

## IV. ENVIRONMENTAL IMPACT ANALYSIS

### F. GREENHOUSE GAS EMISSIONS

#### 1. INTRODUCTION

The following analysis of greenhouse gas (GHG) emission impacts is based primarily upon the *Weddington Golf and Senior Housing Project Air Quality and Noise Impact Report*, prepared by Terry A. Hayes Associates and dated June 27, 2013, and which is incorporated herein. The report, including the applicable calculation sheets, are provided in *Appendix B: Air Quality and Noise Assessments* of this Draft EIR. Analysis of other air quality conditions, pollutants, and impacts associated with the Project can be found in *Section IV.B: Environmental Impact Analysis – Air Quality* of this Draft EIR.

#### 2. ENVIRONMENTAL CONDITIONS

##### a. Physical Setting

###### (1) *GHG Terms and Components*

This section examines the degree to which the proposed Project may result in significant adverse changes in greenhouse gas emissions. Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions. Earth's natural warming process is known as the "greenhouse effect." Simply put, the greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be a frozen globe with an average surface temperature of about 5°F.

In addition to CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, GHGs include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. Of all the GHGs, CO<sub>2</sub> is the most abundant pollutant that contributes to climate change through fossil fuel combustion. CO<sub>2</sub> comprised 81 percent of the total GHG emissions in California in 2002 and non-fossil fuel CO<sub>2</sub> comprised 2.3 percent.<sup>1</sup> The other GHGs are less abundant but have higher global warming potential than CO<sub>2</sub>. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO<sub>2</sub>, denoted as CO<sub>2</sub>e. The CO<sub>2</sub>e of CH<sub>4</sub> and N<sub>2</sub>O represented 6.4 and 6.8 percent, respectively, of the 2002 California GHG emissions. Other high global warming potential gases represented 3.5 percent of these emissions.<sup>2</sup> In addition, there are a number of man-made pollutants, such as CO, NO<sub>x</sub>, non-methane VOC, and SO<sub>2</sub>, that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other climate change emissions.

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<sup>1</sup> California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 11.

<sup>2</sup> *Ibid.*

(2) *Greenhouse Gas Emissions in California*

California is the fifteenth largest emitter of greenhouse gases (GHG) on the planet, representing about two percent of the worldwide emissions.<sup>3</sup> *Table IV.F-1: California Greenhouse Gas Emissions Inventory* shows the California GHG emissions inventory for years 2000 to 2008. statewide GHG emissions slightly decreased in 2008 due to a noticeable drop in on-road transportation emissions. Also, 2008 was the beginning of the economic recession and fuel prices spiked.

**TABLE IV.F-1**  
**CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY<sup>1</sup>**

SOURCES	CO <sub>2</sub> E EMISSIONS (MILLION METRIC TONS)								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Transportation	171	174	180	178	182	184	184	184	175
Electric Power	104	121	106	110	120	111	108	111	116
Commercial and Residential	44	41	44	41	43	41	41	42	43
Industrial	97	95	97	96	91	91	90	94	93
Recycling and Waste	6.2	6.3	6.2	6.3	6.2	6.5	6.6	6.5	6.7
High Global Warming Potential	11	11	12	13	14	14	15	15	16
Agriculture	25	25	28	28	29	29	30	28	28
Forest Net Emissions	(4.7)	(4.5)	(4.4)	(4.3)	(4.3)	(4.2)	(4.0)	(4.1)	(4.0)
<b>Emissions Total</b>	<b>453</b>	<b>469</b>	<b>470</b>	<b>469</b>	<b>480</b>	<b>473</b>	<b>471</b>	<b>477</b>	<b>474</b>

[1] Source : CARB, *California Greenhouse Gas Inventory*, 2011

The transportation sector – largely the cars and trucks that move people and goods – is the largest contributor with 37 percent of the State’s total GHG emissions in 2008. On-road emissions (from passenger vehicles and heavy duty trucks) constitute 93 percent of the transportation sector total emissions. On-road emissions grew to a maximum of 171 million metric tons of CO<sub>2</sub>e in 2005, plateaued until 2007, and decreased in 2008 to 163 million. The amount of gasoline and diesel fuel consumed by on-road vehicles followed a similar trend.

The electricity and commercial/residential energy sectors combine to form the next largest contributor with more than 30 percent of the statewide GHG emissions. In-State generation accounts for 47 percent of GHG emissions and emissions associated with imported electricity accounts for 53 percent of GHG emissions. Electricity imported into California accounts for only about a quarter of the State’s electricity but imported electricity represents more than half of the GHG emissions. This is because much of it is generated by coal-fired power plants, which is among the highest electricity generation sources of GHG emissions. Assembly Bill (AB) 32 specifically requires CARB to address emissions from electricity sources both inside and outside of the State.

