

Chapter 7.0

Project Alternatives

The California Environmental Quality Act (CEQA) Guidelines Section 15126.6 requires that an Environmental Impact Report (EIR) compare the effects of a “reasonable range of alternatives” to the project. The State CEQA Guidelines further specify that the alternatives selected should attain most of the basic project objectives and avoid or substantially lessen one or more significant effects of the project. The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the lead agency, and to foster meaningful public participation (CEQA Guidelines Section 15126.6[f]). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, while also taking into account economic, environmental, social, technological, and legal factors.

7.1 Selection of Alternatives

Chapter 4.0 of this Program EIR (PEIR) provides a detailed analysis of the potential for the project to have a significant effect on the environment.

The project would result in significant unavoidable environmental impacts related to air quality (air quality plan consistency, criteria pollutants, and sensitive receptors), cultural resources (historic resources), geology and soils (paleontological resources), greenhouse gas (GHG) emissions (emissions; policy consistency), noise (ambient noise and vibration), and transportation (vehicle miles traveled [VMT]). All other impacts were determined to be less than significant or would be mitigated to a level less than significant.

In developing the alternatives to be addressed, consideration was given to their ability to meet the basic objectives of the project and eliminate or substantially reduce significant environmental impacts. As identified in Chapter 3.0, project objectives include the following:

1. Implement land use changes necessary to implement the City's 26th Cycle Housing Element Update effective 2021 to 2029 (2021-2029 Housing Element).
2. Identify areas of opportunity and provide options to enhance development in key focus areas of the City while maintaining the City's signature master plan concept.
3. Implement Citywide policy direction to support a high quality-of-life for residents, businesses, and visitors into the future, including a focus on health and wellness.
4. Identify additional sites for residential and/or residential mixed-use development throughout the City using overlay zones to allow greater flexibility for property owners and developers.
5. Implement Phase 2 of the Great Park Framework Plan to serve residents and visitors in the City.

6. Extend Ada roadway between the Irvine Train Station and Marine Way to better support residential uses and improve multi-modal connectivity.

Alternatives selected for consideration include the No Project (Adopted General Plan) Alternative and the Reduced Project Alternative.

As required under Section 15126.6 (e)(2) of the CEQA Guidelines, an EIR must identify the environmentally superior alternative. Pursuant to the CEQA Guidelines, if the No Project Alternative is determined to be the most environmentally superior project, then another alternative among the alternatives evaluated must be identified as the environmentally superior project. Section 7.3 addresses the environmentally superior alternative selected.

The following section provides an analysis of each major issue area included in the impact analysis for the project. Table 7-1 provides a matrix comparison of the significant impacts of the project as compared to each alternative.

Table 7-1 Matrix Comparison of the Project and Alternatives Impacts			
Environmental Issue Area	Project	No Project (Adopted Plan) Alternative	Reduced Project Alternative
Aesthetics	LTS	LTS/LESS	LTS/LESS
Agricultural and Forestry Resources	LTS	LTS/LESS	LTS/LESS
Air Quality	SU	SU/GREATER	SU/GREATER
Biological Resources	SM	SM/LESS	SM/LESS
Cultural and Tribal Cultural Resources	SU	SU/LESS	SU/LESS
Energy	LTS	LTS/LESS	LTS/LESS
Geology and Soils	SU	SU/LESS	SU/LESS
Greenhouse Gas Emissions	SU	SU/GREATER	SU/GREATER
Hazards and Hazardous Materials	LTS	LTS/LESS	LTS/LESS
Hydrology and Water Quality	LTS	LTS/LESS	LTS/LESS
Land Use and Planning	LTS	SU/GREATER	SM/LESS
Mineral Resources	NI	NI/SAME	NI/SAME
Noise	SU	SU/LESS	SU/LESS
Population and Housing	LTS	LTS/LESS	LTS/LESS
Public Services and Recreation	LTS	LTS/LESS	LTS/LESS
Transportation	SU	SU/GREATER	SU/GREATER
Utilities and Service System	LTS	LTS/LESS	LTS/LESS
Wildfire	LTS	LTS/LESS	LTS/LESS
NI = no impact; LTS = less than significant; SM = significant and mitigated; SU = significant and unavoidable			

7.2 Project Alternatives

Consistent with CEQA Guidelines Section 15126(d), the alternatives described below are analyzed to include sufficient information to allow a meaningful analysis and comparison with the project. For purposes of this analysis, those subject areas included in Chapter 4.0 are also included in the analysis of the alternatives. The following sections include a discussion of the impacts of the alternatives

compared to the project. The conclusion for each alternative also provides an overview of how the alternative meets, partially meets, or fails to meet the project objectives.

7.2.1 No Project Alternative

The following discussion of the No Project Alternative is based on the CEQA Guidelines Section 15126.6(e)(3)(A) which states:

When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, an alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), the No Project Alternative represents the continued implementation of the adopted General Plan land use and zoning for the project areas.

7.2.1.1 Description of the No Project Alternative

The No Project Alternative involves the continuation of existing land uses permitted under the City's current General. The No Project Alternative would not identify additional residential sites necessary to meet the City's RHNA allocation, and thereby result in less intensive development within the City. The No Project Alternative would also not include improvements to the Great Park or the proposed Ada roadway extension. Nonetheless, future development under the No Project Alternative would occur consistent with the City's adopted General Plan land use plan and would be subject to implementation of the City's General Plan Mitigation Monitoring Requirements. The No Project Alternative would not implement the overlay zones proposed under the project, and therefore would not provide the densities needed to accommodate the region's housing needs or the required levels of affordability.

