6.0 Other CEQA Considerations
6.0 OTHER CEQA CONSIDERATIONS

6.1 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

If the proposed project is approved and constructed, a variety of short- and long-term impacts would occur on a local level. During project grading and construction, portions of surrounding uses may be temporarily impacted by dust and noise. Short-term soil erosion may also occur during grading. There may also be an increase in vehicle pollutant emissions caused by grading and construction activities. However, these disruptions would be temporary and may be avoided or lessened to a large degree through mitigation cited in this EIR and through compliance with the City of Lake Forest Municipal Code; refer to Section 5.0, Environmental Analysis, and Section 8.0, Effects Found Not To Be Significant.

Ultimate development of the project site would create long-term environmental consequences associated with a transition in land use. Development of the proposed project and the subsequent long-term effects may impact the physical, aesthetic, and human environments. Long-term physical consequences of development include increased traffic volumes, increased noise from project-related mobile (traffic) and stationary (mechanical and landscaping) sources, hydrology and water quality impacts, and increased energy and natural resource consumption. Incremental degradation of local and regional air quality would also occur as a result of mobile source emissions generated from project-related traffic and stationary source emissions generated from the consumption of natural gas and electricity.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Approval of the proposed project would cause irreversible environmental changes, resulting in the following:

- Commitment of land, which would be physically altered;
- Soil erosion due to grading and construction activities;
- Alteration of the human environment as a consequence of the development process and the project’s commitment to the development of a new community of residential neighborhoods, a Civic Center, parks and recreation facilities, and existing and future public facilities, which intensifies land uses in the project area;
- Utilization of various new raw materials, such as lumber, sand and gravel for construction;
- Consumption of energy to develop and maintain the project, which may be considered a permanent investment; and

- Incremental increases in vehicular activity in the surrounding circulation system, resulting in associated increases in air pollutant emissions and noise levels.

6.3 GROWTH-INDUCING IMPACTS

Section 15126 of the CEQA Guidelines requires that an EIR discuss the project’s potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA Guidelines also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. This section analyzes such potential growth-inducing impacts, based on criteria suggested in the CEQA Guidelines.

In general terms, a project may foster spatial, economic, or population growth in a geographic area if it meets any one of the following criteria:

- Removal of an impediment to growth (e.g., establishment of an essential public service and provision of new access to an area);

- Fostering economic expansion or growth (e.g., changes in revenue base and employment expansion);

- Fostering of population growth (e.g., construction of additional housing), either directly or indirectly;

- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning, and general plan amendment approval); or

- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an in-fill project).

Should a project meet any one of the above-listed criteria, it may be considered growth inducing. The potential growth-inducing impacts of the proposed project are evaluated below.

Note that the CEQA Guidelines require an EIR to “discuss the ways” a project could be growth inducing and to “discuss the characteristics of some projects that may encourage...activities that could significantly affect the environment.” However, the CEQA Guidelines do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages (refer to CEQA Guidelines Section 15145).
POPCULATION, HOUSING, AND EMPLOYMENT

Population

County of Orange. The County encompasses approximately 798 square miles. It is bordered by Los Angeles County to the north, San Bernardino County to the northeast, Riverside County to the east, San Diego County to the south, and the Pacific Ocean to the west. As of January 2011, the County of Orange had a population of 3,029,859. This represents an increase of approximately 6.4 percent over the County's January 2000 population of 2,846,289.

The Southern California Association of Governments (SCAG) serves as the Metropolitan Planning Organization (MPO) for Orange, Los Angeles, San Bernardino, Riverside, Ventura, and Imperial counties. Generally, SCAG serves as the regional planning organization for growth management, transportation, and a range of additional planning and environmental issues within southern California. As part of its 2008 Regional Transportation Plan (RTP) growth forecast, SCAG projects that the County’s population will reach 3,586,283 by 2025 and 3,653,990 by 2035.

