
CHAPTER 4 Alternatives to the Proposed Project

4.1 INTRODUCTION

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. Through comparison of these alternatives to the Proposed Project, the relative advantages of each can be weighed and analyzed. However, not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered. Moreover, the decision-making body may choose to approve an alternative to the Proposed Project, or a variation thereof that is within the range of alternatives analyzed by this EIR, instead of the Proposed Project. This chapter sets forth potential alternatives to the Proposed Project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede, to some degree, the attainment of the project objectives or would be more costly.
- The “no project” alternative shall be evaluated along with its impact. The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

As such, alternatives usually take the form of no project, reduced project size, different project design, different range of uses, or suitable alternative project sites. The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. The factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Section 15126.6(f)(1)) are as follows:

- Environmental impacts
- Site suitability
- Economic viability

- Availability of infrastructure
- General plan consistency
- Regulatory limitations
- Jurisdictional boundaries
- Proponent's ability to reasonably acquire, control, or otherwise have access to the alternative site

4.2 RATIONALE FOR SELECTING POTENTIALLY FEASIBLE ALTERNATIVES

For purposes of this analysis, the project alternatives are evaluated to determine the extent to which they attain the basic project objectives, while lessening any significant effects of the Proposed Project. An additional alternative is provided (Landowner Concept Plan) which, while it does not lessen any of the significant impacts of the Proposed Project, does meet the basic project objectives. Because of the history of development of this alternative, and the fact that it is a feasible alternative despite the fact it does not reduce any of the project impacts, it is appropriate to include the analysis of the Landowner Concept Plan in this section. Similarly, Alternative 6, which is the Proposed Project plus a Public Facilities/Land Use Overlay on Site 7 to allow the development of an additional 450 dwelling units on Site 7, is included despite the fact it also results in somewhat greater impacts than the Proposed Project, because it is a feasible development scenario that could be selected. The project objectives are described in Chapter 2 (Project Description) of this document.

The alternatives below were selected for a variety of reasons. However, the goal for evaluating any, and all, of these alternatives is to identify ways to reduce or avoid the significant environmental effects resulting from the Proposed Project. The following alternatives have been analyzed:

- Alternative 1: No Project/Reasonably Foreseeable Development General Plan Alternative
- Alternative 2: Development on Sites 1 through 6 and Public Facilities Overlay on Site 1
- Alternative 3: Development on Sites 1 through 6 and Public Facilities Overlay on Sites 1, 3, and 4
- Alternative 4: Development on Sites 1 through 6 and Public Facilities Overlay on Sites 4 and 9
- Alternative 5: Landowner Concept Plan
- Alternative 6: Proposed Project plus Public Facilities/Land Use Overlay on Site 7

CEQA requires the No Project Alternative to be analyzed in the EIR. The five remaining alternatives were selected as feasible alternatives, three of which potentially reduce some of the environmentally significant impacts of the Proposed Project, such as impacts to agricultural resources, aesthetics from increased light and glare impacts, noise, and population and housing.

In summary, the purpose of this section is to discuss feasible alternatives and to evaluate the ability of each alternative to reduce or avoid significant adverse impacts of the Proposed Project. The reader is referred to the environmental analyses contained within the individual sections of the EIR (Sections 3.1 through 3.15) and to the Executive Summary (Table ES-2 [Summary of Significant Impacts]) for a detailed discussion of environmental impacts, by each issue area, that would result from implementation of the Proposed Project.

4.3 FACTORS CONSIDERED IN THE DEVELOPMENT OF ALTERNATIVES TO THE PROPOSED PROJECT

The 3,700-acre MCAS El Toro, closed since July 1999, was annexed by the City of Irvine in the spring of 2004. The property is planned for a variety of uses, including educational facilities, agriculture, active and passive parks, housing, and commercial uses. With the decision to utilize the former MCAS El Toro property for non-aviation uses, the restriction on development in the City of Lake Forest in the path of the former aircraft flight patterns is no longer necessary. Development pressures in Orange County and the need for additional housing sparked an interest by landowners to seek changes to the designated land uses to allow residential development.

The Proposed Project includes a General Plan Amendment and Zone Change on 793 acres of vacant lands in the Project Area on six Sites plus approval of one public facilities overlay on 45 acres of a seventh parcel, for total development of 838 acres. The General Plan Amendment would change the allowed land uses from industrial and commercial land uses to residential and mixed uses. The vacant lands currently have approximately 9.3 million square feet (sf) of approved industrial and commercial development rights. The General Plan Amendment and Zone Change consider development of 5,415 residential units and a public facilities overlay on Site 7. Over 50 acres of neighborhood parks, 45 acres of sports park and Community/Civic Center, and up to approximately 648,720 sf of commercial development would also be permitted as a result of the project.

In developing the alternatives to the Proposed Project, the significant and unavoidable impacts of the Proposed Project were considered, such as impacts to agricultural resources, aesthetics, air quality, hydrology (water quality), noise, and population and housing.

4.4 ALTERNATIVES REJECTED AS INFEASIBLE

4.4.1 General Plan Amendment and Zone Change for All-Commercial Development

This alternative would consist of a General Plan Amendment and Zone Change to develop Sites 1 through 6 with commercial development only. With a maximum FAR of 0.25 on gross acreage of 793 acres, up to 8,635,770 sf of commercial development could be constructed on the subject Sites.

All-commercial development would not reduce significant and unavoidable impacts from the Proposed Project. Impacts would remain significant and unavoidable in the resource areas of aesthetics (increased light and glare and obstruction of scenic views), agricultural resources (removal of prime agricultural land), air quality (construction emissions and increased traffic emissions), and noise. The level of significance of certain impacts would, in fact, be expected to increase with this alternative, such as increased light and glare, which could be significant with all-commercial development compared to mixed uses, blockage of scenic views, deterioration of air quality, noise, and traffic, as commercial development would have a greater impact on these issue areas due to greater lighting, expanses of glass and other reflective surfaces, heights and massing of buildings, increased traffic and resultant noise and

air quality deterioration. As most of the significant and unavoidable impacts of the Proposed Project were not eliminated, and, in fact, certain impacts could increase in severity, this alternative was therefore rejected from further analysis. In addition, this alternative would not achieve the project objective of providing a balanced community. Further, commercial development on all of the Sites could result in adverse land use compatibility impacts, as four of the Sites are located immediately adjacent to other residential development (Sites 2, 3, 5, and 6).

4.4.2 General Plan Amendment and Zone Change for All-Residential Development

Under this alternative, up to 8,595 dwelling units could be constructed on the 793 acres, subtracting 45 acres utilized for public facilities and 175 acres reserved for the estimated neighborhood parks requirement (net residential developable 573 acres). Assumed density would be 15 dwelling units per acre. Development of all residential uses on the Sites would be expected to reduce somewhat the impacts of the Proposed Project from increased light and glare, and air quality emissions. For reference, air quality emissions would be reduced due to decreased traffic from residential uses compared to commercial uses. However, development of any kind on previously vacant Sites would still result in significant and unavoidable impacts to agricultural resources, air quality, noise, and population and housing, and this alternative would not reduce these significant and unavoidable impacts of the Proposed Project to a less-than-significant level. In addition, all-residential uses would not generate needed revenue for the City, and for fiscal reasons, would not meet the project objectives of providing a balanced community or providing a fiscally sound and stable economic base for the community and provide the community with a mechanism to share equitably in the financial benefit derived from such development within the Project Area. Therefore, this alternative was rejected from further consideration.

4.4.3 General Plan Amendment and Zone Change for All-Industrial/Business Park Development

This alternative would provide for up to 12,090,078 sf of industrial development on the six Sites at a FAR of 0.35. Impacts would remain significant and unavoidable in the resource areas of aesthetics (increased light and glare), agricultural resources (removal of prime agricultural land), air quality (construction emissions and increased traffic emissions), and noise. The level of significance of certain impacts would, in fact, be expected to increase with this alternative, such as increased light and glare, deterioration of air quality, noise, as industrial development would have a greater impact on these issue areas due to greater lighting, expanses of glass and other reflective surfaces, heights and massing of buildings, increased traffic and resultant noise and air quality deterioration. In addition, this alternative would not achieve the project objective of providing a balanced community. Further, industrial development on all of the Sites could result in adverse land use compatibility impacts, as four of the Sites are located immediately adjacent to other residential development (Sites 2, 3, 5 and 6). This alternative was, therefore, rejected from further analysis.

4.4.4 General Plan Amendment and Zone Change for Industrial-Residential Alternative

Under this alternative, approximately 3,691 dwelling units, 731,720 sf of commercial, and 1,546,712 sf of industrial uses would be developed on the six Sites. Approximately 51 acres of park area would also be required. At a density of 8 to 11 dwelling units per acre, approximately 1,327 students would be generated. Similar to the All-Industrial Alternative, impacts would remain significant and unavoidable in the resource areas of aesthetics (increased light and glare), agricultural resources (removal of prime agricultural land), air quality (construction emissions and increased traffic emissions), and noise. The level of significance of certain impacts would, in fact, be expected to increase with this alternative, such as increased light and glare, deterioration of air quality, noise, and traffic, as industrial development would have a greater impact on these issue areas due to greater lighting, expanses of glass and other reflective surfaces, heights and massing of buildings, increased traffic and resultant noise and air quality deterioration. In addition, this alternative would not achieve the project objective of providing a balanced community. Further, industrial development on all of the Sites could result in adverse land use compatibility impacts, as four of the Sites are located immediately adjacent to other residential development (Sites 2, 3, 5 and 6). This alternative was, therefore, rejected from further analysis.

4.4.5 Reduced Density Alternative

Under this alternative, the residential and commercial components of the Proposed Project would be reduced by 30 percent to provide only 3,790 residential units and 455,000 square feet of commercial space. Development of the this reduced density alternative would be expected to reduce the impacts of the Proposed Project with respect to light and glare, air quality emissions and noise. However, development of any kind on previously vacant Sites would still result in significant and unavoidable impacts to agricultural resources, population and housing, air quality and noise, and this alternative would not reduce these significant and unavoidable impacts of the Proposed Project to a less-than-significant level. Furthermore, this reduced density alternative would not meet the project objectives of providing recreational facilities and public amenities (Sports Complex and Civic/Community Center) or providing transportation improvements for the City, nor would this alternative provide a fiscally sound and stable economic base for the community.

In addition, the Proposed Project functions as a reduced density alternative relative to the residential component of the Landowner Concept Plan (Alternative 5), the project that was originally proposed by the property owners. The Landowner Concept Plan proposes 6,617 residential units compared to the 5,415 residential units of the Proposed Project.

For these reasons, this reduced density alternative was rejected from further consideration.

4.4.6 Public Facilities Overlay on Sites 4 and 8

This overlay, described in the NOP, assumed that these contiguous sites would be utilized for all three public facilities. Thirty-five acres would be utilized from Site 8 (Saddleback Church) and 10 acres from

Site 4 for the public facilities. Site 8 would contain the 35 acres of the public facilities, while Site 4 would contain 380 medium-density condominiums and 150,000 sf of commercial and 4 acres for the remainder of the sports park. All other development for Sites 1, 2, 5, and 6 would remain as under the Proposed Project. Zoning for Site 8 would change from industrial (Foothill Ranch Planned Community) to Public Facility Overlay. Land use designation for Site 8 would change from Commercial to Commercial with land use overlay. No development would occur on Site 7. However, subsequent to development of this alternative, Saddleback Church (Site 8) has submitted to the City an application for a Site Development Permit that proposes development of the property for church uses. Therefore, this alternative was rejected as infeasible.

4.5 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

4.5.1 Description

The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. The No Project Alternative analysis is not the baseline for determining whether the Proposed Project's environmental impacts may be significant, unless it is identical to the existing and environmental setting analysis, which does establish that baseline. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the no project alternative will be the continuation of the existing plan, policy, or operation into the future. For purposes of CEQA compliance, the following analysis considers impacts of the Proposed Project Sites remaining in its current, undeveloped state.

■ Aesthetics

Under current conditions, the land is undeveloped and primarily vacant, with a few existing structures on some Sites. If the Sites remain undeveloped, there would be no visual change to the Project Area. No potential obstruction of viewsheds would occur, and there would be no potential impacts from building massing or height. In addition, the significant and unavoidable light and glare impacts from the Proposed Project would be avoided.

■ Agricultural Resources

The project Sites would continue in their current undeveloped state. Existing agricultural uses would remain, and the significant and unavoidable impacts from conversion of Prime or Unique Farmland on Sites 1 and 7 would not occur. No conflicts with existing zoning on Sites 3, 5, and 7 would occur under this alternative. The significant and unavoidable impacts of the Proposed Project would be avoided with this Alternative.

■ Air Quality

As the project Sites would remain vacant, no impacts with regard to construction emissions or increase in vehicular traffic and resultant pollutants would occur. The significant and unavoidable impact from exceedance of thresholds for criteria pollutants would be avoided with this Alternative.

■ Biological Resources

If the project Sites remain vacant, no coastal sage scrub habitat, potential wetland habitat, or the identified seasonal stream would be impacted. The Project Area would remain as under current conditions and there would be no impact to biological resources.

■ Cultural Resources

No structures exist in the Project Area that have been identified as historic structures. All impacts of the Proposed Project have been identified as having no impact or less than significant with mitigation; however, the No Project/No Development Alternative would result in the land remaining in its current state, and no cultural resource impacts would occur.

■ Geology, Soils, and Mineral Resources

With no development in the Project Area, there would be no impacts to geology, soils, or mineral resources. No additional persons would be exposed to seismic hazards or risks from landslides or soil liquefaction or instability.

■ Hazards and Hazardous Materials

No demolition of existing structures would occur and no additional uses would be developed that could expose the public or construction workers to potential risks from asbestos, lead-based paint, or contaminated soil or groundwater.

■ Hydrology and Water Quality

Runoff would remain as under current conditions. Pollutant concentrations would not change if the project Sites remain undeveloped. The impacts of use of pesticides for the Proposed Project uses would not occur and would not change the TMDL levels of existing drainages. The significant and unavoidable impacts to water quality under the Proposed Project would be avoided.

■ Land Use

While the impacts from the Proposed Project with respect to Land Use are determined to be less than significant, maintenance of the Project Area in its current undeveloped condition would avoid all land use impacts. No amendment of zoning or land use maps would be required. However, maintaining the

Project Area in its current state would not be consistent with Policies 1.1 and 1.3 of the General Plan Land Use Element, which seek to achieve a land use composition in Lake Forest that promotes a balance between the generation of public revenues and the costs of providing public facilities and services. In addition, no development would remove the benefit of provision of additional parkland in the City, which is a benefit of the Proposed Project. No development would also result in loss of the estimated \$630,000 surplus in revenue to the City from the Proposed Project.

■ **Noise**

No noise impacts from increased development and vehicular traffic or construction activities would occur under this alternative.

■ **Population and Housing**

No increased population in the City would result from the No Project/No Development alternative. However, as no housing would be provided, the jobs/housing balance in the City would not be improved as identified under the Proposed Project.

■ **Public Services**

No increased demand for public services (fire, police, schools, and libraries) would occur under the No Project/No Development alternative. No potential school site would be developed as under the Proposed Project.

■ **Recreation**

The benefit of additional parkland acreage in the City would not occur under the No Project/No Development alternative as under the Proposed Project. The City would not be required to purchase and improve the parkland under option on Site 1 under this Alternative. There would be no deterioration of existing parks and recreational facilities due to increased population, although this impact was identified as less than significant under the Proposed Project.

■ **Transportation**

There would be no increase in vehicular traffic with continuation of the project Sites in their current undeveloped state. The LFTM would not be implemented, and, therefore, traffic improvements that would benefit the City of Lake Forest would not occur. Maintaining the land in its current state would, therefore, have a greater impact overall on traffic in the City, because the extensive improvements identified under the LFTM would not be implemented.

■ Utilities and Service Systems

There would be no increased demand for water, natural gas, or electricity under the No Project/No Development Alternative, nor increased wastewater or solid waste generation. There would, therefore, be no impacts on utilities and service systems from implementation of this Alternative.

4.5.2 Attainment of Project Objectives

The No Project/No Development Alternative would not achieve any of the project objectives of providing a balanced community by provision of linkages between the north and south portions of the City, providing a stable economic base through development in the Project Area whereby the City and its residents would benefit, providing adequate public space and recreational facilities to benefit City residents, or contribute toward providing a variety of housing types within the City.

Table 4-1 No Project/No Development Alternative		
<i>Resource</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics	Less than	SU impacts of light and glare from Proposed Project would be avoided.
Agricultural Resources	Less than	No development on agricultural sites would occur.
Air Quality	Less than	No increase in development or vehicular traffic.
Biological Resources	Less than	No disturbance of habitat or sensitive biological areas.
Cultural Resources	Less than	No potential disturbance of archeological or paleontological resources.
Geology, Soils and Mineral Resources	Less than	No increase in risks associated with seismic hazards or development on unstable soils.
Hazards and Hazardous Materials	Less than	No development would expose persons to risks from hazardous exposure.
Hydrology and Water Quality	Less than	No increase in polluted runoff from pesticide use would occur; would avoid the SU impact of the Proposed Project on water quality
Land Use and Planning	Less than	No issues of potential incompatibility of uses.
Noise	Less than	No development would result in an increase in population, vehicular traffic, or other sources of noise.
Population and Housing	Less than	The SU population impact of the Proposed Project would be avoided; however, this Alternative would also not improve the jobs/housing balance or provide needed housing in Orange County.
Public Services	Less than	No increased demand for public services.
Recreation	Greater than	No increased demand for recreational facilities; however, benefit of additional parkland provision would not be realized. Public facilities component would not be developed.
Traffic and Circulation	Greater than	There would be no additional trip generation from the Project Sites. However, the LFTM that is part of the Proposed Project would not be implemented.
Utilities and Service Systems	Less than	No increased demand or generation.

4.6 ALTERNATIVE 1: NO PROJECT/REASONABLY FORESEEABLE DEVELOPMENT GENERAL PLAN ALTERNATIVE

4.6.1 Description

The No Project/Reasonably Foreseeable Development General Plan Alternative (No Project Alternative) represents development that would occur in the Project Area under the existing General Plan, which allows only industrial and commercial uses in the Project Area..

Table 2-1 in Chapter 2 (Project Description) describes existing entitlements under the existing General Plan. That table is reproduced below as Table 4-2.

Table 4-2 Existing Entitlements and Allowed Development			
Site	Gross Site Area (acres)^a	Existing General Plan	Non-Residential Entitlement (sf)
Site 1 (Shea/Baker)	387	Business Park	4,865,000 ^c
Site 2 (Portola Center)	243	Business Park	2,271,654 ^d
		Commercial	544,500 ^d
Site 3 (IRWD)	82	Public Facility ^b	0
		Light Industrial	808,038
Site 4 (Baker)	50	Commercial	435,600 ^e
Site 5 (Whisler/Greystone)	13	Professional Office	198,198 ^d
Site 6 (Pacific Heritage)	18	Open Space	0
Site 7 (Nakase)	45	Business Park	686,070 ^d
<i>Subtotal</i>	<i>838</i>		<i>9,809,060</i>

SOURCE: City of Lake Forest 2004

^a All acreages are rounded

^b Site currently contains IRWD storage and maintenance facilities

^c Square footage allowed under current development agreements

^d Assumes Business Park, Light Industrial, and Professional Office at .35 FAR and Commercial at .25 FAR

^e Assumes .20 FAR per BRPC Planning Area 5

Tables 4-3 and 4-4 illustrate the differences between buildout of the General Plan and the Proposed Project.

Legend

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/Net AC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space
-  Lake
-  Transportation Corridor
-  Mineral Resource Overlay

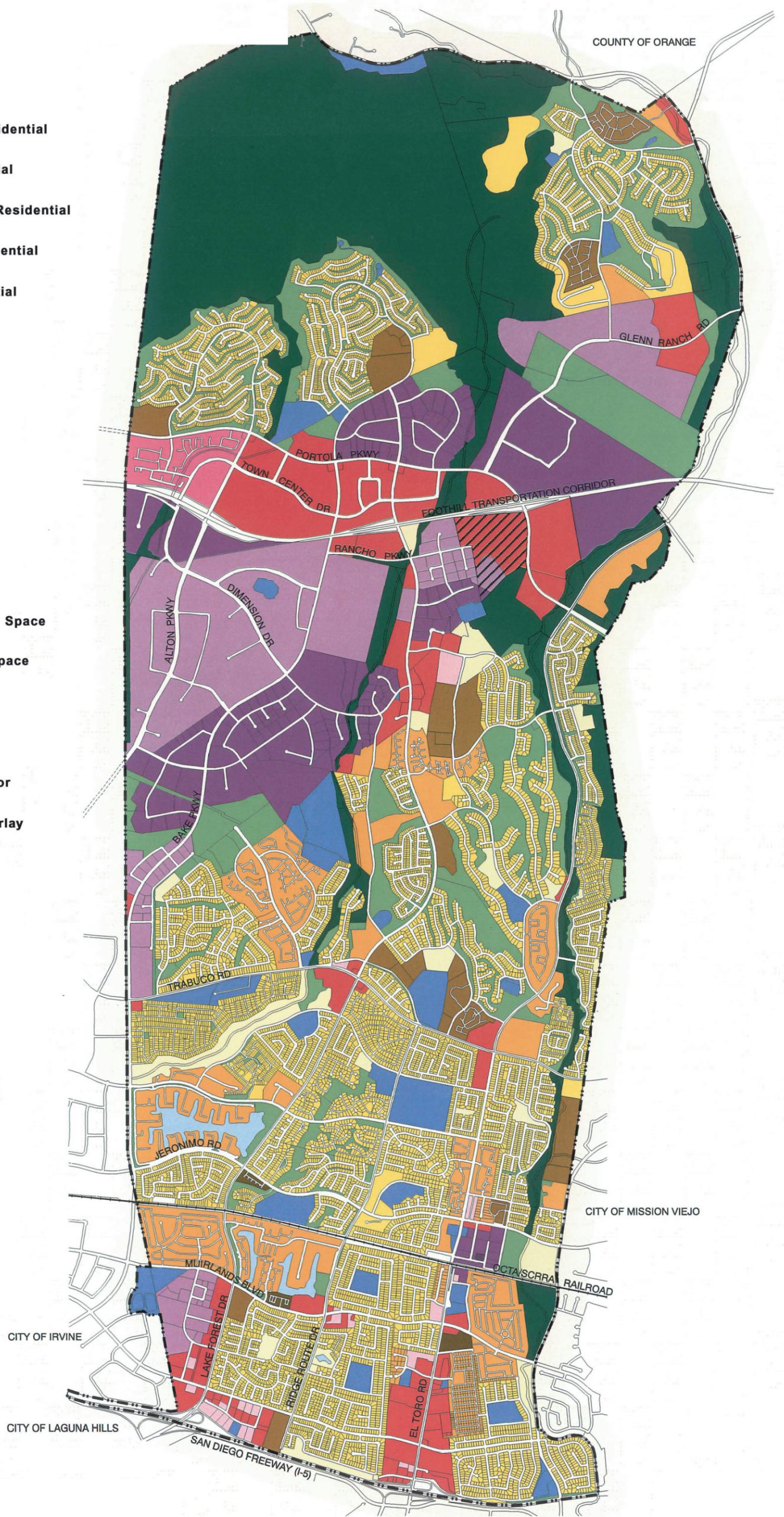


FIGURE 4-1
No Project/Reasonably Foreseeable Development General Plan Alternative (Existing General Plan Land Use)



<i>Characteristics</i>	<i>Existing General Plan</i>	<i>Proposed Project</i>
Land Uses	9.8 million sf of industrial and commercial uses; No mixed or residential uses	Mixed-use Plan 5,415 residential units
Average Residential Density	0	9 units/acre
Industrial and Commercial Square Footage	Up to 9.8 million sf	648,720*
Students Generated	0	1,988
Parks & Public Facilities	18-acre park option; City funds purchase and improvement of property at a cost to the City of more than \$13 million	96 acres of neighborhood and community parks, including sports park and Community/Civic Center
Open space and trails	Class 1 bike path along Borrego Wash	Master planned to include more citywide and regional trail connections
Traffic	152,790 ADT 14,170 AM peak hour trips and 15,740 PM peak hour trips.	Approximately 52 percent reduction in ADT compared to the General Plan—72,816 ADT 4,387 AM peak hour trips and 6,853 PM peak hour trips.
Connection of Alton Parkway	Occurs after development of 1 million sf of industrial park.	Constructed during initial phases of residential development
Fiscal Impact	\$330,000 surplus	\$630,000 surplus

SOURCE: City of Lake Forest 2004

* Includes 200,000 sf of Business Park

<i>Designation</i>	<i>Existing General Plan</i>	<i>Proposed Project</i>
LDR	0	194
L-MDR	0	180
MDR	0	184
HDR	0	0
C	100	0
PO	13	0
MU	0	114
BP	581	45
LI	53	0
PF	29	15
CP/OS	0	8
OS	62	98
<i>Totals</i>	<i>838</i>	<i>838</i>

SOURCE: City of Lake Forest NOP 2004; personnel communication with City of Lake Forest, January, February, March 2005

BP = Business Park

HDR = High Density Residential

LI = Light Industrial

OS = Open Space

C = Commercial

L-MDR = Low-Medium Density Residential

MDR = Medium Density Residential

PF = Public Facility

CP/OS = Community Park/Open Space

LDR = Low Density Residential

MU = Mixed Use

PO = Professional Office

4.6.2 Impacts

■ Aesthetics

The existing General Plan provides for approximately 9.8 million sf of industrial and commercial uses for the project Sites. Development of these land uses would change the character of the existing area from undeveloped to developed, and could result in incompatibility with surrounding uses, if industrial uses, for example, were to be located adjacent to residential uses. In addition, a substantial amount of commercial development would likely be more massive in character than the residential development proposed in the Project Area, which would result in introduction of building mass or height that could conflict with the character of surrounding development. However, architectural style and design features would be required to comply with all General Plan policies and the implementing Zoning Ordinance requirements. These policies require development to consider compatibility with adjacent uses during the design process. As part of this consideration, setbacks, visual screening, noise barriers, and other features as necessary would be incorporated into project design as appropriate to address consistency, and would likely not result in degradation of the visual quality of the Project Area through architectural features.

While development under the existing General Plan would be generally compatible with surrounding uses, a concentration of industrial and commercial uses alone in a 900+-acre area in the middle of the City would detract from the overall image of the City by providing a visual barrier between the north and south portions of the City. Landscaped area with smaller structures would be replaced with larger, boxy structures and large expanses of parking area. Even with introduction of landscaped and open areas, the impact to visual quality could be greater than that caused by the Proposed Project because, as noted, the Proposed Project will result in the construction of residences, which are generally smaller, more aesthetically pleasing structures that lack large parking and other paved areas associated with industrial and commercial development. A substantial massing of industrial and commercial development could result in building heights and massing that would obstruct public views of the Santa Ana Mountains and the Whiting Ranch Wilderness Area to the north from various vantage points to the south of the Project Area. This could be particularly noticeable on the more hilly Sites, such as Site 3. From almost any viewpoint to the south of the Project Area, a noticeable decrease in the viewshed toward the Santa Ana Mountains may be visible, despite the upward slope of the City to the north. Although these impacts to visual quality are likely to be greater than that which would occur under buildout of the Proposed Project, as with buildout of the Proposed Project, such impacts are likely to be less than significant due to required compliance with City building and design review standards.

Buildout of Alternative 1 is unlikely to cause significant impacts to scenic resources or scenic vistas. First, impacts on views from El Toro Road, which is on the County's Master Plan of Scenic Highways, could be greater than under the Proposed Project if buildout of Alternative 1 creates view barriers from El Toro Road or arterial roadways due to building heights and massing that is more substantial than that which would occur under buildout of the Proposed Project. However, just as buildout of the Proposed Project would be subject to site-specific building standards and guidelines, so too, would buildout of Alternative 1. Additionally, as noted under Impact 3.1-2, no natural features have been identified by the City or any applicable plans that would be affected by development in the Project Area., Thus, the impact

of development under the existing General Plan would be similar to the impacts of the Proposed Project regarding obstruction of scenic resources.

As noted above, office lighting creates substantially more light than residential lighting (up to 75 foot-candles compared to a maximum of ten foot-candles for residential). This measurement would likely be similar for industrial uses. The development of 9.8 million sf of industrial and commercial use in the Project Area would, therefore, result in substantial ambient light production that would be significant spread out over the Project Area at General Plan buildout. In addition, commercial and industrial buildings typically utilize substantial amounts of exterior glass, and most structures are constructed with stucco, steel, or concrete exteriors that produce substantial amounts of glare. Security lighting would be required on all industrial and commercial buildings and in all parking areas, some of which would likely be extensive. Lighted signs would be included in most or all industrial and commercial development in the Project Area. There are no standard City conditions or requirements that would reduce the level of this impact. As the City's stated threshold of significance for lighting impacts is 1-1/4 foot-candles between dusk and dawn, this impact would be significant and unavoidable. While the impacts of light and glare of the Proposed Project would be significant and unavoidable, the impacts would be greater for buildout of the existing General Plan due to the difference in land use and lighting and building surfaces.

The Project Area is designated for commercial and industrial uses under the General Plan. All development under the General Plan would be required to comply with provisions and design guidelines contained in any applicable Planned Communities, as well as all water resource regulations under the National Pollutant Discharge Elimination Program (NPDES), Uniform Building Code requirements, and fire codes, and would therefore not result in any conflicts with plans, policies, or regulations. Similar to the Proposed Project, there would be no anticipated impact with regard to this threshold as a result of development under the existing General Plan.

■ Agricultural Resources

Under the existing General Plan designations, no residential uses would occur in the Project Area. Instead, development under the existing General Plan would allow business park, light industrial, and office space uses to develop on Sites 1 through 7. Specifically, the existing General Plan would allow approximately 9.8 million sf of non-residential entitlement as well as open space uses on Sites 1 through 7. Although the type of development would be substantially different from that under the Proposed Project, the same amount of land would eventually be developed. Consequently, Sites 1 and 7, which consist of a combination of prime and unique farmland, would be converted to urban uses. Once the land is converted to urban uses, the ability to use the land for agricultural production will be lost. Similar to the Proposed Project, even though the conversion of Site 1 from agricultural uses to business park uses was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of this Alternative is considered significant and unavoidable. However, the conversion of Site 7 was not previously evaluated in any environmental documentation. Given that a substantial area of prime and unique farmland on Site 7

would be converted to nonagricultural uses under Alternative 1, significant and unavoidable impacts would occur on this site, similar to the Proposed Project.

Presently, Sites 3, 5, and 7 are zoned A1 general agricultural, which represent a total of approximately 140 acres. The remaining sites under the Proposed Project (1, 2, 4, and 6) are zoned for urban activity, business park, commercial, and open space. If the proposed future development were to occur under the existing zoning designations, the development would conflict with zoning for agricultural use. However, future development under the existing General Plan would be required to re-zone appropriate sites in order to be consistent with permitted land uses prior to development. As such, existing agricultural zoning in the Project Area for Sites 3, 5, and 7 would be revised to reflect the permitted non-residential uses. Consequently, similar to the Proposed Project, development under this Alternative 1 would conflict with zoning for agricultural uses, and impacts would be significant and unavoidable.

Similar to the Proposed Project, although approximately 244 acres in the Project Area within three separate parcels (Sites 1, 3, and 7) are currently used for agricultural operations, the development of the Proposed Project on Sites 1 and 3 would not result in other changes in the existing environment, which could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Site 3 is similarly located in an urban environment and its development would not necessarily result in other Farmland in the City being converted to nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not create additional pressures on other Farmland areas to convert to nonagricultural uses. However, development on Site 7 would result in environmental changes that could result in pressure to convert the remaining portion of Site 7 to non-agricultural uses, similar to the Proposed Project. The impact of implementation of this Alternative would be significant and unavoidable with respect to Site 7.

■ Air Quality

Under the existing General Plan, the allowed land uses on Sites 1 through 6 in the Project Area consist of industrial and commercial land uses, while the entire 121-acre Site 7 is designated for business park land use. Implementation of Proposed Project, however, would result in a General Plan and Zone Change that would change the allowed land uses on Sites 1 through 6 from industrial and commercial land uses to residential and mixed uses. In addition, the Proposed Project would maintain the business park land use designation for Site 7 with the exception that a public facilities overlay would be added on the site that would permit the development of three community facilities (i.e., sports park, Community Center, and Civic Center) on 45 acres. By introducing residential uses, mixed-use development, public facilities, and additional parkland acreages while eliminating the development of light industrial uses within the Project Area, the Proposed Project would result in a reduction in overall emissions when compared to the existing General Plan. In addition, as discussed in Section 2.7 of Chapter 2 (Project Description) of this EIR, the development proposed under the Proposed Project would also result in an approximately 52 percent reduction in average daily traffic trips when compared with the development proposed under the existing General Plan. Thus, because continued implementation of the existing General Plan would

result in greater overall emissions than implementation of the Proposed Project, the impact of the existing General Plan would be greater than the Proposed Project.

In terms of the total development that would occur on the 838 acres of land located within Sites 1 through 7 of the Project Area, the overall emissions associated with construction that would be generated under the existing General Plan and the Proposed Project would differ because different land uses are proposed under each plan. Due to the construction of different land uses along with the variables associated with daily construction activity (e.g., construction site size, construction equipment, construction time frame, etc.) within these seven sites of the Project Area, the quantification of total construction emissions resulting from implementation of the existing General Plan and the Proposed Project for the purpose of comparison would be difficult, if not impossible, to conduct. Thus, it would be speculative at this point to compare the total construction emissions that would be generated on Sites 1 through 7 under buildout of the existing General Plan and the Proposed Project. However, regardless of whether the existing General Plan would result in similar, less, or greater construction impacts than the Proposed Project, the overall amount of construction that would occur within these seven sites from buildout of both the existing General Plan and the Proposed Project would still be anticipated to exceed the SCAQMD's recommended thresholds of significance.

In terms of operational emissions, implementation of the existing General Plan would result in the development of non-residential uses consisting of business parks, commercial uses, light industrial uses, and professional office uses on Sites 1 through 7 of the Project Area, while implementation of the Proposed Project would result in the potential development of 5,415 residential units, up to 650,000 sf of commercial development, over 50 acres of neighborhood parks, and 45 acres of community park and Community/Civic Center. When compared to each other, the land uses proposed under the existing General Plan would generally generate greater overall motor vehicle trips than the land uses proposed under the Proposed Project, thereby resulting in greater overall emissions. In particular, as shown in Table 2-11 in Chapter 2 (Project Description) of this EIR, the Proposed Project would incorporate a balanced mix of residential and mixed uses, open space, parkland, and trail linkages that is currently lacking in the existing General Plan. In addition, as discussed previously, implementation of the Proposed Project would result in an approximately 52 percent reduction in average daily traffic trips when compared with the existing General Plan. As such, the existing General Plan would result in greater overall operational emissions than the Proposed Project.

As discussed in Impact 3.3-3 under the Proposed Project, the SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts. Therefore, individual development projects on Sites 1 through 7 of the Project Area that generate construction or operational emissions that exceed the SCAQMD recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. In comparing the existing General Plan and the Proposed Project, a programmatic level of analysis is provided for the proposed development on Sites 1 through 7 under buildout conditions for both the existing General Plan and the Proposed Project. When all of the new land uses that are

proposed for development on Sites 1 through 7 are assessed in whole under buildout conditions, the total emissions generated for both the existing General Plan and the Proposed Project are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. As such, the development on Sites 1 through 7 in the Project Area under both the existing General Plan and the Proposed Project would also make a cumulatively considerable contribution to these criteria pollutants. However, because the existing General Plan would result in greater overall emissions when compared to the Proposed Project, as discussed in Impact 3.3-1 under the Proposed Project, the existing General Plan’s contribution to a cumulative considerable increase in emissions for those pollutants for which the Basin is in nonattainment would be greater than the Proposed Project.

Based on the estimated traffic volumes provided in the traffic study, localized CO concentrations at the study intersections in the Project Area and the traffic study area were calculated for buildout of the existing General Plan in year 2030, which are shown in Table 4-5 and Table 4-6, respectively.

Table 4-5 Future (2030) Localized Carbon Monoxide Concentrations within the Project Area under Existing General Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
1. Alton and Portola	3.2	1.7	3.2	1.6	3.1	1.6
2. Bake and Portola	3.5	1.9	3.4	1.8	3.3	1.7
3. Lake Forest and Portola	3.4	1.8	3.4	1.8	3.3	1.7
4. Glenn Ranch and Portola	3.4	1.8	3.3	1.8	3.3	1.7
5. Portola and SR-241 Ramps	3.4	1.8	3.3	1.7	3.2	1.7
6. Alton and SR-241 Ramps	3.3	1.8	3.3	1.7	3.2	1.7
7. Lake Forest and SR-241 NB	3.2	1.7	3.2	1.6	3.1	1.6
8. Lake Forest and SR-241 SB	3.2	1.7	3.2	1.6	3.1	1.6
9. Bake and Rancho North	3.4	1.8	3.3	1.7	3.2	1.7
10. Lake Forest and Rancho	3.5	1.9	3.4	1.8	3.3	1.7
11. Bake and Rancho South	3.4	1.8	3.3	1.7	3.2	1.7
12. El Toro and Portola/Santa Margarita	3.7	2.1	3.6	2.0	3.4	1.8
13. Bake and Commercentre	3.2	1.7	3.2	1.7	3.1	1.6
14. Bake and Irvine/Trabuco	3.6	2.0	3.5	1.9	3.4	1.8
15. Lake Forest and Trabuco	3.4	1.8	3.3	1.7	3.2	1.7
16. Ridge Route and Trabuco	3.3	1.7	3.2	1.7	3.2	1.6
17. El Toro and Trabuco	3.5	1.9	3.4	1.8	3.3	1.7
18. Bake and Toledo	3.4	1.8	3.3	1.7	3.2	1.7
19. Lake Forest and Toledo	3.2	1.7	3.2	1.6	3.1	1.6
20. Ridge Route and Toledo	3.1	1.6	3.1	1.6	3.1	1.5
21. El Toro and Toledo	3.3	1.7	3.2	1.7	3.2	1.6
22. Bake and Jeronimo	3.4	1.9	3.4	1.8	3.3	1.7
23. Lake Forest and Jeronimo	3.3	1.7	3.2	1.7	3.2	1.6
24. Ridge Route and Jeronimo	3.2	1.6	3.1	1.6	3.1	1.6

Table 4-5 Future (2030) Localized Carbon Monoxide Concentrations within the Project Area under Existing General Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
25. El Toro and Jeronimo	3.4	1.8	3.4	1.8	3.3	1.7
26. Los Alisos and Jeronimo	3.4	1.8	3.3	1.7	3.2	1.7
27. Lake Forest and Muirlands	3.3	1.8	3.3	1.7	3.2	1.7
28. Ridge Route and Muirlands	3.2	1.7	3.2	1.6	3.1	1.6
29. El Toro and Muirlands	3.4	1.8	3.3	1.7	3.2	1.7
30. Los Alisos and Muirlands	3.5	1.9	3.4	1.8	3.3	1.7
31. Lake Forest and Rockfield	3.4	1.8	3.3	1.8	3.3	1.7
32. Ridge Route and Rockfield	3.4	1.8	3.3	1.7	3.2	1.7
33. El Toro and Rockfield	3.3	1.8	3.3	1.7	3.2	1.7
34. Los Alisos and Rockfield	3.4	1.8	3.3	1.7	3.2	1.7
35. Lake Forest and I-5 NB	3.4	1.8	3.3	1.8	3.2	1.7
36. Lake Forest and I-5/Carlota	3.9	2.2	3.7	2.1	3.6	2.0
37. Paseo De Valencia and Carlota	3.3	1.8	3.3	1.7	3.2	1.7
38. El Toro and Bridger/I-5 NB	3.4	1.8	3.3	1.8	3.2	1.7
39. El Toro and Avd Carlota	3.5	1.9	3.4	1.8	3.3	1.7
40. Portola and Rancho	3.4	1.8	3.3	1.8	3.3	1.7
41. Alton and Towne Center Drive	3.5	1.9	3.4	1.8	3.3	1.7
42. Alton and Commercentre	3.3	1.7	3.3	1.7	3.2	1.7

SOURCE: EIP Associates 2005 (calculation sheets are provided in Appendix D)

National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

The localized CO concentrations calculated in this table are based on the estimated traffic volumes generated at the study intersections in the Project Area by development under existing General Plan without the traffic mitigation measures proposed by the traffic report, as the feasibility of implementing these mitigation measures has not been determined at this time.

Table 4-6 Future (2030) Localized Carbon Monoxide Concentrations within the "Extended Project Area" under the Existing General Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
100. Portola Pkwy. at SR-241 NB Ramps	3.2	1.7	3.2	1.6	3.1	1.6
101. Portola Pkwy. at SR-241 SB Ramps	3.2	1.7	3.2	1.6	3.1	1.6
102. Ridge Vly. at Portola Pkwy.	3.3	1.8	3.3	1.7	3.2	1.7
103. Sand Cyn. Ave. at Portola Pkwy.	3.3	1.8	3.3	1.7	3.2	1.6
104. Jeffrey Rd. at Portola Pkwy.	3.3	1.8	3.3	1.7	3.2	1.7
105. Alton Pkwy. at Irvine Bl.	3.6	2.0	3.5	1.9	3.4	1.8
106. B Dr. at Irvine Bl.	3.4	1.8	3.3	1.8	3.3	1.7
107. A Dr. at Irvine Bl.	3.4	1.9	3.4	1.8	3.3	1.7
108. Ridge Vly. at Irvine Bl.	3.4	1.8	3.4	1.8	3.3	1.7
109. College Dr. at Irvine Bl.	3.4	1.8	3.3	1.7	3.2	1.7

Table 4-6 Future (2030) Localized Carbon Monoxide Concentrations within the “Extended Project Area” under the Existing General Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
110. ETC E. Leg NB Ramps at Irvine Bl.	3.4	1.8	3.3	1.8	3.2	1.7
111. ETC E. Leg SB Ramps at Irvine Bl.	3.3	1.8	3.3	1.7	3.2	1.7
112. Sand Cyn. Ave. at Irvine Bl.	3.4	1.8	3.4	1.8	3.3	1.7
113. Jeffrey Rd. at Irvine Bl.	3.5	1.9	3.4	1.8	3.3	1.7
114. SR-133 NB Ramps at Trabuco Rd.	3.2	1.7	3.2	1.7	3.1	1.6
115. SR-133 SB Ramps at Trabuco Rd.	3.2	1.7	3.2	1.7	3.1	1.6
116. Sand Cyn. Ave. at Trabuco Rd.	3.4	1.8	3.3	1.8	3.2	1.7
117. Alton Pkwy. at Toledo Wy.	3.3	1.8	3.3	1.7	3.2	1.7
118. Alton Pkwy. at Jeronimo Rd.	3.4	1.8	3.3	1.7	3.2	1.7
119. Alton Pkwy. at Muirlands Bl.	3.5	1.9	3.4	1.8	3.3	1.7
120. Marine Wy. at Alton Pkwy.	3.3	1.7	3.2	1.7	3.2	1.6
121. Alton Pkwy. at Technology Dr.	3.5	1.9	3.4	1.8	3.3	1.7
122. Alton Pkwy. at I-5 NB Ramps	3.6	2.0	3.5	1.9	3.3	1.8
123. Marine Wy. at Rockfield Bl.	3.2	1.7	3.2	1.6	3.1	1.6
124. Bake Pkwy. at Muirlands Bl.	3.5	1.9	3.4	1.8	3.3	1.7
125. Bake Pkwy. at Rockfield Bl.	3.5	1.9	3.4	1.9	3.3	1.8
126. Bake Pkwy. at I-5 NB Ramps	3.6	2.0	3.5	1.9	3.4	1.8
127. Bake Pkwy. at I-5 SB Ramps	3.6	2.0	3.5	1.9	3.4	1.8
128. Bake Pkwy. at Irvine Center Dr.	3.3	1.7	3.2	1.7	3.2	1.6
129. Lake Forest Dr. at Irvine Center Dr.	3.4	1.8	3.3	1.8	3.2	1.7
130. Ridge Route at Moulton Pkwy.	3.6	2.0	3.5	1.9	3.4	1.8
131. Santa Maria Ave. at Moulton Pkwy.	3.5	1.9	3.4	1.9	3.3	1.8
132. El Toro Rd. at Moulton Pkwy.	3.7	2.1	3.6	2.0	3.4	1.8
137. Los Alisos Bl. at Trabuco Rd.	3.3	1.7	3.3	1.7	3.2	1.7
138. Trabuco Rd. at Alicia Pkwy.	3.4	1.8	3.3	1.7	3.2	1.7
139. Jeronimo Rd. at Alicia Pkwy.	3.3	1.8	3.3	1.7	3.2	1.7
140. Alicia Pkwy. at Muirlands Bl.	3.6	2.0	3.5	1.9	3.3	1.8
141. I-5 NB Ramps at Alicia Pkwy.	3.5	1.9	3.4	1.8	3.3	1.7
142. I-5 SB Ramps at Alicia Pkwy.	3.4	1.8	3.4	1.8	3.3	1.7
143. Los Alisos Bl. at Avd. De la Carlota	3.2	1.7	3.2	1.6	3.1	1.6
144. El Toro Rd. at Paseo de Valencia	3.2	1.7	3.2	1.6	3.1	1.6
145. Los Alisos Bl. at Paseo de Valencia	3.3	1.8	3.3	1.7	3.2	1.7

SOURCE: EIP Associates 2005 (calculation sheets are provided in Appendix D)

National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

The localized CO concentrations calculated in this table are based on the estimated traffic volumes generated at the study intersections in the “extended study area” by development under the existing General Plan without the traffic mitigation measures proposed by the traffic report, as the feasibility of implementing these mitigation measures has not been determined at this time.

As shown in Table 4-5 and Table 4-6, future 1-hour and 8-hour CO concentrations near the study intersections in the Project Area as well as the “extended Project Area” would not exceed national or state ambient air quality standards in year 2030 under the existing General Plan. Thus, as implementation of both the existing General Plan and the Proposed Project would not result in CO hotspots at the study intersections in the Project Area and the “extended Project Area,” the contribution of traffic-related CO associated with buildout of the existing General Plan and the Proposed Project would be similar in magnitude, and would be less than significant.

In terms of objectionable odors, construction activities occurring on Sites 1 through 7 in the Project Area under both the existing General Plan and the Proposed Project are anticipated to generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. However, these odors would occur during daytime hours only and would be isolated to the immediate vicinity of the construction sites within Sites 1 through 7. In addition, standard construction requirements would be imposed on the developers/applicants associated with these construction projects that would address odors from construction activities. As such, objectionable odors resulting from construction under the existing General Plan or the Proposed Project would be similar in magnitude, and would not affect a substantial number of people.

In addition, whereas the Project Area properties could be developed with approximately 9.8 million sf of non-residential uses consisting of business parks, commercial uses, open space, public facilities, light industrial uses, and professional office uses under the existing General Plan, the Proposed Project would change the allowed land uses under the existing General Plan from industrial and commercial land uses on these sites to residential and mixed uses. Overall, implementation of the Proposed Project could result in the development of 5,415 residential units, up to 650,000 sf of commercial development, over 50 acres of neighborhood parks, and 45 acres of community park and Community/Civic Center on the Project Area properties. Despite the different land uses proposed between the existing General Plan and the Proposed Project, none of the new development proposed under each plan is anticipated to result in the creation of objectionable odors. While the new commercial uses designated under the existing General Plan and the Proposed Project could include restaurants, the odors associated with cooking activities would be similar to existing housing and food services uses throughout the City and would be confined to the immediate vicinity of the new buildings. Restaurants are also typically required to have ventilation systems that avoid substantial adverse odor impacts. Furthermore, all new trash receptacles associated with these restaurants would be stored in areas and in containers as required by City and Health Department regulations, and be emptied on a regular basis, before potentially substantial odors have a chance to develop. As such, odors from commercial uses under both plans would not affect a substantial number of people. While light industrial uses are designated in Site 3 under the existing General Plan, this land use designation, according to the existing General Plan, provides for:

... a variety of light industrial uses that are non-polluting and which can co-exist with surrounding land uses and which do not in their maintenance, assembly, manufacturing, or operations create smoke, gas, dust, sound, vibration, soot, or glare to any degree which might be obnoxious or offensive to persons residing or conducting business in the City.

Thus, the development of light industrial uses as part of the existing General Plan would not include facilities that operate processing or fabrication activities that may emit objectionable odors affecting

sensitive receptors such as residential uses. The remaining land uses that are proposed under the existing General Plan and the Proposed Project (i.e., business parks, open space, public facilities, professional office uses, and residential uses) are not considered to be sources that create objectionable odors. Therefore, implementation of both the existing General Plan and the Proposed Project would not create objectionable odors affecting a substantial number of people, and this potential impact would be less than significant for both plans.

■ Biological Resources

The major difference between the existing General Plan and the Proposed Project is the uses that would be allowed on a specific parcel. In general, the existing General Plan would not allow residential development but would allow greater commercial, industrial, and business park uses in the Project Area than under the Proposed Project. The largest change in proposed use between the existing General Plan and the Proposed Project is at Site 6, which is zoned open space in the existing General Plan. The Proposed Project designates this parcel as low-density residential with a small open space running through the middle of the site. Site 6 currently supports areas of moderate- to high-quality coastal sage scrub habitat, potential wetland habitat, and a seasonal stream. Under the existing General Plan, this area would be preserved as open space and these resources would not be significantly impacted. In the Proposed Project, this site would be converted to houses, an action that would require the removal of the coastal sage scrub and other habitats. This action could also impact sensitive species and wetland resources. This would be considered a potentially significant impact of the Proposed Project that would not occur under the existing General Plan. One of the other major differences between the existing General Plan and the Proposed Project is in the amount of Site 2 that is zoned open space or regional park/open space. Under the existing General Plan, 44 acres of this 243-acre site would be zoned for open space. Under the Proposed Project, 90 acres of this site would be zoned for open space and/or regional park. The increase in open space/regional park proposed in the Proposed Project is important because it improves wildlife connectivity between the Whiting Ranch Wilderness Park, existing open space surrounding Site 2, and Site 2 itself when compared to the existing General Plan.

Overall, impacts to biological resources from implementation of either the existing General Plan or the Proposed Project are expected to be potentially significant. From the biological perspective, the difference between construction of residences or commercial structures is not substantial. Both of these uses would result in disturbance of the existing habitats. It is this disturbance which leads to the potential impacts. The mitigation required to offset for these impacts is the same regardless of which plan is implemented. Compliance with standard City conditions and requirements would reduce impacts of General Plan implementation to a less-than-significant level. Therefore, impacts to biological resources would be substantially similar for General Plan buildout compared to the Proposed Project with the exception of Site 6, which would result in a lesser impact because of preservation of the site as open space under the General Plan.

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of MMs 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology/Soils and Mineral Resources

As discussed in Chapter 2 (Project Description) Table 2-1, the existing General Plan would result in buildout of about 9.8 million sf of non-residential entitlements in the Project Area. The Proposed Project would result in the development of 650,000 sf of commercial uses plus a residential component of 5,415 dwelling units. Although the same geology, soils, and seismicity impacts would apply to buildout under either scenario, the inclusion of a residential component in the Proposed Project would have the effect of placing more people in the Project Area, and would appear to increase the number of people exposed to geologic, soils, and seismic hazards. Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, landslides, erosion, etc., are required to be addressed by the provisions of the current California Building Code, the NPDES permit requirements, which are legal requirements, as well as the existing General Plan policies. The investigation, reporting, and treatment of areas suspected of containing potentially weak or unstable soils or slopes, through the use of site-specific analyses conducted to establish design criteria for appropriate foundation type and support, are not optional items. Conformance with these regulations is mandatory and would ensure that potential site-specific geotechnical conditions would be addressed fully in the design of the project and that potential impacts would be maintained at less-than-significant levels. Consequently, the geology, soils, and seismicity impacts would be the same under either development scenario.

The Proposed Project would involve the planned reuse for urban uses of a PCC-grade aggregate production site. Although the proposed uses are different from the currently zoned uses, the planned closure of aggregate production would occur under either development scenario. Consequently, the lack of mineral resource impacts would be the same under the existing General Plan or the Proposed Project.

■ Hazards and Hazardous Materials

Implementation of the existing General Plan would result in the development of commercial, office, and light industrial uses in the Project Area. These uses may involve the handling, use, or disposal of hazardous materials. In general, industrial facilities have a greater potential for exposure of hazardous materials to the public or environment when compared to commercial facilities, because of quantities of hazardous waste they handle. Implementation of the Proposed Project would also result in development of commercial and public facilities that could handle, use, or dispose of hazardous materials. However,

the Proposed Project does not include any industrial land uses in the Project Area. Therefore, the potential for exposure to hazards and hazardous materials in the Project Area would be greater from implementation of the existing General Plan than the Proposed Project.

As is true for the Proposed Project, implementation of the existing General Plan could result in the accidental exposure to hazardous materials during site clearance, grading, or excavation of the project sites within the Project Area. Although no site contamination is known or suspected at any of the project sites within the Project Area, past activities such as the on-site storage of fuels, application of pesticides, herbicides and other agricultural chemicals, or illicit debris disposal could have occurred in the area. Because development occurring under both the existing General Plan and the Proposed Project would require grading and excavation in approximately the same areas, the impacts would also generally be the same and would be potentially significant. However, similar to the Proposed Project, appropriate mitigation measures could be implemented to reduce this impact associated with implementation of the existing General Plan to a less-than-significant level.

The projects anticipated to be developed as part of the existing General Plan could include a variety of commercial and light industrial enterprises, whereas the Proposed Project would have commercial and residential developments and not have any industrial facilities. Operation of the commercial and industrial developments may require the use of hazardous materials. The potential hazards associated with the accidental release of hazardous materials during the implementation of the existing General Plan would be greater than the potential hazards associated with implementation of the Proposed Project because a greater number of businesses and industrial facilities would be built as part of the existing General Plan when compared to facilities that would be built as part of the Proposed Project.

Development of business parks, commercial properties, open space, public facilities, light industrial, and offices, as part of the existing General Plan or Proposed Project would result in construction on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWIS-listed Site 1), and, as a result, could create a significant hazard to the public or environment. Without implementation of MM 3.7-1 and MM 3.7-2, which would require a Phase I Environmental Site Assessment prior to development on this parcel, the impacts from development on Site 1 would be greater than the Proposed Project. No portion of the project sites were identified on the Cortese list, therefore, impacts would be similar.

Limited amounts of some hazardous materials could be used in the construction and operation of new developments in the Project Area under both the existing General Plan and Proposed Project, including the use of standard construction materials (e.g., paints, solvents and fuels), cleaning and other maintenance products (used in the maintenance of buildings, pumps, pipes and equipment), diesel and other fuels (used in construction and maintenance equipment and vehicles), and the limited application of pesticides associated with landscaping around new developments. While similar hazardous materials would be used in the construction and operation of the development projects in the Project Area under both the exiting General Plan and the Proposed Project, the quantity of hazardous materials to be used are likely to be greater under the existing General Plan because of the allowance for the development of industrial facilities. All demolition and construction activities occurring in the Project Area would be subject to standard regulations and programs. Compliance with these regulations would ensure that the

general public as well as schools would not be exposed to any unusual or excessive risks related to hazardous materials during construction and demolition activities. Similar to the Proposed Project, appropriate mitigation measures and standard conditions of approval would be implemented to reduce this impact to a less-than-significant level. As such, although development under the existing General Plan would be less than significant, impacts associated with the exposure of a school to hazardous emissions under implementation of the existing General Plan would be greater than the potential hazards associated with implementation of the Proposed Project because hazardous materials would be used in greater quantities.

Similar to the Proposed Project, implementation of the existing General Plan could result in short-term temporary impacts on street traffic adjacent to the proposed sites, associated with construction vehicles and the potential for lane closures. Any such impacts would be limited to the construction period and the immediate adjacent streets or intersections, and as such, would be unlikely to interfere with emergency response vehicles (e.g., fire, police, or ambulance). However, operation of the various development projects in the Project Area under both the existing General Plan and the Proposed Project could increase traffic on roads or modify existing transportation routes and could interfere with the response times of emergency vehicles. As such, this impact for the existing General Plan and the Proposed Project would be similar in magnitude and would be potentially significant. Compliance with standard City conditions and requirements would be required. Therefore, the impact on emergency response or evacuation would be similar for the existing General Plan than for the Proposed Project.

Implementation of the existing General Plan would result in development of commercial and light industrial businesses in the Project Area. Unlike the Proposed Project, no residential uses would be developed in the Project Area under the existing General Plan. Because commercial and light industrial uses would be developed on sites within the Project Area that would have otherwise been developed with residential uses under the Proposed Project, the risk of exposure of people to potential wildland fire hazards under the existing General Plan would be lower than the Proposed Project. Thus, this impact for the existing General Plan would be lesser in magnitude than the Proposed Project. However, the risk of exposure of people to wildland fires hazard still exists and this impact under the existing General Plan would be considered to be potentially significant. Similar to the Proposed Project, appropriate mitigation measures and standard conditions of approval would be implemented to reduce this impact to a less-than-significant level. Under the Proposed Project, the City will reduce the potential for hazards associated with wildfires by coordinating with the Orange County Fire Authority (OCFA) to implement fire hazard education, fire protection, and fuel modification programs. Additionally, the current Uniform Fire Code will be used to reduce structural fire hazards. Furthermore, the City will work closely with the local water districts and the OCFA to ensure that water pressure is adequate for fire fighting purposes. Implementation of the City's Emergency Plan and mitigation measure (MM) MM 3.7-5 would reduce the potential impact for the Proposed Project to expose people or structures to a significant risk of loss, injury, or death involving wildfires to a less-than-significant level.

John Wayne Airport, which is owned and operated by the County of Orange, is the only commercial service airport in Orange County. Along with the Fullerton Municipal Airport, which is centrally located in the Los Angeles basin, and the Anaheim Airport, located in the City of Anaheim, these three airports are the only facilities that accommodate general aviation in the County. The project sites are not located

within two miles of any of these airports; therefore, similar to the Proposed Project, development under the General Plan would have no impacts.

■ Hydrology/Water Quality

Because runoff coefficients (and therefore flow rates) are generally higher for buildout of the existing General Plan conditions than the Proposed Project, the impact of the existing General Plan associated with runoff and flow rates would be greater in magnitude than the impact under the Proposed Project. Full buildout of the existing General Plan would likely have greater surface runoff compared to the Proposed Project, as indicated by a higher overall runoff coefficient (0.59 compared to 0.40, respectively; higher overall runoff coefficients indicate increased runoff). Consequently, any impacts associated with flooding and flow rates would be greater under the No Project/Reasonably Foreseeable Development scenario.

