

## 4.4 GREENHOUSE GAS EMISSIONS

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### 4.4.1 INTRODUCTION

This section discusses the existing global, national, and statewide conditions related to greenhouse gases (GHG) and global climate change. The section also provides a discussion of the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emissions, potential GHG impacts from the implementation of the proposed project, and applicable mitigation measures.

Calculations made to estimate GHG emissions associated with the proposed project and supporting technical data are found in **Appendix 4.1** of this Draft EIR.

The City received one comment related to GHG emissions in response to the Notice of Preparation (NOP) issued for this EIR. The commenter stated that the rezoning of the project site to mixed-use will decrease local jobs and increase commuters and commute mileage, and that the EIR needs to analyze the likely increase in GHG emissions from additional commuters and identify mitigation measures. This issue is addressed in the analysis below.

### 4.4.2 ENVIRONMENTAL SETTING

#### 4.4.2.1 Background

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer) (US EPA 2013). Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Impacts are due to observed climate change, irrespective of its cause, indicating the sensitivity of natural and human systems to changing climate (IPCC 2013). Continuing changes to the global climate system and ecosystems, and to California, are projected to include:

- Rapidly diminishing sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures (IPCC 2013);
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;
- Changing levels in snowpack, river flow and sea levels indicating that climate change is already affecting California's water resources (Cal EPA 2010);
- An increasing number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Southern California area and the San Joaquin Valley by the end of the 21st century (Cal EPA 2006);
- Increasing potential for erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Delta and associated levee systems due to the rise in sea level (Cal EPA 2006);
- Dry seasons that start earlier and end later, evoking more frequent and intense wildland fires (Cal EPA 2010); and
- Increasing demand for electricity due to rising temperatures (Cal EPA 2010).

The natural process through which heat is retained in the troposphere<sup>1</sup> is called the "greenhouse effect." Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere as short wave radiation. It travels through the atmosphere without warming it and is absorbed by the Earth's surface. When the Earth re-emits this radiation back toward space, the radiation changes to long wave radiation. GHGs are transparent to incoming short wave solar radiation but absorb outgoing long wave radiation. As a result, radiation that otherwise would escape back into space is now retained, warming the atmosphere. This phenomenon is known as the greenhouse effect.

#### 4.4.2.2 Greenhouse Gases

State law defines GHGs to include the following six compounds:

- **Carbon Dioxide** (CO<sub>2</sub>) is released to the atmosphere when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned. CO<sub>2</sub> emissions from motor vehicles occur during

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<sup>1</sup> The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface from 6 to 7 miles).

operation of vehicles and operation of air conditioning systems. CO<sub>2</sub> comprises over 80 percent of GHG emissions in California (Cal EPA 2014).

- **Methane** (CH<sub>4</sub>) is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in solid waste landfills, raising livestock, natural gas and petroleum systems, stationary and mobile combustion, and wastewater treatment. Methane makes up 8.3 percent of all GHGs, and mobile sources and general fuel combustion represent 0.69 percent of overall methane emissions in California (Cal EPA 2014).
- **Nitrous Oxide** (N<sub>2</sub>O) is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. Mobile sources represent about 12 percent of N<sub>2</sub>O emissions in the United States (US EIA 2011). N<sub>2</sub>O emissions from motor vehicles generally occur directly from operation of vehicles.
- **Hydrofluorocarbons** (HFCs) are one of several high global warming potential (GWP) gases that are not naturally occurring and are generated from industrial processes. HFC (refrigerant) emissions from vehicle air conditioning systems occur due to leakage, losses during recharging, or release from scrapping vehicles at end of their useful life.
- **Perfluorocarbons** (PFCs) are other high GWP gasses that are not naturally occurring and are generated in a variety of industrial processes. Emissions of PFCs are generally negligible from motor vehicles.
- **Sulfur Hexafluoride** (SF<sub>6</sub>) is another high GWP gas that is not naturally occurring and is generated in a variety of industrial processes. Emissions of SF<sub>6</sub> are generally negligible from motor vehicles.

While water vapor and carbon dioxide (CO<sub>2</sub>) are the most abundant GHGs, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific period. The GWP of a gas is determined using CO<sub>2</sub> as the reference gas, which has a GWP of 1 over 100 years (IPCC 2007).<sup>2</sup> For example, a gas with a GWP of 10 is 10 times more potent than CO<sub>2</sub> over 100 years. The use of GWP allows GHG emissions to be reported using CO<sub>2</sub> as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as “carbon dioxide equivalents” (CO<sub>2</sub>e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO<sub>2</sub>. As illustrated in **Table 4.4-1, Global Warming Potential of Greenhouse Gases**, the other GHGs are less abundant but have higher GWP than CO<sub>2</sub>. To

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<sup>2</sup> All Global Warming Potentials are given as 100-year values.

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>2e</sub>. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted. High GWP gases such as HFCs, PFCs, and SF<sub>6</sub> are the most heat-absorbent.

**Table 4.4-1**  
**Global Warming Potential of Greenhouse Gases**

Greenhouse Gas	Global Warming Potential Factor (100-Year)
Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	28
Nitrous Oxide (N <sub>2</sub> O)	265
Perfluorocarbons (PFCs)	6,630-11,100
Hydrofluorocarbons (HFCs)	4-12,400
Sulfur Hexafluoride (SF <sub>6</sub> )	23,500

*Source: IPCC. 2013. Climate Change 2013: The Physical Science Basis.*

*Note: Global warming potential measures how much heat a GHG traps in the atmosphere, in this case, over a 100-year period.*

#### 4.4.2.3 GHG Emissions Classification

To achieve consistency in reporting across different geographies, GHG emissions are classified into three categories based on the nature and source of the emissions.

- Scope 1 GHG emissions include direct emissions that are emitted on the project site/facility and are associated with on-site combustion of natural gas, fuel use in vehicle fleets, and fugitive emissions of gases used for refrigeration and scientific research. Fugitive gases include hydrofluorocarbon gases, perfluorocarbon gases, and sulfur hexafluoride (SF<sub>6</sub>).
- Scope 2 GHG emissions include indirect emissions associated with the consumption of purchased energy from off-site sources. Scope 2 electricity emissions reflect emissions from all energy used at the electricity-generating power plant, but exclude transmission and distribution losses, which are reported under Scope 3.
- Scope 3 GHG emissions include indirect emissions not covered in Scope 2, including GHG emissions from employee commuting, business air and ground travel, electricity transmission and distribution losses, off-site wastewater treatment, and off-site municipal solid waste disposal.

