



*Appendix 4.3-1:
Energy Data*

MEMORANDUM

To: Rita Garcia, Kimley-Horn and Associates
From: Olivia Chan, Kimley-Horn and Associates
Date: March 28, 2023
Subject: Normandie Crossing Specific Plan Project – Energy Assessment

1.0 Purpose

The purpose of this technical memorandum is to evaluate potential short- and long-term energy consumption impacts of the Normandie Crossing Specific Plan Project (“Project”) and determine the level of impact the Project would have on the environment.

2.0 Project Location and Setting

The proposed Project would be developed in the City of Gardena (“City”), approximately 8.8 miles southwest of downtown Los Angeles, in the southeast portion of the City of Gardena (“City”). Four parcels (APN: 6106-030-011, 6106-030-015, 6106-030-016, 6106-030-017) make up the 5.25-acre Project site located at 16829, 16835, and 16907 South Normandie Avenue, Gardena, 90247. The Project site is generally bound to the north and south by West 169th Street and West 170th Street, to the east by Normandie Avenue, and to the west by Brighton Way. The Project site is bordered by a 63-unit single-room occupancy development to the north, a single-family residential use to the south, multi- and single-family uses to the east, and duplex residential uses to the west.

The Gardena General Plan (GGP) designates the Project site as Industrial, which provides for a “...wide variety of clean and environmentally friendly industries, technology-related uses and supporting facilities, and business parks.”¹ Additionally, the GGP assigns a High Density 30 Overlay to Parcels 1, 2, and 3 (APNs 6106-030-011, 6106-030-015, 6106-030-016).

The Zoning Map classifies the Project site as Industrial Zone (M-1) on approximately 1.4 acres in the north portion of the site (APNs 6106-030-011, 6106-030-015, and 6106-030-016) and General Industrial Zone (M-2) on approximately 3.9 acres in the southern portion (APN 6106-030-017), which is consistent with the GGP. The M-1 and M-2 zones are intended for general industrial uses; see Gardena Municipal Code (GMC) Chapters 18.36 and 18.38 for permitted uses in these zones.

¹ City of Gardena. (2006, Updated February 2013). *Gardena General Plan 2006*. Figure LU-2: 2013 General Plan Land Use Policy Map. Gardena, CA: City of Gardena.

Additionally, Parcels 1, 2, and 3 are zoned Housing Overlay 4 (HO-4), which allows a density of 21-30 DU/net AC.

3.0 Project Description

The Project proposes a 403-unit multi-family development, inclusive of an apartment building with 328 units and 75 townhome-style units to replace the warehouse buildings currently on the property (approximately 106,424 square feet [s.f.] of warehouse buildings).

The Project proposes the construction of an approximately 308,308-s.f., seven-story residential building that would have provide 328-units of multi-family housing on the northern portion of the parcel. The building height would be approximately 87.5 feet. The apartment component is comprised of 68 studios, 194 one-bedroom units, and 66 two-bedroom units. The first two stories of the proposed seven-story residential building would be on-site vehicle and bicycle parking. Parking within the apartment building would total 394 stalls. The apartment building would be developed at a density of approximately 153 dwelling units per acre (du/acre). Private open space would be provided for each apartment unit and well as shared open space amenities (e.g., roof deck with BBQs and seating areas; swimming pool with BBQ, seating areas, and fire pits; a dog park; fitness room; club houses; and a courtyard with seating area, fire table, and game tables).

In addition to the seven-story apartment building, the Project proposes 75 townhome-style units in 9 buildings on the southern and eastern portions of the Project site. The townhome buildings would be three stories. The various proposed townhome product types are 30 two-bedroom units, 35 three-bedroom units, and 10 four-bedroom units and each unit would have a two-car garage. Pool access would also be provided to residents of the townhomes. Additionally, a 3,100 s.f. green space would be provided near the south driveway of the Project site. while the townhomes would be developed at a density of approximately 24 du/acre for an average overall density of 76.7 du/acre. Private open space would be provided for each unit and well as shared open space amenities (e.g., swimming pool with BBQ and seating areas; dog park; club house; and paseos with seating areas).

Project Phasing and Construction

The anticipated construction timeline, contingent on planning, zoning, and construction documents approval, is anticipated to start in June 2024 and end September 2027. Construction operations are reported to occur for 994 days over a 1,159-day period (approximately 3.18 years) based upon a six-day work week.

4.0 Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state

responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. New CEQA Guidelines Section 15126.2(b) treats “wasteful, inefficient, or unnecessary” energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This technical memorandum has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

Environmental Setting

Energy consumption is analyzed in this technical memorandum due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both construction and long-term operational phases.