Under the No Project Alternative, State Housing Law and legislative requirements for implementation of the project's planned goals, objectives, policies and actions aimed at increasing housing (in particular affordable housing) in the City would not occur. This alternative would not satisfy the project objectives because implementation of the No Project Alternative would not facilitate the future development of sufficient residential units needed to meet the City's RHNA allocation and would not satisfy applicable legislative mandates associated with the City's adopted Housing Element.

7.2.1.2 Environmental Analysis of the No Project Alternative

a. Aesthetics

Future development under the No Project Alternative would be subject to relevant portions of the California Building Code, the City's Municipal Code, Zoning Ordinance, Standard Conditions, and relevant General Plan policies that serve to protect visual resources. Future development under this

alternative would also be required to comply with Municipal Code standards related to light and glare, which requires that outdoor lighting be directed downward and away from adjoining properties and public rights-of-way. Therefore, impacts related to aesthetics under the No Project Alternative would be less than significant and would be less than the project.

b. Agricultural and Forestry Resources

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 adopted General Plan. 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. 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 related to agricultural and forestry resources under the No Project Alternative would be less than significant and would be less than the project.

c. Air Quality

Development would continue under the No Project Alternative consistent with the City's adopted General Plan land use plan, and without guidance provided by the Environmental Protection and Climate Action (EPCA) Element. Therefore, impacts related to air quality would remain significant and unavoidable at this program level of review, greater than the project.

d. Biological Resources

Future development under the No Project Alternative would occur consistent with the City's adopted General Plan land use plan and would be subject to implementation of the City's existing General Plan Mitigation Monitoring Requirements for biological resources, which would reduce impacts related to sensitive species, riparian habitats, wetlands, and wildlife corridors to a level less than significant. Future development under the No Project Alternative would be required to demonstrate compliance with Section 404 of the Clean Water Act (CWA) (PPP BIO-1), Section 401 of the CWA (PPP BIO-2), Section 1600 of the California Fish and Game Code (PPP BIO-3), and the Orange County Central and Coastal Central and Coastal Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) (PPP BIO-5) and California Endangered Species Act (CESA) (PPP BIO-6). Furthermore, overall habitat impacts would be slightly reduced because the No Project Alternative would not allow for as much development compared to the project. Therefore, impacts related to biological resources under the No Project Alternative would be less than significant, and slightly reduced compared to the project.

e. Cultural and Tribal Cultural Resources

Future development under the No Project Alternative would occur consistent with the City's adopted General Plan land use plan and would be subject to Municipal Code Sections 3-4-132 (Protection of Natural, Cultural, Structural and Archaeological Resources) and 9-10-7 (special development standards) (PPP CUL-4) and City Standard Condition 2.5 (construction monitoring) (PPP CUL-5), which would reduce impacts related to a level less than significant. Future development under the No Project Alternative would likely also be subject to the requirements of AB 52 consultation when applicable and necessary. Overall impacts would be slightly reduced when compared to the project because the No Project Alternative would not allow for as much development. Therefore, impacts related to cultural and tribal cultural resources under the No Project Alternative would remain significant and unavoidable at this program level of review, and slightly reduced compared to the project.

f. Energy

Development would continue under the No Project Alternative consistent with the City's adopted General Plan land use plan. The No Project Alternative would develop fewer residential uses, and thereby consume less energy. Therefore, impacts related to energy would be less than significant, and would be less than the project.

g. Geology and Soils

Future site-specific development under the No Project Alternative would be subject to the requirements related to the City's Building Code (PPP GEO-4), Grading Code (PPP GEO-5), Grading Manual (PPP GEO-6), and Standard Condition 2.6 Site Specific Geotechnical Study (PPP GEO-8), which would ensure that structures would be designed with the geologic hazards in mind to reduce risks associated with strong seismic ground shaking, seismic-related ground failure, and other geologic hazards such as liquefaction, landslide lateral spreading, subsidence, and expansive soils to a level less than significant. Post-construction erosion resulting from increased runoff would also generally be avoided or reduced through site design and hydromodification control BMPs as required per PPP-HYD-3, PPP-HYD-5, PPP-HYD-10, PPP-HYD-12, and PPP-HYD-16. Projects would also be required to adhere to the City's Municipal Code (PPP-HYD-10, PPP-HYD-11), Standard Conditions (PPP-HYD-14, PPP-HYD-15), Grading Manual (PPP-HYD-12), to reduce operational impacts associated with erosion. However, site-specific development under the No Project Alternative would have the potential to impact paleontological resources, which would be considered significant and unavoidable, and less than the project.

h. Greenhouse Gas Emissions

The No Project Alternative would not include the new objectives and policies associated with the EPCA Element described above would not be certified. Development would continue under the No Project Alternative consistent with the City's adopted General Plan land use plan, and without guidance provided by the EPCA Element. Therefore, impacts related to GHG would remain significant and unavoidable, and would be greater than the project.