Note that CEQA requires an evaluation of direct and indirect emissions. With the exception of business air and ground travel, all of the Scope 1, 2, and 3 emission sources listed above must be addressed in a

CEQA document. In addition, CEQA requires that the estimate of project emissions include emissions from the supply, treatment and distribution of water used by the project.

### *Existing Project Site Emissions*

The project site is currently vacant and does not generate and direct GHG emissions.

## **4.4.3 REGULATORY FRAMEWORK**

### **4.4.3.1 International Laws and Regulations**

#### *Kyoto Protocol*

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States (the “U.S.”) joined other countries around the world in signing the United Nations’ Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHG emissions in the U.S. The plan currently consists of more than 50 voluntary programs for member nations to adopt. The Kyoto Protocol (the “Protocol”) is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Notably, while the U.S. is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the U.S. is not bound by the Protocol’s commitments. The major feature of the Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions. The major distinction between the Protocol and the UNFCCC is that while the UNFCCC encouraged industrialized countries to stabilize GHG emissions, the Protocol commits them to do so. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

On December 12, 2015, a Conference of the Parties to the UNFCCC and the 11<sup>th</sup> session of the Kyoto Protocol negotiated an agreement in Paris that would keep the rise of temperature below 2 degrees Celsius. While 186 countries published their action plans detailing how they plan to reduce their GHG emissions, these reductions would still result in up to 3 degrees Celsius of global warming. The Paris agreement asks all countries to review their plans every five years from 2020, acknowledges that \$100 billion is needed each year to enable countries to adapt to climate change. The agreement was signed into law on April 22, 2016. However, in May 2017, the U.S. announced that it would withdraw from the agreement.

### *The Western Regional Climate Action Initiative (WCI)*

The Western Regional Climate Action Initiative (WCI) is a partnership among seven states, including California, and four Canadian provinces to implement a regional, economy-wide cap-and-trade system to reduce global warming pollution. The WCI will cap GHG emissions from the region's electricity, industrial, and transportation sectors with the goal to reduce the heat trapping emissions that cause global warming to 15 percent below 2005 levels by 2020. When the WCI adopted this goal in 2007, it estimated that this would require 2007 levels to be reduced worldwide between 50 percent and 85 percent by 2050. California is working closely with the other states and provinces to design a regional GHG reduction program that includes a cap-and-trade approach. The California Air Resources Board's (CARB) planned cap and-trade program, discussed below, is also intended to link California and the other member states and provinces.

#### **4.4.3.2 Federal Laws and Regulations**

The USEPA has historically not regulated GHG emissions because it determined the Clean Air Act did not authorize it to regulate emissions that addressed climate change. In 2007, the U.S Supreme Court found that GHG emissions could be considered within the Clean Air Act's definition of a pollutant (*Massachusetts v. EPA et al*, 2007). In December 2009, USEPA issued an endangerment finding for GHG emissions under the Clean Air Act, setting the stage for future regulation. In September 2009, the National Highway Traffic Safety Administration (NHTSA) and USEPA announced a joint rule that would tie fuel economy to GHG emission reduction requirements. In June 2013, President Obama announced a Climate Action Plan that calls for a number of initiatives, including funding \$8 billion in advanced fossil energy efficiency projects, calls for federal agencies to develop new emission standards for power plants, invests in renewable energy sources, calling for adaptation programs, and leading international efforts to address climate change. There have been numerous executive actions, proposed and finalized agency regulations, investment strategies, budgets requests, and international bilateral agreements. This includes a final rule for the Clean Power Plan issued in August 2015, which has been challenged in court and the current administration has proposed rolling the rule back.

#### ***Vehicle Standards***

Other regulations have been adopted to address vehicle standards including the USEPA and the NHTSA joint rulemaking for vehicle standards.

- On March 30, 2009, the NHTSA issued a final rule for model year 2011 (NHSTA 2009).

- On May 7, 2010, the USEPA and the NHTSA issued a final rule regulating fuel efficiency and GHG emissions pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016 (US EPA 2010).
- On August 9, 2011, USEPA and NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal GHG emissions and fuel economy standards for model year 2017-2025 light-duty vehicles (US EPA and NHTSA 2011).
- NHSTA intends to set standards for model years 2022-2025 in a future rulemaking (NHSTA 2012).
- In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the USEPA and the NHTSA announced fuel economy and GHG emissions standards for medium- and heavy-duty trucks that applies to vehicles from model year 2014–2018 (US EPA and NHTSA 2011).
- On August 2, 2018, USEPA and NHTSA proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide emissions standards for passenger cars and light trucks. The proposal would retain the model year 2020 standards for both programs through model year 2026 (US EPA and NHTSA 2018)

### *Energy Independence and Security Act (the “EISA”)*

Among other key measures, the EISA would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

While superseded by NHTSA and USEPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

### 4.4.3.3 State Laws and Regulations

#### *Assembly Bill 1493*

California has adopted a series of laws and programs to reduce emissions of GHGs into the atmosphere. Assembly Bill (AB) 1493 by then-Assembly member Fran Pavley was enacted in September 2003 and requires regulations to achieve “the maximum feasible reduction of greenhouse gases” emitted by vehicles used for personal transportation.

#### *Executive Order S-3-05*

On June 1, 2005, Governor Schwarzenegger issued Executive Order S-3-05, which 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 California Environmental Protection Agency (Cal EPA) formed a Climate Action Team (“CAT”) that recommended strategies that can be implemented by state agencies to meet GHG emissions targets. The Team reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order (Cal EPA 2006). Furthermore, the report provided to Governor Schwarzenegger in 2006 indicated that smart land use and increased transit availability should be a priority in the State of California (Cal EPA 2006). According to the California Climate Action Team, smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

#### *Executive Order B-30-15*

In April 2015, Governor Brown signed Executive Order B-30-15 that provides the state a mid-term target for reaching GHG reduction goals. The executive order establishes a target for the state to reduce its GHG emissions such that the state’s 2030 emissions are 40 percent of the 1990 emissions. According to the state, California is on track to meet or exceed the current target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32 (discussed below). The new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, established by Executive Order S-3-05.