Electricity

Southern California Edison (SCE) provides electrical services to the City through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California’s electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services

Southern California Gas Company (SoCalGas) provides natural gas services to the City and County. Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth’s surface and is composed primarily of methane (CH₄). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to

increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California's natural gas-fired electric generation accounted for 50.2 percent of in-state generation.²

The City's ongoing development review process includes a review and comment opportunity for privately owned utility companies and to provide input on all development proposals. The input facilitates a detailed review of projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 6,922.8 trillion BTUs in 2020 (the most recent year for which this specific data is available).³ Of California's total energy usage, the breakdown by sector is 34.0 percent transportation, 24.6 percent industrial, 19.6 percent commercial, and 21.8 percent residential.⁴ Electricity and natural gas in California are generally consumed by stationary users such as residences, commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2021, taxable gasoline sales (including aviation gasoline) in California accounted for 13,060,407,775 gallons of gasoline.⁵

The electricity consumption attributable to the County from 2011 to 2021 is shown in **Table 1: Electricity Consumption in Los Angeles County 2011-2021**. As indicated in **Table 1**, electricity consumption in the County increased steadily between 2011 and 2014 with a slight decrease in 2013, and relatively decreased between 2015 and 2021.

² California Energy Commission, *2021 Total System Electric Generation*, <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>, accessed January 5, 2023.

³ U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2020*, https://www.eia.gov/state/seds/sep_fuel/html/fuel_te.html, accessed January 4, 2023.

⁴ U.S. Energy Information Administration, *California State Profile and Energy Estimates, California Energy Consumption by End-Use Sector, 2019*, <https://www.eia.gov/state/?sid=CA#tabs-2>, accessed January 4, 2023.

⁵ California Department of Tax and Fee Administration, *September 2022 – Motor Vehicle Fuel 10 Year Reports*, <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>, accessed January 4, 2023.

| Table 1: Electricity Consumption in Los Angeles County 2011-2021 | |
|---|--|
| Year | Electricity Consumption (in millions of kilowatt hours) |
| 2011 | 68,180 |
| 2012 | 69,248 |
| 2013 | 68,342 |
| 2014 | 69,924 |
| 2015 | 69,503 |
| 2016 | 69,390 |
| 2017 | 68,632 |
| 2018 | 67,887 |
| 2019 | 66,805 |
| 2020 | 65,650 |
| 2021 | 65,375 |

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed January 4, 2023.

The natural gas consumption attributable to the County from 2011 to 2021 is shown in **Table 2: Natural Gas Consumption in Los Angeles County 2011-2021**. Natural gas consumption in the County relatively decreased between 2011 and 2015 with an increase in 2013, increased between 2015 and 2019, and decreased between 2019 and 2021.

| Table 2: Natural Gas Consumption in Los Angeles County 2011-2021 | |
|---|--|
| Year | Natural Gas Consumption (in millions of therms) |
| 2011 | 3,055 |
| 2012 | 2,985 |
| 2013 | 3,065 |
| 2014 | 2,794 |
| 2015 | 2,761 |
| 2016 | 2,878 |
| 2017 | 2,956 |
| 2018 | 2,922 |
| 2019 | 3,048 |
| 2020 | 2,937 |
| 2021 | 2,881 |

Source: California Energy Commission, *Natural Gas Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed January 4, 2023.

Automotive fuel consumption in the County from 2011 to 2021 is shown in **Table 3: Automotive Fuel Consumption in Los Angeles County 2011-2021**. As shown in **Table 3**, on-road automotive fuel consumption in the County relatively increased from 2011 to 2016, decreased between 2018 and 2020, and increased in 2021. Heavy-duty vehicle fuel consumption increased between 2012 and 2017, decreased between 2017 and 2020, and increased in 2021.

| Year | On-Road Automotive Fuel Consumption (gallons) | Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons) |
|-------------|--|--|
| 2011 | 3,745,485,930 | 434,920,563 |
| 2012 | 3,714,743,617 | 430,477,995 |
| 2013 | 3,720,160,331 | 453,247,552 |
| 2014 | 3,754,124,477 | 457,345,104 |
| 2015 | 3,864,098,889 | 462,749,587 |
| 2016 | 3,990,292,164 | 489,895,770 |
| 2017 | 3,961,448,725 | 506,904,226 |
| 2018 | 3,914,668,171 | 494,484,395 |
| 2019 | 3,844,847,561 | 492,605,543 |
| 2020 | 3,381,588,164 | 491,579,947 |
| 2021 | 3,816,162,983 | 507,214,212 |

Source: California Air Resources Board, EMFAC2021.