<sup>3</sup> CARB, *Climate Change Scoping Plan*, December 2008.

California's industrial sector includes refineries, cement plants, oil and gas production, food processors, and other large industrial sources. This sector contributes almost 20 percent of California's GHG emissions, but the sector's emissions are not projected to grow significantly in the future as the State focuses on renewable energy.

The sector termed recycling and waste management is a unique system, encompassing not just emissions from waste facilities but also the emissions associated with the production, distribution, and disposal of products throughout the economy.

Although high global warming potential gases (e.g., PFCs, HFCs, and SF<sub>6</sub>) are a small contributor to historic GHG emissions, levels of these gases are projected to increase sharply over the next several decades making them a significant source by 2020. These gases are used in growing industries such as semiconductor manufacturing.

The forest sector greenhouse gas inventory includes CO<sub>2</sub> uptake and greenhouse gas emissions from wild and prescribed fires, the decomposition and combustion of residues from harvest and conversion/development, and wood products decomposition. The forest sector is unique in that forests both emit GHGs and absorb CO<sub>2</sub> through carbon sequestration. While the current inventory shows forests absorb 4.7 million metric tons of CO<sub>2</sub>e, carbon sequestration has declined since 1990. For this reason, the 2020 projection assumes no net emissions from forests. The agricultural GHG emissions shown are largely methane emissions from livestock, both from the animals and their waste. Emissions of GHG from fertilizer application are also important contributors from the agricultural sector. Opportunities to sequester CO<sub>2</sub> in the agricultural sector may also exist; however, additional research is needed to identify and quantify potential sequestration benefits.

#### **b. Regulatory and Policy Setting**

In response to growing scientific and political concern with global climate change, California adopted a series of laws to reduce emissions of GHGs into the atmosphere.

**Assembly Bill 1493 (AB 1493).** In September 2002, AB 1493 was enacted, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State.

**Executive Order (E.O.) S-3-05.** On June 1, 2005, E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The Executive Order establishes State GHG emission targets of 1990 levels by 2020 (the same as AB 32) and 80 percent below 1990 levels by 2050. It calls for the Secretary of California Environmental Protection Agency (Cal/EPA) to be responsible for coordination of State agencies and progress reporting. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major "decarbonization" of electricity supplies and fuels, and major improvements in energy efficiency.

In response to the Executive Order, the Secretary of the Cal/EPA created the Climate Action Team (CAT). California's CAT originated as a coordinating council organized by the Secretary for Environmental Protection. It included the Secretaries of the Natural Resources Agency, and the Department of Food and Agriculture, and the Chairs of the Air Resources Board, Energy Commission, and Public Utilities Commission. The original council was an informal collaboration between the agencies to develop potential mechanisms for reductions in GHG emissions in the State. The council was given formal recognition in E.O. S-3-05 and became the CAT.

The CAT is responsible for preparing reports that summarize the State's progress in reducing GHG emissions. The most recent CAT Report was published in December 2010. The CAT Report discusses mitigation and adaptation strategies, State research programs, policy development, and future efforts.

**Assembly Bill 32 (AB 32).** In September 2006, the State passed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 focuses on reducing GHG emissions in California, and requires the ARB to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to statewide levels in 1990 by 2020. To achieve this goal, AB 32 mandates that the CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. Because the intent of AB 32 is to limit 2020 emissions to the equivalent of 1990, it is expected that the regulations would affect many existing sources of GHG emissions and not just new general development projects. Senate Bill (SB) 1368, a companion bill to AB 32, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State.

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1, 2007, CARB adopted three discrete early action measures to reduce GHG emissions. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills. On October 25, 2007, CARB tripled the set of previously approved early action measures. The approved measures include improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment, reducing perfluorocarbons from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexafluoride emission from the non-electricity sector. The CARB has determined that the total statewide aggregated GHG 1990 emissions level and 2020 emissions limit is 427 million metric tons of CO<sub>2e</sub>. The 2020 target reductions are currently estimated to be 174 million metric tons of CO<sub>2e</sub>.

The CARB AB 32 Scoping Plan contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the CARB with input from the CAT and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The GHG reduction strategies

contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. Key approaches for reducing greenhouse gas emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable electricity standard of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets; and
- Adopting and implementing measures to reduce transportation sector emissions, including California's.

CARB has also developed the GHG mandatory reporting regulation, which required reporting beginning on January 1, 2008 pursuant to requirements of AB 32. The regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. The regulation language identifies major facilities as those that generate more than 25,000 metric tons of CO<sub>2</sub> per year. Cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons of CO<sub>2</sub> per year, make up 94 percent of the point source CO<sub>2</sub> emissions in California.

