	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Los Angeles Department of Water and Power, 2016 Draft Power Integrated Resource Plan, (2016) C-13.

Land Use - Multi-Family (43 DU); Single-Family (1 DU). Pop.=2.03/DU per census data for Hollywood Community Plan Area.

Vehicle Trips -

Woodstoves - Assumes no woodstoves. 1 Fireplace at duplex multi-family unit. No fireplaces at single-family or apartment units.

Energy Use - Title 24 (2001): California Air Resources Board, CalEEMod User's Guide, Appendix E, Section 5. Factors for the Title 24 (2001) standard are extrapolated based on the technical source documentation.

Water And Wastewater - Refer to "Existing Uses Water Demand Rates" worksheet provided in this Appendix.

Solid Waste - Refer to "Existing Uses Solid Waste Disposal Rates" worksheet provided in this Appendix.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	3,418.36	2,630.88
tblEnergyUse	NT24E	6,680.41	5,089.81
tblEnergyUse	NT24NG	4,831.00	2,578.64
tblEnergyUse	NT24NG	4,831.00	5,819.00
tblEnergyUse	T24E	159.21	225.88
tblEnergyUse	T24E	238.85	582.98
tblEnergyUse	T24NG	13,398.37	13,846.98
tblEnergyUse	T24NG	28,690.19	30,684.69
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	36.55	0.00
tblFireplaces	NumberGas	0.85	0.00
tblFireplaces	NumberNoFireplace	4.30	42.00
tblFireplaces	NumberNoFireplace	0.10	1.00
tblFireplaces	NumberWood	2.15	1.00
tblFireplaces	NumberWood	0.05	0.00
tblLandUse	BuildingSpaceSquareFeet	43,000.00	18,952.00
tblLandUse	BuildingSpaceSquareFeet	1,800.00	1,367.00
tblLandUse	LandUseSquareFeet	43,000.00	18,952.00
tblLandUse	LandUseSquareFeet	1,800.00	1,367.00
tblLandUse	LotAcreage	2.69	0.80
tblLandUse	LotAcreage	0.32	0.16
tblLandUse	Population	123.00	87.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	1132
tblProjectCharacteristics	OperationalYear	2018	2015
tblSolidWaste	SolidWasteGenerationRate	19.78	23.03
tblSolidWaste	SolidWasteGenerationRate	1.23	0.54
tblWater	IndoorWaterUseRate	2,801,623.10	1,947,275.00

tblWater	IndoorWaterUseRate	65,154.03	67,525.00
tblWater	OutdoorWaterUseRate	1,766,240.65	389,455.00
tblWater	OutdoorWaterUseRate	0.00	245,280.00
tblWater	OutdoorWaterUseRate	41,075.36	13,505.00
tblWoodstoves	NumberCatalytic	2.15	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	2.15	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	0.1552	6.1100e-003	0.5270	1.3000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678
Energy	4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	136.9962	136.9962	3.2500e-003	1.2400e-003	137.4479
Waste						0.0000	0.0000		0.0000	0.0000	4.7845	0.0000	4.7845	0.2828	0.0000	11.8534
Water						0.0000	0.0000		0.0000	0.0000	0.6392	17.1686	17.8078	0.0661	1.6400e-003	19.9492

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	0.1552	6.1100e-003	0.5270	1.3000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678
Energy	4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	136.9962	136.9962	3.2500e-003	1.2400e-003	137.4479
Waste						0.0000	0.0000		0.0000	0.0000	4.7845	0.0000	4.7845	0.2828	0.0000	11.8534
Water						0.0000	0.0000		0.0000	0.0000	0.6392	17.1686	17.8078	0.0661	1.6400e-003	19.9492
Total	0.3282	0.8376	2.8811	5.6600e-003	0.3807	0.0233	0.4040	0.1021	0.0228	0.1249	6.2096	641.8393	648.0489	0.3858	2.9500e-003	658.5738

	ROG	NOx	CO	SO2	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

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	97.3573	97.3573	2.4900e-003	5.2000e-004	97.5734
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	97.3573	97.3573	2.4900e-003	5.2000e-004	97.5734
NaturalGas Mitigated	4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6389	39.6389	7.6000e-004	7.3000e-004	39.8745
NaturalGas Unmitigated	4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6389	39.6389	7.6000e-004	7.3000e-004	39.8745

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 Low Rise	706302	3.8100e-003	0.0326	0.0139	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6910	37.6910	7.2000e-004	6.9000e-004	37.9149
Parking Lot	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
Single Family Housing	36503.7	2.0000e-004	1.6800e-003	7.2000e-004	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9480	1.9480	4.0000e-005	4.0000e-005	1.9596
Total		4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6389	39.6389	7.6000e-004	7.3000e-004	39.8745

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 Low Rise	706302	3.8100e-003	0.0326	0.0139	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6910	37.6910	7.2000e-004	6.9000e-004	37.9149
Parking Lot	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
Single Family Housing	36503.7	2.0000e-004	1.6800e-003	7.2000e-004	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9480	1.9480	4.0000e-005	4.0000e-005	1.9596
Total		4.0100e-003	0.0342	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6389	39.6389	7.6000e-004	7.3000e-004	39.8745

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	157686	80.9666	2.0700e-003	4.3000e-004	81.1463
Parking Lot	24640	12.6518	3.2000e-004	7.0000e-005	12.6799
Single Family Housing	7281.63	3.7389	1.0000e-004	2.0000e-005	3.7472
Total		97.3573	2.4900e-003	5.2000e-004	97.5734

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	157686	80.9666	2.0700e-003	4.3000e-004	81.1463
Parking Lot	24640	12.6518	3.2000e-004	7.0000e-005	12.6799
Single Family Housing	7281.63	3.7389	1.0000e-004	2.0000e-005	3.7472
Total		97.3573	2.4900e-003	5.2000e-004	97.5734

6.0 Area Detail

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	0.1552	6.1100e-003	0.5270	1.3000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678
Unmitigated	0.1552	6.1100e-003	0.5270	1.3000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678

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	6.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0584	6.6000e-004	0.0644	1.0000e-004		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.7859	0.0000	0.7859	0.0000	7.0000e-005	0.8066
Landscaping	0.0148	5.4500e-003	0.4626	2.0000e-005		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	0.7419	0.7419	7.7000e-004	0.0000	0.7612
Total	0.1552	6.1100e-003	0.5270	1.2000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678

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	6.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0584	6.6000e-004	0.0644	1.0000e-004		8.8200e-003	8.8200e-003		8.8200e-003	8.8200e-003	0.7859	0.0000	0.7859	0.0000	7.0000e-005	0.8066
Landscaping	0.0148	5.4500e-003	0.4626	2.0000e-005		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	0.7419	0.7419	7.7000e-004	0.0000	0.7612
Total	0.1552	6.1100e-003	0.5270	1.2000e-004		0.0113	0.0113		0.0113	0.0113	0.7859	0.7419	1.5278	7.7000e-004	7.0000e-005	1.5678

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.8078	0.0661	1.6400e-003	19.9492
Unmitigated	17.8078	0.0661	1.6400e-003	19.9492

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.94728 / 0.389455	15.8587	0.0638	1.5800e-003	17.9253
Parking Lot	0 / 0.24528	1.3992	4.0000e-005	1.0000e-005	1.4023
Single Family Housing	0.067525 / 0.013505	0.5499	2.2100e-003	5.0000e-005	0.6216
Total		17.8078	0.0661	1.6400e-003	19.9492

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.94728 / 0.389455	15.8587	0.0638	1.5800e-003	17.9253
Parking Lot	0 / 0.24528	1.3992	4.0000e-005	1.0000e-005	1.4023
Single Family Housing	0.067525 / 0.013505	0.5499	2.2100e-003	5.0000e-005	0.6216
Total		17.8078	0.0661	1.6400e-003	19.9492

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.7845	0.2828	0.0000	11.8534
Unmitigated	4.7845	0.2828	0.0000	11.8534

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	23.03	4.6749	0.2763	0.0000	11.5818
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.54	0.1096	6.4800e-003	0.0000	0.2716
Total		4.7845	0.2828	0.0000	11.8534

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	23.03	4.6749	0.2763	0.0000	11.5818
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.54	0.1096	6.4800e-003	0.0000	0.2716
Total		4.7845	0.2828	0.0000	11.8534

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Year	GHG Emission Factors (metric tons/mile)			
	CO2	CH4	N2O	CO2e
	1	25	298	
2015	4.83E-04	3.12E-08	-	4.84E-04
2018	4.51E-04	2.39E-08	-	4.52E-04
2021	4.17E-04	1.90E-08	-	4.18E-04
2022	4.06E-04	1.78E-08	-	4.06E-04
2023	3.92E-04	1.66E-08	-	3.93E-04
2024	3.82E-04	1.58E-08	-	3.83E-04
2025	3.71E-04	1.50E-08	-	3.71E-04
2026	3.61E-04	1.42E-08	-	3.61E-04
2027	3.52E-04	1.36E-08	-	3.52E-04
2028	3.45E-04	1.31E-08	-	3.45E-04
2029	3.38E-04	1.26E-08	-	3.38E-04
2030	3.32E-04	1.22E-08	-	3.32E-04
2031	3.27E-04	1.18E-08	-	3.28E-04
2032	3.23E-04	1.15E-08	-	3.23E-04
2033	3.19E-04	1.12E-08	-	3.19E-04
2034	3.16E-04	1.10E-08	-	3.16E-04
2035	3.13E-04	1.08E-08	-	3.14E-04
2036	3.11E-04	1.06E-08	-	3.12E-04
2037	3.10E-04	1.04E-08	-	3.10E-04
2038	3.09E-04	1.03E-08	-	3.09E-04
2039	3.08E-04	1.02E-08	-	3.08E-04
2040	3.07E-04	1.01E-08	-	3.07E-04
2041	3.07E-04	1.00E-08	-	3.07E-04
2042	3.06E-04	9.94E-09	-	3.07E-04
2043	3.06E-04	9.89E-09	-	3.06E-04
2044	3.06E-04	9.82E-09	-	3.07E-04
2045	3.06E-04	9.76E-09	-	3.07E-04
2046	3.07E-04	9.65E-09	-	3.07E-04
2047	3.07E-04	9.61E-09	-	3.07E-04
2048	3.07E-04	9.59E-09	-	3.08E-04
2049	3.08E-04	9.56E-09	-	3.08E-04
2050	3.08E-04	9.53E-09	-	3.09E-04

Source: EMFAC2014, South Coast Air Basin (Los Angeles County), "Emissions" (or "Burden") mode.

6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Greenhouse Gas Assessment

Scenario	Year	VMT/year	GHG Emission Factors (metric tons/year)			
			CO2	CH4	N2O	CO2e
			1	25	298	
Existing Uses	2015	939,145	453.51	0.03	-	454

Source: ESA 2017

Appendix B

Project Construction and Operational Emissions

B-1 Project Construction Emissions

6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units	
Residential	High-rise Apartment	210 DU	242,285 sf
Recreational	Hotel	136 rooms	80,335 sf
Retail	Strip Mall	3.5 KSF	3,450 sf
Recreational	Restaurant	9.1 KSF	9,050 sf
Parking	Unenclosed Parking with Elevator	232 spaces	100,483 sf
Parking	Enclosed Parking with Elevator	206 spaces	89,222 sf
Pool/Deck/Spa	Recreational Swimming Pool	4.8 KSF	4,840 sf
Fitness Center	Health Club	2.5 KSF	2,530 sf
Other Open Space/Amenities	City Park	18.5 KSF	18,535 sf
Total Building Area (excluding parking and open space)			335,120 sf
Total Lot Area (acres)/Developed Area (sf)		1.16 acres	

Emissions based on slightly greater square footage than proposed under the current design, which revised the total square footage slightly downward after completion of the emissions modeling. The change is less than 1% which would not materially affect the emissions modeling.

Note:
a. California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2014 with 2010 Census Benchmark, <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>. Accessed September 2014.
Source: 6220 West Yucca Design Plans, prepared by Togawa Smith Martin 2016.

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

CalEEMod Construction Phase	Start Date	End Date	No. Work Days	Demo		Demo Truck One-Way Trips	Demo Truck Daily One-Way Trips	Soil Export (CY)	Soil Import (CY)	Soil Haul Truck Capacity (CY)	Soil Haul Truck Total One-Way Trips	Soil Haul Truck Daily One-Way Trips	Vendor One-Way Trips/Max Day ^a	Worker One-Way Trips/Max Day ^b
				Demo (CY)	Demo Truck Capacity (CY)									
Demolition	1/1/2018	1/21/2018	15	5,000	10	1,000	67						6	18
Site Preparation	1/22/2018	1/31/2018	8											18
Grading/Excavation	2/1/2018	5/31/2018	86					120,000	-	14	17,200	200	6	20
Building Construction 1	6/1/2018	6/30/2019	281										73	280
Building Construction 2	7/1/2019	10/31/2019	89										73	280
Paving	9/1/2019	12/31/2019	87											18
Architectural Coating	7/1/2019	10/31/2019	89											56

Notes:
a. Vendor trips are associated with the Building Construction phase and are based on CalEEMod assumptions.
b. Worker trips are based on CalEEMod assumptions.
Source: ESA 2017.