5.0 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies related to energy consumption that are relevant to the proposed Project.

5.1 State of California

California’s Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission [CEC]) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020. The 2022 Standards went into effect January 1, 2023.

The 2016 Standards improved upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential buildings are 28 percent more energy efficient and nonresidential buildings are 5 percent more energy efficient than under the 2013 Standards. Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings will be about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards use approximately 53 percent less energy than those built to meet the 2016 standards.

The 2022 Standards went into effect January 1, 2023. The updated Standards encourage efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, and strengthens ventilation standards.

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2022 and went into effect January 1, 2023.

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. Assembly Bill 1109, adopted in 2007, also serves as a framework for lighting efficiency. AB 1109 required the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board (CARB) under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, CARB adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

5.2 City of Gardena

City of Gardena Climate Action Plan

The *City of Gardena Climate Action Plan* (Gardena CAP) establishes a series of energy efficiency related measures intended to reduce greenhouse gas (GHG) emissions based on the AB 32 Scoping Plan. Those applicable to the Project are Renewables Portfolio Standard for Building Energy Use, Assembly Bill 1109 Energy Efficiency Standards for Lighting, Electricity Energy Efficiency, Residential Energy Efficiency Standards, and Residential Renewable Energy Requirements.

6.0 CEQA Thresholds and Methodology

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This memorandum will focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation; and/or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips associated with the Project as well as the fuel necessary for Project construction.

7.0 Impacts and Mitigation Measures

Threshold 7.1 Would the project result in wasteful, inefficient, or unnecessary consumption of energy resources?

The Project site is currently an industrial park that encompasses land south of 169th Street and north of 170th Street. The Project site is fully developed with five industrial buildings. In total, there is approximately 115,424 s.f. of built structures on the Project site. Estimated energy use of existing industrial buildings was calculated based on assumed operational characteristics of the existing uses consistent with the Air Quality Technical Report prepared by Ramboll US Consulting, Inc. (March 2023) and subtracted from the estimated Project energy consumption for the additional energy consumption attributable to the proposed Project. Pursuant to the 2022 Energy Code, the Project would be all-electric and would not include connections to natural gas supply.

Net energy consumption associated with the proposed Project is summarized in **Table 4: Project and Countywide Energy Consumption**. As shown in **Table 4**, the Project's increase in electricity usage would constitute approximately 0.0048 percent of the typical annual electricity usage in the County. Construction-related off-road automotive fuel consumption (i.e., fuel consumed during construction) would constitute approximately 0.0272 percent of the diesel and 0.0029 percent of the gasoline consumption within the County. During operations, on-road automotive fuel consumption (i.e., fuel consumed from operational vehicle trips to and from the Project site) would constitute approximately 0.0044 percent of the diesel and approximately 0.0062 percent of the gasoline consumption within the County.

| Table 4: Project and Countywide Energy Consumption | | | | | |
|--|---|---|--|---|---|
| Energy Type | Existing Project Site Energy Consumption¹ | Proposed Project Annual Energy Consumption | Net Annual Energy Consumption Attributable to Project | Los Angeles County Annual Energy Consumption^{2,3} | Percentage of Countywide Consumption |
| Operational Electricity and Natural Gas Consumption | | | | | |
| Electricity | 875,071 kWh | 4,017,999 kWh | 3,142,928 kWh | 65,374,721,369 kWh | 0.0048% |
| Natural Gas | 3,929 therms | 0 therms | -3,929 therms | 2,880,994,891 therms | -0.0001% |
| Automotive Fuel Consumption⁴ | | | | | |
| <i>Construction^{5,6}</i> | | | | | |
| Diesel | -- | 138,115 gallons | 138,115 gallons | 507,214,212 gallons | 0.0272% |
| Gasoline | -- | 111,682 gallons | 111,682 gallons | 3,816,162,983 gallons | 0.0029% |
| <i>Operations</i> | | | | | |
| Diesel | 3,055 gallons | 25,314 gallons | 22,259 gallons | 507,214,212 gallons | 0.0044% |
| Gasoline | 34,091 gallons | 272,283 gallons | 238,193 gallons | 3,816,162,983 gallons | 0.0062% |
| Notes: | | | | | |
| 1. Existing energy consumption based on estimated operational modeling provided in the Air Quality Technical Report prepared by Ramboll US Consulting, Inc. (December 2022). | | | | | |
| 2. The Project increases in electricity and natural gas consumption are compared with the total consumption in Los Angeles County in 2021. | | | | | |
| 3. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2021. | | | | | |
| 4. Countywide fuel consumption is from the California Air Resources Board EMFAC2021 model. | | | | | |
| 5. Construction fuel consumption is based on equipment and load factors from California Emissions Estimator Model (CalEEMod version 2020.4.0) and the Air Quality Technical Report prepared by Ramboll US Consulting, Inc. (December 2022). | | | | | |
| 6. The estimated construction fuel consumption is based on the Project's construction equipment list timing/phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips provided in the Air Quality Technical Report prepared by Ramboll US Consulting, Inc. (December 2022). | | | | | |
| Refer to Appendix A: Energy Data for assumptions used in this analysis. | | | | | |