**CEQA Guidelines Amendments.** California Senate Bill (SB) 97 required the Governor's Office of Planning and Research (OPR) to develop California Environmental Quality Act (CEQA) Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions." The CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. Noteworthy revisions to the CEQA Guidelines include:

- Lead agencies should quantify all relevant GHG emissions and consider the full range of project features that may increase or decrease GHG emissions as compared to the existing setting;
- Consistency with the ARB Scoping Plan is not a sufficient basis to determine that a project's GHG emissions would not be cumulatively considerable;
- A lead agency may appropriately look to thresholds developed by other public agencies, including the ARB's recommended CEQA thresholds;

- To qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project. General compliance with a plan, by itself, is not mitigation;
- The effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis; and
- Given that impacts resulting from GHG emissions are cumulative, significant advantages may result from analyzing such impacts on a programmatic level. If analyzed properly, later projects may tier, incorporate by reference, or otherwise rely on the programmatic analysis.

**Senate Bill 375 (SB 375).** SB 375, adopted in September 30, 2008, provides a means for achieving AB 32 goals through the reduction in emissions by cars and light trucks. SB 375 requires new RTPs to include Sustainable Communities Strategies (SCSs). This legislation also allows the development of an Alternative Planning Strategy (APS) if the targets cannot be feasibly met through an SCS. The APS is not included as part of the RTP. In adopting SB 375, the Legislature expressly found that improved land use and transportation systems are needed in order to achieve the GHG emissions reduction target of AB 32. Further, the staff analysis for the bill prepared for the Senate Transportation and Housing Committee's August 29, 2008 hearing on SB 375 (hereby incorporated by reference) began with the following statement: "According to the author, this bill will help implement AB 32 by aligning planning for housing, land use, transportation and greenhouse gas emissions for the 17 MPOs in the State."

**CARB Guidance.** The CARB has published draft guidance for setting interim GHG significance thresholds (October 24, 2008). The guidance is the first step toward developing the recommended statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. The guidance does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that are responsible for substantial GHG emissions (i.e., industrial, residential, and commercial projects). The CARB believes that thresholds in these important sectors will advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

**SCAQMD Guidance.** The SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD has not adopted guidance for CEQA projects under other lead agencies.

**Green LA Action Plan.** The City of Los Angeles has issued guidance promoting green building to reduce GHG emissions. The goal of the Green LA Action Plan (Plan) is to reduce greenhouse

gas emissions 35 percent below 1990 levels by 2030.<sup>4</sup> The Plan identifies objectives and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations, and create a framework to address City-wide GHG emissions. The Plan lists various focus areas in which to implement GHG reduction strategies. Focus areas listed in the Plan include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local climate are incorporated into planning and building decisions. The Plan discusses City goals for each focus area, as follows:

### **Energy**

- Increase the generation of renewable energy;
- Encourage the use of mass transit;
- Develop sustainable construction guidelines;
- Increase City-wide energy efficiency; and
- Promote energy conservation.

### **Water**

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

#### **Transportation**

- Power the City vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

### **Other Goals**

- Create a more livable City through land use regulations;
- Increase recycling, reducing emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more City parks, promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

The City adopted an ordinance to establish a green building program in April 2008. The ordinance establishes green building requirements for projects involving 50 or more dwelling units. The Green Building Program was established to reduce the use of natural resources, create healthier living environments and minimize the negative impacts of development on local, regional, and global ecosystems. The program addresses the following five areas:

- Site: location, site planning, landscaping, stormwater management, construction and demolition recycling;
- Water Efficiency: efficient fixtures, wastewater reuse, and efficient irrigation;
- Energy and Atmosphere: energy efficiency, and clean/renewable energy;
- Materials and Resources: materials reuse, efficient building systems, and use of recycled and rapidly renewable materials;

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<sup>4</sup> City of Los Angeles, Green LA: An Action Plan to Lead the Nation in Fighting Global Warming, May 2007.

- Indoor Environmental Quality: improved indoor air quality, increased natural lighting, and thermal comfort/control.

### **3. ENVIRONMENTAL IMPACTS**

#### **a. Methodology**

For the purpose of this analysis, GHG emissions were quantified from construction and operation of the proposed Project using SCAQMD's CalEEMod. Operational emissions include both direct and indirect sources including mobile sources, water use, solid waste, area sources, natural gas, and electricity use emissions. The GHG and climate change analysis considered Project emissions and consistency with applicable GHG reduction plans and policies.