6220 West Yucca Street Mixed Use Project
Air Quality and Greenhouse Gas Assessment

Construction Assumptions - Demolition

Demolition Schedule

Start Date	1/1/2018
End Date	1/21/2018
Work Days	15

Notes

Demolition Quantities

Land Use	Amount	Units
6220-6224 Yucca	27.0	KSF
6210-6216 Yucca	16.0	KSF
1765-1779 Vista del Mar	5.3	KSF
Total	48.3	KSF
Total (rounded up)	50.0	

Estimate from Google Earth, two story multi-family
Estimate from Google Earth, two story multi-family
Estimate from Google Earth, single story and two story single-family

<----- ENTER VALUE INTO CALEEMOD

Demolition Volume

Total Area (KSF)	50
Floor Height (ft)	10
Building Volume (ft3)	500,000
Building Volume (CY)	18,519
Debris Volume (CY)	5,000 (rounded, estimated)
Truck Size (CY)	10
Total One-way Truck Trips	1,000 (rounded, estimated)
Daily One-way Truck Trips	67 trips/day

Assumed

Rounded, 1 CY building volume = 0.25 CY waste volume

<----- ENTER VALUE INTO CALEEMOD

6220 West Yucca Street Mixed Use Project
Air Quality and Greenhouse Gas Assessment

Construction Assumptions - Excavation

Demolition Schedule

Start Date	2/1/2018
End Date	5/31/2018
Duration (days)	86

Estimated Soil Excavation

Land Use	Height	Area		Resulting Volume		Soil Export
Loading Area	15 feet	1.0 KSF	=	18,150 ft3	=	672 CY
Building 1 Sub Parking	11 feet	108.0 KSF	=	1,437,480 ft3	=	53,240 CY
Building 2 Sub Parking	11 feet	7.0 KSF	=	93,170 ft3	=	3,451 CY
Foundation	20 feet	48.0 KSF (footprint)	=	1,161,600 ft3	=	43,022 CY
Total						100,385 CY
Total with 10% Contingency Added						110,424 CY

Total Soil Export (CY)	120,000 <i>(rounded, estimated)</i>	<-----	ENTER VALUE INTO CALEEMOD
Truck Size (CY)	14		
Total One-way Truck Trips	17,200	<-----	ENTER VALUE INTO CALEEMOD
Daily One-way Truck Trips	200 <i>trips/day</i>		

6220 W Yucca Street Project - Construction - South Coast Air Basin, Annual

6220 W Yucca Street Project - Construction**South Coast Air Basin, Annual**

Emissions based on slightly greater square footage than proposed under the current design, which revised the total square footage slightly downward after completion of the emissions modeling. The change is less than 1% which would not materially affect the emissions modeling.

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	210.00	Dwelling Unit	0.35	242,285.00	601
Hotel	136.00	Room	0.21	80,335.00	0
Strip Mall	3.45	1000sqft	0.05	3,450.00	0
Quality Restaurant	9.05	1000sqft	0.10	9,050.00	0
Enclosed Parking with Elevator	206.00	Space	0.10	89,222.00	0
Unenclosed Parking with Elevator	232.00	Space	0.10	100,483.00	0
City Park	0.60	Acre	0.10	18,535.00	0
Recreational Swimming Pool	4.84	1000sqft	0.10	4,840.00	0
Health Club	2.53	1000sqft	0.05	2,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	595	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor: California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects (Jan 2017).

Land Use - Multi-Fam (210 DU); Hotel (136 rooms); Retail (3.45 ksf); Rest. (9.05 ksf); Pool (4.84 ksf); Fitness (2.53 ksf); Open Space (25.905 ksf); Parking (~232 above, ~206 below). Pop.=2.03/DU (Hollywood CPA, 426 people).

Construction Phase - Refer to "Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Off-road Equipment - Refer to "Resource Loaded Construction Schedule" worksheet.

Grading -

Demolition -

Trips and VMT - Refer to "Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs" worksheet.

Construction Off-road Equipment Mitigation - Tier 3+DPF Equipment; Tier 4 Equipment (for equipment 90 HP and greater); Water Unpaved Roads and Exposed Areas 3 X Daily; Limit On-Site Speed to 15 MPH or less.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	89.00
tblConstructionPhase	NumDays	200.00	281.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	4.00	86.00
tblConstructionPhase	NumDays	10.00	87.00
tblConstructionPhase	NumDays	2.00	8.00
tblConstructionPhase	NumDays	200.00	89.00
tblConstructionPhase	PhaseEndDate	12/10/2018	10/31/2019
tblConstructionPhase	PhaseEndDate	11/12/2018	6/30/2019
tblConstructionPhase	PhaseEndDate	1/26/2018	1/21/2018
tblConstructionPhase	PhaseEndDate	2/5/2018	5/31/2018
tblConstructionPhase	PhaseEndDate	11/26/2018	12/31/2019
tblConstructionPhase	PhaseEndDate	1/30/2018	1/31/2018
tblConstructionPhase	PhaseStartDate	11/27/2018	7/1/2019
tblConstructionPhase	PhaseStartDate	2/6/2018	6/1/2018

tblConstructionPhase	PhaseStartDate	1/31/2018	2/1/2018
tblConstructionPhase	PhaseStartDate	11/13/2018	9/1/2019
tblConstructionPhase	PhaseStartDate	1/27/2018	1/22/2018
tblGrading	MaterialExported	0.00	120,000.00
tblLandUse	LandUseSquareFeet	210,000.00	242,285.00
tblLandUse	LandUseSquareFeet	197,472.00	80,335.00
tblLandUse	LandUseSquareFeet	82,400.00	89,222.00
tblLandUse	LandUseSquareFeet	92,800.00	100,483.00
tblLandUse	LandUseSquareFeet	26,136.00	18,535.00
tblLandUse	LotAcreage	3.39	0.35
tblLandUse	LotAcreage	4.53	0.21
tblLandUse	LotAcreage	0.08	0.05
tblLandUse	LotAcreage	0.21	0.10
tblLandUse	LotAcreage	1.85	0.10
tblLandUse	LotAcreage	2.09	0.10
tblLandUse	LotAcreage	0.60	0.10
tblLandUse	LotAcreage	0.11	0.10
tblLandUse	LotAcreage	0.06	0.05
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	595
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	227.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	11,865.00	17,200.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	18.00

2.0 Emissions Summary

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					
2018	0.5595	7.3070	4.1161	0.0154	0.7661	0.2021	0.9682	0.2688	0.1881	0.4569	0.0000	1,455.0038	1,455.0038	0.1748	0.0000	1,459.3740
2019	1.6099	2.9084	3.3380	8.4300e-003	0.4209	0.1194	0.5403	0.1129	0.1120	0.2250	0.0000	770.3265	770.3265	0.0816	0.0000	772.3670
Maximum	1.6099	7.3070	4.1161	0.0154	0.7661	0.2021	0.9682	0.2688	0.1881	0.4569	0.0000	1,455.0038	1,455.0038	0.1748	0.0000	1,459.3740

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					
2018	0.2811	4.3175	5.6139	0.0154	0.5662	0.0285	0.5947	0.1772	0.0277	0.2049	0.0000	1,462.3326	1,462.3326	0.1771	0.0000	1,466.7599
2019	1.4599	1.6796	4.6401	8.4300e-003	0.4209	0.0178	0.4387	0.1129	0.0173	0.1302	0.0000	776.4467	776.4467	0.0836	0.0000	778.5356
Maximum	1.4599	4.3175	5.6139	0.0154	0.5662	0.0285	0.5947	0.1772	0.0277	0.2049	0.0000	1,462.3326	1,462.3326	0.1771	0.0000	1,466.7599

	ROG	NOx	CO	SO2	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	19.75	41.29	-37.56	0.00	16.84	85.61	31.49	23.99	85.03	50.86	0.00	-0.60	-0.60	-1.64	0.00	-0.61

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	3.0475	1.6724
2	4-1-2018	6-30-2018	2.7820	1.6908
3	7-1-2018	9-30-2018	0.9563	0.5659
4	10-1-2018	12-31-2018	0.9656	0.5752
5	1-1-2019	3-31-2019	0.8718	0.5312
6	4-1-2019	6-30-2019	0.8733	0.5290
7	7-1-2019	9-30-2019	1.6665	1.4326
		Highest	3.0475	1.6908

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	1/1/2018	1/21/2018	5	15	
2	Site Preparation	Site Preparation	1/22/2018	1/31/2018	5	8	
3	Grading	Grading	2/1/2018	5/31/2018	5	86	
4	Building Construction 1	Building Construction	6/1/2018	6/30/2019	5	281	
5	Paving	Paving	9/1/2019	12/31/2019	5	87	
6	Architectural Coating	Architectural Coating	7/1/2019	10/31/2019	5	89	
7	Building Construction 2	Building Construction	7/1/2019	10/31/2019	5	89	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 86

Acres of Paving: 0.2

Residential Indoor: 490,627; Residential Outdoor: 163,542; Non-Residential Indoor: 143,048; Non-Residential Outdoor: 47,683; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction 1	Generator Sets	1	8.00	84	0.74
Building Construction 1	Cranes	0	6.00	231	0.29
Building Construction 1	Forklifts	3	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	2	6.00	130	0.42
Paving	Rollers	2	7.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40

Building Construction 1	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	7.00	247	0.40
Building Construction 1	Welders	0	8.00	46	0.45
Building Construction 2	Cranes	0	6.00	231	0.29
Building Construction 2	Forklifts	0	6.00	89	0.20
Building Construction 2	Generator Sets	1	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Demolition	Excavators	1	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction 1	Other Construction Equipment	1	8.00	172	0.42

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
Architectural Coating	0	56.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 1	6	280.00	73.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	18.00	6.00	1,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	17,200.00	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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	2	280.00	73.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2018

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					0.0246	0.0000	0.0246	3.7300e-003	0.0000	3.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2708	0.1428	2.4000e-004		0.0145	0.0145		0.0133	0.0133	0.0000	21.6245	21.6245	6.7300e-003	0.0000	21.7928
Total	0.0257	0.2708	0.1428	2.4000e-004	0.0246	0.0145	0.0391	3.7300e-003	0.0133	0.0171	0.0000	21.6245	21.6245	6.7300e-003	0.0000	21.7928

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	4.6000e-003	0.1625	0.0315	4.0000e-004	8.5900e-003	6.1000e-004	9.2100e-003	2.3600e-003	5.9000e-004	2.9500e-003	0.0000	38.7952	38.7952	2.8500e-003	0.0000	38.8666
Vendor	2.0000e-004	5.5800e-003	1.4600e-003	1.0000e-005	2.8000e-004	4.0000e-005	3.2000e-004	8.0000e-005	4.0000e-005	1.2000e-004	0.0000	1.1182	1.1182	8.0000e-005	0.0000	1.1202
Worker	7.2000e-004	5.9000e-004	6.3100e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.4222	1.4222	5.0000e-005	0.0000	1.4234
Total	5.5200e-003	0.1687	0.0393	4.3000e-004	0.0104	6.6000e-004	0.0110	2.8300e-003	6.4000e-004	3.4700e-003	0.0000	41.3356	41.3356	2.9800e-003	0.0000	41.4102

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					9.6000e-003	0.0000	9.6000e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-003	0.0126	0.1396	2.4000e-004		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	21.6245	21.6245	6.7300e-003	0.0000	21.7928
Total	2.9000e-003	0.0126	0.1396	2.4000e-004	9.6000e-003	3.9000e-004	9.9900e-003	1.4500e-003	3.9000e-004	1.8400e-003	0.0000	21.6245	21.6245	6.7300e-003	0.0000	21.7928

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	4.6000e-003	0.1625	0.0315	4.0000e-004	8.5900e-003	6.1000e-004	9.2100e-003	2.3600e-003	5.9000e-004	2.9500e-003	0.0000	38.7952	38.7952	2.8500e-003	0.0000	38.8666
Vendor	2.0000e-004	5.5800e-003	1.4600e-003	1.0000e-005	2.8000e-004	4.0000e-005	3.2000e-004	8.0000e-005	4.0000e-005	1.2000e-004	0.0000	1.1182	1.1182	8.0000e-005	0.0000	1.1202
Worker	7.2000e-004	5.9000e-004	6.3100e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.4222	1.4222	5.0000e-005	0.0000	1.4234
Total	5.5200e-003	0.1687	0.0393	4.3000e-004	0.0104	6.6000e-004	0.0110	2.8300e-003	6.4000e-004	3.4700e-003	0.0000	41.3356	41.3356	2.9800e-003	0.0000	41.4102

3.3 Site Preparation - 2018

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					0.0632	0.0000	0.0632	0.0348	0.0000	0.0348	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1740	0.0833	1.4000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	12.7335	12.7335	3.9600e-003	0.0000	12.8326
Total	0.0165	0.1740	0.0833	1.4000e-004	0.0632	9.3900e-003	0.0726	0.0348	8.6400e-003	0.0434	0.0000	12.7335	12.7335	3.9600e-003	0.0000	12.8326

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	3.8000e-004	3.1000e-004	3.3700e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7585	0.7585	3.0000e-005	0.0000	0.7592
Total	3.8000e-004	3.1000e-004	3.3700e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7585	0.7585	3.0000e-005	0.0000	0.7592

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					0.0247	0.0000	0.0247	0.0136	0.0000	0.0136	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	7.3900e-003	0.0777	1.4000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	12.7334	12.7334	3.9600e-003	0.0000	12.8326
Total	1.7100e-003	7.3900e-003	0.0777	1.4000e-004	0.0247	2.3000e-004	0.0249	0.0136	2.3000e-004	0.0138	0.0000	12.7334	12.7334	3.9600e-003	0.0000	12.8326

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	3.8000e-004	3.1000e-004	3.3700e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7585	0.7585	3.0000e-005	0.0000	0.7592
Total	3.8000e-004	3.1000e-004	3.3700e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7585	0.7585	3.0000e-005	0.0000	0.7592