City of Lake Forest. On a local level, the City of Lake Forest’s January 2011 population was 77,490. This represents an increase of approximately 32.0 percent over the City’s January 2000 population of 58,707. SCAG projects that the City’s population will reach 80,018 by 2025 and 80,598 by 2035. Table 6-1, Population Estimates, provides a summary of both 2000 and 2011 population estimates for Orange County and the City of Lake Forest.

Table 6-1
Population Estimates

<table>
<thead>
<tr>
<th>Year</th>
<th>Orange County</th>
<th>City of Lake Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2,846,289</td>
<td>58,707</td>
</tr>
<tr>
<td>2011</td>
<td>3,029,859</td>
<td>77,490</td>
</tr>
<tr>
<td>Change</td>
<td>6.4%</td>
<td>32.0%</td>
</tr>
</tbody>
</table>

Source:
Project Site. The site is situated within an urbanized area of the City. The project site currently consists of vacant land and public facilities uses. Few employees occupy the existing IRWD facility and there are no residents at the project site. Therefore, currently, there is no population associated with the project site.

Housing

County of Orange. The County’s housing stock was estimated to be 1,054,626 in January 2011. This represents an increase of approximately 8.8 percent over the estimated 969,484 housing units reported in January 2000. The vacancy rate in January 2011 was estimated to be approximately 5.35 percent, with approximately 2.9 persons per household.\(^7\) SCAG projections indicate that the number of households within the County will increase to 1,102,370 in 2025 and 1,118,490 in 2035.\(^8\)

City of Lake Forest. The City’s housing stock was estimated to be 27,115 in January 2011. This represents an increase of approximately 32.4 percent over the estimated 20,486 housing units reported in January 2000. The vacancy rate in January 2011 was estimated to be approximately 3.19 percent, with 3.0 persons per household.\(^9\) According to SCAG projections, the number of housing units in the City is expected to be 26,224 in 2025 and 26,327 in 2035.\(^10\) Table 6-2, Housing Estimates, provides a summary of both 2000 and 2011 housing estimates for Orange County and the City of Lake Forest.

<table>
<thead>
<tr>
<th>Year</th>
<th>Orange County</th>
<th>City of Lake Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000(^1)</td>
<td>969,484</td>
<td>20,486</td>
</tr>
<tr>
<td>2011(^2)</td>
<td>1,054,626</td>
<td>27,115</td>
</tr>
<tr>
<td>Change</td>
<td>8.8%</td>
<td>32.4%</td>
</tr>
</tbody>
</table>

Table 6-2

Housing Estimates

Project Site. The project site is currently occupied by public facilities structures and vacant land. No housing is associated with the property.


Employment

County of Orange. According to the California Employment Development Department, the annual average civilian labor force within Orange County totals approximately 1,580,900 as of May 2011. An estimated 9.6 percent of the County’s workforce (151,200 persons) was unemployed.\(^\text{11}\) SCAG projections indicate that the number of employees within the County will be 1,933,058 in 2025 and 1,981,901 in 2035.\(^\text{12}\)

City of Lake Forest. According to the California Employment Development Department, the annual average civilian labor force within the City of Lake Forest totals approximately 35,900 persons as of May 2011. An estimated 6.7 percent of the City’s workforce (2,400 persons) was unemployed.\(^\text{13}\) SCAG projections indicate that the number of employees within the City will be 59,546 in 2025 and 59,746 in 2035.\(^\text{14}\)

Project Site. As stated above, the project site is currently vacant and does not generate employment, as the existing on-site public facilities do not include man-operated operations.

IMPACT ANALYSIS

A project could induce population growth in an area either directly or indirectly. More specifically, the development of new residences or businesses could induce population growth directly, whereas the extension of roads or other infrastructure could induce population growth indirectly.

The project is located within a fully developed, urbanized area. Project implementation would result in the development of a new community of residential neighborhoods, a Civic Center, parks and recreation facilities, and existing and future public facilities; refer to Section 3.0, Project Description.

Based on the factors discussed below, project implementation would not result in significant growth-inducing impacts:

- **Removal of an Impediment to Growth.** The project site and surrounding area are fully developed and urbanized. Transportation and infrastructure exist to serve the range of industrial, commercial, and residential uses in the project vicinity. Given the built-out nature of the project area and developed infrastructure, the proposed project would not represent a removal of an impediment to growth.