#### **b. Thresholds of Significance**

The SCAQMD has not approved a GHG significance threshold for the development of non-SCAQMD and non-industrial projects. The significance threshold is based on the methodologies recommended by the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (January 2008). CAPCOA conducted an analysis of various approaches and significance thresholds, ranging from a zero threshold (all projects are cumulatively considerable) to a high of 40,000 to 50,000 metric tons of CO<sub>2</sub>e per year. For example, an approach assuming a zero threshold and compliance with AB 32 2020 targets would require all discretionary projects to achieve a 33 percent reduction from projected "business-as-usual" emissions to be considered less-than-significant. A zero threshold approach could be considered on the basis that climate change is a global phenomenon, and not controlling small source emissions would potentially neglect a major portion of the GHG inventory. However, the CEQA Guidelines also recognize that there may be a point where a project's contribution, although above zero, would not be a considerable contribution to the cumulative impact (CEQA Guidelines, Section 15130 (a)). Therefore, a threshold of greater than zero is considered more appropriate for the analysis of GHG emissions under CEQA.

Another method would use a quantitative threshold of greater than 900 metric tons CO<sub>2</sub>e per year based on a market capture approach that requires mitigation for greater than 90 percent of likely future discretionary development. This threshold would generally correspond to office projects of approximately 35,000 square feet, retail projects of approximately 11,000 square feet, or supermarket space of approximately 6,300 square feet. Another potential threshold would be the 10,000 metric tons standard used by the Market Advisory Committee for inclusion in a GHG Cap and Trade System in California. A 10,000-metric-ton significance threshold would correspond to the GHG emissions of approximately 550 residential units, 400,000 square feet of office space, 120,000 square feet of retail, and 70,000 square feet of supermarket space. This threshold would capture roughly half of new residential or commercial development. The basic concepts for the various approaches suggested by CAPCOA are used herein to determine whether or not the proposed project's GHG emissions are "cumulatively considerable."



CAPCOA’s suggested quantitative thresholds are generally more applicable to development on sites at the periphery of metropolitan areas, also known as “greenfield” sites, where there would be an increase in vehicle miles traveled (VMT) and associated GHG emissions than to infill development, which would generally reduce regional VMT and associated emissions. As the City of Los Angeles is generally built out, most commercial development within the City is infill or redevelopment and would be expected to generally reduce VMT and reliance on the drive-alone automobile use as compared to further suburban growth at the periphery of the region. A reduction in vehicle use and vehicle miles traveled can result in a reduction in fuel consumption and in air pollutant emissions, including GHG emissions. Recent research indicates that infill development reduces VMT and associated air pollutant emissions, as compared to greenfield sites. For example, a 1999 simulation study conducted for the USEPA, comparing infill development to greenfield development, found that infill development results in substantially fewer VMT per capita (39 percent to 52 percent) and generates fewer emissions of most air pollutants and greenhouse gases.

For this reason, the most conservative (i.e., lowest) thresholds, suggested by CAPCOA, would not be appropriate for the proposed Project given that it is located in a community that is highly urbanized. Similarly, the 900-ton threshold was also determined to be too conservative for general development in the South Coast Air Basin. Consequently, the threshold of 10,000 metric tons CO<sub>2</sub>e is used as a quantitative benchmark for significance.

**c. Project Impacts**

*(a) GHG Emissions*

Greenhouse gas emissions were calculated for mobile sources, natural gas consumption, general electricity consumption, electricity consumption associated with the use and transport of water, and solid waste decomposition. Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span. As shown in *Table IV.F-2: Greenhouse Gas Emissions*, the proposed Project would result in 1,919 metric tons of CO<sub>2</sub>e per year under the Future Cumulative with Project Conditions (2016). Existing With Project Conditions would result in 1,986 metric tons of CO<sub>2</sub>e per year. Estimated GHG emissions would be less than the 10,000 metric tons of CO<sub>2</sub>e per year quantitative significance threshold. Therefore, the proposed Project would result in a less-than-significant impact related to GHG emissions.

**TABLE IV.F-2**  
**GREENHOUSE GAS EMISSIONS<sup>1</sup>**

SOURCE	CARBON DIOXIDE EQUIVALENT (METRIC TONS PER YEAR)
EXISTING CONDITIONS (Current Year)	
Mobile	988
General Electricity	< 1
Water Cycle Electricity	120
Natural Gas	< 1
Solid Waste Decomposition	7
<b>Total</b>	<b>1,115</b>