Both the existing General Plan and the Proposed Project would have similar effects on drainage patterns and would encounter similar constraints to development. Overall, the existing General Plan would have a similar impact on drainage patterns compared to the Proposed Project.

Due to the higher overall runoff coefficient when compared to the Proposed Project, development in the Project Area under the existing General Plan will likely impede groundwater recharge (because less water would be absorbed into the soil and other porous surfaces) to a greater extent than the Proposed Project, although would still be expected to be less than significant. Consequently, this impact associated with groundwater recharge would be greater for the existing General Plan than the Proposed Project. Increased runoff would not be anticipated to result in flow rates that would exceed the capacity of the existing storm drainage facilities, similar to the Proposed Project, although greater because of increased runoff rates.

Site	Area (acres)	Runoff Coefficients	
		Proposed	General Plan
1	387	0.41	0.60
2	243	0.32	0.56
3	82	0.38	0.66
4	50	0.60	0.70
5	13	0.30	0.50
6	18	0.30	0.25
7	45	0.50	0.60
Overall		0.40	0.59

SOURCE: EIP Associates 2005

As the land uses between the existing General Plan and the Proposed Project are similar, the level and type of urban pollutants contributed under each plan would also be similar. However, because of the higher runoff potential, the potential for increased pollutants in stormwater runoff from the land uses

under the existing General Plan would be greater than the Proposed Project land uses. In addition, due to the grater expanses of surface parking areas, with associated oil and other pollutants from vehicle use, the potential for increased pollutants in stormwater runoff is greater than under the Proposed Project.

Additionally, the existing sedimentation issues in the Borrego Canyon Wash area (as described in the analysis of Impact 3.8-4) would also likely be present under this alternative. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. The No Project/Reasonably Foreseeable Development General Plan Alternative does not include a similar sediment abatement project feature.

Given the foregoing, the impact of the existing General Plan on water quality would also be greater in magnitude than the Proposed Project.

■ Land Use/Planning

Inconsistencies would not occur between development of the existing General Plan and the existing applicable land use plans governing development of the site, as discussed in Section 3.9 for the Proposed Project. Similar to the impacts discussed under that section, impacts would be less than significant.

The existing General Plan would result in no development of residential units in the Project Area. Instead, the focus of development would be business park, light industrial, and commercial uses (see Table 4-8). The majority of the Project Area is devoid of structural development, which includes open space, agricultural areas, mining activities, and previously graded lands. Approximately 9.8 million sf of non-residential development would be allowed over the six sites (see Table 2-1, Project Description). No change would occur on Site 7. Similar to the Proposed Project, the intensity of land uses would increase substantially over existing uses. Where the majority of the site is perceived as vast areas of undeveloped land, the overall character would change to sites with roadways, landscaped areas, signage, and large light industrial/business park/commercial structures. The replacement of vacant areas with large buildings, parking lots, roadways, and landscaping would replace the undeveloped, semi-rural character of these Sites with a commercial setting.

	<i>Public Facility</i>	<i>Commercial</i>	<i>Light Industrial</i>	<i>Business Park/Office</i>	<i>Park/Open Space</i>
1			●	●	
2		●		●	●
3	●		●		
4		●			
5				●	
6					●
7				●	

Of the 838 acres of development, 581 acres (69 percent of the total site area) would be designated business park. Thus, the majority of the site would be dedicated to this use. A total of 100 acres (21 percent) would be associated with commercial uses, and the balance of the site would include professional office, light industrial, public facility, and open space uses.

Similar to Impact 3.9-2 for the Proposed Project, systematic enforcement of City ordinances and monitoring of development within and around the planning area will be used to minimize conflicts of use. Development monitoring by the City can be used to ensure that affected public agencies are capable of providing necessary facilities and services in support of proposed development. During the site-specific development process, development would be required to conform to existing General Plan policies and the implementing Zoning Ordinance requirements. These policies require development to consider compatibility with adjacent uses during the design process. As part of this consideration, setbacks, visual screening, noise barriers, location of parking and entrances, location of loading and trash areas, and other features as necessary would be incorporated into project design as appropriate to address consistency. Buildout of the existing General Plan would result in development of uses across the seven project sites that would be, on the whole, similar to adjacent uses. No residential development would be built. As a result, there would be limited areas where sensitive land uses would be affected by development. As the existing, future, and adjacent uses associated with each site differs on a site-by-site basis, land use compatibility is discussed for each of the individual sites, below.

Site 1 would result in development of business park and light industrial areas adjacent to other areas currently designated for this use. Thus, no conflicts would occur.

Site 2 would result in development of business park and commercial uses adjacent to residential and park areas. The compatibility of placement of business park uses adjacent to one another is discussed above Impact 3.9-2 in Section 3.9 under “Business Park.” As discussed above, although business park and residential uses differ from each another, locating these uses adjacent to each other would not result in conflicts of use. Commercial uses would also result in activities that are somewhat louder than residential uses, and involve more vehicular trips. While the precise types of commercial facilities are not known, established City processes would require new commercial development to consider compatibility with adjacent uses during the design process. As part of this consideration, setbacks, visual screening, noise barriers, location of parking and entrances, location of loading and trash areas, and other features as necessary would be incorporated into project design as appropriate to address consistency. Impacts would be less than significant.

Site 3 would result in light industrial development adjacent to other areas designated for light industrial uses to the north. Adjacent parkland, community facilities, and residential uses would be located south of this site. Compatibility issues such as those identified for the Proposed Project could occur through the location of industrial uses adjacent to residential and parkland areas. As discussed for the Proposed Project, incompatibility could result due to traffic, noise, hazardous materials, and air emissions associated with light industrial uses. Established City processes would require new development to consider compatibility with adjacent uses during the design process. As part of this consideration, setbacks, visual screening, noise barriers, location of parking and entrances, location of loading and trash

areas, and other features as necessary would be incorporated into project design as appropriate to address consistency. Impacts would be less than significant.

Site 4 would result in development of commercial uses following the completion of reclamation activities. This use would be compatible with adjacent, similar business park and commercial uses.

Site 5 would result in development of professional office uses adjacent to residential uses to the south and east, and commercial uses to the west and north. Professional offices are similar to business park uses, although are developed on a smaller scale. Thus, some of the compatibility issues associated with location of business parks adjacent to residential uses would exist. Similarly, although professional office and residential uses differ from one another, locating these uses adjacent to each other would not result in conflicts of use. Impacts would be less than significant.

Site 6 would remain as open space. Open space lands consist of undeveloped areas that are not used for any specific purpose. Thus, no conflicts of use would occur. Impacts would be less than significant.

Site 7 is designated for business park, and would be developed with up to 686,070 sf of this use at 0.25 to 0.35 FAR, depending on use. Surrounding development consists entirely of commercial industrial uses. There would be no conflicts of use and impacts would be less than significant.

■ Noise

Under the existing General Plan, the allowed land uses on Sites 1 through 6 in the Project Area consist of industrial and commercial land uses, while the entire 121-acre Site 7 is designated for business park use. Implementation of the Proposed Project, however, would result in a General Plan Amendment and Zone Change that would change the allowed land uses on Sites 1 through 6 from industrial and commercial land uses to residential and mixed uses. In addition, the Proposed Project would maintain the business park use designation for Site 7 with the exception that a public facilities overlay would be added on the site that would permit the development of three community facilities (i.e., sports park, Community Center, and Civic Center) on 45 acres. As discussed in Section 2.7 of Chapter 2 (Project Description) of this EIR, the development proposed under the Proposed Project would also result in an approximately 52 percent reduction in average daily traffic trips when compared with the development proposed under the existing General Plan.

Construction activities occurring in the Project Area under the existing General Plan would generally be equivalent to construction activities that would occur under the Proposed Project. Due to the provision of less overall parkland to the Project Area than the Proposed Project, the amount of construction that would occur under the existing General Plan would be slightly greater than the Proposed Project. However, the noise resulting from construction activities under the existing General Plan would be similar to the Proposed Project in both the equipment used and activities required. As such, the noise impacts to sensitive receptors in the project vicinity could experience noise levels up to 86 dBA L_{eq} as a result of construction activities, or as high as 107 dBA L_{eq} in the event that pile drivers are used. Thus, this impact would be potentially significant for the existing General Plan, and would be similar in magnitude to the Proposed Project. However, as discussed under Impact 3.10-1 for the Proposed

Project, the City of Lake Forest Municipal Code Section 4-6-7(e) provides an exemption for construction activities from noise limits established in the Code. As such, this impact would be considered to be less than significant for the existing General Plan.

Like noise from construction activities, vibration impacts resulting from construction activities under the existing General Plan would be similar those under the Proposed Project. Construction activities would primarily impact existing buildings within the vicinity of specific projects. These buildings could sometimes be as close as 25 feet to the construction site or as far as several hundred feet away. Based on the information presented in Table 3.10-9 in Section 3.10, vibration levels could reach up to 87 VdB at the buildings located within 25 feet of construction, or up to 112 VdB in the event that impact pile drivers are used. This would exceed the FTA’s thresholds for human annoyance (85 VdB. For sensitive receptors (e.g., residents, school children, and hospital patients), as long as construction occurs more than 50 feet away from these receptors and pile drivers are not used, the impact would be less than significant. However, it is possible that construction activities could occur as close as 25 feet from sensitive receptors. This would result in these sensitive receptors experiencing vibration impacts above the threshold of 85 VdB under the existing General Plan and the Proposed Project. Thus, this impact to sensitive receptors would be potentially significant for both the existing General Plan and the Proposed Project.

Locations in the vicinity of the project sites could experience slight changes in noise levels as a result of an increase in the on-site population and resulting increase in motor vehicle trips due to continued implementation of the existing General Plan. Noise levels associated with traffic generated from buildout of the existing General Plan and the Proposed Project are calculated at the selected locations along the study-area roadway segments within the City of Lake Forest using traffic data from the City of Lake Forest Vacant Land Opportunities Phase III Traffic Study (including in Appendix I). For the purpose of this analysis, a 3.0 dBA CNEL increase is considered substantial. Table 4-9 (Existing General Plan Traffic Noise Impacts Compared to the Proposed Project) presents the future average daily noise levels associated with these roadways under Year 2030 buildout of the existing General Plan and compares them to Year 2030 buildout of the Proposed Project.

Table 4-9 Existing General Plan Traffic Noise Impacts Compared to Proposed Project

<i>Roadway Segment</i>	<i>Noise Levels in dBA CNEL at 100 feet</i>			
	<i>Year 2030 With Project Traffic Volumes</i>	<i>Year 2030 existing General Plan</i>	<i>Increase</i>	<i>Exceeds Significance Threshold?</i>
Glenn Ranch/Portola to Glenn Ranch/El Toro Rd.	65.0	65.9	0.9	No
Portola/Alton to Portola/Bake Pkwy	66.7	66.7	0.0	No
Portola/Bake Pkwy to Portola/Lake Forest Dr.	67.3	67.5	0.2	No
Portola/Lake Forest Dr. to Portola/Glenn Ranch	69.0	69.8	0.2	No
Portola/Glenn Ranch to Portola/SR-241	67.3	68.0	0.7	No
Santa Margarita/SR-241 to Santa Margarita/El Toro Rd.	69.5	70.0	0.5	No

Table 4-9 Existing General Plan Traffic Noise Impacts Compared to Proposed Project

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Year 2030 With Project Traffic Volumes	Year 2030 existing General Plan	Increase	Exceeds Significance Threshold?
Alton/Portola to Alton/SR-241	62.9	62.7	-0.2	No
Bake Pkwy/Portola to Bake Pkwy/SR-241	63.9	63.7	-0.2	No
Lake Forest Dr./Portola to Lake Forest Dr./SR-241	62.6	63.0	0.4	No
SR-241/Alton to SR-241 West	74.6	74.7	0.1	No
SR-241/Alton to SR-241/Lake Forest Dr.	75.2	75.3	0.1	No
SR-241/Lake Forest Dr. to SR-241/Portola	74.5	74.5	0.0	No
SR-241/Santa Margarita to SR-241 East	74.6	74.8	0.2	No
Alton/SR-241 to Alton south	64.9	65.2	0.3	No
Lake Forest Dr./SR-241 to Lake Forest Dr./Rancho	64.7	65.0	0.3	No
Rancho West to Rancho/Bake Pkwy.	60.7	59.8	-0.9	No
Rancho/Bake Pkwy to Rancho/Lake Forest Dr.	63.7	63.7	0.0	No
Bake Pkwy/Rancho to Bake Pkwy/Commercentre	66.8	66.8	0.0	No
Bake Pkwy/Commercentre to Bake Pkwy/Trabuco Rd.	67.3	67.3	0.0	No
Lake Forest Dr./Rancho to Lake Forest Dr./Trabuco Rd.	67.5	67.7	0.2	No
El Toro Rd./Santa Margarita to El Toro Rd./Trabuco Rd.	68.1	68.1	0.0	No
Trabuco Rd./Bake Pkwy. to Trabuco Rd./Lake Forest Dr.	66.1	66.1	0.0	No
Trabuco Rd./Lake Forest Dr. to Trabuco Rd./Ridge Route	67.3	67.3	0.0	No
Trabuco Rd./Ridge Route to Trabuco Rd./El Toro Rd.	67.8	67.8	0.0	No
Trabuco Rd./El Toro Rd. to Trabuco Rd. east	65.8	65.8	0.0	No
Bake Pkwy./Trabuco Rd. to Bake Pkwy./Toledo	68.9	68.8	-0.1	No
Lake Forest Dr./Trabuco Rd. to Lake Forest Dr./Toledo	67.8	67.6	-0.2	No
Ridge Route/Trabuco Rd. to Ridge Route/Toledo	59.8	59.3	-0.5	No
El Toro Rd./Trabuco Rd. to El Toro Rd./Toledo	68.6	68.6	0.0	No
Toledo/Bake Pkwy. to Toledo/Lake Forest Dr.	58.0	58.0	0.0	No
Toledo/Lake Forest Dr. to Toledo/Ridge Route	58.7	58.7	0.0	No

Table 4-9 Existing General Plan Traffic Noise Impacts Compared to Proposed Project

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Year 2030 With Project Traffic Volumes	Year 2030 existing General Plan	Increase	Exceeds Significance Threshold?
Toledo/Ridge Route to Toledo/El Toro Rd.	59.3	58.7	-0.6	No
Bake Pkwy./Toledo to Bake Pkwy./Jeronimo	69.1	69.0	-0.1	No
Lake Forest Dr./Toledo to Lake Forest Dr./Jeronimo	67.5	67.3	-0.2	No
Ridge Route/Toledo to Ridge Route/Jeronimo	59.3	58.7	-0.6	No
El Toro Rd./Toledo to El Toro Rd./Jeronimo	68.6	68.6	0.0	No
Los Alisos/Trabuco Rd. to Los Alisos/Jeronimo	67.9	67.8	-0.1	No
Jeronimo/Bake Pkwy. to Jeronimo/Lake Forest Dr.	61.1	61.1	0.0	No
Jeronimo/Lake Forest Dr. to Jeronimo/Ridge Route	62.3	62.3	0.0	No
Jeronimo/Ridge Route to Jeronimo/El Toro Rd.	62.0	62.0	0.0	No
Jeronimo/El Toro Rd. to Jeronimo/Los Alisos	64.9	64.9	0.0	No
Lake Forest Dr./Jeronimo to Lake Forest Dr./Muirlands	67.6	67.5	-0.1	No
Ridge Route/Jeronimo to Ridge Route/Muirlands	61.1	60.7	-0.4	No
El Toro Rd./Jeronimo to El Toro Rd./Muirlands	68.8	68.7	-0.1	No
Los Alisos/Jeronimo to Los Alisos/Muirlands	67.6	67.5	-0.1	No
Muirlands/Bake Pkwy. to Muirlands/Lake Forest Dr.	63.3	63.3	0.0	No
Muirlands/Lake Forest Dr. to Muirlands/Ridge Route	64.4	64.4	0.0	No
Muirlands/Ridge Route to Muirlands/El Toro Rd.	64.7	64.7	0.0	No
Muirlands/El Toro Rd. to Muirlands/Los Alisos	65.0	65.0	0.0	No
Lake Forest Dr./Muirlands to Lake Forest Dr./Rockfield	68.4	68.3	-0.1	No
Ridge Route/Muirlands to Ridge Route/Rockfield	61.4	61.1	-0.3	No
El Toro Rd./Muirlands to El Toro Rd./Rockfield	68.8	68.6	-0.2	No
Los Alisos/Muirlands to Los Alisos/Rockfield	67.2	67.2	0.0	No
Rockfield/Bake Pkwy. to Rockfield/Lake Forest Dr.	64.1	64.1	0.0	No
Rockfield/Lake Forest Dr. to Rockfield/Ridge Route	64.1	64.1	0.0	No

Table 4-9 Existing General Plan Traffic Noise Impacts Compared to Proposed Project

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Year 2030 With Project Traffic Volumes	Year 2030 existing General Plan	Increase	Exceeds Significance Threshold?
Rockfield/Ridge Route to Rockfield/El Toro Rd.	64.6	64.4	-0.2	No
Rockfield/El Toro Rd. to Rockfield/Los Alisos	63.3	63.3	0.0	No
Lake Forest Dr./Rockfield to Lake Forest Dr./I-5	70.2	70.1	-0.1	No
El Toro Rd./Rockfield to El Toro Rd./I-5	69.4	69.4	0.0	No
Los Alisos/Rockfield to Los Alisos/I-5	66.7	66.7	0.0	No
I-5/Lake Forest Dr. to I-5/El Toro Rd.	88.8	88.7	0.1	No
I-5/El Toro Rd. to I-5/Los Alisos	84.0	84.0	0.0	No

SOURCE: EIP Associates 2005 (calculation data and results are provided in Appendix H)

As shown in Table 4-9, while implementation of the existing General Plan would result in higher ambient noise levels along some roadway segments, it would also result in reduced ambient noise levels along other roadway segments in the Project Area when compared to the Proposed Project. Although the ambient noise levels would be increased by as much as 0.9 dBA CNEL under the existing General Plan, these noise levels would also be reduced by as much as 0.9 dBA CNEL when compared to the Proposed Project. As such, the magnitude of this impact for the existing General Plan and the Proposed Project is considered to be relatively similar. MM 3.10-2 would be required for all development on a project-level basis to determine the level of significance of this impact. On a program level, this impact would be less than significant with mitigation.

Under both the existing General Plan and the Proposed Project, stationary sources of noise such as rooftop heating, ventilation, and air conditioning (HVAC) equipment for commercial and office buildings would be installed within the Project Area. The type of HVAC equipment currently installed on these new buildings within the City generates noise levels that average around 66 dBA L_{eq} on the air inlet side and 62 dBA L_{eq} on the other sides when measured at 50 feet from the source. Noise could reach levels up to 72.6 dBA CNEL in areas with noise as low as 64.8 dBA at nearby receptors under both the Proposed Project and the existing General Plan. This would be expected to cause a substantial permanent increase in noise levels that could exceed the identified thresholds of significance and be a potentially significant impact under the Proposed Project and the existing General Plan. As such, the magnitude of this impact for the existing General Plan and the Proposed Project would be similar. For the Proposed Project, implementation of MM 3.10-3, which would require the installation of HVAC systems with proper shielding to reduce noise to 65 dBA or less when measured 50 feet from the noise source, would be required to mitigate this impact to a less-than-significant level. In the absence of this mitigation measure for the existing General Plan, this noise impact associated with new HVAC systems in the Project Area for the existing General Plan would remain potentially significant and greater than the Proposed Project.

As discussed above, construction activities associated with the existing General Plan and the Proposed Project could reach above 86 dBA L_{eq} at the property line of sensitive receptors in the vicinity of the project sites. These construction activities would represent a substantial temporary or periodic increase in ambient noise levels since the project sites such as the IRWD site, the Portola Center site, and the Pacific Heritage site are all vacant or agricultural with few to no structures or roads. For the purpose of analysis in this EIR, an increase of 5.0 dBA or greater over ambient noise levels is considered to be substantial and significant. The highest existing daytime noise level monitored in the Project Area was at the intersection of Bake Parkway and Calle Entrada, which registered at 74.7 dBA L_{eq} . As such, the noise generated by construction activities under the existing General Plan and the Proposed Project could result in a temporary increase in ambient noise levels of over 5 dBA at the existing noise-sensitive uses adjacent to the project sites within the Project Area. As such, this impact for both the existing General Plan and the Proposed Project would be similar in magnitude, and would be considered to be potentially significant. Under this Alternative, as with the Proposed Project, construction activities would only occur during the permitted hours designated in the City of Lake Forest's Municipal Code Section 4-6-7(e), and thus would not occur during recognized sleep hours for residences or on days that residents are most sensitive to exterior noise. As such, while the physical impact from an increase in ambient noise levels could occur from the construction activities associated with this Alternative, an adverse effect on the nearby residents would not occur. Thus, impacts would be similar under this Alternative as for the Proposed Project.

■ Population/Housing

Under Alternative 1, no residential uses would occur in the Project Area. Rather, development under the existing General Plan would allow 9.8 million sf of industrial and commercial uses to develop in the Project Area. As no residential uses would be developed under the existing General Plan, future population growth would be the result of employment-generated growth rather than a direct increase in residents. Using the same assumptions that were provided in the Proposed Project, the net increase of 9.8 million sf of development could generate a total of 18,518 new employees, out of which 4,630 could choose to relocate to the City. This in turn would generate a demand for 4,630 housing units. Based on the existing ratio of 2.91 pph, the employment-generating industrial and commercial uses under Alternative 1 would have the potential to result in an indirect population increase of 13,473 persons in the City. Compared with the City's 2005 population of 78,020, the addition of 13,473 persons would represent an approximate 17 percent increase in population over existing conditions, and would also exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, the City and County's infrastructure could accommodate the future growth. However, because the indirect employment-generated growth within the City would be substantial over existing conditions (17 percent increase), impacts on population growth would be considered significant. In addition, the jobs/housing balance would not be improved as under the Proposed Project, as no housing would be provided. Resource sections such as Air Quality, Noise, and Traffic analyze the potential impacts directly associated with this substantial increase in population. While the impacts of substantial population growth of Alternative 1 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because population growth would be less under this Alternative.

Future development under Alternative 1 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate the construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 1 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant.

■ Public Services

Under the existing General Plan, no residences would be constructed at any of the sites within the Project Area considered under the Proposed Project. There would be some direct increase of population as a result of implementation of the existing General Plan due to the employment generated, as noted in Population and Housing above. Development of large-scale commercial and industrial facilities within the City of Lake Forest could have secondary, growth-inducing effects, which may increase the local population. The increased demand for school and library facilities as a result of implementation of the existing General Plan would be less than under the Proposed Project. Standard City conditions and requirements provide for school and library fees. Thus, this impact for the existing General Plan would be less than the impacts of the Proposed Project with regard to schools and library services, and less than significant.

With respect to emergency services, police and fire, impacts of implementation of the existing General Plan would be similar to those incurred under the Proposed Project. The sites under consideration are largely vacant and any new construction on those sites would require additional emergency services from the local police and fire departments. All development would be required to comply with the recommendations and regulations of the local emergency services providers prior to, during, and following development (see Impact 3.12-1 in Section 3.12.3 [Public Services] for the Proposed Project for further clarification of existing requirements). City conditions and requirements would ensure that acceptable levels of service are maintained within the City with regard to police and fire services. As such, impacts to police and fire services would, similar to the Proposed Project, be less than significant. Because Site 2 is located within an area designated by OCFA to be a Very High Fire Severity Hazard Zone/Special Fire Protection Area (VHFSHZ/SFPA) and Site 1 is located adjacent to the former MCAS El Toro that is now proposed as a nature reserve, the future development on Sites 1 and 2 under the existing General Plan may be exposed to a higher risk of fire hazards in the Project Area. Under the Proposed Project, MM 3.12-5 would be implemented, which would require both Sites 1 and 2 in the Project Area to comply with the OCFA's VHFSHZ/SFPA guidelines, to reduce this impact to a less-than-significant level. In the absence of these mitigation measures for the existing General Plan, this

impact for the existing General Plan would remain potentially significant. Therefore, development under Alternative 1 would have a substantially similar impact on fire services with respect to Sites 1 and 2 compared to the Proposed Project.

■ Recreation

Compared to the Proposed Project, which would result in the development of residential, commercial, recreational, and open space uses in the Project Area, the existing General Plan would result in development of approximately 9.8 million sf of non-residential uses. As such, without residential uses, the increase in City population from implementation of the existing General Plan would result primarily from employment-generated growth, and would be less than the population increase resulting from implementation of the Proposed Project. The existing General Plan includes an 18-acre park option for the Project Area and the Proposed Project would provide 96 acres of parkland and community facilities. As discussed under Impact 3.13-1 in Section 3.13 (Recreation) of this EIR, the Proposed Project would result in a population increase of approximately 15,758 persons within the City. As discussed above under Population and Housing for this alternative, implementation of the existing General Plan would have the potential to result in an indirect population increase of 13,473 persons in the City. Although the Proposed Project would result in 2,285 more persons in the City than the existing General Plan, it would provide parkland in the Project Area. The City's subdivision code does not require commercial, industrial, or office developers to meet parkland standards, and in-lieu fees are only collected with residential development. Therefore, under this Alternative, no additional parks beyond what is currently described in the General Plan would be developed. In addition, the City would be required to purchase and improve the parkland under option on Site 1 under this Alternative. Therefore, the adverse impact on recreation would be greater under this Alternative than under the Proposed Project. In addition, the beneficial impact of provision of additional parkland to the City would not be realized under this Alternative.

With respect to deterioration of existing recreational facilities by development under the General Plan, this impact would be anticipated to be substantially similar to the impacts for the Proposed Project due to similar population increases.

■ Transportation/Traffic

Trip Generation

As can be seen from Table 4-10, the existing General Plan results in higher ADT trip generation and higher total peak-hour trip generation compared with the Proposed Project. In addition, there is a change in peak hour directionality related to existing General Plan industrial uses rather than Proposed Project residential uses resulting in lower outbound volumes in the A.M. peak hour volumes with the existing General Plan conditions. As a result, different intersections are impacted, than under the Proposed Project.

Table 4-10 Existing General Plan (Project Area) Land Use and Trip Generation Summary

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Commercial (EQ)	924.18 TSF	610	389	999	1,739	1,884	3,623	41,653
Office (EQ)	186.33 TSF	265	36	301	49	241	290	2,154
Open Space	47 acre	0	0	0	0	0	0	0
Park	17 acre	0	0	0	0	0	0	27
Mining/Utility	23 acre	36	21	57	14	17	31	573
Business Park	6726.3 TSF	8,071	1,547	9,618	2,018	6,659	8,677	85,828
Light Industrial	415.91 TSF	2,591	532	3,123	665	2,354	3,019	21,544
Mini Storage	26 acre	36	36	72	52	48	100	1,011
Sites 1-6 (using trip rates below)		11,609	2,561	14,170	4,537	11,203	15,740	152,790
Proposed Project		1,451	2,936	4,387	3,808	3,045	6,854	72,816
Difference		10,158	-375	9,783	729	8,158	8,886	79,974

Trip Rates (Land-Use Based)

Open Space	Acre	.00	.00	.00	.00	.00	.00	.00
Park	Acre	.01	.00	.01	.02	.02	.04	1.59
Mining/Utility	Acre	1.57	0.92	2.49	0.59	.73	1.32	24.9
Business Park	TSF	1.20	.23	1.43	.30	.99	1.29	12.76
Light Industrial	TSF	6.23	1.28	7.51	1.60	5.66	7.26	51.80
Mini Storage	Acre	1.40	1.40	2.80	1.99	1.84	3.83	38.87

SOURCE: Austin-Foust Associates, Inc. 2005b

- The trip rates above and regression equations below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- The land use-based trip rates for office and commercial use are based on the following equation:
 $LN(T) = AxLN(X)+B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		— AM Peak Hour —			— PM Peak Hour —		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%
Office	TSF	.77	3.65	.14	88%	12%	.135	17%	83%

ADT = average daily trips

DU = Dwelling Unit

EQ = equation-based

TSF = thousand square feet

Impacts

Table 4-11 and Table 4-12 summarize A.M. and P.M. peak hour intersection capacity utilization (ICU) values and corresponding levels of service (LOS) for existing General Plan conditions within the Project Area and extended Project Area, respectively. These values assume completion of both funded and unfunded MPAH improvements. Actual turn volumes and ICU calculation worksheets are provided in Appendix I. Based on the peak hour intersection performance criteria and impact thresholds discussed previously, there are 16 intersections within the Project Area, and six within the extended Project Area, that are significantly impacted by the existing General Plan based on year 2030 conditions. Under the Proposed Project which includes the LFTM, there would be four significantly impacted intersections in



Legend

- Existing Roadway
- - - Future Roadway



10953-00

FIGURE 4-2
2030 ADT Volume (000s) - Existing General Plan

Source: Austin-Foust Associates, Inc. 2005

City of Lake Forest

Not to Scale



Table 4-11 2030 Intersection LOS Summary within Project Area

Intersection	Existing General Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
1. Alton & Portola	.57	A	.49	A
2. Bake & Portola (a)	.72	C	1.03	F
3. Lake Forest & Portola (a)	.65	B	.96	E
4. Glenn Ranch & Portola	.85	D	.78	C
5. Portola & SR-241 Ramps	.49	A	.69	B
6. Alton & SR-241 Ramps	.65	B	.65	B
7. Lake Forest & SR-241 NB	.37	A	.51	A
8. Lake Forest & SR-241 SB	.64	B	.57	A
9. Bake & Rancho North	.76	C	.90	D
10. Lake Forest & Rancho (a)	.96	E	1.32	F
11. Bake & Rancho South	.76	C	.83	D
12. El Toro Rd. & Portola/Santa Margarita (a)	.95	E	1.08	F
13. Bake & Commercentre	.62	B	.72	C
14. Bake & Irvine/Trabuco (a)	1.07	F	1.09	F
15. Lake Forest & Trabuco	.76	C	.88	D
16. Ridge Route & Trabuco	.60	A	.68	B
17. El Toro Rd. & Trabuco (a)	.89	D	.99	E
18. Bake & Toledo	.82	D	.66	B
19. Lake Forest & Toledo	.56	A	.53	A
20. Ridge Route & Toledo	.41	A	.41	A
21. El Toro Rd. & Toledo	.57	A	.65	B
22. Bake & Jeronimo (a)	.94	E	.82	D
23. Lake Forest & Jeronimo	.77	C	.89	D
24. Ridge Route & Jeronimo	.51	A	.69	B
25. El Toro Rd. & Jeronimo (a)	.96	E	.94	E
26. Los Alisos & Jeronimo (a)	.91	E	.96	E
27. Lake Forest & Muirlands	.69	B	.81	D
28. Ridge Route & Muirlands	.58	A	.80	C
29. El Toro Rd. & Muirlands	.75	C	.84	D
30. Los Alisos & Muirlands (a)	1.03	F	1.08	F
31. Lake Forest & Rockfield	.76	C	.85	D
32. Ridge Route & Rockfield (a)	.76	C	1.19	F
33. El Toro Rd. & Rockfield	.58	A	.74	C
34. Los Alisos & Rockfield (a)	.91	E	.93	E
35. Lake Forest & I-5 NB	.67	B	.65	B
36. Lake Forest & I-5/Carlota (a)	.81	D	.99	E
37. Paseo De Valencia & Carlota (a)	.67	B	.98	E
38. El Toro Rd. & Bridger/I-5 NB	.65	B	.67	B

Table 4-11 2030 Intersection LOS Summary within Project Area

Intersection	Existing General Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
39. El Toro Rd. & Avd Carlota (a)	.72	C	1.00	E
40. Portola & Rancho	.69	B	.79	C
41. Alton & Towne Centre Dr (a)	.82	D	1.07	F
42. Alton & Commercentre	.53	A	.69	B

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

(a) Shaded areas indicate locations which are forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard).

For information on the ICU and LOS values projected at each intersection under the project scenario, please see Table 3.14-14 beginning at page 3.14-46 of the PEIR.

Table 4-12 2030 Intersection LOS Summary within Extended Project Area

Intersection	Existing General Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
100. Portola Pkwy. at SR-241 NB Ramps	.63	B	.70	B
101. Portola Pkwy. at SR-241 SB Ramps	.57	A	.47	A
102. Ridge Vly. at Portola Pkwy.	.60	A	.86	D
103. Sand Cyn. Av. at Portola Pkwy.	.76	C	.68	B
104. Jeffrey Rd. at Portola Pkwy.	.83	D	.68	B
105. Alton Pkwy. at Irvine Bl. (a)	.92	E	.98	E
106. B Dr. at Irvine Bl.	.83	D	.79	C
107. A Dr. at Irvine Bl.	.85	D	.85	D
108. Ridge Vly. at Irvine Bl.	.76	C	.82	D
109. College Dr. at Irvine Bl.	.78	C	.67	B
110. ETC E. Leg NB Ramps at Irvine Bl.	.88	D	.74	C
111. ETC E. Leg SB Ramps at Irvine Bl.	.84	D	.57	A
112. Sand Cyn. Av. at Irvine Bl.	.87	D	.81	D
113. Jeffrey Rd. at Irvine Bl. (b)	.83	D	.89	D
114. SR-133 NB Ramps at Trabuco Rd.	.61	B	.53	A
115. SR-133 SB Ramps at Trabuco Rd.	.56	A	.50	A
116. Sand Cyn. Av. at Trabuco Rd. (b)	.77	C	.76	C
117. Alton Pkwy. at Toledo Wy. (a)	.73	C	.84	D
118. Alton Pkwy. at Jeronimo Rd.	.63	B	.71	C
119. Alton Pkwy. at Muirlands Bl.	.77	C	.83	D
120. Marine Wy. at Alton Pkwy.	.64	B	.67	B
121. Alton Pkwy. at Technology Dr.	.83	D	.87	D
122. Alton Pkwy. at I-5 NB Ramps	1.00	E	.59	A
123. Marine Wy. at Rockfield Bl.	.51	A	.57	A
124. Bake Pkwy. at Muirlands Bl.	.73	C	.85	D
125. Bake Pkwy. at Rockfield Bl. (a)	.66	B	.89	D

Table 4-11 2030 Intersection LOS Summary within Project Area

Intersection	Existing General Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
126. Bake Pkwy. at I-5 NB Ramps	1.00	E	.94	E
127. Bake Pkwy. at I-5 SB Ramps	.91	E	.89	D
128. Bake Pkwy. at Irvine Center Dr.	.43	A	.45	A
129. Lake Forest Dr. at Irvine Center Dr.	.71	C	.81	D
130. Ridge Route at Moulton Pkwy. (a)	.56	A	1.13	F
131. Santa Maria Av. at Moulton Pkwy. (a)	.98	E	.99	E
132. El Toro Rd. at Moulton Pkwy. (a)	1.17	F	1.02	F
137. Los Alisos Bl. at Trabuco Rd. (a)	.94	E	.79	C
138. Trabuco Rd. at Alicia Pkwy. (a)	.78	C	.94	E
139. Jeronimo Rd. at Alicia Pkwy.	.74	C	.77	C
140. Alicia Pkwy. at Muirlands Bl. (a)	.91	E	1.00	E
141. I-5 NB Ramps at Alicia Pkwy.	.42	A	.72	C
142. I-5 SB Ramps at Alicia Pkwy.	.71	C	.75	C
143. Los Alisos Bl. at Avd. de la Carlota	.51	A	.75	C
144. El Toro Rd. at Paseo de Valencia	.64	B	.70	B
145. Los Alisos Bl. at Paseo de Valencia	.74	C	.80	C

SOURCE: Austin-Foust Associates, Inc. 2005b

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

(a) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard). Shaded entries denote locations where ICUs are worsened by the project (i.e., adverse project impacts).

(b) ICUs at this City of Irvine location include a .05 Advanced Transportation Management System (ATMS) credit.

For information on the ICU and LOS values projected at each intersection under the project scenario, please see Table 3.14-14 beginning at page 3.14-46 of the PEIR.

the Study Area and five in the extended Study Area compared to existing conditions, but none compared to the 2030 General Plan.

As noted in Section 3.14, there are five locations, which are deficient under the existing General Plan, that have lower ICUs with the Proposed Project and therefore benefit from the Proposed Project:

3. Lake Forest Drive and Portola Parkway
10. Lake Forest Drive and Rancho Parkway
12. El Toro Road and Portola Parkway/Santa Margarita Parkway
25. El Toro Road and Jeronimo Road
34. Los Alisos Boulevard and Rockfield Boulevard

These benefits would not occur under this Alternative. In addition under this Alternative, the LFTM improvements which are designed to address the existence of unfunded MPAH improvements, would not be made, resulting for the potential for additional impacts to intersections due to the lack of MPAH funding for key improvements assumed in the 2030 General Plan Scenario. These impacts would be avoided with the Proposed Project.

Table 4-12 2030 Intersection LOS Summary within Extended Project Area

Intersection	Existing General Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
126. Bake Pkwy. at I-5 NB Ramps	1.00	E	.94	E
127. Bake Pkwy. at I-5 SB Ramps	.91	E	.89	D
128. Bake Pkwy. at Irvine Center Dr.	.43	A	.45	A
129. Lake Forest Dr. at Irvine Center Dr.	.71	C	.81	D
130. Ridge Route at Moulton Pkwy. (a)	.56	A	1.13	F
131. Santa Maria Av. at Moulton Pkwy. (a)	.98	E	.99	E
132. El Toro Rd. at Moulton Pkwy. (a)	1.17	F	1.02	F
137. Los Alisos Bl. at Trabuco Rd. (a)	.94	E	.79	C
138. Trabuco Rd. at Alicia Pkwy. (a)	.78	C	.94	E
139. Jeronimo Rd. at Alicia Pkwy.	.74	C	.77	C
140. Alicia Pkwy. at Muirlands Bl. (a)	.91	E	1.00	E
141. I-5 NB Ramps at Alicia Pkwy.	.42	A	.72	C
142. I-5 SB Ramps at Alicia Pkwy.	.71	C	.75	C
143. Los Alisos Bl. at Avd. de la Carlota	.51	A	.75	C
144. El Toro Rd. at Paseo de Valencia	.64	B	.70	B
145. Los Alisos Bl. at Paseo de Valencia	.74	C	.80	C

SOURCE: Austin-Foust Associates, Inc. 2005b

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

(a) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard). Shaded entries denote locations where ICUs are worsened by the project (i.e., adverse project impacts).

(b) ICUs at this City of Irvine location include a .05 Advanced Transportation Management System (ATMS) credit.

the Study Area and five in the extended Study Area compared to existing conditions, but none compared to the 2030 General Plan.

As noted in Section 3.14, there are five locations, which are deficient under the existing General Plan, that have lower ICUs with the Proposed Project and therefore benefit from the Proposed Project:

- 3. Lake Forest Drive and Portola Parkway
- 10. Lake Forest Drive and Rancho Parkway
- 12. El Toro Road and Portola Parkway/Santa Margarita Parkway
- 25. El Toro Road and Jeronimo Road
- 34. Los Alisos Boulevard and Rockfield Boulevard

These benefits would not occur under this Alternative. In addition under this Alternative, the LFTM improvements which are designed to address the existence of unfunded MPAH improvements, would not be made, resulting for the potential for additional impacts to intersections due to the lack of MPAH funding for key improvements assumed in the 2030 General Plan Scenario. These impacts would be avoided with the Proposed Project.

Year 2030 with-project A.M. and P.M. peak hour ramp volumes and V/C ratios are summarized in Table 4-13; Year 2030 with-project A.M. and P.M. freeway mainline peak hour volumes and V/C ratios are summarized in Table 4-14. Five freeway ramps and five freeway mainline segments, are forecast to be significantly impacted by the existing General Plan based on year 2030 conditions compared to existing conditions. Under the Proposed Project, no ramps and five segments would be significantly impacted compared to existing conditions, but none compared to the 2030 General Plan.

As under the Proposed Project, no impacts related to parking would occur with implementation of the existing General Plan. Each development under the General Plan would be required to comply with the parking standards (on-street and off-street) identified in the Municipal Code. This reduction generally only applies to nonresidential projects. No impacts related to parking would occur with implementation of this Alternative.

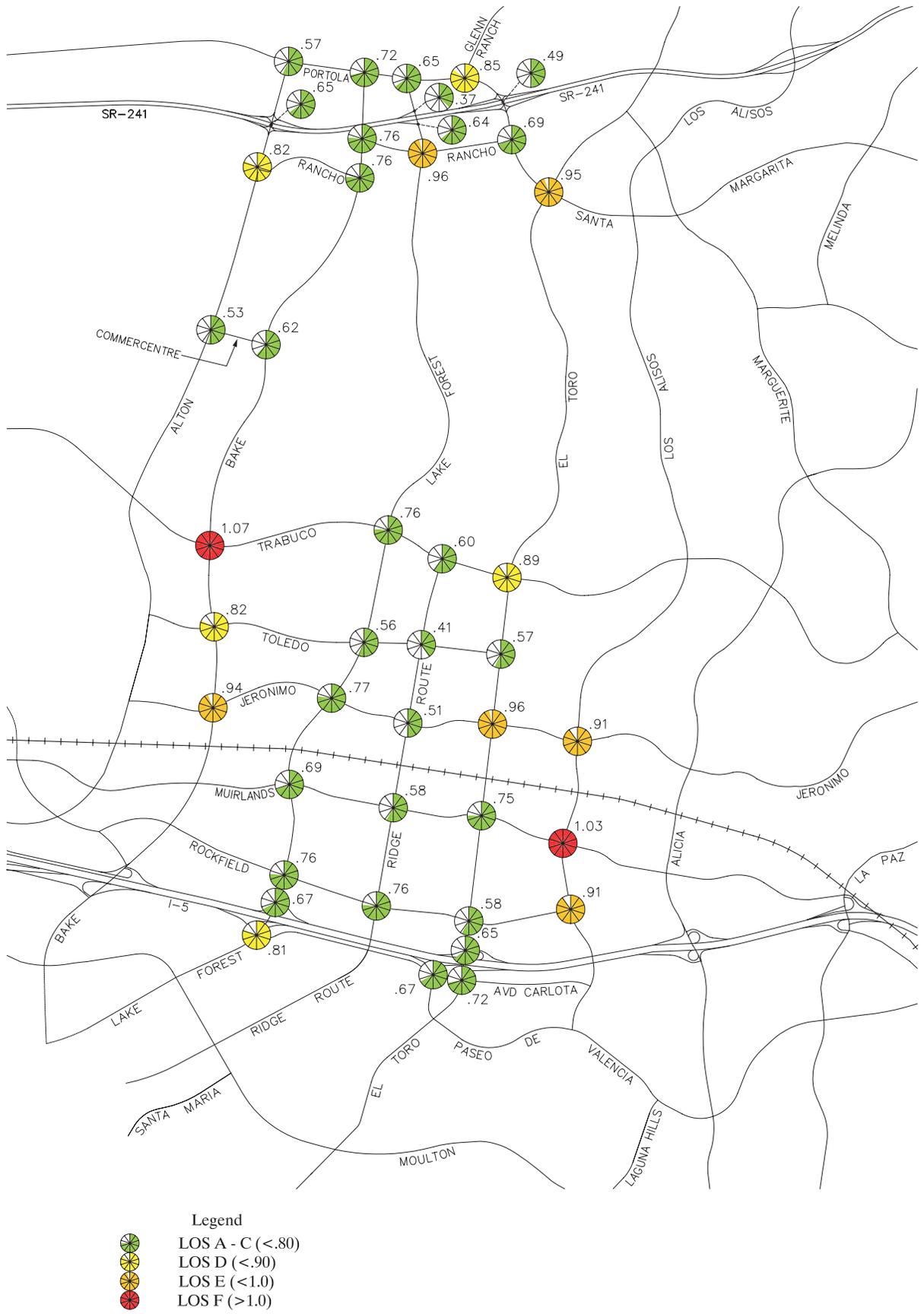
Table 4-13 2030 Proposed Project Freeway/Tollway Ramp LOS Summary

Interchange	Ramp	Lanes	Peak Hour Capacity	Existing General Plan					
				AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 at Lake Forest	SB Direct On	1	1,500	190	.13	A	1,310	.87	D
	SB Loop On	1	1,080	470	.44	A	570	.53	A
	NB On	2	1,800	1,240	.69	B	1,120	.62	B
	SB Off	2	3,000	2,280	.76	C	3,070	1.02	F
	(a) NB Off	1	1,500	1,530	1.02	F	710	.47	A
I-5 at El Toro Rd.	SB Direct On	1	1,080	50	.05	A	440	.41	A
	SB Loop On	1	1,500	660	.44	A	1,180	.79	C
	NB Direct On	1	1,500	1,170	.78	C	1,010	.67	B
	NB Loop On	1	1,500	1,170	.78	C	1,170	.78	C
	SB Off	2	3,000	1,870	.62	B	1,870	.62	B
	NB Off	1	1,500	1,280	.85	D	1,140	.76	C
SR-241 at Alton	SB On	1	1,500	410	.27	A	1,600	1.07	F
	NB On	1	1,500	80	.05	A	590	.39	A
	SB Off	1	1,500	870	.58	A	150	.10	A
	NB Off	1	1,500	1,650	1.10	F	660	.44	A
SR-241 at Lake Forest	NB On	2	2,250	90	.04	A	820	.36	A
	SB Off	2	2,250	860	.38	A	300	.13	A
SR-241 at Portola (East)	SB On	1	1,500	340	.23	A	1,640	1.09	F
	NB On	2	2,250	710	.32	A	450	.20	A
	SB Off	1	1,500	520	.35	A	500	.33	A
	NB Off	2	2,250	2,460	1.09	F	610	.27	A

SOURCE: Austin-Foust Associates, Inc. 2005b

LOS = level of service NB = northbound SB = southbound V/C = volume/capacity ratio

(a) This ramp is currently operating at V/C 1.02 LOS F in the P.M. Peak Period. There would therefore be no change under the Alternative. For existing conditions see Traffic Study Table 3-2 in Appendix I or Table 3.14.2.



10953-00

FIGURE 4-3
2030 AM Peak Hour ICUs and Level of Service - Existing General Plan

Source: Austin-Foust Associates, Inc. 2005

City of Lake Forest

Not to Scale





FIGURE 4-4
2030 PM Peak Hour ICUs and Level of Service - Existing General Plan

Not to Scale

10953-00

Source: Austin-Foust Associates, Inc. 2005

City of Lake Forest



Table 4-14 2030 Proposed Project Freeway/Tollway Mainline LOS Summary

Location	Direction	Lanes	Peak Hour Capacity	Existing General Plan					
				AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 n/o Lake Forest	Northbound	8+2H	19,500	18,304	.94	E	12,385	.64	C
	Southbound	8+2H	19,500	12,162	.62	C	16,792	.86	D
I-5 n/o El Toro Rd.	Northbound	6+2H	15,500	17,752	1.15	F	11,782	.76	D
	Southbound	6+2H	15,500	10,127	.65	C	15,700	1.01	F
I-5 n/o Alicia	Northbound	4+1H	9,600	16,265	1.69	F	10,643	1.11	F
	Southbound	4+1H	9,600	9,065	.94	E	14,912	1.55	F
SR-241 n/o Alton	Northbound	4+1H	9,600	7,514	.78	D	4,118	.43	B
	Southbound	4+1H	9,600	3,794	.40	B	6,195	.65	C
SR-241 n/o Lake Forest	Northbound	4+1H	9,600	8,817	.92	E	4,210	.44	B
	Southbound	4+1H	9,600	3,394	.35	B	7,456	.78	D
SR-241 n/o Portola East	Northbound	4+1H	9,600	8,761	.91	E	3,384	.35	B
	Southbound	4+1H	9,600	2,508	.26	A	7,162	.75	D
SR-241 n/o Los Alisos	Northbound	4+1H	9,600	10,633	1.11	F	3,596	.37	B
	Southbound	4+1H	9,600	2,400	.25	A	8,330	.87	D

SOURCE: Austin-Foust Associates, Inc. 2005b

H = high-occupancy vehicle lane LOS = level of service V/C = volume/capacity ratio

For existing conditions see Table 3.14-3.

■ Utilities/Service Systems

Development under the existing General Plan could result in buildout of approximately 9.8 million sf of industrial and commercial uses within the Project Area. The Proposed Project, on the other hand, would result in the development of approximately 5,415 residential units and 648,000 sf of commercial development and would not have a light industrial component.

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 1 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRWD criteria. In addition, as under the Proposed Project, the General Plan policies in the Public Facilities / Growth Management Element require the City of Lake Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon compliance with these regulations and policies, impacts related to water conveyance infrastructure under Alternative 1 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Under Alternative 1, development under the existing General Plan could result in buildout of approximately 9.8 million sf of industrial and commercial uses within the Project Area. As shown in the Utility Report (Appendix J), development under the General Plan would result in a water demand of

approximately 597,990 gpd (0.59 mgd), which is approximately 70 percent less than the Proposed Project. Since Alternative 1 would require less water than the Proposed Project, development under this alternative would not generate additional demand or require additional water treatment facilities or expansion of existing facilities. Impacts related to water demand and water treatment facilities would be less than under the Proposed Project and would be less than significant. In addition, existing General Plan mitigation measures would ensure that this impact would remain less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD's sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City's compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 1 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development Alternative 1 would not result in an exceedance of the Board's wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained in the discharge. For nonpoint source discharges, development under Alternative 1 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 1 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. Similar to water demand, as discussed above, development under Alternative 1 would result in a decrease in wastewater generation than under the Proposed Project. As shown in the Utility Report (Appendix J), development under the General Plan would result in a wastewater generation of approximately 561,200 gpd (0.56 mgd), which is approximately 0.74 mgd less than the Proposed Project. Since Alternative 1 would generate less wastewater than the Proposed Project, development under this alternative would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. Impacts related to wastewater treatment would be less than under the Proposed Project and would be less than significant. In addition, existing General Plan mitigation measures would ensure that this impact would remain less than significant.

Solid Waste

As shown in Table 4-15, Alternative 1 would result in an additional 36 tons of solid waste per day to be disposed of in Orange County. The additional solid waste would be collected by Waste Management of Orange County, a private hauler, and disposed of at one of the three landfills (described in Section 3.15.2) that are owned and operated by the Orange County IMWD. Table 4-15 displays the daily capacity of the three nearby landfills. It is possible that the solid waste generated by the Proposed Project would be distributed over more than one of the landfills listed in Table 4-14. However, for the purposes of this analysis to determine the potential for the Proposed Project to exceed the permitted capacity of a landfill, it is assumed that all of the Proposed Project's solid waste would be taken to one of the three Orange County landfills.

Table 4-15 Solid Waste Generation						
Site	Land Use	Units	Generation Factor (lbs/1000sf/day)	Average Daily		Annual Tons/Year
				Lbs/Day	Tons/Day	
1	BP	4,315,000	8	34,520	17.26	6,300
2	BP	2,271,654	8	18,173	9.09	3,318
	Commercial	544,500	6	3,267	1.63	595
3	PF	0	6	0	0	0
	LI	808,038	8	6,464	3.23	1,179
4	Commercial	435,600	6	2,614	1.31	478
5	PO	198,198	6	198	0.10	37
6	Open Space	0	N/A	0	0	0
7	BP	686,070	8	5,489	2.74	1,000
Total				70,725 lbs/day	35.36 tons/day	12,907 tons/year

SOURCE: City of Lake Forest 1994

As shown in Table 4-16, Alternative 1 would increase the daily tonnage at local landfills by 0.48 percent to 1.3 percent, depending on the landfill used. This increase would not exceed the permitted daily capacity of any of the nearby landfills. Therefore, the nearby landfills would have sufficient permitted capacity to accommodate the Proposed Project's disposal needs. However, because implementation of Alternative 1 would generate more solid waste than the Proposed Project, this impact would be greater than the Proposed Project but would remain less than significant. In addition, existing General Plan mitigation measures would ensure that this impact would remain less than significant.

Table 4-16 Remaining Landfill Capacity with Proposed Project				
Landfill	Permitted Capacity (tons/day)	Daily Tonnage (tons/day)	Remaining Daily Capacity with Proposed Project (tons/day)	Percentage Increase of Daily Tonnage
Frank R. Bowerman (Class III)	8,500	7,424	1,040	0.48%
Olinda Alpha (Class III)	8,000	6,834	1,130	0.52%
Prima Descheca (Class III)	4,000	2,656	1,308	1.3%

SOURCES: Hagthorp 2005; City of Lake Forest 1994

As with the Proposed Project, development under Alternative 1 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development under Alternative 1, similar to the Proposed Project, would be implemented in a manner consistent with City’s commitment and in compliance with AB 939. In addition, Alternative 1 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar as under the Proposed Project and would be less than significant.

Energy

As shown in Table 4-17 and Table 4-18, Alternative 1 would increase the daily electricity and natural gas demand within the City, which could require the construction of new energy production or transmission facilities. Specifically, the electricity demand under Alternative 1 would be substantially greater than that of the Proposed Project; however, natural gas demand would be slightly less than the Proposed Project. However, existing General Plan mitigation measures would reduce these impacts to a less-than-significant level, and impacts would be similar to the Proposed Project.

Table 4-17 Electricity Demand				
<i>Site</i>	<i>Land Use</i>	<i>Non-Residential Entitlement (ksf)</i>	<i>Generation Factor (kWh/day)</i>	<i>Total (MWh/day)</i>
1	BP	4,315	123.3	532.04
2	BP	2,272	123.3	280.14
	Commercial	545	41.9	22.84
3	PF	0	30.1	0
	LI	808	123.3	99.63
4	Commercial	436	41.9	18.27
5	P.O	198	46.8	9.87
6	Open Space	0	3.5	0
7	BP	686	123.3	84.58
Total				1046.77 MWh/day

Table 4-18 Natural Gas Demand				
<i>Site</i>	<i>Land Use</i>	<i>Non-Residential Entitlement (ksf)</i>	<i>Generation Factor (cf/day)</i>	<i>Total (mcf/day)</i>
1	BP	4,315	110.0	0.475
2	BP	2,272	110.0	0.250
	Commercial	545	95.3	0.052
3	PF	0	95.3	0
	LI	808	110.0	0.089
4	Commercial	436	95.3	0.042
5	P.O.	198	65.7	0.013
6	Open Space	0	16.4	0
7	BP	686	110.0	0.075
Total				0.996 mcf/day

4.6.3 Attainment of Project Objectives

The No Project/Reasonably Foreseeable Alternative would not achieve any of the project objectives of providing a balanced community by provision of linkages between the north and south portions of the City, providing a stable economic base through development in the Project Area whereby the City and its residents would benefit, providing adequate public space and recreational facilities to benefit City residents, or contribute toward providing a variety of housing types within the City.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Greater than	Substantially greater building massing and height; concentration of commercial and industrial structures on 900 acres would create visual barrier between north and south portions of the City.
Substantial adverse effect on a scenic vista by obstructing public views of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Similar	Buildout of Proposed Project and Alternative 1 are both subject to site-specific building standards and guidelines; no natural features have been identified by the City or any applicable plans that would be affected by development in the Project Area.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Greater than	Greater due to significantly more lighting for industrial uses and substantially more parking area that would require security lighting. Would not avoid SU impact of light and glare from Proposed Project.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Buildout of the existing General Plan would be required to comply with applicable design guidelines, same as the Proposed Project.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan.	Similar	Buildout of the existing General Plan would be required to comply with all existing development standards, same as the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Similar	Buildout of the existing General Plan calls for development on Sites 1 through 7, same as the Proposed Project. Would not avoid the SU impact of the Proposed Project.
Conflict with existing zoning for agricultural use.	Similar	Buildout of the existing General Plan would conflict with zoning for agricultural uses, similar to the Proposed Project.
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Similar	Buildout of the existing General Plan would cause changes to the character of development, resulting in conversion of farmland to non-agricultural use, same as the Proposed Project. Would not avoid the SU impact of the Proposed Project.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Greater than	Greater due to the type of uses and more average daily vehicle traffic trips.
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Similar	Buildout of the existing General Plan is anticipated to exceed the SCAQMD's recommended thresholds of significance, similar to the Proposed Project. Would not avoid the SU impact of the Proposed Project.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Greater than	Greater due to a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment (greater than the Proposed Project due to the type of uses and more average daily vehicle traffic trips). Would not avoid the SU impact of the Proposed Project.
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Similar	Buildout of the existing General Plan would not create substantial pollutant concentrations, similar to the Proposed Project.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Buildout of the existing General Plan would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact; this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar (Sites 1, 3, 4, 5, 7); Less than (Site 6); Greater than (Site 2)	Under the existing General Plan, Site 6 would be preserved as open space, and would result in lesser impact to sensitive species and wetland resources compared to the Proposed Project for this Site. Under the existing General Plan, 44 acres of Site 2 would be zoned for open space. Under the Proposed Project, 90 acres of this site would be zoned for open space and/or regional park.
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of the existing General Plan would result in disturbance of existing habitats, similar to the Proposed Project.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Similar	Buildout of the existing General Plan would result in disturbance of the existing habitats, similar to the Proposed Project.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Greater than	Greater due to less connectivity between habitats.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of the existing General Plan would be required to abide by local policies and/or ordinances, the same as the Proposed Project.
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Buildout of the existing General Plan would be required to abide by local, regional, and/or state habitat conservation plans, the same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the existing General Plan would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Result in substantial soil erosion or the loss of topsoil.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of the existing General Plan calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
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.	Similar	Buildout of the existing General Plan calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Greater than	Greater due to the inclusion of industrial land uses and the number of businesses.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Greater than	Greater due to the inclusion of industrial land uses and the number of businesses.
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Greater than	The Portola Hills School is located within one-quarter mile of Site 2 (Portola Center Site). Materials used for industrial or commercial use are more likely to result in potential hazardous emissions.
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Greater than	Buildout of the existing General Plan would not result in construction on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, same as the Proposed Project. However, without implementation of MMs 3.7-1 and 3.7-2, the impact under buildout of the General Plan would be greater than under the Proposed Project.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	Buildout of the existing General Plan is not located within two miles of a public airport, same as the Proposed Project.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	Buildout of the existing General Plan is not located within the vicinity of an airstrip, same as the Proposed Project.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Compliance would be required with standard City conditions and requirements and would result in similar impacts with regard to emergency response plans.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Less than	Fewer persons would be exposed to risk of wildland fires.
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Greater than	Greater due to higher runoff coefficients.
Adversely alter an existing drainage pattern or watercourse.	Similar	No significant changes in drainage patterns compared to the Proposed Project.
Have an impact on groundwater that is inconsistent with a groundwater management plan.	Greater than	Greater due to higher runoff coefficients, leading to less infiltration, when compared to buildout of the Proposed Project.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Affect water quality of receiving waterbodies and thus would degrade water quality.	Greater than	Greater due to higher runoff coefficients, leading to less infiltration, when compared to buildout of the Proposed Project. SU impact of the Proposed Project would not be avoided.
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Buildout of the existing General Plan would be consistent with all permitted uses at time of development, same as the Proposed Project. Would not provide amount of parkland as under the Proposed Project. Would not provide financial surplus as under the Proposed Project.
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Buildout of the existing General Plan would be consistent with all permitted uses at time of development, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Buildout of the existing General Plan would be consistent with all permitted uses at time of development, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Similar	Buildout of the existing General Plan would not create a nuisance for adjacent properties, similar to the Proposed Project.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Similar	Buildout of the existing General Plan would not be incompatible with the surrounding land uses, similar to the Proposed Project.
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Greater than	Greater amount of development would result in greater noise impacts.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Greater than	Greater amount of development would result in greater vibration impacts.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar (roadway segments); Greater than (stationary sources)	Greater noise impacts at some roadway segments and less at others; stationary sources greater than impacts of the Proposed Project.
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	Construction noise impacts would be similar.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	Buildout of the existing General Plan is not located within an airport land use plan, same as the Proposed Project.
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less than	Direct population growth would be non-existent, as no residential uses are included; indirect growth due to employment would be less than the growth under the Proposed Project. Would not improve jobs/housing balance.
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of the existing General Plan would result in the demolition of a negligible number of houses (3) currently in the Project Area, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of the existing General Plan would result in the displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
<p>Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</p> <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Less than (Schools, Libraries) Similar (Police, Fire)	Buildout of the General Plan would result in population increase, although less of an increase than under the Proposed Project. The impact on schools would be similar to the Proposed Project, similar to for Police Protection and Library Services, and similar for Fire Protection.
Recreation		
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.	Greater than	No development impact fees for parkland would be required for commercial or industrial development. The City would be required to expend City funds to purchase and improve the parkland under option on Site 1. Impacts with regard to deterioration of recreational facilities would be somewhat less due to less direct population growth. Benefit of additional parkland would not be provided.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	No development impact fees for parkland would be required for commercial or industrial development; therefore, fewer parks or recreational facilities would be developed under General Plan buildout. All construction impacts addressed in other technical sections of the EIR would be similar.
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or the extended Project Study Area.	Greater than	Based on the peak hour intersection performance criteria and impact thresholds discussed previously, there are 16 intersections within the Project Area, and six within the extended Project Area, that are significantly impacted by the existing General Plan based on year 2030 conditions. Under the Proposed Project which includes the LFTM, there would be four significantly impacted intersections in the Study Area and five in the extended Study Area compared to existing conditions, but none compared to the 2030 General Plan. This scenario assumes completion of both funded and unfunded MPAH improvements. If the unfunded improvements are not completed, additional impacts would result, which would not occur under the Proposed Project which includes the LFTM which addressed unfunded MPAH improvements.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Greater than	Five freeway ramps are forecast to be significantly impacted by the existing General Plan based on year 2030 conditions compared to existing conditions. Under the Proposed Project, no ramps would be significantly impacted compared to existing conditions, and none compared to the 2030 General Plan.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Greater than	Six freeway ramps are forecast to be significantly impacted by the existing General Plan based on year 2030 conditions compared to existing conditions. Under the Proposed Project, one ramp would be significantly impacted compared to existing conditions, but none compared to the 2030 General Plan.
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Similar	Five freeway mainline segments are forecast to be significantly impacted by the existing General Plan based on year 2030 conditions, compared to existing conditions. Under the Proposed Project, five segments would be significantly impacted compared to existing conditions, but none compared to the 2030 General Plan.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the existing General Plan.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or the extended Project Study Area.	Greater than	Based on the peak hour intersection performance criteria and impact thresholds discussed previously, there are 16 intersections within the Project Area, and six within the extended Project Area, that are significantly impacted by the existing General Plan based on year 2030 conditions. Under the Proposed Project which includes the LFTM, there would be four significantly impacted intersections in the Study Area and five in the extended Study Area compared to existing conditions, but none compared to the 2030 General Plan. This scenario assumes completion of both funded and unfunded MPAH improvements. If the unfunded improvements are not completed, additional impacts would result, which would not occur under the Proposed Project which includes the LFTM which addressed unfunded MPAH improvements.
Utilities and Service Systems		
Water		
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than	Demand for potable and non-potable water would be less due to change in land use.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Less than	Demand for potable and non-potable water would be less due to change in land use.
Wastewater		
Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.	Less than	Buildout of the existing General Plan would lead to the creation of less wastewater than buildout of the Proposed Project.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Less than	Buildout of the existing General Plan would lead to the creation of less wastewater than buildout of the Proposed Project.
Solid Waste		
Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.	Less than	Buildout of the existing General Plan would lead to the creation of less solid waste than buildout of the Proposed Project.
Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.	Similar	Buildout of the existing General Plan would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.