i. Hazards and Hazardous Materials

Future development under the No Project Alternative would not require use of materials that are acutely hazardous, and use of common hazardous materials in small quantities would not represent a significant hazard to the public or environment. Project construction would adhere to typical Best Management Practices regarding the use of hazardous materials, such as proper labeling and storage, removal of materials once completed, and offsite vehicle maintenance. Compliance with the Certified Union Program Agency for Orange County (PPP HAZ-1) would ensure that projects would identify and remediate any known hazardous materials sites. Future residential development within the John Wayne Airport safety zones, as well as the 70 CNEL, 65 CNEL, and 60 CNEL John Wayne Airport noise contours would be subject to the land use restrictions for each of the compatibility zones, which provide development limitations to minimize potential incidents of off-airport accidents to persons and property on the ground. Future development would be located within existing developed areas and along major transportation corridors in the City that would allow for evacuation and response. Future development would also be designed consistent with all applicable safety requirements and would not physically interfere with any emergency response or evacuation plans, including the LHMP. Future development would also implement an Emergency Access Plan that would maintain emergency access to all properties within the project limits and the surrounding vicinity. All new development and redevelopment adjacent to a CAL FIRE designated fire hazard severity zone would be required to prepare a fuel modification plan and adhere to other fire protection requirements before approval of tentative maps and grading permits, per City Standard Condition 2.19 Open Space Fuel Modification (PPP HAZ-7) and Standard Condition 3.14 HOA/Fuel Modification (PPP HAZ-8). Therefore, impacts associated with hazards would be less than significant, and less than the project.

j. Hydrology and Water Quality

The No Project Alternative would not include relevant new General Plan policies that would further reduce impacts related to hydrology and water quality. To minimize potential water quality impacts during construction, future development under the No Project Alternative would be required to comply with the statewide Construction General Permit (PPP HYD-1). Future projects would also be required to comply with the City Grading Code (PPP HYD-10), and the City Grading Manual (PPP HYD-HYD-12). Adherence to the following PPPs would require implementation and compliance with existing water quality control plans and sustainable groundwater management plans as conditions of approval for future development associated with the project: PPP-HYD-1, PPP-HYD-2, PPP-HYD-3, PPP-HYD-4, PPP-HYD-5, PPP-HYD-7, PPP-HYD-8, PPP-HYD-9, PPP-HYD-11, PPP-HYD-12, PPP-HYD-13, PPP-HYD-15, PPP-HYD-16, PPP-HYD-17, and PPP-HYD-20. Future development under the No Project Alternative would be subject to the regulatory requirements described above for the project, including the City's National Pollutant Discharge Elimination System (NPDES) Permit, Municipal Code, Standard Conditions and Grading Manual, and would be required to prepare WQMPs per PPP-HYD-16, described in further detail in Section 4.8.6.1 above, to identify Best Management Practices (BMPs) directed at pollution reduction and the maintenance of on-site drainage patterns. Additionally, future development under the No Project Alternative would also adhere to the joint NPDES permit from the Santa Ana RWQCB. Therefore, impacts associated with hydrology and water quality would be less than significant, less than the project.

k. Mineral Resources

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. Therefore, no impacts related to mineral resources would occur, the same as the project.

l. Land Use and Planning

Development would continue under the No Project Alternative consistent with the City's adopted General Plan. However, the new objectives and policies associated with the General Plan Update described above would not be certified. As such, the No Project Alternative would result in a land use inconsistency between the City's adopted Housing Element and the existing General Plan, Zoning Ordinance, and Zoning Map. This inconsistency would also result in inconsistencies with state housing laws requiring local agencies to implement the necessary land use tools to accommodate their fair-share RHNA requirements. Furthermore, future development under the project would not benefit from the policies and land use planning direction that would increase connectivity and utilize proximity-based planning that would foster social interactions and community engagement. Therefore, impacts related to land use would be significant and unavoidable and would be greater than the project.

m. Noise

The No Project Alternative would not include goals and policies associated with the Noise Element Update and would not be certified. Development would continue under the No Project Alternative consistent with the City's adopted General Plan land use plan and would result in increases in ambient noise and vibration levels that exceed applicable standards. Therefore, impacts related to noise and vibration would remain significant and unavoidable at this program level of review, less than the project.

n. Population and Housing

Residential development would continue under the No Project Alternative, consistent with the City's adopted General Plan land use plan. Future development under the No Project Alternative would be in areas that are already served by infrastructure, and therefore would not induce population growth. The No Project Alternative would not displace substantial number of people or housing. Therefore, impacts associated with inducing unplanned population and housing growth and displacement of people and housing would be less than significant, less than the project.

o. Public Services and Recreation

Future site-specific development under the No Project Alternative would not directly result in sufficient demand to require construction of new fire protection, police protection, school, library, or park and recreation facilities, since each incremental housing development would pay its fair share toward anticipated facility needs. Pursuant to California Government Code Section 65995, applicants for future projects under the No Project Alternative would be continue to be required to pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Per AB 2626 and SB 50, school districts may impose a fee in conjunction with the construction of new commercial or residential buildings and for those projects that are adding square footage to an existing commercial or residential building. Future development under the No Project Alternative would also be subject to the requirements of the Quimby Act and the fee schedule established by the City for the payment of development impact fees to support the provision of new recreational facilities and the rehabilitation of existing neighborhood parks or recreational facilities. Therefore, impacts associated with public services and recreation would be less than significant, less than the project.

p. Transportation

The No Project Alternative would not include the new objectives and policies associated with the Circulation Element Update and would not be certified. Although the Circulation Element Update would not be certified, future development under the No Project Alternative would be subject to the City's existing regulatory requirements.