3.4 Grading - 2018

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					0.2398	0.0000	0.2398	0.1117	0.0000	0.1117	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1633	1.8888	1.1411	2.2800e-003		0.0835	0.0835		0.0769	0.0769	0.0000	207.9049	207.9049	0.0647	0.0000	209.5230
Total	0.1633	1.8888	1.1411	2.2800e-003	0.2398	0.0835	0.3234	0.1117	0.0769	0.1885	0.0000	207.9049	207.9049	0.0647	0.0000	209.5230

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	0.0791	2.7955	0.5414	6.8000e-003	0.1478	0.0106	0.1584	0.0406	0.0101	0.0507	0.0000	667.2776	667.2776	0.0491	0.0000	668.5049
Vendor	1.1300e-003	0.0320	8.3800e-003	7.0000e-005	1.6300e-003	2.3000e-004	1.8600e-003	4.7000e-004	2.2000e-004	6.9000e-004	0.0000	6.4111	6.4111	4.6000e-004	0.0000	6.4226
Worker	4.5600e-003	3.7400e-003	0.0402	1.0000e-004	9.4400e-003	8.0000e-005	9.5100e-003	2.5100e-003	7.0000e-005	2.5800e-003	0.0000	9.0600	9.0600	3.1000e-004	0.0000	9.0678
Total	0.0848	2.8313	0.5900	6.9700e-003	0.1589	0.0109	0.1697	0.0436	0.0104	0.0539	0.0000	682.7487	682.7487	0.0499	0.0000	683.9953

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					0.0935	0.0000	0.0935	0.0436	0.0000	0.0436	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0281	0.1216	1.2370	2.2800e-003		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	207.9047	207.9047	0.0647	0.0000	209.5228
Total	0.0281	0.1216	1.2370	2.2800e-003	0.0935	3.7400e-003	0.0973	0.0436	3.7400e-003	0.0473	0.0000	207.9047	207.9047	0.0647	0.0000	209.5228

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	0.0791	2.7955	0.5414	6.8000e-003	0.1478	0.0106	0.1584	0.0406	0.0101	0.0507	0.0000	667.2776	667.2776	0.0491	0.0000	668.5049
Vendor	1.1300e-003	0.0320	8.3800e-003	7.0000e-005	1.6300e-003	2.3000e-004	1.8600e-003	4.7000e-004	2.2000e-004	6.9000e-004	0.0000	6.4111	6.4111	4.6000e-004	0.0000	6.4226
Worker	4.5600e-003	3.7400e-003	0.0402	1.0000e-004	9.4400e-003	8.0000e-005	9.5100e-003	2.5100e-003	7.0000e-005	2.5800e-003	0.0000	9.0600	9.0600	3.1000e-004	0.0000	9.0678
Total	0.0848	2.8313	0.5900	6.9700e-003	0.1589	0.0109	0.1697	0.0436	0.0104	0.0539	0.0000	682.7487	682.7487	0.0499	0.0000	683.9953

3.5 Building Construction 1 - 2018

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	0.1263	1.1922	0.9411	1.4100e-003		0.0763	0.0763		0.0717	0.0717	0.0000	125.8527	125.8527	0.0289	0.0000	126.5753
Total	0.1263	1.1922	0.9411	1.4100e-003		0.0763	0.0763		0.0717	0.0717	0.0000	125.8527	125.8527	0.0289	0.0000	126.5753

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	0.0243	0.6884	0.1802	1.4200e-003	0.0350	4.9600e-003	0.0399	0.0101	4.7400e-003	0.0148	0.0000	137.8630	137.8630	9.9300e-003	0.0000	138.1113
Worker	0.1128	0.0926	0.9949	2.4800e-003	0.2335	1.9100e-003	0.2354	0.0620	1.7600e-003	0.0638	0.0000	224.1825	224.1825	7.6800e-003	0.0000	224.3744
Total	0.1371	0.7810	1.1752	3.9000e-003	0.2684	6.8700e-003	0.2753	0.0721	6.5000e-003	0.0786	0.0000	362.0454	362.0454	0.0176	0.0000	362.4856

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	0.0207	0.3947	2.3518	1.4100e-003		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003	0.0000	133.1818	133.1818	0.0312	0.0000	133.9615
Total	0.0207	0.3947	2.3518	1.4100e-003		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003	0.0000	133.1818	133.1818	0.0312	0.0000	133.9615

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	0.0243	0.6884	0.1802	1.4200e-003	0.0350	4.9600e-003	0.0399	0.0101	4.7400e-003	0.0148	0.0000	137.8630	137.8630	9.9300e-003	0.0000	138.1113
Worker	0.1128	0.0926	0.9949	2.4800e-003	0.2335	1.9100e-003	0.2354	0.0620	1.7600e-003	0.0638	0.0000	224.1825	224.1825	7.6800e-003	0.0000	224.3744
Total	0.1371	0.7810	1.1752	3.9000e-003	0.2684	6.8700e-003	0.2753	0.0721	6.5000e-003	0.0786	0.0000	362.0454	362.0454	0.0176	0.0000	362.4856

3.5 Building Construction 1 - 2019

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	0.0970	0.9283	0.7924	1.1900e-003		0.0574	0.0574		0.0539	0.0539	0.0000	105.6930	105.6930	0.0242	0.0000	106.2984
Total	0.0970	0.9283	0.7924	1.1900e-003		0.0574	0.0574		0.0539	0.0539	0.0000	105.6930	105.6930	0.0242	0.0000	106.2984

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	0.0187	0.5513	0.1406	1.2000e-003	0.0297	3.6100e-003	0.0333	8.5600e-003	3.4500e-003	0.0120	0.0000	115.9346	115.9346	8.1400e-003	0.0000	116.1379
Worker	0.0870	0.0694	0.7542	2.0400e-003	0.1981	1.5800e-003	0.1997	0.0526	1.4600e-003	0.0541	0.0000	184.2570	184.2570	5.7800e-003	0.0000	184.4015
Total	0.1057	0.6207	0.8948	3.2400e-003	0.2278	5.1900e-003	0.2330	0.0612	4.9100e-003	0.0661	0.0000	300.1916	300.1916	0.0139	0.0000	300.5394

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	0.0173	0.3246	1.9774	1.1900e-003		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	111.8133	111.8133	0.0262	0.0000	112.4671
Total	0.0173	0.3246	1.9774	1.1900e-003		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	111.8133	111.8133	0.0262	0.0000	112.4671

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	0.0187	0.5513	0.1406	1.2000e-003	0.0297	3.6100e-003	0.0333	8.5600e-003	3.4500e-003	0.0120	0.0000	115.9346	115.9346	8.1400e-003	0.0000	116.1379
Worker	0.0870	0.0694	0.7542	2.0400e-003	0.1981	1.5800e-003	0.1997	0.0526	1.4600e-003	0.0541	0.0000	184.2570	184.2570	5.7800e-003	0.0000	184.4015
Total	0.1057	0.6207	0.8948	3.2400e-003	0.2278	5.1900e-003	0.2330	0.0612	4.9100e-003	0.0661	0.0000	300.1916	300.1916	0.0139	0.0000	300.5394

3.6 Paving - 2019

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	0.0647	0.6725	0.6542	1.0000e-003		0.0377	0.0377		0.0347	0.0347	0.0000	89.4566	89.4566	0.0283	0.0000	90.1642
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0647	0.6725	0.6542	1.0000e-003		0.0377	0.0377		0.0347	0.0347	0.0000	89.4566	89.4566	0.0283	0.0000	90.1642

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	3.7700e-003	3.0100e-003	0.0327	9.0000e-005	8.5900e-003	7.0000e-005	8.6600e-003	2.2800e-003	6.0000e-005	2.3400e-003	0.0000	7.9886	7.9886	2.5000e-004	0.0000	7.9948
Total	3.7700e-003	3.0100e-003	0.0327	9.0000e-005	8.5900e-003	7.0000e-005	8.6600e-003	2.2800e-003	6.0000e-005	2.3400e-003	0.0000	7.9886	7.9886	2.5000e-004	0.0000	7.9948

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	0.0147	0.1543	0.7552	1.0000e-003		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	89.4565	89.4565	0.0283	0.0000	90.1641
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0147	0.1543	0.7552	1.0000e-003		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	89.4565	89.4565	0.0283	0.0000	90.1641

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	3.7700e-003	3.0100e-003	0.0327	9.0000e-005	8.5900e-003	7.0000e-005	8.6600e-003	2.2800e-003	6.0000e-005	2.3400e-003	0.0000	7.9886	7.9886	2.5000e-004	0.0000	7.9948
Total	3.7700e-003	3.0100e-003	0.0327	9.0000e-005	8.5900e-003	7.0000e-005	8.6600e-003	2.2800e-003	6.0000e-005	2.3400e-003	0.0000	7.9886	7.9886	2.5000e-004	0.0000	7.9948

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2264					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.2264	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0120	9.5700e-003	0.1041	2.8000e-004	0.0273	2.2000e-004	0.0276	7.2600e-003	2.0000e-004	7.4600e-003	0.0000	25.4246	25.4246	8.0000e-004	0.0000	25.4446
Total	0.0120	9.5700e-003	0.1041	2.8000e-004	0.0273	2.2000e-004	0.0276	7.2600e-003	2.0000e-004	7.4600e-003	0.0000	25.4246	25.4246	8.0000e-004	0.0000	25.4446

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2264					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.2264	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0120	9.5700e-003	0.1041	2.8000e-004	0.0273	2.2000e-004	0.0276	7.2600e-003	2.0000e-004	7.4600e-003	0.0000	25.4246	25.4246	8.0000e-004	0.0000	25.4446
Total	0.0120	9.5700e-003	0.1041	2.8000e-004	0.0273	2.2000e-004	0.0276	7.2600e-003	2.0000e-004	7.4600e-003	0.0000	25.4246	25.4246	8.0000e-004	0.0000	25.4446

3.8 Building Construction 2 - 2019

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	0.0275	0.2461	0.2425	4.0000e-004		0.0153	0.0153		0.0148	0.0148	0.0000	34.4633	34.4633	4.5400e-003	0.0000	34.5768
Total	0.0275	0.2461	0.2425	4.0000e-004		0.0153	0.0153		0.0148	0.0148	0.0000	34.4633	34.4633	4.5400e-003	0.0000	34.5768

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	0.0129	0.3804	0.0970	8.3000e-004	0.0205	2.4900e-003	0.0230	5.9100e-003	2.3800e-003	8.2900e-003	0.0000	79.9859	79.9859	5.6100e-003	0.0000	80.1262
Worker	0.0600	0.0479	0.5203	1.4100e-003	0.1367	1.0900e-003	0.1378	0.0363	1.0000e-003	0.0373	0.0000	127.1231	127.1231	3.9900e-003	0.0000	127.2227
Total	0.0729	0.4282	0.6173	2.2400e-003	0.1572	3.5800e-003	0.1608	0.0422	3.3800e-003	0.0456	0.0000	207.1089	207.1089	9.6000e-003	0.0000	207.3489

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	7.1200e-003	0.1392	0.2587	4.0000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	34.4632	34.4632	4.5400e-003	0.0000	34.5767
Total	7.1200e-003	0.1392	0.2587	4.0000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	34.4632	34.4632	4.5400e-003	0.0000	34.5767

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	0.0129	0.3804	0.0970	8.3000e-004	0.0205	2.4900e-003	0.0230	5.9100e-003	2.3800e-003	8.2900e-003	0.0000	79.9859	79.9859	5.6100e-003	0.0000	80.1262
Worker	0.0600	0.0479	0.5203	1.4100e-003	0.1367	1.0900e-003	0.1378	0.0363	1.0000e-003	0.0373	0.0000	127.1231	127.1231	3.9900e-003	0.0000	127.2227
Total	0.0729	0.4282	0.6173	2.2400e-003	0.1572	3.5800e-003	0.1608	0.0422	3.3800e-003	0.0456	0.0000	207.1089	207.1089	9.6000e-003	0.0000	207.3489

B-2 Project Operational Emissions

**6220 West Yucca Street Mixed Use Project
Draft Environmental Impact Report
Greenhouse Gas Assessment**

Project Solid Waste Disposal Rates

Land Use	Project Units	Solid Waste Factor ^a (lbs/unit/day)	Solid Waste Before Diversion (tons/year)	Diversion Rate ^b (%)	Solid Waste After Diversion
Residential	210 DU	12.23	468.7	76%	112.5
Hotel ^c	156 DU	4	113.9	76%	27.3
Commercial/Restaurant	12.5 KSF	5	11.4	76%	2.7
Total Project					142.6

Notes:

- a. Generation factors provided by the CalRecycle website: Estimated Solid Waste Generation Rates. Available <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed January 2017.
- b. City of Los Angeles, Zero Waste Progress Report, (March 2013) 3. According to the Report, the City achieved a landfill diversion rate of approximately 76% by year 2012.
- c. Hotel suites count as 2 rooms. The hotel proposes to include 20 suites; therefore, the total number of rooms for solid waste generation purposes is 116 + 2*20 = 156.

Source: ESA 2017.