Table 4-19 Comparison of Impacts of the No Project/Reasonably Foreseeable Development Alternative General Plan Alternative to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
<p>Energy Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>Greater than</p>	<p>Buildout of the existing General Plan would result in greater demand for energy would be greater due to industrial land use.</p>

4.7 ALTERNATIVE 2: DEVELOPMENT ON SITES 1 THROUGH 6 AND PUBLIC FACILITIES OVERLAY ON SITE 1

4.7.1 Description

This alternative includes the Proposed Project development, with the exception that 408 residential units would be removed from Site 1 to allow development of all three community facilities (Civic Center, Community Center, and sports park) on a 45-acre portion in the northwestern portion of the site adjacent to the open space bordering the City of Irvine, as shown on Figure 2-4 in the Project Description. Site 1 would remain developed with 320,000 sf of commercial development, and a new net development of 2,407 dwelling units consisting of 1,102 multi-family residential units, 805 single-family units, and 500 rental units. New General Plan designations would remain for the site as under the Proposed Project. In addition, no development would occur on Site 7. The LFTM Program outlined under the Proposed Project would be adopted under this Alternative.

Table 4-20 Alternative 2 Summary

Site	Gross Site Area	Total Net Site Area	Max. # of Units	Total Comm'l. SF	Total Industrial SF	Park (acres)	Public Facilities	Total Buffer/ Open Space ac.	Average Density
Site 1	387	329	2,407	320,000	0	21	45 acres (Civic Center, Community Center, sports park)	70	6-9
Site 2	243	164	1,132	178,720	0	10	0	82	5-7
Site 3	82	36	833	0	0	11	0	1	10-23
Site 4	50	45	475	150,000	0	4	0	2	10-11
Site 5	13	12	75	0	0	In lieu fees	0	0	6-7
Site 6	18	18	85	0	0	In lieu fees	0	5	5
Total	793	603	5,007	648,720	0	46	45	160	8-11

SOURCE: City of Lake Forest 2004

All acreages are rounded

4.7.2 Impacts

■ Aesthetics

Site 1 is a 387-acre parcel that is largely vacant, just south of SR-241, and is bordered on the east by Bake Parkway and on the west by the City of Irvine boundary. This property is bisected by the proposed extension of Alton Parkway. The northwestern boundary abuts the City of Irvine boundary. Contained on the site are two single-family residential units, agricultural uses consisting of a nursery, avocado grove, and composting area, an RV storage facility, and large vacant graded areas adjacent to Bake Parkway. Views to the south, north, and east from Site 1 are generally of urban development and are limited on certain areas of the site by topography. Views to the west consist of the open space area in the City of

Irvine and the Borrego Wash. The Santa Ana Mountains are a prominent view to the north and east from this site.

The public facilities on Site 1 would be constructed in a 45-acre portion of the site abutting Borrego Wash at the northwestern corner of the parcel, as noted on Figure 4-5. The park site would be generally bounded by Alton Parkway to the east, the open space buffer to the west, and Towne Centre Drive to the north. The residential areas would be concentrated east and south of the public facilities site, thereby ensuring maximum land use compatibility by placing the community facilities at the edge of the Site abutting open space. The provision of housing and commercial uses on any of these sites would be compatible with surrounding land uses in building mass and height and would not substantially degrade the visual quality of the Project Area. While development would change the character of the sites from vacant land to development, it would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City, or result in building incompatibility with surrounding uses or building mass that conflicts with the character of surrounding development. Further, as the development proposed would be visually compatible and similar in uses to adjacent development, the Proposed Project would provide a seamless transition visually and would not degrade views from adjacent roadways or uses. While some sites are more visually prominent than others due to topography or location (e.g., Sites 1, 2, and 3), because of adherence to development guidelines in the City's Municipal Code, height, bulk, architecture, and/or signage would not be in vivid contrast to the surrounding development or environment, degrading the visual unity of the area. Specific development proposals would be subject to the City's design review process, with approval by the Planning Commission, which would further ensure compatibility with surrounding architectural styles. Municipal Code regulations for screening outdoor uses and materials would be required to be followed. Views from El Toro Road would remain similar to the Proposed Project. The impact on visual quality relative to development on Site 1, 2, 3, 4, 5, and 6 under this alternative would be less than significant, substantially similar to the Proposed Project.

Views to the south, north, and east from Site 1 are generally of urban development and are limited on certain areas of the site by topography. The Santa Ana Mountains are a prominent view to the northeast from this site with the developed areas of the Foothill Ranch Planned Community in the near view horizon. Views toward Bake Parkway consist of the Nakase Nursery site across the street, and industrial and commercial uses to the east, north, and south. The Santa Ana Mountains are visible to the north.

Construction of the community facilities on the site would not be anticipated to significantly obstruct views across the site toward the Santa Ana Mountains, due to the location of the proposed community facilities, except perhaps at night when the sports fields are lit. However, this would be an intermittent and short-term impact, and would not be considered significant. Additionally, this scenic view would remain visible from numerous other areas of the site, and any obstruction would be minimal and localized.

Views of the ocean would not be altered because of the particular sitting of the community facilities in the farthest northeast corner of the Site. All proposed residences would be located generally south and east of the facilities, between them and the ocean. Therefore, the impacts of the public facilities overlay

on obstruction of viewsheds and scenic views would be less than significant. Impacts to viewsheds under this alternative would remain substantially similar as the impacts of the Proposed Project.

Lighting for the sports park would result in a greater impact on ambient lighting in the immediate area, but light fixtures would be oriented in such a way as to avoid spill light onto the adjacent residences. The analysis for the Proposed Project relative to increased light and glare determined that this impact would be significant and unavoidable, as current conditions do not produce significant lighting sources other than the existing industrial use and scattered residences. The increase in ambient light from the sports park on Site 1 would increase this impact to a certain extent, and would still be significant and unavoidable. The impacts from glare produced by exterior surfaces and finishes would be substantially similar to the Proposed Project's impacts, but increased due to the slightly larger expanse of glass and exterior that would be inherent in the community facilities. These impacts were identified as significant and unavoidable for the Proposed Project. The location of community facilities on Site 1 would impact the proposed residential uses to the south and east, which would increase the severity of the impact on these residents. Significant and unavoidable impacts from increased light and glare would not occur on Site 7, as no development would occur on this site under this alternative. However, because implementation of this alternative would exceed the City's stated threshold of significance is 1¼ foot-candles between dusk and dawn, this impact would be significant and unavoidable. The overall impact remains significant and unavoidable but would be slightly increased under this alternative compared to the Proposed Project, because of the sensitive residential uses adjacent to the proposed public facilities on Site 1.

Impacts with regard to conflict with applicable plans and policies as well as design standards would be the same as under the Proposed Project, and less than significant. Development under this alternative would not result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines. There would be no impact with regard to visual resources, similar to the Proposed Project.

■ Agricultural Resources

Implementation of Alternative 2 would convert Site 1, which is presently designated by the FMMP as prime and unique farmland from agricultural to residential, commercial, and public facilities uses. Although not all of the land is currently being used for agricultural production, the loss of approximately 387 acres of prime and unique agricultural land is considered a substantial and significant conversion. The conversion of Site 1 from agricultural to residential, commercial, and public facilities uses would result in a reduction of the total amount of these farmland types within the County by approximately 2.6 percent. In addition, the conversion of this land could result in the elimination of approximately 76 percent of the prime and unique farmland within the City's boundaries. Similar to the Proposed Project, even though the agricultural conversion of Site 1 was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of Alternative 2 is considered significant and unavoidable. In addition, less overall

Legend

Residential Designations

- Very Low Density Residential (0 to 2 DUs/Net AC)
- Low Density Residential (2 to 7 DUs/Net AC)
- Low-Medium Density Residential (7 to 15 DUs/Net AC)
- Medium Density Residential (15 to 25 DUs/Net AC)
- High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

- Commercial
- Professional Office
- Mixed-Use
- Business Park
- Light Industrial
- Public Facility
- Community Park/Open Space
- Regional Park/Open Space
- Open Space
- Lake
- Transportation Corridor
- Mineral Resource Overlay
- S Possible School Site
- NP Proposed New Park
- Project Site Boundary
- Community Facilities
- 1 Shea/Baker Ranch
- 2 Portola Center/Baldwin
- 3 IRWD/Lewis
- 4 Baker Ranch
- 5 Whisler/Greystone Homes
- 6 Pacific Heritage

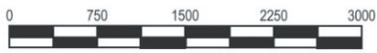
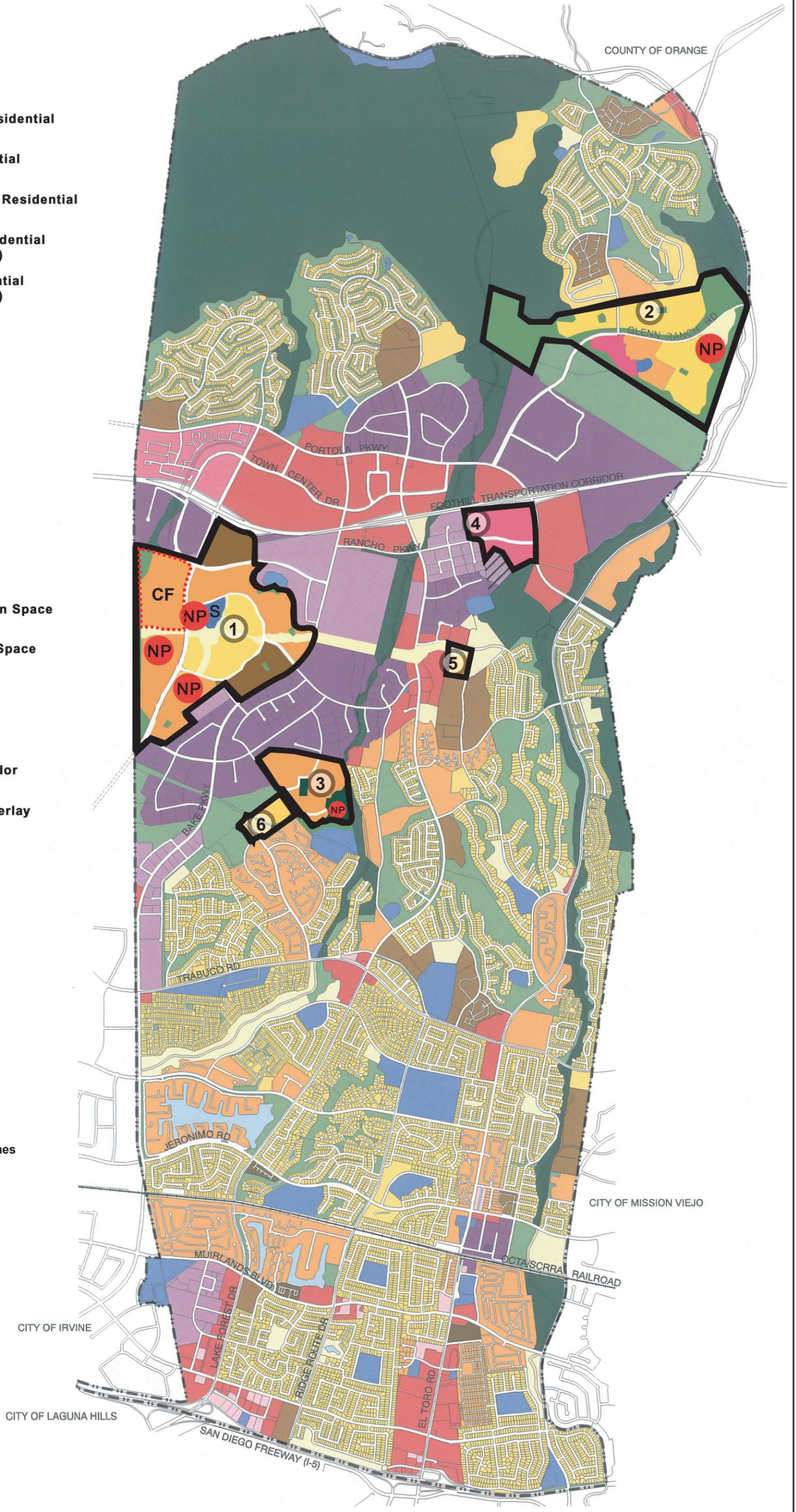


FIGURE 4-5
Alternative 2: Public Facilities Overlay on Site 1



development would occur in the Project Area since Site 7 would not be developed, and less prime and unique farmland would be converted to non-agricultural uses. As such, this impact for Alternative 2 would be less than the Proposed Project.

Implementation of Alternative 2 would convert Sites 3 and 5, which represent a total of approximately 95 acres and are presently zoned for agricultural uses to allow urban development. Implementation of this Alternative would conflict with existing zoning for agricultural uses on sites 3 and 5. This impact for Alternative 2 would be similar in magnitude as compared to the Proposed Project.

Similar to the Proposed Project, although approximately 199 acres in the Project Area on Sites 1 and 3 are currently used for agricultural operations, the development of the Proposed Project on these Sites would not result in other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Site 3 is similarly located in an urban environment and its development would not necessarily result in other Farmland in the City being converted to nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not create additional pressures on other Farmland areas to convert to nonagricultural uses. The impact on potential conversion of additional land to non-agricultural uses would be less than significant for this Alternative. Because development on Site 7 is eliminated with this Alternative, which resulted in the significant and unavoidable impact from development on this site, the impacts for Alternative 2 would be less than the Proposed Project.

■ Air Quality

Under Alternative 2, the Proposed Project development on Sites 1 through 6 would occur in the Project Area with the exception that 408 residential units on Site 1 would be eliminated in order to accommodate the three community facilities, which consists of a 44,000 sf Community Center, a 44,000 sf Civic Center, and a 39-acre sports park, on 45 acres in the northwestern portion of the site. No development on Site 7 would occur under this alternative. As the overall development in the Project Area under Alternative 2 would be less than the Proposed Project, the overall emissions generated under this alternative would also be less than the Proposed Project. Thus, because the overall emissions generated in the Project Area under Alternative 2 would be less than the Proposed Project, and implementation of the Proposed Project would not impair implementation of the AQMP (as discussed under Impact 3.3-1 under the Proposed Project), implementation of Alternative 2 would also not impair implementation of the AQMP. This impact would be less than significant, and would be less than the Proposed Project.

Both construction and operational emissions generated from development under the Proposed Project would result in significant and unavoidable impacts. In terms of construction emissions, because construction emissions for an individual project typically exceeds the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the Proposed Project, which takes into consideration the construction emissions generated from all of the development

on Sites 1 through 6 of the Project Area, is anticipated to be significant and unavoidable. While 408 residential units that were initially proposed on Site 1 under the Proposed Project would be removed under Alternative 2 in order to accommodate the three community facilities, the total construction emissions generated on Sites 1 through 6 of the Project Area from all the development proposed under Alternative 2, when considered in whole, would still exceed the SCAQMD's recommended thresholds of significance for individual projects. As such, although the impact associated with construction emissions for Alternative 2 is anticipated to be less in magnitude than the Proposed Project, it would remain significant and unavoidable.

The estimated daily operational emissions generated from both stationary and mobile sources resulting from development under the Proposed Project would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_x, and PM₁₀. Although implementation of Alternative 2 would result in a net reduction of 408 residential units in the Project Area when compared to the Proposed Project, the overall operational emissions generated by development under this alternative in the Project Area, when considered in whole, would not be substantially lower than the Proposed Project. Although the overall operational emissions would be lower than the Proposed Project, the impact associated with operational emissions for Alternative 2 would remain significant and unavoidable.

As discussed above, both construction and operation related daily emissions associated with the development projects that are planned to occur in the Project Area under Alternative 2 are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. Under this condition, the development proposed by Alternative 2 would also make a cumulatively considerable contribution to these criteria pollutants. Therefore, this impact is anticipated to be significant and unavoidable. Because less overall development would occur in the Project Area under this alternative than the Proposed Project, this impact for Alternative 2 would be less than the Proposed Project.

As the growth envisioned under the Proposed Project in the Project Area would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact, this impact would be of an even lesser magnitude for Alternative 2, which has less overall development than the Proposed Project.

Implementation of the Proposed Project would not create objectionable odors affecting a substantial number of people, and the impact was determined to be less than significant. As implementation of Alternative 2 would result in a net reduction of 408 residential units when compared with the Proposed Project, the total amount of emissions generated under this alternative would also be less than that of the Proposed Project. However, residential uses are not considered to be sources of objectionable odors. Therefore, while implementation of Alternative 2 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact, this impact would be similar in magnitude to the Proposed Project.

■ Biological Resources

The placement of the proposed public and community facilities on Site 1 would have the same impacts on biological resources as would the construction of the residential development under the Proposed Project, as the types of uses proposed would not change impacts to Biological Resources. There could be potentially significant impacts to biological resources resulting from the removal of sensitive habitat and species and alteration of wetlands. Specifically, implementation of this alternative would result in conversion of habitat that is suitable for multiple sensitive species, including but not limited to the California horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren, it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, and southern willow riparian scrub and would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA. This loss of sensitive habitat and wetlands, along with the loss of habitat required by sensitive species and the potential removal of the species themselves would be considered a substantial adverse effect and therefore this is considered a potentially significant impact of this alternative.

The impact analysis and conclusions from the Proposed Project would apply to the public facility overlay on Site 1 (Impact 3.4-1 through Impact 3.4-6). The removal of the Public Facilities on 45 acres of Site 7 would not result in a reduction in impacts, as this site is entirely a commercial nursery and supports no significant biological resources. Consequently, the corresponding mitigation measures identified within Section 3.4 would be required to mitigate for the impacts of this alternative to biological resources, and would result in less-than-significant impacts for this alternative (MM 3.4-1 through MM 3.4-5).

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of Mitigation Measures 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology/Soils and Mineral Resources

This alternative would result in less total development, and a change in location of community facilities. These changes would not affect the magnitude of impacts on geologic resources. Similar to the Proposed Project, no construction would occur in a known Earthquake Fault Zone. Although less total development would occur, persons and structures would be similarly exposed to potential substantial adverse effects, as a result of strong seismic groundshaking, seismic-related ground failure, liquefaction, lateral spreading, subsidence, and landslides. Compliance with regulatory processes, including the City Building Code, would ensure that impacts would be less than significant, similar to the Proposed Project

Construction would expose the drainage systems downslope to substantial soil erosion or the loss of topsoil. A smaller total area would be disturbed under this alternative, and thus the area exposed to erosion impacts would be smaller than under the Proposed Project. Compliance with the City Building Code and the National Pollutant Discharge Elimination System permitting process would reduce impacts to less-than-significant areas.

This alternative could locate structures on a geologic unit or soil that are potentially unstable or expansive, similar to the Proposed Project. Although fewer structures would be built under this alternative, development would be exposed to these risks in a manner similar to the Proposed Project. Compliance with the City Building Code would reduce this potential impact to a less-than-significant level.

Development under this alternative would be served by existing wastewater treatment facilities. Because no known septic systems or alternative wastewater disposal systems would be installed, there would be no impact, same as the Proposed Project.

This alternative would not result in the loss of availability of a known mineral resource or locally important mineral resource site. Loss of mineral resource recovery operations would occur on Site 4, similar to the Proposed Project. Mining operations will cease in 2006 per written contract, and similar to the Proposed Project, no impact would occur.

■ Hazards and Hazardous Materials

Implementation of Alternative 2 would result in similar impacts as those discussed for Impact 3.7-1 through Impact 3.7-8, discussed for the Proposed Project. With implementation of MM 3.7-1 and adherence to Title 26 of the California Code of Regulations (CCR), Chapter 6.95 of the California Health and Safety Code, and regulations that apply to workplace safety contained in CCR Title 8, Alternative 2 would not result in any significant hazards to the public or the environment associated with the routine transportation, use, or disposal of hazardous materials, nor would it result in the release of hazardous materials into the environment during construction. Implementation of Alternative 2 would not create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment with continued adherence to applicable federal, state, and local laws, and implementation of the County's Hazardous Materials Area Plan, Landfill Load Checking Program, Orange County Integrated Waste Management Department Household Hazardous Waste Program, the City's Emergency Preparedness Plan, and the City's Household Hazardous Waste Element. This alternative is located within an area that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWIS-listed Site 1), and Site 1 would be located within one-quarter mile of a proposed school. MM 3.7-2 would be implemented for additional CEQA review prior to development of the school on Site 1. With implementation of the MM 3.7-3 through MM 3.7-5, development of Alternative 2 would not interfere with any adopted emergency response plan or emergency evacuation plan, and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Compliance with all federal, state, and local laws pertaining to hazards and hazardous materials, and implementation of the appropriate mitigation measures would reduce the potential impacts associated with the implementation

of Alternative 2 to a less-than-significant level. No development would occur on Site 7, thus eliminating impacts on this Site. Impacts would be less than the Proposed Project, and would be reduced to less-than-significant levels.

■ Hydrology/Water Quality

Implementation of Alternative 2 would result in slightly more runoff compared to the Proposed Project because overall runoff coefficients are slightly higher for Alternative 2. Thus, construction of Alternative 2 would cause slightly more runoff than would occur under the Proposed Project. Development characteristics would be similar to the Proposed Project; therefore, stormwater quality constituents would be similar. Overall, impacts associated with this alternative would not be significantly different from those associated with the Proposed Project. Impacts to the San Diego Creek watershed would be slightly higher for this alternative compared to the Proposed Project because of an approximately five percent higher runoff coefficient. However, no development would occur on Site 7, thereby eliminating changes to drainage patterns on this Site.

Runoff rate would not increase above the pre-development condition and the 100-year floodwater surface elevation would not increase by one foot or more. Drainage patterns may be altered, but no significant impacts would be associated with these alterations. Potential increases in runoff in the San Diego Creek watershed would be primarily associated with increased imperviousness in Site 1. A portion of Site 1 is within the Borrego Wash 100-year and 500-year flood zone. Increased runoff from this site could have a greater impact on localized flooding. Implementation of on-site detention (MM 3.8-1) would reduce any potential impacts to less-than-significant levels, the same as the Proposed Project.

Groundwater resources would not be significantly degraded or depleted and recharge potential would not be reduced. Additionally, groundwater flow, rate, or direction would not be changed because there will be no additional wells and no impacts on groundwater recharge and surface water infiltration. Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant. Water quality standards may be exceeded for certain constituents and may result in an increase in pollutants listed as impairments for San Diego Creek and Aliso Creek. This impact would be significant and unavoidable, the same as for the Proposed Project.

However, public facilities constructed within Site 1 may impact the Borrego Wash area and affect sedimentation issues in the area as discussed under Impact 3.8-4. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area of Site 1, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. Alternative 2 does not include a similar sediment abatement project feature.

■ Land Use/Planning

Minor inconsistencies would occur between Alternative 2 and the existing applicable land use plans governing development of the site, similar to that identified for the Proposed Project. Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity

with the Proposed Project. Similar to the impacts discussed for the Proposed Project, impacts would be less than significant.

Overall changes to the land use character would be similar to that described for the Proposed Project. Land use changes on Sites 2 through 6 would occur similar to the Proposed Project, and no land use changes would occur on Site 7. Proposed land uses on Site 1 would be reconfigured to reduce the number of residential dwelling units and include community facilities instead.

A sports park, Civic Center, and Community Center would be largely compatible with adjacent residential uses. Noise associated with sports activities would be louder than noise typically associated with residential uses. However, sports park activities would be required to conform to noise standards contained in the City Municipal Code. Further, night lighting associated with the sports park would produce illumination that would be substantially brighter than outdoor lighting associated with residential uses. The community facilities may also include occasional special events that may result in nuisances to adjacent residences, as a result of noise, vehicular traffic, and night lighting. These nuisance effects would be temporary, associated only with special events. Conflicts could also be minimized through visual buffers, noise buffers, and site siting and design determined appropriate when this facility is built. Although some nuisance would occur, impacts would be less than significant.

Location of the community facilities in the northwestern portion of the site would serve as a buffer between residential uses on Site 1 and adjacent light industrial uses. The Civic Center and Community Center would be largely consistent with light industrial uses. Effects of light industrial uses, including loading of delivery trucks, noise, and odors would be less pronounced at the Civic Center and Community Center, as these facilities also experience periodic congestion and noise, although to a lesser degree than at light industrial facilities. Thus, although the northern portion of Site 1 residential uses would continue to abut light industrial uses, this inconsistency would be reduced in the southern portion of Site 1.

On the whole, impacts would be less than significant for Alternative 2, and similar to the Proposed Project.

■ Noise

Implementation of the Alternative 2 would result in similar impacts as those discussed for Impact 3.9-1 through Impact 3.9-5 for the Proposed Project. Construction of the sports park, Civic Center, Community Center, commercial uses, and residential units would have similar noise impacts related to grading and construction activities. While these impacts could expose sensitive receptors to noise levels above established standards, the City of Lake Forest Municipal Code Section 4-6-7(e) allows such activities to be exempt from the Noise Ordinance. Impacts would remain less than significant and similar to the Proposed Project.

Vibration impacts associated with implementation of Alternative 2 in the Project Area would be similar to those associated with implementation of the Proposed Project. As is true for the Proposed Project, the groundborne vibration generated during construction and grading activities would primarily impact

existing sensitive uses (e.g., residences, schools, and hospitals) that are located adjacent to or within the vicinity of specific projects in the Project Area. These construction and grading activities could expose sensitive receptors to vibration levels above the FTA's 85 VdB threshold for vibration. MM 3.10-1 would be implemented to require the operation of vibration-generating equipment to be located as far away from vibration-sensitive sites as possible. While implementation of MM 3.10-1 may reduce the magnitude of groundborne vibration levels experienced by nearby sensitive receptors, the possibility exists that these vibration levels may not be reduced to a level below the FTA's 85 VdB threshold. At the general plan and zoning level of analysis, this causes a potentially significant impact. However, the development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to excessive groundborne vibration or groundborne noise levels. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level.

Ambient noise levels resulting from project-generated traffic from implementation of Alternative 2 would be similar to ambient noise levels under buildout of the Proposed Project. While implementation of this alternative would generate approximately 1,111 more average daily trips, this would not significantly impact noise levels on roadway segments in within the City of Lake Forest. As a result, implementation of this alternative would not have a significant effect on permanent ambient noise levels within the City when compared to the noise levels resulting from implementation of the Proposed Project. However, similar to the Proposed Project, the project-generated traffic resulting from implementation of Alternative 2 could result in a significant increase in permanent ambient noise over existing conditions, although it is not considered to be a significant increase in noise over Year 2030 buildout of the existing General Plan. At the general plan and zoning level of analysis, this causes a potentially significant impact. While this Alternative would contribute to a significant cumulative impact (see discussion in Chapter 5, Section 5.22), similar to the Proposed Project, whether or not significant impacts will occur will be subject to tiered environmental review as project-level discretionary approvals are considered by the City. The development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to a substantial increase in ambient noise resulting from increased traffic volumes. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level. This impact would be slightly greater in magnitude than the Proposed Project.

Implementation of Alternative 2 would not introduce additional stationary noise sources in the Project Area over those in the Proposed Project. Similar to the Proposed Project, new stationary sources of noise such as rooftop heating, ventilation, and air conditioning (HVAC) equipment would be installed on new commercial and office buildings within the City as part of Alternative 2. Although fewer residential units would be developed in the Project Area compared to the Proposed Project, the amount of commercial development would remain the same in the Project Area under Alternative 2. As such, the amount of new HVAC equipment that would be installed within the Project Area on new commercial and office buildings would be the same as the Proposed Project. Therefore, the impact associated with a substantial

increase in noise levels generated by stationary sources in the Project Area would be similar in magnitude to the Proposed Project. As is true for the Proposed Project, implementation of MM 3.10-3 would reduce the impacts associated a permanent increase in ambient noise levels resulting from stationary sources to a less-than-significant level.

While construction activities that would occur in the Project Area from implementation of Alternative 2 could result in a substantial temporary or periodic increase in ambient noise levels, this increase would not be substantially different from the temporary or periodic increase in ambient noise levels occurring under the Proposed Project. Section 4-6-7(e) of the City of Lake Forest Municipal Code provides an exemption from the Noise Ordinance for construction and grading activities. As a result, this impact would be similar to the Proposed Project and would be less than significant.

■ Population/Housing

Alternative 2 would result in a total net new development of 5,007 residential units and 648,720 sf of commercial uses on Sites 1 through 6, and the 45-acre public facilities overlay on the northwestern portion of Site 1. Implementation of the residential uses would result in a population increase of 14,570 persons. In addition, the new employment-generating commercial uses in the Project Area have the potential to result in a population increase of 943 persons in the City. As such, maximum buildout of residential and commercial uses under Alternative 2 would result in an increase in the City's population of 15,513 persons. With the City's 2005 population of 78,020, the generation of 15,513 persons from Alternative 2 would result in an increase of approximately 20 percent and would exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, the City and County's infrastructure could accommodate the future growth. However, because Alternative 2 would substantially increase population growth within the City (by approximately 20 percent), impacts on population growth would be considered significant, similar to the Proposed Project. While the impacts of substantial population growth of Alternative 2 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated. The jobs/housing balance would be improved, similar to the Proposed Project.

Future development under Alternative 2 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate the construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 2 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. In addition, although the three dwelling units would be removed, the new residential units that would be developed under implementation of Alternative 2 would be more than adequate to compensate for the initial loss of the existing dwelling

units on Sites 1 and 5. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant.

■ Public Services

Police and Fire

Similar to the Proposed Project, emergency/security services could be required periodically at individual construction sites. Construction sites are typically fenced and have security personnel onsite. As such, the impact to emergency services during construction activities would be short-term in nature and less than significant.

Operation of a development of this scale would lead to an increased demand for local emergency services, including police and fire. Impacts associated with development of this alternative would be similar in scale to those incurred under the Proposed Project (See Impact 3.12-1). Impacts to emergency services would be less than significant with mitigation (see MM 3.12-1 through MM 3.12-3).

Schools

Under Alternative 2, approximately 5,007 residential units would be constructed, resulting in a potential increase of 1,814 students in local SVUSD schools, less than the Proposed Project. While some of this increase would be absorbed by nearby private school facilities, for the purposes of this analysis, it is assumed that the entire increase in student population would be assumed by SVUSD. The potential school site mentioned under Impact 3.12-2 would alleviate some of the increase in student population with SVUSD but not all. The payment of appropriate statutory school fees by developers in the Project Area at the time of issuance of building permits to the SVUSD to assist in funding efforts necessary to alleviate school overcrowding (MM 3.12-3) would reduce this impact to a less-than-significant level. Therefore, impacts would be similar to the Proposed Project.

Libraries

With implementation of Alternative 2, approximately 5,007 residences would be constructed within the limits of the City of Lake Forest. This would represent an additional demand for 2,914 sf of library space and 21,855 volumes in the Project Area. It should be noted that the public facilities overlay alone would not increase demand for library services in the area; however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, the demand for library facilities/services would increase. Most, if not all, of this demand would be assumed by the County library system. According to the County, such an increase would cause existing service levels to drop below the performance standards (0.2 sf and 1.5 volumes per capita). Further, no additional library facilities are currently planned in the area that would mitigate the increased demand. MM 3.12-4 would reduce this impact to a less-than-significant level, the same as for the Proposed Project.

■ Recreation

Under this alternative, the Proposed Project would be implemented, except that 45 acres of community facilities (sports park, Community Center, and Civic Center) would be developed in place of 408 residential units proposed under the Proposed Project on Site 1 (Shea/Baker site) and 45 acres of community facilities proposed for Site 7 (Nakase site) under the Proposed Project would be eliminated. The sports park would specifically entail 39 of the 45 acres of the community facilities on Site 1.

Thus, development under this alternative would result in 65 acres of parkland on the Shea/Baker site, 10 acres on the Portola site, 11 acres on the IRWD site, and 4 acres on the Baker Ranch site. The Greystone and Pacific Heritage sites would not contain any parkland; however, in-lieu fees would be paid. In addition, trails would be provided that connect to existing trails, connecting the northern portions of the City with southern portions of the City as well as the City to the Great Park, Aliso Beach, and the Pacific Ocean. Thus, this alternative would result in an additional 90 acres of parkland within the City of Lake Forest.

Utilizing a factor of 2.91 persons per dwelling unit (stated in Section 3.11, Population and Housing), this alternative's 5,007 residential units would result in a population increase of 14,570 persons within the City of Lake Forest. Thus, with a population factor of 92,270 (existing 77,700 City population plus 14,570 population associated with this alternative) and a park acreage factor of 263.9 (existing 173.9 acres of park plus 90 acres associated with this alternative), implementation of this alternative would result in a parkland/population ratio of 2.86 acres of parkland per 1,000 population within the City of Lake Forest.

This alternative would need to develop a total of 75.11 acres of parkland in conjunction with its proposed 5,007 residential units to comply with the City's established standard of 5 acres per 1,000 population. Since this alternative proposes uses that would result in a significantly increased City population compared to existing conditions but would develop adequate parkland to increase the citywide parkland ratio to 2.86 acres per 1,000 population—a 27.3 percent increase in parkland ratio than currently maintained and/or planned for in the City), impacts would be less than significant.

■ Transportation/Traffic

Trip Generation

The Traffic Study used the Lake Forest Traffic Analysis Model (LFTAM) to analyze the Traffic Analysis Zones (TAZ) in which each of the overlays (Alternatives) would occur. The resulting ADTs, for the Proposed Project and Overlay Plan, in the affected TAZs were compared to identify whether Alternative 2 would result in more or fewer trips and consequently would impact more or fewer intersections, freeway ramps, and mainline segments than the Proposed Project.

Impacts

As can be seen from Table 4-21, Alternative 2 includes 408 fewer residential units on Site 1. However, under this alternative all three community facilities would be build on Site 1. The total traffic generated

under Alternative 2 would be 1,111 more daily trips than the Proposed Project from this Site. This alternative would result in an approximately one percent difference in total trip generation as compared to the Proposed Project. Therefore, the impacts of Alternative 2 would be similar to slightly greater those of the Proposed Project.

Table 4-21 Overlay Plan Land Use and Trip Generation Summary—Alternative 2

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Alternative 2—Proposed Project								
Single-Family Detached	321 DU	61	180	241	205	119	324	3,072
Condominium	474 DU	81	237	318	213	156	369	3,863
<i>Total (using vehicle trip rates below)</i>		<i>142</i>	<i>417</i>	<i>559</i>	<i>418</i>	<i>275</i>	<i>693</i>	<i>6,935</i>
Alternative 2—Overlay Plan								
Single-Family Detached	237 DU	45	133	178	152	88	240	2,268
Condominium	150 DU	26	75	101	68	50	118	1,223
Government Facility	88 TSF	173	21	194	77	173	250	2,457
Sports Park	39 acre	0	0	0	133	160	293	2,098
<i>Total (using vehicle trip rates below)</i>		<i>244</i>	<i>229</i>	<i>473</i>	<i>430</i>	<i>471</i>	<i>901</i>	<i>8,046</i>
<i>Total Difference Alternative 2</i>		<i>102</i>	<i>-188</i>	<i>-86</i>	<i>12</i>	<i>196</i>	<i>208</i>	<i>1,111</i>

SOURCE: Austin-Foust Associates, Inc. 2005b

- 1) The trip rates above and regression equation below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- 2) The land use-based trip rates for commercial use are based on the following equation:
 $LN(T) = AxLN(X)+B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		AM Peak Hour			PM Peak Hour		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%
Office	TSF	.77	3.65	.14	88%	12%	.135	17%	83%

ADT = average daily trips DU = Dwelling Unit EQ = equation-based TSF = thousand square feet

Although an intersection-specific analysis was not done, it is likely that Alternative 2 would result in a similar number of impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project that would similarly be addressed by the LFTM, which is part of the Alternative. As a result no intersection impacts are anticipated. As under the Proposed Project, it is likely that no freeway ramps, or freeway mainline segments, would be significantly impacted by Alternative 2 based on year 2030 conditions compared to the 2030 General Plan Scenario.

■ Utilities/Service Systems

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 2 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRRWD design criteria. In addition, as under the Proposed Project, the

General Plan policies in the Public Facilities / Growth Management Element require the City of Lake Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon compliance with these regulations and policies, impacts related to water conveyance infrastructure under Alternative 2 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Under Alternative 2, the development on Sites 1 through 6 would occur in the Project Area with the exception that 408 residential units on Site 1 would be removed in order to accommodate the 45 acres of community facilities on the northwestern portion of the Site. No development on Site 7 would occur under this alternative. Thus, the total difference in development scenarios between the Proposed Project and Alternative 2 consists of a decrease in 408 residential units on Site 1 in order to accommodate the 45 acres of public facilities. Using the same water demand factors as presented in Table 3.15-6, development under Alternative 2 would result in a water demand on Site 1 of approximately 842,450 gpd (0.84 mgd), which is approximately 142,800 gpd (0.14 mgd) less than the Proposed Project. As discussed under Impact 3.15-2, IRWD can adequately supply water to the Proposed Project. Also, as discussed in Impact 3.15-1, the existing water treatment facilities can adequately provide service for the Proposed Project. Since Alternative 2 would result in less water demand than the Proposed Project, development under this alternative would not generate additional demand or require additional water treatment facilities or expansion of existing facilities. Impacts related to water demand and water treatment facilities would be less than under the Proposed Project and would be less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD's sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City's compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 2 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the City's wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development Alternative 2 would not result in an exceedance of the Board's wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained in the discharge. For nonpoint source discharges, Development Alternative 2 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 2 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. Similar to water demand, as discussed above, development under Alternative 2 would result in a decrease in wastewater generation than under the Proposed Project. Using the same wastewater generation factors as presented in Table 3.15-9, the reduced development under Alternative 2 would result in a wastewater generation on Site 1 of 517,505 gpd (0.5 mgd), which is approximately 87,720 gpd (0.08 mgd) less wastewater than under the Proposed Project. Wastewater generated by the Proposed Project would constitute less than the remaining capacity of the existing wastewater treatment facilities and, therefore, could be adequately served by these facilities. Since Alternative 2 would generate less wastewater than the Proposed Project, development under this alternative would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. Impacts related to wastewater treatment would be less than under the Proposed Project and would be less than significant.

Solid Waste

Development of Alternative 2 would not reduce the capacity of the landfill(s) providing landfill disposal services to the City and would comply with applicable statutes and regulations related to solid waste. Similar to water demand and wastewater generation, as discussed above, development under Alternative 2 would result in a decrease in solid waste generated than under the Proposed Project. Specifically, using the same solid waste generation factors as presented in Table 3.15-10, the reduced development under Alternative 2 would result in a solid waste generation on Site 1 of approximately 16,849 lbs/day, which is 2,856 lbs/day (1.4 tons/day) less than the Proposed Project. This would represent a decrease by approximately 1.4 tons per day of solid waste than under the Proposed Project. As discussed in Impact 3.15-5, solid waste generated by the Proposed Project would constitute less than the remaining capacity of the existing landfill facilities and, therefore, could be adequately served by these facilities. Since Alternative 2 would generate less solid waste than the Proposed Project, development under this alternative would not exceed the permitted daily capacity of any of the nearby landfills. Impacts related to solid waste disposal would be less than under the Proposed Project and would be less than significant.

As with the Proposed Project, development under Alternative 2 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development, similar to the Proposed Project, would be implemented in a manner consistent with City's commitment and in compliance with AB 939. In addition, Alternative 2 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar to those of the Proposed Project and would be less than significant.

Energy

Development under Alternative 2 would not generate electricity or natural gas demand that would require the construction of new energy production or transmission facilities. Similar to the issues discussed above, development under Alternative 2 would result in a decrease in energy demand than under the Proposed Project because implementation of this Alternative would result in 408 fewer residential units. Using the same electricity generation factors as presented in Table 3.15-11, the reduced development under Alternative 2 would result in approximately 37.06 megawatt hours per day

(MWh/day) on Site 1, which is 6.29 MWh/day less than the Proposed Project. Similarly, with regard to natural gas, demand would decrease under Alternative 2 by 0.072 million cubic feet per day on Site 1. Since Alternative 2 would generate less demand for electricity and natural gas, development under Alternative 2 would not require or result in the construction of new electric or natural gas facilities or the expansion of existing facilities. Impacts related to electricity and natural gas demand would be less than under the Proposed Project and would be less than significant.

4.7.3 Attainment of Project Objectives

This alternative provides for development on Sites 1 through 6, plus the inclusion of community facilities on a portion of Site 1. No development would occur on Site 7. This alternative attains all project objectives, but to a lesser extent than the Proposed Project; specifically, the objectives of providing a balanced community, public facilities, and diversity of housing would be achieved to a lesser extent than the Proposed Project because of fewer units, and a public facility location that is less centralized than with the Proposed Project.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Similar	Building heights, densities, and massing would be substantially similar to the Proposed Project, as the only difference between this alternative and the Proposed Project is the location of the public facilities.
Substantial adverse effect on a scenic vista by obstructing public views or of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Similar	Impacts with regard to alteration of viewsheds and obstruction of views of scenic resources on all sites would remain less than significant.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Greater than	Siting of the public facilities on Site 1 would increase the impact on adjacent proposed residential uses to the south and east; while the impact was identified as significant and unavoidable for the Proposed Project, the impact would be greater under this alternative.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Development of this alternative would not change the level of impact with regard to conflict with any applicable plans or policies, and this impact is less than significant.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan. There would be no impact with regard to visual resources.	Similar	Development under this alternative would comply with all applicable standards and design guidelines, the same as for the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less Than	Buildout of the existing General Plan would still convert land from agricultural use on Site 1, but would not convert Site 7.
Conflict with existing zoning for agricultural use.	Similar	Buildout of Alternative 2 would require that the existing General Plan be amended to reflect the change in land use, same as the Proposed Project.
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Less Than	Buildout of the General Plan would still convert existing designated farmland to other use, but would not convert Site 7.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Less than	Alternative 2 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Less than	Though Alternative 2 is expected to exceed SCAQMD's recommended thresholds, Alternative 2 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Less than	Though Alternative 2 is expected to exceed the SCAQMD's recommended thresholds for CO, VOC, NOx, and PM ₁₀ , because the overall development area for Alternative 2 is less than the Proposed Project, the overall emissions generated under this alternative would be less than that of the Proposed Project.
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Less than	The Proposed Project would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact; this impact would be of an even lesser magnitude for Alternative 2, which has less overall development than the Proposed Project.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Implementation of Alternative 2 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact; this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 2 would place the public facilities on Site 1, which would have the same impacts biologically as the Proposed Project; removal of the 45 acre facility on Site 7 would not result in a reduction of impacts.
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 2 would place the public facilities on Site 1, which would have the same impacts biologically as the Proposed Project; removal of the 45 acre facility on Site 7 would not result in a reduction of impacts.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Similar	Buildout of Alternative 2 would place the public facilities on Site 1, which would have the same impacts biologically as the Proposed Project; and as such, would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Similar	Buildout of Alternative 2 would place the public facilities on Site 1, which would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of Alternative 2 would be required to abide by local policies and/or ordinances, same as the Proposed Project.
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Alternative 2 would be required to abide by local, regional, and/or state habitat conservation plans, same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the Alternative would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	During buildout of Alternative 2, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Result in substantial soil erosion or the loss of topsoil.	Similar	During buildout of Alternative 2, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	During buildout of Alternative 2, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	During buildout of Alternative 2, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	Similar	During buildout of Alternative 2, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of Alternative 2 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
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.	Similar	Buildout of Alternative 2 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Similar	Implementation of MM 3.7-1 and compliance with appropriate regulations would result in less-than-significant impact, the same as for the Proposed Project.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Similar	Compliance with appropriate regulations would reduce this impact to less than significant, similar to the Proposed Project.
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Similar	No change in use of hazardous materials that would result in this impact being significantly different from the impact of the Proposed Project
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Similar	Only Site 1 contains a SWIS-listed site, and the impact of this Alternative would be substantially similar to the Proposed Project. Project Area.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	No public airport is located within two miles of the Project Area.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	No private airstrip is located within two miles of the Project Area.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Mitigation measures identified for the Proposed Project would similarly reduce the level of impact.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Similar	Mitigation measures identified for the Proposed Project would similarly reduce the level of impact.
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Similar	Similar, but with slightly greater runoff coefficients.
Adversely alter an existing drainage pattern or watercourse.	Similar	No significant changes in drainage patterns compared to the Proposed Project.
Have an impact on groundwater that is inconsistent with a groundwater management plan.	Similar	Similar, but with slightly greater runoff coefficients.
Affect water quality of receiving waterbodies and thus would degrade water quality.	Greater than	SU impact of the Proposed Project would not be avoided. Alternative 2 does not include a similar sediment abatement project feature
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Greater than	Buildout of Alternative 2, the community facilities may include occasional special events that could result in nuisances to adjacent residences as a result of noise, vehicular traffic, and night lighting.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Similar	Buildout of Alternative 2 would not be incompatible with the surrounding land uses, similar to the Proposed Project.
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Similar	Buildout of Alternative 2 could expose sensitive receptors to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction, similar to the Proposed Project.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Similar	Buildout of Alternative 2 could generate construction and grading activities that expose sensitive receptors to vibration levels above the 85 VdB threshold for vibration; similar to the Proposed Project.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Greater than	Greater, causing a significant increase in permanent ambient noise over existing conditions, though not considered to be a significant increase in noise over Year 2030 buildout of the Proposed Project.
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	Increase would not be substantially different from temporary or periodic noise increase under the Proposed Project.
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	Buildout of Alternative 2 is not located within an airport land use plan, same as the Proposed Project.
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less than	Impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated. Similar improvement in jobs/housing balance.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 2 would result in the demolition of a negligible number of houses (3) currently on site, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 2 would result in the displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Less than	Direct population increase would be somewhat less than the Proposed Project (fewer residential units).
Recreation		
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.	Less than	Lower direct population increase with the same amount of park acreage.
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	Similar construction impacts, fully identified in other technical sections of the EIR.
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or the extended Project Study Area.	Similar	This alternative would result in approximately 1,111 more ADT than the Proposed Project, which is slightly more than the Proposed Project. It is anticipated Alternative 2 would result in a similar number of impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project. As with the Proposed Project, this impact would be mitigated by the LFTM, which is a part of the Proposed Project.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, no freeway ramps are forecast to be significantly impacted by Alternative 2 based on year 2030 conditions compared to the 2030 General Scenario.

Table 4-22 Comparison of Impacts of Alternative 2 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, no freeway mainline segments are anticipated to be significantly impacted by Alternative 2 based on year 2030 conditions.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the Alternative 2.
Utilities and Service Systems		
Water		
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than	Demand for potable and non-potable water would be less due to the lower number of residential units.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Less than	Demand for potable and non-potable water would be less due to the lower number of residential units.
Wastewater		
Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.	Less than	Slightly less wastewater generation due to the fewer residential units.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Less than	Slightly less wastewater generation due to the fewer residential units.
Solid Waste		
Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.	Less than	Slightly less solid waste generation because of fewer residential units.
Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.	Similar	Buildout of Alternative 2 would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.
Energy		
Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than	Demand for energy would be less due fewer residential units.

4.8 ALTERNATIVE 3: PUBLIC FACILITIES OVERLAY ON SITES 1, 3, AND 4 (SPLIT-PARK ALTERNATIVE)

4.8.1 Description

This alternative includes the Proposed Project development on sites 2, 5, and 6. The analysis assumes a park would be built on 18 acres in the northwest corner of Site 1, the Civic Center and Community Center would be built on Site 3, utilizing 7 acres, and a park would utilize 20 acres on the southern portion of Site 4. Site 1 would accommodate 2,815 dwelling units, the same amount as under the Proposed Project; Site 3 would continue to accommodate 833 medium-density dwelling units; the remaining 30 acres on Site 4 in the northern portion would accommodate a mixed-use project with up to 225 residential units (assumes 15 du/acre on 15 acres) and up to 150,000 sf of new commercial (approximately .25 FAR on 15 acres), and would retain a mixed-use designation. New General Plan designations would otherwise remain the same as under the Proposed Project alone. No development would occur on Site 7. Under this alternative, the sports park component would be reduced to 38 acres compared to 39 acres under the Proposed Project. The LFTM program would be adopted under this Alternative.

Table 4-23 Alternative 3 Summary

Site	Gross Site Area	Total Net Site Area	Max. # of Units	Total Comm'l. SF	Req. Park ac.	Public Facilities	Total Buffer/Open Space (acres)	Average Density
Site 1	387	329	2,815	320,000	22	The 45 acre Community Facilities (Civic Center, Community Center, sports park) would be adjusted proportionally with residential density	25	8-9
Site 2	243	164	1,132	178,720	10		82	5-7
Site 3	82	36	833	0	11		56	10-23
Site 4	50	45	225	150,000	2			15
Site 5	13	12	75	0	In lieu fees		0	6-7
Site 6	18	18	85	0	In lieu fees		5	5
<i>Subtotal</i>	<i>793</i>	<i>603</i>	<i>5,165</i>	<i>648,720</i>	<i>45</i>	<i>45</i>	<i>168</i>	<i>8-11</i>

SOURCE: City of Lake Forest 2004

All acreages are rounded.

CEQA allows the City Council to adopt a project alternative or a combination of alternatives, depending on the relative environmental impacts and project benefits. This would allow the City Council to consider a modification to this alternative allowing a substitution of some residential development for the proposed commercial development in order to fund the public facilities at the project level. This could occur if the City Council determines that such modification (1) is in the public interest, (2) will not cause environmental impacts that have not been analyzed in the EIR, and (3) provides the same or greater fiscal benefit as the project.

4.8.2 Impacts

■ Aesthetics

Site 1 is located on the west side of Bake Parkway and is bisected by the proposed Alton Parkway Extension. This site consists of mainly agricultural uses and two single-family dwellings. Site 3 is located between Bake Parkway and Lake Forest Drive, north of Trabuco Road and south of Commercentre drive. This site consists of 82 acres that currently support water district facilities as well as agricultural row crops and support structures. The site also contains an office building for the Irvine Ranch Water District. Surrounding land uses include residential areas to the west, south, and east, industrial complexes to the north, and open space to the east and west of the site. Site 3 is located in a hilly area, surrounded by other commercial and industrial uses on Bake Parkway and Lake Forest Drive. Views from this site consist primarily of urban development, with the Santa Ana Mountains seen in the distance. Site 4 is a 50-acre site, located immediately south of and adjacent to SR-241 and bisected by the proposed extension of Rancho Parkway, contains gravel mining and associated facilities, parking lots, and a nursery. Surrounding land uses include industrial complexes to the west, Highway 241 to the north, Portola Parkway to the east, and open space and a commercial shopping center to the south. Views of the Santa Ana Mountains to the east and north may be held from this site, as well as views of surrounding urban development and some open space area.

The Civic Center and Community Center components of the community facilities would be developed on Site 3. An 18-acre sports park with lit fields would be developed in the northwestern portion of Site 1, and a sports park with lit fields would be constructed on 20 acres in the southern part of Site 4. Site 3 would also host 833 residential units. Site 1 would be developed with 2,815 dwelling units, to the same as with the Proposed Project. The remaining 30 acres in the northern portion of Site 4 would accommodate mixed use, with development of up to 225 condominium units. Site 4 would also be developed with 150,000 sf of commercial, the same as with the Proposed Project. The inclusion of the two facilities on Site 3 would result in a commercial civic (government) use adjacent to residential uses. Development on Site 3 would not be anticipated to significantly block views of the surrounding area, including distant views of the Santa Ana Mountains, as the footprint would be relatively small, occupying 7 acres of the site (redeveloping the existing government facility already located on the site), including surface parking, and the structures are not anticipated to be greater than two stories. The sports parks on Sites 1 and 4 would not be anticipated to significantly impact the availability of the views to the Santa Ana Mountains to the north except perhaps at night when the sports fields are lit. However, this impact would be intermittent and short-term, and would not represent a significant impact. Therefore, development of the community facilities as opposed to the residential uses identified for the Proposed Project would not significantly change the type of development in terms of height, and would, therefore, not significantly obstruct existing viewsheds. Views from El Toro Road would not be impacted different from under the Proposed Project. Impacts to viewsheds under this alternative would remain substantially similar as the impacts of the Proposed Project.