**TABLE IV.F-2 (CONTINUED)**  
**GREENHOUSE GAS EMISSIONS<sup>1</sup>**

EXISTING WITH PROJECT CONDITIONS (Current year)	
Mobile	2,085
General Electricity	509
Water Cycle Electricity	159
Natural Gas	265
Solid Waste Decomposition	42
<b>Total</b>	<b>3,060</b>
Net Operational Emissions	1,945
Construction Emissions Amortized	41
<b>Net Emissions</b>	<b>1,986</b>
<b>Regional Significance Threshold</b>	<b>10,000</b>
Exceed Threshold?	No
FUTURE CUMULATIVE PRE-PROJECT CONDITIONS (2016)	
Mobile	995
General Electricity	< 1
Water Cycle Electricity	120
Natural Gas	< 1
Solid Waste Decomposition	7
<b>Total</b>	<b>1,122</b>
MARKET INCENTIVES/COMPLIANCE FLEXIBILITY	
Mobile	2,032
General Electricity	509
Water Cycle Electricity	159
Natural Gas	265
Solid Waste Decomposition	42
<b>Total</b>	<b>3,007</b>
Net Operational Emissions	1,885
Construction Emissions Amortized	34
<b>Net Emissions</b>	<b>1,919</b>
<b>Regional Significance Threshold</b>	<b>10,000</b>
Exceed Threshold?	No

<sup>1</sup> Source: Terry A. Hayes and Associates, 2013.

(b) *GHG Reduction Plans and Policies*

The proposed Project would meet many of the objectives and overall intent of reducing greenhouse gases consistent with direction/measures of the California Air Pollution Control Officers Association (CAPCOA) and the California Climate Action Team (CAT). Additionally, the proposed Project incorporates many “sustainable” or “green” strategies incorporated as voluntary Project Design Features (PDFs) that target sustainable site development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. These strategies are listed in *Section II: Project Description* of this Draft EIR and are not required to demonstrate consistency with GHG reduction plans and policies, but will further reduce GHG emission impacts resulting from the Project. Project consistency with

GHG reduction policies are in shown in *Tables IV.F-3: Project Consistency with Climate Action Team Greenhouse Gas Emission Reduction Strategies* and *Table IV.F-4: Project Consistency with CAPCOA Greenhouse Gas Reduction Measures*. Therefore, the proposed project would result in a less-than-significant impact related to GHG reduction plans and policies.

**TABLE IV.F-3**  
**PROJECT CONSISTENCY WITH CLIMATE ACTION TEAM**  
**GREENHOUSE GAS EMISSION REDUCTION STRATEGIES<sup>1</sup>**

STRATEGY	PROJECT CONSISTENCY
CALIFORNIA AIR RESOURCES BOARD (CARB)	
<p><b>Vehicle Climate Change Standards:</b> AB 1493 required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.</p>	<p><b>Not Applicable:</b> These are CARB enforced standards for vehicle manufacturing. Therefore, this strategy is not applicable to the Project.</p>
<p><b>Diesel Anti-Idling:</b> The CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.</p>	<p><b>Consistent:</b> Current State law restricts diesel truck idling to five minutes or less. Diesel trucks making deliveries to the Project Site would be subject to this statewide law. Construction vehicles would also subject to this regulation.</p>
<p><b>Hydrofluorocarbon Reduction:</b>            1) Ban retail sale of HFC in small cans.            2) Require that only low GWP refrigerants be used in new vehicular systems.            3) Adopt specifications for new commercial refrigeration.            4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs.            5) Enforce federal ban on releasing HFCs.</p>	<p><b>Not Applicable:</b> This strategy applies to the sale, manufacturing and regulation of consumer products. Therefore, this strategy is not applicable to the Project.</p>
<p><b>Alternative Fuels: Biodiesel Blends:</b> CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.</p>	<p><b>Not Applicable:</b> These are CARB strategies for regulating the use of alternative fuels and increasing heavy duty vehicle efficiency. Therefore, this strategy is not applicable to the Project.</p>
<p><b>Alternative Fuels: Ethanol:</b> Increased use of E-85 fuel.</p>	
<p><b>Heavy-Duty Vehicle Emission Reduction Measures:</b> Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.</p>	
<p><b>Achieve 50 Percent Statewide Recycling Goal:</b> Achieving the State’s 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills.</p>	<p><b>Consistent:</b> As a Compliance Measure and in accordance with the City of Los Angeles Construction and Demolition Waste Recycling Ordinance, during construction, non-hazardous construction and demolition debris will be recycled and/or salvaged.</p>
<p><b>Zero Waste – High Recycling:</b> Efforts to exceed the 50 percent goal would allow for additional reductions in climate change emissions.</p>	<p>Although the Project will be consistent with this Strategy through the above Compliance Measure, as a PDF, the Project will also contain easily accessible recycling areas dedicated to the collection and storage of non-hazardous materials for recycling, including paper, corrugated cardboard, glass, plastics, metals and landscaping debris.</p>

