Chapter 6.0
Effects Found Not to be Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) briefly describe potential environmental effects that were determined not to be significant, and therefore were not discussed in detail in the EIR. Based on initial environmental review, the City of Irvine (City) determined that the project would not have the potential to cause significant impacts associated with the environmental categories discussed below.

6.1 Agricultural and Forestry Resources

According to CEQA Guidelines Appendix G, a significant impact on agricultural and forestry resources would occur if the project would:

1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]);
4) Result in the loss of forest land or conversion of forest land to non-forest use; or
5) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The California Department of Conservation, Division of Land Resource Protection, identified important farmland throughout the state through its Farmland Mapping and Monitoring Program (FMMP). The FMMP is non-regulatory and was developed to inventory land and provide categorical definitions of important farmlands and consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP classifies the majority of the City as Urban and Built-Up Land and Other Land. Small amounts of land are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide of Importance (generally located in the northern portion of City and in areas near the Great Park-Planning Area 51), some of which are in active agricultural cultivation. Most of these areas are surrounded by undeveloped land and are not contemplated for development under the project. Furthermore, agricultural uses near the Great Park exist as interim uses due to their adjacency to the former Marine Corps Air Station (MCAS) El Toro air base, which historically limited development on these properties due to potential conflicts with flight paths and air space in these areas. Since the closure of MCAS El Toro, the adopted Housing Element (which is being implemented by the project)

identified a potential housing site on a parcel within the Great Park area that is currently occupied by agricultural uses.

It is important to note that the project itself does not contemplate any confirmed development projects on agricultural sites, including those identified in the adopted Housing Element, but rather would allow for residential uses on nonresidential sites through a new Residential and Residential Mixed-Use Overlay. The overlay would retain all existing land use and zoning designations/classifications on properties throughout the City (refer to Chapter 3.0, Project Description, for more details). Should future projects facilitated by project approval occur on existing agricultural sites, site-specific evaluations would be required in compliance with the CEQA to determine project-specific impacts to agricultural lands.

There is no forest land within the City, and the City does not possess any zoning classifications for forestland, timberland, or timberland production zones. Similarly, there are no lands protected by a Williamson Act Contract within the City. Therefore, impacts to agricultural and forestry resources that would occur as a result of project implementation would be less than significant. Similarly

6.2 Energy

According to CEQA Guidelines Appendix G, a significant impact on energy would occur if the project would:

1) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Environmental Protection and Climate Action Element includes the following objectives and policies that would serve to further reduce energy consumption.

Goal 6: Reduce energy consumption and promote energy efficiency in Irvine.

Objective EPCA-6. Achieve significant reductions in per capita energy consumption across residential, commercial, and municipal sectors while promoting the adoption of renewable energy sources and energy-efficient technologies.

- Policy (a): Through the efforts of CALGreen, establish and enforce energy efficiency standards and building codes for new construction and major renovations to improve the energy performance of buildings and reduce energy demand.
- Policy (b): Require energy-efficient building design, insulation, HVAC systems, lighting, and appliances to minimize energy consumption and lower utility costs for residents and businesses.
- Policy (c): Promote the adoption of renewable energy systems, such as solar photovoltaic (PV) panels, wind turbines, and geothermal heat pumps, to generate clean and sustainable electricity for onsite consumption or grid injection.

- **Policy (d)**: Streamline permitting processes and provide incentives, rebates, and financing options to encourage residents, businesses, and municipal facilities to invest in renewable energy installations.
- **Policy (e)**: Implement energy conservation programs and public awareness campaigns to educate residents and businesses about the importance of energy conservation, energy-saving practices, and behavioral changes to reduce energy waste.
- **Policy (f)**: Monitor federal, state, regional, and other local governments, utility companies, Irvine Ranch Water District (IRWD), and other private and public agencies energy programs. Obtain information and technical assistance for energy programs and implement federal and state energy programs.
- **Policy (g)**: Promote energy savings in buildings constructed before 1978.
- **Policy (h)**: Encourage voluntary retrofit energy programs for residential, commercial, and industrial buildings including energy conservation measures.
- **Policy (i)**: Maximize energy efficiency of the City's facilities and operations by use of recycled materials, renewable sources, and conservation measures.