Legend

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/NetAC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space
-  Lake
-  Transportation Corridor
-  Mineral Resource Overlay
-  Possible School Site
-  Proposed New Park
-  Project Site Boundary
-  Community Facilities
-  1 Shea/Baker Ranch
-  2 Portola Center/Baldwin
-  3 IRWD/Lewis
-  4 Baker Ranch
-  5 Whisler/Greystone Homes
-  6 Pacific Heritage

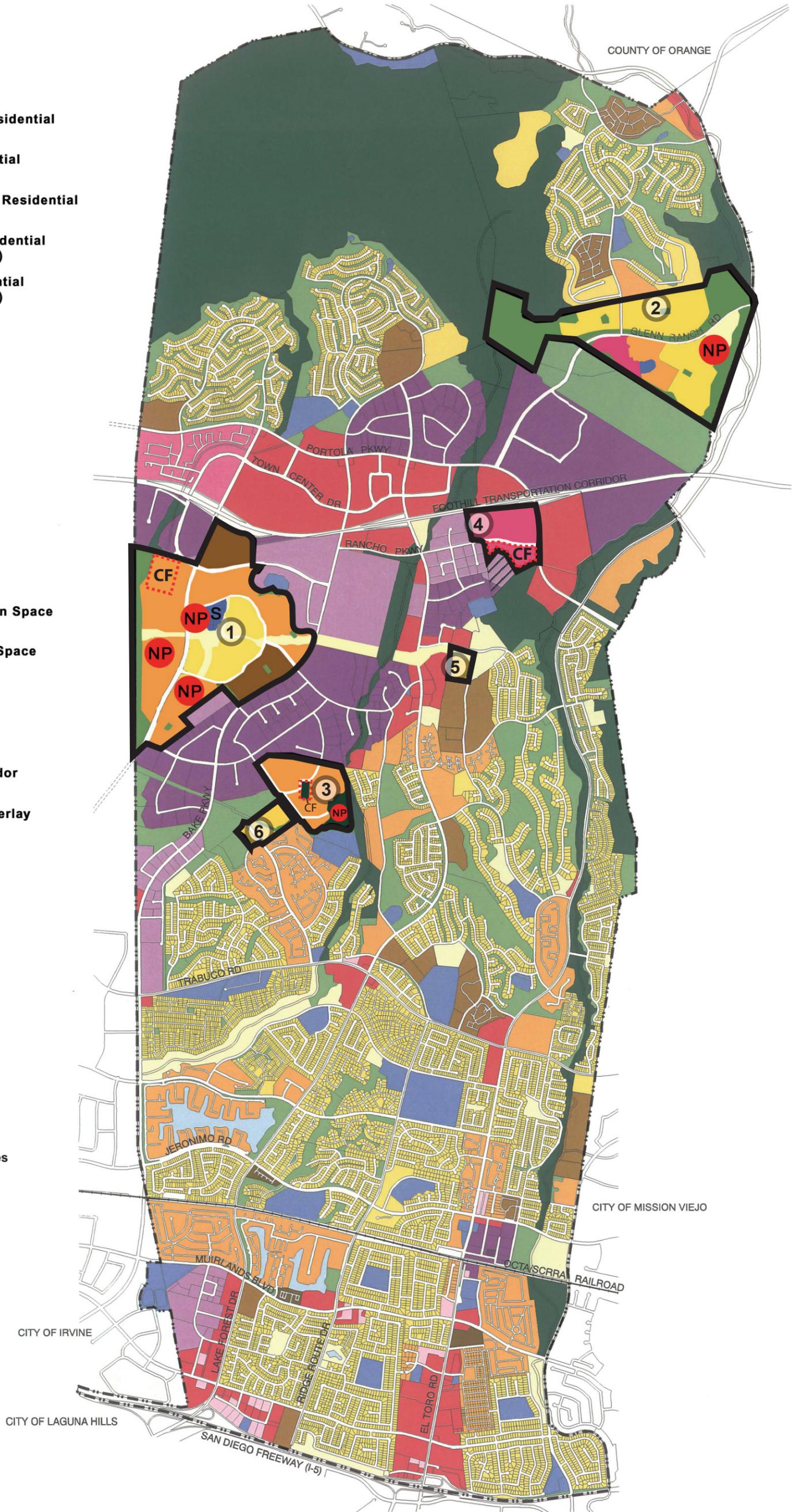


FIGURE 4-6
Alternative 3: Public Facilities Overlay on Sites 1, 3, and 4



Development of residential and commercial uses would be compatible with surrounding development in building mass and height, and, while development would change the character of the site from open space to development, it would not substantially degrade the visual quality of the Project Area. Such development would not detract from the overall image of the City, cause building incompatibility with surrounding uses, or cause building mass that conflicts with the character of surrounding development. The placement of the public facilities on the southern portion of Site 4 would be compatible with surrounding commercial and industrial development. Development of the new Civic Center on Site 3 would also be expected to be compatible with surrounding development, including the planned residential units, as the Civic Center is not expected to exceed two stories in height and would be designed to be compatible architecturally with all surrounding development. All development would be required to conform to General Plan Policies and design guidelines, which would ensure that architectural style and design features would be compatible with surrounding development. In addition, specific development proposals would be subject to the City's design review process, which would further ensure compatibility with surrounding architectural styles. Municipal Code regulations for screening outdoor uses and materials would be required to be followed.

As to light and glare impacts, there would be security and parking lot lighting provided for the Civic Center and Community Center on Site 3, which could adversely impact the adjacent residential uses proposed. However, light fixtures would be shielded and appropriately placed so as to minimize light spill and glare onto sensitive land uses, and the mitigation measures identified for the Proposed Project would reduce this potential impact to less than significant. The sports park lighting on Site 4 would occur in an area surrounded by industrial and commercial uses and is visible from the Portola Hills Planned community located approximately $\frac{3}{4}$ mile to the northeast. A buffer of mixed use (up to 225 condominiums and 150,000 sf of commercial) would be developed on the northern portion of Site 4, between the residential uses to the north and the mining operations to the south, which would reduce the impacts to the residential uses in the Portola Hills community. On Site 1, the sports park would be adjacent to residential uses on the south and east. As these are considered sensitive uses, light and glare impacts from the proposed facilities would be significant and greater than the Proposed Project. Positioning and shielding of light fixtures would be accomplished to minimize light spill onto adjacent uses. Therefore, the impacts of this overlay on adjacent sensitive uses compared to the Proposed Project would be significant.

No changes to views would occur on Site 7, as no development would occur on this site under this alternative. However, when considered in conjunction with the other development proposed on Sites 1 through 6, the impacts from light and glare would remain significant and unavoidable, Sites are currently vacant and do not contain substantial sources of light and glare.

The community facilities would be subject to the same policies, plans, and design standards applicable to the remainder of the development. Thus, the impact with respect to consistency with these plans and policies would be less than significant, similar to the Proposed Project.

■ Agricultural Resources

Implementation of Alternative 3 would convert Site 1, which is presently designated by the FMMP as prime and unique farmland, from agricultural to residential, commercial, and public facility uses. Although not all of the land is currently being used for agricultural production, the loss of approximately 387 acres of prime and unique agricultural land is considered a substantial and significant conversion. The conversion of Site 1 from agricultural to residential and commercial uses would result in a reduction of the total amount of these farmland types within the County by approximately 2.6 percent. In addition, the conversion of this land could result in the elimination of approximately 76 percent of the prime and unique farmland within the City's boundaries. Similar to the Proposed Project, even though the agricultural conversion of Site 1 was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of Alternative 3 is considered significant and unavoidable. In addition, less overall development would occur in the Project Area since Site 7 would not be developed, and less prime and unique farmland would be converted to non-agricultural uses. As such, this impact for Alternative 3 would be less than the Proposed Project.

Implementation of Alternative 3 would rezone Sites 3 and 5, which represent a total of approximately 95 acres and are presently zoned for agricultural uses, to allow urban development. Consequently, implementation of this Alternative would conflict with existing zoning for agricultural uses on sites 3 and 5. As a General Plan Amendment would be required to redesignate these Sites for non-agricultural uses, the impact for Alternative would be significant and unavoidable, similar to the Proposed Project.

Approximately 199 acres on Sites 1 and 3 are currently used for agricultural operations. Specifically, although not presently zoned for agricultural uses, Site 1 contains approximately 174 acres of existing agricultural activities, while Site 3, which is zoned for agricultural uses, contains approximately 25 acres of row crops. Implementation of Alternative 3 would result in the conversion these two sites currently used as farmland to urban uses. The development of this Alternative on Sites 1 and 3 would not result in other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Site 3 is similarly located in an urban environment and its development would not necessarily result in other Farmland in the City being converted to nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not create additional pressures on other Farmland areas to convert to nonagricultural uses. As no development would occur on Site 7, this impact would be less than significant, and less than the Proposed Project, which proposes development on Site 7.

■ Air Quality

As proposed under Alternative 3, the Civic Center and Community Center would be built on Site 3. The sports park would be split within Sites 1 and 4, with 18 acres of the park built on Site 1 and 20 acres built on Site 4. Under this alternative, Site 3 would continue to accommodate 833 dwelling units as proposed under the Proposed Project. However, 490 residential units that were initially proposed by the Proposed Project would be eliminated to accommodate the sports parks. In addition, the 150,000 sf of commercial uses designated on Site 4 by the Proposed Project would remain. The other land uses originally proposed on Sites 2, 5, and 6 under the Proposed Project would also remain. No development on Site 7 would occur under this alternative. When compared with the Proposed Project, implementation of Alternative 3 would result in a net reduction of 490 residential units along with a 6-acre reduction in overall recreational park acreage in the Project Area, while the total buffer/open space acreage would be increased by approximately 14 acres. In addition, the sports park component would be reduced to a total of 38 acres under this alternative, compared to 39 acres under the Proposed Project.

Overall, with the elimination of 240 residential units on Site 1 and a net of 250 residential units on Site 4, implementation of Alternative 3 would result in less overall development in the Project Area than the Proposed Project. As such, the overall emissions generated under this alternative would also be less than the Proposed Project. Thus, because the overall emissions generated in the Project Area under Alternative 3 would be less than the Proposed Project, and implementation of the Proposed Project would not impair implementation of the AQMP (as discussed under Impact 3.3-1 under the Proposed Project), implementation of Alternative 3 would also not impair implementation of the AQMP. This impact would be less than significant, and would be less than the Proposed Project.

Both construction and operational emissions generated from development under the Proposed Project would result in significant and unavoidable impacts. In terms of construction emissions, because construction emissions for an individual project typically exceeds the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the Proposed Project, which takes into consideration the construction emissions generated from all of the development on Sites 1 through 7 of the Project Area, is anticipated to be significant and unavoidable. While 240 residential units on Site 1 and 250 residential units on Site 4 under the Proposed Project would be removed under Alternative 3 to accommodate the two sports parks, the total construction emissions generated on Sites 1 through 6 of the Project Area from all the development proposed under Alternative 3, when considered as a whole, would still exceed the SCAQMD's recommended thresholds of significance for individual projects. As such, although the impact associated with construction emissions for Alternative 3 is anticipated to be less in magnitude than the Proposed Project, it would remain significant and unavoidable.

The estimated daily operational emissions generated from both stationary and mobile sources resulting from development under the Proposed Project would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_x, and PM₁₀. Although implementation of Alternative 3 would result in a net reduction of 490 residential units in the Project Area when compared to the Proposed Project, the overall operational emissions generated by development under this alternative in the Project Area, when considered in whole, would not be substantially lower than the Proposed Project. Although the overall

operational emissions would be lower than the Proposed Project, the impact associated with operational emissions for Alternative 3 would remain significant and unavoidable.

As discussed above, both construction and operation related daily emissions associated with the development projects that are planned to occur in the Project Area under Alternative 3 are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. Under this condition, the development proposed by Alternative 3 would also make a cumulatively considerable contribution to these criteria pollutants. Therefore, this impact is anticipated to be significant and unavoidable. Because less overall development would occur in the Project Area under this alternative than the Proposed Project, this impact for Alternative 3 would be less than the Proposed Project.

As the growth envisioned under the Proposed Project in the Project Area would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact, this impact would be of an even smaller magnitude for Alternative 3, which has less overall development than the Proposed Project.

Implementation of the Proposed Project would not create objectionable odors affecting a substantial number of people, and the impact was determined to be less than significant. As implementation of Alternative 3 would result in a net reduction of 490 residential units when compared with the Proposed Project, the total amount of emissions generated under this alternative would also be less than that of the Proposed Project. However, residential uses are not considered to be sources of objectionable odors. Therefore, while implementation of Alternative 3 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact, this impact would be similar in magnitude to the Proposed Project.

■ Biological Resources

The placement of the proposed public and community facilities on some portion of Sites 1, 3, and 4 would have the same impacts on biological resources as would the construction of the residential or commercial development in the Proposed Project. Depending on the location of these facilities, there could be potentially significant impacts to biological resources resulting from the removal of sensitive habitat and species and alteration of wetlands. In general, Site 4 does not support sensitive species or habitats. Most of the impacts to biological resources would come from development of Site 3.

Implementation of this alternative would result in conversion of habitat that is suitable for multiple sensitive species, including but not limited to the orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren; it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation. Since the Civic Center and Community Center would be constructed on the footprint of an existing government building, there would be no substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA. Development of the Project Area under this alternative would increase the number of nighttime-site light sources throughout the Project Area. If unchecked, this light, where proximal to natural areas, could adversely impact the wildlife. Implementation of this alternative

would conflict with the General Plan Policy 2.1 as it relates to non NCCP covered species and resources, requiring the conservation and protection of sensitive biological resources. The loss of sensitive habitat and wetlands, along with the loss of habitat required by sensitive species would be considered a substantial adverse effect and is therefore considered a potentially significant impact of this alternative.

Although the sites under this alternative are outside the Reserve System implemented by the NCCP/HCP in 1996, just as the buildout of the Proposed Project would be required to comply with the NCCP/HCP (see, e.g., mitigation measure 3.4-2), buildout under Alternative 3 would also be required to comply with the NCCP/HCP. Thus, neither Alternative 3 nor the Proposed Project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The impact analysis and conclusions from the Proposed Project would apply to the public facility overlay on Sites 1, 3, and 4 (Impact 3.4-1 through Impact 3.4-6). The removal of the public facilities on 45 acres of Site 7 would not result in a reduction in impacts, as this site is entirely a commercial nursery and supports no significant biological resources. Consequently, the corresponding mitigation measures identified within Section 3.4 would be required to mitigate for the impacts of this alternative to biological resources, and would result in less-than-significant impacts for this alternative (MM 3.4-1 through MM 3.4-5).

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of Mitigation Measures 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology/Soils and Mineral Resources

This alternative would result in less total development, and a change in location of community facilities. These changes would not affect the magnitude of impacts on geologic resources. Similar to the Proposed Project, no construction would occur in a known Earthquake Fault Zone. Although less total development would occur, persons and structures would be similarly exposed to potential substantial adverse effects, as a result of strong seismic groundshaking, seismic-related ground failure, liquefaction, lateral spreading, subsidence, and landslides. Compliance with regulatory processes, including the City Building Code, would ensure that impacts would be less than significant, similar to the Proposed Project

Construction would expose the drainage systems downslope to substantial soil erosion or the loss of topsoil. As less total area would be disturbed under this alternative, the area exposed to erosion impacts

would be less than the Proposed Project. Compliance with the City Building Code and the National Pollutant Discharge Elimination System permitting process would reduce impacts to less than significant.

This alternative could locate structures on a geologic unit or soils that are potentially unstable or expansive, similar to the Proposed Project. Although fewer structures would be built under this alternative, development would be exposed to these risks in a manner similar to the Proposed Project. Compliance with the City Building Code would reduce this potential impact to a less-than-significant impact.

Development under this alternative would be served by existing wastewater treatment facilities. Because no known septic systems or alternative wastewater disposal systems would be installed, there would be no impact, same as the Proposed Project.

This alternative would not result in the loss of availability of a known mineral resource or locally important mineral resource site. Although different land uses are proposed, loss of mineral resource recovery operations would occur on Site 4, similar to the Proposed Project. However, mining operations will cease in 2006 under the reclamation agreement. Similar to the Proposed Project, no impact would occur.

■ Hazards and Hazardous Materials

Implementation of this alternative would result in similar impacts as those discussed for Impact 3.7-1 through Impact 3.7-8 discussed above for the Proposed Project. Construction of the sports park, Civic Center, Community Center, and residential units would have similar impacts related to hazards and hazardous materials as those associated with the development of businesses and public facilities that could be developed as part of any of the project alternatives. With implementation of MM 3.7-1 and adherence to Title 26 of the California Code of Regulations (CCR), Chapter 6.95 of the California Health and Safety Code, and regulations that apply to workplace safety contained in CCR Title 8, this alternative would not result in any significant hazards to the public or the environment associated the routine transportation, use, or disposal of hazardous materials, nor would it result in the release of hazardous materials into the environment during construction. Implementation of this alternative would not create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment with continued adherence to applicable federal, state, and local laws, and implementation of the County's Hazardous Materials Area Plan, Landfill Load Checking Program, Orange County Integrated Waste Management Department Household Hazardous Waste Program, the City's Emergency Preparedness Plan, and the City's Household Hazardous Waste Element. The Proposed Project is located within an area that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWIS-listed Site 1). Sites 3 and 4 are not located within one-quarter mile of an existing school, or within two miles of an airport or private airstrip. With a proposed school to be located on Site 1, this alternative would result in development within one mile of a proposed school, the same as for the Proposed Project. MM 3.7-2 would provide for additional CEQA analysis prior to development of the school. With implementation of MM 3.7-3 through MM 3.7-5, development of this alternative would not interfere with any adopted emergency response plan or emergency evacuation plan, and would not expose people

or structures to a significant risk of loss, injury, or death involving wildland fires. Compliance with all federal, state, and local laws pertaining to hazards and hazardous materials, and implementation of the appropriate mitigation measures would reduce the potential impacts associated with the implementation of this alternative to a less-than-significant level.

■ Hydrology/Water Quality

Implementation of this alternative would result in slightly more runoff compared to the Proposed Project, as overall runoff coefficients are slightly higher. Development characteristics would be similar to the Proposed Project; therefore, stormwater quality constituents would be similar. Overall, impacts associated with this alternative would not be significantly different from those associated with the Proposed Project. However, impacts to the San Diego Creek watershed would be slightly higher for this alternative compared to the Proposed Project because of an approximately five percent higher runoff coefficient (meaning Alternative 3 is likely to cause greater runoff than anticipated under buildout of the Proposed Project).

Runoff rate would not increase above the pre-development condition and the 100-year floodwater surface elevation would not increase by one-foot or more. Drainage patterns may be altered, but no significant impacts would be associated with these alterations. Groundwater resources would not be significantly degraded or depleted and recharge potential would not be reduced. Additionally, groundwater flow, rate, or direction would not be changed because there will be no additional wells and no impacts on groundwater recharge and surface water infiltration. Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant. Water quality standards may be exceeded for certain constituents and may result in an increase in pollutants listed as impairments for San Diego Creek and Aliso Creek.

Additionally, the existing sedimentation issues in the Borrego Canyon Wash area (as described in the analysis of Impact 3.8-4) would also likely be present under this alternative, and may in fact be exacerbated given that Alternative 3 is projected to have a five percent higher runoff coefficient than that which would occur under buildout of the Proposed Project. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. Alternative 3 does not include a similar sediment abatement project feature.

■ Land Use/Planning

Minor inconsistencies would occur between this overlay and the existing applicable land use plans governing development of the Project Area, similar to that identified for the Proposed Project. Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity. Similar to the impacts discussed for the Proposed Project, impacts would be less than significant.

Overall changes to the land use character would be similar to that described for the Proposed Project. Land use changes on Sites 2, 5, and 6 would occur similar to the Proposed Project, and no land use changes would occur on Site 7. Proposed land uses on Sites 1, 3, and 4 would be reconfigured to reduce residential dwelling units and include community facilities instead.

Under this alternative, 7 acres of land would be dedicated to a Civic Center and Community Center on Site 3. These uses would be largely compatible with adjacent residential uses. The community facilities may also include occasional special events that may result in nuisances to adjacent residences as a result of noise, vehicular traffic, and night lighting. These nuisance effects would be temporary, associated only with special events. Conflicts could also be minimized through site siting and design determined appropriate when this facility is built.

Use of a 20-acre portion of Site 4 and an 18-acre portion of Site 1 would be compatible with adjacent business park and community facilities. Siting and design of the sports parks would need to consider adjacent activities, including hours of operation, in order to minimize conflicts. Land located to the south is currently used for gravel washing operations. However, mining operations will cease in 2006, and this area would be developed with business park uses, consistent with the General Plan. Impacts would be less than significant, and would be less than the Proposed Project.

■ Noise

Implementation of this alternative would result in similar impacts as those discussed for Impact 3.9-1 through Impact 3.9-5 for the Proposed Project. Construction of the sports park, Civic Center, Community Center, commercial uses, and residential units would have similar noise impacts related to grading and construction activities as the Proposed Project. While these impacts could expose sensitive receptors to noise levels above established standards, the City of Lake Forest Municipal Code Section 4-6-7(e) allows such activities to be exempt from the Noise Ordinance. Impacts would remain less than significant and similar to the Proposed Project.

Vibration impacts associated with implementation of this alternative in the Project Area would be similar to those associated with implementation of the Proposed Project. As is true for the Proposed Project, the groundborne vibration generated during construction and grading activities would primarily impact existing sensitive uses (e.g., residences, schools, and hospitals) that are located adjacent to or within the vicinity of specific projects in the Project Area. These construction and grading activities could expose sensitive receptors to vibration levels above the FTA's 85 VdB threshold for vibration. MM 3.10-1 would be implemented to require the operation of vibration-generating equipment to be located as far away from vibration-sensitive sites as possible. While implementation of MM 3.10-1 may reduce the magnitude of groundborne vibration levels experienced by nearby sensitive receptors, the possibility exists that these vibration levels may not be reduced to a level below the FTA's 85 VdB threshold. At the general plan and zoning level of analysis, this causes a potentially significant impact. However, the development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to excessive groundborne vibration or groundborne noise levels. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or

tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level.

Alternative 3 would generate approximately 9,060 more average daily trips than the Proposed Project. As such, the ambient noise levels resulting from project-generated traffic from implementation of this alternative would be greater than the ambient noise levels generated by traffic under buildout of the Proposed Project. This increase in daily vehicle trips could potentially impact noise levels on more roadway segments within the City of Lake Forest than the Proposed Project. As a result, implementation of this alternative would have a greater significant effect on permanent ambient noise levels within the City when compared to the noise levels resulting from implementation of the Proposed Project. At the general plan and zoning level of analysis, this causes a potentially significant impact. While this Alternative would contribute to a significant cumulative impact (see discussion in Chapter 5, Section 5.22), similar to the Proposed Project, whether or not significant impacts would occur would be subject to tiered environmental review as project-level discretionary approvals are considered by the City. The development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to a substantial increase in ambient noise resulting from increased traffic volumes. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level. This impact would be slightly greater in magnitude than the Proposed Project.

Implementation of this alternative would not introduce additional stationary noise sources in the Project Area over those for the Proposed Project. Similar to the Proposed Project, new stationary sources of noise such as rooftop heating, ventilation, and air conditioning (HVAC) equipment would be installed on new commercial and office buildings within the City as part of Alternative 3. Although fewer residential units would be developed in the Project Area compared to the Proposed Project, the amount of commercial development would remain the same in the Project Area under Alternative 3. As such, the amount of new HVAC equipment that would be installed within the Project Area on new commercial and office buildings would be the same as the Proposed Project. Therefore, the impact associated with a substantial increase in noise levels generated by stationary sources in the Project Area would be similar in magnitude to the Proposed Project. As is true for the Proposed Project, implementation of MM 3.10-3 would reduce the impacts associated a permanent increase in ambient noise levels resulting from stationary sources to a less-than-significant level.

While construction activities that would occur in the Project Area from implementation of this alternative could result in a substantial temporary or periodic increase in ambient noise levels, this increase would not be substantially different from the temporary or periodic increase in ambient noise levels occurring under the Proposed Project. Section 4-6-7(e) of the City of Lake Forest Municipal Code provides an exemption from the Noise Ordinance for construction and grading activities. As a result, this impact would be similar to the Proposed Project and would be less than significant.

■ Population/Housing

Alternative 3 would result in the total net new development of 5,165 residential units and 648,720 sf of commercial uses on Sites 1 through 6. In addition, the Civic Center and Community Center would be constructed on 7 acres of Site 3, while two sports parks would utilize 18 acres from Site 1 and 20 acres from Site 4. Implementation of the residential uses would result in a population increase of 14,331 persons. In addition, the new employment-generating commercial uses in the Project Area have the potential to result in a population increase of 943 persons in the City. As such, maximum buildout of residential and commercial uses under Alternative 3 would result in an increase in the City's population of 15,274 persons. With the City's 2005 population of 78,020, the generation of 15,274 persons from Alternative 3 would result in an increase of approximately 20 percent and would exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, the City and County's infrastructure could accommodate the future growth. However, because Alternative 3 would substantially increase population growth within the City (by approximately 20 percent), impacts on population growth would be considered significant. While the impacts of substantial population growth of Alternative 3 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated. The jobs/housing balance would be improved, similar to the Proposed Project.

Future development under Alternative 3 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 3 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. In addition, although the three dwelling units would be removed, the new residential units that would be developed under implementation of Alternative 3 would be more than adequate to compensate for the initial loss of the existing dwelling units on Sites 1 and 5. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant.

■ Public Services

Police and Fire

Similar to the Proposed Project, emergency/security services could be required periodically at individual construction sites with implementation of Alternative 3. Construction sites are typically fenced and have security personnel. As such, the impact to emergency services during construction activities would be short-term in nature and less than significant.

Operation of a development of this scale would lead to an increased demand for local emergency services, including police and fire. Impacts associated with development of this alternative would be similar in scale to those incurred under the Proposed Project (See Impact 3.12-1). Impacts to emergency services would be less than significant with mitigation (MM 3.12-1 through MM 3.12-3).

Schools

Under Alternative 3, approximately 5,165 residential units would be constructed, resulting in a potential increase of 1,889 students in local SVUSD schools, approximately 100 fewer students than under the Proposed Project. It should be noted that the public facilities overlay alone would not increase student enrollment in the area, however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, student enrollment would increase. While some of this increase would be absorbed by nearby private school facilities, for the purposes of this analysis, it is assumed that the entire increase in student population would be assumed by SVUSD. The potential school site mentioned under Impact 3.12-2 would alleviate some of the increase in student population with SVUSD but not all. The payment of appropriate statutory school fees by developers in the Project Area at the time of issuance of building permits to the SVUSD to assist in funding efforts necessary to alleviate school overcrowding (MM 3.12-3) would reduce this impact to a less-than-significant level. Therefore, impacts would be similar to the Proposed Project.

Libraries

With implementation of Alternative 3, approximately 4,925 residences would be constructed within the limits of the City of Lake Forest. This would represent a demand for 2,866 sf of library space and 21,498 volumes in the Project Area, less than that of the Proposed Project. It should be noted that the public facilities overlay alone would not increase demand for library services in the area; however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, the demand for library facilities/services would increase. Most, if not all, of this demand would be assumed by the County library system. According to the County, such an increase would cause existing service levels to drop below the performance standards mentioned previously (0.2 sf and 1.5 volumes per capita). Further, no additional library facilities are currently planned in the area that would mitigate the increased demand. However, MM 3.12-4 would reduce this impact to a less-than-significant level, the same as for the Proposed Project.

■ Recreation

Under this alternative, the Proposed Project would be implemented, except that 7 acres of community facilities (Civic Center and Community Center) would be developed without eliminating any of the uses proposed under the Proposed Project on Site 3 (IRWD/Lewis site); 20 acres of sports park would be developed in place of 475 residential units proposed under the Proposed Project on Site 4 (Baker Ranch site), 18 acres of sports park would be developed on Site 1, and 45 acres of community facilities proposed for Site 7 (Nakase Site) under the Proposed Project would be eliminated. The sports park component would be reduced from 39 acres under the Proposed Project to 38 acres under this alternative.

Thus, development under this alternative would result in 26 acres of parkland on the Shea/Baker site, 10 acres on the Portola site, 11 acres on the IRWD site, and 40 acres on the Baker Ranch site. The Greystone and Pacific Heritage sites would not contain any parkland; however, in-lieu fees would be paid. In addition, trails would be provided that connect to existing trails, connecting the northern portions of the City with southern portions of the City as well as the City to the Great Park, Aliso Beach, and the Pacific Ocean. Thus, this alternative would result in an additional 87 acres of parkland within the City of Lake Forest compared to the 95 acres proposed under the Proposed Project.

Utilizing a factor of 2.91 persons per dwelling unit (stated in Section 3.11, Population and Housing), this alternative's 4,940 residential units would result in a population increase of 14,375 persons within the City of Lake Forest. Thus, with a population factor of 92,075 (existing 77,700 City population plus 14,375 population associated with this alternative) and a park acreage factor of 260.9 (existing 173.9 acres of park plus 87 acres associated with this alternative), implementation of this alternative would result in a parkland/population ratio of 2.83 acres of parkland per 1,000 population within the City of Lake Forest.

This alternative would need to develop a total of 74.10 acres of parkland in conjunction with its proposed 4,940 residential units to comply with the City's established standard of 5 acres per 1,000 population. Since this alternative proposes uses that would result in a significantly increased City population compared to existing conditions but would develop adequate parkland to increase the City-wide parkland ratio to 2.83 acres per 1,000 population—a 25.9 percent increase in parkland ratio than currently maintained and/or planned for in the City), impacts would be less than significant, and substantially similar to the impacts of the Proposed Project.

■ **Transportation/Traffic**

Trip Generation

The Traffic Study used the Lake Forest Traffic Analysis Model (LFTAM) to analyze the Traffic Analysis Zones (TAZ) in which each of the overlays (Alternatives) would occur. The resulting ADTs, for the Proposed Project and Overlay Plan, in the affected TAZs were compared to identify whether Alternative 3 would result in more or less trips, and consequently would impact more or less intersections than the Proposed Project.

Impacts

As can be seen from Table 4-24, Alternative 3 includes 490 fewer residential units, 88,000 sf of community facilities, and a 39-acre sports park. The traffic generated for this alternative would be 12,710 ADT. This alternative would generate 2,518 more daily trips than the Proposed Project. Therefore, the impacts of Alternative 3 are likely to be greater than those of the Proposed Project.

Although an intersection-specific analysis was not done, it is likely that Alternative 3 would result in a greater number of impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project. It is not known whether improvements in the LFTM would fully mitigate the intersection impacts of this alternative. This alternative would require analysis to identify the

additional intersections that would be impacted, as well as the mitigation that would be necessary. It is expected that all impacts, including to additional intersections, could be mitigated to less than significant, similar to the Proposed Project. With this alternative, there could be new impacts to freeway ramps, or freeway mainline segments, compared to the Proposed Project.

As under the Proposed Project, no impacts related to parking would occur with implementation of Alternative 3.

Table 4-24 Overlay Plan Land Use and Trip Generation Summary—Alternative 3

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Alternative 3—Proposed Project								
Condominium	475 DU	81	238	319	214	157	371	3,871
Commercial (EQ)	150 TSF	129	83	212	369	400	769	8,839
<i>Total (using vehicle trip rates below)</i>		<i>210</i>	<i>321</i>	<i>531</i>	<i>583</i>	<i>557</i>	<i>1,140</i>	<i>12,710</i>
Alternative 3—Overlay Plan								
Condominium	225 DU	38	113	151	101	74	175	1,834
Commercial (EQ)	150 TSF	129	83	212	369	400	769	8,839
Government Facility	88 TSF	173	21	194	77	173	250	2,457
Sports Park	39 acre	0	0	0	132	160	292	2,098
<i>Total (using vehicle trip rates below)</i>		<i>340</i>	<i>217</i>	<i>557</i>	<i>679</i>	<i>807</i>	<i>1,486</i>	<i>15,228</i>
<i>Total Difference Alternative 3</i>		<i>-130</i>	<i>104</i>	<i>-26</i>	<i>-97</i>	<i>-250</i>	<i>-347</i>	<i>-2,518</i>

SOURCE: Austin-Foust Associates, Inc. 2005b

- 1) The trip rates above and regression equation below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- 2) The land use-based trip rates for commercial use are based on the following equation:
 $LN(T) = A \times LN(X) + B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		— AM Peak Hour —			— PM Peak Hour —		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%
Office	TSF	.77	3.65	.14	88%	12%	.135	17%	83%

ADT = average daily trips DU = Dwelling Unit EQ = equation-based TSF = thousand square feet

Utilities/Service Systems

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 3 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRWD design criteria. In addition, as under the Proposed Project, the General Plan policies in the Public Facilities / Growth Management Element require the City of Lake Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon compliance with these regulations and policies, impacts related to water conveyance infrastructure under

Alternative 3 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Under Alternative 3, the Proposed Project development on Sites 2, 5, and 6 would occur in the Project Area with the exception that 240 residential units would be removed on Site 1 and 250 residential units on Site 4 would be removed in order to accommodate the sports parks. The Civic Center and Community Center would be built on Site 3, and Site 4 would continue to accommodate 150,000 sf of commercial development. Thus, the total difference applicable to this analysis in development scenarios between the Proposed Project and Alternative 3 consists of a decrease in 490 residential units.

Using the same water demand factors as presented in Table 3.15-6, development under Alternative 3 would result in a water demand on Site 1 of approximately 901,250 gpd and on Site 4 of approximately 69,750 gpd, which would be an overall decrease in water demand in the Project Area by approximately 161,500 gpd (0.16 mgd.) As discussed under Impact 3.15-2, IRWD can adequately supply water to the Proposed Project. Also, as discussed in Impact 3.15-1, the existing water treatment facilities can adequately provide service for the Proposed Project. Since Alternative 3 would generate less water than the Proposed Project, development under this alternative would not generate additional demand or require additional water treatment facilities or expansion of existing facilities. Impacts related to water demand and water treatment facilities would be less than under the Proposed Project and would be less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD's sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City's compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 3 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the City's wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development Alternative 3 would not result in an exceedance of the Board's wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained in the discharge. For nonpoint source discharges, Development Alternative 3 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 3 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. Similar to water demand, as discussed above, development under Alternative 3 would result in a decrease in wastewater generation than under the Proposed Project.

Using the same wastewater generation factors as presented in Table 3.15-9, the reduced development under Alternative 3 would result in a wastewater generation on Site 1 of 553,625 gpd (0.55 mgd), and on Site 4 of approximately 45,000 gpd (0.045 mgd), which would be an overall decrease of approximately 101,600 gpd (0.10 mgd) in wastewater when compared to the Proposed Project. As discussed in Impact 3.15-4, the remaining capacity of existing wastewater treatment facilities is sufficient to accommodate wastewater generated by the Proposed Project. Since Alternative 3 would generate less wastewater than the Proposed Project, development under this alternative would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. Impacts related to wastewater treatment would be less than under the Proposed Project and would be less than significant.

Solid Waste

Development of Alternative 3 would not reduce the capacity of the landfill(s) providing landfill disposal services to the City and would comply with applicable statutes and regulations related to solid waste. Similar to water demand and wastewater generation, as discussed above, development under Alternative 3 would result in a decrease in solid waste generated than under the Proposed Project. Alternative 3 would result in a decrease in solid waste generated than under the Proposed Project. Specifically, using the same solid waste generation factors as presented in Table 3.15-10, the reduced development under Alternative 3 would result in a solid waste generation on Site 1 of approximately 18,025 lbs/day, and on Site 4 of approximately 1,575 lbs/day. This would represent a total decrease by approximately 3,430 lbs/day (1.7 tons per day) of solid waste when compared to the Proposed Project. As discussed in Impact 3.15-5, solid waste generated by the Proposed Project would constitute less than the remaining capacity of the existing landfill facilities and, therefore, could be adequately served by these facilities. Since Alternative 3 would generate less solid waste than the Proposed Project, development under this alternative would not exceed the permitted daily capacity of any of the nearby landfills. Impacts related to solid waste disposal would be less than under the Proposed Project and would be less than significant.

As with the Proposed Project, development under Alternative 3 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development under Alternative 3, similar to the Proposed Project, would be implemented in a manner consistent with City's commitment and in compliance with AB 939. In addition, Alternative 3 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar as under the Proposed Project and would be less than significant.

Energy

Development under Alternative 3 would not generate electricity or natural gas demand that would require the construction of new energy production or transmission facilities. Similar to the issues

discussed above, development under Alternative 3 would result in a less of an increase in energy demand than under the Proposed Project because implementation of this Alternative would result in less development. Similarly, Alternative 3 would also result in a decrease in natural gas demand. Since Alternative 3 would generate less demand for electricity and natural gas, development under Alternative 3 would not require or result in the construction of new electric or natural gas facilities or the expansion of existing facilities. Impacts related to electricity and natural gas demand would be less than under the Proposed Project and would be less than significant.

4.8.3 Attainment of Project Objectives

This alternative provides for development on Sites 1 through 6, plus the inclusion of community facilities on Sites 1, 3, and 4. No development would occur on Site 7. This alternative attains all project objectives, but to a lesser extent than the Proposed Project. Specifically, this Alternative would attain the project objectives for a balanced community, recreational facilities, and diversity of housing to a lesser extent than the Proposed Project because the facilities would be split up and also because there would be fewer housing units.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Similar	Building heights, densities, and massing would be substantially similar to the Proposed Project, as the only difference between this alternative and the Proposed Project is the location of the public facilities.
Substantial adverse effect on a scenic vista by obstructing public views or of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Similar	Impacts with regard to alteration of viewsheds and obstruction of views of scenic resources on all sites would remain less than significant.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Greater than	Siting of the sports park on Site 1 would increase the impact on adjacent proposed residential uses to the south and east. The sports park on Site 4 would not adversely affect adjacent uses, which are commercial and industrial, but would still be significant and unavoidable. Impacts from the Civic Center on Site 3 would increase ambient lighting for adjacent sensitive residential uses. Because this alternative would place public facilities adjacent to residential uses, the impact would be greater than identified for the Proposed Project, although still significant and unavoidable.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Development of this alternative would not change the level of impact with regard to conflict with any applicable plans or policies, and this impact is less than significant.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan. There would be no impact with regard to visual resources.	Similar	Development under this alternative would comply with all applicable standards and design guidelines, the same as for the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less than	In buildout of the Proposed Project, Site 7, a site that contains prime and unique farmland, would be converted. Site 7 would not be developed under this Alternative.
Conflict with existing zoning for agricultural use.	Similar	Buildout of Alternative 3 would require that the existing General Plan be amended to reflect the change in land use, same as the Proposed Project.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Less than	In buildout of the Proposed Project, Site 7, a site that contains farmland, would be converted.
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Less than	Alternative 3 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Less than	Though Alternative 3 is expected to exceed SCAQMD's recommended thresholds, Alternative 3 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Less than	Though Alternative 3 is expected to exceed the SCAQMD's recommended thresholds for CO, VOC, NOx, and PM ₁₀ , because the overall development area for Alternative 3 is less than the Proposed Project, the overall emissions generated under this alternative would be less than that of the Proposed Project.
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Less than	This alternative would generate fewer CO concentrations that would exceed the national and state ambient air quality standards due to less overall development.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Implementation of Alternative 3 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact, this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 3 would place the public facilities on Sites 1, 3, and 4, which would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Similar	Under Alternative 3, the Civic Center and the Community Center would be constructed on the site of an existing government building. Thus, there would be no substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA, similar to the Proposed Project.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Similar	Buildout of Alternative 3 would place the public facilities on Sites 1, 3, and 4, which would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of Alternative 3 would be required to comply with local policies and/or ordinances, same as the Proposed Project.
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Buildout of Alternative 3 would be required to comply with local, regional, and/or state habitat conservation plans, same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the Alternative would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Result in substantial soil erosion or the loss of topsoil.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of Alternative 3 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
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.	Similar	Buildout of Alternative 3 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Similar	Implementation of MM 3.7-1 and compliance with appropriate regulations would result in less-than-significant impact, the same as for the Proposed Project.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Similar	Compliance with appropriate regulations would reduce this impact to less than significant, similar to the Proposed Project.
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Similar	No change in use of hazardous materials that would result in this impact being significantly different from the impact of the Proposed Project
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Similar	There are no CORTESE sites in the Project Area. Site 1 is listed on the SWIS database, and development on this site, as on all Sites, would be subject to the same mitigation as under the Proposed Project.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	No public airport is located within two miles of the Project Area.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	No private airstrip is located in the vicinity of the Project Area.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Compliance with appropriate regulations and implementation of project mitigation measures would reduce this impact to less than significant, similar to the Proposed Project.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Similar	No change in use of hazardous materials that would result in this impact being significantly different from the impact of the Proposed Project
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Similar	Similar but slightly greater runoff coefficients.
Adversely alter an existing drainage pattern or watercourse.	Similar	No significant changes in drainage patterns compared to the Proposed Project.
Have an impact on groundwater that is inconsistent with a groundwater management plan.	Similar	Similar runoff coefficients, leading to less infiltration, when compared to buildout of the Proposed Project.
Affect water quality of receiving waterbodies and thus would degrade water quality.	Greater than	SU impact of the Proposed Project would not be avoided. Alternative 3 does not include a similar sediment abatement project feature

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Greater than	Public Facilities adjacent to more sensitive uses.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Greater than	Siting and design of the sports park would need to consider adjacent activities, including hours of operation, in order to minimize conflicts.
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Similar	Buildout of Alternative 3 could expose sensitive receptors to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction, similar to the Proposed Project; however, the City of Lake Forest Municipal Code Section 4-6-7(e) allows such activities to be exempt from the Noise Ordinance.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Similar	Buildout of Alternative 3 could generate construction and grading activities that expose sensitive receptors to vibration levels above the 85 VdB threshold for vibration; similar to the Proposed Project.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Greater than	Greater, causing a significant increase in permanent ambient noise over existing conditions, though not considered to be a significant increase in noise over Year 2030 buildout of the Proposed Project.
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	While construction activities that would occur from implementation of Alternative 3 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from temporary or periodic noise increase under the Proposed Project.
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	Project Area is not located within an airport land use plan, same as the Proposed Project.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less than	While the impacts of substantial population growth of Alternative 3 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated. Jobs/housing balance would be similarly improved.
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Demolition of a negligible number of houses (3) currently on site, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
<p>Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</p> <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Less than	The direct increase in population is slightly less for the alternative, creating slightly less demand for public services.
Recreation		
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.	Similar	Similar parkland per 1,000 person ratio to the Proposed Project.
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	Similar amount of parkland would be provided, resulting in similar construction impacts from recreational facilities, identified in the technical sections of this EIR.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or extended Project Study Area.	Greater than	The total traffic generated under Alternative 3 would be 2,518 more daily trips than the Proposed Project. Alternative 3 could result in a greater number of impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project. Analysis would be required to determine if the LFTM improvements would fully avoid potential impacts from this alternative.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Greater than	With Alternative 3, there could be new impacts to freeway ramps, compared to the Proposed Project.
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Greater than	With Alternative 3, there could be new impacts to freeway mainline segments, compared to the Proposed Project.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the Alternative 3.
Utilities and Service Systems		
Water Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than	Demand for potable and non-potable water would be less due to less overall development.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Less than	Demand for potable and non-potable water would be less due to less overall development.
Wastewater Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.	Less than	Creation of less wastewater than buildout of the Proposed Project due to the less overall development. however, neither is expected to exceed wastewater treatment requirements.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Less than	Creation of less wastewater than buildout of the Proposed Project due to the less overall development
Solid Waste Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.	Less than	Less solid waste generation than buildout of the Proposed Project due to less overall development.

Table 4-25 Comparison of Impacts of Alternative 3 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.	Similar	Development under Alternative 3 would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.
<p>Energy Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	Less than	Demand for energy would be slightly less due to less overall development.

4.9 ALTERNATIVE 4: DEVELOPMENT ON SITES 1 THROUGH 6 AND PUBLIC FACILITIES OVERLAY ON SITES 4 AND 9

4.9.1 Description

Unlike alternatives 1-3, this alternative does not include Site 7, and adds Site 9. Site 9 is within the Opportunities Study Area, but is not one of the sites proposed for inclusion within the Proposed Project. This overlay assumes 35 acres from Site 4 for active public facilities (sports park), 10 acres from Site 9 for the community facilities; 150,000 sf of commercial would be developed on Site 4; the 200,000 sf of business park uses that could be accommodated without the overlay would be eliminated on Site 9. The 475 residential units would be removed from Site 4. Zoning for Site 9 would remain urban activity (Baker Ranch Planned Community). The General Plan land use designation for Site 9 would be changed from business park to business park with public facility overlay. Development on Sites 1, 2, 3, 5, and 6 would remain as under the Proposed Project. No development would occur on Site 7. The LFTM Program outlined under the Proposed Project would be adopted under this Alternative.

Table 4-26 Alternative 4 Summary

Site	Gross Site Area	Total Net Site Area	Max. # of Units	Total Comm'l. SF	Total Industrial SF	Park (acres)	Public Facilities	Total Buffer/ Open Space ac.	Average Density
Site 1	387	329	2,815	320,000	0	26		25	7-9
Site 2	243	164	1,132	178,720	0	10		82	5-7
Site 3	82	36	833	0	0	11		1	10-23
Site 4	50	45	0	150,000	0	0	35	35	n/a
Site 5	13	12	75	0	0	In-lieu fees		0	6-7
Site 6	18	18	85	0	0	In-lieu fees		5	5
Site 9	13	10	0	0	0	0	10	10	n/a
Subtotal	806	613	4,940	648,720	0	47	45	125	8-11

SOURCE: City of Lake Forest 2004

All acreages are rounded

4.9.2 Impacts

■ Existing Conditions on Site 9

Site 9 comprises approximately 15 acres of land within the central portion of the project site. The site lies immediately south and adjacent to Site 4. Surrounding land used include light industrial complexes to the west, gravel mining operations to the north and east, and undeveloped areas to the south. The site is vacant undeveloped land.

Legend

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/NetAC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space

-  Lake
-  Transportation Corridor
-  Mineral Resource Overlay

-  Possible School Site

-  Proposed New Park

-  Community Facilities

-  Project Site Boundary

-  Shea/Baker Ranch
-  Portola Center/Baldwin
-  IRWD/Lewis
-  Baker Ranch
-  Whisler/Greystone Homes
-  Pacific Heritage
-  Radio

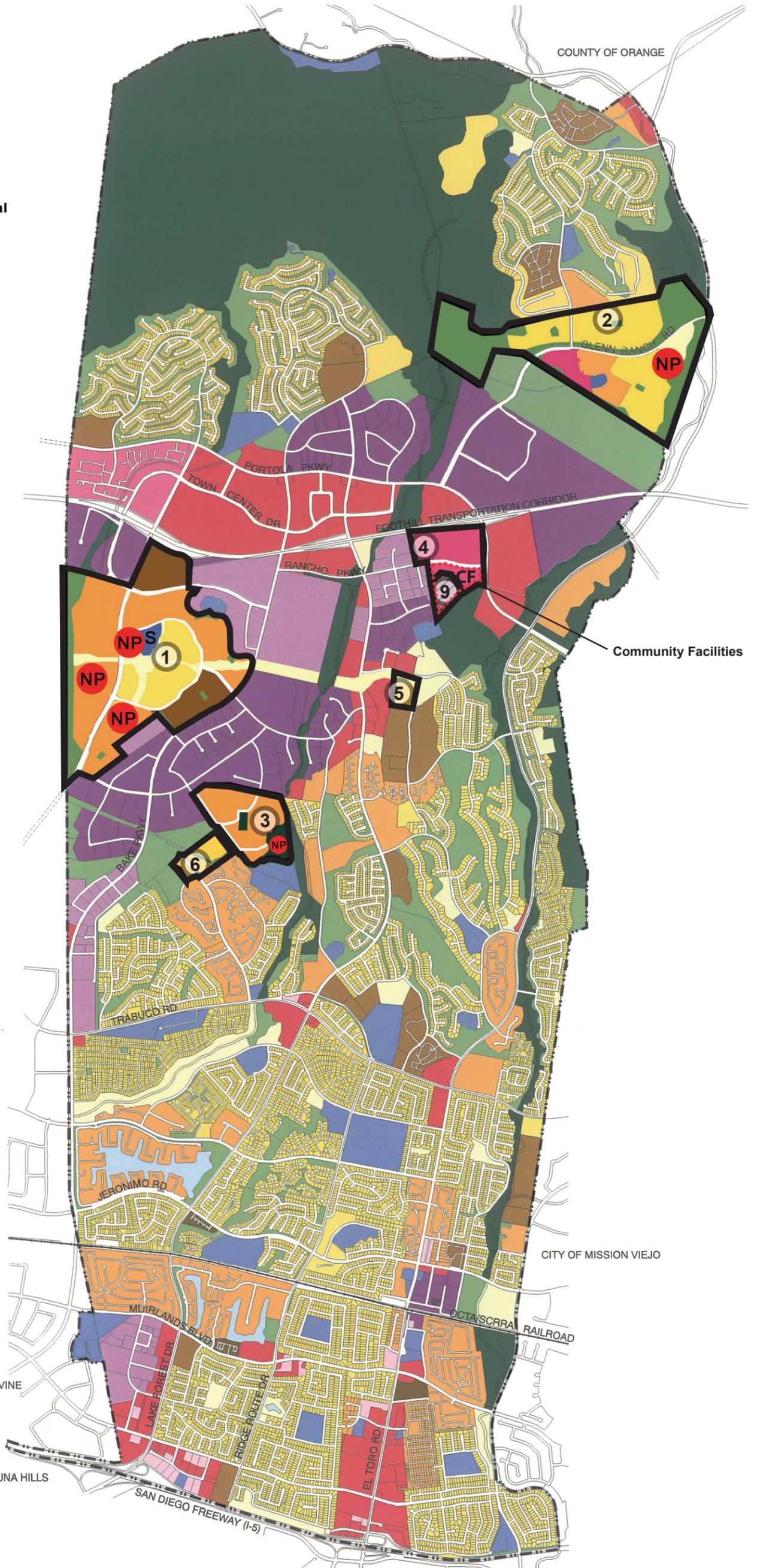


FIGURE 4-7
Alternative 5: Public Facilities Overlay on Sites 4 and 9

■ Aesthetics

Existing views from Site 4 are as described above under Alternative 3. Views from Site 9 include the Santa Ana Mountains, urban development in adjacent areas, and some open space areas.

Thirty-five acres of Site 4 would be used for the sports park facility, while 10 acres would be used from Site 9 for the remainder of the sports park, Civic Center, and Community Center components. Site 4 would not contain any residential uses, but would still contain 150,000 sf of commercial uses. No residential would be built on Site 9. The sports park on Site 4 would replace residential uses under the Proposed Project.

Development of residential uses and a business park, as well as neighborhood commercial, would be compatible with surrounding development in building mass and height. While development would change the character of the site from open space to development, it would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City, cause building incompatibility with surrounding uses, or create building mass that conflicts with the character of surrounding development. The placement of the public facilities would be compatible with surrounding development and would be designed to blend architecturally with all surrounding development. All development would be required to conform to General Plan policies and design guidelines, which would ensure that architectural style and design features would be compatible with surrounding development. In addition, specific development proposals would be subject to the City's design review process, which would further ensure compatibility with surrounding architectural styles. Alternative 4 would be required to comply with the Municipal Code regulations for screening outdoor uses and materials.

Development of the other community facilities on Site 9 are not be anticipated to block any views of the surrounding area or the Santa Ana Mountains, as such facilities are not anticipated to be greater than two stories and would have a footprint of only 6 acres. Construction of the sports park on Site 4 would be anticipated to result in less obstruction of scenic views than residential development it would replace, and scenic views of the mountains and open space would remain from the sports park as well as other portions of the site. Therefore, development of the community facilities as opposed to the residential uses identified for the Proposed Project would not significantly change the type of development in terms of height, and would, therefore, not significantly obstruct existing viewsheds. The public facilities overlay on Sites 4 and 9 would result in a less-than-significant impact on obstruction of viewsheds or scenic views. Further, no changes to viewsheds on Site 7 would occur, as no development would occur on that site under this alternative. This Alternative would impact views from El Toro Road similar to the Proposed Project. This impact would be less than significant, as identified for the Proposed Project.

With regard to light and glare impacts, there would be security and parking lot lighting provided for the Civic Center and Community Center on Site 9. As surrounding development does not consist of sensitive uses such as residential, there would not be anticipated to be any significant impacts on adjacent uses. In addition, light fixtures would be shielded and appropriately placed so as to minimize light spill and glare onto sensitive land uses. However, even with implementation of the mitigation measures identified for the Proposed Project, this impact would remain significant and unavoidable. Similarly, glare

produced by exterior building surfaces and expanses of glass would not impact sensitive uses, but would remain significant and unavoidable, as under the Proposed Project. The sports park lighting on Site 4 would occur in an area surrounded by commercial uses, and impacts for Site 4 would be similar to the Proposed Project... No light and glare impacts would occur on Site 7, as no development would occur on this site under this alternative. However, when considered in conjunction with the other development proposed on Sites 1 through 6, the impacts from light and glare would remain significant and unavoidable, as most of the Sites are currently vacant and do not contain substantial sources of light and glare.

The community facilities would be subject to the same policies, plans, and design standards applicable to the remainder of the development, and therefore the impact with respect to consistency with these plans and policies would be less than significant, similar to the Proposed Project.

■ Agricultural Resources

Implementation of Alternative 4 would convert Site 1, which is presently designated by the FMMP as prime and unique farmland from agricultural to residential, commercial, and public facilities uses. Although not all of the land is currently being used for agricultural production, the loss of approximately 387 acres of prime and unique agricultural land is considered a substantial and significant conversion. The conversion of Site 1 from agricultural to residential, commercial, and public facilities uses would result in a reduction of the total amount of these farmland types within the County by approximately 2.6 percent. In addition, the conversion of this land could result in the elimination of approximately 76 percent of the prime and unique farmland within the City's boundaries. Similar to the Proposed Project, even though the agricultural conversion of Site 1 was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of Alternative 4 is still considered significant and unavoidable. However, because Site 7 would not be developed, less prime and unique farmland would be converted to non-agricultural uses. As such, this impact for Alternative 4 would be less than the Proposed Project.

Implementation of Alternative 4 would convert Sites 3 and 5, which represent a total of approximately 95 acres and are presently zoned for agricultural uses to allow urban development. If the proposed future development were to occur under the existing zoning designations, the development would conflict with zoning for agricultural use. Implementation of Alternative 4 would be required to specifically amend the existing General Plan and zoning designations for the Project Area. Consequently, implementation of Alternative 4 would conflict with zoning for agricultural uses, and impacts would be significant and unavoidable, similar to the Proposed Project.

Approximately 199 acres on Sites 1 and 3 are currently used for agricultural operations. Specifically, although not presently zoned for agricultural uses, Site 1 contains approximately 174 acres of existing agricultural activities, while Site 3, which is zoned for agricultural uses, contains approximately 25 acres of row crops. Implementation of Alternative 3 would result in the conversion of these two sites currently used as farmland to urban uses. The development of this Alternative on Sites 1 and 3 would not result in

other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Site 3 is similarly located in an urban environment and its development would not necessarily result in other Farmland in the City being converted to nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not create additional pressures on other Farmland areas to convert to nonagricultural uses. As no development would occur on Site 7, this impact would be less than significant, and less than the Proposed Project, which proposes development on Site 7.

■ Air Quality

Under Alternative 4, 35 acres of land from Site 4 would be used for active public facilities (sports park) and 10 acres of land from Site 9 would be utilized for the three public facilities. To accommodate the public facilities on Site 4, the 475 residential units that were initially proposed on the site under the Proposed Project would be eliminated, while the 150,000 sf of commercial uses would remain. To accommodate the public facilities on Site 9, the 200,000 sf of business park uses that could be accommodated without the Proposed Project would also be eliminated on this site. The other land uses originally proposed on Sites 1, 2, 3, 5, and 6 under the Proposed Project would remain. No development on Site 7 would occur under this alternative. When compared with the Proposed Project, implementation of Alternative 4 would result in a net reduction of 475 residential units in the Project Area along with a reduction of 29 acres and 4 acres in buffer/open space acreage and recreational park acreage, respectively.

Overall, with the elimination of 475 residential units on Site 4, implementation of Alternative 4 would result in less overall development in the Project Area than the Proposed Project. As such, the overall emissions generated under this alternative would also be less than the Proposed Project. Thus, because the overall emissions generated in the Project Area under Alternative 4 would be less than the Proposed Project, and implementation of the Proposed Project would not impair implementation of the AQMP (as discussed under Impact 3.3-1 under the Proposed Project), implementation of Alternative 4 would also not impair implementation of the AQMP. This impact would be less than significant, and would be less than the Proposed Project.

Both construction and operational emissions generated from development under the Proposed Project would result in significant and unavoidable impacts. In terms of construction emissions, because construction emissions for an individual project typically exceeds the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the Proposed Project, which takes into consideration the construction emissions generated from all of the development on Sites 1 through 7 of the Project Area, is anticipated to be significant and unavoidable. While 475 residential units that were initially proposed on Site 4 under the Proposed Project would be removed under Alternative 4 in order to accommodate the sports park, the total construction emissions generated within the Project Area from all the development proposed under Alternative 4, when considered in whole, would still exceed the SCAQMD's recommended thresholds of significance for individual

projects. As such, although the impact associated with construction emissions for Alternative 4 is anticipated to be less in magnitude than the Proposed Project, it would remain significant and unavoidable.

The estimated daily operational emissions generated from both stationary and mobile sources resulting from development under the Proposed Project would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_x, and PM₁₀. Although implementation of Alternative 4 would result in a net reduction of 475 residential units in the Project Area when compared to the Proposed Project, the overall operational emissions generated by development under this alternative in the Project Area, when considered in whole, would not be substantially lower than the Proposed Project. Although the overall operational emissions would be lower than the Proposed Project, the impact associated with operational emissions for Alternative 4 would remain significant and unavoidable.

As discussed above, both construction and operation related daily emissions associated with the development projects that are planned to occur in the Project Area under Alternative 4 are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. Under this condition, the development proposed by Alternative 4 would also make a cumulatively considerable contribution to these criteria pollutants. Therefore, this impact is anticipated to be significant and unavoidable. Because less overall development would occur in the Project Area under this alternative than the Proposed Project, this impact for Alternative 4 would be less than the Proposed Project.

As the growth envisioned under the Proposed Project in the Project Area would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact, this impact would be of an even lesser magnitude for Alternative 4, which has less overall development than the Proposed Project.

As discussed in Impact 3.2-5 under the Proposed Project, implementation of the Proposed Project would not create objectionable odors affecting a substantial number of people, and the impact was determined to be less than significant. As implementation of Alternative 4 would result in a net reduction of 475 residential units when compared with the Proposed Project, the total amount of emissions generated under this alternative would also be less than that of the Proposed Project. However, residential uses are not considered to be sources of objectionable odors. Therefore, while implementation of Alternative 4 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact, this impact would be similar in magnitude to the Proposed Project.

■ Biological Resources

Site 9 has been almost completely graded and contains very little native vegetation. The coastal sage scrub habitat present on the site is of very low quality and has been highly disturbed. The use of this site for a portion of the community facilities overlay would result in less-than-significant impacts to sensitive habitat (the sage scrub). The CNDDDB reports coastal California gnatcatcher and southern California rufous-crowned sparrow from near this location (CNDDDB 2005). However, current habitat conditions are not suitable to support either of these species. When the two locations (Site 9 and Site 4) are

considered together it is expected that there would be a less-than-significant impact to biological resources from implementation of the public and community facilities overlay on a combination of Sites 9 and 4.