### ***Assembly Bill 32***

In September 2006, AB 32 was signed into law by Governor Arnold Schwarzenegger, focusing on achieving GHG emissions equivalent to statewide levels in 1990 by 2020. It 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.

CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. This Scoping Plan, which was developed by CARB in coordination with the CAT, was first published in October 2008 (the “2008 Scoping Plan”). The 2008 Scoping Plan proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce the state’s dependence on oil, diversify the state’s energy sources, save energy, create new jobs, and enhance public health. It accommodated the State’s projected population growth. Moreover, it expressly called for coordinated planning of growth, including the location of dense residential projects near transportation infrastructure, including public transit.

On May 22, 2014, ARB approved its first update to the AB 32 Scoping Plan, recalculating 1990 GHG emissions using IPCC Fourth Assessment Report (AR4) released in 2007. It states that based on the AR4 global warming potentials, the 427 MMTCO<sub>2e</sub> 1990 emissions level would be slightly higher than identified in the original Scoping Plan, at 431 MMTCO<sub>2e</sub>. Based on the revised estimates of expected 2020 emissions identified in the 2011 supplement to the FED and updated 1990 emissions levels identified in the draft first update to the Scoping Plan, achieving the 1990 emission level would require a reduction of 76 MMTCO<sub>2e</sub> or a reduction by approximately 15.3 percent (down from 28.4 percent) to achieve in 2020 emissions levels in the BAU condition. ARB’s First Update “lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050,” and many of the emission reduction strategies recommended by CARB would serve to reduce a project’s post-2020 emissions level to the extent applicable by law by focusing on reductions from several sectors (ARB 2014).

On December 14, 2017, CARB approved the final version of *California’s 2017 Climate Change Scoping Plan* (2017 Scoping Plan), which outlines the proposed framework of action for achieving the SB 32 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB 2017). See further discussion below.

Nearly all reductions are to come from sources that are controlled at the statewide level by State agencies, including the CARB, Public Utilities Commission (PUC), High Speed Rail Authority (HSRA), and

California Energy Commission (CEC). The few actions that are directly or indirectly associated with local government control are in the Transportation sector. Of these actions, only one (GHG reductions through coordinated planning) specifically identifies local governments as the responsible agency.

### ***Cap-and-Trade Program***

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and declines over time, achieving GHG emission reductions throughout the program’s duration.

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California’s GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects’ electricity usage are covered by the Cap-and-Trade Program.

On July 25, 2017, the Governor signed AB 398 into law, extending the Cap-and-Trade Program to 2030. AB 398 calls for half of emissions offsets to be generated in California and prohibits CARB and air districts from regulating CO<sub>2</sub> from sources under the Cap-and-Trade program.

### ***Senate Bill 1368***

Senate Bill (SB) 1368 requires the California Public Utilities Commission and the California Energy Commission to establish GHG emissions 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.

### ***SB 97 & CEQA Guidelines***

In August 2007, the California State Legislature adopted Senate Bill 97 (SB 97), requiring the Governor’s Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions. In response to SB 97, the OPR adopted CEQA guidelines that became effective on March 18, 2010. The amendments provide guidance to public agencies on analysis and mitigation of the effects of GHG emissions in CEQA documents, including the following:

- 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 CARB 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 CARB'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.

### ***State Bill 375***

On September 30, 2008, SB 375 was instituted to help achieve AB 32 goals through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve GHG emissions reductions targets for the transportation sector. It establishes a process for CARB to develop GHG emissions reductions targets for each region (as opposed to individual local governments or households). SB 375 also requires Metropolitan Planning Organizations ("MPOs") to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions.

In February 2018, CARB released its updated final report recommending updates to the SB 375 GHG emission reduction targets across the State (CARB 2018). This addresses several statutory, technological, and policy factors that have changed since the original 2010 targets. The original SB 375 2020 targets for the Metropolitan Transportation Commission/Association of Bay Area Governments region were a seven percent reduction, while the proposed 2035 target could increase from a 15 percent to a 19 percent reduction.

### ***Senate Bill 350***

On October 7, 2015, Senate Bill 350: Clean Energy and Pollution Reduction Act (SB 350) was signed into law, establishing new clean energy, clean air and greenhouse gas reduction goals for 2030 and beyond. Building off of AB 32, SB 350 established California's 2030 greenhouse gas reduction target of 40 percent

below 1990 levels. To achieve this goal, SB 350 set ambitious 2030 targets for energy efficiency and renewable electricity, among other actions aimed at reducing greenhouse gas emissions. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

### ***Senate Bill 32 (SB 32) and AB 197***

On September 8, 2016, California signed into law Senate Bill 32 (SB 32), which adds Section 38566 to the Health and Safety Code and requires a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels. SB 32 was passed with companion legislation (AB 197, Chapter 250, Statutes of 2016), which provides greater legislative oversight of CARB's GHG regulatory programs, requires CARB to account for the social costs of GHG emissions, and establishes a legislative preference for direct reductions of GHG emissions.

In November 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), which outlines the proposed framework of action for achieving California's SB 32 2030 GHG target: a 40 percent reduction in GHG emissions by 2030 relative to 1990 levels.<sup>3</sup> The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by E.O. B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels.

The 2017 Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 MMTCO<sub>2e</sub>, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO<sub>2e</sub> beyond current policies and programs. Key elements of the 2017 Update include a proposed 20 percent reduction in GHG emissions from refineries and an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2050 limit set forth by E.O. B-30-15. For the transportation sector, the 2017 Update indicates that while most of the GHG reductions will come from technologies and low carbon fuels, a reduction in the growth of vehicle miles traveled (VMT) is also needed. The 2017 Update indicates that stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. It notes that here is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals. The

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<sup>3</sup> CARB, *California's 2017 Climate Change Scoping Plan*, November 2017.

2017 Update recommends that local governments consider policies to reduce VMT, including: “land use and community design that reduces VMT; transit-oriented development; street design policies that prioritize transit, biking, and walking; and increasing low carbon mobility choices, including improved access to viable and affordable public transportation and active transportation opportunities.”