Project Solid Waste Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 West Yucca Street Project
Draft Environmental Impact Report
Greenhouse Gas Assessment

Project Water Demand Rates

Land Use	Units (DU, Rooms, or 1000 sqft)	Wastewater Generation ^a (gal/unit/day)	Water Demand ^b (120% factor) (gal/day)	Indoor Water Demand Rate (gal/year)	Outdoor Water Demand Rate (gal/year)	Indoor Water Reduction (%)	Reduced Indoor Water Demand Rate (gal/year)	Outdoor Water Reduction (%)	Reduced Outdoor Water Demand Rate (gal/year)
Multi-Family Residential	210		33,336	10,139,700	2,027,940	20%	8,111,760	20%	1,622,352
<i>Studio</i>	-	75	-						
<i>One Bedroom</i>	104	110	13,728						
<i>Two Bedroom</i>	95	150	17,100						
<i>Three Bedroom</i>	11	190	2,508						
Hotel ^c	156	120	22,464	6,832,800	1,366,560	20%	5,466,240	20%	1,093,248
Restaurant (seats)	509	30	18,324	5,573,550	1,114,710	20%	4,458,840	20%	891,768
Retail	3.45	25	104	31,481	6,296	20%	25,185	20%	5,037
Open Space (Bar/Public Table Area)	0.92	720	795	241,776	48,355	20%	193,421	20%	38,684
Spa (Fitness)	3.85	650	3,003	913,413	182,683	20%	730,730	20%	146,146
Parking Structure	189.71	20	4,553	-	1,661,816	-	-	20%	1,329,453
Total Water Demand				23,732,720	6,408,360		18,986,176		5,126,688

Notes:

- a. Wastewater generation factors obtained from City of Los Angeles Bureau of Engineering, Sewer Capacity Availability Request (SCAR), dated January 10, 2017 and based on Los Angeles Department of Public Works, Bureau of Sanitation, Sewerage Facilities Charge Sewage Generation Factor for Residential and Commercial Categories, dated April 6, 2012. These factors do not account for water saving features incorporated into the Project.
- b. Water demand rates are calculated based on the wastewater generation rates and increasing the factor by 20% to account for absorption, evaporation, consumption, irrigation, and other losses.
- c. Hotel suites count as 2 rooms. The hotel proposes to include 20 suites; therefore, the total number of rooms for water demand purposes is 116 + 2*20 = 156.

Source: Southland Civil Engineering & Survey, LLP 2017; ESA 2017.

Project Water and Wastewater Greenhouse Gas Emissions

Refer to CalEEMod output files.

6220 W Yucca Street Project**Air Quality and Greenhouse Gas Assessment****Title 24 Energy Savings Adjustment****Project Energy Use Factors Adjustment**

Nonresidential % savings over Title 24 (2013) =

5.0%

Residential % savings over Title 24 (2013) =

28.0%

	T24 Electricity	NT24 Electricity	Lighting Electricity	T24 NG	NT24 NG
Title 24 (2013 - CalEEMod Default)					
Project Nonresidential Land Uses					
City Park ¹	-	-	2.63	-	-
Enclosed Parking with Elevator	3.92	0.19	2.63	-	-
Health Club	2.36	5.75	3.20	13.71	4.45
Hotel	2.68	2.89	2.20	20.02	4.06
Quality Restaurant	8.50	28.16	8.13	43.19	187.78
Recreational Swimming Pool ²	-	-	3.20	13.71	-
Strip Mall	4.20	3.23	6.43	1.16	0.49
Unenclosed Parking with Elevator	-	0.19	2.63	-	-
Project Residential Land Uses					
Apartment High Rise	194.04	3,277.06	741.44	6,328.91	4,831.00
Title 24 (2016)					
Project Nonresidential Land Uses					
City Park ¹	-	-	2.50	-	-
Enclosed Parking with Elevator	3.72	0.19	2.50	-	-
Health Club	2.24	5.75	3.04	13.02	4.45
Hotel	2.55	2.89	2.09	19.02	4.06
Quality Restaurant	8.08	28.16	7.72	41.03	187.78
Recreational Swimming Pool ²	-	-	3.04	13.02	-
Strip Mall	3.99	3.23	6.11	1.10	0.49
Unenclosed Parking with Elevator	-	0.19	2.50	-	-
Project Residential Land Uses					
Apartment High Rise	139.71	3,277.06	533.84	4,556.82	4,831.00

Notes:

1. CalEEMod does not provide energy rates for city park land use. For the purposes of this assessment, lighting electricity for city park (i.e., open space) assumed to be equivalent to parking electricity lighting demand.
2. CalEEMod does not provide energy rates for recreational swimming pool land use. For the purposes of this assessment, lighting electricity and T24 natural gas for the pool is assumed to be equivalent to health club electricity lighting and T24 natural gas demand.

Sources:

California Emissions Estimator Model (CalEEMod), version 2016.3.1.

California Energy Commission, Adoption Hearing, 2016 Building Energy Efficiency Standards, June 10, 2015. Available:

http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2015-06-10_hearing/2015-06-10_Adoption_Hearing_Presentation.pdf. Accessed December 2016.

6220 W Yucca Street Project - Operations (Initial Year) - Area, Energy, Water, Waste - South Coast Air Basin, Annual

6220 W Yucca Street Project - Operations (Initial Year) - Area, Energy, Water, Waste**South Coast Air Basin, Annual**

Emissions based on slightly greater square footage than proposed under the current design, which revised the total square footage slightly downward after completion of the emissions modeling. The change is less than 1% which would not materially affect the emissions modeling.

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	206.00	Space	0.10	89,222.00	0
Unenclosed Parking with Elevator	232.00	Space	0.10	100,483.00	0
City Park	0.60	Acre	0.10	18,535.00	0
Health Club	2.53	1000sqft	0.05	2,530.00	0
Hotel	136.00	Room	0.21	80,335.00	0
Quality Restaurant	9.05	1000sqft	0.10	9,050.00	0
Recreational Swimming Pool	4.84	1000sqft	0.10	4,840.00	0
Apartments High Rise	210.00	Dwelling Unit	0.35	242,285.00	426
Strip Mall	3.45	1000sqft	0.05	3,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	595	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor: California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects (Jan 2017).

Land Use - Multi-Fam (210 DU); Hotel (136 rooms); Retail (3.45 ksf); Rest. (9.05 ksf); Pool (4.84 ksf); Fitness (2.53 ksf); Open Space (25.905 ksf); Parking (~232 above, ~206 below). Pop.=2.03/DU (Hollywood CPA, 426 people).

Woodstoves - Assumes residential units equipped with natural gas hearths (210 DU) (SCAQMD Rule 445).

Energy Use - Adjusted for Title 24 (2016) compliance. According to CEC data, Title 24 (2016) standards are expected to result in energy savings of 5% non-residential and 28% residential over the 2013 standards.

Water And Wastewater - Refer to "Project Water Demand Rates" worksheet provided in this Appendix.

Solid Waste - Refer to "Project Solid Waste Disposal Rates" worksheet provided in this Appendix.

Area Mitigation -

Energy Mitigation - Exceed Title 24 by 5% per PDF. Energy efficient appliances (e.g., ENERGY STAR qualified).

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	533.84
tblEnergyUse	LightingElect	0.00	2.50
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	3.20	3.04
tblEnergyUse	LightingElect	2.20	2.09
tblEnergyUse	LightingElect	8.13	7.72
tblEnergyUse	LightingElect	0.00	3.04
tblEnergyUse	LightingElect	6.43	6.11
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	T24E	194.04	139.71
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.36	2.24
tblEnergyUse	T24E	2.68	2.55
tblEnergyUse	T24E	8.50	8.08
tblEnergyUse	T24E	4.20	3.99
tblEnergyUse	T24NG	6,328.91	4,556.82
tblEnergyUse	T24NG	13.71	13.02
tblEnergyUse	T24NG	20.02	19.02
tblEnergyUse	T24NG	43.19	41.03
tblEnergyUse	T24NG	0.00	13.02
tblEnergyUse	T24NG	1.16	1.10

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	178.50	210.00
tblFireplaces	NumberNoFireplace	21.00	0.00
tblFireplaces	NumberWood	10.50	0.00
tblLandUse	BuildingSpaceSquareFeet	82,400.00	89,222.00
tblLandUse	BuildingSpaceSquareFeet	92,800.00	100,483.00
tblLandUse	BuildingSpaceSquareFeet	0.00	18,535.00
tblLandUse	BuildingSpaceSquareFeet	197,472.00	80,335.00
tblLandUse	BuildingSpaceSquareFeet	0.00	4,840.00
tblLandUse	BuildingSpaceSquareFeet	210,000.00	242,285.00
tblLandUse	GreenSpaceSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	82,400.00	89,222.00
tblLandUse	LandUseSquareFeet	92,800.00	100,483.00
tblLandUse	LandUseSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	197,472.00	80,335.00
tblLandUse	LandUseSquareFeet	210,000.00	242,285.00
tblLandUse	LotAcreage	1.85	0.10
tblLandUse	LotAcreage	2.09	0.10
tblLandUse	LotAcreage	0.60	0.10
tblLandUse	LotAcreage	0.06	0.05
tblLandUse	LotAcreage	4.53	0.21
tblLandUse	LotAcreage	0.21	0.10
tblLandUse	LotAcreage	0.11	0.10
tblLandUse	LotAcreage	3.39	0.35
tblLandUse	LotAcreage	0.08	0.05
tblLandUse	Population	601.00	426.00
tblLandUse	RecSwimmingAreaSquareFeet	4,840.00	4,840.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	595
tblProjectCharacteristics	OperationalYear	2018	2021
tblSolidWaste	SolidWasteGenerationRate	96.60	112.50

tblSolidWaste	SolidWasteGenerationRate	0.05	0.00
tblSolidWaste	SolidWasteGenerationRate	14.42	0.00
tblSolidWaste	SolidWasteGenerationRate	74.46	27.30
tblSolidWaste	SolidWasteGenerationRate	8.26	0.00
tblSolidWaste	SolidWasteGenerationRate	27.59	0.00
tblSolidWaste	SolidWasteGenerationRate	3.62	2.70
tblTripsAndVMT	HaulingTripNumber	227.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	17,200.00
tblWater	IndoorWaterUseRate	13,682,345.38	8,111,760.00
tblWater	IndoorWaterUseRate	149,632.15	193,421.00
tblWater	IndoorWaterUseRate	3,449,880.72	5,466,240.00
tblWater	IndoorWaterUseRate	2,746,980.10	4,458,840.00
tblWater	IndoorWaterUseRate	286,252.82	730,730.00
tblWater	IndoorWaterUseRate	255,550.20	25,185.00
tblWater	OutdoorWaterUseRate	8,625,826.44	1,622,352.00
tblWater	OutdoorWaterUseRate	714,888.81	0.00
tblWater	OutdoorWaterUseRate	0.00	625,268.00
tblWater	OutdoorWaterUseRate	91,710.03	38,684.00
tblWater	OutdoorWaterUseRate	383,320.08	1,093,248.00
tblWater	OutdoorWaterUseRate	175,339.16	891,768.00
tblWater	OutdoorWaterUseRate	175,445.28	146,146.00
tblWater	OutdoorWaterUseRate	156,627.54	5,037.00
tblWater	OutdoorWaterUseRate	0.00	704,185.00
tblWoodstoves	NumberCatalytic	10.50	0.00
tblWoodstoves	NumberNoncatalytic	10.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4300e-003	9.2000e-004	54.3675
Energy	0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	1,078.9248	1,078.9248	0.0431	0.0135	1,084.0329
Waste						0.0000	0.0000		0.0000	0.0000	28.9262	0.0000	28.9262	1.7095	0.0000	71.6635
Water						0.0000	0.0000		0.0000	0.0000	6.0234	82.0934	88.1169	0.6227	0.0154	108.2834

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4300e-003	9.2000e-004	54.3675
Energy	0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	1,056.1329	1,056.1329	0.0422	0.0132	1,061.1311
Waste						0.0000	0.0000		0.0000	0.0000	28.9262	0.0000	28.9262	1.7095	0.0000	71.6635
Water						0.0000	0.0000		0.0000	0.0000	6.0234	82.0934	88.1169	0.6227	0.0154	108.2834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	743.3566	743.3566	0.0362	7.5000e-003	746.4961
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	758.2614	758.2614	0.0370	7.6500e-003	761.4639
NaturalGas Mitigated	0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.7763	312.7763	5.9900e-003	5.7300e-003	314.6350
NaturalGas Unmitigated	0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	320.6634	320.6634	6.1500e-003	5.8800e-003	322.5690

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.97144e+006	0.0106	0.0908	0.0387	5.8000e-004		7.3400e-003	7.3400e-003		7.3400e-003	7.3400e-003	0.0000	105.2037	105.2037	2.0200e-003	1.9300e-003	105.8288
City Park	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
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
Health Club	44199.1	2.4000e-004	2.1700e-003	1.8200e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3586	2.3586	5.0000e-005	4.0000e-005	2.3727
Hotel	1.85413e+006	0.0100	0.0909	0.0764	5.5000e-004		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	98.9435	98.9435	1.9000e-003	1.8100e-003	99.5315
Quality Restaurant	2.07073e+006	0.0112	0.1015	0.0853	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.5021	110.5021	2.1200e-003	2.0300e-003	111.1587
Recreational Swimming Pool	63016.8	3.4000e-004	3.0900e-003	2.5900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3628	3.3628	6.0000e-005	6.0000e-005	3.3828
Strip Mall	5485.5	3.0000e-005	2.7000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2927	0.2927	1.0000e-005	1.0000e-005	0.2945
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	320.6634	320.6634	6.1600e-003	5.8800e-003	322.5690