Buildout of the City's Existing General Plan would require a 17.0 percent reduction in VMT to meet the significance threshold, while the project requires a 3.5 percent reduction in VMT needed to meet the significance threshold under the project. This is because the No Project Alternative would not introduce the housing overlays that would allow for increased residential development necessary to meet the City's RHNA allocation, and therefore would not reduce the jobs/housing imbalance that exists in the City.

The No Project Alternative could meet the VMT threshold with the implementation of a combination of on-site infrastructure improvements (2.5 percent) and on-site TDM programs (5 percent), which could provide an overall 7.5 percent reduction in VMT in certain areas of the City where a TDM program exists or could be introduced as part of a development agreement. However, no specific projects have been identified at this time, and it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Future development under the No Project Alternative would be subject to existing City mitigation measures to incorporate on-site connectivity into site design to achieve a reduction of 2.5 percent VMT rate and incorporate a TDM program to achieve a reduction of up to 5 percent VMT rate if applicable. However, as no specific projects have been identified at this time, it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Therefore, impacts related to VMT would remain significant and unavoidable under the No Project Alternative and would be greater than the project.

q. Utilities and Service System

Adequate water, wastewater, and solid waste capacity exists to accommodate future growth within the City. Since the No Project Alternative would generate less development than the project, water, wastewater, and solid waste capacity would exist to serve this alternative. The No Project Alternative would also consume less electrical power, natural gas, and telecommunications services than the project. Future development under the No Project Alternative would be subject to existing City requirements to comply with the Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential) (PPP 14-2) and the Irvine Sustainability Community Initiative (PPP 14-3) to reduce energy consumption. Therefore, impacts associated with utilities and services would be less than significant, less than the project.

r. Wildfire

Future development under the No Project Alternative would be designed, constructed, and maintained in accordance with applicable standards associated with the LHMP, EOP, and Emergency Access Plan. New development and redevelopment under the No Project Alternative would also need to consider water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space, and vegetation management, and demonstrate consistency with the requirements of California Building Code Chapter 7A, the International Wildland-Urban Interface Code, and the City Municipal Code. Therefore, impacts associated with wildfire would be less than significant, and less than the project.

7.2.1.3 Conclusion Regarding the No Project Alternative

As described in Section 7.2.1.2 above, the No Project Alternative would not identify additional residential sites necessary to meet the City's RHNA allocation, and thereby would result in development of fewer residential units. The No Project Alternative would not include necessary improvements within the Great Park or the extension of Ada roadway. Development would continue under the No Project Alternative consistent with the City's adopted General Plan land use plan. Therefore, impacts associated with aesthetics, agricultural and forestry resources, biological resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, population and housing, public services and recreation, utilities and services, and wildfire would be less than significant, the same as the project, but the intensity of those impacts would be less than the project due to development of fewer residential units. Impacts associated with historic resources, paleontological resources, and noise would remain significant and unavoidable, the same as the project, but the intensity of those impacts would be less than the project due to development of fewer residential units. Impacts associated with air quality, GHG, and transportation would be significant and unavoidable, the same as the project, but the intensity of those impacts would be greater than the project. This is because the No Project Alternative would not introduce the housing overlays that would allow for increased residential development necessary to meet the City's RHNA allocation, and therefore would not reduce the jobs/housing imbalance that exists in the City resulting in greater vehicle miles traveled and associated air quality and GHG emissions. In the absence of adopting the General Plan Update prepared under the project, this alternative would not implement State Housing Law requirements and would not implement the updates of the general plan elements. Therefore, impacts associated with land use would be significant and unavoidable,

greater than the project. This alternative would not satisfy the project objectives stated in Chapter 3.0, Project Description, because buildout of the No Project Alternative would not provide enough residential units to meet the City's RHNA allocation, would not satisfy legislative mandates to implement State Housing Law requirements, would not enhance development or provide development opportunities within the three focus areas, would not include improvements to the Great Park, and would not extend the Ada roadway.

7.2.2 Reduced Project Alternative

7.2.2.1 Description of the Reduced Project Alternative

The City has developed a Reduced Project Alternative that would accommodate the City's RHNA requirement and implement the 2021-2029 Housing Element utilizing a smaller number of residential sites. Compared to the 57,656 units proposed under the project, the Reduced Project Alternative would only propose 42,637 residential units, a difference of 15,019 units. Similar to the project, the Reduced Project Alternative would also include the 2,261 unbuilt units already in the General Plan. While the number of residential units proposed under the Reduced Project Alternative would be less than the project, this alternative would still exceed the City's RHNA allocation of 23,610 units, and therefore would be consistent with applicable housing statute, including no-net loss and affirmatively furthering fair housing requirements. The proposed number of residential units within Focus Area 3 would remain unchanged under the Reduced Project Alternative. However, the Reduced Project Alternative would decrease the number of proposed residential units within Focus Area 1 from 15,000 units to 11,242 units and in Focus Area 2 from 26,607 units to 19,811 units. Table 3-2 in Chapter 3.0 presents the distribution of proposed residential units within various PAs throughout the City under the Reduced Project Alternative.