- **Economic Growth.** As stated above, the project involves the development of a new community of residential neighborhoods, a Civic Center, parks and recreation facilities, and existing and future public facilities. The proposed uses do not include the construction of

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In addition to inducing growth, a project may create a significant environmental impact if it would displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere and/or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. Implementation of the proposed project would not displace substantial numbers of existing housing or persons, as no dwelling units are currently located at the project site. Therefore, the project would not result in an impact with regard to the displacement of persons, housing, and businesses.
6.4 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F requires a description (where relevant) of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill 1575 (AB 1575) in response to the oil crisis of the 1970s. Appendix F of the State CEQA Guidelines provides guidance for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. Because Appendix F does not include specific significance criteria, this threshold is based on the goal of Appendix F. Therefore, an energy impact is considered significant if the proposed project would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

6.4.1 PROJECT ENERGY CONSUMPTION

SHORT-TERM CONSTRUCTION

In 1994, the United States Environmental Protection Agency (EPA) adopted the first set of emission standards (Tier 1) for all new off-road diesel engines greater than 37 kilowatts (kW). The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing NO\textsubscript{X} emissions from these engines by 30 percent. The EPA Tier 2 and Tier 3 standards for off-road diesel engines are projected to further reduce emissions by 60 percent for NO\textsubscript{X} and 40 percent for particulate matter from Tier 1 emission levels. In 2004, the EPA issued the Clean Air Non-road Diesel Rule. This rule will cut emissions from off-road diesel engines by more than 90 percent, and will be fully phased in by 2014.

Depending on market conditions, the project is expected to be constructed in phases generally over a period of six years, starting from approximately 2013 to approximately 2019.

Table 6-3, Construction Fuel Consumption, provides an estimate of construction fuel consumption based on information provided by the CalEEMod air quality computer model; refer to Appendix 12.4, Air Quality and Greenhouse Gas Data. Project construction would occur over six phases, with Phase 3 utilizing the most construction equipment. Table 6-3 depicts the “worst-case” construction phase with regards to the highest amount of fuel utilized during construction. As shown in Table 6-3, Phase 3 construction would consume a total of approximately 56,498 gallons of fuel. The remaining five phases would each consume less than Phase 3. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Additionally, Mitigation Measure AQ-2 requires the project to use low emission mobile construction equipment, maintain construction equipment in proper tune, use low sulfur fuel, and utilize existing power sources. Additionally, all diesel fueled construction vehicles would be required to meet the latest emissions standards. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.
Table 6-3
Construction Fuel Consumption