Construction-Related Energy

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during demolition, grading, paving, and building construction. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation

costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in **Table 4**, the overall diesel fuel consumption during construction of the Project would be 138,115 gallons and gasoline consumption would be 111,682 gallons, which would result in a nominal increase in fuel use in the County. As such, Project construction would have a minimal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. A less than significant impact would occur in this regard.

Operational Energy

Energy Demand

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. **Table 4** provides an estimate of the daily fuel consumed by vehicles traveling to and from the Project site. As indicated in **Table 4**, Project operations are estimated to consume approximately 22,259 additional gallons of diesel fuel and 238,196 additional gallons of gasoline fuel per year (compared to existing conditions), which constitutes approximately 0.0044 percent and 0.0062 percent of Countywide consumption, respectively. The Project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Building Energy Demand

Operations of the proposed Project would require approximately 3,142,928 additional kWh of electricity per year and (compared to existing conditions). The proposed Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Pursuant to 2022 of the Title 24 standards, the Project would be all-electric and would not connect to natural gas supply, which significantly reduces energy usage. Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 36 percent of total procurement by 2020 and to 60 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures projects will not result in the waste of the finite energy resources.

As indicated in **Table 4**, net operational energy consumption would represent approximately 0.0031 percent of electricity consumption in the County. The Project would adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. As such, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Conclusion

As shown in **Table 4**, the increase in electricity, natural gas, and automotive fuel consumption over existing conditions is minimal. For the reasons described above, the Project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand. Thus, the Project would not cause a wasteful, inefficient, and unnecessary consumption of energy during Project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation.

Threshold 7.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a State mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. The Project would comply with Title 24, Part 6 per State regulations. In accordance with Title 24 Part

6, the Project would have: (a) sensor-based lighting controls— for fixtures located near windows, the lighting would be adjusted by taking advantage of available natural light; (b) electrical components providing electric-ready buildings (allowing for electric heating, cooking, and clothes drying); and (c) efficient process equipment—improved technology offers significant savings through more efficient processing equipment.

Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the Project under the California Green Building Standards Code. As discussed above, the Project would result in an increased demand for electricity, natural gas, and petroleum. In accordance with Title 24 Part 11 mandatory compliance, the Applicant would have (a) 50 percent of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring and particle boards; and (d) a 20 percent reduction in indoor water use. Compliance with all of these mandatory measures would decrease the consumption of electricity, natural gas, and petroleum.

The Gardena CAP establishes a series of energy efficiency related measures intended to reduce GHG emissions based on the AB 32 Scoping Plan. Those applicable to the Project are Renewables Portfolio Standard for Building Energy Use, Assembly Bill 1109 Energy Efficiency Standards for Lighting, Electricity Energy Efficiency, Residential Energy Efficiency Standards, and Residential Renewable Energy Requirements.

The Project would not conflict with any of the federal, State, or local plans for renewable energy and energy efficiency. Because the Project would comply with Parts 6 and 11 of Title 24 and with Gardena CAP measures, no conflict with existing energy standards and regulations would occur. Therefore, impacts associated with renewable energy or energy efficiency plans would be considered less than significant.

8.0 References

California Air Resources Board, EMFAC2021.

California Energy Commission, *2019 Building Energy Efficiency Standards*, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>, accessed January 5, 2023.

California Energy Commission, *2022 Building Energy Efficiency Standards*, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>, accessed January 5, 2023.

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California Department of Tax and Fee Administration, *September 2022 – Motor Vehicle Fuel 10 Year Reports*, <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>, accessed January 4, 2023.

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U.S. Energy Information Administration, *California State Profile and Energy Estimates, California Energy Consumption by End-Use Sector, 2019*, <https://www.eia.gov/state/?sid=CA#tabs-2>, accessed January 4, 2023.

Appendix A

Energy Data

Existing Energy Use Calculations

Project Energy Use Calculations