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.9236e+06	0.0104	0.0886	0.0377	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6504	102.6504	1.9700e-003	1.8800e-003	103.2604
City Park	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
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
Health Club	42552.1	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2707	2.2707	4.0000e-005	4.0000e-005	2.2842
Hotel	1.77773e+006	9.5900e-003	0.0871	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8666	94.8666	1.8200e-003	1.7400e-003	95.4304
Quality Restaurant	2.05216e+006	0.0111	0.1006	0.0845	6.0000e-004		7.6500e-003	7.6500e-003		7.6500e-003	7.6500e-003	0.0000	109.5113	109.5113	2.1000e-003	2.0100e-003	110.1621
Recreational Swimming Pool	59866	3.2000e-004	2.9300e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1947	3.1947	6.0000e-005	6.0000e-005	3.2137
Strip Mall	5295.75	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2826	0.2826	1.0000e-005	1.0000e-005	0.2843
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.7763	312.7763	6.0000e-003	5.7400e-003	314.6350

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	829628	223.9062	0.0109	2.2600e-003	224.8519
City Park	46337.5	12.5059	6.1000e-004	1.3000e-004	12.5587
Enclosed Parking with Elevator	571913	154.3522	7.5200e-003	1.5600e-003	155.0041
Health Club	27905.9	7.5315	3.7000e-004	8.0000e-005	7.5633
Hotel	604923	163.2610	7.9600e-003	1.6500e-003	163.9506
Quality Restaurant	397838	107.3715	5.2300e-003	1.0800e-003	107.8250
Recreational Swimming Pool	14713.6	3.9710	1.9000e-004	4.0000e-005	3.9878
Strip Mall	45988.5	12.4117	6.0000e-004	1.3000e-004	12.4641
Unenclosed Parking with Elevator	270299	72.9504	3.5600e-003	7.4000e-004	73.2585
Total		758.2614	0.0370	7.6700e-003	761.4639

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	805868	217.4937	0.0106	2.1900e-003	218.4123
City Park	46337.5	12.5059	6.1000e-004	1.3000e-004	12.5587
Enclosed Parking with Elevator	555318	149.8733	7.3000e-003	1.5100e-003	150.5063
Health Club	27622.5	7.4550	3.6000e-004	8.0000e-005	7.4865
Hotel	594680	160.4966	7.8200e-003	1.6200e-003	161.1745
Quality Restaurant	394182	106.3847	5.1900e-003	1.0700e-003	106.8340
Recreational Swimming Pool	14713.6	3.9710	1.9000e-004	4.0000e-005	3.9878
Strip Mall	45300.2	12.2260	6.0000e-004	1.2000e-004	12.2776
Unenclosed Parking with Elevator	270299	72.9504	3.5600e-003	7.4000e-004	73.2585
Total		743.3566	0.0362	7.5000e-003	746.4961

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4300e-003	9.2000e-004	54.3675
Unmitigated	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4300e-003	9.2000e-004	54.3675

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	0.1226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.1000e-003	0.0435	0.0185	2.8000e-004		3.5200e-003	3.5200e-003		3.5200e-003	3.5200e-003	0.0000	50.4288	50.4288	9.7000e-004	9.2000e-004	50.7285
Landscaping	0.0665	0.0251	2.1780	1.1000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	3.5523	3.5523	3.4700e-003	0.0000	3.6390
Total	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4400e-003	9.2000e-004	54.3675

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	0.1226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.1000e-003	0.0435	0.0185	2.8000e-004		3.5200e-003	3.5200e-003		3.5200e-003	3.5200e-003	0.0000	50.4288	50.4288	9.7000e-004	9.2000e-004	50.7285
Landscaping	0.0665	0.0251	2.1780	1.1000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	3.5523	3.5523	3.4700e-003	0.0000	3.6390
Total	1.5110	0.0687	2.1965	3.9000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	53.9811	53.9811	4.4400e-003	9.2000e-004	54.3675

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	88.1169	0.6227	0.0154	108.2834
Unmitigated	88.1169	0.6227	0.0154	108.2834

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	35.9444	0.2660	6.5800e-003	44.5533
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.8748	9.0000e-005	2.0000e-005	1.8828
Health Club	0.193421 / 0.038684	0.8571	6.3400e-003	1.6000e-004	1.0624
Hotel	5.46624 / 1.09325	24.2217	0.1792	4.4300e-003	30.0230
Quality Restaurant	4.45884 / 0.891768	19.7578	0.1462	3.6200e-003	24.4899
Recreational Swimming Pool	0.73073 / 0.146146	3.2380	0.0240	5.9000e-004	4.0135
Strip Mall	0.025185 / 0.005037	0.1116	8.3000e-004	2.0000e-005	0.1383
Unenclosed Parking with Elevator	0 / 0.704185	2.1115	1.0000e-004	2.0000e-005	2.1204
Total		88.1169	0.6227	0.0154	108.2834

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	35.9444	0.2660	6.5800e-003	44.5533
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.8748	9.0000e-005	2.0000e-005	1.8828
Health Club	0.193421 / 0.038684	0.8571	6.3400e-003	1.6000e-004	1.0624
Hotel	5.46624 / 1.09325	24.2217	0.1792	4.4300e-003	30.0230
Quality Restaurant	4.45884 / 0.891768	19.7578	0.1462	3.6200e-003	24.4899
Recreational Swimming Pool	0.73073 / 0.146146	3.2380	0.0240	5.9000e-004	4.0135
Strip Mall	0.025185 / 0.005037	0.1116	8.3000e-004	2.0000e-005	0.1383
Unenclosed Parking with Elevator	0 / 0.704185	2.1115	1.0000e-004	2.0000e-005	2.1204
Total		88.1169	0.6227	0.0154	108.2834

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.9262	1.7095	0.0000	71.6635
Unmitigated	28.9262	1.7095	0.0000	71.6635

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	112.5	22.8365	1.3496	0.0000	56.5764
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Hotel	27.3	5.5417	0.3275	0.0000	13.7292
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.7	0.5481	0.0324	0.0000	1.3578
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.9262	1.7095	0.0000	71.6635

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	112.5	22.8365	1.3496	0.0000	56.5764
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Hotel	27.3	5.5417	0.3275	0.0000	13.7292
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.7	0.5481	0.0324	0.0000	1.3578
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		28.9262	1.7095	0.0000	71.6635

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

6220 W Yucca Street Project - Operations (2024) - Electricity, Water - South Coast Air Basin, Annual

6220 W Yucca Street Project - Operations (2024) - Electricity, Water

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	206.00	Space	0.10	89,222.00	0
Unenclosed Parking with Elevator	232.00	Space	0.10	100,483.00	0
City Park	0.60	Acre	0.10	18,535.00	0
Health Club	2.53	1000sqft	0.05	2,530.00	0
Hotel	136.00	Room	0.21	80,335.00	0
Quality Restaurant	9.05	1000sqft	0.10	9,050.00	0
Recreational Swimming Pool	4.84	1000sqft	0.10	4,840.00	0
Apartments High Rise	210.00	Dwelling Unit	0.35	242,285.00	426
Strip Mall	3.45	1000sqft	0.05	3,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	533	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor: California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects (Jan 2017). Linearly adjusted to 40% RPS by 2024.

Land Use - Multi-Fam (210 DU); Hotel (136 rooms); Retail (3.45 ksf); Rest. (9.05 ksf); Pool (4.84 ksf); Fitness (2.53 ksf); Open Space (25.905 ksf); Parking (~232 above, ~206 below). Pop.=2.03/DU (Hollywood CPA, 426 people).

Energy Use - Adjusted for Title 24 (2016) compliance. According to CEC data, Title 24 (2016) standards are expected to result in energy savings of 5% non-residential and 28% residential over the 2013 standards.

Water And Wastewater - Refer to "Project Water Demand Rates" worksheet provided in this Appendix.

Energy Mitigation - Exceed Title 24 by 5% per PDF. Energy efficient appliances (e.g., ENERGY STAR qualified).

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	533.84
tblEnergyUse	LightingElect	0.00	2.50
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	3.20	3.04
tblEnergyUse	LightingElect	2.20	2.09
tblEnergyUse	LightingElect	8.13	7.72
tblEnergyUse	LightingElect	0.00	3.04
tblEnergyUse	LightingElect	6.43	6.11
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	T24E	194.04	139.71
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.36	2.24
tblEnergyUse	T24E	2.68	2.55
tblEnergyUse	T24E	8.50	8.08
tblEnergyUse	T24E	4.20	3.99
tblEnergyUse	T24NG	6,328.91	4,556.82
tblEnergyUse	T24NG	13.71	13.02
tblEnergyUse	T24NG	20.02	19.02
tblEnergyUse	T24NG	43.19	41.03
tblEnergyUse	T24NG	0.00	13.02
tblEnergyUse	T24NG	1.16	1.10
tblLandUse	BuildingSpaceSquareFeet	82,400.00	89,222.00
tblLandUse	BuildingSpaceSquareFeet	92,800.00	100,483.00
tblLandUse	BuildingSpaceSquareFeet	0.00	18,535.00

tblLandUse	BuildingSpaceSquareFeet	197,472.00	80,335.00
tblLandUse	BuildingSpaceSquareFeet	0.00	4,840.00
tblLandUse	BuildingSpaceSquareFeet	210,000.00	242,285.00
tblLandUse	GreenSpaceSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	82,400.00	89,222.00
tblLandUse	LandUseSquareFeet	92,800.00	100,483.00
tblLandUse	LandUseSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	197,472.00	80,335.00
tblLandUse	LandUseSquareFeet	210,000.00	242,285.00
tblLandUse	LotAcreage	1.85	0.10
tblLandUse	LotAcreage	2.09	0.10
tblLandUse	LotAcreage	0.60	0.10
tblLandUse	LotAcreage	0.06	0.05
tblLandUse	LotAcreage	4.53	0.21
tblLandUse	LotAcreage	0.21	0.10
tblLandUse	LotAcreage	0.11	0.10
tblLandUse	LotAcreage	3.39	0.35
tblLandUse	LotAcreage	0.08	0.05
tblLandUse	Population	601.00	426.00
tblLandUse	RecSwimmingAreaSquareFeet	4,840.00	4,840.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	533
tblProjectCharacteristics	OperationalYear	2018	2024
tblWater	IndoorWaterUseRate	13,682,345.38	8,111,760.00
tblWater	IndoorWaterUseRate	149,632.15	193,421.00
tblWater	IndoorWaterUseRate	3,449,880.72	5,466,240.00
tblWater	IndoorWaterUseRate	2,746,980.10	4,458,840.00
tblWater	IndoorWaterUseRate	286,252.82	730,730.00
tblWater	IndoorWaterUseRate	255,550.20	25,185.00
tblWater	OutdoorWaterUseRate	8,625,826.44	1,622,352.00
tblWater	OutdoorWaterUseRate	714,888.81	0.00

tblWater	OutdoorWaterUseRate	0.00	625,268.00
tblWater	OutdoorWaterUseRate	91,710.03	38,684.00
tblWater	OutdoorWaterUseRate	383,320.08	1,093,248.00
tblWater	OutdoorWaterUseRate	175,339.16	891,768.00
tblWater	OutdoorWaterUseRate	175,445.28	146,146.00
tblWater	OutdoorWaterUseRate	156,627.54	5,037.00
tblWater	OutdoorWaterUseRate	0.00	704,185.00

2.0 Emissions Summary

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					
Energy	0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	999.9127	999.9127	0.0431	0.0135	1,005.0208
Water						0.0000	0.0000		0.0000	0.0000	6.0234	73.5392	79.5626	0.6227	0.0154	99.7291

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					
Energy	0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	978.6739	978.6739	0.0422	0.0132	983.6721
Water						0.0000	0.0000		0.0000	0.0000	6.0234	73.5392	79.5626	0.6227	0.0154	99.7291

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	665.8976	665.8976	0.0362	7.5000e-003	669.0371
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	679.2493	679.2493	0.0370	7.6500e-003	682.4518

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.97144e+006	0.0106	0.0908	0.0387	5.8000e-004		7.3400e-003	7.3400e-003		7.3400e-003	7.3400e-003	0.0000	105.2037	105.2037	2.0200e-003	1.9300e-003	105.8288
City Park	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
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
Health Club	44199.1	2.4000e-004	2.1700e-003	1.8200e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3586	2.3586	5.0000e-005	4.0000e-005	2.3727
Hotel	1.85413e+006	0.0100	0.0909	0.0764	5.5000e-004		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	98.9435	98.9435	1.9000e-003	1.8100e-003	99.5315
Quality Restaurant	2.07073e+006	0.0112	0.1015	0.0853	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.5021	110.5021	2.1200e-003	2.0300e-003	111.1587
Recreational Swimming Pool	63016.8	3.4000e-004	3.0900e-003	2.5900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3628	3.3628	6.0000e-005	6.0000e-005	3.3828
Strip Mall	5485.5	3.0000e-005	2.7000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2927	0.2927	1.0000e-005	1.0000e-005	0.2945
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	320.6634	320.6634	6.1600e-003	5.8800e-003	322.5690

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.9236e+06	0.0104	0.0886	0.0377	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6504	102.6504	1.9700e-003	1.8800e-003	103.2604
City Park	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
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
Health Club	42552.1	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2707	2.2707	4.0000e-005	4.0000e-005	2.2842
Hotel	1.77773e+006	9.5900e-003	0.0871	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8666	94.8666	1.8200e-003	1.7400e-003	95.4304
Quality Restaurant	2.05216e+006	0.0111	0.1006	0.0845	6.0000e-004		7.6500e-003	7.6500e-003		7.6500e-003	7.6500e-003	0.0000	109.5113	109.5113	2.1000e-003	2.0100e-003	110.1621
Recreational Swimming Pool	59866	3.2000e-004	2.9300e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1947	3.1947	6.0000e-005	6.0000e-005	3.2137
Strip Mall	5295.75	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2826	0.2826	1.0000e-005	1.0000e-005	0.2843
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.7763	312.7763	6.0000e-003	5.7400e-003	314.6350