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Horsepower</th>
<th>Load Factor</th>
<th>Fuel Consumption Rate ((\text{gallons per hour}))</th>
<th>Duration ((\text{total hours}))</th>
<th>Total Fuel Consumption ((\text{gallons}))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHASE 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grader</td>
<td>2</td>
<td>162</td>
<td>0.61</td>
<td>3.95</td>
<td>744</td>
<td>2,939</td>
</tr>
<tr>
<td>Excavator</td>
<td>4</td>
<td>157</td>
<td>0.57</td>
<td>3.58</td>
<td>1,488</td>
<td>5,327</td>
</tr>
<tr>
<td>Rubber Tired Dozer</td>
<td>2</td>
<td>358</td>
<td>0.59</td>
<td>8.45</td>
<td>744</td>
<td>6,287</td>
</tr>
<tr>
<td>Tractor/Loader/Backhoe</td>
<td>7</td>
<td>75</td>
<td>0.55</td>
<td>1.65</td>
<td>5,037</td>
<td>8,311</td>
</tr>
<tr>
<td>Scraper</td>
<td>4</td>
<td>356</td>
<td>0.72</td>
<td>10.25</td>
<td>1,488</td>
<td>15,252</td>
</tr>
<tr>
<td>Paver</td>
<td>2</td>
<td>89</td>
<td>0.62</td>
<td>2.21</td>
<td>144</td>
<td>318</td>
</tr>
<tr>
<td>Paving Equipment</td>
<td>2</td>
<td>82</td>
<td>0.53</td>
<td>1.74</td>
<td>144</td>
<td>251</td>
</tr>
<tr>
<td>Roller</td>
<td>2</td>
<td>84</td>
<td>0.56</td>
<td>1.88</td>
<td>144</td>
<td>271</td>
</tr>
<tr>
<td>Crane</td>
<td>1</td>
<td>208</td>
<td>0.43</td>
<td>3.58</td>
<td>1,352</td>
<td>4,840</td>
</tr>
<tr>
<td>Forklift</td>
<td>3</td>
<td>149</td>
<td>0.30</td>
<td>1.79</td>
<td>4,056</td>
<td>7,260</td>
</tr>
<tr>
<td>Generator Set</td>
<td>1</td>
<td>84</td>
<td>0.74</td>
<td>2.49</td>
<td>1,352</td>
<td>3,366</td>
</tr>
<tr>
<td>Welder</td>
<td>1</td>
<td>46</td>
<td>0.45</td>
<td>0.83</td>
<td>1,352</td>
<td>1,122</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>1</td>
<td>78</td>
<td>0.48</td>
<td>1.50</td>
<td>636</td>
<td>954</td>
</tr>
<tr>
<td><strong>TOTAL PHASE 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>56,498</strong></td>
</tr>
</tbody>
</table>

Notes:
1. Derived using the following equation:
   \[ \text{Fuel Consumption Rate} = \text{Horsepower} \times \text{Load Factor} \times \text{Fuel Consumption Factor} \]
   Where:
   Fuel Consumption Factor for a diesel engine is 0.04 gallons per horsepower per hour (gal/hp/hr) and a gasoline engine is 0.06 gal/hp/hr.
2. Total hours of duration derived from CalEEMod modeling results; refer to Appendix 12.4, Air Quality and Greenhouse Gas Data.
3. Total Fuel Consumption calculated using the following equation:
   \[ \text{Total Fuel Consumption} = \text{Duration in Hours} \times \text{Fuel Consumption Rate} \]
4. Values may be slightly off due to rounding.

Source: Refer to Appendix 12.4, Air Quality and Greenhouse Gas Data, for CalEEMod assumptions used in this analysis.

LONG TERM OPERATIONS

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon (mpg). Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer’s average fuel economy for the portion of their vehicles produced for sale in the United States.
Trip generation rates and the daily vehicle miles traveled (VMT) provided in Appendix 12.4, *Air Quality and Greenhouse Gas Data*, were used to estimate vehicle fuel consumption associated with trips generated by the proposed project. Table 6-4, *Project Operational Fuel Consumption*, provides an estimate of the mitigated annual fuel consumed by vehicles traveling to and from the proposed project.

### Table 6-4

**Operations Fuel Consumption**

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Percent of Annual Vehicle Miles Traveled¹</th>
<th>Annual Vehicle Miles Traveled²</th>
<th>Average Fuel Economy (miles per gallon)³</th>
<th>Total Annual Fuel Consumption (gallons)⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildout</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condo/Townhouse</td>
<td>36.9</td>
<td>6,792,109</td>
<td>6.1</td>
<td>1,113,460</td>
</tr>
<tr>
<td>Single Family Housing</td>
<td>17.4</td>
<td>3,212,938</td>
<td>6.1</td>
<td>526,711</td>
</tr>
<tr>
<td>Government Office Building</td>
<td>45.7</td>
<td>8,409,605</td>
<td>6.1</td>
<td>1,378,624</td>
</tr>
<tr>
<td>Mitigated Total</td>
<td>100</td>
<td>18,414,652</td>
<td>--</td>
<td>3,018,795</td>
</tr>
</tbody>
</table>

**Notes:**
1. Percent of Vehicle Miles Traveled distribution derived from Appendix 12.4, *Air Quality and Greenhouse Gas Data*.
2. Annual Vehicle Miles Traveled obtained from Appendix 12.4, *Air Quality and Greenhouse Gas Data*.
3. Average fuel economy derived from the Department of Transportation.
4. Total Daily Fuel Consumption calculated by dividing the vehicle miles traveled by the average fuel economy.