**TABLE IV.F-3 (CONTINUED)**  
**PROJECT CONSISTENCY WITH CLIMATE ACTION TEAM**  
**GREENHOUSE GAS EMISSION REDUCTION STRATEGIES<sup>1</sup>**

STRATEGY	PROJECT CONSISTENCY
<b>DEPARTMENT OF FORESTRY</b>	
<b>Urban Forestry:</b> A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	<b>Consistent:</b> The Project would include the planting of new landscape trees throughout Lot 2 of the Project Site and possibly Lot 1.
<b>DEPARTMENT OF WATER RESOURCES</b>	
<b>Water Use Efficiency:</b> Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.  Use both potable and non-potable water to maximum extent practicable; low flow appliances (i.e., toilets, dishwashers, showerheads, washing machines, etc); automatic shut off valves for sinks in restrooms; drought resistant landscaping; Place "Save Water" signs near water faucets.	<b>Consistent:</b> The Project will comply with the City's Green Building Ordinance, which includes energy efficiency requirements to exceed 2008 Title 24 Energy Code by 15%. In addition, the proposed Project's landscaping would be required to comply with the City's Landscape Ordinance and Irrigation Guidelines.  Although the Project will be consistent with this Strategy through the above Compliance Measures, as PDFs, the Project will be 20 percent more effective than required by Title 24 Standards, 2010 Edition; the Project will include stormwater infiltration and detention basins to manage stormwater runoff and limit disruption and pollution of natural water flows; and the Project will use water-efficient landscaping and native drought-tolerant plants.
<b>ENERGY COMMISSION (CEC)</b>	
<b>Building Energy Efficiency Standards in Place and in Progress:</b> Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	<b>Consistent:</b> The Project will comply with the City's Green Building Ordinance, which requires that the Project exceed the 2008 Title 24 Energy Code by 15%.  Although the Project will be consistent with this Strategy through the above Compliance Measure, as a PDF, the Project will be 20 percent more effective than required by Title 24 standards.
<b>Appliance Energy Efficiency Standards in Place and in Progress:</b> Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	<b>Not Applicable:</b> This strategy is aimed at sellers of devices, equipment, or appliances using energy in California. Therefore, this strategy is not applicable to the Project. There are no current requirements to use energy efficient appliances in dwelling units and it is at the discretion of the owner of the Project.
<b>Fuel-Efficient Replacement Tires &amp; Inflation Programs:</b> State legislation established a statewide program to encourage the production and use of more efficient tires.	<b>Not Applicable:</b> This strategy is aimed at manufacturers and sellers of tires. Therefore, this strategy is not applicable to the Project.

**TABLE IV.F-3 (CONTINUED)**  
**PROJECT CONSISTENCY WITH CLIMATE ACTION TEAM**  
**GREENHOUSE GAS EMISSION REDUCTION STRATEGIES<sup>1</sup>**

STRATEGY	PROJECT CONSISTENCY
<p><b>Municipal Utility Energy Efficiency Programs/Demand Response:</b> Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.</p>	<p><b>Consistent:</b> The Project will comply with the City’s Green Building Ordinance with regard to energy efficiency.</p>
<p><b>Municipal Utility Renewable Portfolio Standard:</b> California’s Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 20 percent of retail electricity sales from renewable energy sources by 2017, within certain cost constraints.</p>	<p>Although the Project will be consistent with this Strategy through the above Compliance Measure, as PDFs, the Project’s air filtration will be applied to process both return and outside air that is to be delivered as supply air; the Project will provide separate HVAC units for each dwelling unit and for common areas, thus providing a high level of thermal comfort controllability and satisfaction; and the Project will be constructed adjacent to the existing golf course, which will allow utilization of existing greenery as a heat absorption source to potentially reduce air-conditioning and energy usage.</p>
<p><b>Municipal Utility Combined Heat and Power:</b> Cost effective reduction from fossil fuel consumption in the commercial and industrial sector through the application of onsite power production to meet both heat and electricity loads.</p>	
<p><b>Alternative Fuels: Non-Petroleum Fuels:</b> Increasing the use of non-petroleum fuels in California’s transportation sector, as recommended as recommended in the CEC’s 2003 and 2005 Integrated Energy Policy Reports.</p>	<p><b>Not Applicable:</b> These strategies are aimed at the transportation sector. Therefore, this strategy is not applicable to the Project.</p>
<b>BUSINESS, TRANSPORTATION, AND HOUSING</b>	
<p><b>Smart Land Use and Intelligent Transportation Systems (ITS):</b> Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors.</p>	<p><b>Consistent:</b> The Project would be located in proximity to basic commercial services and public transit opportunities. The Project Site has pedestrian access to banks, groceries and restaurants within half a mile. Future residences will also have easy access to the Metropolitan Transit Authority bus service stops along adjacent roadways.</p>
<b>STATE AND COUNSUMER SERVICE AGENCY (DEPARTMENT OF GENERAL SERVICES)</b>	
<p><b>Green Buildings Initiative:</b> Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions State agencies are to take with State-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.</p>	<p><b>Consistent:</b> The Project will comply with the City’s Green Building Ordinance.</p> <p>Although the Project will be consistent with this Strategy through the above Compliance Measure, as PDFs, the Project will use natural light as the primary source of light in all dwelling units and any lighting systems will be controllable to achieve maximum efficiency. Additionally, the Project design will incorporate roofing that serves to reduce unwanted heat absorption and minimize energy consumption</p>
<p><sup>1</sup> Source: Terry A. Hayes and Associates, 2013.</p>	