### ***Senate Bill 100***

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California’s RPS and SB 350, as discussed above, to the following: achieve a 50 percent renewable resources target by December 31, 2026 and achieve a 60 percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

### ***Senate Bill 743***

Governor Brown signed SB 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the *CEQA Guidelines* to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” Measurements of transportation impacts may include vehicle miles traveled, vehicles miles traveled per capita, automobile trip generation rates, or automobile trips generated.”<sup>4</sup>

### ***Title 24 Energy Efficiency Standards***

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

### ***California Green Building Standards***

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations (the “CCR”), is commonly referred to as the *CALGreen* Code. *CALGreen* was added to Title 24 to represent

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<sup>4</sup> Public Resources Code Section 21099(b)(1)

base standards for reducing water use, recycling construction waste, and reducing polluting materials in new buildings. In contrast, Title 24 focuses on promoting more energy-efficient buildings and considers the building envelope, heating and cooling, water heating, and lighting restrictions. The current 2016 CALGreen Code became effective January 1, 2017.

### ***California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)***

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy and water efficient appliances.

### Center for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court’s decision published on November 30, 2015, in the Center for Biological Diversity v. California Department of Fish and Wildlife (62 Cal.4<sup>th</sup> 204) (also known as the “Newhall Ranch” Case) reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the County of Los Angeles. The EIR used a business as usual (BAU) approach to determine whether the project would impede the state’s compliance with statutory emissions reduction mandate established by AB 32 and the 2008 Climate Change Scoping Plan. The California Supreme Court did not invalidate the BAU approach entirely but did hold that the “Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.”<sup>5</sup>

The California Supreme Court suggested regulatory consistency as a pathway to compliance, by stating that a lead agency might assess consistency with AB 32’s goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emission from particular activities. The Court stated that a lead agency might assess consistency with AB 32’s goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities, including statewide programs and local climate action plans or GHG emissions reduction plans. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. The

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<sup>5</sup> *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4<sup>th</sup> 204, 230.

Court also suggested: “A lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions” (bright line threshold approach) if supported by substantial evidence.

It is important to note that the Court gave a nod to use of efficiency metrics, which describe emissions on a per capita basis, per service population basis, or some other rate-oriented descriptor. The Court’s support of efficiency metrics as a superior approach was based on the recognition that California population will continue to grow, while at the same time GHG emissions will need to shrink.

#### 4.4.3.4 Regional

##### *Bay Area Air Quality Management District*

On June 2, 2010, the Bay Area Air Quality Management District (BAAQMD) adopted updated *CEQA Guidelines*. These guidelines were last updated on May 9, 2017.<sup>6</sup> These guidelines contain GHG operational emissions significance thresholds and recommended methodologies and models to be used for assessing the impacts of project-specific GHG emissions on global climate change. The updated BAAQMD *CEQA Air Quality Guidelines* state that thresholds of significance for GHG emissions should be related to AB 32’s GHG reduction goals or the state’s strategy to achieve the 2020 GHG emissions limit, and also include measures for reducing GHG emissions from land use development projects and stationary sources.

##### *Plan Bay Area*

Plan Bay Area is the Bay Area’s RTP/SCS and was adopted jointly by the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) on July 26, 2017. It lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. The 2040 Plan Bay Area is a limited and focused update to the 2013 Plan Bay Area, with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last several years. As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated in PDAs. Per the 2040 Plan Bay Area, while the projected number of new housing units and new jobs within PDAs would increase to 629,000 units and 707,000 jobs compared to the 2013 Plan Bay Area,

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<sup>6</sup> BAAQMD, *CEQA Air Quality Guidelines*, May 2017. <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>.

its overall share would be reduced to 77 percent and 55 percent. However, the 2040 Plan Bay Area remains on track to meet a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

#### 4.4.4 IMPACTS AND MITIGATION MEASURES

##### 4.4.4.1 Significance Criteria

The impacts related to GHG emissions resulting from the implementation of the proposed project would be considered significant if they would exceed the following significance criteria, in accordance with Appendix G of the *State CEQA Guidelines*:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The *State CEQA Guidelines* include Section 15064.4, which states that, when making a determination with respect to the significance of a project's GHG emissions, a lead agency shall have discretion to determine whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) Rely on a qualitative analysis or performance-based standards. Section 15064.4 also states that a lead agency should consider the following factors when assessing the significance of the impact of GHG emissions on the environment: (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

*CEQA Guidelines* Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. As stated above, lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or

suggested by other experts, such as the California Air Pollution Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (See CEQA Guidelines Section 15064.7(c)). The *CEQA Guidelines* also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see *CEQA Guidelines* Section 15130 (f)). As a note, the CEQA Guidelines were amended in response to SB 97 to specify that compliance with a GHG emission reduction plan renders a cumulative impact insignificant.

Per *CEQA Guidelines* Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions" (*CEQA Guidelines* Section 15064(h)(3)). Put another way, *CEQA Guidelines* Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

In the absence of any applicable adopted numeric threshold, the significance of a project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b)(2) considering whether the project complies with applicable plans, policies, regulations and requirements adopted to implement statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the Solano County Climate Action Plan and Plan Bay Area 2040, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long term climate goals.

### ***BAAQMD Thresholds***

BAAQMD *CEQA Air Quality Guidelines* contain numeric and non-numeric thresholds of significance that may be used to evaluate the significance of the operational GHG emissions from stationary and non-

stationary sources<sup>7</sup> of GHG emissions associated with a proposed project. These thresholds of significance can be used by a lead agency to determine whether the project exceeds the first GHG significance criteria from Appendix G of the *State CEQA Guidelines*, i.e., whether the project would generate GHG emissions, "either directly or indirectly, that may have a significant impact on the environment." There are no numeric or qualitative significance thresholds for evaluating the GHG impact of a project's construction emissions, although BAAQMD *CEQA Air Quality Guidelines* state that construction emissions should be quantified, reported, and evaluated.

### Thresholds for Operational Emissions from Non-Stationary Sources

The numeric significance thresholds for non-stationary source operational GHG emissions in the BAAQMD *CEQA Air Quality Guidelines* are the following:

- A bright-line threshold of 1,100 MTCO<sub>2</sub>e/year, or
- An efficiency threshold of 4.6 MTCO<sub>2</sub>e/service person/year (where service persons are residents plus employees).

The BAAQMD thresholds were developed specifically for the Bay Area after considering the Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. By using these thresholds, the BAAQMD intended to achieve GHG reductions from new land use developments to close the gap between projected regional emissions and the AB 32 targets. However, the thresholds were designed for compliance with AB 32 which has a target date of 2020. BAAQMD staff has suggested that for projects that would become operational after 2020, lead agencies should consider developing additional thresholds to evaluate a project's GHG impact.