As shown above, the operation of project is estimated to consume approximately 3,018,795 gallons of fuel annually. However, the project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. The project is located in close proximity to existing transit. Additionally, with implementation of the Mitigation Measure GHG-1, the project would provide pedestrian connections to the off-site circulation network, include a trip reduction program, and implement a ride sharing program, which would in turn result in reduced fuel consumption. Therefore, incorporation of Mitigation Measure GHG-1 would result in fuel savings. Fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

**Other Non-Motorized Transportation Options**

The project vicinity is currently served by Orange County Transportation Authority Routes 206 and 480. Routes 206 and 480 stop adjacent to the project site at the corner of Commercentre Drive and Biscayne Bay Drive. Routes 206 and 480 connect Lake Forest to surrounding locations within the City as well as regional locations throughout Orange County. The proximity of the project site to Routes 206 and 480 would reduce the number of trips to and from the project. The proposed project would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy.
Building Energy Demand

With implementation of Mitigation Measure GHG-1, the proposed project would be expected to demand approximately four million kilowatt hours (kWh) of electricity per year and approximately 16 million British Thermal units (BTU) of natural gas per year. These figures were obtained from Section 5.5, *Greenhouse Gas Emissions*.

The project would involve operations typical of residential and civic uses, requiring electricity and natural for typical lighting, climate control, and day-to-day activities. Additionally, as stated in Table 5.2-2, *Project Consistency with GHG Emissions Reductions Strategies* in Section 5.2, *Greenhouse Gas Emissions*, the proposed project would incorporate several energy efficiency measures, including exceeding Title 24 requirements, high efficiency lighting, cool roofs and pavements, shade trees, and high efficiency heating and cooling systems. Therefore, the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Energy Efficiency Measures

Title 24, California’s Energy Efficiency Standards for Residential and Non-residential Buildings, was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California’s energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save about additional of electricity. These savings are cumulative, doubling as years go by. The project proposes to exceed Title 24 requirements by 15 percent.

In addition to energy efficiency measures required by Title 24, the project would implement the following efficiency measures required by Mitigation Measure GHG-1:

- Energy efficient buildings, 15 percent above Title 24 requirements;
- Install high efficiency lights for public street and area lighting;
- Light colored “cool” roofs and cool pavements, and strategically placed shade trees;
- High efficiency lighting, and energy efficient heating and cooling systems;
- Reduced unnecessary outdoor lighting;
- Water-efficient irrigation systems;
- Low-flow faucets and toilets;
- Reduce turf (per requirements in the Green Builder Program);
- Reuse and recycling of construction and demolition waste;
- Interior and exterior storage areas for recyclables and adequate recycling containers located in public areas; and
- Institute recycling and composting services to reduce solid waste by at least 50 percent.
The project would adhere to all Federal, State, and local requirements for energy efficiency. The proposed project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

**PROJECT ALTERNATIVE**

**Short-Term Construction**

The Project Alternative proposes all residential uses at the project site. However, the anticipated construction schedule and construction details (i.e., acres disturbed, excavation, soil import/export, construction equipment) remain the same as that of the proposed project. Therefore, similar to the proposed project, it is expected that construction fuel consumption associated with the Project Alternative would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

**Long-Term Operations**

The Project Alternative proposes all residential uses at the project site, which would result in less trips and VMTs than that of the proposed project. The Project Alternative would also be required to implement Mitigation Measure GHG-1 which includes transportation efficiency measures that would reduce trips to and from the project site. The Project Alternative would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy.

Additionally, the Project Alternative would incorporate energy efficiency measures required by Mitigation Measure GHG-1 to reduce energy and natural gas consumption. The Project Alternative would adhere to all Federal, State, and local requirements for energy efficiency. The Project Alternative would not result in the inefficient, wasteful, or unnecessary consumption of building energy.