Implementation of this alternative would result in the conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, Southern California rufous-crowned sparrow, and coastal cactus wren. Alternative 4 would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA. Development of the Project Area under this alternative would increase the number of nighttime-site light sources throughout the Project Area. If unchecked, this light, where proximal to natural areas, could adversely impact the wildlife. Implementation of this alternative would conflict with the General Plan Policy 2.1 as it relates to non NCCP covered species and resources, requiring the conservation and protection of sensitive biological resources. The loss of sensitive habitat and wetlands, along with the loss of habitat required by sensitive species would be considered a substantial adverse effect and is therefore considered a potentially significant impact of this alternative.

Although the sites under this alternative are outside the Reserve System implemented by the NCCP/HCP in 1996, just as the buildout of the Proposed Project would be required to comply with the NCCP/HCP (see, e.g., mitigation measure 3.4-2), buildout under Alternative 4 would also be required to comply with the NCCP/HCP. Thus, neither Alternative 4 nor the Proposed Project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The Biological Resources impact analysis and conclusions of the Proposed Project would apply to Alternative 4 (Impact 3.4-1 through Impact 3.4-6). Not placing Public Facilities on 45 acres of Site 7 would not result in a reduction in impacts to biological resources compared to the Proposed Project as this site is entirely a commercial nursery and supports no significant biological resources. Consequently, the corresponding mitigation measures identified within Section 3.4 would be required to mitigate for the impacts of this alternative to biological resources, and would result in less-than-significant impacts for this alternative (MM 3.4-1 through MM 3.4-5).

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of Mitigation Measures 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology/Soils and Mineral Resources

This alternative would result in less total development than that proposed under the Proposed Project, and a change in location of community facilities. Geologic conditions on Site 9 do not differ substantially from conditions on other Project Area sites. Thus, this alternative would not affect the magnitude of impacts on geologic resources. Similar to the Proposed Project, no construction would occur in a known Earthquake Fault Zone. Although less total development would occur, persons and structures would be similarly exposed to potential substantial adverse effects as a result of strong seismic groundshaking, seismic-related ground failure, liquefaction, lateral spreading, subsidence, and landslides. Compliance with regulatory processes, including the City Building Code, would ensure that impacts would be less than significant, similar to the Proposed Project.

Construction would expose the drainage systems downslope to substantial soil erosion or the loss of topsoil. As less total area would be disturbed under this alternative relative to that which could occur under buildout of the Proposed Project, the area exposed to erosion impacts would be less than the Proposed Project. Further, as Site 9 would also change from vacant to community facilities, existing erosion from the site would be reduced due to the requirement that any development on the site comply with the City Building Code and the National Pollutant Discharge Elimination System permitting processes. Given this, any development on the site would not have significant impacts on geology, soils, or mineral resources.

This alternative could locate structures on a geologic unit or soil that is potentially unstable or expansive, similar to the Proposed Project. Although fewer structures would be built under this alternative, those structures that are built would be exposed to the same geologic and soil risks as those associated with the Proposed Project. Compliance with the City Building Code would reduce this potential impact to a less-than-significant impact.

Development under this alternative would be served by existing wastewater treatment facilities. Because no known septic systems or alternative wastewater disposal systems would be installed, there would be no impact.

This alternative would not result in the loss of availability of a known mineral resource or locally important mineral resource site. Loss of mineral resource recovery operations would occur on Site 4. Because the existing aggregate mine on Site 4 would be reclaimed in advance of buildout of the Proposed Project or this Alternative 4, neither the Proposed Project nor Alternative 4 would result in the loss of availability of a known mineral resource. Thus, no impact will occur under Alternative 4.

■ Hazards and Hazardous Materials

Implementation of Alternative 4 would result in similar impacts as those discussed for Impact 3.7-1 through Impact 3.7-8 discussed above for the Proposed Project. Construction of the sports park, civic center, Community Center, and residential units would have similar impacts related to hazards and hazardous materials as those associated with the development of businesses and public facilities that could be developed as part of any of the project alternatives. With implementation of MM 3.7-1, and

adherence to Title 26 of the California Code of Regulations (CCR), Chapter 6.95 of the California Health and Safety Code, and regulations that apply to workplace safety contained in CCR Title 8, Alternative 4 would not result in any significant hazards to the public or the environment associated the routine transportation, use, or disposal of hazardous materials, nor would it result in the release of hazardous materials into the environment during construction. Implementation of Alternative 4 would not create a significant hazard to the public or the environment through upset or accident conditions involving the release of hazardous materials with continued adherence to applicable federal, state, and local laws, and implementation of the County's Hazardous Materials Area Plan, Landfill Load Checking Program, Orange County Integrated Waste Management Department Household Hazardous Waste Program, the City's Emergency Preparedness Plan, and the City's Household Hazardous Waste Element. The Proposed Project is located within an area that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWIS-listed Site 1). Additionally, a school site is proposed on Site 1. Sites 9 and 4 are not located within one-quarter mile of an existing school. None of the sites is located within two miles of an airport or private airstrip. With implementation of MM 3.7-3 through MM 3.7-5, development of the Site 4 and 9 Overlay would not interfere with any adopted emergency response plan or emergency evacuation plan, and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Compliance with all federal, state, and local laws pertaining to hazards and hazardous materials, and implementation of the appropriate mitigation measures would reduce the potential impacts associated with the implementation of Alternative 4 related to hazards and hazardous materials to a less-than-significant level.

■ Hydrology/Water Quality

Implementation of Alternative 4 would result in slightly more runoff when compared to the Proposed Project; overall runoff coefficients are slightly higher. Runoff rates would not increase above the pre-development condition and the 100-year floodwater surface elevation would not increase by one-foot or more. Development characteristics would be similar to the Proposed Project; therefore, stormwater quality constituents would be similar. Impacts associated with this alternative would not be significantly different from those associated with the Proposed Project and with implementation of mitigation measure MM 3.8-1, impacts to downstream flooding would be less than significant.

Drainage patterns may be altered; however, no significant impacts would be associated with these alterations and with implementation of MM 3.8-1 potential impacts would be reduced to below significance, as it requires project developers to provide a water quality management plan prior to grading.

Groundwater resources would not be significantly degraded or depleted and recharge potential would not be reduced. Additionally, groundwater flow, rate, or direction would not be changed because there will be no additional wells and no impacts on groundwater recharge and surface water infiltration. Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant.

Water quality standards may be exceeded for certain constituents and may result in an increase in pollutants listed as impairments for which San Diego Creek and Aliso Creek. With implementation of

mitigation measures MM 3.8-1 through MM 3.8-4, this alternatives impact on water quality would be reduced; however, levels may still remain significant and unavoidable.

Additionally, the existing sedimentation issues in the Borrego Canyon Wash area (as described in the analysis of Impact 3.8-4) would also likely be present under this alternative. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. Alternative 4 does not include a similar sediment abatement project feature.

■ Land Use/Planning

Minor inconsistencies would occur between this overlay and the existing applicable land use plans governing development of the site, similar to that identified for the Proposed Project. Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity with the Proposed Project. Similar to the impacts discussed for the Proposed Project, impacts would be less than significant.

Overall changes to the land use character would be similar to that described for the Proposed Project. Land use changes on Sites 1, 2, 3, 5, and 6 would occur similar to the Proposed Project, and no land use changes would occur on Site 7. Proposed land uses on Site 4 would be reconfigured to eliminate residential dwelling units and include community facilities instead.

Mining uses would be completed prior to development on Site 4, and these areas would be used for the Civic Center, Community Center, and sports park. No residential units would be built on Site 4. Sites 4 and 9 are adjacent to each other. Community facilities would be consistent with adjacent business park and commercial uses. Gravel mining activities on Site 8 that could result in incompatibility with the sports park, will cease as of 2006 per the reclamation agreement. Siting and design of the sports park would need to consider adjacent activities, including hours of operation, in order to minimize conflicts. Further, inconsistencies identified for the Proposed Project between residential uses on Site 4 and adjacent gravel mining operations would be eliminated. Impacts would be less than significant, and would be less than the Proposed Project.

■ Noise

Implementation of Alternative 4 would result in similar impacts as those discussed for Impact 3.10-1 through Impact 3.10-5 for the Proposed Project. Construction of the sports park, civic center, Community Center, commercial uses, and residential units would have similar noise impacts related to grading and construction activities. While these impacts could expose sensitive receptors to noise levels above established standards, the City of Lake Forest Municipal Code Section 4-6-7(e) allows such activities to be exempt from the Noise Ordinance. Impacts would remain less than significant and similar to the Proposed Project.

Vibration impacts associated with implementation of Alternative 4 would be similar to those associated with implementation of the Proposed Project. As is true for the Proposed Project, the groundborne vibration generated during construction and grading activities would primarily impact existing sensitive uses (e.g., residences, schools, and hospitals) that are located adjacent to or within the vicinity of specific projects in the Project Area. These construction and grading activities could expose sensitive receptors to vibration levels above the FTA's 85 VdB threshold for vibration. MM 3.10-1 would be implemented to require the operation of vibration-generating equipment to be located as far away from vibration-sensitive sites as possible. While implementation of MM 3.10-1 may reduce the magnitude of groundborne vibration levels experienced by nearby sensitive receptors, the possibility exists that these vibration levels may not be reduced to a level below the FTA's 85 VdB threshold. At the general plan and zoning level of analysis, this causes a potentially significant impact. However, the development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to excessive groundborne vibration or groundborne noise levels. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level.

Ambient noise levels resulting from project-generated traffic from implementation of Alternative 4 would be similar to ambient noise levels under buildout of the Proposed Project. While implementation of this Overlay would generate approximately 1,876 fewer average daily trips than the Proposed Project, this difference in daily vehicle trips would not result in significantly different impact noise levels on roadway segments within the City of Lake Forest when compared to the Proposed Project. Similar to the Proposed Project, the project-generated traffic resulting from implementation of Alternative 4 would result in a significant increase in permanent ambient noise over existing conditions, although it is not considered to be a significant increase in noise over Year 2030 buildout of the existing General Plan. This impact would be slightly lesser in magnitude than the Proposed Project.

Implementation of Alternative 4 would not introduce additional stationary noise sources in the Project Area over the Proposed Project. Similar to the Proposed Project, new stationary sources of noise such as rooftop heating, ventilation, and air conditioning (HVAC) equipment would be installed on new commercial and office buildings within the City as part of the Proposed Project. Although fewer residential units would be developed in the Project Area compared to the Proposed Project, the amount of commercial development would remain the same in the Project Area under Alternative 4. As such, the amount of new HVAC equipment that would be installed within the Project Area on new commercial and office buildings would be the same as the Proposed Project. Therefore, the impact associated with a substantial increase in noise levels generated by stationary sources in the Project Area would be similar in magnitude to the Proposed Project. As is true for the Proposed Project, implementation of MM 3.10-3 would reduce the impacts associated a permanent increase in ambient noise levels resulting from stationary sources to a less-than-significant level.

While construction activities that would occur in the Project Area from implementation of Alternative 4 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from the temporary or periodic increase in ambient noise levels occurring under

the Proposed Project. Section 4-6-7(e) of the City of Lake Forest Municipal Code provides an exemption from the Noise Ordinance for construction and grading activities. As a result, this impact would be similar to the Proposed Project and would be less than significant.

■ Population/Housing

Alternative 4 would result in a total net new development of 4,940 residential units and 648,720 sf of commercial uses on Sites 1 through 6, and assumes 35 acres from Site 4 for active public facilities (sports park) and 10 acres from Site 9 for the community facilities. Implementation of the residential uses would result in a population increase of 14,375 persons. In addition, the new employment-generating commercial uses in the Project Area have the potential to result in a population increase of 943 persons in the City. As such, maximum buildout of residential and commercial uses under the Alternative 4 would result in an increase in the City's population of 15,318 persons. With the City's 2005 population of 78,020, the generation of 15,318 persons from Alternative 4 would result in an increase of approximately 20 percent and would exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, the City and County's infrastructure could accommodate the future growth. However, because Alternative 4 would substantially increase population growth within the City (by approximately 20 percent), impacts on population growth would be considered significant. While the impacts of substantial population growth of Alternative 4 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated.

Future development under Alternative 4 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate the construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 4 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. In addition, although the three dwelling units would be removed, the new residential units that would be developed under implementation of Alternative 4 would be more than adequate to compensate for the initial loss of the existing dwelling units on Sites 1 and 5. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant. The jobs/housing balance in the City would be improved, similar to the Proposed Project.

■ Public Services

Police and Fire

Similar to the Proposed Project, emergency/security services could be required periodically at individual construction sites. Construction sites are typically fenced and have security personnel onsite. As such, the impact to emergency services during construction activities would be short-term in nature and less than significant.

Operation of a development of this scale would lead to an increased demand for local emergency services, including police and fire. Impacts associated with development of this alternative in conjunction with the Proposed Project would be similar in scale to those incurred under the Proposed Project (See Impact 3.12-1). As such, operational impacts to emergency services would be less than significant with mitigation (see MM 3.12-1 through MM 3.12-3).

Schools

Under Alternative 4, approximately 4,940 residential units would be constructed resulting in a potential increase of 1,833 students in local SVUSD schools, approximately 155 fewer students than under the Proposed Project. It should be noted that the public facilities overlay alone would not increase student enrollment in the area, however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, student enrollment would increase. The potential school site mentioned under Impact 3.12-2 and in Chapter 2 would alleviate some of the increase in student population with SVUSD but not all. The payment of appropriate statutory school fees by developers in the Project Area at the time of issuance of building permits to the SVUSD to assist in funding efforts necessary to alleviate school overcrowding (MM 3.12-3) would reduce this impact to a less-than-significant level. Therefore, impacts would be similar to the Proposed Project.

Libraries

With implementation of Alternative 4, approximately 4,940 residences would be constructed within the limits of the City of Lake Forest. This would represent an additional demand for 2,875 sf of library space and 21,562 volumes in the Project Area, less than that of the Proposed Project. It should be noted that the public facilities overlay alone would not increase demand for library services in the area, however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, the demand for library facilities/services would increase. Most, if not all, of this demand would be assumed by the County library system. According to the County, such an increase would cause existing service levels to drop below the performance standards mentioned previously (0.2 sf and 1.5 volumes per capita). Further, no additional library facilities are currently planned in the area that would mitigate the increased demand. Implementation of MM 3.12-4 would reduce this impact to a less-than-significant impact, the same as for the Proposed Project.

■ Recreation

Under this alternative, the Proposed Project would be implemented, except that 35 acres of active public facilities (sports park) would be developed in place of 475 residential units under the Proposed Project on Site 4 (Baker Ranch site), 10 acres of community facilities (remaining portion of sports park, Civic Center, and Community Center) would be developed on Site 9 (Rados site), and 45 acres of community facilities proposed for Site 7 (Nakase Site) under the Proposed Project would be eliminated. The sports park would specifically entail 39 of 45 acres of the community facilities on Sites 4 and 9.

Thus, development under this alternative would result in 26 acres of parkland on the Shea/Baker site, 10 acres on the Portola site, 11 acres on the IRWD site, 39 acres on the Baker Ranch site, and 4 acres on the Rados site. The Greystone and Pacific Heritage sites would not contain any parkland; however, in-lieu fees would be paid. In addition, trails would be provided that connect to existing trails, connecting the northern portions of the City with southern portions of the City as well as the City to the Great Park, Aliso Beach, and the Pacific Ocean. Thus, this alternative would result in an additional 89 acres of parkland within the City of Lake Forest.

Utilizing a factor of 2.91 persons per dwelling unit (stated in Section 3.11, Population and Housing), this alternative's 4,940 residential units would result in a population increase of 14,375 persons within the City of Lake Forest. Thus, with a population factor of 92,075 (existing 77,700 City population plus 14,375 population associated with this alternative) and a park acreage factor of 263.9 (existing 173.9 acres of park plus 89 acres associated with this alternative), implementation of this alternative would result in a parkland/population ratio of 2.87 acres of parkland per 1,000 population within the City of Lake Forest.

This alternative would need to develop a total of 74.10 acres of parkland in conjunction with its proposed 4,940 residential units to comply with the City's established standard of 5 acres per 1,000 population. Since this alternative proposes uses that would result in a significantly increased City population compared to existing conditions but would develop adequate parkland to increase the City-wide parkland ratio to 2.87 acres per 1,000 population—a 27.2 percent increase in parkland ratio than currently maintained and/or planned for in the City), impacts would be less than significant.

■ Transportation/Traffic

Trip Generation

The Traffic Study used the Lake Forest Traffic Analysis Model (LFTAM) to analyze the Traffic Analysis Zones (TAZ) in which each of the overlays (Alternatives) would occur. The resulting ADTs, for the Proposed Project and Overlay Plan, in the affected TAZs were compared to identify whether Alternative 4 would result in more or fewer trips and consequently would impact more or fewer intersections, freeway ramps, and mainline segments than the Proposed Project.

Impacts

As can be seen from Table 4-27, Alternative 4 includes 475 fewer residential units, and an additional 6-acre government facility and a 39-acre sports park. The total traffic generated under Alternative 4 would be 1,876 fewer daily trips than the Proposed Project. This alternative would result in an approximately 1- to 2-percent difference in total trip generation as compared to the Proposed Project. Therefore, the impacts of Alternative 4 would be similar, and somewhat less than, those of the Proposed Project.

Therefore, Alternative 4 would result in a similar number of impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project. As with the Proposed Project potential impact would be avoided through implementation of the LFTM, which is a part of the alternative. As under the Proposed Project, no freeway ramps, or freeway mainline segments, are anticipated to be significantly impacted by Alternative 4 based on year 2030 conditions compared to the 2030 General Plan scenario.

Table 4-27 Overlay Plan Land Use and Trip Generation Summary—Alternative 4

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Alternative 4—Proposed Project								
Condominium	475 DU	81	238	319	214	157	371	3,871
Commercial (EQ)	150 TSF	129	83	212	369	400	769	8,839
Park	5 acre	0	0	0	0	0	0	8
Business Park	890.97 TSF	1,069	205	1,274	267	882	1,149	11,369
<i>Total (using vehicle trip rates below)</i>		<i>1,279</i>	<i>526</i>	<i>1,805</i>	<i>850</i>	<i>1,439</i>	<i>2,289</i>	<i>24,087</i>
Alternative 4—Overlay Plan								
Commercial (EQ)	150 TSF	129	83	212	369	400	769	8,839
Government Facility	88 TSF	173	21	194	77	173	250	2,457
Business Park	690.97 TSF	829	159	988	207	684	891	8,817
Sports Park	39 acre	0	0	0	132	160	292	2,098
<i>Total (using vehicle trip rates below)</i>		<i>1,131</i>	<i>263</i>	<i>1,394</i>	<i>785</i>	<i>1,417</i>	<i>2,202</i>	<i>22,211</i>
<i>Total Difference Alternative 4</i>		<i>-148</i>	<i>-263</i>	<i>-411</i>	<i>-65</i>	<i>-22</i>	<i>-87</i>	<i>-1,876</i>

SOURCE: Austin-Foust Associates, Inc. 2005b

- 1) The trip rates above and regression equation below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- 2) The land use-based trip rates for commercial use are based on the following equation:
 $LN(T) = AxLN(X)+B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		— AM Peak Hour —			— PM Peak Hour —		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%
Office	TSF	.77	3.65	.14	88%	12%	.135	17%	83%

ADT = average daily trips DU = Dwelling Unit EQ = equation-based TSF = thousand square feet

As under the Proposed Project, no impacts related to parking would occur with implementation of Alternative 4.

■ Utilities/Service Systems

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 4 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRWD design criteria. In addition, as under the Proposed Project, the General Plan policies in the Public Facilities / Growth Management Element require the City of Lake Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon compliance with these regulations and policies, impacts related to water conveyance infrastructure under Alternative 4 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Under Alternative 4, the Proposed Project development on Sites 1, 2, 3, 5 and 6 would occur in the Project Area with the exception that 475 residential units on Site 4 would be removed in order to accommodate the public facilities (in combination with 10 acres from Site 9). Site 4 would continue to accommodate 150,000 sf of commercial development. Thus, the total difference applicable to this analysis in development scenarios between the Proposed Project and Alternative 4 consists of a decrease in 475 residential units. Using the same water demand factors as presented in Table 3.15-6, development under Alternative 4 would result in a water demand that is approximately 147,250 gpd (0.14 mgd) less than the Proposed Project. As discussed under Impact 3.15-2, IRWD can adequately supply water to the Proposed Project. Also, as discussed in Impact 3.15-1, the existing water treatment facilities can adequately provide service for the Proposed Project. Since Alternative 4 would generate less water than the Proposed Project, development under this alternative would not generate additional demand or require additional water treatment facilities or expansion of existing facilities. Impacts related to water demand and water treatment facilities would be less than under the Proposed Project and would be less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD's sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City's compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 4 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the City's wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development Alternative 4 would not result in an exceedance of the Board's wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained in the discharge. For nonpoint source discharges, Development Alternative 4 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 4 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. Similar to water demand, as discussed above, development under Alternative 4 would result in a decrease in wastewater generation than under the Proposed Project. Using the same wastewater generation factors as presented in Table 3.15-9, the reduced development under Alternative 4 would result in a wastewater generation that is approximately 95,000 gpd (0.095 mgd) less than the Proposed Project. As discussed in Impact 3.15-4, wastewater generated by the Proposed Project would constitute less than the remaining capacity of the existing wastewater treatment facilities and, therefore, could be adequately served by these facilities. Since Alternative 4 would generate less wastewater than the Proposed Project, development under this alternative would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. Impacts related to wastewater treatment would be less than under the Proposed Project and would be less than significant.

Solid Waste

Development of Alternative 4 would not reduce the capacity of the landfill(s) providing landfill disposal services to the City and would comply with applicable statutes and regulations related to solid waste. Similar to water demand and wastewater generation, as discussed above, development under Alternative 4 would result in a decrease in solid waste generated than under the Proposed Project. Specifically, the reduced development under Alternative 4 would result in a solid waste generation that is approximately 3,325 lbs per day (1.66 tons per day) less than the Proposed Project. As discussed in Impact 3.15-5, solid waste generated by the Proposed Project would constitute less than the remaining capacity of the existing landfill facilities and, therefore, could be adequately served by these facilities. Since Alternative 4 would generate less solid waste than the Proposed Project, development under this alternative would not exceed the permitted daily capacity of any of the nearby landfills. Impacts related to solid waste disposal would be less than under the Proposed Project and would be less than significant.

As with the Proposed Project, development under Alternative 4 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development under Alternative 4, similar to the Proposed Project, would be implemented in a manner consistent with City's commitment and in compliance with AB 939. In addition, Alternative 4 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar as under the Proposed Project and would be less than significant.

Energy

Development under Alternative 4 would not generate electricity or natural gas demand that would require the construction of new energy production or transmission facilities. Similar to the issues discussed above, development under Alternative 4 would result in a less of an increase in energy demand than under the Proposed Project because implementation of this Alternative would result in 475 fewer residential units. The reduced development under Alternative 4 would result in an electricity demand that is approximately 7.32 MWh per day less than the Proposed Project. Similarly, Alternative 4 would also result in a decrease in natural gas demand of approximately 0.084 million cubic feet per day. Since Alternative 4 would generate less demand for electricity and natural gas, development under Alternative 4 would not require or result in the construction of new electric or natural gas facilities or the expansion of existing facilities. Impacts related to electricity and natural gas demand would be less than under the Proposed Project and would be less than significant.

4.9.3 Attainment of Project Objectives

This alternative provides for development on Sites 1 through 6, plus the inclusion of community facilities on Sites 4 and 9. No development would occur on Site 7. This alternative would attain all project objectives, but to a lesser extent than the Proposed Project. Specifically, the objective of achieving a diversity of housing would be attained to a lesser extent because fewer residential units would be provided; the objective for recreational facilities would be achieved to a lesser extent because of a smaller park site.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Similar	Building heights, densities, and massing would be substantially similar to the Proposed Project, as the only difference between this alternative and the Proposed Project is the location of the public facilities.
Substantial adverse effect on a scenic vista by obstructing public views or of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Similar	Impacts with regard to alteration of viewsheds and obstruction of views of scenic resources on all sites would remain less than significant.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Less than	The sports park on Site 4 and 9 would not adversely affect adjacent uses, which are commercial and industrial, but would still be significant and unavoidable. Impacts from the Civic Center on Site 3 would increase ambient lighting for adjacent sensitive residential uses.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Development of this alternative would not change the level of impact with regard to conflict with any applicable plans or policies, and this impact is less than significant.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan. There would be no impact with regard to visual resources.	Similar	Development under this alternative would comply with all applicable standards and design guidelines, the same as for the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less than	Site 7 would not be developed.
Conflict with existing zoning for agricultural use.	Similar	Development under Alternative 4 would require that the existing General Plan be amended to reflect the change in land use, same as the Proposed Project.
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Less than	Site 7 would not be developed.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Less than	Alternative 4 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Less than	Though Alternative 4 is expected to exceed SCAQMD's recommended thresholds, Alternative 4 is smaller in scale than the Proposed Project; therefore, the emissions generated under the alternative would also be less than those of the Proposed Project.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Less than	Though Alternative 4 is expected to exceed the SCAQMD's recommended thresholds for CO, VOC, NOx, and PM ₁₀ , because the overall development area for Alternative 4 is less than the Proposed Project, the overall emissions generated under this alternative would be less than that of the Proposed Project.
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Less than	The Proposed Project would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact, this impact would be of an even lesser magnitude for Alternative 4, which has less overall development than the Proposed Project.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Implementation of Alternative 4 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact, this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Greater than	Under Alternative 4, conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren; it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Greater than	Under Alternative 4, conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren; it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands.
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Greater than	Under Alternative 4, conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren; it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Greater than	Under Alternative 4, conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren; it would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of Alternative 4 would be required to comply with local policies and/or ordinances, same as the Proposed Project.
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Buildout of Alternative 4 would be required to comply with local, regional, and/or state habitat conservation plans, same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the Alternative would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Result in substantial soil erosion or the loss of topsoil.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of Alternative 4 calls for the eventual closure of one PCC-grade aggregate production sites, similar to the Proposed Project.
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.	Similar	Buildout of Alternative 4 calls for the eventual closure of one PCC-grade aggregate production sites, similar to the Proposed Project.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Similar	Mitigation measures for the Proposed Project would reduce this impact to a similar level.
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Similar	Mitigation measures for the Proposed Project would reduce this impact to a similar level.
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Similar	Mitigation measures for the Proposed Project would reduce this impact to a similar level.
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Similar	Development under Alternative 4 would result in construction on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, same as the Proposed Project.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	Development under Alternative 4 is not located within a two-mile radius of a public airport, same as the Proposed Project.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	Development under Alternative 4 is not located within the vicinity of an airstrip, same as the Proposed Project.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Development under Alternative 4 would not interfere with any emergency response or emergency evacuation plans with implementation of project mitigation.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Similar	Implementation of project mitigation would reduce this impact to a similar level of insignificance.
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Similar	Similar, though slightly greater, runoff coefficients.
Adversely alter an existing drainage pattern or watercourse.	Similar	No significant changes in drainage patterns compared to the Proposed Project.
Have an impact on groundwater that is inconsistent with a groundwater management plan.	Similar	Similar runoff coefficients.
Affect water quality of receiving waterbodies and thus would degrade water quality.	Greater than	SU impact of the Proposed Project would not be avoided. Alternative 4 does not include a similar sediment abatement project feature

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Similar	No significant inconsistencies with adjacent properties would occur that are greater than the Proposed Project.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Similar	No significant inconsistencies with adjacent uses would occur that are greater than the Proposed Project.
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Similar	Development under Alternative 4 could expose sensitive receptors to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction, similar to the Proposed Project.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Similar	Development under Alternative 4 could generate construction and grading activities that expose sensitive receptors to vibration levels above the 85 VdB threshold for vibration; similar to the Proposed Project.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Greater than	Greater, causing a significant increase in permanent ambient noise over existing conditions, though not considered to be a significant increase in noise over Year 2030 buildout of the Proposed Project.
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	While construction activities that would occur from implementation of Alternative 4 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from temporary or periodic noise increase under the Proposed Project.
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	The Project Area is not within an airport land use plan.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less than	While the impacts of substantial population growth of Alternative 4 would be significant and unavoidable, the impacts would be less substantial than the impacts from development under the Proposed Project because less overall development would occur and fewer residents would be generated.
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Development under Alternative 4 would result in the demolition of a negligible number of houses (3) currently on site, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Development under Alternative 4 would result in the displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
<p>Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</p> <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Less than	Direct population increase would be slightly less, creating less demand for public services.
Recreation		
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.	Similar	A similar amount of parkland would be provided under this alternative.
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	Construction impacts from a similar amount of park acreage under this alternative would be substantially similar to the Proposed Project, as identified in the technical sections of this EIR

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or extended Project Study Area.	Similar to Less than	The total traffic generated under Alternative 4 would be 1,876 less daily trips than the Proposed Project. This alternative would result in an approximately one- to two-percent percent difference in total trip generation as compared to the Proposed Project. Alternative 4 would result in fewer impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Similar	With Alternative 4 impacts to freeway ramps are anticipated to be similar to the Proposed Project. No ramp impacts are anticipated compared to existing conditions or the 2030 General Plan scenario
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Similar	With Alternative 4, impacts to freeway mainline segments, are anticipated to be similar to the Proposed Project. As with the Proposed Project, no impacts are anticipated compared to the 2030 General Plan scenario.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the Alternative 4.
Utilities and Service Systems		
Water Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than	Demand would be less due to less overall development.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Less than	Demand would be less due to less overall development.
Wastewater Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.	Less than	Generation of less wastewater due to less overall development.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Less than	Generation of less wastewater due to less overall development.

Table 4-28 Comparison of Impacts of Alternative 4 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
<p>Solid Waste Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.</p>	Less than	Generation of less solid waste due to less overall development.
<p>Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.</p>	Similar	Development under Alternative 4 would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.
<p>Energy Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	Less than	Demand for energy would be slightly less due to less overall development.

4.10 ALTERNATIVE 5: LANDOWNER CONCEPT PLAN

4.10.1 Description

During Phase 2 of the Opportunities Study, the six participating landowners submitted conceptual plans for proposed development on their properties. Those plans comprised a mixed-use plan for the Project Area with:

- 6,617 residential units
- 498,720 sf of commercial uses
- 41.4 acres of neighborhood parks

Table 4-29 summarizes the characteristics of the Landowner Concept Plan. Figure 4-8 shows the Landowner Concept Plan Land Use Map for the Project Area.

Site	Gross Site Area	Total Net Site Area	Max. # of Units	Total Comm'l. SF	Total Industrial SF	Park ac. Credit	Public Facilities	Total Buffer/ Open Space ac.	Density
Site 1	387	329	2,850	320,000	0	19.8	NONE	24.8	7-9
Site 2	243	164	1,132	178,720	0	10.4		82	5-7
Site 3	82	36	1,000	0	0	10.9		1.2	12-28
Site 4	50	45	1,450	0	0	0.9		2.0	29-32
Site 5	12	12	100	0	0	0.0		0.0	8-9
Site 6	18	18	85	0	0	0.0		5.0	5
	793.0	603	6,617	498,720	0	41.4	NONE	115	11-15

SOURCE: City of Lake Forest 2004

Table 4-30 and Table 4-31 provide a breakdown of the Landowner Concept Plan by general plan land use category and residential unit type. The Landowner Concept Plan includes the same residential product types as the Proposed Project, with 1,202 more units and 150,000 fewer commercial square feet. The residential density of the Landowner Concept Plan ranges from 4 to 32 dwelling units per acre, with an average density of 13 dwelling units per acre. A different residential product type is proposed under this alternative for Site 4, which would consist of a very dense apartment community at a density of approximately 29 units per acre. The proposed apartments would be three or more stories, with subterranean parking provided. A modified LFTM Program as outlined below under Transportation/Traffic would be adopted under this Alternative. This Alternative would not include the public facilities package outlined in the Proposed Project.

Legend

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/Net AC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space
-  Lake
-  Transportation Corridor
-  Mineral Resource Overlay

-  Shea/Baker Ranch
-  Portola Center/Baldwin
-  IRWD/Lewis
-  Baker Ranch
-  Whisler/Greystone Homes
-  Pacific Heritage

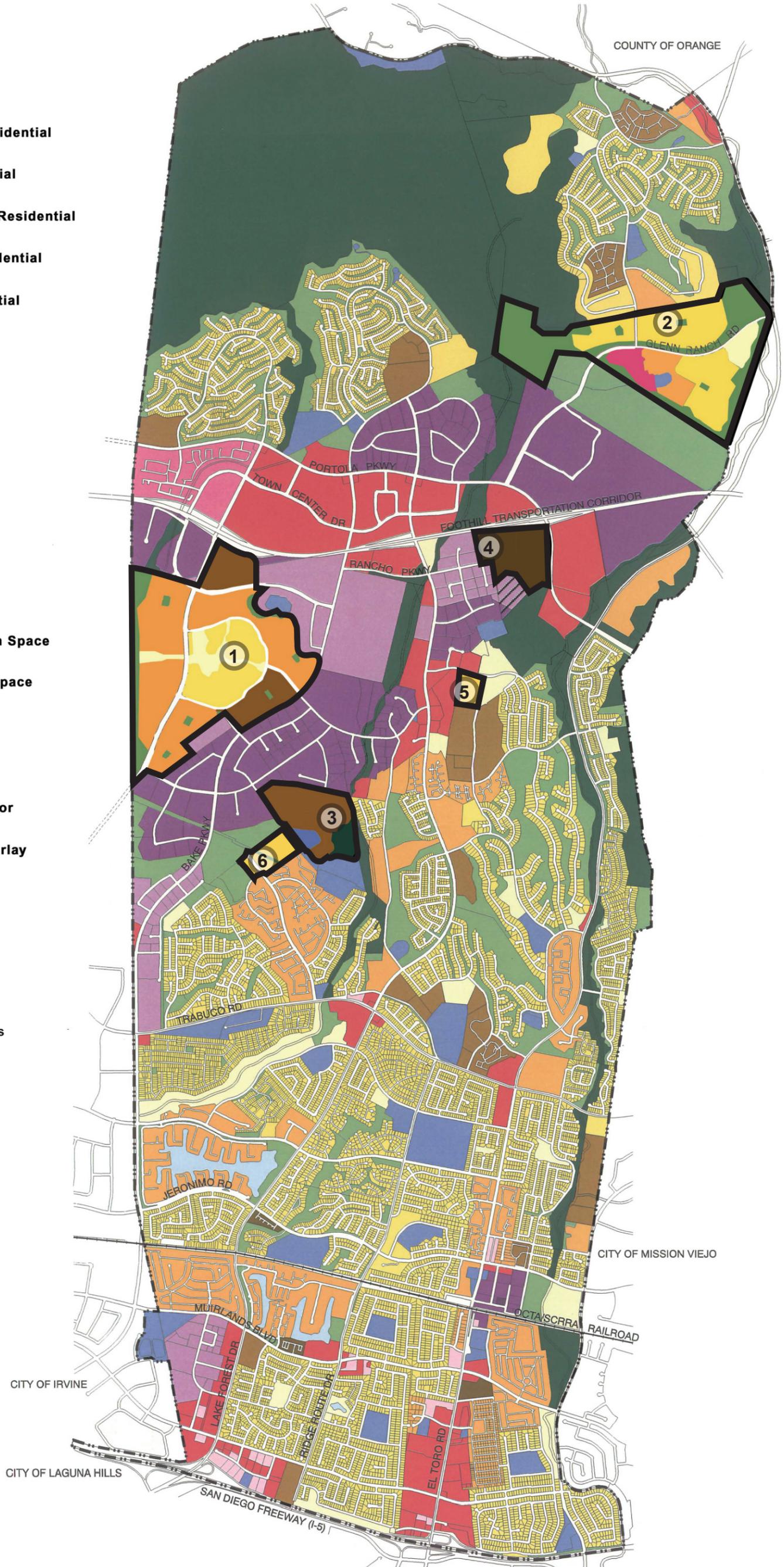


FIGURE 4-8
Alternative 5: Landowner Concept Plan

Table 4-30 Proposed General Plan Land Use Categories (Landowner Concept Plan)

<i>Land Use Category</i>	<i>Acres</i>
Low Density Residential	223
Low-Medium Density Residential	224
Medium Density Residential	148
High Density Residential	50
Mixed Use	12
Public Facility	46
Open Space	82
Community Park/Open Space	8
Total	793

SOURCE: City of Lake Forest 2004

Table 4-31 Residential Unit Type by Site (Landowner Concept Plan)

<i>Site</i>	<i>Total Residential Units</i>	<i>Unit Type</i>		
		<i>For-Sale Attached</i>	<i>For-Sale Detached</i>	<i>Rental</i>
Site 1	2,850	1,461	889	500
Site 2	1,132	607	525	0
Site 3	1,000	0	0	1,000
Site 4	1,450	0	0	1,450
Site 5	100	100	0	0
Site 6	85	0	85	0
Total	6,617	2,168	1,499	2,950
Percent of Unit Types	100%	33%	23%	45%

SOURCE: City of Lake Forest 2004

4.10.2 Impacts

■ Aesthetics

The Landowner Concept Plan would include development of 6,617 residential units, 41.4 acres of neighborhood parks, and up to 498,720 sf of commercial development. The Landowner Concept Plan includes the same residential product types as the Proposed Project, with 1,202 more units and 150,000 fewer commercial square feet. The residential density of the Landowner Concept Plan ranges from 4 to 32 dwelling units per acre, with an average density of 13 dwelling units per acre, compared to the Proposed Project's average residential density of 9 units per acre. This development would be allocated on specific Sites as indicated on Figure 2-5 (Landowner Concept Plan Land Use Map) and Table 4-28.

Development on Site 1 (Shea/Baker) would include 2,850 residential units and up to 320,000 sf of commercial development, which could consist of neighborhood-serving commercial uses such as medium-sized shopping centers with grocery stores. A potential school site has also been identified on Site 1, as well as several neighborhood parks as noted. Land uses adjacent to this site consist primarily of commercial and residential uses. Development of residential and business park uses, as well as neighborhood commercial uses would be compatible with surrounding development in building mass and height. While development would change the character of the site from undeveloped to development, it would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City, cause building incompatibility with surrounding uses, or create building mass that conflicts with the character of surrounding development. All development would be required to conform to General Plan policies and site development standards, which would ensure that architectural style and design features would be compatible with surrounding development. In addition, specific development proposals would be subject to the City's design review process, which would further ensure compatibility with surrounding architectural styles. Compliance with Municipal Code regulations for screening outdoor uses and materials would be required.

Site 2 would include the same number of dwelling units and commercial square footage as the Proposed Project (1,132 dwelling units and up to 178,720 sf of commercial development). This site is located in the Portola Hills Planned Community. Site 3 would include 1,000 multi-family dwelling units and no commercial development. As surrounding uses consist of industrial and commercial development, as well as some residential, the residential uses for this site would be compatible with surrounding development. Site 4 includes 1,450 residential units and no commercial square footage. Site 5 includes 100 single-family residential units and no commercial development. Development on Site 6 includes 85 medium-density residential units, the same as the Proposed Project. Each of these sites is surrounded by existing residential, commercial, and some industrial development, as well as by open space. The provision of housing and commercial on these sites would be compatible with surrounding land uses in building mass and height and would not substantially degrade the visual quality of the Project Area. While development would change the character of the sites from undeveloped to development, it would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City, or result in building incompatibility with surrounding uses or building mass that conflicts with the character of surrounding development. Development would be required to conform to applicable Planned Community Design Guidelines, which would ensure that architectural style and design features would be compatible with surrounding development. In addition, specific development proposals would be subject to the City's design review process, which would further ensure compatibility with surrounding architectural styles. Compliance with Municipal Code regulations for screening outdoor uses and materials would be required.

Given the foregoing, the Landowner Concept Plan would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development, and this impact is less than significant.

As noted under the description of the Proposed Project and Impact 3.1-2 in Section 3.1, all of the project development sites maintain views of the Santa Ana Mountains to the north. Development on all sites, but Sites 2 and 4 (which provides for a significantly more dense and taller development than under the Proposed Project), would not obstruct views from a given vantage point. This impact was identified as less than significant for all sites. Views of the Santa Ana Mountains and the Whiting Ranch Wilderness Area would continue, including from Portola Parkway, SR-241, Bake Parkway, Lake Forest Drive, El Toro Road, Los Alisos Blvd., and other roadways to the southeast. Because development would not occur in a contiguous swath across the City from west to east, but would instead be scattered at various locations in the Project Area, blocked views would be at specific points. The development proposed on Site 4 is considerably more dense and taller than that proposed under the Proposed Project. Views from adjacent roadways of the Santa Ana Mountains and Whiting Ranch Wilderness area would be blocked to a greater extent under this alternative, and would be considered significant and unavoidable. Such impacts would be greater than under the Proposed Project, which impacts to viewsheds were identified as less than significant for all sites.

Nighttime lighting would be included in development under the Landowner Concept Plan similar to the Proposed Project in the form of security lighting and street and parking area lighting, in addition to interior lighting that would be visible through undraped windows. This would represent a significant increase from the existing, relatively non-lighted conditions that exist on the project sites. Glare could occur from building materials of the new structures and could affect residents, visitors, and drivers on local roadways such as Bake Parkway, Alton Parkway, and El Toro Road. Construction materials would include glass, concrete, stucco, wood, core-ten steel, and other materials compliant with City design guidelines and architectural standards. MM 3.1-1 and MM 3.1-2 would help reduce the impact of the new sources of light and glare, but not to a less-than-significant level. Because current conditions do not involve significant sources of lighting, and development under the Proposed Project would convert primarily undeveloped properties to new development, thus significantly increasing the ambient light in the Project Area. As implementation of this alternative would exceed the City's stated threshold of significance is 1¼ foot-candles between dusk and dawn, this impact would be significant and unavoidable, and this impact would be somewhat greater than the Proposed Project due to a greater amount of development.

The Landowner Concept Plan alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Development under the Landowner Concept Plan would be required to comply with provisions and design guidelines contained in any applicable planned community, Uniform Building Code requirements, and fire codes. Thus, there would be no impact with regard to visual resources.

All development would be required to conform to General Plan policies and site development standards, including building height, setback, signage, exterior materials, etc. The specific development proposals would be subject to the City's design review process, ensuring that the project would conform to these guidelines and standards. Therefore, there would be no impact from development under the Landowner Concept Plan.

■ Agricultural Resources

The Landowner Concept Plan would include more residential uses and fewer commercial and open space uses as compared to the Proposed Project. However, similar changes in land use designations would occur under the Landowner Concept Plan as would occur under the Proposed Project as it would affect Sites 1 through 6. It is important to note that Site 7 would not be included within the Landowner Concept Plan as no public facilities are proposed under this Alternative.

Implementation of Alternative 5 would convert Site 1, which is presently designated by the FMMP as prime and unique farmland from agricultural to residential, commercial, and public facilities uses. Although not all of the land is currently being used for agricultural production, the loss of approximately 387 acres of prime and unique agricultural land is considered a substantial and significant conversion. The conversion of Site 1 from agricultural to residential, commercial, and public facilities uses would result in a reduction of the total amount of these farmland types within the County by approximately 2.6 percent. In addition, the conversion of this land could result in the elimination of approximately 76 percent of the prime and unique farmland within the City's boundaries. However, similar to the Proposed Project, even though the agricultural conversion of Site 1 was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of Alternative 5 is considered significant and unavoidable. However, since Site 7 would not be developed, less prime and unique farmland would be converted to non-agricultural uses. As such, this impact for Alternative 5 would be less than the Proposed Project.

Implementation of Alternative 5 would convert Sites 3 and 5, which represent a total of approximately 95 acres and are presently zoned for agricultural uses to allow urban development. If the proposed future development were to occur under the existing zoning designations, the development would conflict with zoning for agricultural use. Implementation of Alternative 5 would be required to specifically amend the existing General Plan and zoning designations for the Project Area. Consequently, implementation of Alternative 5 would conflict with zoning for agricultural uses, a significant and unavoidable impact, similar to the Proposed Project.

Approximately 199 acres on Sites 1 and 3 are currently used for agricultural operations. Specifically, although not presently zoned for agricultural uses, Site 1 contains approximately 174 acres of existing agricultural activities, while Site 3, which is zoned for agricultural uses, contains approximately 25 acres of row crops. Implementation of Alternative 3 would result in the conversion these two sites currently used as farmland to urban uses. The development of this Alternative on Sites 1 and 3 would not result in other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Site 3 is similarly located in an urban environment and its development would not necessarily result in other Farmland in the City being converted to nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not

create additional pressures on other Farmland areas to convert to nonagricultural uses. As no development would occur on Site 7, this impact would be less than significant, and less than the Proposed Project, which proposes development on Site 7.

■ Air Quality

When compared with the Proposed Project, implementation of Alternative 5 would result in a net increase of 1,202 residential units and a net decrease of 150,000 sf of commercial uses along with a reduction of 39 acres and approximately 10 acres in buffer/open space acreage and recreational park acreage, respectively.

Overall, Alternative 5 is a mixed-use plan with a large residential component. Compared to the existing General Plan, Alternative 5 would introduce residential uses, mixed use development, and additional parkland acreages in Sites 1 through 6 of the Project Area while eliminating the development of light industrial uses in the Project Area. Thus, similar to the Proposed Project, implementation of Alternative 5 would introduce new land uses in the Project Area and would result in a reduction in overall emissions when compared to the existing General Plan. Furthermore, according to the traffic study prepared for the Proposed Project, development under Alternative 5 would result in an approximately 53 percent reduction in average daily trips on Sites 1 through 6 of the Project Area when compared with development under the City's existing General Plan. Since development in the Project Area under the existing General Plan would not impair implementation of the AQMP, development in the Project Area under Alternative 5, which would result in a further reduction in overall emissions relative to the Proposed Project, would also not impair implementation of the AQMP. Therefore, because Alternative 5 would not impair implementation of the AQMP, this impact would be less than significant, and the magnitude of this impact would be similar for both Alternative 5 and the Proposed Project.

As discussed in Impact 3.3-2 under the Proposed Project, both construction and operational emissions generated from development under the Proposed Project would result in significant and unavoidable impacts. In terms of construction emissions, because construction emissions for an individual project typically exceeds the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the Proposed Project, which takes into consideration the construction emissions generated from all of the development on Sites 1 through 7 of the Project Area, is anticipated to be significant and unavoidable. While an additional 1,202 residential units would occur in the Project Area under Alternative 5 when compared with the Proposed Project, a decrease in 150,000 sf of commercial uses would also occur. As such, similar to the Proposed Project, the total construction emissions generated within the Project Area from all the development proposed under Alternative 5, when considered in whole, would still exceed the SCAQMD's recommended thresholds of significance for individual projects. Thus, this impact would be significant and unavoidable. Due to the variables associated with daily construction activity (e.g., construction site size, construction equipment, construction time frame, etc.), the quantification of total construction emissions resulting from implementation of Alternative 5 and the Proposed Project for the purpose of comparison would be difficult, if not impossible, to conduct. Thus, it would be speculative at this point to compare the total construction emissions that would be generated within the Project Area under Alternative 5 and the Proposed Project. However, for the purpose of analysis, because development occurring under

Alternative 5 would occur in less gross area in the Project Area than the Proposed Project, the impact associated with construction emissions for Alternative 5 is anticipated to be lesser in magnitude than the Proposed Project.

In order to assess the impact of operational emissions on a programmatic level, a screening-level analysis was performed using the URBEMIS 2002 computer model to approximately quantify the total amount of operational emissions that would occur under Alternative 5. For the purpose of providing a conservative analysis, a worst-case scenario was provided in which the most intensive uses (in terms of operational emissions generation) were selected under each land use category designated under Alternative 5 for each of the six sites in the project area. Table 4-31 shows the estimated operational emissions generated from both stationary and mobile sources on these six sites resulting from full buildout of Alternative 5.

As shown in Table 4-32, the estimated daily operational emissions resulting from buildout of Sites 1 through 6 under Alternative 5 would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_x, and PM₁₀. The exceedance of the SCAQMD thresholds for these criteria pollutants is primarily due to the increase in motor vehicles traveling to and from the new land uses within these sites. As no feasible mitigation is available to reduce the amount of motor vehicle trips generated by the new land uses on these six sites under Alternative 5 to the extent that motor vehicle emissions would be below the SCAQMD's recommended thresholds, this impact would be significant and unavoidable. When compared to the Proposed Project, the emissions for CO, NO_x, SO_x, and PM₁₀ would be lower under Alternative 5, while the emissions for VOCs would be higher under the Proposed Project. Thus, the overall magnitude of this impact for this alternative would be of less than that for the Proposed Project.

Table 4-32 Estimated Daily Operational Emissions from Buildout of the Project Area under the Landowner Concept Plan					
<i>Emissions Source</i>	<i>Emissions in Pounds per Day</i>				
	<i>CO</i>	<i>VOC</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM₁₀</i>
Site 1 (Shea/Baker)					
Water and Space Heating	12.11	2.20	28.60	—	0.05
Landscape Maintenance	13.61	1.63	0.17	0.35	0.03
Consumer Products	—	139.43	—	—	—
Motor Vehicles	476.55	47.84	44.46	1.41	268.62
<i>Net Emissions</i>	<i>502.27</i>	<i>191.10</i>	<i>73.23</i>	<i>1.76</i>	<i>268.70</i>
Site 2 (Portola Center)					
Water and Space Heating	5.44	0.99	12.88	—	0.02
Landscape Maintenance	8.16	0.99	0.10	0.20	0.02
Consumer Products	—	55.38	—	—	—
Motor Vehicles	352.38	33.07	33.84	1.05	200.65
<i>Net Emissions</i>	<i>365.98</i>	<i>90.43</i>	<i>46.82</i>	<i>1.25</i>	<i>200.69</i>

Table 4-32 Estimated Daily Operational Emissions from Buildout of the Project Area under the Landowner Concept Plan

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NO _x	SO _x	PM ₁₀
Site 3 (IRWD)					
Water and Space Heating	3.21	0.58	7.54	—	0.01
Landscape Maintenance	0.58	0.08	0.01	0.00	0.00
Consumer Products	—	48.92	—	—	—
Motor Vehicles	107.96	11.56	9.91	0.32	60.26
<i>Net Emissions</i>	<i>111.75</i>	<i>61.14</i>	<i>17.46</i>	<i>0.32</i>	<i>60.27</i>
Site 4 (Baker)					
Water and Space Heating	4.65	0.84	10.94	—	0.02
Landscape Maintenance	0.58	0.08	0.01	0.00	0.00
Consumer Products	—	70.94	—	—	—
Motor Vehicles	142.28	15.53	13.01	0.42	79.18
<i>Net Emissions</i>	<i>147.51</i>	<i>87.39</i>	<i>23.96</i>	<i>0.42</i>	<i>79.80</i>
Site 5 (Whisler/Greystone)					
Water and Space Heating	0.44	0.08	1.02	—	0.00
Landscape Maintenance	1.24	0.16	0.01	0.02	0.00
Consumer Products	—	4.89	—	—	—
Motor Vehicles	16.75	1.66	1.52	0.05	9.32
<i>Net Emissions</i>	<i>18.43</i>	<i>6.79</i>	<i>2.55</i>	<i>0.07</i>	<i>9.32</i>
Site 6 (Pacific Heritage)					
Water and Space Heating	0.45	0.08	1.07	—	0.00
Landscape Maintenance	1.04	0.12	0.01	0.03	0.00
Consumer Products	—	4.16	—	—	—
Motor Vehicles	16.16	1.57	1.47	0.05	9.00
<i>Net Emissions</i>	<i>17.65</i>	<i>5.93</i>	<i>2.55</i>	<i>0.08</i>	<i>9.00</i>
Total Emissions	1,163.59	442.78	166.57	3.90	627.18
SCAQMD Thresholds (lb/day)	550.00	55.00	55.00	150.00	150.00
Significant Impact	Yes	Yes	Yes	No	Yes

SOURCE: EIP Associates 2005 (computer sheets are provided in Appendix D)

As discussed above, both construction and operation related daily emissions associated with the development projects that are planned to occur in the Project Area under Alternative 5 are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. Under this condition, the development proposed by Alternative 5 would also make a cumulatively considerable contribution to these criteria pollutants. Therefore, this impact is anticipated to be significant and unavoidable. Because less overall operational emissions would occur in the Project Area under this alternative than the Proposed Project, this impact for Alternative 5 would be less than the Proposed Project.

As shown in Table 4-33, future 1-hour and 8-hour CO concentrations near the study intersections in the Project Area would not exceed national or state ambient air quality standards under Alternative 5. Therefore, CO hotspots would not occur near these intersections in the future, and the contribution of the traffic-related CO associated with implementation of the Landowner Concept Plan at these intersections would be less than significant, and would be similar to the Proposed Project.

Table 4-33 Future (2030) Localized Carbon Monoxide Concentrations within the Project Area under the Landowner Concept Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
1. Alton and Portola	3.2	1.7	3.2	1.6	3.1	1.6
2. Bake and Portola	3.5	1.9	3.4	1.8	3.3	1.7
3. Lake Forest and Portola	3.4	1.8	3.3	1.8	3.2	1.7
4. Glenn Ranch and Portola	3.4	1.8	3.3	1.7	3.2	1.7
5. Portola and SR-241 Ramps	3.3	1.8	3.3	1.7	3.2	1.7
6. Alton and SR-241 Ramps	3.3	1.7	3.2	1.7	3.2	1.6
7. Lake Forest and SR-241 NB	3.2	1.6	3.1	1.6	3.1	1.6
8. Lake Forest and SR-241 SB	3.2	1.7	3.2	1.6	3.1	1.6
9. Bake and Rancho North	3.4	1.8	3.3	1.7	3.2	1.7
10. Lake Forest and Rancho	3.5	1.9	3.4	1.8	3.3	1.7
11. Bake and Rancho South	3.4	1.8	3.3	1.7	3.2	1.7
12. El Toro Rd. and Portola/Santa Margarita	3.6	2.0	3.5	1.9	3.4	1.8
13. Bake and Commercentre	3.3	1.7	3.2	1.7	3.2	1.6
14. Bake and Irvine/Trabuco	3.6	2.0	3.5	1.9	3.4	1.8
15. Lake Forest and Trabuco	3.4	1.8	3.3	1.8	3.2	1.7
16. Ridge Route and Trabuco	3.3	1.7	3.2	1.7	3.2	1.6
17. El Toro Rd. and Trabuco	3.6	1.9	3.5	1.9	3.4	1.8
18. Bake and Toledo	3.4	1.8	3.3	1.7	3.2	1.7
19. Lake Forest and Toledo	3.2	1.7	3.2	1.6	3.1	1.6
20. Ridge Route and Toledo	3.1	1.6	3.1	1.6	3.1	1.5
21. El Toro Rd. and Toledo	3.3	1.8	3.3	1.7	3.2	1.7
22. Bake and Jeronimo	3.5	1.9	3.4	1.8	3.3	1.8
23. Lake Forest and Jeronimo	3.3	1.7	3.3	1.7	3.2	1.7
24. Ridge Route and Jeronimo	3.2	1.6	3.1	1.6	3.1	1.6
25. El Toro Rd. and Jeronimo	3.4	1.9	3.4	1.8	3.3	1.7
26. Los Alisos and Jeronimo	3.4	1.8	3.3	1.7	3.2	1.7
27. Lake Forest and Muirlands	3.3	1.8	3.3	1.7	3.2	1.7
28. Ridge Route and Muirlands	3.2	1.7	3.2	1.7	3.2	1.6
29. El Toro Rd. and Muirlands	3.4	1.8	3.3	1.7	3.2	1.7
30. Los Alisos and Muirlands	3.5	1.9	3.4	1.8	3.3	1.7
31. Lake Forest and Rockfield	3.4	1.8	3.3	1.8	3.3	1.7
32. Ridge Route and Rockfield	3.4	1.8	3.3	1.7	3.2	1.7

Table 4-33 Future (2030) Localized Carbon Monoxide Concentrations within the Project Area under the Landowner Concept Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
33. El Toro Rd. and Rockfield	3.3	1.8	3.3	1.7	3.2	1.7
34. Los Alisos and Rockfield	3.3	1.8	3.3	1.7	3.2	1.7
35. Lake Forest and I-5 NB	3.4	1.8	3.3	1.8	3.2	1.7
36. Lake Forest and I-5/Carlota	3.6	2.0	3.5	1.9	3.4	1.8
37. Paseo De Valencia and Carlota	3.4	1.8	3.3	1.7	3.2	1.7
38. El Toro Rd. and Bridger/I-5 NB	3.4	1.8	3.3	1.8	3.2	1.7
39. El Toro Rd. and Avd Carlota	3.5	1.9	3.4	1.9	3.3	1.8
40. Portola and Rancho	3.4	1.8	3.3	1.7	3.2	1.7
41. Alton and Towne Center Drive	3.4	1.8	3.3	1.7	3.2	1.7
42. Alton and Commercentre	3.3	1.8	3.3	1.7	3.2	1.7

SOURCE: EIP Associates 2005 (calculation sheets are provided in Appendix D)

National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

The localized CO concentrations calculated in this table are based on the estimated traffic volumes generated at the study intersections in the Project Area by development under the Landowner Concept Plan without the traffic mitigation measures proposed by the traffic report, as the feasibility of implementing these mitigation measures has not been determined at this time.

In addition, as discussed under Impact 3.3-4 in Section 3.3 (Air Quality) of this EIR for the Proposed Project, the traffic study also analyzed the traffic conditions at additional intersections located outside of the Project Area (referred to in the traffic study as the “extended study area”). The future CO concentrations at these additional study intersections in 2030 are presented in Table 4-34.