Goal 8: Mitigate the impacts of climate change, enhance resilience, and transition to a climate-resilient community in Irvine.

Objective EPCA-8. Reduce greenhouse gas emissions, adapt to the effects of climate change, and promote climate resilience through comprehensive policies, programs, and initiatives that engage stakeholders, foster innovation, and prioritize equitable and sustainable solutions.

- **Policy (b)**: Encourage the adoption of renewable energy targets, energy efficiency standards, and building codes to promote clean energy adoption, reduce energy consumption, and decarbonize the built environment, while incentivizing the use of renewable technologies and sustainable practices.

Goal 10: Promote sustainable land use practices in Irvine.

Objective EPCA-10. Implement policies and initiatives that prioritize sustainable land management, smart growth principles, and equitable development strategies to ensure the efficient use of land while protecting environmental quality and promoting community well-being.

- **Policy (f)**: Encourage and incentivize the adoption of Leadership in Energy and Environmental Design (LEED) building standards for new construction and major renovations within the City.
- **Policy (g)**: Explore the adoption of green building standards, energy-efficient design guidelines, and sustainable construction practices to reduce greenhouse gas emissions, promote energy conservation, and minimize environmental impacts associated with new development and redevelopment projects.

6.2.1 Construction

Grading and construction activities consume energy through the operation of heavy off-road equipment, trucks, and worker traffic. At the program level, it is too speculative to quantify total construction-related energy consumption of future development, either in total or by fuel type. However, a worst-case project-level construction scenario for a future development occurring because of project implementation is expected to include the development of 1,500 units, with an average size of 670 square feet (small apartments), on a 15-acre site. Emissions associated with this worst-case project were calculated as part of the air quality analysis prepared for the project (Appendix B). Based on CalEEMod model defaults, construction of this project would last approximately 18 months. Fuel consumption associated with on-road worker trips and delivery trips were calculated using EMFAC2021 fuel consumption rates. Fuel consumption associated with on-site construction equipment was calculated using CARB's OFFROAD model. Off-site and on-site fuel consumption that would occur over the entire construction period is summarized in Tables 6-1 and 6-2, respectively.

Table 6-1
Off-site Construction Vehicle Fuel Consumption

Trip Type	Total Vehicle Miles Traveled	Total Fuel Consumption (gallons)		Electricity Consumption
		Gasoline	Diesel	kWh
Workers	6,099,450	207,167	3,903	137,969
Deliveries	2,112	1,089	3,929	297
TOTAL	**6,101,562**	**208,286**	**7,832**	**138,266**

Table 6-2
On-site Construction Equipment Fuel Consumption

Phase	Phase Length (days)	Equipment	Amount	Total Usage Hours	Total Diesel Fuel Consumption (gallons)
Demolition	20	Rubber Tired Dozers	2	320	1,721
		Excavators	3	480	1,424
		Concrete/Industrial Saw	1	160	221
Site Preparation	10	Rubber Tired Dozers	3	240	1,291
		Tractors/Loaders/Backhoes	4	320	702
Grading	30	Excavators	2	480	1,424
		Grader	1	240	1,067
		Rubber Tired Dozer	1	240	1,291
		Tractors/Loaders/Backhoes	2	480	1,052
		Scrapers	2	480	4,217
Building Construction	300	Crane	1	2,100	9,402
		Forklifts	3	7,200	15,809
		Generator Set	1	2,400	5,472
		Tractors/Loaders/Backhoes	3	6,300	13,811
		Welder	1	2,400	3,338