In addition to the RHNA residential component, the Reduced Project Alternative includes additional non-residential land uses in the Irvine Great Park (Great Park). Phase 1 of the Great Park Framework Plan is in the baseline (no build condition) and the remaining land uses supporting the buildout of the Great Park Framework are included as part of the Reduced Project Alternative. Phase 2 (or the remaining buildout of the Great Park) includes the following: a botanical garden, a veteran's memorial garden, a library, a discovery center, two museums, a 65-acre central park area, an accessory restaurant use, three aquatic center pools, an aquatic stadium, an all-wheel park, and pickleball courts.

The Reduced Project Alternative would also include the extension of the Ada roadway from its current terminus in the parking lot of the Irvine train station south of the SCRRRA railroad tracks to extend north under the railroad tracks to meet the future Marine Way extension north of the railroad tracks. The Ada roadway extension between the Irvine train station and Marine Way provides multi-modal connectivity to support the residential uses.

7.2.2.2 Environmental Analysis of the Reduced Project Alternative

a. Aesthetics

Like the project, development under this alternative would be subject to relevant portions of the California Building Code, the City's Municipal Code, Zoning Ordinance, Standard Conditions, and relevant General Plan policies that serve to protect visual resources (PPPs AES-1 through AES-8), including those related to (but not limited to) building height limitations under Federal Aviation Administration (FAA) regulations, landscaping, and design standards. Future development under this alternative would also be required to comply with Municipal Code standards related to light and glare, which requires that outdoor lighting be directed downward and away from adjoining properties and public rights-of-way. Therefore, impacts related to aesthetics under the Reduced Project Alternative would be less than significant and would be less than the project.

b. Agricultural and Forestry Resources

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 Reduced Project Alternative. Furthermore, agricultural uses near the Great Park exist as interim uses due to their adjacency to the former 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 would be implemented by the Reduced Project Alternative) 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 Reduced Project Alternative itself would 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 approval of the Reduced Project Alternative 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 related to agricultural and forestry resources under the Reduced Project Alternative would be less than significant and would be less than the project.

c. Air Quality

The reduced amount of development under this alternative would be subject to the objectives and policies associated with the EPCA Element aimed at improving air quality. Although mitigation would

be required to reduce construction emissions (AQ-1), operational emissions (AQ-2), and reduce exposure of sensitive receptors to TACs (AQ-3), no specific projects have been identified at this time, and it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Furthermore, the Reduced Project Alternative would develop less housing in the City, and therefore would not reduce the jobs/housing imbalance that exists in the City to the same degree as the project, and therefore would generate greater vehicle emissions than the project. Therefore, impacts related to air quality would remain significant and unavoidable at this program level of review and would be greater than the project.

d. Biological Resources

Future development under the Reduced Project Alternative would be required to demonstrate compliance with Section 404 of the CWA (PPP BIO-1), Section 401 of the CWA (PPP BIO-2), Section 1600 of the California Fish and Game Code (PPP BIO-3), and the Orange County NCCP/HCP (PPP BIO-5) and California Endangered Species Act (CESA) (PPP BIO-6). Future site-specific development under the Reduced Project Alternative would be required to implement mitigation measures BIO-1 through BIO-10, which would require project-specific biological assessments and jurisdictional delineations for projects meeting specific requirements and would require future projects affecting such resources to obtain all necessary authorizations from respective resource agencies. Furthermore, overall habitat impacts would be slightly reduced because the Reduced Project Alternative would not allow for as much development compared to the project. Compliance with goals, objectives, and policies in the updated Conservation and Open Space Element would further the City's goals of reducing impacts to biological resources. Therefore, impacts related to biological resources under the Reduced Project Alternative would be mitigated to a less than significant level and would be slightly reduced compared to the project.

e. Cultural and Tribal Cultural Resources

Overall impacts would be slightly reduced because the Reduced Project Alternative would not allow for as much development compared to the project. Future development under the Reduced Project Alternative, where required, would conduct tribal consultation under Assembly Bill 52 to avoid impacts to tribal cultural resources. Future projects would also continue to be required to comply with City regulations (including Standard Conditions) aimed at reducing impacts to cultural and tribal cultural resources and would also be required to implement mitigation measure CUL-2 to reduce potentially significant impacts to cultural and tribal and cultural resources, similar to the project. Mitigation measure CUL-2 would require that, at the discretion of the City of Irvine Director of Community Development, or designee, acting in a similar capacity, applicants for future proposed ground disturbing projects to either (1) provide a technical cultural resources assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified archaeologist meeting Secretary of the Interior Standards and certified by the County of Orange or (2) agree to full-time monitoring by an archaeologist and a designated representative from the tribe/ group(s) who is culturally linked to the site. Additionally, the City's updated Conservation and Open Space Element includes Goal 4, which aims to maintain historical resources as part of the City's land use pattern. Compliance with this goal would further support the City's goal of considering and preserving historic, archaeological, cultural, and tribal cultural resources. The Reduced Project Alternative would implement mitigation measure CUL-1, which would reduce

impacts on historic resources. However, as no specific development projects have been identified at this time, it is not possible to ensure that every future project could fully mitigate potentially significant impacts on historic resources. Therefore, impacts to historic resources would remain significant and unavoidable at this program level of review, and would be slightly reduced compared to the project.

f. Energy

Overall, the No Reduced Alternative would develop fewer residential uses, and thereby consume less energy. Construction under the Reduced Project Alternative would be required to meet would meet California Air Resources Board (CARB) Tier 3 In-Use Off-Road Diesel Engine Standards 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. Future development would also be required to install electric vehicle charging infrastructure in accordance with 2022 California Green Building Standards Code (CALGreen) mandatory requirements, at a minimum. Therefore, impacts related to energy would be less than significant, and would be less than the project.