Table 4-34 Future (2030) Localized Carbon Monoxide Concentrations within the “Extended Study Area” under the Landowner Concept Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
100. Portola Pkwy. at SR-241 NB Ramps	3.2	1.7	3.2	1.6	3.1	1.6
101. Portola Pkwy. at SR-241 SB Ramps	3.2	1.7	3.2	1.6	3.1	1.6
102. Ridge Vly. at Portola Pkwy.	3.3	1.8	3.3	1.7	3.2	1.7
103. Sand Cyn. Ave. at Portola Pkwy.	3.3	1.7	3.2	1.7	3.2	1.6
104. Jeffrey Rd. at Portola Pkwy.	3.3	1.7	3.2	1.7	3.2	1.6
105. Alton Pkwy. at Irvine Bl.	3.7	2.1	3.6	2.0	3.4	1.9
106. B Dr. at Irvine Bl.	3.4	1.8	3.3	1.7	3.2	1.7
107. A Dr. at Irvine Bl.	3.4	1.9	3.4	1.8	3.3	1.7
108. Ridge Vly. at Irvine Bl.	3.4	1.9	3.4	1.8	3.3	1.7
109. College Dr. at Irvine Bl.	3.4	1.8	3.3	1.7	3.2	1.7
110. ETC E. Leg NB Ramps at Irvine Bl.	3.4	1.8	3.3	1.8	3.2	1.7
111. ETC E. Leg SB Ramps at Irvine Bl.	3.3	1.8	3.3	1.7	3.2	1.7
112. Sand Cyn. Ave. at Irvine Bl.	3.4	1.9	3.4	1.8	3.3	1.7

Table 4-34 Future (2030) Localized Carbon Monoxide Concentrations within the “Extended Study Area” under the Landowner Concept Plan

Intersection	CO Concentrations in Parts per Million					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
113. Jeffrey Rd. at Irvine Bl.	3.5	1.9	3.4	1.8	3.3	1.7
114. SR-133 NB Ramps at Trabuco Rd.	3.2	1.7	3.2	1.7	3.1	1.6
115. SR-133 SB Ramps at Trabuco Rd.	3.2	1.7	3.2	1.7	3.1	1.6
116. Sand Cyn. Ave. at Trabuco Rd.	3.4	1.8	3.3	1.8	3.2	1.7
117. Alton Pkwy. at Toledo Wy.	3.4	1.8	3.3	1.7	3.2	1.7
118. Alton Pkwy. at Jeronimo Rd.	3.4	1.8	3.3	1.8	3.2	1.7
119. Alton Pkwy. at Muirlands Bl.	3.5	1.9	3.4	1.8	3.3	1.7
120. Marine Wy. at Alton Pkwy.	3.3	1.7	3.2	1.7	3.2	1.6
121. Alton Pkwy. at Technology Dr.	3.5	1.9	3.4	1.8	3.3	1.7
122. Alton Pkwy. at I-5 NB Ramps	3.6	2.0	3.5	1.9	3.4	1.8
123. Marine Wy. at Rockfield Bl.	3.2	1.7	3.2	1.6	3.1	1.6
124. Bake Pkwy. at Muirlands Bl.	3.5	1.9	3.4	1.8	3.3	1.7
125. Bake Pkwy. at Rockfield Bl.	3.6	2.0	3.5	1.9	3.4	1.8
126. Bake Pkwy. at I-5 NB Ramps	3.6	2.0	3.5	1.9	3.4	1.8
127. Bake Pkwy. at I-5 SB Ramps	3.7	2.1	3.6	2.0	3.4	1.8
128. Bake Pkwy. at Irvine Center Dr.	3.3	1.7	3.2	1.7	3.2	1.6
129. Lake Forest Dr. at Irvine Center Dr.	3.3	1.8	3.3	1.7	3.2	1.7
130. Ridge Route at Moulton Pkwy.	3.6	2.0	3.5	1.9	3.4	1.8
131. Santa Maria Ave. at Moulton Pkwy.	3.5	1.9	3.4	1.9	3.3	1.8
132. El Toro Rd. at Moulton Pkwy.	3.7	2.1	3.6	2.0	3.4	1.8
137. Los Alisos Bl. at Trabuco Rd.	3.3	1.8	3.3	1.7	3.2	1.7
138. Trabuco Rd. at Alicia Pkwy.	3.4	1.8	3.3	1.7	3.2	1.7
139. Jeronimo Rd. at Alicia Pkwy.	3.3	1.8	3.3	1.7	3.2	1.7
140. Alicia Pkwy. at Muirlands Bl.	3.6	2.0	3.5	1.9	3.3	1.8
141. I-5 NB Ramps at Alicia Pkwy.	3.5	1.9	3.4	1.8	3.3	1.7
142. I-5 SB Ramps at Alicia Pkwy.	3.4	1.8	3.4	1.8	3.3	1.7
143. Los Alisos Bl. at Avd. De la Carlota	3.3	1.7	3.2	1.7	3.2	1.6
144. El Toro Rd. at Paseo de Valencia	3.2	1.7	3.2	1.7	3.1	1.6
145. Los Alisos Bl. at Paseo de Valencia	3.3	1.8	3.3	1.7	3.2	1.7

SOURCE: EIP Associates 2005 (calculation sheets are provided in Appendix D)

National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

The localized CO concentrations calculated in this table are based on the estimated traffic volumes generated at the study intersections in the “extended study area” by development under the Landowner Concept Plan without the traffic mitigation measures proposed by the traffic report, as the feasibility of implementing these mitigation measures has not been determined at this time.

As shown, future 1-hour and 8-hour CO concentrations near these intersections would not exceed national or state ambient air quality standards. Therefore, CO hotspots would also not occur near these intersections in the future, and the contribution of the traffic-related CO associated with implementation

of Alternative 5 at these intersections would be less than significant, and would be similar to the Proposed Project.

As discussed in Impact 3.2-5 under the Proposed Project, implementation of the Proposed Project would not create objectionable odors affecting a substantial number of people, and the impact was determined to be less than significant. Implementation of Alternative 5 would result in a net increase of 1,202 residential units and a net decrease of 150,000 sf of commercial uses in the Project Area when compared with the Proposed Project. Because residential uses are not considered to be sources of objectionable odors, the increase of residential uses in the Project Area under this alternative would not create objectionable odors affecting a substantial number of people. Thus, this impact would be less than significant, and would be similar in magnitude to the Proposed Project.

■ Biological Resources

The following analysis presents the potential for implementation of the Landowner Concept Plan to impact biological resources. In most cases, site-specific design information is not available. There are very few changes the proposed land uses from the Proposed Project. Site 3 is designated for medium-density residential and a public facility instead of low-medium density. Site 4 is designated as all high-density residential instead of mixed use. Site 5 is designated low-medium-density residential instead of low-density residential. From the perspective of biological resources, the change in land use from low density to high density residential is inconsequential. The construction of housing is expected to have the same impacts on biological resources regardless of how many structures are actually placed on the site because ground disturbance activities associated with either building density are expected to cause roughly the same impact to biological resources on these sites. This assumption is necessary because there are no site-specific designs available that would allow a detailed analysis. Additionally, the mitigation required for the impacts would be the same. Given this, the following analysis is essentially identical to that for the Proposed Project.

The potential impacts associated with implementation of the Landowner Concept Plan on sensitive species or their habitat is essentially identical to that of the Proposed Project. Therefore impacts to sensitive species potentially occurring within Site 1, Site 2, and Site 6 would be potentially significant without mitigation, and development on Site 3, Site 4, and Site 5 would result in less-than-significant impacts. (Please refer to Impact 3.4-1 under the Proposed Project). Potentially significant impacts associated with Sites 1, 2, and 6 would be reduced to less-than-significant levels through implementation of MM 3.4-1 through MM 3.4-3.

MM 3.4-1 through MM 3.4-3 shall be implemented as applicable to mitigate for impacts to sensitive species (Section 3.4.10). Successful implementation of these mitigation measures is expected to reduce the level of project-related impacts to sensitive species and their habitats to a less-than-significant level.

The potential impacts associated with implementation of the Landowner Concept Plan on sensitive natural communities are essentially identical to that of the Proposed Project. Specifically, impacts would be potentially significant without mitigation within Sites 1, 2, 3, and 6, and less than significant within

Sites 4 and 5. Potentially significant impacts associated with Sites 1, 2, 3, and 6 would be reduced to less-than-significant levels through implementation of MM 3.4-1 through MM 3.4-3.

MM 3.4-1 through MM 3.4-3 shall be implemented as applicable to mitigate for impacts to sensitive habitats (Section 3.4.10). Successful implementation of these mitigation measures is expected to reduce the level of project-related impacts to sensitive habitats to a less-than-significant level.

The potential impacts associated with implementation of the Landowner Concept Plan on federally protected wetlands are essentially identical to that of the Proposed Project. Specifically, impacts would be potentially significant without mitigation within Sites 1, 2, 3, and 6. Sites 4 and 5 would have no impact on federally protected wetlands (Please refer to Impact 3.4-3 under the Proposed Project). Potentially significant impacts associated with Site 1, 2, 3, and 6 would be reduced to less-than-significant levels through implementation of MM 3.4-4.

MM 3.4-4 shall be implemented as applicable to mitigate for impacts to wetlands and other aquatic habitats (Section 3.4.10). Successful implementation of these mitigation measures is expected to reduce the level of project-related impacts to sensitive species and their habitats to a less-than-significant level.

The potential impacts associated with implementation of the Landowner Concept Plan on movement of resident and migratory wildlife or native wildlife nursery sites are essentially identical to that of the Proposed Project. Specifically, impacts would be potentially significant without mitigation within Site 5, and less than significant within Sites 1, 2, 3, and 6. Site 4 would have no impact on wildlife movement (Please refer to Impact 3.4-4 under the Proposed Project). Potentially significant impacts associated with Site 5 would be reduced to less-than-significant levels through implementation of MM 3.4-4.

MM 3.4-4 shall be implemented as applicable to mitigate for impacts to habitat fragmentation and wildlife movement (Section 3.4.10). Successful implementation of this mitigation measure is expected to reduce the level of project-related impacts to wildlife movement to a less-than-significant level.

Potential conflicts with local policies and ordinances that could result from implementation of the Landowner Concept Plan are essentially identical to those of the Proposed Project. Specifically, The Lake Forest General Plan establishes guidelines intended to reduce impacts and protect sensitive biological resources. The most pertinent policy is Policy 2.1 which requires that the City conserve and protect natural plant and animal communities including those supporting rare and endangered species, riparian and wetlands habitat, and movement corridors. Most of these resource-specific impacts are discussed in previous impact analysis. For example, Impact 3.4-1 deals with threatened and endangered species, Impact 3.4-2 deals with habitats, Impact 3.4-3 with wetlands, and Impact 3.4-4 with movement corridors. For all of these resource specific impacts, the Landowner Concept Plan was found to have a potentially significant impact (at one or more sites). Therefore, implementation of the Landowner Concept Plan would conflict with the General Plan Policy 2.1 requiring the conservation and protection of sensitive biological resources. This is considered a potentially significant impact.

MM 3.4-1 through MM 3.4-5 shall be implemented as applicable thereby allowing the City to Conserve and protect natural plant and animal communities as required in General Plan Policy 2.1 (Section 3.4.10).

Successful implementation of these mitigation measures is expected to allow compliance with the General Plan policies and reduce the level of project-related impacts to a less-than-significant level.

Potential conflicts with the NCCP/HCP that could result from implementation of the Landowner Concept Plan are essentially identical to that of the Proposed Project and impacts would be less than significant. Specifically, although the City is contained within the planning area for the Central and Coastal Orange County NCCP/HCP, the sites are outside the Reserve System implemented by the NCCP/HCP in 1996 and thus do not have to conform to the NCCP/HCP. Although Site 2 is outside of the Reserve System, the site is surrounded on three sides by designated biological reserves. Consequently, the conversion of Site 2 to urban uses from its existing open nature would reduce habitat linkages between elements of the Reserve System. However elements to maintain habitat connections between these different reserves would be incorporated into specific site plans for the area. Once again though, because Site 2 is outside the reserve system, this conversion is only considered a less-than-significant impact in relation to the provisions of the NCCP/HCP.

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of Mitigation Measures 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology, Soils, and Mineral Resources

Geology and Soils

As discussed in Section 3.6.2 (Environmental Setting) no part of the Project Area is in a known Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1994. Because there are no known active faults traces in the Project Area, fault rupture is not anticipated, and there would be no impact.

The discussion under Impact 3.6-2 for the Proposed Project applies equally to the Landowner Concept Plan. In view of the regulatory requirements, the potential impacts of seismically induced groundshaking, ground shaking failures, or landslides in the Project Area would be reduced to a less-than-significant level.

The discussion under Impact 3.6-5 for the Proposed Project applies equally to the Landowner Concept Plan. In view of the regulatory requirements, the potential hazards posed by substantial soil erosion or the loss of topsoil in the Project Area would be reduced to a less-than-significant level. However, it

should be noted that a greater amount of grading and excavation would occur on Site 4, which would result in potentially greater loss of topsoil. The impact would be similar to the Proposed Project.

The discussion under Impact 3.6-7 for the Proposed Project applies equally to the Landowner Concept Plan. The Landowner Concept Plan could locate structures on a geologic unit or soils that are potentially unstable or expansive, similar to the Proposed Project. Although a greater amount of grading and excavation would occur on Site 4, development would be exposed to these risks in a manner similar to the Proposed Project. Compliance with the City Building Code would reduce this potential impact to a less-than-significant impact, similar to the Proposed Project

As discussed in Chapter 3.15 (Utilities and Service Systems) of this EIR, development in the Project Area would be served by existing wastewater treatment facilities. Because no known septic systems or alternative wastewater disposal systems would be installed there would be no impact.

Mineral Resources

The discussion in Impact 3.6-9 of the Proposed Project of the lack of impacts to known mineral resources that would be of value to the region and the residents of the state or that would be locally imported applies equally to the Landowner Concept Plan. Consequently, implementation of the Landowner Concept Plan would not alter the projected aggregate production or consumption of the county and is not considered an impact.

■ Hazards and Hazardous Materials

Similar to Impact 3.7-1 (Impacts of the Proposed Project), implementation of the Landowner Concept Plan could result in development of public facilities that would handle, use, or dispose of hazardous materials. Any new developments in the Project Area would be required to comply with applicable federal, state, and local laws regulating the generation, handling, transportation, and disposal of hazardous materials and waste. Hazardous materials regulations related to the use, handling, and transport of hazardous materials are codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code. The haulers and users of hazardous materials are listed with the Orange County Fire Authority and are regulated and monitored under the auspices of the County of Orange. Compliance with all federal, state, and local regulations during the development of Landowner Concept Plan would insure that there are no significant hazards to the public or the environment associated the routine transportation, use, or disposal of hazardous materials; therefore, impacts would be less than significant.

Construction of the Landowner Concept Plan projects could result in the accidental exposure of hazardous materials during site clearance, grading, or excavation of the project site. Although no site contamination is known or suspected at any of the project sites, past activities such as the on-site storage of fuels, application of pesticides, herbicides and other agricultural chemicals, or illicit debris disposal could have occurred in the area. MM 3.7-1 would require an environmental site assessment (ESA) to be conducted prior to the development of the Landowner Concept Plan projects. The ESA will identify

areas of potential soil contamination, if any, and recommend mitigation measures to reduce the hazard to less-than-significant levels.

Impacts associated with implementation of the Landowner Concept Plan would be similar to those impacts discussed in Impact 3.7-3 (Impacts of the Proposed Project). The projects anticipated to be developed as part of the Landowner Concept Plan could include residential and some public facilities. Operation of these facilities may require the use of equipment or machinery, including pumps, motors, compressors, etc. This equipment would require fuel in order to operate. Compliance with applicable regulations in the CCR and California Health and Safety Code would ensure that all feasible precautions are taken to prevent the accidental release of this fuel. Other chemicals associated with typical consumer products would most likely be used as well. Any incidents involving hazardous materials would typically be site-specific and would involve accidental spills or inadvertent releases of small amounts of chemicals or products that would be contained on site. Associated health and safety risks of chemical spills would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. With continued adherence to applicable federal, state, and local laws and implementation of the counties Hazardous Materials Area Plan, Landfill Load Checking Program, the Orange County Integrated Waste Management Department Household Hazardous Waste Program, and the City's Emergency Plan, and Household Hazardous Waste Element, the potential for the accidental release of hazardous materials would be less than significant.

Impacts associated with implementation of the Landowner Concept Plan would be similar to those impacts discussed in Impact 3.7-4 (Impacts of the Proposed Project). Based upon review of federal, state, and county hazardous waste lists and databases pursuant to Government Code Section 65962.5, there are no "Cortese" listed sites in the Project Area. However, the Project Area does contain one facility on Site 1, listed on the SWIS database, that handles hazardous waste (see Table 3.7-1). The lists and databases reviewed include, the California State Water Resources Control Boards Underground Storage Tank Program list Leaking Underground Storage Tanks (LUST, LUST-Closed, UST), and the Spills Leaks, Investigations and cleanup Program list (SLIC, and SLIC—Closed), The California Environmental Protection Agency's CalSites database (CalSites—SCH, -NFE, REF, -NFA), the U.S. Environmental Protection Agency National Priorities List (NPL), and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS, and CERCLIS—Archived), and Resource Conservation and Recovery Act list (RCRA-TSD, -COR), the National Response Center Emergency Response Notification System lists (ERNS), and the California Integrated Waste Management Boards Solid Waste Information system database (SWIS). No portion of the project site was identified on the Cortese list.

As mentioned above, implementation of MM 3.7-1 would require an environmental site assessment (ESA) to be conducted prior to the development of the Landowner Concept Plan. The ESA will identify areas of potential soil contamination, if any, and recommend mitigation measures to reduce the potential hazard to less-than-significant levels, similar to the Proposed Project

The Portola Hills Elementary School is located within one-quarter mile of Site 2 (Portola Center Site). In addition, a school site is proposed on Site 1. Limited amounts of some hazardous materials could be used in the construction and operation of new developments in the Proposed Project Area, including the use

of standard construction materials (e.g., paints, solvents and fuels), cleaning and other maintenance products (used in the maintenance of buildings, pumps, pipes and equipment), diesel and other fuels (used in construction and maintenance equipment and vehicles), and the limited application of pesticides associated with landscaping around new developments. None of these materials would result in the hazardous emissions or are considered acutely hazardous. The routine transport, use, and disposal of these materials would be subject to a wide range of laws and regulations intended to minimize potential health risks associated with their use or the accidental release of such substances. Hazardous materials regulations related to the use, handling, and transport of hazardous materials are codified in Titles 8, 22, and 26 of the CCR.

Construction activities could expose the schools to hazardous emissions. Various regulations and guidelines pertaining to abatement of, and protection from, exposure to asbestos and lead have been adopted for construction activities. In California, asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the state Department of Health Services. In addition, the California Occupational Safety and Health Administration (Cal/OSHA) has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal/OSHA standards.

The regulation and programs noted above would be followed during construction activities. Compliance with these regulations would ensure that the school and the general public would not be exposed to any unusual or excessive risks related to hazardous materials during construction and demolition activities. As such, impacts associated with the exposure of a school to hazardous emissions would be less than significant, similar to the Proposed Project.

Impacts associated with implementation of the Landowner Concept Plan would be similar to those impacts discussed in Impact 3.7-6. As new Landowner Concept Plan projects are implemented, MM 3.7-3 would require site contractors to notify the City and emergency departments (OCSD and OCFA) of any lane closures in advance. MM 3.7-4 would require the City to update their Emergency Preparedness Plan to address potential for accidental release of hazardous materials that may be used, stored, and/or transported at any new facility. With implementation MM 3.7-3 and MM 3.7-4, the Landowner Concept Plan would not interfere with any emergency response or emergency evacuation plans and this impact would be less than significant, similar to the Proposed Project.

Implementation of the Landowner Concept Plan would provide for development of approximately 6,617 residential units in the Project Area, along with a variety of mixed use and open space areas. According to the City's General Plan Master EIR, and the Orange County Safety Element, portions of the Portola Center parcel are partially located in a designated high fire hazard area. These areas are contiguous with the Whiting Ranch Wilderness Area, which is, in turn, adjacent to the Cleveland National Forest. The regional natural vegetation in this area is highly prone to wildfires. A wildfire in the national forest could spread to developed areas in the City. The City will reduce the potential for dangerous fires by

coordinating with the Orange County Fire Authority (OCFA) to implement fire hazard education, fire protection and fuel modification programs. Furthermore, the current Uniform Fire Code will be used to reduce structural fire hazards. In addition, the City will work closely with the local water districts and the OCFA to ensure that water pressure is adequate for fire fighting purposes. Implementation of MM 3.7-4 would reduce the potential impact for the project to expose people or structures to a significant risk of loss, injury, or death involving wildfires to a less-than-significant level, similar to the Proposed Project

As discussed in Impact 3.7-8 (Impacts of the Proposed Project), the John Wayne Airport, which is owned and operated by the County of Orange, is the only commercial service airport in Orange County. Along with the Fullerton Municipal Airport, which is centrally located in the Los Angeles basin, and the Anaheim Airport, located in the City of Anaheim, these three airports are the only facilities that accommodate general aviation in the County. The project site is not located within two miles of any of these airports; therefore, there are no impacts.

■ Hydrology and Water Quality

Table 4-35 shows the change in runoff coefficient for each Site. These values provide a relative indication of Landowner Concept Plan impact on runoff processes. Higher coefficients will likely mean greater runoff. Runoff from all Sites except 2 and 3 are expected to be greater for the Landowner Concept Plan compared to existing conditions, but runoff to both the San Diego Creek and the Aliso Creek watersheds will decrease. On an entire project basis, runoff will decrease slightly.

Site	Area (acres)	Runoff Coefficients	
		Existing	Landowner Concept Plan
1	387	0.38	0.41
2	243	0.48	0.32
3	82	0.48	0.38
4	50	0.48	0.60
5	13	0.44	0.60
6	18	0.44	0.50
Overall		0.43	0.40

SOURCE: EIP Associates 2005

Higher runoff amounts for individual Sites could exceed local conveyance capacities or contribute to localized flooding. In particular, the northern area of Site 1 is within the 100-year flood zone for Borrego Wash. However, steep banks that contain the 500-year flood area to equivalent areas the 100-year flood indicate that additional flow to Borrego Wash from Site 1 will not significantly impact the flood elevations.

Furthermore, if the drainage system is not adequately designed (e.g., concentrated flow paths) implementation of the Landowner Concept Plan could result in localized higher peak flow rates even though runoff coefficients (and therefore amounts of runoff) are lower for the Landowner Concept Plan

compared to existing conditions (Table 4-36). However, compliance with existing City and County construction and stormwater management codes/regulations and the DAMP should reduce [to what level?] any potential runoff impacts. The City manages local storm drain facilities and the Orange County Flood Control District (OCFCD) is responsible for regional flood control planning within the County. With implementation of MM 3.8-1, Landowner Concept Plan impacts would be less than significant.

Table 4-36 Magnitude of Runoff Coefficient Change for the Landowner Concept Plan		
Site	Change in Proposed Plan Runoff Coefficient	
	Existing Conditions (%)	General Plan Conditions (%)
1	8.9	-31.0
2	-33.5	-42.7
3	-20.8	-42.4
4	25.0	-14.3
5	36.4	20.0
6	13.6	100.0
To Aliso Creek	-13.0	-29.9
To San Diego Creek	-5.3	-33.3
Overall	-7.3	-32.5

SOURCE: EIP Associates 2005

Grading activities are likely to alter existing drainage patterns and may alter watercourses. Two Sites (5 and 6) may be internal drainages that could potentially be filled or otherwise altered. Most of the Sites have a rolling to hilly topography, bisected by ephemeral and potentially intermittent watercourses. Additionally, (Sites 1, 2, and 3) are adjacent to or contain riparian corridor areas. Development in these areas would likely involve grading and alteration of drainage patterns to minimize stormwater impacts to planned structures and facilities. Existing city ordinances, however, require a grading permit prior to initiation of construction. Disturbance of watercourse beds or banks and changes in drainage patterns would require prior approval and project requirements that would be identified during the permitting process. Compliance with the existing DAMP and sediment TMDL for San Diego Creek would assist in assuring that Landowner Concept Plan impacts to drainage patterns are less than significant.

Development of the Landowner Concept Plan would likely increase demand on water supplies. However, the Irvine Ranch Water District (IRWD, Landowner Concept Plan water supplier) has performed a Water Supply Assessment (see Utilities Section for details) that shows adequate water resources are available to meet Landowner Concept Plan needs without contributing to degradation of the groundwater basin. Approximately 50 percent of the water supplied by the IRWD within the entire district is groundwater; colored groundwater [define] and recycled water is used as a non-potable supply. However, IRWD groundwater supplies to the City of Lake Forest comprise only five percent of total water use. The IRWD, Orange County Water District, and member agencies aggressively manage groundwater resources to minimize impacts. These agencies may use recycled water, imported water for groundwater storage, spreading grounds for groundwater recharge, injection wells, and conduct monitoring and research programs to further manage groundwater resources. Additionally, existing

NPDES stormwater regulations (e.g., construction activities, post construction BMPs, and others) would prevent direct contamination and degradation of groundwater resources. City and County development codes are consistent with the groundwater management plan. No new wells are proposed and no significant impact on groundwater recharge or recharge potential would occur due to the Proposed Project. Additionally, potential groundwater quality degradation will be less than significant, since only a portion of the Landowner Concept Plan overlays the groundwater basin and compliance with NPDES General Construction Activity and Industrial Permits, the DAMP, the Groundwater Management Plan, City of Lake Forest Codes, and County of Orange codes will prevent discharges of pollutants to groundwater or landscapes where they may infiltrate to groundwater. Compliance with existing regulations would result in potential impacts that are less than significant.

Water Quality Issues

Landowner Concept Plan water quality issues are not significantly different from the Proposed Project and are discussed under the Proposed Project's impacts section.

Sediment

Incorporation of stormwater detention, minimization of directly connected impervious area, implementation of a construction SWPPP and post-construction BMPs, all activities required for compliance with existing regulations, would create conditions that would likely reduce potential sediment load to San Diego Creek to the less-than-50-percent level. However, the existing sedimentation issues in the Borrego Canyon Wash area (as described in the analysis of Impact 3.8-4) would also likely be present under this alternative. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. The Landowner Concept Plan Alternative does not include a similar sediment abatement project feature.

Metals

Any increase in metal concentrations in stormwater above existing conditions could result in a significant impact. Several conventional and proprietary BMPs have been shown to effectively remove metals concentrations from stormwater. Implementation of the DAMP and associated BMPs, would reduce potential impacts on metals contamination of water resources to less-than-significant levels.

Chlorpyrifos and Diazinon

The potential for continued high levels of these pesticides in runoff water will remain. Implementation of BMPs targeted to reducing pesticides and continued monitoring of program success will be necessary. Implementation of education and training programs to assure appropriate application by professionals, voluntary collection and disposal of individual stores of pesticides, and structural controls may help reduce concentrations of these pollutants in stormwater; however, regardless, implementation of BMPs to the maximum extent practicable or significantly reduced-scope of the Landowner Concept Plan may still result in exceedance of these pesticide TMDLs. Therefore, Landowner Concept Plan impacts on

water quality may be potentially significant and unavoidable, even with implementation of MM 3.8-1 through MM 3.8-3.

Nutrients

Implementation of the Landowner Concept Plan could increase nutrient concentrations in stormwater runoff due to landscaping practices and degradation of organic debris on impervious surfaces. Implementation of a nutrient and pesticide management program, as well as design guidelines and ordinances encouraging use of native plant species and other minimal maintenance plants in landscaping would reduce potential nutrient impacts from the Landowner Concept Plan can be reduced to less-than-significant levels with implementation of MM 3.8-1 through MM 3.8-3.

■ **Land Use and Planning**

Inconsistencies would occur between the Landowner Concept Plan and the existing applicable land use plans governing development of the site, as discussed under Impact 3.9-1 above. Similar to the impacts discussed under that section, impacts would be less than significant.

Impacts of the Landowner Concept Plan would be largely similar to those of the Proposed Project. The Landowner Concept Plan proposes additional residential units at higher densities, and this change would not affect compatibility with adjacent uses. The Landowner Concept Plan would result in development of residential uses on Sites 1 through 6, in addition to commercial development on Sites 1 and 2, and neighborhood parks on Sites 1, 2, 3, and 4 (see Table 3.9-3). No community facilities and no community park would be provided. The majority of the site is comprised of land devoid of structural development, which includes open space, agricultural areas, mining activities, and previously graded lands. A total of 6,617 residential units and 498,720 sf of commercial development, and no public facilities would be built over the six sites. The intensity of land uses in the Project Area would increase substantially over existing uses. Where the majority of the area is currently devoid of structural development and is perceived as vast areas of undeveloped land, the overall character would change to an area with roadways, landscaped areas, signage, and residential dwellings. Residential units would include a range of densities from low density of 2 to 7 units per acre, to high density of 25 to 43 units per acre. The replacement of vacant, undeveloped areas with residential uses, roadways, and commercial areas would substitute the undeveloped character of this parcel with a neighborhood setting. In areas with low-density development (portions of Sites 1 and 2, and Sites 5 and 6), substantial pockets of open areas would remain, although many of these areas would be developed with formalized landscaping, rather than the existing natural character of the area.

Proposed residential uses would be located adjacent to existing residential areas, open space, public facilities, business park, and light industrial. As a result of implementation of the Landowner Concept Plan, intensification of development throughout the City would occur, which could result in land use incompatibilities with adjacent uses. The Landowner Concept Plan proposes a dense apartment community on Site 4 at a density of approximately 29 units per acre. The proposed apartments would be three or more stories with subterranean parking. Therefore, impacts would be greater with respect to housing unit type and density under the Landowner Concept Plan.

Table 4-37 Proposed Uses by Parcel—Landowner Concept Plan

Parcel	Proposed Use			
	Residential	Commercial	Public Facilities	Park
1	●	●		●
2	●	●		●
3	●			●
4	●			●
5	●			
6	●			

Similar to Impact 3.9-2 (under Proposed Project), systematic enforcement of City ordinances and monitoring of development within and around the planning area will be used to minimize conflicts of use. Development monitoring by the City can be used to ensure that affected public agencies are capable of providing necessary facilities and services in support of proposed development. During the site-specific development process, residential development would be required to conform to General Plan policies discussed above, and the implementing Zoning Ordinance requirements. These policies require development to consider compatibility with adjacent uses during the design process. As part of this consideration, setbacks, visual screening, noise barriers, location of parking and entrances, location of loading and trash areas, and other features as necessary would be incorporated into project design as appropriate to address consistency. This would ensure that impacts would be less than significant.

■ Noise

The Landowner Concept Plan has the potential to result in events that may exceed permitted noise levels. The primary sources of noise associated with the Proposed Project would be construction activities and project-related traffic volumes. Secondary sources increased human activity throughout the sites. Noise limits for sensitive uses are shown in Table 3.10-5.

Implementation of the Landowner Concept Plan would require the use of heavy equipment for site excavation, installation of utilities, site grading, paving, and building fabrication. Construction activities would also involve the use of smaller power tools, generators, and other sources of noise. During each stage of construction there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment in operation and the location of the activity.

The EPA has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. These data are presented in Table 3.10-7 and Table 3.10-8. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receptor would reduce to 80 dBA at 100 feet from the source to the receptor, and reduce by another 6 dBA to 74 dBA at 200 feet from the source to the receptor.

Noise that would be experienced by sensitive uses due to implementation of the Proposed Project is determined at their property lines. While the nearest sensitive uses vary from site to site and as specific

development plans have not yet been determined at individual sites, for the purpose of this analysis it is assumed that sensitive receptors could be as close as 50 feet from where construction would take place. Sensitive receptors in the project vicinity could experience noise levels up to 86 dBA L_{eq} as a result of construction activities, or as high as 107 dBA L_{eq} in the event that pile drivers are used. The City of Lake Forest Municipal Code Section 4-6-7(e) provides allows noise resulting from construction activities to be exempt noise limits established in the Code. In accordance with the Noise Ordinance, construction activities would also be limited to the hours of 7:00 A.M. and 8:00 P.M. on Monday through Saturday, and is prohibited on Sundays and federal holidays. As construction would not occur except during the times permitted in the Noise Ordinance, and as the Section 4-6-7(e) of the Municipal Code allows construction noise in excess of standards to occur between these hours, the Landowner Concept Plan would not violate established standards. In the event that construction would need to take place at a time that construction noise would not be exempt from the Municipal Code per Section 4-6-7(e), project applicant(s) may apply for a variance to the Health Officer per Section 4-6-12 of the Municipal Code. To apply for a variance, project applicant(s) would be required to set forth all actions taken to comply with the provisions of the Municipal Code, the reasons why immediate compliance cannot be achieved, a proposed method of achieving compliance, and a proposed time schedule for its accomplishment. A separate application would need to be filed for each noise source; provided, however, that several mobile sources under common ownership, or several fixed sources on a single property may be combined into one application. This impact would be less than significant.

Although impacts from construction activity are expected to be less than significant, implementation of MM 3.10-1 and MM 3.10-2 would ensure that impacts associated with construction-related noise would remain less than significant.

Construction-related vibration has two potential impacts. First, vibration at high enough levels can disturb people trying to sleep. Second, groundborne vibration can potentially damage the foundations and exteriors of existing, older structures. Groundborne vibration that can cause this kind of damage is typically limited to impact equipment, especially pile drivers. Construction activities that would occur under the Proposed Project have the potential to generate low levels of groundborne vibration. Table 3.10-8 identifies various vibration velocity levels for the types of construction equipment that would operate within the City during construction. In addition, vibration that would be experienced from the use of impact pile drivers could reach as high as 112 VdB at a distance of 25 feet (HMMH).

With implementation of the Landowner Concept Plan, construction activities would primarily impact existing buildings within the vicinity of specific projects. These buildings could sometimes be as close as 25 feet to the construction site or as far as several hundred feet away. Based on the information presented in Table 3.10-9, vibration levels could reach up to 87 VdB at the buildings located within 25 feet of construction. As sensitive receptors may be this close to potential development, this would exceed the thresholds for each building type. So long as construction occurs more than 50 feet from sensitive receptors, the impact would be less than significant. However, as specific site plans or construction schedules are unknown at this time, it may be possible that construction activities could occur as close as 25 feet from sensitive receptors. This would result in these sensitive receptors experiencing vibration impacts above the threshold of 85 VdB, this impact would be potentially significant. MM 3.10-1 would be implemented to require the operation of vibration-generating equipment to be located as far away

from vibration-sensitive sites as possible. While implementation of MM 3.10-1 may reduce the magnitude of groundborne vibration levels experienced by nearby sensitive receptors, the possibility exists that these vibration levels may not be reduced to a level below the FTA's 85 VdB threshold. At the general plan and zoning level of analysis, this causes a potentially significant impact. However, the development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to excessive groundborne vibration or groundborne noise levels. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level.

Future noise levels within the City would continue to be dominated by vehicular traffic on the adjacent roadways. Other sources of noise would include new stationary sources (such as rooftop heating, ventilation, and air conditioning equipment) and increased human activity throughout the City.

Locations in the vicinity of the project sites could experience slight changes in noise levels as a result of an increase in the on-site population due to the potential development of residential and commercial development on currently vacant land and resulting increase in motor vehicle trips. Existing traffic noise levels are identified in Table 3.10-4 in Section 3.10 of this EIR. Noise levels associated with traffic generated from the Landowner Concept Plan are calculated at the selected locations along the study-area roadway segments within the City of Lake Forest using traffic data from the City of Lake Forest Vacant Land Opportunities Phase III Traffic Study (included in Appendix I). As stated in Section 3.10.5, a 3.0 dBA CNEL increase is considered substantial. Table 4-38 (Landowner Concept Plan Traffic Noise Impacts Compared to the Existing Conditions) presents the future average daily noise levels associated with these roadways under the LCP and compares them to existing conditions.

Table 4-38 Landowner Concept Plan Traffic Noise Impacts Compared to the Existing Conditions				
<i>Roadway Segment</i>	<i>Noise Levels in dBA CNEL at 100 feet</i>			
	<i>Existing Conditions</i>	<i>Year 2030 With Landowner Concept Plan Traffic Volumes</i>	<i>Increase</i>	<i>Exceeds Significance Threshold?</i>
Glenn Ranch/Portola to Glenn Ranch/EI Toro Rd.	63.0	65.0	2.0	No
Portola/Alton to Portola/Bake Pkwy	62.9	66.7	3.8	Yes
Portola/Bake Pkwy to Portola/Lake Forest Dr.	66.1	67.3	1.2	No
Portola/Lake Forest Dr. to Portola/Glenn Ranch	68.1	69.0	0.9	No
Portola/Glenn Ranch to Portola/SR-241	67.2	67.3	0.1	No
Santa Margarita/SR-241 to Santa Margarita/EI Toro Rd.	66.5	69.5	3.0	Yes
Alton/Portola to Alton/SR-241	58.2	62.9	4.7	Yes
Bake Pkwy/Portola to Bake Pkwy/SR-241	64.6	63.9	-0.7	No
Lake Forest Dr./Portola to Lake Forest Dr./SR-241	62.6	62.6	0.0	No

Table 4-38 Landowner Concept Plan Traffic Noise Impacts Compared to the Existing Conditions

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Existing Conditions	Year 2030 With Landowner Concept Plan Traffic Volumes	Increase	Exceeds Significance Threshold?
SR-241/Alton to SR-241 West	72.3	74.6	2.3	No
SR-241/Alton to SR-241/Lake Forest Dr.	71.8	75.2	3.4	Yes
SR-241/Lake Forest Dr. to SR-241/Portola	70.8	74.5	3.7	Yes
SR-241/Santa Margarita to SR-241 East	71.2	74.6	3.4	Yes
Alton/SR-241 to Alton south	53.4	64.9	11.5	Yes
Lake Forest Dr./SR-241 to Lake Forest Dr./Rancho	64.4	64.7	0.3	No
Rancho West to Rancho/Bake Pkwy.	53.3	60.7	7.4	Yes
Rancho/Bake Pkwy to Rancho/Lake Forest Dr.	58.7	63.7	5.0	Yes
Bake Pkwy/Rancho to Bake Pkwy/Commercentre	67.2	66.8	-0.4	No
Bake Pkwy/Commercentre to Bake Pkwy/Trabuco Rd.	67.9	67.4	-0.5	No
Lake Forest Dr./Rancho to Lake Forest Dr./Trabuco Rd.	66.9	67.6	0.7	No
El Toro Rd./Santa Margarita to El Toro Rd./Trabuco Rd.	67.3	68.2	0.9	No
Trabuco Rd./Bake Pkwy. to Trabuco Rd./Lake Forest Dr.	65.4	66.1	0.7	No
Trabuco Rd./Lake Forest Dr. to Trabuco Rd./Ridge Route	66.5	67.3	0.8	No
Trabuco Rd./Ridge Route to Trabuco Rd./El Toro Rd.	67.1	67.8	0.7	No
Trabuco Rd./El Toro Rd. to Trabuco Rd. east	65.2	65.8	0.6	No
Bake Pkwy./Trabuco Rd. to Bake Pkwy./Toledo	68.6	69.0	0.4	No
Lake Forest Dr./Trabuco Rd. to Lake Forest Dr./Toledo	67.2	67.9	0.7	No
Ridge Route/Trabuco Rd. to Ridge Route/Toledo	59.3	59.3	0.0	No
El Toro Rd./Trabuco Rd. to El Toro Rd./Toledo	67.3	68.6	1.3	No
Toledo/Bake Pkwy. to Toledo/Lake Forest Dr.	57.3	58.0	0.7	No
Toledo/Lake Forest Dr. to Toledo/Ridge Route	58.0	58.7	0.7	No
Toledo/Ridge Route to Toledo/El Toro Rd.	58.0	59.3	1.3	No
Bake Pkwy./Toledo to Bake Pkwy./Jeronimo	68.9	69.1	0.2	No

Table 4-38 Landowner Concept Plan Traffic Noise Impacts Compared to the Existing Conditions

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Existing Conditions	Year 2030 With Landowner Concept Plan Traffic Volumes	Increase	Exceeds Significance Threshold?
Lake Forest Dr./Toledo to Lake Forest Dr./Jeronimo	66.8	67.5	0.7	No
Ridge Route/Toledo to Ridge Route/Jeronimo	59.3	59.3	0.0	No
El Toro Rd./Toledo to El Toro Rd./Jeronimo	67.4	68.6	1.2	No
Los Alisos/Trabuco Rd. to Los Alisos/Jeronimo	66.9	67.9	1.0	No
Jeronimo/Bake Pkwy. to Jeronimo/Lake Forest Dr.	60.3	61.1	0.8	No
Jeronimo/Lake Forest Dr. to Jeronimo/Ridge Route	61.7	62.3	0.6	No
Jeronimo/Ridge Route to Jeronimo/El Toro Rd.	61.4	62.0	0.6	No
Jeronimo/El Toro Rd. to Jeronimo/Los Alisos	63.9	64.9	1.0	No
Lake Forest Dr./Jeronimo to Lake Forest Dr./Muirlands	67.1	67.8	0.7	No
Ridge Route/Jeronimo to Ridge Route/Muirlands	60.3	61.1	0.8	No
El Toro Rd./Jeronimo to El Toro Rd./Muirlands	67.8	68.9	1.1	No
Los Alisos/Jeronimo to Los Alisos/Muirlands	66.9	67.6	0.7	No
Muirlands/Bake Pkwy. to Muirlands/Lake Forest Dr.	61.7	63.3	1.6	No
Muirlands/Lake Forest Dr. to Muirlands/Ridge Route	63.3	64.6	1.3	No
Muirlands/Ridge Route to Muirlands/El Toro Rd.	63.5	64.7	1.2	No
Muirlands/El Toro Rd. to Muirlands/Los Alisos	63.3	64.9	1.6	No
Lake Forest Dr./Muirlands to Lake Forest Dr./Rockfield	67.4	68.5	1.1	No
Ridge Route/Muirlands to Ridge Route/Rockfield	59.8	61.4	1.6	No
El Toro Rd./Muirlands to El Toro Rd./Rockfield	68.0	68.8	0.8	No
Los Alisos/Muirlands to Los Alisos/Rockfield	66.8	67.2	0.4	No
Rockfield/Bake Pkwy. to Rockfield/Lake Forest Dr.	62.8	64.1	1.3	No

Table 4-38 Landowner Concept Plan Traffic Noise Impacts Compared to the Existing Conditions

Roadway Segment	Noise Levels in dBA CNEL at 100 feet			
	Existing Conditions	Year 2030 With Landowner Concept Plan Traffic Volumes	Increase	Exceeds Significance Threshold?
Rockfield/Lake Forest Dr. to Rockfield/Ridge Route	62.8	64.1	1.3	No
Rockfield/Ridge Route to Rockfield/El Toro Rd.	62.8	64.6	1.8	No
Rockfield/El Toro Rd. to Rockfield/Los Alisos	62.6	63.3	0.7	No
Lake Forest Dr./Rockfield to Lake Forest Dr./I-5	69.4	70.2	0.8	No
El Toro Rd./Rockfield to El Toro Rd./I-5	69.1	69.5	0.4	No
Los Alisos/Rockfield to Los Alisos/I-5	66.1	66.7	0.6	No
I-5/Lake Forest Dr. to I-5/El Toro Rd.	87.7	88.8	1.1	No
I-5/El Toro Rd. to I-5/Los Alisos	83.0	84.0	1.0	No

SOURCE: EIP Associates 2005 (calculation data and results are provided in Appendix H)

As shown in Table 4-38, nine roadway segments are expected to experience a significant increase over existing conditions under the Landowner Concept Plan, with a maximum increase of 11.5 dBA CNEL, which is considered an audible and substantial increase to most people and would exceed the identified thresholds of significance. At the general plan and zoning level of analysis, this causes a potentially significant impact. While this Alternative would contribute to a significant cumulative impact (see discussion in Chapter 5, Section 5.22), similar to the Proposed Project, whether or not significant impacts would occur would be subject to tiered environmental review as project-level discretionary approvals are considered by the City. The development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to a substantial increase in ambient noise resulting from increased traffic volumes. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level. This impact would be greater in magnitude than the Proposed Project.

New stationary sources of noise, such as rooftop heating, ventilation, and air conditioning (HVAC) equipment, would be installed within the City as part of the Landowner Concept Plan. The type of HVAC equipment currently installed on new buildings within the City generates noise levels that average around 66 dBA L_{eq} on the air inlet side and 62 dBA L_{eq} on the other sides when measured at 50 feet from the source. New HVAC equipment for the Proposed Project could generate noise levels that average between 57 to 72 dBA CNEL at 50 feet when the equipment is operating constantly for 24 hours. Because existing noise levels within the City currently average 64.8 to 74.7 dBA, the combination of ambient noise and the equipment noise levels of up to than 72 dBA could result in ambient noise reaching levels up to 72.6 dBA CNEL in areas with noise as low as 64.8 dBA at nearby receptors. This would be expected to cause a substantial permanent increase in noise levels that would exceed the

identified thresholds of significance. This impact would be a potentially significant impact. However, implementation of MM 3.10-3 would reduce impacts to a less-than-significant level, similar to the Proposed Project.

Construction activities associated with the Landowner Concept Plan could reach above 86 dBA L_{eq} at the property line of sensitive receptors in the vicinity of the project sites. These construction activities would represent a substantial temporary or periodic increase in ambient noise levels since the project sites such as the IRWD site, the Portola Center site, and the Pacific Heritage site are vacant, undeveloped, or agricultural with few to no structures or roads. As discussed previously in Section 3.10.5, this EIR assumes that an increase of 5.0 dBA or greater over ambient noise levels is substantial and significant. As shown in Table 3.10-3, the highest existing daytime noise level monitored was at the intersection of Bake Parkway and Calle Entrada is 74.7 dBA L_{eq} . As such, the noise generated by construction activities for the Landowner Concept Plan could result in a temporary increase in ambient noise levels of over 5 dBA at the existing noise-sensitive uses adjacent to the project sites. However, the construction activities would only occur during the permitted hours designated in the City of Lake Forest's Municipal Code Section 4-6-7(e), and thus would not occur during recognized sleep hours for residences or on days that residents are most sensitive to exterior noise. As such, while the physical impact from an increase in ambient noise levels could occur from the construction activities associated with the Landowner Concept Plan, an adverse effect on the nearby residents would not occur. Therefore, this impact would be less than significant.

Implementation of MM 3.10-1 through MM 3.10-3 would minimize impacts associated with a temporary or periodic increase in ambient noise as a result of construction activities. Therefore, impacts associated with substantial temporary or periodic increases in ambient noise levels in the project vicinity would be less than significant.

■ Population and Housing

Development under the Landowner Concept Plan, or Alternative 5, would result in a total net new development of 6,617 residential units and 498,720 sf of commercial uses on Sites 1 through 6, with no public facilities proposed on any of the sites. Implementation of the residential uses would result in a population increase of 19,255 persons. In addition, the new employment-generating commercial uses in the Project Area have the potential to result in a population increase of 726 persons in the City. As such, maximum buildout of residential and commercial uses under the Alternative 5 would result in an increase in the City's population of 19,981 persons. With the City's 2005 population of 78,020, the generation of 19,981 persons from Alternative 5 would result in an increase of approximately 26 percent and would exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, it is anticipated that the City and County's infrastructure could accommodate the future growth. However, because Alternative 5 would substantially increase population growth within the City (by approximately 26 percent), impacts on population growth would be considered significant. In addition, the impacts associated with substantial population growth would be greater than the impacts from development under the Proposed Project because increased residential development would occur and more residents would be generated.

Future development under Alternative 5 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate the construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 5 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. In addition, although the three dwelling units would be removed, the new residential units that would be developed under implementation of Alternative 5 would be more than adequate to compensate for the initial loss of the existing dwelling units on Sites 1 and 5. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant.

■ Public Services

Implementation of the Landowner Concept Plan would potentially result in the construction of 6,617 residential units, approximately 500,000 sf of commercial space, and 41.4 acres of park space. During construction of the proposed uses, emergency/security services could be required periodically at individual construction sites. However, construction sites are typically fenced and have security personnel onsite. As such, the impact to emergency services during construction activities would be short-term in nature and less than significant.

Operation of a development of this scale would lead to an increased demand for local emergency services, including police and fire. As mentioned above, no standard criteria currently exist for evaluating acceptable service levels. However, as indicated in Table 3.12-4, police staffing levels in the City of Lake Forest are acceptable, if not above average, for the area, based on the reported response times. The ability of OCSD to support the needs of future growth is dependent on its financial ability to hire additional sworn personnel. The City's General Plan has established goals and policies (listed above) to address these issues and ensure compliance with standard levels of service. Therefore, the goals and policies of the General Plan would ensure that acceptable levels of service are maintained. As such, impacts to police services would be less than significant.

In terms of fire services, the Orange County Fire Authority is currently undergoing an evaluation of acceptable service levels that should be completed by 2006. A new truck company or medic unit may be necessary in the Project Area to effectively handle calls for service at the project sites and the surrounding area. Because additional personnel/facilities may be necessary, this would represent a potentially significant impact. However, the potential need for additional fire apparatus and staff would be addressed through the implementation of a Secured Fire Protection Agreement, which would specify the developer's fair share contribution to capital improvements necessary to maintain adequate fire protection services in the area. Therefore, implementation of MM 3.12-1 through MM 3.12-3 would reduce the impact to emergency services, especially fire services, to less than significant.

Under the Landowner Concept Plan, approximately 6,617 residential units would be constructed, resulting in a potential increase of 2,149 students in local SVUSD schools, approximately 161 students more than under the Proposed Project. Compared to SVUSD's district-wide student population, the proposed Landowner Concept Plan would result in a projected increase of 2,167 students to the general student population. While some of this increase will be absorbed by nearby private school facilities, it is assumed that the entire increase in student population would be assumed by SVUSD. Based on the 2004 SVUSD attendance numbers (SVUSD 2004), the Landowner Concept Plan would result in a 6.12 percent increase in the student population district-wide. However, the increase in students would likely occur over a smaller number of SVUSD schools located in close proximity to the project Sites. The total population of the schools listed in Table 3.12-2 is 12,746 students from grades K–12. Based on this number, the Landowner Concept Plan would result in a 17.0 percent increase in the student population at nearby schools.

The potential school site mentioned under Impact 3.12-2 of the Proposed Project and in Chapter 2 would alleviate some of the increase in student population with SVUSD but not all. The payment of appropriate statutory school fees by developers in the Project Area at the time of issuance of building permits to the SVUSD to assist in funding efforts necessary to alleviate school overcrowding (MM 3.12-3) would reduce this impact to a less-than-significant level. Therefore, impacts would be similar to the Proposed Project.

With implementation of the Landowner Concept Plan, approximately 6,617 residences would be constructed within the limits of the City of Lake Forest. According to the State Department of Finance, there is a ratio of 2.91 residents per household in the City of Lake Forest. Using this ratio, the population of Lake Forest would increase by approximately 19,255 residents as a result of implementation of the Landowner Concept Plan. This would represent an additional demand for 3,851 sf of library space and 28,882 volumes in the Project Area. Most, if not all, of this demand would be assumed by the County library system. According to the County, the Proposed Project would cause existing service levels to drop below the performance standards mentioned previously (0.2 sf and 1.5 volumes per capita) (Adams 2005). Further, no additional library facilities are currently planned in the area that would accommodate the increased demand (Adams 2005). However, implementation of MM 3.12-4 would reduce this impact to a less-than-significant level, the same as for the Proposed Project.

■ Recreation

Implementation of the Landowner Concept Plan would substitute residential, recreational, and commercial uses for existing vacant lands and underutilized uses located on the project site. Landowner concept development would entail approximately 6,617 residential units, 41.4 acres of parkland, 498,720 sf of commercial uses, and 115 acres of buffer/open space as well as rezoning of areas currently zoned for industrial and office uses to a mix of residential, recreational, and commercial uses. The site currently contains no park or recreational facilities.

Currently, the City of Lake Forest provides a total of 173.9 acres of parkland for its 77,700 population. Thus, the current citywide parkland ratio is 2.24 acres per 1,000 population. This ratio falls short of the

City of Lake Forest General Plan Recreational and Resources Element standard of 5 acres per 1,000 population.

The Landowner Concept Plan proposes development of 19.8 acres of parkland on the Shea/Baker site, 10.4 acres on the Portola site, 10.9 acres on the IRWD site, and 0.9 acre on the Baker Ranch site. The Greystone and Pacific Heritage sites would not contain any parkland; however, in lieu fees would be paid. In addition, a limited number of trails would be provided that are isolated and do not connect to existing trails. Thus, the Landowner Concept Plan would result in an additional 41.4 acres of parkland within the City of Lake Forest.

Utilizing a factor of 2.91 persons per dwelling unit (stated in Section 3.11, Population and Housing), the Landowner Concept Plan's 6,617 residential units would result in a population increase of 19,255 persons within the City of Lake Forest. Thus, with a population factor of 96,955 (existing 77,700 City population plus 19,255 population associated with the Proposed Project) and a park acreage factor of 215.3 (existing 173.9 acres of park plus 41.4 acres associated with the Proposed Project), implementation of the Landowner Concept Plan would result in a parkland/population ratio of 2.22 acres of parkland per 1,000 population within the City of Lake Forest.

The Landowner Concept Plan would need to develop a total of 99.26 acres of parkland in conjunction with its proposed 6,617 residential units to comply with the City's established standard of 5 acres per 1,000 population. Since the Landowner Concept Plan proposes uses that would result in a significantly increased City population compared to existing conditions and would develop less-than-adequate parkland to decrease the City-wide parkland ratio to 2.22 acres per 1,000 population—a 1.3 percent decrease in parkland ratio than currently maintained and/or planned for in the City), impacts would be significant and unavoidable.

The construction impacts anticipated to result from implementation of the Landowner Concept Plan are comprehensively analyzed in Sections 3.3 (Air Quality), 3.10 (Noise), and 4.14 (Transportation and Circulation) of this EIR. While significant, unavoidable construction impacts would occur in each of these issue areas as a result of construction under the Landowner Concept Plan, the specific recreational facilities proposed as part of the Landowner Concept Plan, by themselves, is not considered likely to result in significant construction-related impacts.

Construction of various outdoor, relatively flat parks would occur on sites (specifically Sites 1 through 4) that are primarily vacant or contain agricultural and/or nursery uses and would, thus, not require substantial demolition or excavation. Consequently, following MM 3.3-7, which would require implementation of fugitive dust control measures according to SCAQMD Rule 403, would further reduce any air quality impact associated with grading activities.

Construction activities would be limited, and construction traffic would, therefore, also be limited and considered less than significant. This would limit emissions from construction equipment to less-than-significant levels. Implementation of MM 3.3-4 and MM 3.3-6 would require maintenance and tuning of construction engines, as well as the use of existing electricity infrastructure surrounding the construction site, rather than generators powered by internal combustion engines. Following these practices and

procedures would ensure that construction-related impacts to air quality would be less than significant. This less-than-significant impact would be further reduced with implementation of MM 3.3-5 and MM 3.3-3, which would require that all construction equipment not in use for more than five minutes be turned off and would also require, to the extent feasible, the use of alternative fuel construction equipment.

The limited amount and type of construction activity, the minimal demolition, and the low amount of construction traffic would ensure that construction-related noise effects would also be less than significant with respect to on- and off-site uses. Compliance with the City's noise ordinance would ensure that construction-related noise generated by construction associated with the proposed recreational facilities would remain less than significant.

Construction of the recreational component of the Landowner Concept Plan alone would be less than significant, and no specific mitigation would be required. However, all relevant mitigation measures related to construction occurring with implementation of the Landowner Concept Plan shall be applied to reduce overall construction impacts to the maximum extent feasible.

■ Transportation/Traffic

Trip Generation

As can be seen from Table 4-39, the Landowner Concept Plan has similar trip generation characteristics to the Proposed Project. While the Proposed Project includes Site 7, the Nakase site, as the location for public facilities, the traffic report assumed that because the public facilities would replace other land uses that would otherwise be developed on the site, there would be a minimal change in overall trip generation.

Impacts

Table 4-40 and Table 4-41 summarize A.M. and P.M. peak hour intersection capacity utilization (ICU) values and corresponding levels of service (LOS) for Landowner Concept Plan conditions within the Project Area and extended Project Area, respectively. Actual turn volumes and ICU calculation worksheets are provided in Appendix I. Based on the peak hour intersection performance criteria and impact thresholds discussed previously, there are more intersections impacted under this Alternative than under the Proposed Project. For this reason, additional intersections are included in the LFTM for the Landowner Concept Plan. With implementation of the Landowner Concept Plan LFTM shown in Table 4-41, impacts would be similar to those of the Proposed Project.

A set of potential mitigation measures for the deficient intersections are summarized in Table 4-42 for the Landowner Concept Plan, together with the corresponding peak hour ICUs before and after mitigation. Also shown here are the potential sources of funds for implementing the improvements, including the North Irvine Transportation Mitigation (NITM) Program and the Lake Forest Transportation Mitigation (LFTM) Program. The proposed mitigation measures either bring the peak

hour ICU at each intersection to an acceptable level of service or to less than the ICU under existing General Plan conditions (i.e., the improvement(s) mitigate the project impact).

Year 2030 with-project A.M. and P.M. peak-hour ramp volumes and V/C ratios are summarized in Table 4-42; Year 2030 with-project A.M. and P.M. freeway mainline peak hour volumes and V/C ratios are summarized in Table 4-43. As under the Proposed Project, no freeway ramps and five freeway mainline segments, are forecast to be significantly impacted by the Landowner Concept Plan based on year 2030 conditions compared to existing conditions. However, as with the Proposed Project, fewer ramps and segments would be impacted than under the 2030 General Plan scenario and impacts would not differ significantly from General Plan scenario impacts for the 5 segments affected by the Alternative.

As under the Proposed Project, no impacts related to parking would occur with implementation of Alternative 5.