Table 6-2 On-site Construction Equipment Fuel Consumption					
Phase	Phase Length (days)	Equipment	Amount	Total Usage Hours	Total Diesel Fuel Consumption (gallons)
Paving	20	Pavers	2	320	1,039
		Paving Equipment	2	320	1,020
		Rollers	2	320	602
Architectural Coatings	20	Air Compressor	1	210	131
TOTAL					65,034

Energy used during future construction of the project areas is not considered significant given typical energy use associated with the type of development proposed (primarily residential and residential mixed-use projects) and short-term nature of the energy consumption. Consistent with state requirements, all construction equipment would meet California Air Resources Board (CARB) Tier 3 In-Use Off-Road Diesel Engine Standards. Engines are required to meet certain emission standards, and groups of standards are referred to as Tiers. A Tier 0 engine is unregulated with no emission controls, and each progression of standard level (i.e., Tier 1, Tier 2, Tier 3, etc.) generate lower emissions, use less energy, and are more advanced technologically than the previous tier. CARB's Tier 3 In-Use Off-Road Diesel Engine Standards requires that construction equipment fleets become cleaner and use less energy over time. All construction equipment is subject to the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which limits unnecessary idling to 5 minutes, requires all construction fleets to be labeled and reported to CARB, and requires that fleets comply with Best Available Control Technology requirements. Therefore, the project would not result in a wasteful and inefficient use of energy resources during the construction of future development, and impacts would be less than significant.

6.2.2 Long-term Operations

Long-term operational energy use associated with buildout of the project would include fuel consumption of vehicles; electricity and natural gas consumption by residents and commercial operations, and energy consumption related to obtaining water. However, the majority of the future housing units would be multi-family housing, which is a more efficient way to provide housing than lower density single-family development. Although the project would provide capacity for future housing and residential-mixed use development that could increase energy use, associated energy demand would be consistent with energy demand within other cities in the region and would not be associated with inefficient or wasteful energy use. Therefore, operational energy use would not result in wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

Future development would be subject to compliance with the California Building Code (CBC; Title 24), which seeks to reduce excessive and inefficient energy use. The CBC is regularly updated and includes higher energy-efficiency standards in comparison to other states. Individual development projects in the City would be required to comply with applicable federal, state, and local energy and

building regulations. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant,

6.2.2.1 Transportation

Buildout of the project would consume energy associated transportation uses. Trips by individuals traveling to, from, and within the City would largely rely on passenger vehicles or public transit. Passenger vehicles would be mostly powered by gasoline, with some fueled by diesel or electricity. Public transit would be powered by diesel or natural gas and could potentially be fueled by electricity.

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing 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. Over time, fuel economy standards have increased and reduced the greenhouse gas emissions footprint of vehicles. Furthermore, the California state law, Advanced Clean Cars II, passed in 2022 requiring all new cars sold in 2035 and beyond be zero-emission vehicles, which includes battery electric vehicles, plug-in hybrid electric vehicles, and fuel cell electric vehicles. Additionally, future development would be required to install electric vehicle charging infrastructure in accordance with 2022 California Green Building Standards Code (CALGreen) mandatory requirements, at a minimum. Therefore, the project would not create a land use pattern that would result in a wasteful, inefficient, or unnecessary use of transportation-related energy, and impacts would be less than significant.

6.2.2.2 Electricity and Natural Gas

Non-transportation energy use would be associated with electricity and natural gas. The Renewables Portfolio Standard (RPS) promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the goal has been accelerated and increased by Executive Orders S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, SB 2 (1X) codified California's 33 percent RPS goal. SB 350 (2015) increased California's renewable energy mix goal to 50 percent by year 2030. SB 100 (2018) further increased the standard set by SB 350 establishing the RPS goal of 44 percent by the end of 2024, 52 percent by the end of 2027, and 60 percent by 2030.

The City is served by Southern California Edison (SCE). Based on the most recent annual report, SCE has already procured 36 percent (California Public Utilities Commission [CPUC] 2023) renewable energy and is on track to procure 60 percent by 2030.