Based on the current schedule, the proposed project is anticipated to be fully constructed and occupied in 2021. However, because the project's emissions would essentially occur in the years after 2021, in order to evaluate the project's impact, a conservatively developed new efficiency metric (annual emissions per service person, per year) that is consistent with the direction provided by SB 32 was used. Using the Bay Area 1990 emissions level, the AB 32 target that 2020 emissions equal 1990 emissions, and the mid-term target provided by SB 32 that 2030 emissions be 40 percent below 1990 levels, as well as the existing efficiency threshold of 4.6 MTCO<sub>2</sub>e/person/year, an efficiency metric for the Bay Area for year 2021 was calculated at 4.42 MTCO<sub>2</sub>e/service person/year (details of the methodology used to calculate the metric

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<sup>7</sup> Stationary sources are defined as land uses that would accommodate processes and equipment that emit GHG emissions and would require an BAAQMD permit to operate, while non-stationary source land use development includes residential, commercial, industrial, and public land uses and facilities. As there are no stationary sources associated with the proposed project that would routinely emit GHGs, the BAAQMD numeric threshold of 10,000 MTCO<sub>2</sub>e/year for stationary sources is not discussed in this section.

are in **Appendix 4.1**). This metric was developed specifically for this project. As stated above, CEQA does give lead agencies the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (See CEQA Guidelines Section 15064.7(c)).<sup>8</sup> In this case, the Bay Area’s AB 32 target is an adopted threshold and has been modified to conservatively apply to this project.

Further, long-term goals for GHG reductions for 2030 and 2050 also have been articulated in EO B-30-15 and EO S 3-05, respectively. The 2030 threshold of 2.75 MT CO<sub>2e</sub> per service population was calculated for 2030 and based on the GHG reduction goal established under SB 32 and EO B-30-15 (40 percent reduction below 1990 levels by 2030, taking into account the 1990 emissions levels adjusted for the AR4 global warming potentials for consistency with the rest of the inventory and the projected 2030 statewide population and employment levels). The detailed derivation is shown in **Appendix 4.1**. The comparison to these thresholds is used to determine whether GHG emissions exceed the BAAQMD threshold for what is considered a significant amount of GHG emissions. It is not intended to demonstrate consistency with any plan for reducing GHG emissions.

In addition to the existing efficiency threshold of 4.6 MTCO<sub>2e</sub>/person/year, the 2021 and 2030 thresholds were also used to evaluate the significance of the impact associated with the project’s non-stationary source operational emissions.

It should be noted that the current legal climate regarding thresholds and analysis within CEQA documents is evolving. Several recent cases have addressed the issues of thresholds and use of a statewide data. One such case is *Golden Door Properties, LLC v. County of San Diego* (2018) Cal.App.5th 892. In this case, the Court of Appeal held that the County “reli[ed] on statewide data without evidence supporting its relationships to countywide [GHG] reductions.” This approach was legally flawed under the principles set forth in *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204. The Court concluded that the County failed to address why using the statewide data that did not specifically address the County was appropriate for the County and also failed to account for variations in different types of development.

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<sup>8</sup> See *CEQA Guidelines* Section 15384 “Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.”

#### 4.4.4.3 Methodology

Amendments to CEQA Guidelines 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e. extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggest by other experts such as CAPCOA, so long as any threshold chosen is supported by substantial evidence. The National Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and they should be analyzed in the context of CEQA's requirements for cumulative impact analysis.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Under CEQA when no guidance exists, the lead agency may look to and assess general compliance with comparable regulatory schemes.<sup>9</sup>

In evaluating climate change impacts, OPR recommends consideration of a project's consistency with the State's long-term climate goals or strategies to reduce GHG emissions. The lead agency may also use modeling to estimate a project's contribution to climate change by preparing an emissions inventory. For this project, GHG emissions are quantified for information purposes. A numerical threshold is provided solely for the purpose of demonstrating progress toward the state's long-term climate goals.

#### *Quantification of Emissions*

As noted above, CEQA guidelines require that the impact from a project's GHG emissions, emitted directly or indirectly, be evaluated. Direct emissions are those that are emitted on a project site whereas

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<sup>9</sup> See *Protect Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1107, "A lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means or promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and resolution." Lead agencies can, and often do, use regulatory agencies' performance standards. A project's compliance with these standards usually is presumed to provide adequate level of project for environmental resources. See e.g., *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal. App 4th 74, 99 (upholding use of regulatory agency performance standard).

indirect emissions are those that are emitted off-site, such as those associated with vehicular traffic, electricity generation, etc. OPR has noted that lead agencies “should make a good-faith effort, based on available information, to calculate, model, or estimate... GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities” (OPR 2017). Therefore, direct and indirect emissions were calculated for the project. Both construction phase and operational emissions were calculated.

GHG emissions were quantified using the [California Emissions Estimator Model](#) (CalEEMod) version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model is considered by the BAAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California. As set forth in greater detail in **Section 4.1, Air Quality**, the project land use types and size, construction schedule, assumptions of construction equipment usage and truck trips, were input to CalEEMod.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions. As a result, there is an inability to conclude whether a project’s GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. The analysis of the project’s GHG emissions is particularly conservative in that it assumes all GHG emissions are new additions to the atmosphere.

### **Construction**

The project’s construction emissions were calculated using CalEEMod. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile source and fugitive dust emissions factors derived from CalEEMod.

The calculations of the emissions generated during project construction reflect the types and quantities of construction equipment that would be used to grade the project site, construct the new buildings and related improvements and plant new landscaping.

## Operation

Similar to construction, CalEEMod was used to calculate potential GHG emissions generated by new land uses on the project site, including area sources, electricity, natural gas, mobile sources, solid waste generation and disposal and water usage/wastewater generation.

Area source emissions include landscaping equipment, which are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Emissions of GHGs associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. As with electricity, the emissions of GHG associated with the natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted.

Mobile source GHG emission are calculated based on an estimate of the project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the transportation study prepared for the project. The CalEEMod derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new employee and visitor trips to and from the project site and other activities that create a vehicle trip.

The emissions of GHGs associated with solid waste disposal are based on the size of the project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution, electrical intensity factors for wastewater treatment, the GHG factors for the electricity utility provider, and the GWP values for the GHGs emitted.