Table 4-39 Landowner Concept Plan Land Use and Trip Generation Summary

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Single-Family Detached	1,588 DU	301	889	1,190	1,016	587	1,603	15,197
Condominium	1,613 DU	274	808	1,082	726	532	1,258	13,146
Apartment	3,416 DU	343	1,400	1,743	1,366	753	2,119	22,956
Commercial (EQ)	298.72 TSF	257	165	422	733	794	1,527	17,550
Park	41.4 acre	0	0	0	0	0	0	65
Business Park	200 TSF	240	46	286	60	198	258	2,552
Sites 1-6 (using trip rates below)		1,415	3,308	4,723	3,901	2,864	6,765	71,466
Proposed Project		1,451	2,936	4,387	3,808	3,045	6,854	72,816
Difference from Proposed Project		-36	372	336	93	-181	-89	-1,350

Trip Rates (Land-Use Based)								
Single-Family Detached	DU	.19	.56	.75	.64	.37	1.01	9.57
Condominium	DU	.17	.50	.67	.45	.33	.78	8.15
Apartment	DU	.10	.41	.51	.40	.22	.62	6.72
Park	Acre	.01	.00	.01	.02	.02	.04	1.59
Business Park	TSF	1.20	.23	1.43	.30	.99	1.29	12.76

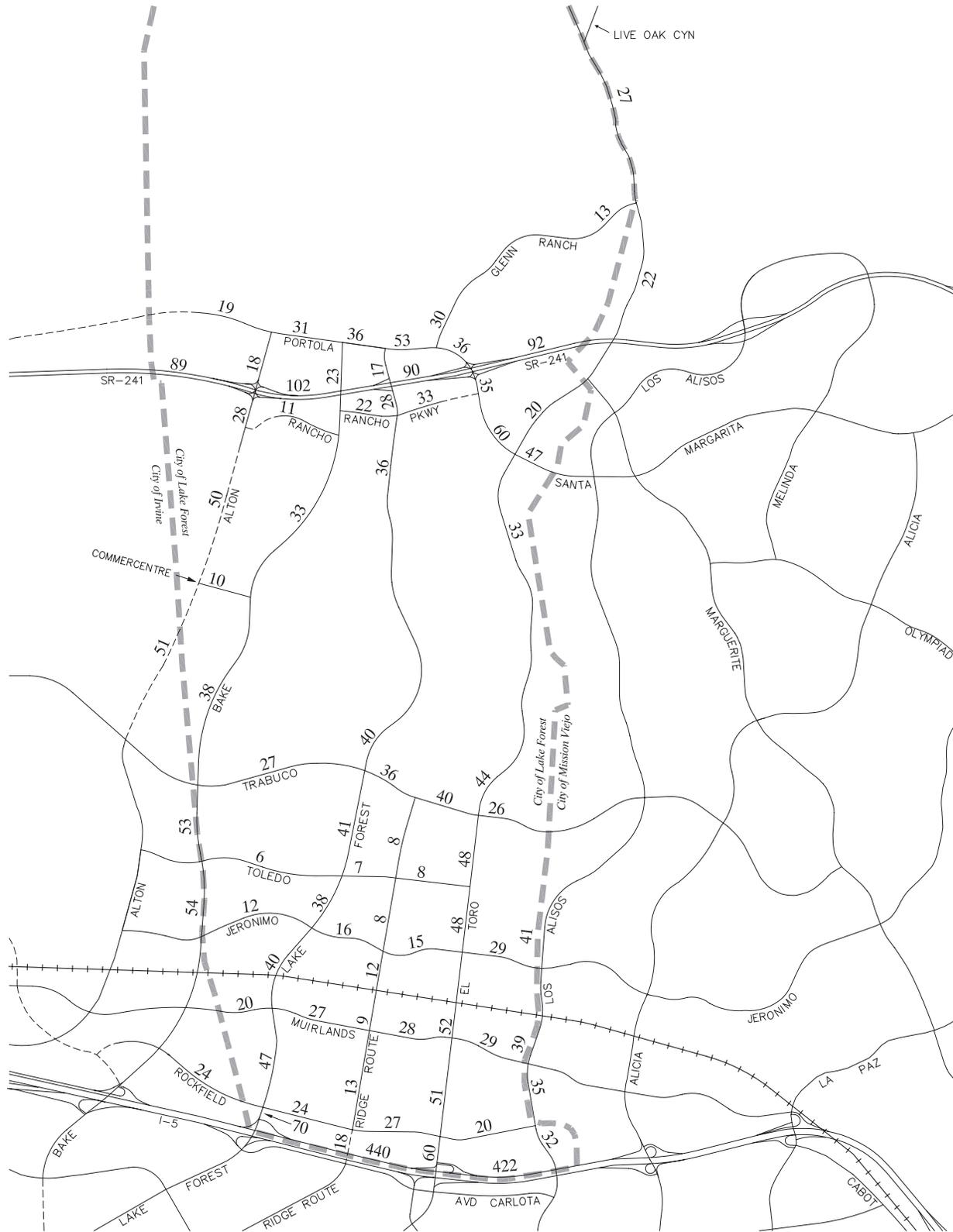
SOURCE: Austin-Foust Associates, Inc. 2005b

- The trip rates above and regression equation below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- The land use-based trip rates for commercial use are based on the following equation:
 $LN(T) = AxLN(X)+B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		AM Peak Hour			PM Peak Hour		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%

Abbreviations:

ADT = average daily trips DU = Dwelling Unit EQ = equation-based TSF = thousand square feet



Legend

- Existing Roadway
- - - Future Roadway



10953-00

FIGURE 4-9
2030 ADT Volume (000s) - Landowner Concept Plan

Source: Austin-Foust Associates, Inc. 2005

Not to Scale



City of Lake Forest

Table 4-40 2030 Intersection LOS Summary within Project Area

<i>Intersection</i>	<i>Landowner Concept Plan</i>			
	<i>AM Peak Hour</i>		<i>PM Peak Hour</i>	
	<i>ICU</i>	<i>LOS</i>	<i>ICU</i>	<i>LOS</i>
1. Alton & Portola	.51	A	.50	A
2. Bake & Portola (a) (L)	.76	C	1.04	F
3. Lake Forest & Portola (a)	.65	B	.91	E
4. Glenn Ranch & Portola	.68	B	.69	B
5. Portola & SR-241 Ramps	.46	A	.64	B
6. Alton & SR-241 Ramps	.61	B	.52	A
7. Lake Forest & SR-241 NB	.33	A	.45	A
8. Lake Forest & SR-241 SB	.53	A	.51	A
9. Bake & Rancho North	.72	C	.87	D
10. Lake Forest & Rancho (a) (L)	.95	E	1.27	F
11. Bake & Rancho South	.77	C	.81	D
12. El Toro Rd. & Portola/Santa Margarita (a) (L)	.82	D	1.01	F
13. Bake & Commercentre	.68	B	.74	C
14. Bake & Irvine/Trabuco (a) (L)	1.15	F	1.05	F
15. Lake Forest & Trabuco	.83	D	.87	D
16. Ridge Route & Trabuco	.55	A	.67	B
17. El Toro Rd. & Trabuco (a) (L)	.92	E	1.01	F
18. Bake & Toledo	.88	D	.70	B
19. Lake Forest & Toledo	.62	B	.58	A
20. Ridge Route & Toledo	.41	A	.43	A
21. El Toro Rd. & Toledo	.63	B	.70	B
22. Bake & Jeronimo (a) (L)	1.03	F	.87	D
23. Lake Forest & Jeronimo (L)	.75	C	.90	D
24. Ridge Route & Jeronimo	.55	A	.71	C
25. El Toro Rd. & Jeronimo (a)	.92	E	.93	E
26. Los Alisos & Jeronimo (a) (L)	.93	E	.95	E
27. Lake Forest & Muirlands	.70	B	.82	D
28. Ridge Route & Muirlands	.62	B	.82	D
29. El Toro Rd. & Muirlands	.77	C	.88	D
30. Los Alisos & Muirlands (a) (L)	1.03	F	1.12	F
31. Lake Forest & Rockfield (L)	.82	D	.90	D
32. Ridge Route & Rockfield (a)	.78	C	1.20	F
33. El Toro Rd. & Rockfield	.60	A	.73	C
34. Los Alisos & Rockfield (a)(L)	.91	E	.88	D
35. Lake Forest & I-5 NB	.65	B	.67	B
36. Lake Forest & I-5/Carlota (a) (L)	.82	D	1.00	E
37. Paseo De Valencia & Carlota (a) (L)	.65	B	1.00	E
38. El Toro Rd. & Bridger/I-5 NB	.65	B	.67	B

Table 4-40 2030 Intersection LOS Summary within Project Area

Intersection	Landowner Concept Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
39. El Toro Rd. & Avd Carlota (a) (L)	.71	C	1.08	F
40. Portola & Rancho	.55	A	.68	B
41. Alton & Towne Centre Dr (a) (L)	.92	E	.77	C
42. Alton & Commercentre	.63	B	.75	C

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

- (a) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard). Shaded entries denote deficient locations under existing General Plan where ICUs are reduced with the Proposed Project, (i.e., beneficial effects of the project), and shaded entries under the Proposed Project denote locations where ICUs are worsened by the project (i.e., adverse project impacts).

For information on the ICU and LOS values projected at each intersection under the project scenario, please see Table 3.14-14 beginning at page 3.14-46 of the PEIR.

Table 4-41 2030 Intersection LOS Summary within Extended Project Area

Intersection	Landowner Concept Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
100. Portola Pkwy. at SR-241 NB Ramps	.62	B	.74	C
101. Portola Pkwy. at SR-241 SB Ramps	.58	A	.52	A
102. Ridge Vly. at Portola Pkwy.	.57	A	.90	D
103. Sand Cyn. Av. at Portola Pkwy.	.74	C	.70	B
104. Jeffrey Rd. at Portola Pkwy.	.78	C	.62	B
105. Alton Pkwy. at Irvine Bl. (a) (L)	.90	D	1.02	F
106. B Dr. at Irvine Bl.	.79	C	.75	C
107. A Dr. at Irvine Bl.	.81	D	.83	D
108. Ridge Vly. at Irvine Bl.	.74	C	.81	D
109. College Dr. at Irvine Bl.	.77	C	.66	B
110. ETC E. Leg NB Ramps at Irvine Bl.	.85	D	.73	C
111. ETC E. Leg SB Ramps at Irvine Bl.	.79	C	.61	B
112. Sand Cyn. Av. at Irvine Bl.	.84	D	.78	C
113. Jeffrey Rd. at Irvine Bl. (b)	.83	D	.88	D
114. SR-133 NB Ramps at Trabuco Rd.	.59	A	.53	A
115. SR-133 SB Ramps at Trabuco Rd.	.59	A	.50	A
116. Sand Cyn. Av. at Trabuco Rd. (b)	.80	C	.78	C
117. Alton Pkwy. at Toledo Wy. (a) (L)	.72	C	.91	E
118. Alton Pkwy. at Jeronimo Rd.	.74	C	.77	C
119. Alton Pkwy. at Muirlands Bl.	.82	D	.88	D
120. Marine Wy. at Alton Pkwy.	.70	B	.65	B
121. Alton Pkwy. at Technology Dr.	.82	D	.84	D
122. Alton Pkwy. at I-5 NB Ramps	.97	E	.58	A
123. Marine Wy. at Rockfield Bl.	.53	A	.56	A

Table 4-41 2030 Intersection LOS Summary within Extended Project Area

Intersection	Landowner Concept Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
124. Bake Pkwy. at Muirlands Bl.	.81	D	.85	D
125. Bake Pkwy. at Rockfield Bl. (a) (L)	.69	B	.92	E
126. Bake Pkwy. at I-5 NB Ramps	1.00	E	.93	E
127. Bake Pkwy. at I-5 SB Ramps	.87	D	.93	E
128. Bake Pkwy. at Irvine Center Dr.	.43	A	.47	A
129. Lake Forest Dr. at Irvine Center Dr.	.73	C	.80	C
130. Ridge Route at Moulton Pkwy. (a)	.58	A	1.12	F
131. Santa Maria Av. at Moulton Pkwy. (a)	.99	E	1.00	E
132. El Toro Rd. at Moulton Pkwy. (a)	1.18	F	1.01	F
137. Los Alisos Bl. at Trabuco Rd. (a)	.95	E	.79	C
138. Trabuco Rd. at Alicia Pkwy. (a)	.77	C	.95	E
139. Jeronimo Rd. at Alicia Pkwy.	.74	C	.78	C
140. Alicia Pkwy. at Muirlands Bl. (a)	.92	E	1.00	E
141. I-5 NB Ramps at Alicia Pkwy.	.39	A	.73	C
142. I-5 SB Ramps at Alicia Pkwy.	.70	B	.77	C
143. Los Alisos Bl. at Avd. De la Carlota	.54	A	.73	C
144. El Toro Rd. at Paseo de Valencia	.63	B	.68	B
145. Los Alisos Bl. at Paseo de Valencia	.76	C	.79	C

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

(a) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard). Shaded entries denote locations where ICUs are worsened by the project (i.e., adverse project impacts).

(b) ICUs at this City of Irvine location include a .05 Advanced Transportation Management System (ATMS) credit.

(L) Indicates LFTM intersection under the Proposed Project.

For information on the ICU and LOS values projected at each intersection under the project scenario, please see Table 3.14-14 beginning at page 3.14-46 of the PEIR.

Table 4-41 2030 Intersection LOS Summary within Extended Project Area

Intersection	Landowner Concept Plan			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
125. Bake Pkwy. at Rockfield Bl. (a) (L)	.69	B	.92	E
126. Bake Pkwy. at I-5 NB Ramps	1.00	E	.93	E
127. Bake Pkwy. at I-5 SB Ramps	.87	D	.93	E
128. Bake Pkwy. at Irvine Center Dr.	.43	A	.47	A
129. Lake Forest Dr. at Irvine Center Dr.	.73	C	.80	C
130. Ridge Route at Moulton Pkwy. (a)	.58	A	1.12	F
131. Santa Maria Av. at Moulton Pkwy. (a)	.99	E	1.00	E
132. El Toro Rd. at Moulton Pkwy. (a)	1.18	F	1.01	F
137. Los Alisos Bl. at Trabuco Rd. (a)	.95	E	.79	C
138. Trabuco Rd. at Alicia Pkwy. (a)	.77	C	.95	E
139. Jeronimo Rd. at Alicia Pkwy.	.74	C	.78	C
140. Alicia Pkwy. at Muirlands Bl. (a)	.92	E	1.00	E
141. I-5 NB Ramps at Alicia Pkwy.	.39	A	.73	C
142. I-5 SB Ramps at Alicia Pkwy.	.70	B	.77	C
143. Los Alisos Bl. at Avd. de la Carlota	.54	A	.73	C
144. El Toro Rd. at Paseo de Valencia	.63	B	.68	B
145. Los Alisos Bl. at Paseo de Valencia	.76	C	.79	C

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

ICU = intersection capacity utilization LOS = level of service NB = northbound SB = southbound

(a) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the forecasted LOS is worse than the adopted LOS performance standard). Shaded entries denote locations where ICUs are worsened by the project (i.e., adverse project impacts).

(b) ICUs at this City of Irvine location include a .05 Advanced Transportation Management System (ATMS) credit.

(L) Indicates LFTM intersection under the Proposed Project.

Table 4-42 Summary of 2030 Deficient Intersections and Improvements – LFTM (Landowner Concept Plan)

Intersection (NS & EW)	2030 Peak Hour ICU				Mitigation Measures	Source
	Landowner Concept Plan					
	Without Mitigation		With Mitigation			
	AM	PM	AM	PM		
3. Lake Forest & Portola	.62	.92	.56	.81	Add 2 nd SBL	LFTM Program
10. Lake Forest & Rancho	.97	1.25	.70	.90	Restripe WB and remove WBR to show 2 WBL, 2 WBT and add de facto WBR and 2 nd EBT	LFTM Program
12. El Toro Rd. & Portola/Santa Marg.	.78	1.00	.68	.85	Add 2 nd NBL	LFTM Program
14. Bake & Irvine/Trabuco	1.15	1.05	.89	.87	Add 2 nd NBL, convert 3 rd WBT and WBR to 4 th WBT and restripe 3 rd EBT to shared 3 rd EBT/2 nd EBR Add de facto WBR	NITM Program LFTM Program
17. El Toro Rd. & Trabuco	.92	1.01	.88	.88	Add de facto NBR and de facto WBR	LFTM Program

Table 4-42 Summary of 2030 Deficient Intersections and Improvements – LFTM (Landowner Concept Plan)

Intersection (NS & EW)	2030 Peak Hour ICU				Mitigation Measures	Source
	Landowner Concept Plan					
	Without Mitigation		With Mitigation			
	AM	PM	AM	PM		
22. Bake & Jeronimo	1.03	.87	.91	.87	Add 2 nd NBL	NITM Program
23. Lake Forest & Jeronimo	.80	.92	.77	.90	Add de facto EBR	LFTM Program
25. El Toro Rd. & Jeronimo	.92	.83	.79	.78	Add 2 nd SBL	NITM and LFTM Programs
26. Los Alisos & Jeronimo	.93	.95	.87	.89	Restripe WB and remove WBR to 2 WBL, 2 WBT and add de facto WBR and 2 nd EBL	NITM and LFTM Programs
30. Los Alisos & Muirlands	.103	1.12	.89	.90	Add 2 nd NBL, de facto NBR, 2 nd SBL and 2 nd EBL	NITM and LFTM Programs
31. Lake Forest & Rockfield	.82	.91	.82	.86	Restripe 2 nd WBT to shared 3 rd WBL/2 nd WBT	NITM and LFTM Programs
34. Los Alisos & Rockfield	.92	.92	.73	.84	Add SBR	NITM and LFTM Programs
36. Lake Forest & I-5/Carlota	.81	1.08	.75	.95	Restripe shared 3 rd EBL/2 nd EBT to 3 rd EBL, add 2 nd WBL and right-turn overlap for WBR Add 2 nd EBT	NITM Program LFTM Program
37. Paseo De Valencia & Carlota	.63	1.01	.58	.87	Restripe 2 nd SBT to shared 3 rd SBL/2 nd SBT ^a	NITM and LFTM Programs and Laguna Hills
39. El Toro Rd. & Avd. Carlota	.70	1.02	.60	.88	Restripe EB to 2 EBL, EBT and shared 2 nd EBT/EBR and restripe WB to shared WBL/WBT and 2 WBR with overlap	NITM and LFTM Programs and Laguna Hills
41. Alton & Towne Centre Dr	.92	.77	.79	.76	Add 2 nd WBL	LFTM Program
105. Alton & Irvine	.90	1.02	.77	.95	Remove E/W split phasing, restripe shared 3 rd EBL/3 rd EBT to full 3 rd EBL and add 3 rd EBT and de facto EBR	LFTM Program
117. Alton & Toledo	.72	.91	.67	.86	Add a WB right-turn overlap	LFTM Program
125. Bake & Rockfield	.69	.92	.67	.89	Restripe shared 3 rd WBL/2 nd WBT to full 3 rd WBL, remove E/W split phasing and free WBR and add 2 nd WBT and de facto WBR	LFTM Program

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

LFTM = Lake Forest Transportation Mitigation Program

NITM = North Irvine Transportation Mitigation Program

^a Includes construction of a third eastbound receiving lane for the third southbound left-turn lane.

Table 4-43 2030 Landowner Concept Plan Freeway/Tollway Ramp LOS Summary

Interchange	Ramp	Lanes	Peak Hour Capacity	Landowner Concept Plan					
				AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 at Lake Forest	SB Direct On	1	1,500	200	.13	A	1,290	.86	D
	SB Loop On	1	1,080	470	.44	A	560	.52	A
	NB On	2	1,800	1,370	.76	C	1,090	.61	B
	SB Off (a)	2	3,000	2,140	.71	C	3,020	1.01	F
I-5 at El Toro Rd.	NB Off	1	1,500	1,480	.99	E	720	.48	A
	SB Direct On	1	1,080	50	.05	A	410	.38	A
	SB Loop On	1	1,500	660	.44	A	1,180	.79	C
	NB Direct On	1	1,500	1,340	.89	D	1,020	.68	B
	NB Loop On	1	1,500	1,180	.79	C	1,130	.75	C
	SB Off	2	3,000	1,780	.59	A	2,010	.67	B
SR-241 at Alton	NB Off	1	1,500	1,240	.83	D	1,160	.77	C
	SB On	1	1,500	430	.29	A	1,230	.82	D
	NB On	1	1,500	140	.09	A	420	.28	A
SR-241 at Lake Forest	SB Off	1	1,500	570	.38	A	200	.13	A
	NB Off	1	1,500	1,320	.88	D	660	.44	A
	NB On	2	2,250	140	.06	A	620	.28	A
SR-241 at Portola (East)	SB Off	2	2,250	660	.29	A	350	.16	A
	SB On	1	1,500	340	.23	A	1,410	.94	E
	NB On	2	2,250	800	.36	A	340	.15	A
	SB Off	1	1,500	340	.23	A	540	.36	A
	NB Off	2	2,250	2,120	.94	E	530	.24	A

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

LOS = level of service V/C = volume/capacity ratio

(a) This ramp is currently operating at V/C 1.02 LOS F in the P.M. Peak Period. There would therefore be no change under the Alternative. For existing conditions see Traffic Study Table 3-2. included in Appendix I or Table 3.14-2.

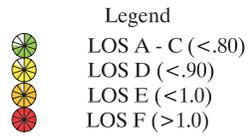


FIGURE 4-10
2030 AM Peak Hour ICUs and Level of Service - Landowner Concept Plan

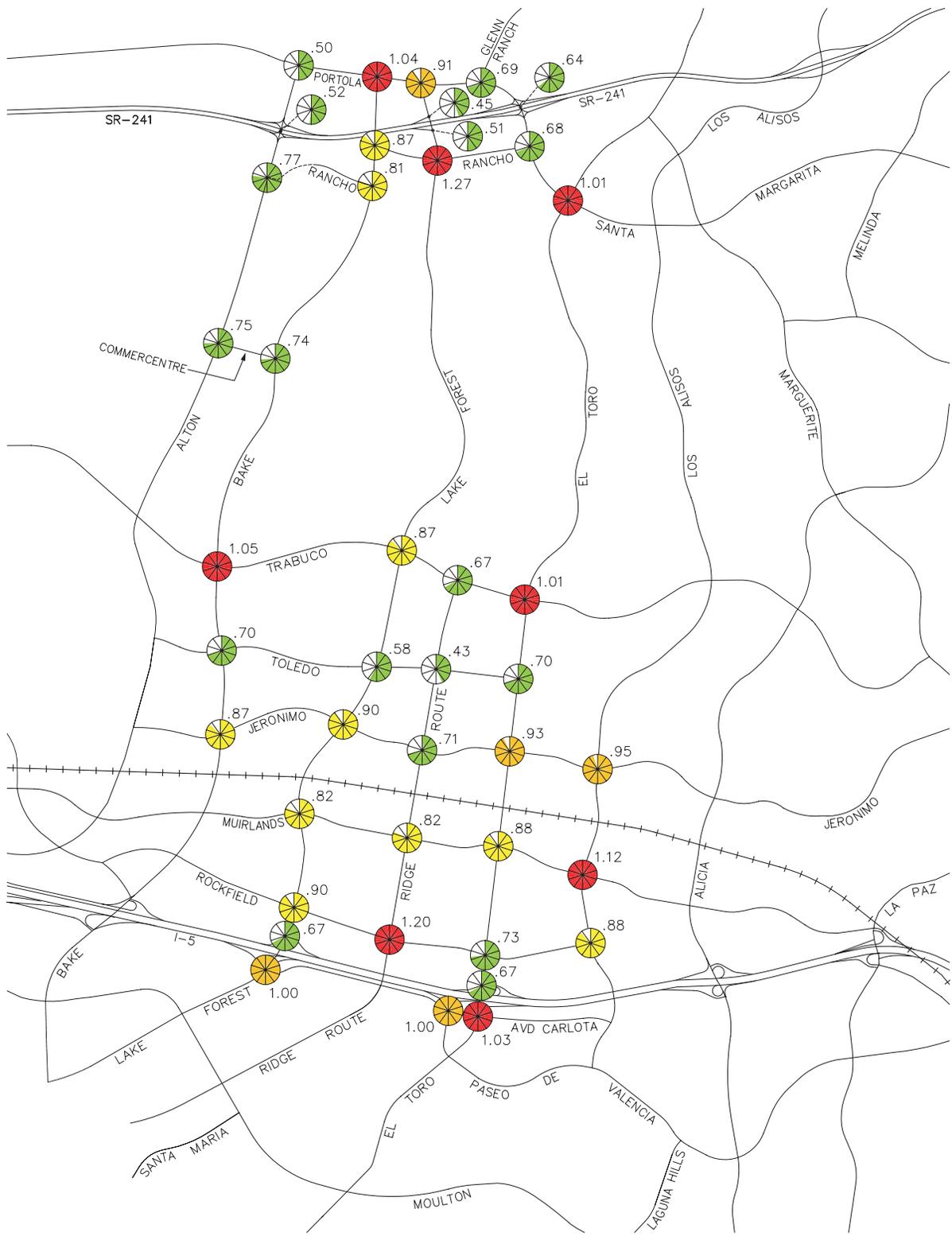
Not to Scale

10953-00

Source: Austin-Foust Associates, Inc. 2005

City of Lake Forest





- Legend
- LOS A - C (<.80)
 - LOS D (<.90)
 - LOS E (<1.0)
 - LOS F (>1.0)



FIGURE 4-11
2030 PM Peak Hour ICUs and Level of Service - Landowner Concept Plan

Not to Scale

10953-00

Source: Austin-Foust Associates, Inc. 2005

City of Lake Forest



Table 4-44 2030 Landowner Concept Plan Freeway/Tollway Mainline LOS Summary

Location	Direction	Lanes	Peak Hour Capacity	Landowner Concept Plan					
				AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 n/o Lake Forest	Northbound	8+2H	19,500	18,945	.97	E	12,335	.63	C
	Southbound	8+2H	19,500	11,966	.61	C	17,170	.88	D
I-5 n/o El Toro Rd.	Northbound	6+2H	15,500	18,187	1.17	F	11,766	.76	D
	Southbound	6+2H	15,500	10,076	.65	C	16,111	1.04	F
I-5 n/o Alicia	Northbound	4+1H	9,600	16,479	1.72	F	10,685	1.11	F
	Southbound	4+1H	9,600	9,105	.95	E	15,116	1.57	F
SR-241 n/o Alton	Northbound	4+1H	9,600	8,108	.84	D	3,689	.38	B
	Southbound	4+1H	9,600	3,051	.32	B	6,666	.69	C
SR-241 n/o Lake Forest	Northbound	4+1H	9,600	9,007	.94	E	3,974	.41	B
	Southbound	4+1H	9,600	2,967	.31	B	7,502	.78	D
SR-241 n/o Portola East	Northbound	4+1H	9,600	8,888	.93	E	3,348	.35	B
	Southbound	4+1H	9,600	2,295	.24	A	7,150	.74	D
SR-241 n/o Los Alisos	Northbound	4+1H	9,600	10,337	1.08	F	3,588	.37	B
	Southbound	4+1H	9,600	2,357	.25	A	8,063	.84	D

SOURCE: Austin-Foust Associates, Inc. 2005b

Abbreviations:

H = high-occupancy vehicle lane LOS = level of service V/C = volume/capacity ratio

For existing conditions see Traffic Study Table 3-3. included in Appendix I or Table 3.14-3.

■ Utilities and Service Systems

Development under the Landowner Concept Plan includes a total of 6,617 residential units; 1,202 additional units over that of the Proposed Project. In addition, development under the Landowner Concept Plan includes 150,000 sf of commercial development less than under the Proposed Project. A detailed breakdown of various residential land use types for each site in the Project Area under the Landowners Concept Plan is located in Table 4-30. Therefore, the most conservative residential generation factors were used to calculate the impacts related to utilities and service systems from the residential component of the Landowner Concept Plan. Table 4-44 through Table 4-45 present total generation and demand factors applicable to development under the Landowner Concept Plan.

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 5 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRWD design criteria. In addition, as under the Proposed Project, the General Plan policies in the Public Facilities / Growth Management Element require the City of Lake Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon

compliance with these regulations and policies, impacts related to water conveyance infrastructure under Alternative 5 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Table 4-45 Water Demand					
Site	Land Use	Units	Average Day Demand		General PlanM
			General PlanD/Unit	General PlanD	
1	L-MDR	2,850	350	997,500	693
	C	320,000	220	70,400	49
	PARK	19.8 AC	20	384	.27
2	L-DR	1132	385	435,820	303
	C	178,720	220	39,320	27
	PARK	10.4 AC	20	208	.14
3	MDR	1000	310	310,000	215
	PARK	10.9 AC	20	218	.15
4	HDR	1,450	310	449,500	312
	PARK	.9 AC	20	18	.012
5	L-MDR	100	385	38,500	27
6	L-DR	85	405	34,430	24
Total				2,376,298 gpd (2.3 mgd)	1,651 General PlanM (2,664 AFY)

Table 4-46 Wastewater Generation						
Site	Land Use	Units	Duty Factor General PlanD/Unit	Average Daily		Peak* Daily CFS
				General PlanD	CFS	
1	Residential	2,850	223	635,600	0.99	2.48
	Park	19.8 AC	—	—	—	—
	Commercial	320,000 sf	209 / 1,000 sf	66,900	0.10	0.31
2	Residential	1,132 DU	223	252,436	0.39	0.98
	Park	10.4 AC	—	—	—	—
	Commercial	178,720 SF	209 / 1,000 sf	37,400	0.06	0.18
3	Residential	1,000 DU	223	223,000	0.35	0.88
	Park	10.9 AC	—	—	—	—
4	Residential	1,450 DU	223	323,400	0.50	1.26
	Park	0.9 AC	—	—	—	—
5	Residential	100 DU	223	22,300	0.04	0.09
6	Residential	85 DU	225	19,100	0.03	0.07
Total				1,580,136 gpd (1.5 mgd)	2.44 cfs	6.25 cfs

SOURCE: Fuscoe Engineering 2005
 * Nonresidence Peak Flow = 3.0 X Average Flow, Residence Peak Flow = 2.5 X Average Flow.

Table 4-47 Solid Waste Generation

Site	Land Use	Units	Generation Factor	Average Daily		Annual Tons/Year
				Lbs/Day	Tons/Day	
1	Residential	2,850 DU	7 lbs/day/DU	19,950	9.98	3,640.9
	Park	19.8 AC	-			
	Commercial	320 ksf	6 lbs/day/ksf	1,920	0.96	350.4
2	Residential	1,132 DU	7 lbs/day/DU	7,924	3.96	1,446.1
	Park	10.4 AC	-			
	Commercial	178.72 ksf	6 lbs/day/ksf	1,072	0.54	195.6
3	Residential	1,000 DU	7 lbs/day/DU	7,000	3.50	1277.5
	Park	10.9 AC	-			
4	Residential	1,450 DU	7 lbs/day/DU	10,150	5.08	1852.4
	Park	0.9 AC	-			
5	Residential	100 DU	7 lbs/day/DU	700	0.35	127.8
6	Residential	85 DU	7 lbs/day/DU	595	0.30	108.6
Total				49,311 lbs/day	24.7 tons/day	8999.3 tons/year

SOURCE: City of Lake Forest 1994

Table 4-48 Electricity Demand

Site	Land Use	Units / Area (Proposed Project)	Generation Factor (kWh/day)	Total (MWh/day)
1	Residential	2,850 DU	15.4	43.89
	Park	19.8 AC	—	—
	Commercial	320 ksf	41.9	13.41
2	Residential	1,132 DU	15.4	17.43
	Park	10.4 AC	—	—
	Commercial	178.72 ksf	41.9	7.49
3	Residential	1,000 DU	15.4	15.40
	Park	10.9 AC	—	—
4	Residential	1,450 DU	15.4	22.33
	—	—	—	—
	Park	0.9 AC	—	—
5	Residential	100 DU	15.4	1.54
6	Residential	85 DU	15.4	1.31
Total				122.80 MWh/day

Table 4-49 Natural Gas Demand				
Site	Land Use	Units/ Area (Proposed Project)	Generation Factor (cf/day)	Total (mcf/day)
1	Residential	2,850 DU	177.05	0.504
	Park	19.8 AC	—	—
	Commercial	320 ksf	95.3	0.030
2	Residential	1,132 DU	177.05	0.200
	Park	10.4 AC	—	—
	Commercial	178.72 ksf	95.3	0.017
3	Residential	1,000 DU	177.05	0.177
	Park	10.9 AC	—	—
4	Residential	1,450 DU	177.05	0.257
	Park	0.9 AC	—	—
5	Residential	100 DU	177.05	0.017
6	Residential	85 DU	177.05	0.015
Total				1.217 mcf/day

As shown above in Table 4-45, implementation of Alternative 5 would result in a water demand of approximately 2,376,298 gpd (2.3 mgd), which is approximately 341,570 gpd (0.3 mgd) greater than the Proposed Project. Although the water demand would be greater under this Alternative when compared to the Proposed Project, IRWD would have sufficient supplies to serve the increased demand. In addition, the existing water treatment facilities could also adequately provide service under Alternative 5. However, since Alternative 5 would generate more water than the Proposed Project, impacts related to water demand and water treatment facilities would be greater than the Proposed Project but would remain less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD’s sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City’s compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 5 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the City’s wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development under Alternative 5 would not result in an exceedance of the Board’s wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained

in the discharge. For nonpoint source discharges, development under Alternative 5 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 5 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. The additional 6.25 cfs (1.5 mgd) of wastewater generated by the Landowner Concept Plan can be adequately treated by the LAWRP and the MWRP. The wastewater generated by the Proposed Project would constitute approximately 7.1 percent of the available LAWRP capacity. As discussed, only a percentage of the wastewater generated would flow to the MWRP. Upon complete expansion of the MWRP to 33 mgd, the total wastewater generated by the Proposed Project would constitute approximately 12 percent of overall capacity.

Consequently, because adequate capacity exists in the LAWRP and MWRP to accommodate the demand of the Landowner Concept Plan and because capacity improvements are planned at MWRP to accommodate anticipated development, implementation of the Landowner Concept Plan would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, and this impact would be less than significant. However, because Alternative 5 would generate more wastewater than the Proposed Project, impacts related to wastewater treatment would be greater than under the Proposed Project.

Solid Waste

As shown above in Table 4-47, Alternative 5 would result in an additional 24.7 tons of solid waste per day. The additional solid waste would be collected by Waste Management of Orange County, a private hauler, and disposed of at one of the three landfills (described above) that are owned and operated by the Orange County Integrated Waste Management Department. Table 4-50 displays the daily capacity of the three nearby landfills. It is possible that the solid waste generated by the Landowner Concept Plan would be distributed over more than one of the landfills listed in Table 4-50. However, for the purposes of this analysis to determine the potential for the Landowner Concept Plan to exceed the permitted capacity of a landfill, it is assumed that all of the Proposed Project's solid waste would be taken to one of the three Orange County landfills.

<i>Landfill</i>	<i>Permitted Capacity (tons/day)</i>	<i>Daily Tonnage (tons/day)</i>	<i>Remaining Daily Capacity with Landowner Concept Plan (tons/day)</i>	<i>Percentage Increase of Daily Tonnage</i>
Frank R. Bowerman (Class III)	8,500	7,424	1,051	0.33%
Olinda Alpha (Class III)	8,000	6,834	1,141	0.36%
Prima Descheca (Class III)	4,000	2,656	1,319	0.93%

SOURCES: Hagthorp 2005; City of Lake Forest 1994

As shown in Table 4-50, the Landowner Concept Plan would increase the daily tonnage at local landfills by 0.33 percent to 0.93 percent, depending on the landfill used. This increase would not exceed the

permitted daily capacity of any of the nearby landfills. Therefore, the nearby landfills would have sufficient permitted capacity to accommodate the Landowner Concept Plan's disposal needs. This impact would be less than significant. However, because implementation of Alternative 5 would generate more solid waste than the Proposed Project, this impact would be greater than the Proposed Project.

As with the Proposed Project, development under Alternative 5 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development under Alternative 5, similar to the Proposed Project, would be implemented in a manner consistent with City's commitment and in compliance with AB 939. In addition, Alternative 5 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar as under the Proposed Project and would be less than significant.

Electricity and Natural Gas

Development under Alternative 5 would not generate electricity or natural gas demand that would require the construction of new energy production or transmission facilities. Based on the information provided in Table 4-48, the total daily electricity consumption from Alternative 5 is estimated to be approximately 122.80 megawatt hours per day, which is approximately 10.86 megawatt hours per day greater than the Proposed Project. Similarly, Alternative 5 would also result in an increase of approximately 0.195 million cubic feet per day of natural gas when compared to the Proposed Project. However, SCE is currently in the process of upgrading their transmission systems, and it is anticipated that the electricity demand generated by the Landowner Concept Plan could be supplied without the need for additional construction or expansion of energy facilities beyond that which was previously planned. In addition, SCGC declares itself a "reactive" utility and will provide natural gas as customers request its services. SCGC has also indicated that an adequate supply of natural gas is currently available to serve additional development, and that the natural gas level of service provided to the surrounding area would not be impaired by the Landowner Concept Plan. Consequently, although the demand for electricity and natural gas would be greater than the Proposed Project, this impact would be less than significant.

4.10.3 Attainment of Project Objectives

The Landowner Concept Plan would achieve most, but not all, of the project objectives outlined in Chapter 2 of this document. As this alternative does not include public facilities or as much park space as under the Proposed Project, it would not meet the objectives of benefiting the entire community by providing adequate recreational facilities, including an active sports/park complex or by providing adequate public open space and other public amenities; including a civic/Community Center. In addition, the greater level of development would not protect natural resources within the Project Area to as great an extent as the Proposed Project, and greater demands on infrastructure would result and could create greater impacts on the City's infrastructure or fiscal stability than the existing entitlement or uses allowed by the General Plan or adversely impact the City's ability to provide an acceptable level of service to the community.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Greater than	This alternative would result in greater building density than the Proposed Project. On Site 4, the proposed residential product type is a very dense apartment community at a density of about 29 units to the acre, three or more stories with subterranean parking. Therefore, building heights, densities, and massing would be different from the development proposed on Site 4 under the Proposed Project. Although impacts with regard to visual quality are identified as less than significant with both this alternative and the Proposed Project, the impacts would be greater under this alternative because of the difference in density.
Substantial adverse effect on a scenic vista by obstructing public views or of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Greater than	Impacts with regard to alteration of viewsheds and obstruction of views of scenic resources on all sites would remain less than significant. Impacts with respect to obstruction of views would be greater on Site 4 because of the increased building heights proposed. Therefore, the impacts with regard to scenic resources and viewsheds would be greater under this alternative than under the Proposed Project.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Greater than	There would be no public facilities under this alternative. Therefore, there would be no impact from sports field lighting. However, development under this alternative would result in significant and unavoidable impacts with regard to light and glare, as the threshold of significance would be exceeded. In addition, there would be greater development under this alternative, which could offset or exceed the removal of sports field lighting as contemplated under the Proposed Project.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Development of this alternative would not change the level of impact with regard to conflict with any applicable plans or policies, and this impact is less than significant.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan. There would be no impact with regard to visual resources.	Similar	Development under this alternative would comply with all applicable standards and design guidelines, the same as for the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less than	Site 7 would not be developed.
Conflict with existing zoning for agricultural use.	Similar	Buildout of Alternative 5 would require that the existing General Plan be amended to reflect the change in land use, same as the Proposed Project.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Less than	Site 7 would not be developed.
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Similar	Development in the Project Area under Alternative 5, which would result in a further reduction in overall emissions, would not impair implementation of the AQMP. Therefore, as Alternative 5 would not impair implementation of the AQMP, this impact would be less than significant, and the magnitude of this impact would be similar for both Alternative 5 and the Proposed Project
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Similar	Similar to the Proposed Project, the total construction emissions generated within the Project Area from all the development proposed under Alternative 5, when considered in whole, would still exceed the SCAQMD's recommended thresholds of significance for individual projects.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Less than	When compared to the Proposed Project, the emissions for CO, NOx, SOx, and PM ₁₀ would be lower under Alternative 5 while the emissions for VOCs would be higher under the Proposed Project. Thus, the overall magnitude of this impact for this alternative would be of less than that for the Proposed Project.
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Similar	The Proposed Project would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact; this impact would be similar in magnitude for Alternative 5, even with more overall development than the Proposed Project.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Implementation of Alternative 5 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact; this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 5 with mitigation would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

Threshold	Impacts of Alternative Compared to Proposed Project	Comments
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 5 with mitigation would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Similar	Buildout of Alternative 5 with mitigation would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts; and as such, could result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Similar	Buildout of Alternative 5 with mitigation would have the same impacts biologically as the Proposed Project; removal of the 45-acre facility on Site 7 would not result in a reduction of impacts.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of Alternative 5 would be required to abide by local policies and/or ordinances, same as the Proposed Project.
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Buildout of Alternative 5 would be required to comply with local, regional, and/or state habitat conservation plans, same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the Alternative would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	During buildout of Alternative 5, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Result in substantial soil erosion or the loss of topsoil.	Similar	During buildout of Alternative 5, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	During buildout of Alternative 5, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	During buildout of Alternative 5, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	Similar	During buildout of Alternative 5, all mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of Alternative 5 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
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.	Similar	Buildout of Alternative 5 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Similar	Mitigation measures for the Proposed Project would be implemented with this alternative and would result in the same level of significance.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Similar	Mitigation measures for the Proposed Project would be implemented with this alternative and would result in the same level of significance.
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Similar	Mitigation measures for the Proposed Project would be implemented with this alternative and would result in the same level of significance.
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Similar	There are no sites on the CORTESE list within the Project Area. Site 1 is listed on the SWIS database.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	The Project Area is not located within a two-mile radius of a public airport, same as the Proposed Project.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	The Project Area is not located within the vicinity of an airstrip, same as the Proposed Project.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Buildout of Alternative 5 would not interfere with any emergency response or emergency evacuation plans if MM 3.7-3 and 3.7-4 are implemented, similar to the Proposed Project.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Similar	Mitigation measures for the Proposed Project would be implemented with this alternative and would result in the same level of significance.
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Greater than	Implementation of this Alternative 5 would result in greater runoff compared to the Proposed Project due to greater amount of development.
Adversely alter an existing drainage pattern or watercourse.	Greater than	More extensive grading activities could alter existing drainage patterns and may alter watercourses.
Have an impact on groundwater that is inconsistent with a groundwater management plan	Similar	Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant, similar to the Proposed Project.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Affect water quality of receiving waterbodies and thus would degrade water quality.	Greater than	Development under Alternative 5 would not cause an increase in any pollutant for which a water body is impaired as identified on the Clean Water Act Section 303(d) list, but to a greater extent than the Proposed Project due to higher runoff coefficients.
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Similar	Buildout of Alternative 5 should create a less- than-significant level of nuisance, similar to the Proposed Project.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Greater than	Alternative 5 proposes a dense apartment community on Site 4 at a density of approximately 29 units per acre. The proposed apartments would be three or more stories with subterranean parking. Therefore, impacts would be greater with respect to housing unit type and density under Alternative 5.
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Similar	Buildout of Alternative 5 could expose sensitive receptors to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction; however, implementation of MM 3.10-1 through MM 3.10-3 would ensure that impacts associated with construction-related noise would remain less than significant, similar to the Proposed Project.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Similar	Buildout of Alternative 5 could generate construction and grading activities that expose sensitive receptors to vibration levels above the 85 VdB threshold for vibration, similar to the Proposed Project.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Greater than	Greater, causing a significant increase in permanent ambient noise over existing conditions, though not considered to be a significant increase in noise over Year 2030 buildout of the Proposed Project.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project		
<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	While construction activities that would occur from implementation of Alternative 5 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from temporary or periodic noise increase under the Proposed Project.
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	Buildout of Alternative 5 is not located within an airport land use plan, same as the Proposed Project.
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Greater than	Alternative 5 would substantially increase population growth within the City (by approximately 26 percent), impacts on population growth would be considered significant. In addition, the impacts associated with substantial population growth would be greater than the impacts from development under the Proposed Project because increased residential development would occur and more residents would be generated.
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 5 would result in the demolition of a negligible number of houses (3) currently on site, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 5 would result in the displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Greater than	In buildout of Alternative 5, the direct increase in population is larger than that which would occur in buildout of the Proposed Project. Both would call for additional schools, emergency services, and libraries to serve the increase in population.
Recreation		
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.	Greater than	Greater due to the decrease in parkland to population ratio (2.21 per 1,000 persons) proposed in Alternative 5.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	Buildout of Alternative 5's recreational component would not require site-specific mitigation; however, all relevant mitigation measures related to construction should be implemented, similar to the Proposed Project.
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study Area or extended Project Study Area.	Similar	Alternative 5 would result in a similar number of impacted intersections within the Project Area and extended Project Area as the Proposed Project compared to existing conditions and the 2030 General Plan, with implementation of the Landowner Concept Plan LFTM.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, no freeway ramps are forecast to be significantly impacted by Alternative 5 based on year 2030 conditions compared to existing conditions. However, impacts would be less than under the 2030 General Plan
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, five freeway mainline segments are forecast to be significantly impacted by Alternative 5 based on year 2030 conditions compared to existing conditions. However, impacts would be similar to those under the 2030 General Plan.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the Alternative 5.
Utilities and Service Systems		
Water Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Greater than	The demand for potable and non-potable water would be greater due to the larger amount of residential use.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Greater than	The demand for potable and non-potable water would be greater due to the larger amount of residential use.
Wastewater Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.	Greater than	Generation of wastewater would be greater due to the larger amount of residential use.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Greater than	Generation of wastewater would be greater due to the larger amount of residential use.

Table 4-51 Comparison of Impacts of Alternative 5 (Landowner Concept Plan) to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
<p>Solid Waste Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.</p>	<p>Greater than</p>	<p>Generation of solid waste would be greater due to the larger amount of residential use.</p>
<p>Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.</p>	<p>Similar</p>	<p>Buildout of Alternative 5 would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.</p>
<p>Energy Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>Greater than</p>	<p>Demand for energy would be greater due to the larger amount of residential use.</p>

4.11 ALTERNATIVE 6: DEVELOPMENT OF PROPOSED PROJECT PLUS PUBLIC FACILITIES/LAND USE OVERLAY ON SITE 7

4.11.1 Description

The entire 121-acre Site 7 would host all three public facilities on a 45-acre portion, plus 450 low-medium density (single-family detached) dwelling units on the remaining 76 acres of the parcel at a gross density of approximately six units per acre. These units are in addition to the Proposed Project’s maximum of 5,415 residential units. All development on Sites 1 through 6 would continue as under the Proposed Project. The LFIM Program outlined under the Proposed Project would be adopted under this Alternative.

Site	Gross Site Area	Total Net Site Area	Max. # of Units	Total Comm'l. SF	Total Industrial SF	Park (acres)	Public Facilities	Total Buffer/Open Space ac.	Average Density
Site 1	387	329	2,815	320,000	0	26		25	7-9
Site 2	243	164	1,132	178,720	0	10		82	5-7
Site 3	82	36	833	0	0	11		1	10-23
Site 4	50	45	475	150,000	0	4		2	10-11
Site 5	13	12	75	0	0	In lieu fees		0	6-7
Site 6	18	18	85	0	0	In lieu fees		5	5
Site 7	121	121	450			4	45-acre Community Facilities (Civic Center, Community Center, sports park)	45	6
Total	914	724	5,865	648,720	0	55	45	160	8-11

SOURCE: City of Lake Forest 2004

All acreages are rounded

4.11.2 Impacts

■ Aesthetics

Site 7 consists of the Nakase Brothers Nursery operations, located on Bake Parkway just south of Rancho Parkway. The site as it currently exists totals 121 acres and consists of growing grounds and support structures such as a greenhouse and office area. There are no major trees on Site 7. The site is bordered on the north, south, west, and east by industrial and commercial complexes. The Proposed Project would utilize 45 acres of this parcel at the northeast end bordering Rancho Parkway. The Santa Ana Mountains may be viewed in the distance from Site 7.

Legend

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/Net AC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space
-  Lake
-  Transportation Corridor
-  Mineral Resource Overlay
-  Possible School Site
-  Proposed New Park
-  Community Facilities
-  Project Site Boundary
-  1 Shea/Baker Ranch
-  2 Portola Center/Baldwin
-  3 IRWD/Lewis
-  4 Baker Ranch
-  5 Whisler/Greystone Homes
-  6 Pacific Heritage
-  7 Nakase Nursery

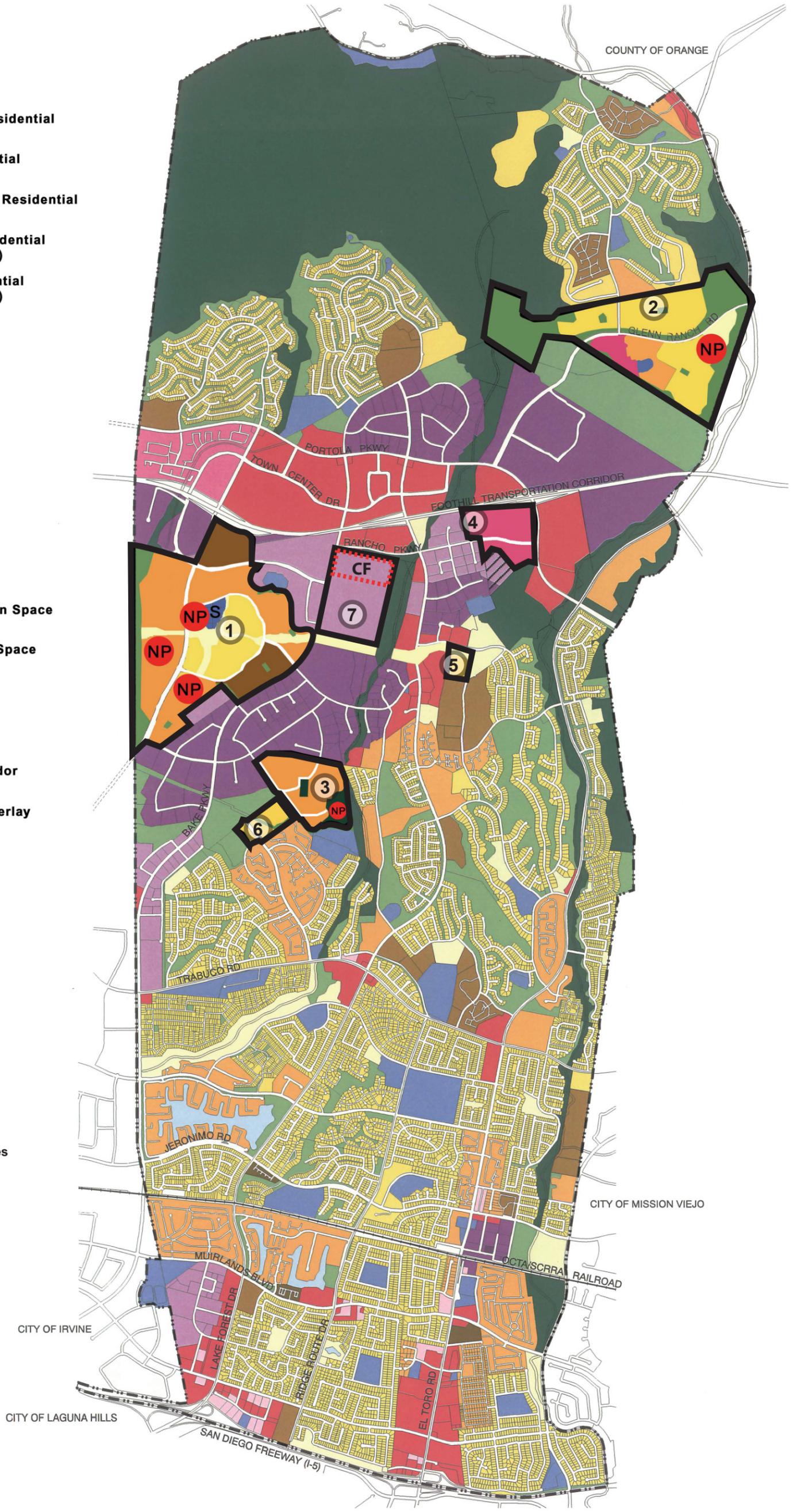


FIGURE 4-12
Alternative 6: Public Facilities/Land Use Overlay on Site 7



Development of residential uses and public facilities would be compatible with surrounding development in building mass and height. While development would change the character of the site from undeveloped/nursery to development, it would not substantially degrade the visual quality of the Project Area by detracting from the overall image of the City, cause building incompatibility with surrounding uses, or cause building mass that conflicts with the character of surrounding development. The placement of the public facilities would be compatible with surrounding development and would be designed to be architecturally compatible with all surrounding development. Development would be required to conform to site development standards and applicable Planned Community Design Guidelines, which would ensure that architectural style and design features would be compatible with surrounding development. In addition, specific development proposals would be subject to the City's design review process, which would further ensure compatibility with surrounding architectural styles. Municipal Code regulations for screening outdoor uses and materials would be required to be followed. However, because this alternative would result in slightly greater development than the Proposed Project, with the addition of 450 dwelling units on Site 7, the impact would be slightly greater with respect to massing and density, although still less than significant, as identified for the Proposed Project.

Development of 450 single-family dwelling units on the southern portion of site, which could be up to three stories in addition to the three community facilities could further obstruct scenic views of the Santa Ana Mountains from major roadways. However, the area to the south of Site 7 is at a higher elevation, and construction of residential uses on Site 7 in addition to the community facilities would not be anticipated to significantly obstruct views from areas south of the site. Views of the Santa Ana Mountains and Whiting Ranch Wilderness Area would still be held from adjacent roadways and other vantage points in the City. This impact would be less than significant under this alternative, similar to the Proposed Project.

Construction of the community facilities on the north portion of this property would occur directly opposite an existing commercial complex, behind which are SR-241 and other commercial and industrial complexes. The 450 dwelling units would be constructed on the remaining 76 acres of the property, adjacent to commercial and industrial uses to the north and west. The construction of the additional 450 dwelling units on this site would result in sensitive uses being placed immediately adjacent to existing commercial and industrial uses, as well as the proposed sports park and other community facilities, which are the sources of increased light and glare as identified for the Proposed Project. The impact of the increased light and glare would be greater on this parcel than on Sites without residential uses and would be significant and unavoidable, as the additional illumination exceeds the City's threshold of significance of 1¼ foot-candles between dusk and dawn. Therefore, the impacts from light and glare would remain significant and unavoidable.

The additional 450 dwelling units would be subject to the same policies, plans, and design standards applicable to the remainder of the development, and therefore the impact with respect to consistency with these plans and policies would be less than significant, similar to the Proposed Project.

■ Agricultural Resources

Implementation of Alternative 6 would convert Sites 1 and 7, which are presently designated by the FMMP as prime and unique farmland from agricultural to residential, commercial, and public facilities uses. Although not all of the land is currently being used for agricultural production, the loss of approximately 508 acres of prime and unique agricultural land is considered a substantial and significant conversion. The conversion of Sites 1 and 7 from agricultural to residential and commercial uses would result in a reduction of the total amount of these farmland types within the County by approximately 3.5 percent. In addition, the conversion of this land could result in the elimination of 100 percent of the prime and unique farmland within the City's boundaries. Similar to the Proposed Project, even though the agricultural conversion of Site 1 was previously evaluated and was subject to the County's Statement of Overriding Considerations in at least one previous EIR (notably the 1982 General Plan and zone change EIR for the Baker-Salvatori Group [SCH#81121811]), when Site 1 was under the County of Orange's jurisdiction, the loss of prime and unique farmland on Site 1 that would result from implementation of Alternative 6 is considered significant and unavoidable. However, the conversion of Site 7 was not previously evaluated in any environmental documentation. Given that a substantial area of prime and unique farmland on Site 7 (121 acres) would be converted to nonagricultural uses under Alternative 6, significant and unavoidable impacts would occur on this site. Development of the Proposed Project would also cause significant and unavoidable impacts to agricultural resources, but would convert fewer acres of agricultural land than would development under Alternative 6. Since development under Alternative 6 would convert all of Site 7's agricultural land to urban uses, this impact for Alternative 6 would be greater in magnitude than the Proposed Project.

Implementation of Alternative 6 would convert Sites 3, 5, and 7, which are presently zoned for agricultural uses, to allow urban development. If the proposed future development were to occur under the existing zoning designations, the development would conflict with zoning for agricultural use. Implementation of Alternative 6 would require amendment of the existing General Plan and zoning designations for the Project Area. Consequently, implementation of Alternative 6 would conflict with zoning for agricultural uses, and impacts would be significant and unavoidable, similar to the Proposed Project.

Approximately 314 acres on Sites 1, 3, and 7 are currently used for agricultural operations. Specifically, although not presently zoned for agricultural uses, Site 1 contains approximately 174 acres of existing agricultural activities. In addition, while both are zoned for agricultural uses, Site 3 contains approximately 25 acres of row crops and Site 7 contains approximately 115 acres of agricultural (nursery) uses. Implementation of Alternative 6 would result in the conversion these three sites currently used as farmland to urban uses. Implementation of Alternative 6 would result in the conversion these three sites currently used as farmland to urban uses. The development of this Alternative on Sites 1 and 3 would not result in other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use on areas other than the Project Area. Site 1 is already surrounded by land, which was formerly farmed, but has been converted to commercial, industrial and retail uses. Where adjacent open space exists to the west of Site 1, that land (on the former MCAS El Toro) has already been designated for habitat conservation. Sites 3 and 7 are similarly located in an urban environment and their development would not necessarily result in other Farmland in the City being converted to

nonagricultural uses. Sites 2, 4, 5 and 6 are also located within developed or urbanizing areas and the development of these sites would not create additional pressures on other Farmland areas to convert to nonagricultural uses. Thus, this Alternative would result in a less-than-significant impact related to conversion of other farmland to non-agricultural uses, and the impact would be less than under the Proposed Project. Overall, however, because of the conversion of more Prime or Unique Farmland on Site 7 under this Alternative, Alternative 6 would result in greater impacts to agricultural resources than the Proposed Project.

■ Air Quality

Under Alternative 6, all three community facilities, i.e., sports park, Community Center, and Civic Center, would be constructed on a 45-acre portion of the 121-acre Site 7. Additionally, a total of 450 low-medium density (single-family detached) dwelling units would also be developed on 76 acres of Site 7. As these dwelling units are developed in addition to the Proposed Project's maximum of 5,415 residential units, a total of 5,865 dwelling units would occur under this alternative. All of the other land uses proposed on Sites 1 through 6 under the Proposed Project would remain.

Overall, with the addition of 450 residential units on Site 7, implementation of Alternative 6 would result in greater overall development in the Project Area than the Proposed Project. As such, the overall emissions generated under this alternative would also be greater than the Proposed Project. As discussed in Impact 3.3-1 under the Proposed Project, the Proposed Project would not impair implementation of the AQMP as implementation of the Proposed Project would introduce mixed use development in the Project Area as well as result in an approximately 52 percent reduction in average daily vehicle trips when compared to the existing General Plan. While implementation of Alternative 6 would result in the addition of 450 residential units to the Project Area when compared to the Proposed Project, the introduction of these additional residential units would not substantially negate the reduction in emissions achieved by the Proposed Project such that the overall emissions generated would be equal to or greater than those resulting from buildout of the Project Area under the existing General Plan. Thus, implementation of Alternative 6 would still result in less overall emissions than the existing General Plan, and therefore would not impair implementation of the AQMP. This impact would be less than significant, but would be greater than the Proposed Project.

As discussed in Impact 3.3-2 under the Proposed Project, both construction and operational emissions generated from development under the Proposed Project would result in significant and unavoidable impacts. In terms of construction emissions, because construction emissions for an individual project typically exceeds the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the Proposed Project, which takes into consideration the construction emissions generated from all of the development on Sites 1 through 7 of the Project Area, is anticipated to be significant and unavoidable. Because implementation of Alternative 6 would further add an additional 450 residential units to the Project Area on Site 7, the total construction emissions generated within the Project Area from all the development proposed under this alternative, when considered in whole, would further exceed the SCAQMD's recommended thresholds of significance for individual projects. As such, the impact associated with construction emissions for Alternative 6 would be significant and unavoidable, and would be greater in magnitude than the Proposed Project.