g. Geology and Soils

F Future site-specific development under the Reduced Project Alternative would be subject to the requirements related to the City's Building Code (PPP GEO-4), Grading Code (PPP GEO-5), Grading Manual (PPP GEO-6), and Standard Condition 2.6 Site Specific Geotechnical Study (PPP GEO-8), which would ensure that structures would be designed with the geologic hazards in mind to reduce risks associated with strong seismic ground shaking, seismic-related ground failure, and other geologic hazards such as liquefaction, landslide lateral spreading, subsidence, and expansive soils to a level less than significant. Post-construction erosion resulting from increased runoff would also generally be avoided or reduced through site design and hydromodification control BMPs as required per PPP-HYD-3, PPP-HYD-5, PPP-HYD-10, PPP-HYD-12, and PPP-HYD-16. Projects would also be required to adhere to the City's Municipal Code (PPP-HYD-10, PPP-HYD-11), Standard Conditions (PPP-HYD-14, PPP-HYD-15), Grading Manual (PPP-HYD-12), to reduce operational impacts associated with erosion. Implementation of the mitigation measure GEO-1 would potentially reduce impacts on paleontological resources. However, as no specific development projects have been identified at this time, it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Therefore, impacts to paleontological resources would remain significant and unavoidable, and would be less than the project.

h. Greenhouse Gas Emissions

The reduced amount of development under this alternative would be subject to the objectives and policies associated with the Land Use and EPCA Elements. Although mitigation requiring identification of potential measures that would reduce GHG emissions below the applicable South Coast Air Quality Management District (SCAQMD) thresholds (mitigation measure GHG-1) would be feasible under the Reduced Project Alternative, no specific projects have been identified at this time,

and it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Furthermore, the Reduced Project Alternative would develop less housing in the City, and therefore would not reduce the jobs/housing imbalance that exists in the City to the same degree as the project, and therefore would generate greater vehicle emissions than the project. Therefore, impacts related to GHG would remain significant and unavoidable at this program level of review and would be greater than the project.

i. Hazards and Hazardous Materials

Future site-specific development under the Reduced Project Alternative would be subject to the regulatory requirements described above for the project, which would ensure projects would remediate existing hazardous contamination before construction can commence. Compliance with the Certified Union Program Agency for Orange County (PPP HAZ-1) would ensure that projects would identify and remediate any known hazardous materials sites. Future development under the Reduced Project Alternative would be located within existing developed areas and along major transportation corridors in the City that would allow for evacuation and response. Future development under the Reduced Project Alternative would also be designed consistent with all applicable safety requirements, would implement an Emergency Access Plan, and would not physically interfere with any emergency response or evacuation plans. Future development under the Reduced Project Alternative would not be located within the segment of Focus Area 3 designated as a Very High fire severity zone, and any development near this area would be required to prepare a fuel modification plan and adhere to other fire protection requirements before approval of tentative maps and grading permits, per City Standard Condition 2.19 Open Space Fuel Modification (PPP HAZ-7) and Standard Condition 3.14 HOA/Fuel Modification (PPP HAZ-8). Furthermore, compliance with the updated Safety Element would further support the City's goal of minimizing land use conflicts and hazards associated with hazardous materials, emergencies, and hazardous sites. Therefore, impacts associated with hazards would be less than significant, less than the project.

j. Hydrology and Water Quality

To minimize potential water quality impacts during construction, future development would be required to comply with the statewide Construction General Permit (PPP HYD-1). Future projects would also be required to comply with the City Grading Code (PPP HYD-10), and the City Grading Manual (PPP HYD-HYD-12). Adherence to the following PPPs would require implementation and compliance with existing water quality control plans and sustainable groundwater management plans as conditions of approval for future development associated with the project: PPP-HYD-1, PPP-HYD-2, PPP-HYD-3, PPP-HYD-4, PPP-HYD-5, PPP-HYD-7, PPP-HYD-8, PPP-HYD-9, PPP-HYD-11, PPP-HYD-12, PPP-HYD-13, PPP-HYD-15, PPP-HYD-16, PPP-HYD-17, and PPP-HYD-20. Future site-specific development under the Reduced Project Alternative would be subject to the regulatory requirements described above for the project, including the City's Municipal Permit, Municipal Code, Standard Conditions and Grading Manual, and would be required to prepare Water Quality Management Plans (WQMPs) per PPP-HYD-16 to identify Best Management Practices (BMPs) directed at pollution reduction and the maintenance of on-site drainage patterns. Additionally, future development under the Reduced Project Alternative would also adhere to the joint NPDES permit from the Santa Ana Regional Water Quality Control Board (RWQCB). Therefore, impacts associated with hydrology and water quality would be less than significant, less than the project.

k. Land Use and Planning

The reduced amount of development under this alternative would occur within infill sites (primarily in the three focus areas) and would be subject to the objectives and policies associated with the Land Use Element Update and the City regulatory requirements pertaining to land use. Development would simply occur at less densities. As such, the reduced Project Alternative would also not result in the physical division of established communities. Approval of the Reduce Project Alternative would include the same land use plan amendments to the City's General Plan, Zoning Ordinance, Zoning Map, and Local Coastal Program that are also required for the project. Furthermore, all future development resulting from implementation of the project would be required to comply with all existing land use plans and policies. Additionally, future projects would be required to comply with mitigation measures BIO-1 through BIO-10 to reduce potential conflicts with the NCCP/HCP. As such, the Reduced Project Alternative would also not result in inconsistencies with adopted plans regulating land use in the City. Therefore, impacts related to land use would be mitigated to a level less than significant, less than the project.