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	829628	200.5748	0.0109	2.2600e-003	201.5205
City Park	46337.5	11.2028	6.1000e-004	1.3000e-004	11.2556
Enclosed Parking with Elevator	571913	138.2684	7.5200e-003	1.5600e-003	138.9203
Health Club	27905.9	6.7467	3.7000e-004	8.0000e-005	6.7785
Hotel	604923	146.2489	7.9600e-003	1.6500e-003	146.9385
Quality Restaurant	397838	96.1832	5.2300e-003	1.0800e-003	96.6367
Recreational Swimming Pool	14713.6	3.5572	1.9000e-004	4.0000e-005	3.5740
Strip Mall	45988.5	11.1184	6.0000e-004	1.3000e-004	11.1708
Unenclosed Parking with Elevator	270299	65.3488	3.5600e-003	7.4000e-004	65.6569
Total		679.2493	0.0370	7.6700e-003	682.4518

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	805868	194.8305	0.0106	2.1900e-003	195.7490
City Park	46337.5	11.2028	6.1000e-004	1.3000e-004	11.2556
Enclosed Parking with Elevator	555318	134.2562	7.3000e-003	1.5100e-003	134.8892
Health Club	27622.5	6.6782	3.6000e-004	8.0000e-005	6.7096
Hotel	594680	143.7726	7.8200e-003	1.6200e-003	144.4505
Quality Restaurant	394182	95.2993	5.1900e-003	1.0700e-003	95.7486
Recreational Swimming Pool	14713.6	3.5572	1.9000e-004	4.0000e-005	3.5740
Strip Mall	45300.2	10.9520	6.0000e-004	1.2000e-004	11.0036
Unenclosed Parking with Elevator	270299	65.3488	3.5600e-003	7.4000e-004	65.6569
Total		665.8976	0.0362	7.5000e-003	669.0371

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	79.5626	0.6227	0.0154	99.7291
Unmitigated	79.5626	0.6227	0.0154	99.7291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	32.4671	0.2660	6.5800e-003	41.0760
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.6795	9.0000e-005	2.0000e-005	1.6874
Health Club	0.193421 / 0.038684	0.7742	6.3400e-003	1.6000e-004	0.9794
Hotel	5.46624 / 1.09325	21.8785	0.1792	4.4300e-003	27.6797
Quality Restaurant	4.45884 / 0.891768	17.8464	0.1462	3.6200e-003	22.5785
Recreational Swimming Pool	0.73073 / 0.146146	2.9247	0.0240	5.9000e-004	3.7002
Strip Mall	0.025185 / 0.005037	0.1008	8.3000e-004	2.0000e-005	0.1275
Unenclosed Parking with Elevator	0 / 0.704185	1.8915	1.0000e-004	2.0000e-005	1.9004
Total		79.5626	0.6227	0.0154	99.7291

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	32.4671	0.2660	6.5800e-003	41.0760
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.6795	9.0000e-005	2.0000e-005	1.6874
Health Club	0.193421 / 0.038684	0.7742	6.3400e-003	1.6000e-004	0.9794
Hotel	5.46624 / 1.09325	21.8785	0.1792	4.4300e-003	27.6797
Quality Restaurant	4.45884 / 0.891768	17.8464	0.1462	3.6200e-003	22.5785
Recreational Swimming Pool	0.73073 / 0.146146	2.9247	0.0240	5.9000e-004	3.7002
Strip Mall	0.025185 / 0.005037	0.1008	8.3000e-004	2.0000e-005	0.1275
Unenclosed Parking with Elevator	0 / 0.704185	1.8915	1.0000e-004	2.0000e-005	1.9004
Total		79.5626	0.6227	0.0154	99.7291

6220 W Yucca Street Project - Operations (2027) - Electricity, Water - South Coast Air Basin, Annual

6220 W Yucca Street Project - Operations (2027) - Electricity, Water

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	206.00	Space	0.10	89,222.00	0
Unenclosed Parking with Elevator	232.00	Space	0.10	100,483.00	0
City Park	0.60	Acre	0.10	18,535.00	0
Health Club	2.53	1000sqft	0.05	2,530.00	0
Hotel	136.00	Room	0.21	80,335.00	0
Quality Restaurant	9.05	1000sqft	0.10	9,050.00	0
Recreational Swimming Pool	4.84	1000sqft	0.10	4,840.00	0
Apartments High Rise	210.00	Dwelling Unit	0.35	242,285.00	426
Strip Mall	3.45	1000sqft	0.05	3,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2027
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	488	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor: California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects (Jan 2017). Linearly adjusted to 45% RPS by 2027.

Land Use - Multi-Fam (210 DU); Hotel (136 rooms); Retail (3.45 ksf); Rest. (9.05 ksf); Pool (4.84 ksf); Fitness (2.53 ksf); Open Space (25.905 ksf); Parking (~232 above, ~206 below). Pop.=2.03/DU (Hollywood CPA, 426 people).

Energy Use - Adjusted for Title 24 (2016) compliance. According to CEC data, Title 24 (2016) standards are expected to result in energy savings of 5% non-residential and 28% residential over the 2013 standards.

Water And Wastewater - Refer to "Project Water Demand Rates" worksheet provided in this Appendix.

Energy Mitigation - Exceed Title 24 by 5% per PDF. Energy efficient appliances (e.g., ENERGY STAR qualified).

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	533.84
tblEnergyUse	LightingElect	0.00	2.50
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	3.20	3.04
tblEnergyUse	LightingElect	2.20	2.09
tblEnergyUse	LightingElect	8.13	7.72
tblEnergyUse	LightingElect	0.00	3.04
tblEnergyUse	LightingElect	6.43	6.11
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	T24E	194.04	139.71
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.36	2.24
tblEnergyUse	T24E	2.68	2.55
tblEnergyUse	T24E	8.50	8.08
tblEnergyUse	T24E	4.20	3.99
tblEnergyUse	T24NG	6,328.91	4,556.82
tblEnergyUse	T24NG	13.71	13.02
tblEnergyUse	T24NG	20.02	19.02
tblEnergyUse	T24NG	43.19	41.03
tblEnergyUse	T24NG	0.00	13.02
tblEnergyUse	T24NG	1.16	1.10
tblLandUse	BuildingSpaceSquareFeet	82,400.00	89,222.00
tblLandUse	BuildingSpaceSquareFeet	92,800.00	100,483.00
tblLandUse	BuildingSpaceSquareFeet	0.00	18,535.00

tblLandUse	BuildingSpaceSquareFeet	197,472.00	80,335.00
tblLandUse	BuildingSpaceSquareFeet	0.00	4,840.00
tblLandUse	BuildingSpaceSquareFeet	210,000.00	242,285.00
tblLandUse	GreenSpaceSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	82,400.00	89,222.00
tblLandUse	LandUseSquareFeet	92,800.00	100,483.00
tblLandUse	LandUseSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	197,472.00	80,335.00
tblLandUse	LandUseSquareFeet	210,000.00	242,285.00
tblLandUse	LotAcreage	1.85	0.10
tblLandUse	LotAcreage	2.09	0.10
tblLandUse	LotAcreage	0.60	0.10
tblLandUse	LotAcreage	0.06	0.05
tblLandUse	LotAcreage	4.53	0.21
tblLandUse	LotAcreage	0.21	0.10
tblLandUse	LotAcreage	0.11	0.10
tblLandUse	LotAcreage	3.39	0.35
tblLandUse	LotAcreage	0.08	0.05
tblLandUse	Population	601.00	426.00
tblLandUse	RecSwimmingAreaSquareFeet	4,840.00	4,840.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	488
tblProjectCharacteristics	OperationalYear	2018	2027
tblWater	IndoorWaterUseRate	13,682,345.38	8,111,760.00
tblWater	IndoorWaterUseRate	149,632.15	193,421.00
tblWater	IndoorWaterUseRate	3,449,880.72	5,466,240.00
tblWater	IndoorWaterUseRate	2,746,980.10	4,458,840.00
tblWater	IndoorWaterUseRate	286,252.82	730,730.00
tblWater	IndoorWaterUseRate	255,550.20	25,185.00
tblWater	OutdoorWaterUseRate	8,625,826.44	1,622,352.00
tblWater	OutdoorWaterUseRate	714,888.81	0.00

tblWater	OutdoorWaterUseRate	0.00	625,268.00
tblWater	OutdoorWaterUseRate	91,710.03	38,684.00
tblWater	OutdoorWaterUseRate	383,320.08	1,093,248.00
tblWater	OutdoorWaterUseRate	175,339.16	891,768.00
tblWater	OutdoorWaterUseRate	175,445.28	146,146.00
tblWater	OutdoorWaterUseRate	156,627.54	5,037.00
tblWater	OutdoorWaterUseRate	0.00	704,185.00

2.0 Emissions Summary

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					
Energy	0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	942.5652	942.5652	0.0431	0.0135	947.6733
Water						0.0000	0.0000		0.0000	0.0000	6.0234	67.3304	73.3538	0.6227	0.0154	93.5204

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					
Energy	0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	922.4536	922.4536	0.0422	0.0132	927.4519
Water						0.0000	0.0000		0.0000	0.0000	6.0234	67.3304	73.3538	0.6227	0.0154	93.5204

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	609.6773	609.6773	0.0362	7.5000e-003	612.8169
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	621.9018	621.9018	0.0370	7.6500e-003	625.1043

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.97144e+006	0.0106	0.0908	0.0387	5.8000e-004		7.3400e-003	7.3400e-003		7.3400e-003	7.3400e-003	0.0000	105.2037	105.2037	2.0200e-003	1.9300e-003	105.8288
City Park	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
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
Health Club	44199.1	2.4000e-004	2.1700e-003	1.8200e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3586	2.3586	5.0000e-005	4.0000e-005	2.3727
Hotel	1.85413e+006	0.0100	0.0909	0.0764	5.5000e-004		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	98.9435	98.9435	1.9000e-003	1.8100e-003	99.5315
Quality Restaurant	2.07073e+006	0.0112	0.1015	0.0853	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.5021	110.5021	2.1200e-003	2.0300e-003	111.1587
Recreational Swimming Pool	63016.8	3.4000e-004	3.0900e-003	2.5900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3628	3.3628	6.0000e-005	6.0000e-005	3.3828
Strip Mall	5485.5	3.0000e-005	2.7000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2927	0.2927	1.0000e-005	1.0000e-005	0.2945
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	320.6634	320.6634	6.1600e-003	5.8800e-003	322.5690

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.9236e+06	0.0104	0.0886	0.0377	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6504	102.6504	1.9700e-003	1.8800e-003	103.2604
City Park	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
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
Health Club	42552.1	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2707	2.2707	4.0000e-005	4.0000e-005	2.2842
Hotel	1.77773e+006	9.5900e-003	0.0871	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8666	94.8666	1.8200e-003	1.7400e-003	95.4304
Quality Restaurant	2.05216e+006	0.0111	0.1006	0.0845	6.0000e-004		7.6500e-003	7.6500e-003		7.6500e-003	7.6500e-003	0.0000	109.5113	109.5113	2.1000e-003	2.0100e-003	110.1621
Recreational Swimming Pool	59866	3.2000e-004	2.9300e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1947	3.1947	6.0000e-005	6.0000e-005	3.2137
Strip Mall	5295.75	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2826	0.2826	1.0000e-005	1.0000e-005	0.2843
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.7763	312.7763	6.0000e-003	5.7400e-003	314.6350

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	829628	183.6407	0.0109	2.2600e-003	184.5864
City Park	46337.5	10.2570	6.1000e-004	1.3000e-004	10.3098
Enclosed Parking with Elevator	571913	126.5947	7.5200e-003	1.5600e-003	127.2466
Health Club	27905.9	6.1771	3.7000e-004	8.0000e-005	6.2089
Hotel	604923	133.9015	7.9600e-003	1.6500e-003	134.5910
Quality Restaurant	397838	88.0627	5.2300e-003	1.0800e-003	88.5162
Recreational Swimming Pool	14713.6	3.2569	1.9000e-004	4.0000e-005	3.2737
Strip Mall	45988.5	10.1797	6.0000e-004	1.3000e-004	10.2321
Unenclosed Parking with Elevator	270299	59.8316	3.5600e-003	7.4000e-004	60.1397
Total		621.9018	0.0370	7.6700e-003	625.1043

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	805868	178.3814	0.0106	2.1900e-003	179.2999
City Park	46337.5	10.2570	6.1000e-004	1.3000e-004	10.3098
Enclosed Parking with Elevator	555318	122.9213	7.3000e-003	1.5100e-003	123.5543
Health Club	27622.5	6.1143	3.6000e-004	8.0000e-005	6.1458
Hotel	594680	131.6342	7.8200e-003	1.6200e-003	132.3121
Quality Restaurant	394182	87.2534	5.1900e-003	1.0700e-003	87.7027
Recreational Swimming Pool	14713.6	3.2569	1.9000e-004	4.0000e-005	3.2737
Strip Mall	45300.2	10.0273	6.0000e-004	1.2000e-004	10.0790
Unenclosed Parking with Elevator	270299	59.8316	3.5600e-003	7.4000e-004	60.1397
Total		609.6773	0.0362	7.5000e-003	612.8169