As discussed in Impact 3.3-2 under the Proposed Project and shown in Table 3.3-3, the estimated daily operational emissions generated from both stationary and mobile sources resulting from development under the Proposed Project would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_x, and PM₁₀. As implementation of Alternative 6 would further add an additional 450 residential units in the Project Area, the overall operational emissions generated by development under this alternative in the Project Area, when considered in whole, would be greater than the Proposed Project. As such, the impact associated with operational emissions for Alternative 6 would be significant and unavoidable, and would be greater than the Proposed Project.

As discussed above, both construction and operation related daily emissions associated with the development projects that are planned to occur in the Project Area under Alternative 6 are anticipated to exceed SCAQMD significance thresholds for criteria pollutants for which the Basin is in nonattainment. Under this condition, the development proposed by Alternative 6 would also make a cumulatively considerable contribution to these criteria pollutants. Therefore, this impact is anticipated to be significant and unavoidable. Because greater overall development would occur in the Project Area under this alternative than the Proposed Project, this impact for Alternative 6 would also be greater than the Proposed Project.

As discussed in Impact 3.3-4 under the Proposed Project, the growth envisioned under the Proposed Project in the Project Area would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact. Although implementation of Alternative 6 would result in an additional 450 residential units in the Project Area, this development would not contribute substantially to CO concentrations at the study intersections in the Project Area. Thus, although this impact would be of greater magnitude for Alternative 6 than the Proposed Project, this impact would also be less than significant.

As discussed in Impact 3.3-5 under the Proposed Project, implementation of the Proposed Project would not create objectionable odors affecting a substantial number of people, and the impact was determined to be less than significant. As implementation of Alternative 6 would result in a net addition of 450 residential units when compared with the Proposed Project, the total amount of emissions generated under this alternative would also be greater than that of the Proposed Project. However, residential uses are not considered to be sources of objectionable odors. Therefore, although implementation of Alternative 6 would result in greater overall emissions than the Proposed Project, it would not create objectionable odors affecting a substantial number of people. This impact would be less than significant.

■ Biological Resources

All three community facilities, i.e., sports park, Community Center, and Civic Center, would be constructed on a 45-acre portion of the 121-acre Site 7. Site 7 contains a commercial nursery and associated support structures. This site does not support any sensitive species or habitats. There are no wetlands within this site. The construction of the proposed public and community facilities in this location would have no impact on biological resources. Additionally, use of this site for these facilities would be consistent with the General Plan policies relating to biological resources. This use of Site 7 would not conflict with the NCCP/HCP.

Implementation of this alternative would still result in the conversion of habitat that is suitable for multiple sensitive species, including but not limited to the horned lark, orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, and coastal cactus wren. It would also involve the removal of sensitive habitats such as coastal sage scrub, chaparral, needlegrass grassland, riparian vegetation, and would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA. Development of the Project Area under this alternative would increase the number of nighttime-site light sources throughout the Project Area. If unchecked, this light, where proximal to natural areas, could adversely impact the wildlife. Implementation of this alternative would conflict with the General Plan Policy 2.1 as it relates to non NCCP covered species and resources, requiring the conservation and protection of sensitive biological resources. The loss of sensitive habitat and wetlands, along with the loss of habitat required by sensitive species would be considered a substantial adverse effect and is therefore considered a potentially significant impact of this alternative.

Although the sites under this alternative are outside the Reserve System implemented by the NCCP/HCP in 1996, just as the buildout of the Proposed Project would be required to comply with the NCCP/HCP (see, e.g., mitigation measure 3.4-2), buildout under Alternative 6 would also be required to comply with the NCCP/HCP. Thus, neither Alternative 6 nor the Proposed Project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The impact analysis and conclusions of the Proposed Project would apply to Alternative 6 (Impact 3.4-1 through Impact 3.4-6). The construction of all three community facilities on 45 acres of Site 7 would not result in an overall reduction in impacts as this site is entirely a commercial nursery and supports no significant biological resources. Consequently, the corresponding mitigation measures identified within the section 3.4 would be required to mitigate for the impacts of this alternative to biological resources, and would result in less-than-significant impacts for this alternative (MM 3.4-1 through MM 3.4-5)

■ Cultural Resources

No historical resources have been identified in the Project Area. As with the Proposed Project, no historical resource impacts would occur under this alternative.

As under the Proposed Project, ground-disturbing construction activities under this Alternative could potentially encounter sensitive archaeological and paleontological sites, including unknown human burial sites, resulting in potentially significant impacts. As with the Proposed Project, implementation of Mitigation Measures 3.5-1 to 3.5-8 would reduce impacts to archaeological, paleontological, and unknown human remains to less than significant.

■ Geology/Soils and Mineral Resources

This alternative would result in a change in location of community facilities. These changes would not affect the magnitude of impacts on geologic resources. Similar to the Proposed Project, no construction would occur in a known Earthquake Fault Zone. Persons and structures would be similarly exposed to potential substantial adverse effects, as a result of strong seismic groundshaking, seismic-related ground

failure, liquefaction, lateral spreading, subsidence, and landslides. Compliance with regulatory processes, including the City Building Code, would ensure that impacts would be less than significant, similar to the Proposed Project

Construction would expose the drainage systems downslope to substantial soil erosion or the loss of topsoil. Compliance with the City Building Code and the National Pollutant Discharge Elimination System permitting process would reduce impacts to less-than-significant areas.

This alternative could locate structures on a geologic unit or soil that are potentially unstable or expansive, similar to the Proposed Project. Development would be exposed to these risks in a manner similar to the Proposed Project. Compliance with the City Building Code would reduce this potential impact to a less-than-significant level.

Development under this alternative would be served by existing wastewater treatment facilities. Because no known septic systems or alternative wastewater disposal systems would be installed, there would be no impact, same as the Proposed Project.

This alternative would not result in the loss of availability of a known mineral resource or locally important mineral resource site. Loss of mineral resource recovery operations would occur on Site 4, similar to the Proposed Project. Mining operations will cease in 2006 per written contract, and similar to the Proposed Project, no impact would occur.

The impact analysis for the Proposed Project would apply equally to Alternative 6. Consequently, there would be no impacts to geology, soils, or mineral resources, under Alternative 6.

■ Hazards and Hazardous Materials

Implementation of Alternative 6 would result in similar impacts as those discussed for Impact 3.7-1 through Impact 3.7-8, discussed above for the Proposed Project. Construction of the sports park, civic center, Community Center, and 450 dwelling units would have similar impacts related with hazards and hazardous materials as those associated with the development of businesses and public facilities that could be developed as part of any of the project alternatives. With implementation of MM 3.7-1, and adherence to Title 26 of the California Code of Regulations (CCR), Chapter 6.95 of the California Health and Safety Code, and regulations that apply to workplace safety contained in CCR Title 8, Alternative 6 would not result in any significant hazards to the public or the environment associated the routine transportation, use, or disposal of hazardous materials, nor would it result in the release of hazardous materials into the environment during construction. Implementation of Alternative 6 would not create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment with continued adherence to applicable federal, state, and local laws, and implementation of the County's Hazardous Materials Area Plan, Landfill Load Checking Program, Orange County Integrated Waste Management Department Household Hazardous Waste Program, the City's Emergency Preparedness Plan, and the City's Household Hazardous Waste Element. The Proposed Project is located within an area that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWIS-

listed Site 1). Site 7 is not located within one-quarter mile of an existing school, or within two miles of an airport or private airstrip. With implementation of the MM 3.7-3 and MM 3.7-4, development of Alternative 6 would not interfere with any adopted emergency response plan or emergency evacuation plan, and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Compliance with all federal, state, and local laws pertaining to hazards and hazardous materials, and implementation of the appropriate mitigation measures would reduce the potential impacts associated with the implementation of Alternative 6 to a less-than-significant level.

■ Hydrology/Water Quality

Implementation of Alternative 6 would result in slightly more runoff compared to the Proposed Project, as overall runoff coefficients are slightly higher. Runoff rate would not increase above the pre-development condition and the 100-year floodwater surface elevation would not increase by one foot or more. Development characteristics would be similar to the Proposed Project. Thus, stormwater quality constituents would be similar and impacts associated with this alternative would not be significantly different than those associated with the Proposed Project.

Drainage patterns may be altered, but no significant impacts would be associated with these alterations.

Groundwater resources would not be significantly degraded or depleted and recharge potential would not be reduced. Additionally, groundwater flow, rate, or direction would not be changed because there will be no additional wells and no impacts on groundwater recharge and surface water infiltration. Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant.

Water quality standards may be exceeded for certain constituents and may result in an increase in pollutants listed as impairments for San Diego Creek and Aliso Creek. This impact is similar to that which is anticipated under buildout of the Proposed Project.

Though implementation of Alternative 6 would not exceed pre-development conditions or result in a rate of flow that exceeds downstream capacity, it would result in slightly more runoff compared to the Proposed Project, as overall runoff coefficients are slightly higher.

The existing sedimentation issues in the Borrego Canyon Wash area (as described in the analysis of Impact 3.8-4) would also likely be present under this alternative. Although it is not anticipated that the Proposed Project would contribute significantly to Wash runoff in the Shea/Baker Ranch area, the Proposed Project proposes as a sediment abatement project feature to construct erosion-resistant armor along the portion of the Borrego Canyon Wash bordering the Shea-Baker Ranch development. Alternative 6 does not include a similar sediment abatement project feature.

■ Land Use/Planning

Minor inconsistencies would occur between this overlay and the existing applicable land use plans governing development of the site, similar to that identified for the Proposed Project. Amendments to

the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity with the Proposed Project. Similar to the impacts discussed for the Proposed Project, impacts would be less than significant.

Overall changes to the land use character would be similar to that described for the Proposed Project. Land use changes on Sites 1 through 6 would occur similar to the Proposed Project. Proposed land uses on Site 7 would be expanded to include residential dwelling units in addition to community facilities.

Site 7 would include 45 acres of community facilities, similar to the Proposed Project, and 450 units on the remainder of the nursery site. All existing nursery operations would be eliminated. The sports park and Community Center would be largely compatible with adjacent residential uses. Noise associated with sports activities would be louder than noise typically associated with residential uses. However, sports park activities would be required to conform to noise standards contained in the City Municipal Code. Further, night lighting associated with the sports park would produce illumination that would be substantially brighter than outdoor lighting associated with residential uses, as discussed under aesthetics, above. The community facilities may also include occasional special events that may result in nuisances to adjacent residences, as a result of noise, vehicular traffic, and night lighting. These nuisance effects would be temporary, associated only with special events. Conflicts could also be minimized through visual buffers, noise buffers, and site siting and design determined appropriate when this facility is built. Although some nuisance would occur, impacts would be less than significant, although greater than under the Proposed Project, as residences on Site 7 would be immediately adjacent to public facilities, which may not occur under the Proposed Project.

This alternative would also result in the placement of residential units associated with development on Site 7 adjacent to business park and light industrial facilities, similar to the Proposed Project. Some conflicts of use could occur, due to congestion, noise, odors, and hazardous materials. Similar to the Proposed Project, development on Site 7 would be required to conform to City standards and development would be designed in a manner that considers adjacent land uses. Similar to the Proposed Project, impacts would be less than significant. In addition, localized congestion could occur, as patrons enter and exit from the event. When events do occur in the evening hours, night lighting would also result in illumination effects, similar to those that would occur with daily operations.

■ Noise

Implementation of Alternative 6 would result in similar impacts as those discussed for Impact 3.9-1 through Impact 3.9-5 for the Proposed Project. Construction of the sports park, Civic Center, Community Center, and residential units would have similar noise impacts related to grading and construction activities. Additional construction is proposed for Site 7 under this alternative, and these impacts could expose sensitive receptors to noise levels above established standards, the City of Lake Forest Municipal Code Section 4-6-7(e) allows such activities to be exempt from the Noise Ordinance. Impacts would remain less than significant and similar to the Proposed Project.

Vibration impacts associated with implementation of Alternative 6 would be increased compared to Impact 3.9-2 of the Proposed Project. Construction and grading activities could expose sensitive

receptors to vibration levels above the 85 VdB threshold for vibration.. MM 3.10-1 would be implemented to require the operation of vibration-generating equipment to be located as far away from vibration-sensitive sites as possible. While implementation of MM 3.10-1 may reduce the magnitude of groundborne vibration levels experienced by nearby sensitive receptors, the possibility exists that these vibration levels may not be reduced to a level below the FTA's 85 VdB threshold. At the general plan and zoning level of analysis, this causes a potentially significant impact. However, the development of detailed, site-specific information during the future review of individual development projects in the project area will allow a timely determination of which, if any, projects would expose sensitive receptors to excessive groundborne vibration or groundborne noise levels. Therefore, given the potential for a significant impact, MM 3.10-2 shall require further CEQA review with the submittal of each area plan or tentative map for the Proposed Project, reducing this potential impact at the program stage to a less-than-significant level.

Ambient noise levels resulting from project generated traffic from implementation of Alternative 6 would be slightly greater than ambient noise levels under buildout of the Proposed Project. Implementation of this alternative would not significantly impact traffic levels on roadway segments in within the City of Lake Forest, although there would be a slight increase in these traffic levels resulting from the additional housing on Site 7. As a result, implementation of this alternative would not have a significant effect on permanent ambient noise levels within the City resulting from implementation of the Proposed Project. As shown in Section 3.9, Noise, while this is a significant increase in permanent ambient noise over existing conditions, it is not considered to be a significant increase in noise over Year 2030 buildout of the existing General Plan. This impact is greater than the Proposed Project.

Implementation of Alternative 6 would introduce additional stationary noise sources over the Proposed Project due to the additional housing that would be built on Site 7. New stationary sources of noise, such as rooftop heating, ventilation, and air conditioning (HVAC) equipment, would be installed within the City as part of the Proposed Project. However, while there would be an increase in stationary noise sources, this increase in stationary noise sources would not result in a significant increase in ambient noise levels above those existing without the project or above those under the Proposed Project. This impact would be less than significant, similar to the Proposed Project.

While construction activities that would occur from implementation of Alternative 6 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from temporary or periodic noise increase under the Proposed Project. Section 4-6-7(e) of the City of Lake Forest Municipal Code provides an exemption from the Noise Ordinance for construction and grading activities. As a result, this impact would be similar to the Proposed Project and would be less than significant.

■ Population/Housing

Alternative 6 would result in a total net new development of 5,865 residential units and 648,720 sf of commercial uses on Sites 1 through 7, with the 45-acre public facilities overlay on Site 7. Implementation of the residential uses would result in a population increase of 17,067 persons. In addition, the new employment-generating commercial uses in the Project Area have the potential to result in a population

increase of 943 persons in the City. As such, maximum buildout of residential and commercial uses under the Alternative 6 would result in an increase in the City's population of 18,010 persons. With the City's 2005 population of 78,020, the generation of 18,010 persons from Alternative 6 would result in an increase of approximately 23 percent and would exceed SCAG's population projection for the City in 2030. Similar to the Proposed Project, although population increases would exceed projections, it is anticipated that the City and County's infrastructure could accommodate the future growth. However, because Alternative 6 would substantially increase population growth within the City (by approximately 23 percent), impacts on population growth would be considered significant. In addition, because Alternative 6 would include increased residential development and would generate more residents, the impacts associated with substantial population growth would be greater than development under the Proposed Project. The jobs/housing balance would be improved, to a greater extent than under the Proposed Project because of the addition of 450 residential units.

Future development under Alternative 6 would displace the two single-family dwellings on Site 1 (Shea/Baker) and the single, vacant residential dwelling on Site 5 (Whisler/Greystone) that could necessitate the construction of replacement housing elsewhere. The demolition of existing dwelling units would not, by itself, have a significant impact on the physical environment, provided demolition proceeds in accordance with applicable demolition regulations, including those related to control of particulate matter. However, demolition activities could have a significant impact within the meaning of CEQA if they conflict with SCAG's long-range growth forecast for the City, or with adopted City housing policies. The three units that could be demolished under Alternative 6 represent a negligible percentage (0.01 percent) of the City's current housing stock. Even if the removal of these three dwelling units (two households) were permanent (i.e., not replaced as new units are constructed in the City), the reduction would not alter SCAG's 2000–30 household forecast for the City. In addition, although the three dwelling units would be removed, the new residential units that would be developed under implementation of Alternative 6 would be more than adequate to compensate for the initial loss of the existing dwelling units on Sites 1 and 5. Therefore, similar to the Proposed Project, impacts related to the displacement of existing housing or people in the Project Area would be less than significant.

■ Public Services

Police and Fire

During construction of the proposed uses under Alternative 6, emergency/security services could be required periodically at individual construction sites. However, construction sites are typically fenced and have security personnel onsite. As such, the impact to emergency services during construction activities would be short-term in nature and less than significant.

Operation of a development of this scale would lead to an increased demand for local emergency services, including police and fire. Impacts associated with development of this alternative would be similar in scale to those incurred under the Proposed Project (See Impact 3.12-1). Impacts to emergency services would be less than significant with mitigation (see MM 3.12-1 through MM 3.12-3).

Schools

Under Alternative 6, approximately 5,865 residential units would be constructed, resulting in a potential increase of 2,272 students in local SVUSD schools, approximately 284 students more than under the Proposed Project. It should be noted that the public facilities overlay alone would not increase student enrollment in the area, however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, student enrollment would increase. While some of this increase will likely be absorbed by nearby private school facilities, for the purposes of this analysis, it is assumed that the entire increase in student population would be assumed by SVUSD. Based on the 2004 SVUSD attendance numbers, the Proposed Project would result in a 6.41 percent increase in the student population district-wide. However, the increase in students would likely occur over a smaller number of SVUSD schools located in close proximity to the project Sites (see Table 3.12-5). The total population of the schools listed in Table 3.12-2 is 12,746 students from grades K-12. Based on this number, Alternative 6 would result in a 17.8 percent increase in the student population at nearby schools.

The potential school site mentioned under Impact 3.12-2 and in Chapter 2 would alleviate some of the increase in student population with SVUSD but not all. The payment of appropriate statutory school fees by developers in the Project Area at the time of issuance of building permits (MM 3.12-3) to the SVUSD to assist in funding efforts necessary to alleviate school overcrowding would reduce this impact to a less-than-significant level. Therefore, impacts would be similar to the Proposed Project.

Libraries

With implementation of Alternative 6, approximately 5,865 residences would be constructed within the limits of the City of Lake Forest. This would represent an additional demand for 3,505 sf of library space and 26,288 volumes in the Project Area. It should be noted that the public facilities overlay alone would not increase demand for library services in the area, however, in combination with the residential development at Sites 1 through 6 included as part of this alternative, the demand for library facilities/services would increase. Most, if not all, of this demand would be assumed by the County library system. According to the County, such an increase would cause existing service levels to drop below the performance standards mentioned previously (0.2 sf and 1.5 volumes per capita).

No additional library facilities are currently planned in the area that would accommodate the increased demand (Adams 2005). However, implementation of MM 3.12-4 would reduce this impact to a less-than-significant level, the same as for the Proposed Project.

■ Recreation

Under this land use overlay alternative, the Proposed Project would be implemented, except that an additional 450 residential units would be developed on Site 7 (Nakase site). The sports park would specifically entail 39 of the 45 acres of the community facilities on Site 7.

Thus, development under this alternative would result in 26 acres of parkland on the Shea/Baker site, 10 acres on the Portola site, 11 acres on the IRWD site, 4 acres on the Baker Ranch site, and 39 acres on

the Nakase site. The Greystone and Pacific Heritage sites would not contain any parkland; however, in lieu fees would be paid. In addition, trails would be provided that connect to existing trails, connecting the northern portions of the City with southern portions of the City as well as the City to the Great Park, Aliso Beach, and the Pacific Ocean. Thus, this alternative would result in an additional 90 acres of parkland within the City of Lake Forest.

Utilizing a factor of 2.91 persons per dwelling unit (stated in Section 3.11, Population and Housing), this alternative's 5,865 residential units would result in a population increase of 17,067 persons within the City of Lake Forest. Thus, with a population factor of 94,767 (existing 77,700 City population plus 17,595 population associated with this alternative) and a park acreage factor of 263.9 (existing 173.9 acres of park plus 90 acres associated with this alternative), implementation of this alternative would result in a parkland/population ratio of 2.78 acres of parkland per 1,000 population within the City of Lake Forest.

This alternative would need to develop a total of 87.98 acres of parkland in conjunction with its proposed 5,865 residential units to comply with the City's established standard of 5 acres per 1,000 population. Since this alternative proposes uses that would result in a significantly increased City population compared to existing conditions but would develop adequate parkland to increase the City-wide parkland ratio to 2.78 acres per 1,000 population (a 23.7 percent increase in parkland ratio than currently maintained and/or planned for in the City), impacts would be less than significant. This would be considered a less-than-significant cumulative impact.

■ **Transportation/Traffic**

Trip Generation

The Traffic Study used the Lake Forest Traffic Analysis Model (LFTAM) to analyze the Traffic Analysis Zones (TAZ) in which each of the overlays (Alternatives) would occur. The resulting ADTs, for the Proposed Project and Overlay Plan, in the affected TAZs were compared to identify whether Alternative 6 would result in more or fewer trips and consequently would impact more or fewer intersections, freeway ramps, and mainline segments than the Proposed Project.

Impacts

As can be seen from Table 4-53, Alternative 6 includes 1,159,000 sf fewer business park uses and an additional 450 residential units. The total traffic generated under Alternative 6 would be 10,481 fewer daily trips than the Proposed Project. This alternative would result in an approximately 10 percent difference in total trip generation as compared to the Proposed Project. Therefore, the impacts of Alternative 6 would be less than those of the Proposed Project. However, there would be a change in peak hour directionality associated with residential uses replacing industrial uses that would likely result in different affected intersections compared to the Proposed Project.

Therefore, Alternative 6 would result in less, and potentially different, impacted intersections within the Project Area and within the extended Project Area compared to the Proposed Project. Since different intersections would be impacted under this Alternative, the same mitigation measures identified for the

Proposed Project may not mitigate intersection impacts to a less-than-significant level. A specific list of mitigation measures would need to be developed to reduce these intersections to less than significant, but would be similar improvements as identified for the Proposed Project. As under the Proposed Project, no freeway ramps, or freeway mainline segments, are anticipated to be significantly impacted by Alternative 6 based on year 2030 conditions compared to the 2030 General Plan Scenario.

As under the Proposed Project, no impacts related to parking would occur with implementation of Alternative 6.

Table 4-53 Overlay Plan Land Use and Trip Generation Summary—Alternative 2								
Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Alternative 6—Existing General Plan								
Business Park	1,841.7 TSF	2,210	424	2,634	553	1,823	2,376	23,500
Alternative 6—Proposed Project								
Government Facility	88 TSF	173	21	194	77	173	250	2,457
Business Park	1,159 TSF	1,391	267	1,658	348	1,147	1,495	14,788
Sports Park	39 acre	0	0	0	133	160	293	2,098
<i>Total (using vehicle trip rates below)</i>		<i>1,564</i>	<i>288</i>	<i>1,852</i>	<i>558</i>	<i>1,480</i>	<i>2,038</i>	<i>19,343</i>
Alternative 6—Overlay Plan								
Single-Family Detached	450 DU	86	252	338	288	167	455	4,307
Government Facility	88 TSF	173	21	194	77	173	250	2,457
Sports Park	39 acre	0	0	0	133	160	293	2,098
<i>Total (using vehicle trip rates below)</i>		<i>259</i>	<i>273</i>	<i>532</i>	<i>498</i>	<i>500</i>	<i>998</i>	<i>8,862</i>
<i>Total Difference Alternative 6</i>		<i>-1,305</i>	<i>-15</i>	<i>-1,320</i>	<i>-60</i>	<i>-980</i>	<i>-1,040</i>	<i>-10,481</i>

SOURCE: Austin-Foust Associates, Inc. 2005b

- 1) The trip rates above and regression equation below have been taken from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Manual.
- 2) The land use-based trip rates for commercial use are based on the following equation:
 $LN(T) = AxLN(X)+B$ where X=land use amount (combined TSF in the TAZ) and T=daily trips

Land Use Type	Units	Coefficients		— AM Peak Hour —			— PM Peak Hour —		
		A	B	Peak/ADT Ratio	In	Out	Peak/ADT Ratio	In	Out
Commercial	TSF	.65	5.83	.024	61%	39%	.087	48%	52%
Office	TSF	.77	3.65	.14	88%	12%	.135	17%	83%

ADT = average daily trips DU = Dwelling Unit EQ = equation-based TSF = thousand square feet

■ Utilities/Service Systems

Water

Similar to the Proposed Project, water utility connections that would be required upon implementation of Alternative 6 would be constructed in accordance with applicable Uniform Codes, City Ordinances, Public Works standards, and IRWD design criteria. In addition, as under the Proposed Project, the General Plan policies in the Public Facilities / Growth Management Element require the City of Lake

Forest to coordinate water quality and supply programs with the responsible water agencies and to work with local water districts in determining and meeting community needs for water service. Upon compliance with these regulations and policies, impacts related to water conveyance infrastructure under Alternative 6 would be similar in magnitude to the Proposed Project and, thus, would be less than significant.

Under Alternative 6, the Proposed Project development on Sites 1 through 7 would occur in the Project Area and an additional 450 residential units on Site 7 would be developed in addition to the 45 acres of community facilities. Thus, the total difference in development scenarios between the Proposed Project and Alternative 6 consists of an increase of 450 residential units. Using the most conservative water demand factor for low-medium density residential uses (385 gpd), as shown in Table 3.15-6, the additional development under Alternative 6 would result in a water demand of approximately 173,250 gpd (0.17 mgd) greater than the Proposed Project. The water demand would be greater under this Alternative when compared to the Proposed Project, but it is anticipated that IRWD would have sufficient supplies to serve the increased demand of only 450 residential units. In addition, given the remaining capacity, it is expected that the existing water treatment facilities could also adequately provide service under Alternative 6. However, since Alternative 6 would demand more water than the Proposed Project, impacts related to water demand and water treatment facilities would be greater than the Proposed Project but would remain less than significant.

Wastewater

The IRWD requires a wastewater discharge permit for industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the IRWD's sewage collection and treatment system. The purpose of the wastewater discharge permit program is to ensure the City's compliance with the NPDES program, as administered by the RWQCB, for all facilities discharging to navigable waters of surface water of the state, including sewage treatment plants.

Development under Alternative 6 would comply with all provisions of industrial wastewater permits, if required, which regulate discharges. Through compliance with the City's wastewater discharge permit, which is administered subject to the requirements and limitations of the NPDES program and enforced by the Regional Water Quality Control Board, it can be assumed that development Alternative 6 would not result in an exceedance of the Board's wastewater treatment requirements.

Further, the NPDES permit system also regulates both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the state (e.g., stormwater systems). For point source discharges, each NPDES permit contains limits on allowable concentrations and emissions of pollutants contained in the discharge. For nonpoint source discharges, Alternative 6 would be required to apply for the applicable permits, and would be required to comply with all applicable wastewater discharge requirements issued by the SARWQCB and RWQCB. Impacts would be similar in magnitude to the Proposed Project and be less than significant.

Development under Alternative 6 would not generate wastewater that would exceed the capacity of the existing wastewater treatment system in combination with the provider's existing service commitments. Similar to water demand, as discussed above, development under Alternative 6 would result in an increase in wastewater generation than under the Proposed Project. Using the wastewater generation factor for low-medium density residential uses (215 gpd), the additional development under Alternative 6 would result in approximately 96,750 gpd (0.09 mgd) more wastewater than the Proposed Project. As discussed in Impact 3.15-4, wastewater generated by the Proposed Project would constitute less than the remaining capacity of the existing wastewater treatment facilities and, therefore, could be adequately served by these facilities. Under Alternative 6, wastewater generation would constitute approximately 7.1 percent of LAWRP's available capacity. Although the MWRP would not receive the total wastewater flow generated by Alternative 6, total wastewater flow under this alternative would consist of approximately 17.58 percent of remaining capacity (upon completion of the planned improvements). Development under Alternative 6 would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. However, because Alternative 6 would generate more wastewater than the Proposed Project, impacts related to wastewater treatment would be greater than the Proposed Project but would remain less than significant.

Solid Waste

Development of Alternative 6 would not reduce the capacity of the landfill(s) providing landfill disposal services to the City and would comply with applicable statutes and regulations related to solid waste. Similar to water demand and wastewater generation, as discussed above, development under Alternative 6 would result in an increase in solid waste generated over that of the Proposed Project. Using the residential solid waste generation factor of 7 lbs per day per dwelling unit, the increase of 450 residential units would result in an increase of approximately 3,150 lbs per day (1.5 tons per day) of solid waste compared to the Proposed Project. Under Alternative 6, solid waste generation would constitute slightly more than the percentage increases noted in Table 3.15-13, depending on the landfill used. However, development under Alternative 6 would not exceed the permitted daily capacity of any of the nearby landfills. Consequently, impacts related to solid waste disposal would be greater than under the Proposed Project but would remain less than significant.

As with the Proposed Project, development under Alternative 6 would be subject to AB 939, which mandates a minimum 50 percent diversion goal. Development, similar to the Proposed Project, would be implemented in a manner consistent with City's commitment and in compliance with AB 939. In addition, Alternative 6 would be implemented in a manner consistent with the goals and policies in the City of Lake Forest General Plan Recreation and Resources Element. Impacts would be similar as under the Proposed Project and would be less than significant.

Energy

Development under Alternative 6 would not generate electricity or natural gas demand that would require the construction of new energy production or transmission facilities. Similar to the issues discussed above, development under Alternative 6 would result in an increase in energy demand than under the Proposed Project because implementation of this Alternative would result in 450 additional

residential units. Based on the electricity generation factors in Table 3.15-11, the additional development would result in approximately 6.93 megawatt hours per day more than the Proposed Project. Similarly, Alternative 6 would also result in an increase of approximately 0.079 million cubic feet per day of natural gas when compared to the Proposed Project. However, SCE is currently in the process of upgrading their transmission systems, and it is anticipated that the electricity demand generated by the Landowner Concept Plan could be supplied without the need for additional construction or expansion of energy facilities beyond that which was previously planned. In addition, SCGC declares itself a “reactive” utility and will provide natural gas as customers request its services. Development under Alternative 6 would not require or result in the construction of new electric or natural gas facilities or the expansion of existing facilities. Consequently, impacts related to electricity and natural gas demand would be greater than under the Proposed Project but would remain less than significant.

4.11.3 Attainment of Project Objectives

This alternative provides for all of the development under the Proposed Project, plus the development of additional dwelling units on Site 7. As the primary difference between this alternative and the Proposed Project is the inclusion of the additional housing units, this alternative would meet all of the project objectives as outlined in Chapter 2 (Project Description).

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Aesthetics		
Substantially degrade the visual quality of the Project Area by detracting from the overall image of the City or through design features, architectural style, building incompatibility with surrounding uses, degradation of views from roadways or adjacent uses, unscreened outdoor uses or materials, or introduction of building mass that conflicts with the character of surrounding development.	Greater than	Building heights, densities, and massing would be slightly greater than the Proposed Project, as an additional 450 dwelling units would be constructed on Site 7. The impact would remain less than significant, however.
Substantial adverse effect on a scenic vista by obstructing public views or of scenic resources or scenic vistas and by obstructing views from a designated scenic highway or arterial roadway, or through removal of natural features or addition of man-made features or structures that degrades the visual intactness and unity of the scenic vista.	Similar	Impacts with regard to alteration of viewsheds and obstruction of views of scenic resources on all sites would remain less than significant.
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area where the project would have outdoor illumination of more than 1¼ foot candles from dusk to dawn, where the project will use reflective building materials, or where the project would use neon or similar signage or architectural features.	Greater than	The greater amount of development under this alternative would result in slightly greater impacts from increased light and glare, although the impact would be significant and unavoidable, as identified for the Proposed Project.
Conflict with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Similar	Development of this alternative would not change the level of impact with regard to conflict with any applicable plans or policies, and this impact is less than significant.
Result in a design that is not permitted by the applicable Planned Community Development Standards and Design Guidelines or the relevant Specific Plan. There would be no impact with regard to visual resources.	Similar	Development under this alternative would comply with all applicable standards and design guidelines, the same as for the Proposed Project.
Agricultural Resources		
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Greater than	More overall development would occur in the Project Area since the entirety of Site 7 would be developed, and more prime and unique farmland would be converted to non-agricultural uses, this impact for Alternative 6 would be greater in magnitude than the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Conflict with existing zoning for agricultural use.	Similar	Buildout of Alternative 6 would require that the existing General Plan be amended to reflect the change in land use, same as the Proposed Project.
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Greater than	More overall development would occur in the Project Area since the entirety of Site 7 would be developed, and more prime and unique farmland would be converted to non-agricultural uses, this impact for Alternative 6 would be greater in magnitude than the Proposed Project.
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan by causing or contributing to the emission of identified air pollutants in excess of levels stated in the plan or by failing to implement a remedial or mitigation measure required under the plan.	Greater than	Alternative 6 is larger in scale than the Proposed Project; therefore, the emissions generated under the alternative would be greater than those of the Proposed Project.
Violate any state or federal air quality standard or contribute substantially to an existing or projected air quality violation.	Greater than	Alternative 6 is expected to exceed SCAQMD's recommended thresholds. Alternative 6 is larger in scale than the Proposed Project; therefore, the emissions generated under the alternative would be greater than those of the Proposed Project.
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) where the incremental effect of the project emissions, considered together with past, present, and reasonably anticipated further project emissions, increase the level of any criteria pollutant above the existing ambient level.	Greater than	Alternative 6 is expected to exceed the SCAQMD's recommended thresholds for CO, VOC, NO _x , and PM ₁₀ . Alternative 6 is larger in scale than the Proposed Project; therefore, the emissions generated under the alternative would be greater than those of the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Expose sensitive receptors to substantial pollutant concentrations by causing the emission of identified pollutants in excess of the pounds per day or tons per quarter standards established by SCAQMD.	Greater than	The Proposed Project would not generate CO concentrations that would exceed the national and state ambient air quality standards, and thus would result in a less-than-significant impact; this impact would be greater in magnitude for Alternative 6, which has more overall development than the Proposed Project.
Create objectionable odors affecting a substantial number of people by causing an odiferous emission that is noxious, putrid, having an appreciable chemical smell, or having an appreciable smell of human or animal waste, renderings, or by-products which will affect an area occupied by 100 or more people.	Similar	Implementation of Alternative 6 would not create objectionable odors affecting a substantial number of people, and would result in a less-than-significant impact; this impact would be similar in magnitude to the Proposed Project.
Biological Resources		
Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 6 with mitigation would have the same impacts biologically as the Proposed Project.
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Similar	Buildout of Alternative 6 with mitigation would have the same impacts biologically as the Proposed Project.
Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the <i>Clean Water Act</i> (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Similar	Buildout of Alternative 6 with mitigation would have the same impacts biologically as the Proposed Project and would result in substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA.
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Similar	Buildout of Alternative 6 with mitigation would have the same impacts biologically as the Proposed Project.
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Similar	Buildout of Alternative 6 would be required to abide by local policies and/or ordinances, same as the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Similar	Buildout of Alternative 6 would be required to abide by local, regional, and/or state habitat conservation plans, same as the Proposed Project.
Cultural Resources		
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Similar	Buildout of the Alternative would have no adverse change in the significance of a historical resource, since none are located on the Proposed Project sites. This would be similar to the Proposed Project.
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Similar	Mitigation measures for the Proposed Project would similarly reduce impacts of this alternative to less than significant.
Disturb any human remains, including those interred outside formal cemeteries.	Similar	Following the applicable provisions of the California Health and Safety Code would ensure that this impact remains less than significant by ensuring appropriate examination, treatment, and protection of human remains, as required by state law, similar to the Proposed Project.
Geology, Soils, and Mineral Resources		
Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> ▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area of based on other substantial evidence of a known fault ▪ Strong seismic groundshaking ▪ Seismic-related ground failure, including liquefaction ▪ Landslides 	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Result in substantial soil erosion or the loss of topsoil.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	Similar	All mandatory regulations would be observed, ensuring that potential site-specific geotechnical conditions will be addressed fully in project design, same as the Proposed Project.
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.	Similar	Buildout of Alternative 6 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
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.	Similar	Buildout of Alternative 6 calls for the eventual closure of a PCC-grade aggregate production site, similar to the Proposed Project.
Hazards and Hazardous Materials		
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Similar	Mitigation measures included in the Proposed Project would be implemented and reduce this impact to a similar level of insignificance.
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Similar	Mitigation measures included in the Proposed Project would be implemented and reduce this impact to a similar level of insignificance.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Similar	Mitigation measures included in the Proposed Project would be implemented and reduce this impact to a similar level of insignificance. Additional development would not result in substantially more use of hazardous materials.
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Similar	No Sites are listed on the CORTESE database. Site 1 is listed on the SWIS database. The same mitigation as for the Proposed Project would be implemented.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	The Project Area is not located within a two - mile radius of a public airport, same as the Proposed Project.
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area.	Similar	The Project Area is not located within the vicinity of an airstrip, same as the Proposed Project.
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Similar	Mitigation measures included in the Proposed Project would be implemented and reduce this impact to a similar level of insignificance.
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Greater than	Mitigation measures included in the Proposed Project would be implemented and reduce this impact to a similar level of insignificance, although slightly more persons would be exposed to this hazard.
Hydrology and Water Quality		
Increase the amount of runoff from some sites compared to existing conditions. The increased runoff could affect downstream facility capacity and may alter the 100-year floodwater surface elevation.	Greater than	Implementation of this Alternative 6 would result in slightly more runoff compared to the Proposed Project.
Adversely alter an existing drainage pattern or watercourse.	Similar	Drainage patterns will most likely not be altered, similar to the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Have an impact on groundwater that is inconsistent with a groundwater management plan.	Similar	Any impacts to groundwater that would be considered inconsistent with the OCWD Groundwater Management Plan would be less than significant, similar to the Proposed Project.
Affect water quality of receiving waterbodies and thus would degrade water quality.	Similar	Water quality standards may be exceeded, especially for pesticide TMDLs, similar to the Proposed Project.
Land Use/Planning		
Propose a use not currently permitted by the General Plan Land Use Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not currently permitted by the Zoning Ordinance and Zoning Map.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use not permitted by an applicable Planned Community or Specific Plan.	Similar	Amendments to the General Plan, Zoning Code, and Planned Communities would be undertaken to ensure conformity, same as the Proposed Project.
Propose a use that would create a nuisance for adjacent properties.	Greater than	Residential uses on Site 7 would be placed immediately adjacent to the proposed public facilities.
Propose a use that is incompatible with surrounding land uses (e.g., difference in the physical scale of development, noise levels, traffic levels, or hours of operation).	Greater than	In buildout of Alternative 6, placement of residential units associated with development on Site 7 would be adjacent to business park and light industrial facilities. Some conflicts of use could occur, due to congestion, noise, odors, and hazardous materials.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Noise		
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Similar	Buildout of Alternative 6 could expose sensitive receptors to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction, similar to the Proposed Project.
Expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Similar	Buildout of Alternative 6 could involve construction and grading activities that expose sensitive receptors to vibration levels above the 85 VdB threshold for vibration; similar to the Proposed Project.
Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Greater than	Greater, causing a significant increase in permanent ambient noise over existing conditions, though not considered to be a significant increase in noise over Year 2030 buildout of the Proposed Project.
Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Similar	While construction activities that would occur from implementation of Alternative 6 could result in a substantial temporary or periodic increase in noise levels, this increase would not be substantially different from temporary or periodic noise increase under the Proposed Project.
Expose people residing or working in the Project Area to excessive noise levels from a project located within an airport land use plan.	Similar	The Project Area is not located within an airport land use plan, same as the Proposed Project.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Population and Housing		
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Greater than	Because Alternative 6 would include increased residential development and would generate more residents, the impacts associated with substantial population growth would be greater than development under the Proposed Project. Jobs/housing balance would be improved to a greater extent than under the Proposed Project.
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 6 would result in the demolition of a negligible number of houses (3) currently on site, same as the Proposed Project.
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	Similar	Buildout of Alternative 6 would result in the displacement of a negligible number of people currently on site, same as the Proposed Project.
Public Services		
<p>Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</p> <ul style="list-style-type: none"> ▪ Fire Protection ▪ Police Protection ▪ Schools ▪ Other public facilities 	Greater than	In buildout of Alternative 6, the direct increase in population is larger than that which would occur in buildout of the Proposed Project. Impacts to emergency services would be less than significant with implementation of MM 3.12-1 through MM 3.12-3.
Recreation		
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.	Greater than	Greater due to the decrease in parkland acreage per person (2.77 per 1,000 persons) proposed in Alternative 6.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Similar	Buildout of Alternative 6's recreational component would not require site-specific mitigation; however, all relevant mitigation measures related to construction should be implemented, similar to the Proposed Project.
Transportation/Traffic		
Cause the LOS on a roadway to exceed the applicable standard within the Project Study area and extended Project Study Area.	Less than or different.	This alternative would result in the generation of 10,481 ADT than the Proposed Project. A change in peak hour directionality would likely create impacts on different intersections which may or may not be adequately addressed by the LFTM.
Cause the LOS on a freeway ramp to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, no freeway ramps are anticipated to be significantly impacted by Alternative 6 based on year 2030 conditions compared to the 2030 General Plan scenario.
Cause the LOS on a freeway mainline segment to exceed the applicable standard within the Project Area.	Similar	As under the Proposed Project, no freeway mainline segments are forecast to be significantly impacted by Alternative 6 based on year 2030 conditions compared to the 2030 General Plan scenario.
Provide less parking than provided for in the City of Lake Forest Municipal Code	Similar	As under the Proposed Project, no impacts related to parking would occur with implementation of the Alternative 6.
Utilities and Service Systems		
Water Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Greater than	Demand for potable and non-potable water would be greater due to the larger amount of residential use.
Create a shortfall of sufficient water supplies available to serve the Project from existing entitlements and resources, or may require issuance of new or expanded entitlements.	Greater than	Demand for potable and non-potable water would be greater due to the larger amount of residential use.

Table 4-54 Comparison of Impacts of Alternative 6 to the Proposed Project

<i>Threshold</i>	<i>Impacts of Alternative Compared to Proposed Project</i>	<i>Comments</i>
<p>Wastewater Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.</p>	Greater than	Generation of wastewater would be slightly greater due to the larger residential component.
Result in a determination (by the wastewater treatment provider that serves or may serve the Project) that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	Greater than	Generation of wastewater would be slightly greater due to the larger residential component.
<p>Solid Waste Result in the permitted capacity being exceeded, of the landfill serving the Project's solid waste needs.</p>	Greater than	Generation of solid waste would be slightly greater due to the larger residential component.
Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.	Similar	Buildout of Alternative 6 would be required to be in compliance with all federal, state, and local statutes and regulations related to solid waste, same as the Proposed Project.
<p>Energy Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	Greater than	Demand for energy would be slightly greater due to the larger residential component.

4.12 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

~~CEQA requires that if the No Project/No Development alternative is determined to be the environmentally superior alternative, the environmentally superior alternative should be identified from among the remaining alternatives. The purpose of analyzing alternatives is to determine those alternatives that would avoid or lessen the significant impacts identified for the Proposed Project. In this case, none of the alternatives with the exception of the No Project/No Development Alternative avoids any of the significant impacts of the Proposed Project or reduces them to a level of insignificance. However, several of the alternatives reduce the severity of some or all of the significant impacts of the Proposed Project due to reconfiguration of development, although the impacts remain significant.~~

~~With regard to Aesthetics and the significant impact from increased light and glare, Alternative 2 would be environmentally superior due to the clustering of the public facilities on Site 1, thus limiting the area affected by increased light and glare. The impacts on light and glare from Alternatives 3 and 4 would remain substantially similar to the impacts of the Proposed Project, although slightly greater due to the split configuration of the public facilities on various sites. The impacts on light and glare from Alternatives 1, 5, and 6 would be greater than for the Proposed Project, as described in the foregoing sections.~~

~~Air quality and population and housing impacts for Alternatives 2, 3, and 4 would be substantially similar to the significant impacts identified for the Proposed Project. Alternatives 5 (Landowner Concept Plan) and 6 would result in greater impacts to air quality and population and housing due to a greater level of development.~~

~~The significant and unavoidable impact with regard to pollutant runoff identified for the Proposed Project would still occur with all of the Alternatives. The impacts would be somewhat greater for Alternatives 1, 2, 5, and 6, due to either the uses proposed or the increased level of development.~~

~~Therefore, from among the six development alternatives analyzed in this EIR, the environmentally superior alternative would be Alternative 2, as it reduces Proposed Project impacts to the greatest extent because of clustering of the public facilities on Site 1, which would limit the area affected by increased light and glare.~~

CEQA requires that if the No Project/No Development alternative is determined to be the environmentally superior alternative, the environmentally superior alternative should be identified from among the remaining alternatives. The purpose of analyzing alternatives is to determine those alternatives that would avoid or lessen the significant impacts identified for the Proposed Project. In this case, none of the alternatives with the exception of the No Project/No Development Alternative avoids any of the significant impacts of the Proposed Project or reduces them to a level of insignificance. However, several of the alternatives reduce the severity of some or all of the significant impacts of the Proposed Project due to reconfiguration of development, although the impacts remain significant.

With regard to Aesthetics the impact to visual quality relative to development on Site 1, 2, 3 4, 5 and 6 would be similar to the Proposed Project under Alternative 2. The significant impact from increased light and glare would be slightly increased because of sensitive residential uses adjacent to the proposed public facilities with Alternative 2. The impacts on light and glare from Alternatives 3 and 4 and 7 would remain substantially similar to the impacts of the Proposed Project, although slightly greater due to the split configuration of the public facilities on various sites. The impacts on light and glare from Alternatives 1, 5, and 6 would be greater than for the Proposed Project, as described in the foregoing sections.

Air quality and population and housing impacts for Alternatives 2, 3, and 4 would be substantially similar to the significant impacts identified for the Proposed Project. Alternatives 5 (Landowner Concept Plan) and 6 would result in greater impacts to air quality and population and housing due to a greater level of development. Alternative 7 would result in a lower construction and operational emissions, although impacts would still be significant.

The significant and unavoidable impact with regard to pollutant runoff identified for the Proposed Project would still occur with all of the Alternatives. The impacts would be somewhat greater for Alternatives 1, 2, 5, and 6, due to either the uses proposed or the increased level of development.

The Draft PEIR identified Alternative 2 as the environmentally superior alternative. It would have fewer impacts than the proposed Project in six impact categories. Alternative 2 would, however, result in greater impacts in five impact categories.

As presented in the Recirculated Draft PEIR (Chapter 7 in Volume 2), Alternative 7 would result in greater impacts than the proposed Project in two impact categories, but would involve lesser impacts in eight impact categories. Specifically, Alternative 7, because of its lower trip generation, would result in less noise and air emission generation than the other alternatives. Alternative 7 would also result in less demand for public services and utilities. Therefore, from among the seven development alternatives analyzed in the Draft PEIR and Recirculated Draft PEIR, the environmentally superior alternative would be Alternative 7, as it reduces Proposed Project impacts to the greatest extent by reducing project trip generation and overall development.

4.13 COMPARISON OF ALTERNATIVES

All of the alternatives, with the exception of Alternative 1 (the No Project/Reasonably Foreseeable Development General Plan Alternative) would result in substantially similar impacts in all of the resource areas as outlined under the Proposed Project, as most of the development on Sites 1 through 6 as described for the Proposed Project would occur for Alternatives 2 through 5. Alternative 6 would provide for development on Sites 1 through 7 exactly as under the Proposed Project, with the addition of 450 residential units on Site 7. Alternatives 2 through 6 would also meet all of the project objectives as described in Chapter 2 (Project Description). Table 4-55 summarizes the impacts of Alternatives 1 through 6 compared to the Proposed Project for overall resource areas. Table 4-56 compares the various alternatives with regard to attainment of project objectives.

All of the alternatives, with the exception of Alternative 1 (the No Project/Reasonably Foreseeable Development General Plan Alternative) would result in substantially similar impacts in all of the resource areas as outlined under the Proposed Project, as most of the development on Sites 1 through 6 as described for the Proposed Project would occur for Alternatives 2 through 5 and Alternative 7. Alternative 6 would provide for development on Sites 1 through 7 exactly as under the Proposed Project, with the addition of 450 residential units on Site 7. Alternative 7 would result in a reduction of 677 residential units and 288,720 sf of commercial development compared to the Proposed Project. Alternatives 2 through 7 would also meet all of the project objectives as described in Chapter 2 (Project Description). Revised Table 4-55 summarizes the impacts of Alternatives 1 through 7 compared to the Proposed Project for overall resource areas. Revised Table 4-56 compares the various alternatives with regard to attainment of project objectives.

Table 4-55 Summary of Impacts of Alternatives Compared to Proposed Project

	No Project/No Development	No Project/Reasonably Foreseeable Development (General Plan)	Alternative 2 (Site 1)	Alternative 3 (Sites 1, 3, and 4)	Alternative 4 (Sites 4 and 9)	Alternative 5 (Landowner Concept Plan)	Alternative 6 (Site 7)
Aesthetics	Less than	Greater	Greater	Greater	Less than	Greater	Greater
Agricultural Resources	Less than	Similar	Less than	Less than	Less than	Less than	Greater
Air Quality	Less than	Greater	Less than	Less than	Less than	Less than	Greater
Biological Resources	Less than	Similar	Similar	Similar	Greater	Similar	Similar
Cultural Resources	Less than	Similar	Similar	Similar	Similar	Similar	Similar
Geology, Soils, and Mineral Resources	Less than	Similar	Similar	Similar	Similar	Similar	Similar
Hazards and Hazardous Materials	Less than	Greater	Similar	Similar	Similar	Similar	Greater
Hydrology and Water Quality	Less than	Greater	Greater	Greater	Greater	Greater	Greater
Land Use and Planning	Greater than	Similar	Greater	Greater	Similar	Greater	Greater
Noise	Less than	Greater	Greater	Greater	Greater	Greater	Greater
Population and Housing	Less than	Similar	Less than	Less than	Less than	Greater	Greater
Public Services	Less than	Similar	Less than	Less than	Less than	Greater	Greater
Recreation	Less than	Similar	Less than	Similar	Similar	Greater	Greater
Transportation/Traffic	Greater than	Greater	Similar to Slightly Greater	Greater	Similar to Slightly Less	Similar	Less than or Different
Utilities and Service Systems	Less than	Less than	Less than	Less than	Less than	Greater	Greater
Avoids or Lessens any of Project's Significant Impacts?	Yes	No					

Revised Table 4-55 Summary of Impacts of Alternatives Compared to Proposed Project

	No Project/No Development	No Project/Reasonably Foreseeable Development (General Plan)	Alternative 2 (Site 1)	Alternative 3 (Sites 1, 3, and 4)	Alternative 4 (Sites 4 and 9)	Alternative 5 (Landowner Concept Plan)	Alternative 6 (Site 7)	Alternative 7 Hybrid
Aesthetics	Less than	Greater	Greater	Greater	Less than	Greater	Greater	Less than
Agricultural Resources	Less than	Similar	Less than	Less than	Less than	Less than	Greater	Less than
Air Quality	Less than	Greater	Less than	Less than	Less than	Less than	Greater	Less than
Biological Resources	Less than	Similar	Similar	Similar	Greater	Similar	Similar	Greater
Cultural Resources	Less than	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Geology, Soils, and Mineral Resources	Less than	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Hazards and Hazardous Materials	Less than	Greater	Similar	Similar	Similar	Similar	Greater	Similar
Hydrology and Water Quality	Less than	Greater	Greater	Greater	Greater	Greater	Greater	Greater
Land Use and Planning	Greater than	Similar	Greater	Greater	Similar	Greater	Greater	Similar
Noise	Less than	Greater	Greater	Greater	Greater	Greater	Greater	Less Than
Population and Housing	Less than	Similar	Less than	Less than	Less than	Greater	Greater	Less than
Public Services	Less than	Similar	Less than	Less than	Less than	Greater	Greater	Less than
Recreation	Less than	Similar	Less than	Similar	Similar	Greater	Greater	Similar
Transportation/Traffic	Greater than	Greater	Similar to Slightly Greater	Greater	Similar to Slightly Less	Similar	Less than or Different	Less Than
Utilities and Service Systems	Less than	Less than	Less than	Less than	Less than	Greater	Greater	Less than
Avoids or Lessens any of Project's Significant Impacts?	Yes	No	5 greater 6 less than					2 greater 8 less than

Table 4-56 Summary of Project Objectives Compared to Proposed Project (PP)

Project Objective	Alt 1 - Existing General Plan	Alt 2 - Public Facilities on Site 1	Alt 3 - Split Public Facilities Site	Alt 4 - Public Facilities on 4 and 9	Alt 5 - Landowner Concept Plan	Alt 6 - Land Use Overlay on Site 7
<i>Balanced Community.</i> Future residential and/or commercial development within the Project Area should serve to create a balanced and integrated community by providing linkages between existing segments of the City through master-planned trail systems, strategically located public amenities, and carefully planned residential neighborhoods	No	Less than PP	Less than PP	Similar to PP	Less than PP	Similar to PP
<i>Fiscal Stability.</i> Future residential and/or commercial development within the Project Area should ensure a fiscally sound and stable economic base for the community and provide the community with a mechanism to share equitably in the financial benefit derived from such development within the Project Area	No	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP
<i>Recreational Facilities.</i> Future residential and/or commercial development within the Project Area should benefit the entire community by providing adequate recreational facilities, including an active sports/park complex	No	Less than PP	Similar to PP	Less than PP	No	Similar to PP
<i>Public Space.</i> Future residential and/or commercial development within the Project Area should benefit the entire community by providing adequate public open space and other public amenities, including a civic/community center	No	Similar to PP	Similar to PP	Similar to PP	No	Similar to PP
<i>Natural Resources.</i> Future residential and/or commercial development within the Project Area should serve to protect natural resources within the Project Area	Less than PP	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP
<i>Diversity of Housing.</i> Future residential and/or commercial development within the Project Area should provide a diversity of housing types, including housing that is sold or rented at less than market rates to meet the needs of residents and potential residents who cannot afford market-rate housing, and accessible commercial amenities in order to ensure the establishment of a well balanced community	No	Less than PP	Less than PP	Less than PP	Similar to PP	Similar to PP
<i>Circulation System.</i> Future residential and/or commercial development within the Project Area should facilitate and achieve completion of the City's Circulation System including the extension of Alton Parkway and improvements to intersections impacted by the project.	Less than PP	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP
<i>Level of Service.</i> Future residential and/or commercial development within the Project Area should not create any greater impacts on the City's infrastructure or fiscal stability than the existing entitlement or uses allowed by the General Plan or adversely impact the City's ability to provide an acceptable level of service to the community	Similar to PP	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP

Table 4-56 Summary of Project Objectives Compared to Proposed Project (PP)

Project Objective	Alt 1— Existing General Plan	Alt 2— Public Facilities on Site 1	Alt 3— Split Public Facilities Site	Alt 4— Public Facilities on 4 and 9	Alt 5— Landowner Concept Plan	Alt 6— Land Use Overlay on Site 7
Development Commitments: As a precondition to future residential and/or commercial development within the Project Area, each landowner and developer will be required to make binding development commitments determined to be appropriate by the City Council	Less than PP	Similar to PP	Similar to PP	Similar to PP	Similar to PP	Similar to PP

REVISED Table 4-56 Summary of Project Objectives Compared to Proposed Project (PP)

Project Objective	Alt 1—Existing General Plan	Alt 2—Public Facilities on Site 1	Alt 3—Split Public Facilities Site	Alt 4—Public Facilities on 4 and 9	Alt 5—Lardowner Concept Plan	Alt 6—Land Use Overlay on Site 7	Alternative 7 Hybrid
<i>Balanced Community.</i> Future residential and/or commercial development within the Project Area should serve to create a balanced and integrated community by providing linkages between existing segments of the City through master planned trail systems, strategically located public amenities, and carefully planned residential neighborhoods	No	Less than PP	Less than PP	Similar to PP	Less than PP	Similar to PP	Similar to PP
<i>Fiscal Stability.</i> Future residential and/or commercial development within the Project Area should ensure a fiscally sound and stable economic base for the community and provide the community with a mechanism to share equitably in the financial benefit derived from such development within the Project Area	No	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP	Similar to PP
<i>Recreational Facilities.</i> Future residential and/or commercial development within the Project Area should benefit the entire community by providing adequate recreational facilities, including an active sports/park complex	No	Less than PP	Similar to PP	Less than PP	No	Similar to PP	Greater than PP
<i>Public Space.</i> Future residential and/or commercial development within the Project Area should benefit the entire community by providing adequate public open space and other public amenities, including a civic/community center	No	Similar to PP	Similar to PP	Similar to PP	No	Similar to PP	Similar to PP
<i>Natural Resources.</i> Future residential and/or commercial development within the Project Area should serve to protect natural resources within the Project Area	Less than PP	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP	Similar to PP
<i>Diversity of Housing.</i> Future residential and/or commercial development within the Project Area should provide a diversity of housing types, including housing that is sold or rented at less than market rates to meet the needs of residents and potential residents who cannot afford market-rate housing, and accessible commercial amenities in order to ensure the establishment of a well balanced community	No	Less than PP	Less than PP	Less than PP	Similar to PP	Similar to PP	Less than PP
<i>Circulation System.</i> Future residential and/or commercial development within the Project Area should facilitate and achieve completion of the City's Circulation System including the extension of Alton Parkway and improvements to intersections impacted by the project.	Less than PP	Similar to PP	Similar to PP	Similar to PP	Less than PP	Similar to PP	Similar to PP

REVISED Table 4-56 Summary of Project Objectives Compared to Proposed Project (PP)

Project Objective	Alt 1—Existing General Plan	Alt 2—Public Facilities on Site 1	Alt 3—Split Public Facilities Site	Alt 4—Public Facilities on 4 and 9	Alt 5—Landowner Concept Plan	Alt 6—Land Use Overlay on Site 7	Alternative 7 Hybrid
<p><i>Level of Service.</i> Future residential and/or commercial development within the Project Area should not create any greater impacts on the City's infrastructure or fiscal stability than the existing entitlement or uses allowed by the General Plan or adversely impact the City's ability to provide an acceptable level of service to the community</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Less than PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>
<p><i>Development Commitments.</i> As a precondition to future residential and/or commercial development within the Project Area, each landowner and developer will be required to make binding development commitments determined to be appropriate by the City Council</p>	<p>Less than PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>	<p>Similar to PP</p>