l. Mineral Resources

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. Therefore, no impacts related to mineral resources would occur, the same as the project.

m. Noise

The reduced amount of development under this alternative would be subject to the goals and policies associated with the Noise Element Update described above. Under the Reduced Project Alternative, off-site traffic noise level impacts will exceed noise level increase thresholds along 129 segments which is less than the 147 impacted segments under the project. Construction related noise impacts under the Reduced Project Alternative would be similar compared to the project. Similarly, the Reduced Project Alternative would not develop any vibration generating uses, and future development near John Wayne Airport would be subject to the noise requirements of the Airport Land Use Plan, Noise Element Update policies, and associated FAA requirements. Future development under the Reduced Project Alternative would be subject to mitigation measures NOI-1 through NOI-4 related to ambient noise and mitigation measures NOI-5 and NOI-6 related to vibration developed for the project. Impacts related to ambient noise increases associated with railroads, stationary sources, and construction would be mitigated to a level less than significant. Although the Reduced Project Alternative would develop fewer residential units and generate less vehicle traffic, impacts related to increases in ambient traffic noise would remain significant and unavoidable. Similarly, impacts associated with railroad vibration would be mitigated to a level less

than significant, but impacts associated with construction vibration would remain significant and unavoidable. Therefore, impacts associated with noise and vibration would remain significant and unavoidable at this program level of review and would be less than the project.

n. Population and Housing

Because the housing assessment in the RHNA is determined by the Southern California Association of Governments (SCAG), future development under the Reduced Project Alternative would accommodate increases in population based on SCAG's demographic projections. Therefore, future housing developed under the Reduced Project Alternative would provide housing necessary to meet the City's RHNA allocation of 23,610 units, as well as accommodate future population growth and housing needs projected in SCAG's growth projections. Additionally, the Reduced Project Alternative would reduce the City's existing jobs/housing imbalance. Future development under the Reduced Project Alternative would primarily be in developed areas that are already served by infrastructure. Given these conditions and the City's existing development and housing occupancy patterns, it is not anticipated that future housing development facilitated by the Reduced Project Alternative would induce unplanned population growth directly or indirectly through extension of roads or other infrastructure or otherwise.

Although some people may be displaced by a future site-specific redevelopment project, buildout of the Reduced Project Alternative would provide an overall expansion of housing opportunities and would be required to comply with all laws and regulations related to the displacement of tenants including Government Code §§ 66300 et seq. Furthermore, the Reduced Project Alternative would exceed the state RHNA allocations assigned to the City, providing a buffer in all income categories. This exceedance of the City's RHNA allocation would provide additional housing that would accommodate residents displaced by future redevelopment projects, ensuring no net loss of housing, and that displaced residents would be able to find replacement housing. Therefore, displacement of people associated with implementation of the Reduced Project Alternative would be temporary. Additionally, the City's Inclusionary Housing Ordinance, as contained in Chapter 2-3 of the Zoning Ordinance, would be considered in the analysis of a future site-specific development that consists of 50 residential units or more to ensure adequate and accessible affordable housing. The Inclusionary Housing Ordinance requires a minimum of 15 percent of the total units that are constructed to be affordable units, providing an expansion of housing opportunities. Therefore, impacts associated with population and housing would be less than significant and would be less than the project.

o. Public Services and Recreation

Future site-specific development under the Reduced Project Alternative would not directly result in sufficient demand to require construction of new fire protection, police protection, school, library, or park and recreation facilities, since each incremental housing development would pay its fair share toward anticipated facility needs. Although this alternative would reduce the potential for development of approximately 15,019 residential units, the Reduced Project Alternative would still potentially meet the City's RHNA allocation. Similar to the project, under the Reduced Project Alternative, the existing and projected deficit in population-based parks and recreation facilities would remain upon implementation of the project. However, future development would occur

incrementally through 2045, based on market conditions and other factors, such that parks are not overburdened at any given time. As such, there would not be a sudden increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Pursuant to California Government Code Section 65995, applicants shall pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Per AB 2626 and SB 50, school districts may impose a fee in conjunction with the construction of new commercial or residential buildings and for those projects that are adding square footage to an existing commercial or residential building. Future development under the project would also be subject to the requirements of the Quimby Act and the fee schedule established by the City for the payment of development impact fees to support the provision of new recreational facilities and the rehabilitation of existing neighborhood parks or recreational facilities. Therefore, impacts associated with public services and recreation would be less than significant, and less than the project.

p. Transportation

The City has also developed a Reduced Project Alternative that would accommodate the City's RHNA requirement and implement the 2021-2029 Housing Element utilizing a smaller number of residential sites but would include the same amount of nonresidential development within the Great Park and the extension of Ada roadway. However, compared to the 57,656 units proposed under the project, the Reduced Project Alternative would only propose 42,639 residential units, a difference of 15,017 units. However, the 42,639 residential units proposed under the Reduced Project Alternative would exceed the City's RHNA allocation of 23,610 units, and therefore would be consistent with applicable housing statute, including no-net loss and affirmatively furthering fair housing requirements. The proposed number of residential units within Focus Area 3 would remain unchanged under the Reduced Project Alternative. However, the Reduced Project Alternative would decrease the number of proposed residential units within Focus Area 1 from 15,000 units to 11,242 units and in Focus Area 2 from 26,607 to 19,811.