The analysis of project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force at project buildout (e.g., Pavley I Standards and full implementation of California's Statewide RPS beyond current levels of renewable energy). It should be noted that GHG reductions due to low carbon fuel standards (LCFS) are not currently incorporated into CalEEMod and are thus not captured in the analysis presented herein. Calculation of project emissions conservatively did not include actions and mandates that are not already in place, but are anticipated to be enforced at

project buildout (e.g., Pavley II, which could further reduce GHG emissions from light duty vehicles by 2.5 percent). Similarly, emissions reductions regarding cap-and-trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the project's GHG emissions at buildout because the state is expected to implement a number of policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the state's long term climate goals.

### **Project Design Features**

As discussed in the Project Description, the project will incorporate the following design features to reduce energy use and GHG emissions:

- All buildings will meet or exceed Title 24 energy requirements.
- All apartments will be equipped with Energy Star certified appliances (dishwashers and refrigerators).
- Energy efficient LED light fixtures will be installed within the apartment buildings and for exterior lighting.
- All residential units will incorporate energy efficient Low-E windows.
- A minimum of 15 percent of the roof areas will be reserved for future photovoltaic (PV) solar installation. Infrastructure (conduit, structural elements, etc.) will be provided to facilitate the future PV solar installation.
- Each residential structure will be installed with a solar thermal assist hot water heating system.
- On-site parking will be designed for future Electric Vehicle (EV) charging station expansion.
- Temperature controllers will be installed for pool and spa heaters.

#### **4.4.4.5 Project Impacts and Mitigation Measures**

**Impact GHG-1: Project construction and operation would generate greenhouse gas emissions, either directly or indirectly, that would potentially have a significant impact on the environment.**

**Impact GHG-2: The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gas emissions.**

### *Construction GHG Emissions*

Emissions associated with construction of the proposed project site are anticipated to occur between Spring 2020 and Fall 2021. Project construction activities include site preparation, grading, building construction, pavement and asphalt installation, landscaping and hardscaping, and architectural coatings. Based on the result of CalEEMod modeling, approximately 1,096 MTCO<sub>2e</sub> of GHG emissions would be emitted during the 2-year project construction period.

The BAAQMD has not yet set forth quantitative or qualitative thresholds for the evaluation of construction-phase GHG emissions. The BAAQMD advises that lead agencies quantify and disclose GHG emissions that would occur during construction and make a determination on the significance of these construction-generated GHG emissions in relation to meeting AB 32 GHG emissions reduction goals. GHG emissions from construction activities are one-time, short-term emissions; and therefore, would not significantly contribute to long-term cumulative GHG emissions. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation.<sup>10</sup> As shown in **Table 4.4-2** below, the Project's construction phase GHG emissions would not exceed the BAAQMD Bright Line Threshold of 1,100 MTCO<sub>2e</sub> when amortized appropriately. Impacts would be less than significant.

**Table 4.4-2  
Project GHG Emissions – Construction Phase**

Source	Emissions (in MTCO <sub>2e</sub> )
Total Construction Emissions	1,096
30-year Amortized Construction	37
BAAQMD Bright Line Threshold	1,100
<i>Exceed Threshold?</i>	No

<sup>10</sup> The South Coast Air Quality Management District's *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* discusses recommending amortizing construction emissions over the life of the project. It is important to note that even without amortizing GHG emissions from construction, project construction emissions would still be below the BAAQMD stationary source threshold.

### Operational GHG Emissions

As previously discussed, the goal to reduce GHG emissions to 1990 levels by 2020 (Executive Order S-3-05) was codified by the Legislature as AB 32. In 2008, CARB approved a Climate Change Scoping Plan as required by AB 32. In 2016, SB 32 was signed into law to include an emission reduction goal for the year 2030. The 2017 Update was updated to include 2030 targets specified in SB 32. The 2008 Climate Change Scoping Plan has a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as cap-and-trade, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce project related GHG emissions.

**Table 4.4-3, Green Valley II Annual Operational Emissions**, presents the results of the CalEEMod model analysis in terms of annual MTCO<sub>2</sub>e. As shown in **Table 4.4-3** below, operation of the project would generate approximately 3,779 MTCO<sub>2</sub>e/year. The daily service population associated with the proposed project would be approximately 866 persons.<sup>11</sup> The per capita emissions would be 4.3 MTCO<sub>2</sub>e/per capita/year, which would be below the BAAQMD efficiency threshold of 4.6 MTCO<sub>2</sub>e/capita/year. As described above, a secondary metric used in this analysis is the SB 32 based efficiency threshold of 4.42 MTCO<sub>2</sub>e/capita/year. This threshold was chosen because the project will be operational in 2021 which is beyond the BAAQMD's 2020 threshold.

**Table 4.4-3  
Green Valley II Annual Operational Emissions**

Source	Emissions (in MTCO <sub>2</sub> e)
Area	3
Energy	138
Mobile	3,493
Stationary	1
Waste	88
Water	56
<b>Total Operational Emissions (2021)</b>	<b>3,779</b>
Per Capita Emissions	4.4 MT/capita/year
BAAQMD Efficiency Threshold	4.6 MT/capita/year
<i>Exceed Threshold?</i>	No
SB 32 based 2021 Efficiency Threshold	4.42 MT/capita/year

<sup>11</sup> Service population = 821 residents + 45 employees

Source	Emissions (in MTCO <sub>2e</sub> )
<i>Exceed Threshold?</i>	No
SB 32 based 2030 Efficiency Threshold	2.75 MT/capita/year
<i>Exceed Threshold?</i>	<b>Yes</b>

As noted above, the Newhall Ranch decision indicated that using targets derived from statewide information may not be sufficient to demonstrate necessary reductions to meet climate reduction goals at the project level. The BAAQMD efficiency metric is derived from statewide goals and, as such, 4.42 MT/capita/year may not provide sufficient reductions for an individual project. A geographically specific threshold was calculated for the year 2030 by obtaining emissions estimates for California and the City of Fairfield, and estimating a local emissions target based on statewide targets. These targets were then divided by the projected service population of the City of Fairfield for the year 2030 to determine an efficiency metric of 2.75 MT/capita/year. As shown in **Table 4.4-3**, the project would exceed this numeric threshold. As stated in the Methodology section above, due to the uncertain and evolving nature of GHG analysis, thresholds are provided for informational purposes only.