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	73.3538	0.6227	0.0154	93.5204
Unmitigated	73.3538	0.6227	0.0154	93.5204

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	29.9433	0.2660	6.5800e-003	38.5521
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.5377	9.0000e-005	2.0000e-005	1.5456
Health Club	0.193421 / 0.038684	0.7140	6.3400e-003	1.6000e-004	0.9193
Hotel	5.46624 / 1.09325	20.1777	0.1792	4.4300e-003	25.9790
Quality Restaurant	4.45884 / 0.891768	16.4591	0.1462	3.6200e-003	21.1912
Recreational Swimming Pool	0.73073 / 0.146146	2.6974	0.0240	5.9000e-004	3.4729
Strip Mall	0.025185 / 0.005037	0.0930	8.3000e-004	2.0000e-005	0.1197
Unenclosed Parking with Elevator	0 / 0.704185	1.7318	1.0000e-004	2.0000e-005	1.7407
Total		73.3538	0.6227	0.0154	93.5204

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	29.9433	0.2660	6.5800e-003	38.5521
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.5377	9.0000e-005	2.0000e-005	1.5456
Health Club	0.193421 / 0.038684	0.7140	6.3400e-003	1.6000e-004	0.9193
Hotel	5.46624 / 1.09325	20.1777	0.1792	4.4300e-003	25.9790
Quality Restaurant	4.45884 / 0.891768	16.4591	0.1462	3.6200e-003	21.1912
Recreational Swimming Pool	0.73073 / 0.146146	2.6974	0.0240	5.9000e-004	3.4729
Strip Mall	0.025185 / 0.005037	0.0930	8.3000e-004	2.0000e-005	0.1197
Unenclosed Parking with Elevator	0 / 0.704185	1.7318	1.0000e-004	2.0000e-005	1.7407
Total		73.3538	0.6227	0.0154	93.5204

6220 W Yucca Street Project - Operations (2030) - Electricity, Water - South Coast Air Basin, Annual

6220 W Yucca Street Project - Operations (2030) - Electricity, Water

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	206.00	Space	0.10	89,222.00	0
Unenclosed Parking with Elevator	232.00	Space	0.10	100,483.00	0
City Park	0.60	Acre	0.10	18,535.00	0
Health Club	2.53	1000sqft	0.05	2,530.00	0
Hotel	136.00	Room	0.21	80,335.00	0
Quality Restaurant	9.05	1000sqft	0.10	9,050.00	0
Recreational Swimming Pool	4.84	1000sqft	0.10	4,840.00	0
Apartments High Rise	210.00	Dwelling Unit	0.35	242,285.00	426
Strip Mall	3.45	1000sqft	0.05	3,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2030
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	444	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor: California Air Resources Board, Statewide Emission Factors (EF) For Use With AB 900 Projects (Jan 2017). Linearly adjusted to 50% RPS by 2030.

Land Use - Multi-Fam (210 DU); Hotel (136 rooms); Retail (3.45 ksf); Rest. (9.05 ksf); Pool (4.84 ksf); Fitness (2.53 ksf); Open Space (25.905 ksf); Parking (~232 above, ~206 below). Pop.=2.03/DU (Hollywood CPA, 426 people).

Energy Use - Adjusted for Title 24 (2016) compliance. According to CEC data, Title 24 (2016) standards are expected to result in energy savings of 5% non-residential and 28% residential over the 2013 standards.

Water And Wastewater - Refer to "Project Water Demand Rates" worksheet provided in this Appendix.

Energy Mitigation - Exceed Title 24 by 5% per PDF. Energy efficient appliances (e.g., ENERGY STAR qualified).

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	533.84
tblEnergyUse	LightingElect	0.00	2.50
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	LightingElect	3.20	3.04
tblEnergyUse	LightingElect	2.20	2.09
tblEnergyUse	LightingElect	8.13	7.72
tblEnergyUse	LightingElect	0.00	3.04
tblEnergyUse	LightingElect	6.43	6.11
tblEnergyUse	LightingElect	2.63	2.50
tblEnergyUse	T24E	194.04	139.71
tblEnergyUse	T24E	3.92	3.72
tblEnergyUse	T24E	2.36	2.24
tblEnergyUse	T24E	2.68	2.55
tblEnergyUse	T24E	8.50	8.08
tblEnergyUse	T24E	4.20	3.99
tblEnergyUse	T24NG	6,328.91	4,556.82
tblEnergyUse	T24NG	13.71	13.02
tblEnergyUse	T24NG	20.02	19.02
tblEnergyUse	T24NG	43.19	41.03
tblEnergyUse	T24NG	0.00	13.02
tblEnergyUse	T24NG	1.16	1.10
tblLandUse	BuildingSpaceSquareFeet	82,400.00	89,222.00
tblLandUse	BuildingSpaceSquareFeet	92,800.00	100,483.00
tblLandUse	BuildingSpaceSquareFeet	0.00	18,535.00

tblLandUse	BuildingSpaceSquareFeet	197,472.00	80,335.00
tblLandUse	BuildingSpaceSquareFeet	0.00	4,840.00
tblLandUse	BuildingSpaceSquareFeet	210,000.00	242,285.00
tblLandUse	GreenSpaceSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	82,400.00	89,222.00
tblLandUse	LandUseSquareFeet	92,800.00	100,483.00
tblLandUse	LandUseSquareFeet	26,136.00	18,535.00
tblLandUse	LandUseSquareFeet	197,472.00	80,335.00
tblLandUse	LandUseSquareFeet	210,000.00	242,285.00
tblLandUse	LotAcreage	1.85	0.10
tblLandUse	LotAcreage	2.09	0.10
tblLandUse	LotAcreage	0.60	0.10
tblLandUse	LotAcreage	0.06	0.05
tblLandUse	LotAcreage	4.53	0.21
tblLandUse	LotAcreage	0.21	0.10
tblLandUse	LotAcreage	0.11	0.10
tblLandUse	LotAcreage	3.39	0.35
tblLandUse	LotAcreage	0.08	0.05
tblLandUse	Population	601.00	426.00
tblLandUse	RecSwimmingAreaSquareFeet	4,840.00	4,840.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	444
tblProjectCharacteristics	OperationalYear	2018	2030
tblWater	IndoorWaterUseRate	13,682,345.38	8,111,760.00
tblWater	IndoorWaterUseRate	149,632.15	193,421.00
tblWater	IndoorWaterUseRate	3,449,880.72	5,466,240.00
tblWater	IndoorWaterUseRate	2,746,980.10	4,458,840.00
tblWater	IndoorWaterUseRate	286,252.82	730,730.00
tblWater	IndoorWaterUseRate	255,550.20	25,185.00
tblWater	OutdoorWaterUseRate	8,625,826.44	1,622,352.00
tblWater	OutdoorWaterUseRate	714,888.81	0.00

tblWater	OutdoorWaterUseRate	0.00	625,268.00
tblWater	OutdoorWaterUseRate	91,710.03	38,684.00
tblWater	OutdoorWaterUseRate	383,320.08	1,093,248.00
tblWater	OutdoorWaterUseRate	175,339.16	891,768.00
tblWater	OutdoorWaterUseRate	175,445.28	146,146.00
tblWater	OutdoorWaterUseRate	156,627.54	5,037.00
tblWater	OutdoorWaterUseRate	0.00	704,185.00

2.0 Emissions Summary

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					
Energy	0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	886.4921	886.4921	0.0431	0.0135	891.6002
Water						0.0000	0.0000		0.0000	0.0000	6.0234	61.2596	67.2831	0.6227	0.0154	87.4496

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					
Energy	0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	867.4827	867.4827	0.0422	0.0132	872.4810
Water						0.0000	0.0000		0.0000	0.0000	6.0234	61.2596	67.2831	0.6227	0.0154	87.4496

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	554.7064	554.7064	0.0362	7.5000e-003	557.8460
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	565.8286	565.8286	0.0370	7.6500e-003	569.0312

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.97144e+006	0.0106	0.0908	0.0387	5.8000e-004		7.3400e-003	7.3400e-003		7.3400e-003	7.3400e-003	0.0000	105.2037	105.2037	2.0200e-003	1.9300e-003	105.8288
City Park	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
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
Health Club	44199.1	2.4000e-004	2.1700e-003	1.8200e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3586	2.3586	5.0000e-005	4.0000e-005	2.3727
Hotel	1.85413e+006	0.0100	0.0909	0.0764	5.5000e-004		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	98.9435	98.9435	1.9000e-003	1.8100e-003	99.5315
Quality Restaurant	2.07073e+006	0.0112	0.1015	0.0853	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.5021	110.5021	2.1200e-003	2.0300e-003	111.1587
Recreational Swimming Pool	63016.8	3.4000e-004	3.0900e-003	2.5900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3628	3.3628	6.0000e-005	6.0000e-005	3.3828
Strip Mall	5485.5	3.0000e-005	2.7000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2927	0.2927	1.0000e-005	1.0000e-005	0.2945
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0324	0.2888	0.2049	1.7700e-003		0.0224	0.0224		0.0224	0.0224	0.0000	320.6634	320.6634	6.1600e-003	5.8800e-003	322.5690

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.9236e+06	0.0104	0.0886	0.0377	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6504	102.6504	1.9700e-003	1.8800e-003	103.2604
City Park	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
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
Health Club	42552.1	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2707	2.2707	4.0000e-005	4.0000e-005	2.2842
Hotel	1.77773e+006	9.5900e-003	0.0871	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8666	94.8666	1.8200e-003	1.7400e-003	95.4304
Quality Restaurant	2.05216e+006	0.0111	0.1006	0.0845	6.0000e-004		7.6500e-003	7.6500e-003		7.6500e-003	7.6500e-003	0.0000	109.5113	109.5113	2.1000e-003	2.0100e-003	110.1621
Recreational Swimming Pool	59866	3.2000e-004	2.9300e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1947	3.1947	6.0000e-005	6.0000e-005	3.2137
Strip Mall	5295.75	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2826	0.2826	1.0000e-005	1.0000e-005	0.2843
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0316	0.2817	0.1999	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.7763	312.7763	6.0000e-003	5.7400e-003	314.6350

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	829628	167.0830	0.0109	2.2600e- 003	168.0286
City Park	46337.5	9.3321	6.1000e- 004	1.3000e- 004	9.3850
Enclosed Parking with Elevator	571913	115.1804	7.5200e- 003	1.5600e- 003	115.8323
Health Club	27905.9	5.6201	3.7000e- 004	8.0000e- 005	5.6519
Hotel	604923	121.8284	7.9600e- 003	1.6500e- 003	122.5179
Quality Restaurant	397838	80.1226	5.2300e- 003	1.0800e- 003	80.5761
Recreational Swimming Pool	14713.6	2.9633	1.9000e- 004	4.0000e- 005	2.9800
Strip Mall	45988.5	9.2619	6.0000e- 004	1.3000e- 004	9.3143
Unenclosed Parking with Elevator	270299	54.4369	3.5600e- 003	7.4000e- 004	54.7450
Total		565.8286	0.0370	7.6700e- 003	569.0312

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	805868	162.2978	0.0106	2.1900e-003	163.2164
City Park	46337.5	9.3321	6.1000e-004	1.3000e-004	9.3850
Enclosed Parking with Elevator	555318	111.8382	7.3000e-003	1.5100e-003	112.4712
Health Club	27622.5	5.5630	3.6000e-004	8.0000e-005	5.5945
Hotel	594680	119.7656	7.8200e-003	1.6200e-003	120.4434
Quality Restaurant	394182	79.3863	5.1900e-003	1.0700e-003	79.8356
Recreational Swimming Pool	14713.6	2.9633	1.9000e-004	4.0000e-005	2.9800
Strip Mall	45300.2	9.1232	6.0000e-004	1.2000e-004	9.1749
Unenclosed Parking with Elevator	270299	54.4369	3.5600e-003	7.4000e-004	54.7450
Total		554.7064	0.0362	7.5000e-003	557.8460

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	67.2831	0.6227	0.0154	87.4496
Unmitigated	67.2831	0.6227	0.0154	87.4496

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	27.4755	0.2660	6.5800e-003	36.0844
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.3990	9.0000e-005	2.0000e-005	1.4070
Health Club	0.193421 / 0.038684	0.6551	6.3400e-003	1.6000e-004	0.8604
Hotel	5.46624 / 1.09325	18.5148	0.1792	4.4300e-003	24.3160
Quality Restaurant	4.45884 / 0.891768	15.1026	0.1462	3.6200e-003	19.8347
Recreational Swimming Pool	0.73073 / 0.146146	2.4751	0.0240	5.9000e-004	3.2506
Strip Mall	0.025185 / 0.005037	0.0853	8.3000e-004	2.0000e-005	0.1120
Unenclosed Parking with Elevator	0 / 0.704185	1.5756	1.0000e-004	2.0000e-005	1.5845
Total		67.2831	0.6227	0.0154	87.4496

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	8.11176 / 1.62235	27.4755	0.2660	6.5800e-003	36.0844
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0.625268	1.3990	9.0000e-005	2.0000e-005	1.4070
Health Club	0.193421 / 0.038684	0.6551	6.3400e-003	1.6000e-004	0.8604
Hotel	5.46624 / 1.09325	18.5148	0.1792	4.4300e-003	24.3160
Quality Restaurant	4.45884 / 0.891768	15.1026	0.1462	3.6200e-003	19.8347
Recreational Swimming Pool	0.73073 / 0.146146	2.4751	0.0240	5.9000e-004	3.2506
Strip Mall	0.025185 / 0.005037	0.0853	8.3000e-004	2.0000e-005	0.1120
Unenclosed Parking with Elevator	0 / 0.704185	1.5756	1.0000e-004	2.0000e-005	1.5845
Total		67.2831	0.6227	0.0154	87.4496

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Solar Photovoltaic Panel Electricity Demand

Land Use ^a	Electricity Demand kilowatt-hours/year		Reduced Demand with Solar Photovoltaics	
Apartments High Rise	805,868.0	→	758,390.0	94.11%
City Park	46,337.5			
Enclosed Parking with Elevator	555,318.0			
Health Club	27,622.5			
Hotel	594,680.0			
Quality Restaurant	394,182.0			
Recreational Swimming Pool	14,713.6			
Strip Mall	45,300.2			
Unenclosed Parking with Elevator	270,299.0			
	2,754,321			
Solar 30 kW Photovoltaics ^b	47,478			
Percent of Project Total	1.72%			

Notes:

- a. Project electricity demand estimated from CalEEMod (2016.3.1)
- b. Electricity provided by 30 kW Photovoltaics based on data from U.S. Department of Energy, National Renewable Energy Laboratory, PVWatts Calculator, <http://pvwatts.nrel.gov/pvwatts.php>.