Development under this alternative would be subject to the objectives and policies associated with the updated Circulation Element and the City regulatory requirements described above. The Vehicle Miles Travelled (VMT) Traffic Study prepared for the project included an evaluation of the Reduced Project Alternative compared to the project. Table 7-2 presents a comparison of VMT generated under the Reduced Project Alternative to the project. As shown in Table 7-2, the Reduced Project Alternative would require a 6.7 percent reduction in VMT to meet the significance threshold, which is greater than the 3.5 percent reduction in VMT needed to meet the significance threshold under the project. This is because the Reduced Project Alternative would develop less housing in the City, and therefore would not reduce the jobs/housing imbalance that exists in the City to the same degree as the project. Future development under the Reduced Project Alternative would be subject to mitigation measures to incorporate on-site connectivity into site design to achieve a reduction of 2.5 percent VMT rate (TRA-1) and incorporate a TDM program to achieve a reduction of up to 5 percent VMT rate (TRA-2). However, as no specific projects have been identified at this time, it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Therefore, impacts related to VMT would remain significant and unavoidable at this program level of review, greater than the project.

Table 7-2 VMT Analysis Results Comparison of the Reduced Project Alternative to the Project							
Scenario	Total VMT (miles)	Total Population	Total Employees	Service Population	VMT Per Service Population	VMT Per Service Rate Above Threshold	Percent VMT Reduction Needed
Reduced Project Alternative	21,008,186	477,019	337,910	814,929	25.78	1.72	.36.7
Project	21,337,558	517,654	337,910	855,564	24.94	0.88	3.5

SOURCE: Appendix H.

q. Utilities and Service System

Adequate water, wastewater, and solid waste capacity exists to accommodate future growth within the City. Since the Reduced Project Alternative would develop fewer residential uses than the project, water, wastewater, and solid waste capacity would exist to serve this alternative. The Reduced Project Alternative would also consume less electrical power, natural gas, and telecommunications services than the project. Future development under the Reduced Project Alternative would be subject to existing City requirements to comply with the Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential) (PPP 14-2) and the Irvine Sustainability Community Initiative (PPP 14-3) to reduce energy consumption. Therefore, impacts associated with utilities and services would be less than significant, less than the project.

s. Wildfire

The reduced amount of development under this alternative would be designed, constructed, and maintained in accordance with applicable standards associated with the Safety Element Update, Local Hazard Mitigation Plan (LHMP), Emergency Operations Plan (EOP), and Emergency Access Plan. New development and redevelopment under the Reduced Project Alternative would also need to consider water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space, and vegetation management, and demonstrate consistency with the requirements of California Building Code Chapter 7A, the International Wildland-Urban Interface Code, and the City Municipal Code. Furthermore, the updated Safety Element includes goals, objectives, and policies addressing wildfires that would further support the City's goals of addressing wildfire events. Therefore, impacts associated with wildfire would be less than significant and less than the project.

7.2.2.3 Conclusion Regarding the Reduced Project Alternative

As described in Section 7.2.2.2 above, the Reduced Project Alternative would result in the same significance conclusions as the project, but the intensity of the impacts would be different. Impacts associated with aesthetics, agricultural and forestry resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, population and housing, public services and recreation, utilities and services, and wildfire would be less than significant, the same as the project,

but the intensity of those impacts would be less than the project due to development of fewer residential units. Impacts associated with biological resources and land use would be mitigated to a level less than significant, the same as the project, but the intensity of those impacts would be less than the project due to development of fewer residential units. Impacts associated with historic resources, paleontological resources, and noise would be mitigated but remain significant and unavoidable, the same as the project, but the intensity of those impacts would be less than the project due to development of fewer residential units. Impacts associated with air quality, greenhouse gases (GHGs), and transportation would be significant and unavoidable, the same as the project, but the intensity of those impacts would be greater than the project. This is because the Reduced Project Alternative would develop less housing in the City, and therefore would not reduce the jobs/housing imbalance that exists in the City to the same degree as the project, resulting in greater vehicle miles traveled and associated air quality and GHG emissions.

7.3 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify the environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from the other alternatives. The project itself may not be identified as the environmentally superior alternative. The no project alternative is the superior alternative due to a lower cumulative impact on the environment than is expected for the proposed project and the Reduced Project Alternative.

The Reduced Project Alternative would be the environmentally superior alternative, other than the No Project Alternative, because it would incrementally reduce significant impacts associated with aesthetics, biological resources, cultural and tribal cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services and recreation, utilities and services, and wildfire compared to the project. However, none of the potentially significant impacts of the project would be completely avoided.

Compared to the 57,656 units proposed under the project, the Reduced Project Alternative would only propose 42,637 residential units, a difference of 15,019 units. While the number of residential units proposed under the Reduced Project Alternative would be less than the project, this alternative would still exceed the City's RHNA allocation of 23,610 units, and therefore would be consistent with applicable housing statute, including no-net loss and affirmatively furthering fair housing requirements. Therefore, the Reduced Project Alternative would meet all the project's objectives.