#### ***Consistency with EO S-3-05, AB 32, SB 350, and SB 32***

AB 32 established the goal for the reduction of California's GHG emissions to 1990 levels by 2020. Prior to that, Executive Order S-3-05 established the goal of reducing California's emissions 80 percent under 1990 levels by 2050. In 2015 and 2016, SB 350 and SB 32 were signed into law, establishing the state's mid-term target for 2030 emissions to be 40 percent below the 1990 emissions.

Following the passage of AB 32, some of regional air districts in the state, such as the BAAQMD, based their planning and regulations on the requirements of AB 32, which included a reduction of GHG emissions to 1990 levels by 2020. The BAAQMD set forth the GHG significance thresholds specifically to meet AB 32 requirements within its jurisdiction, and so plans and projects that meet those thresholds can be assumed to meet the requirements of AB 32. The per capita GHG emissions from each Alternative of the proposed project would be below the BAAQMD efficiency threshold of 4.6 MTCO<sub>2e</sub>/per capita/year that applies to projects through 2020. Therefore, the proposed project would not conflict with AB 32.

Further, the project's emissions level beyond 2030 cannot be reliably quantified to determine compliance with Executive Order S-3-05 goals; but statewide efforts are underway to facilitate the State's achievement of that goal. Overall, it is reasonable to expect that the proposed project's emissions profile would decline as the regulatory initiatives identified in the CARB's Scoping Plan are implemented, and other technological innovations occur. Stated differently, the project's emissions total at build-out in 2021

presented in this analysis represents the maximum emissions inventory for the project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in project emissions once fully constructed and operational, the project is consistent with the Executive Order's horizon-year goal.

Many of the emission reduction strategies recommended by CARB would serve to reduce the project's post-2020 emissions level to the extent applicable by law and help lay the foundation "...for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," as called for in CARB's First Update to the AB 32 Scoping Plan.<sup>12</sup> As such, the project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Order S-3-05 and B-30-15.

Additionally, the CARB *California's 2017 Climate Change Scoping Plan* details measures designed to meet the goals set by SB 32. According to the plan, CARB recommends lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions (CARB 2017). As detailed in the traffic study for the proposed project, there are trip reductions for internal capture associated with the mix of uses at the proposed project that would reduce VMT (Fehr & Peers 2018). In addition to this, the proposed project features several sustainable design features designed to reduce GHG emissions and VMT. These features include:

#### **Water**

- Utilize reclaimed irrigation water.
- New landscape plants will be drought tolerant, native to California or other Mediterranean climates, or other low water use species.
- High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers that use satellite weather data will be used.
- All water fixtures (faucets, showerheads, and toilets) will be low flow and/or WaterSense certified for low water use.
- All units will be equipped with Energy Star certified dishwashers for low water use.
- High-efficiency hot water boiler systems will be used for efficient hot water distribution.

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<sup>12</sup> CARB, First Update, p. 4, May 2014. See also *id.* at pp. 32–33 [recent studies show that achieving the 2050 goal will require that the "electricity sector will have to be essentially zero carbon; and that electricity or hydrogen will have to power much of the transportation sector, including almost all passenger vehicles."]; CARB, First Update, Table 6: Summary of Recommended Actions by Sector, pp. 94-99, May 2014..

### Energy

- All buildings will exceed Title 24 energy requirements by a minimum of 10 percent.
- All apartments will be equipped with Energy Star certified appliances (dishwashers and refrigerators).
- Energy efficient LED light fixtures will be installed within the apartment buildings and for exterior lighting.
- All residential units will incorporate energy efficient Low-E windows.
- A minimum of 15 percent of the roof areas will be reserved for future photovoltaic (PV) solar installation. Infrastructure (conduit, structural elements, etc.) will be provided to facilitate the future PV solar installation.
- Installation of solar thermal assist hot water heating system on each structure.
- The parking garage will be designed for future Electric Vehicle (EV) charging station expansion.
- Temperature controllers will be installed for pool and spa heaters.

### Materials

- More than 55 percent of all demolition materials and construction debris will be recycled.
- Durable, non-combustible materials, and fire resistant roofing will be used.
- Low/no VOC paints and coatings will be used in project construction and maintenance.
- Low VOC caulks, construction adhesives, and sealants will be used in project construction and maintenance.

### Site Planning & Design

- The proposed project will be equipped with secure bicycle storage areas for residents.

With regard to SB 32 and SB 350, the analysis under **Impact GHG-1** illustrates that the project's per capita operational emissions would be less than the SB 32 based efficiency threshold, derived from the current BAAQMD GHG efficiency threshold, used in this Draft EIR.

Therefore, the proposed project is consistent with the applicable laws, plans and policies adopted for the purpose of reducing the emissions of GHG emissions. The impact would be less than significant.

### Consistency with Solano County Climate Action Plan

The Solano County Climate Action Plan is the local plan for reducing GHG emissions. Although the majority of measures presented in the Solano County Climate Action Plan (CAP) are applicable to government operations, **Table 4.4-4** analyzes the proposed project's consistency with measures presented in the Solano County CAP.