RESULTS

47,478 kWh per Year *

System output may range from 45,232 to 48,470 kWh per year near this location.

Caution: Photovoltaic system performance predictions calculated by PVWatts include many inherent assumptions and uncertainties and do not reflect variations between PV technologies or site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <http://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

The names DOE/NREL/ALLIANCE shall not be used in any representation, advertising, publicity or other manner whatsoever to endorse or promote any entity that adopts or uses the Model. DOE/NREL/ALLIANCE shall not provide

any support, consulting, training or assistance of any kind with regard to the use of the Model or any updates, revisions or new versions of the Model.

YOU AGREE TO INDEMNIFY DOE/NREL/ALLIANCE, AND ITS AFFILIATES, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY CLAIM OR DEMAND, INCLUDING REASONABLE ATTORNEYS' FEES, RELATED TO YOUR USE, RELIANCE, OR ADOPTION OF THE MODEL FOR ANY PURPOSE WHATSOEVER. THE MODEL IS PROVIDED BY DOE/NREL/ALLIANCE "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL DOE/NREL/ALLIANCE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO CLAIMS ASSOCIATED WITH THE LOSS OF DATA OR PROFITS, WHICH MAY RESULT FROM ANY ACTION IN CONTRACT, NEGLIGENCE OR OTHER TORTIOUS CLAIM THAT ARISES OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE MODEL.

The energy output range is based on analysis of 30 years of historical weather data for nearby , and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Energy Value (\$)
January	3.93	2,915	371
February	4.91	3,291	419
March	5.45	4,029	513
April	6.14	4,356	555
May	6.56	4,781	609
June	6.64	4,666	594
July	6.92	4,984	635
August	6.88	4,926	628
September	5.71	3,955	504
October	5.07	3,681	469
November	4.32	3,058	390
December	3.88	2,835	361
Annual	5.53	47,477	\$ 6,048

Location and Station Identification

Requested Location	6220 Yucca Street, Los Angeles, CA
Weather Data Source	(TMY2) LOS ANGELES, CA 13 mi
Latitude	33.93° N
Longitude	118.4° W

PV System Specifications (Commercial)

DC System Size	30 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14%
Inverter Efficiency	96%
DC to AC Size Ratio	1.1

Economics

Average Cost of Electricity Purchased from Utility	0.13 \$/kWh
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Performance Metrics

Capacity Factor	18.1%
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Project Operational Emissions - Emergency Generator

Standby Emergency Generator

Rating:	250 kW	(kW, HP rating reflect total sitewide need)
	335 HP	(conversion from kW to hp)
Load Factor:	0.74	(based on CalEEMod Generator Set Load Factor)
Engine Emissions Tier:	Tier 4	(compliance with CARB diesel regulations)
Number of Units:	1	(kW, HP rating reflect total sitewide need)
Operating Hours per Unit:	2 hours/day	(testing/maintenance)
	50 hours/year	(testing/maintenance, Regulatory Limit per SCAQMD Rule 1470)

Emergency Generator Emissions

Units	Greenhouse Gases ¹	
	CO ₂	CO ₂ e
g/HP-hr	526.17	531.48
lbs/hr	287.56	290.47
lbs/day	575.13	580.94
lbs/yr	14,378.20	14,523.43
tons/yr	7.19	7.26
metric tons/yr	6.52	6.59

Notes:

1. Emission factor for CO₂: U.S. Environmental Protection Agency, *AP-42 Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 3.4, Table 3.4-1. Emissions of GHGs assume 99% of the CO₂e emissions occur as CO₂, which is typical for off-road diesel engines.

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Year	GHG Emission Factors (metric tons/mile)			
	CO2	CH4	N2O	CO2e
	1	25	298	
2015	4.83E-04	3.12E-08	-	4.84E-04
2018	4.51E-04	2.39E-08	-	4.52E-04
2021	4.17E-04	1.90E-08	-	4.18E-04
2022	4.06E-04	1.78E-08	-	4.06E-04
2023	3.92E-04	1.66E-08	-	3.93E-04
2024	3.82E-04	1.58E-08	-	3.83E-04
2025	3.71E-04	1.50E-08	-	3.71E-04
2026	3.61E-04	1.42E-08	-	3.61E-04
2027	3.52E-04	1.36E-08	-	3.52E-04
2028	3.45E-04	1.31E-08	-	3.45E-04
2029	3.38E-04	1.26E-08	-	3.38E-04
2030	3.32E-04	1.22E-08	-	3.32E-04
2031	3.27E-04	1.18E-08	-	3.28E-04
2032	3.23E-04	1.15E-08	-	3.23E-04
2033	3.19E-04	1.12E-08	-	3.19E-04
2034	3.16E-04	1.10E-08	-	3.16E-04
2035	3.13E-04	1.08E-08	-	3.14E-04
2036	3.11E-04	1.06E-08	-	3.12E-04
2037	3.10E-04	1.04E-08	-	3.10E-04
2038	3.09E-04	1.03E-08	-	3.09E-04
2039	3.08E-04	1.02E-08	-	3.08E-04
2040	3.07E-04	1.01E-08	-	3.07E-04
2041	3.07E-04	1.00E-08	-	3.07E-04
2042	3.06E-04	9.94E-09	-	3.07E-04
2043	3.06E-04	9.89E-09	-	3.06E-04
2044	3.06E-04	9.82E-09	-	3.07E-04
2045	3.06E-04	9.76E-09	-	3.07E-04
2046	3.07E-04	9.65E-09	-	3.07E-04
2047	3.07E-04	9.61E-09	-	3.07E-04
2048	3.07E-04	9.59E-09	-	3.08E-04
2049	3.08E-04	9.56E-09	-	3.08E-04
2050	3.08E-04	9.53E-09	-	3.09E-04

Source: EMFAC2014, South Coast Air Basin (Los Angeles County), "Emissions" (or "Burden") mode.

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Scenario	Year	VMT/year	GHG Emission Factors (metric tons/year)			
			CO2	CH4	N2O	CO2e
			1	25	298	
Project	2021	8,950,895	3,736.75	0.17	-	3,741
	2022	8,950,895	3,632.10	0.16	-	3,636
	2023	8,950,895	3,511.03	0.15	-	3,515
	2024	8,950,895	3,422.04	0.14	-	3,426
	2025	8,950,895	3,317.63	0.13	-	3,321
	2026	8,950,895	3,230.00	0.13	-	3,233
	2027	8,950,895	3,152.14	0.12	-	3,155
	2028	8,950,895	3,084.30	0.12	-	3,087
	2029	8,950,895	3,024.64	0.11	-	3,027
	2030	8,950,895	2,972.82	0.11	-	2,976
	2031	8,950,895	2,930.32	0.11	-	2,933
	2032	8,950,895	2,890.81	0.10	-	2,893
	2033	8,950,895	2,856.75	0.10	-	2,859
	2034	8,950,895	2,827.92	0.10	-	2,830
	2035	8,950,895	2,804.20	0.10	-	2,807
	2036	8,950,895	2,787.01	0.09	-	2,789
	2037	8,950,895	2,772.49	0.09	-	2,775
	2038	8,950,895	2,761.57	0.09	-	2,764
	2039	8,950,895	2,753.52	0.09	-	2,756
	2040	8,950,895	2,747.89	0.09	-	2,750
	2041	8,950,895	2,743.52	0.09	-	2,746
	2042	8,950,895	2,741.51	0.09	-	2,744
	2043	8,950,895	2,740.99	0.09	-	2,743
	2044	8,950,895	2,741.37	0.09	-	2,744
	2045	8,950,895	2,742.46	0.09	-	2,745
	2046	8,950,895	2,744.71	0.09	-	2,747
	2047	8,950,895	2,747.67	0.09	-	2,750
	2048	8,950,895	2,751.15	0.09	-	2,753
	2049	8,950,895	2,755.08	0.09	-	2,757
	2050	8,950,895	2,760.49	0.09	-	2,763

Source: ESA 2017

Appendix C
**California Air Resources Board,
Statewide Emission Factors
(EF) For Use With
AB 900 Projects, January 2017**



Attachment 2
Statewide Emission Factors for Use With AB 900 Projects

Mobile-Source Emissions

Project applicants under AB 900 may use default GHG emission factors (EFs) from the California Emissions Estimator Model (CalEEMod). However, ARB acknowledges that CalEEMod does not contain the latest mobile-source emissions reductions from State and federal regulations. If an AB 900 project applicant does not wish to use CalEEMod EFs, and the project's mobile sources include "all vehicle classifications," the EFs provided via the EMFAC2014 Web Database provide a quick and easy way to access commonly used emission rates data. The Web Database contains daily emissions and emission rates data for all areas, calendar years and seasons.

See <https://www.arb.ca.gov/emfac/2014/>.

Electricity Emissions

An AB 900 project applicant may use the local electric utility provider's EFs and electricity intensities for today's electric supply generation.

If an applicant would like to use an EF that represents the State's Renewable Portfolio Standard (RPS) law and growth in electricity demand, the EF of 595 pounds CO₂/MWh may be used². This EF represents a "marginal" supply profile for new generation that will be added to the grid in the years 2020 and beyond, and is consistent with the methodology used in State emission rule impact assessments. It represents a generation supply mix of 67 percent natural gas-fueled combined cycle power plants, and 33 percent renewable energy. ARB believes this marginal profile represents new generation plans in any electric utility territory in California.

² LEV III Initial Statement Of Reasons (ISOR, Dec. 7, 2011), <http://www.arb.ca.gov/regact/2012/leviiighg2012/leviiighg2012.htm>, based on analysis with CA-GREET model.

**Exhibit 7 Applicant's Acknowledgement and Binding Agreement with the City
of Los Angeles**

February 21, 2017

Lisa Webber
Deputy Director of Planning
City of Los Angeles
200 N. Spring Street
Los Angeles, CA 90012

RE: Yucca Argyle Project: Acknowledgement of Obligations under
Public Resources Code§ 21183(d), (e), and (f)

Dear Ms. Webber:

As you are aware, Riley Realty LP ("Applicant") has applied to the California Governor to request certification of the Yucca Argyle project (the "Project") as a Leadership Project subjected to streamlined environmental review pursuant to the Jobs and Economic Improvement through Environmental Leadership Act of 2011 (the "Act"), California Public Resource Code§ 21178 et seq as amended by SB 743 and SB 734. By this letter, Applicant acknowledges and agrees to its obligations under the Act as set forth at Public Resources Code§ 21183(d), (e), and (f).

As required by Public Resources Code§ 21183(d), Applicant agrees that all mitigation measures required pursuant to CEQA to certify the Project under the Act shall be conditions of approval, and those conditions will be fully enforceable by the City of Los Angeles (the "City") or another agency designated by the City. Applicant agrees that all environmental mitigation measures required to certify the Project under the Act will be monitored and enforced by the City for the life of the obligation.

As required by Public Resources Code§ 21183(e), Applicant agrees to pay the costs of the Court of Appeal in hearing and deciding any case, including payment of the costs for the appointment of a special master if deemed appropriate by the court, in a form and manner specified by the Judicial Council, as provided in the Rules of Court adopted by the Judicial Council pursuant to the Act.

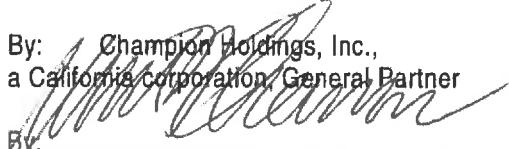
As required by Public Resources Code§ 21183(f), Applicant agrees to pay the costs of preparing the administrative record for the Project, in a form and manner specified by the City, concurrent with review and consideration of the Project pursuant to CEQA and the Act.

Sincerely,

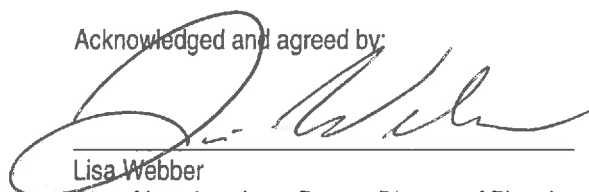
RILEY REALTY, L.P.,
a California limited partnership

By: Champion Enterprises, Inc.,
a Nevada corporation, General Partner

By: Champion Holdings, Inc.,
a California corporation, General Partner

By: 
Robert D. Champion, President

Acknowledged and agreed by:


Lisa Webber
City of Los Angeles – Deputy Director of Planning