The California Code of Regulations, Title 24, is referred to as the CBC. It consists of a compilation of several distinct standards and codes related to building construction, including plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to greenhouse gas reductions are the CBC's energy efficiency and green building standards as outlined below.

Title 24, Part 11 of the CBC is CALGreen. Beginning in 2011, CALGreen instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and nonresidential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may adopt CALGreen with amendments for stricter requirements.

Future development would, at a minimum, be required to comply with the mandatory measures included in the current 2022 Energy Code (California Code of Regulations, Title 24, Part 6) and the 2022 CALGreen standards. The 2022 Energy Code increases on-site renewable energy generation from solar, increases electric load flexibility to support grid reliability, reduces emissions from newly constructed buildings, reduces air pollution for improved public health, and encourages adoption of environmentally beneficial efficient electric technologies. The 2022 CALGreen mandatory measures are related to planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The 2022 CALGreen also includes two tiers of residential and nonresidential voluntary measures that encourage local jurisdictions to raise the following sustainability goals: Tier 1 adds additional requirements beyond the mandatory measures, and Tier 2 further increases the requirements.

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The compliance reports must demonstrate a building's energy performance through use of CEC approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning; sealing; glazing; insulation; and other components related to the building envelope.

The project does not involve any unusual characteristics that would result in excessive long-term operational demand for electricity or natural gas. The applicable state plans that address renewable energy and energy efficiency are CALGreen, the California Energy Code, and RPS, and the applicable local plan is the General Plan. All future development projects would be required to meet the mandatory energy requirements of the 2022 CALGreen and the 2022 California Energy Code, at a minimum. The project would not conflict with or obstruct implementation of CALGreen and the California Energy Code, or with SCE's implementation of RPS. Adherence to RPS, 2022 CALGreen, and the 2022 California Energy Code requirements would reduce the City's collective long-term operational energy use. Therefore, the project would not result in a wasteful, inefficient, or unnecessary consumption of electricity and natural gas, nor conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

6.3 Mineral Resources

According to CEQA Guidelines Appendix G, a significant impact on mineral resources would occur if the project would:

1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

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

Mineral resources encompass vital construction materials such as sand, gravel, and crushed rock, integral for the production of construction materials like Portland cement and asphaltic concrete. Additionally, nonfuel mineral resources include metals like gold, silver, iron, copper, as well as industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone.

Classification of the significance of mineral resources in Irvine adheres to the California Surface Mining and Reclamation Act of 1975, empowering the State Mining and Geology Board to designate lands with mineral deposits of regional or statewide importance. Lands are classified according to the following Mineral Resource Zones (MRZ).

Lands classified as MRZ-2 hold the utmost significance to California, indicating areas underlain by proven mineral resources or where data suggests substantial measured or indicated resources exist. MRZ-2 areas are acknowledged as "regionally significant" by the state board, necessitating that land use decisions consider the importance of the mineral resource to the region or state, beyond the lead agency's jurisdiction. Irvine's MRZ classification areas, mainly MRZ-1 and MRZ-3, are depicted in the California Geological Survey mineral resources map of Orange County, known as the "Generalized Mineral Land Classification of Orange County, California: Aggregate Resources Only." No areas in Irvine have been designated MRZ-2 or as regionally significant mineral deposits.

While gas and oil exploration have occurred in Irvine, the City did not yield significant reserves compared to other locales. Irvine currently has no known gas, oil, or geothermal fields. However, the Department of Conservation estimates there are 24 oil and gas wells in Irvine, with all but three existing as capped and abandoned. The remaining wells are currently inactive.

Furthermore, the majority of the City is urbanized and cannot be used for mineral resource extraction. Substantial amounts of the undeveloped land within the City are preserved under the Orange County Natural Community Conservation Plan/Habitat Conservation Plan, which would preclude mineral resource extraction. Undeveloped land that is not preserved is in proximity to existing residential and commercial uses, which also would preclude mineral resource extraction. Therefore, no impacts to mineral resources would occur.