**TABLE IV.F-4  
 PROJECT CONSISTENCY WITH CAPCOA GREENHOUSE GAS REDUCTION MEASURES<sup>1</sup>**

CAPCOA-SUGGESTED MEASURE	PROJECT CONSISTENCY
<p><b>T1: Bike Parking at Multi-Unit Residential:</b> Long term bicycle parking is provided at apartment complexes or condominiums without garages (e.g., one long-term bicycle parking space for each unit without a garage). Long term facilities shall consist of one of the following: a bike locker, a locked room with standard racks and access limited to bicyclists only, or a standard rack in a location that is staffed and/or monitored by video surveillance 24 hours per day).</p>	<p><b>Consistent:</b> As a Compliance Measure, and in accordance with the City’s Bicycle Parking Ordinance, the Project will provide bicycle facilities as required.</p>
<p><b>T2: Proximity to Bike Path/ Bike Lanes:</b> The Project is located within 0.5 miles of an existing/planned Class I or Class II bike lane and Project design includes a network that connects the Project uses to the existing offsite facility. Project design includes a designated bicycle route connecting all units, onsite bicycle parking facilities, offsite bicycle facilities, site entrances, and primary building entrances to existing Class I or Class II bike lane(s) within 0.5 miles. Bicycle route connects to all streets contiguous with the Project Site.</p>	<p><b>Consistent:</b> As a Compliance Measure, and in accordance with the City’s Bicycle Parking Ordinance, the Project will provide bicycle facilities as required, including a lockable storage room in each Project building for long-term parking and bike racks for short-term parking near the entrance to proposed Lot 2 along Whitsett Avenue.</p>
<p><b>T3: Minimum Parking:</b> Provide minimum amount of parking required.</p>	<p><b>Consistent:</b> The proposed Project would include 613 subterranean parking spaces underneath the senior housing community. The parking structure will include 13 handicapped parking spaces to comply with the Americans with Disabilities Act. The 613 parking spaces will exceed the 500 parking spaces required by the LAMC for the senior housing Project.</p>
<p><b>T4: Residential Density:</b> Employ Sufficient Density for New Residential Development to Support the Use of Public Transit. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 0.25 miles of the Project border.</p>	<p><b>Consistent:</b> The proposed Project is located in a developed area. The Project Site is near and accessible from nearby commercial uses (e.g., retail, restaurants, etc.) and other amenities along the Ventura Boulevard corridor, as well as adjacent to public bus transit stops. Pedestrian walkways within the Project and adjacent sidewalks will be landscaped to provide a friendly walking environment.</p>
<p><b>T5: Suburban Mixed-Use:</b> Have at least three of the following on site and/offsite within 0.25 miles: Residential Development, Retail Development, Park, Open Space, or Office.</p>	<p><b>Consistent:</b> The proposed Project is located in a developed area. The Project Site is near and accessible from nearby commercial uses (e.g., retail, restaurants, etc.). The proposed Project will also include outdoor amenities, such as a lap pool and children’s playground.</p>
<p><b>T6: Wood Burning Fireplaces/ Stoves:</b> Project does not feature fireplaces or wood burning stoves.</p>	<p><b>Consistent:</b> The Project would not include fireplaces or wood burning stoves.</p>
<p><b>T7: Low-Water Use Appliances:</b> Require the installation of low-water Use Appliances.</p>	<p><b>Consistent:</b> The proposed Project would comply with the City’s Low Impact Development Standards.</p>

**TABLE IV.F-4 (CONTINUED)**

**PROJECT CONSISTENCY WITH CAPCOA GREENHOUSE GAS REDUCTION MEASURES [1]**

CAPCOA-SUGGESTED MEASURE	PROJECT CONSISTENCY
<b>T8: Landscaping:</b> Project shall use drought resistant native trees, trees with low emissions and high carbon sequestration potential.	<b>Consistent:</b> The proposed Project’s landscaping would be required to comply with the City’s Landscape Ordinance and Irrigation Guidelines. Landscaping will include water efficient and native drought tolerant plants.
<b>T9: LEED Certification:</b> Promote building approach to sustainability by recognizing performance in sustainable site development, water savings, energy efficiency, materials selection, and indoor environment quality.	<b>Consistent:</b> The proposed Project will be designed to achieve LEED certification as noted in Project Design Feature PDF AQ-10 in <i>Section IV.B.4: Environmental Impact Analysis - Air Quality</i> of this Draft EIR. A sample LEED Checklist is included herein as <i>Appendix K</i> of this Draft EIR.
<b>T10: Energy Star Roof:</b> Project installs Energy Star labeled roof materials, where feasible.	<b>Consistent:</b> The Project design will incorporate roofing that serves to reduce unwanted heat absorption and minimize energy consumption.
<b>T11: Exceed Title 24:</b> Project exceeds title 24 requirements.	<b>Consistent:</b> The Project will comply with the City’s Green Building Ordinance, which requires that the Project exceed the 2008 Title 24 Energy Code by 15%.  Although the Project will be consistent with this measure through the above Compliance Measure, as a PDF, the Project will be 20 percent more effective than required by Title 24 standards.
<b>T12: Energy Efficient Appliance Standard:</b> Project uses energy efficient appliances.	<b>To Be Determined:</b> The use of energy efficient appliances within each dwelling unit is not required and will be determined at a later point.
<b>T13: Green Building Materials:</b> Project uses materials which are resource efficient and recycled, with long life cycles and manufactured in environmentally friendly way.	<b>Consistent:</b> As a Compliance Measure and in accordance with the City of Los Angeles Construction and Demolition Waste Recycling Ordinance, during construction, non-hazardous construction and demolition debris will be recycled and/or salvaged. Additionally, the Project will attempt to use as many regional construction materials as possible.

<sup>1</sup> Source: Terry A. Hayes and Associates, 2013.

**d. Cumulative Impacts**

A project’s GHG emissions typically would be relatively very small in comparison to State or global GHG emissions and, consequently, it would, in isolation, have no significant direct impact on climate change. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change, which can cause adverse environmental effects. Accordingly, the threshold of significance for GHG emissions determines whether a project’s contribution to global climate change is “cumulatively considerable.” As such, GHG emissions and climate change should be evaluated as a potentially significant cumulative, rather than project direct impact. Accordingly, the greenhouse gas emissions and global climate change analysis in this section already considers cumulative conditions of the Project under Future Cumulative Pre-Project Conditions and Future Cumulative

With Project Conditions, which take into account emissions from Related Projects and general ambient growth. Therefore, as determined in the above analysis, the proposed Project's generation of GHG emissions would not be cumulatively considerable and cumulative impacts would be less-than-significant.

#### **4. COMPLIANCE MEASURES, PDFS, AND MITIGATION PROGRAM**

##### **a. Compliance Measures**

The following Compliance Measures are reasonably anticipated standard conditions that are based on local, State, and federal regulations or laws that serve to offset or prevent specific air quality impacts. These Compliance Measures are applicable to the proposed Project and shall be incorporated to ensure that the Project has minimal impacts to surrounding uses:

- The Project shall comply with applicable CARB regulations and standards. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county levels.
- The Project shall comply with the applicable regulations and standards of the City of Los Angeles Construction & Demolition (C&D) Waste Recycling Ordinance.
- The Project shall comply with the applicable regulations and standards of the City of Los Angeles Green Building Code.
- The Project shall comply with the applicable regulations and standards of the City of Los Angeles Bicycle Parking Ordinance.
- The Project shall comply with the applicable regulations and standards of the City of Los Angeles Landscape Ordinance and associated Irrigation Guidelines.

##### **b. Project Design Features (PDFs)**

PDFs are specific design and/or operational characteristics included to avoid or reduce potential air quality impacts. All PDFs applicable to GHG emissions are already included as part of the Mitigation Program in *Section IV.B: Environmental Impact Analysis – Air Quality* of this Draft EIR.



**c. Mitigation Measures**

Cumulative construction and operation impacts with relation to greenhouse gas emissions would be less-than-significant, and no Mitigation Measures are required.

**5. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Implementation of all required Compliance Measures for the Project would reduce all cumulative greenhouse gas impacts to a less-than-significant level with respect to emissions and consistency with GHG education plans and policies. Voluntary implementation of the Project Design Features (PDFs) spelled out in *Section IV.B: Environmental Impact Analysis – Air Quality* of this Draft EIR would further reduce GHG impacts. Therefore, no Mitigation Measures are required and GHG impacts would remain less-than-significant.