**Table 4.4-4  
Project Consistency with Solano County Climate Action Plan**

Actions and Strategies	Consistency Analysis <sup>1a/</sup>
<b>Agriculture</b>	
AG-1: Develop a program that provides outreach, technical assistance, and incentives to promote soil management techniques that reduce nitrous oxide emissions and increase carbon sequestration within agricultural operations.	<b>Not Applicable.</b> While this strategy aims to improve agricultural operations. The proposed project does not include any agricultural uses. The proposed project would not interfere with such policymaking.
AG-2: Develop an outreach program aimed at reducing field equipment emissions and fuel costs.	<b>Not Applicable.</b> While this strategy aims to improve agricultural operations. The proposed project does not include any agricultural uses. The proposed project would not interfere with such policymaking.
AG-4: Encourage the use of alternatives to the fumigant and potent greenhouse gas Methyl Bromide and other fumigants with high global warming potential.	<b>Not Applicable.</b> While this strategy aims to improve agricultural operations. The proposed project does not include any agricultural uses. The proposed project would not interfere with such policymaking.
AG-5: Assist agricultural producers and processors in efforts to increase the sale of locally grown-products to local/regional markets.	<b>Not Applicable.</b> While this strategy aims to improve agricultural operations. The proposed project does not include any agricultural uses. The proposed project would not interfere with such policymaking.
AG-6: Allocate financial resources towards the position of a County Agricultural Ombudsman.	<b>Not Applicable.</b> While this strategy aims to improve agricultural operations. The proposed project does not include any agricultural uses. The proposed project would not interfere with such policymaking.
<b>Energy and Efficiency</b>	
E-1: Investigate the potential to establish a countywide community choice aggregation program and increase the community's use of locally produced renewable energy.	<b>Not Applicable.</b> This strategy aims to establish a community choice aggregation (CCA) program. The proposed project would not interfere with such policymaking.
E-2: Develop a comprehensive renewable energy program that provides outreach, financing, and other forms of assistance to residential, commercial, agricultural, and industrial uses.	<b>Not Applicable.</b> This strategy aims for the County to develop a comprehensive energy program. The proposed project would not interfere with such policymaking. The proposed project would, however, include many energy efficiency measures outlined above.
E-3: Develop a comprehensive energy efficiency	<b>Not Applicable.</b> This strategy aims for the County to

Actions and Strategies	Consistency Analysis <sup>/a/</sup>
program that provides outreach, financing, and other forms of assistance to residential, commercial, agricultural, and industrial uses.	develop a comprehensive energy program. The proposed project would not interfere with such policymaking. The proposed project would, however, include many energy efficiency measures outlined above.
E-4: Adopt green building and energy efficiency ordinances to require green building practices, programs and design elements.	<b>Potentially Consistent.</b> This strategy calls for County adoption of green building practices. The proposed project would not interfere with such policymaking. The proposed project would, however, comply with all County building practices, and would meet or exceed Title 24 standards.
E-5: Work with Cal Recycle, Bay Area waste agencies, other jurisdictions, and interested private sector parties to develop an agricultural and food waste-to- energy biomass facility in Solano County.	<b>Not Applicable.</b> This strategy calls for multiple agencies to develop a food waste-to-energy biomass facility. The proposed project would not interfere with such policymaking.
E-6: Partner with Solano Economic Development Corporation, Pacific Gas & Electric, and agricultural processing and industrial energy businesses to increase building and process energy efficiency	<b>Not Applicable.</b> This strategy calls for multiple agencies to increase building and process energy efficiency. The proposed project would not interfere with such policymaking.
E-7: Work with Solano Economic Development Corporation and cities to establish an eco-agriculture and food processing park that incorporates industrial ecology, renewable energy generation, and zero-waste practices.	<b>Not Applicable.</b> This strategy calls for cities to establish an eco-agricultural and food processing park. The proposed project would not interfere with such policymaking.
E-M1: Reduce total energy consumption in County facilities cost-effectively by 20% by 2020.	<b>Potentially Consistent.</b> This measure applies to County facilities. However, the proposed project includes many energy reduction measures listed above. The proposed project would not interfere with such policymaking.
E-M2: Increase the use of renewable energy in County operations.	<b>Potentially Consistent.</b> This measure applies to County facilities. However, the proposed project includes many energy reduction measures listed above. The proposed project would not interfere with such policymaking.
<b>Transportation and Land Use</b>	
TC-1: Solano County will work with STA to enhance countywide rideshare infrastructure and services.	<b>Not Applicable.</b> This strategy calls for the County to enhance rideshare infrastructure and services. The proposed project would not interfere with such policymaking.
TC-2: Work with STA to increase public transit ridership by expanding express bus service and improving transit stop amenities and transit connections.	<b>Not Applicable.</b> This strategy calls for the County to increase public transportation service and connections. The proposed project would not interfere with such policymaking.
TC-3: Work with cities and STA to improve bicycle and pedestrian connectivity in the county.	<b>Not Applicable.</b> This strategy calls for the County to work with cities to improve bicycle and pedestrian connectivity. The proposed project would not interfere with such policymaking.
TC-4: Educate residents and businesses about options to reduce motor vehicle emissions.	<b>Not Applicable.</b> This strategy calls for the County to provide education about options to reduce motor vehicle emissions. The proposed project would not

Actions and Strategies	Consistency Analysis <sup>/al</sup>
	interfere with such policymaking.
TC-M1: Replace County vehicles with fuel efficient, electric, or alternative fuel vehicle models as the existing fleet is retired. (Emergency Vehicles are exempt, unless appropriate alternative vehicle options become available.)	<b>Not Applicable.</b> This strategy calls for the County to update their vehicle fleets. The proposed project would not interfere with such policymaking.
LU-1: Update the zoning ordinance to allow live-work uses in residential zones as long as such uses are compatible with existing community character.	<b>Potentially Consistent.</b> This strategy calls for the County to update their zoning policies. The proposed project would include both residential and commercial uses. The proposed project would not interfere with such policymaking.
LU-2: Protect and preserve forested areas, agricultural lands, wildlife habitat, and wetlands that provide carbon sequestration.	<b>Potentially Consistent.</b> With mitigation incorporated, the proposed project would not conflict with the protection or preservation of any protected resources listed in LU-2.
LU-3: Protect oak woodlands and heritage trees and encourage the planting of native tree species in new developments and along road rights-of-way. Require the planting of shade and roadside trees in development projects.	<b>Potentially Consistent.</b> With mitigation incorporated, the proposed project would not conflict with the protection or preservation of any protected resources listed in LU-3. The proposed project would comply with all municipal requirements addressing shade and roadside trees.
<b>Waste Reduction and Recycling</b>	
W-1: Work with the Local Task Force and other organizations to create a zero- waste plan and provide public education regarding zero-waste strategies and implementation.	<b>Not Applicable.</b> This strategy calls for the County to create a zero-waste plan and provide public education. The proposed project would not interfere with such policymaking.
W-2: Adopt a Construction and Demolition Ordinance to require 65% of construction and demolition debris to be recycled or reused by 2020.	<b>Potentially Consistent.</b> This strategy calls for the County to adopt a conservation and demolition ordinance to reduce debris. The proposed project would not interfere with such policymaking. The proposed project would comply with all municipal requirements to recycle or reuse construction and demolition debris.
W-3: Work with State agencies to provide free audits to commercial generators and recommend strategies to reduce waste and increase recycling and composting.	<b>Not Applicable.</b> This strategy calls for the State to provide free audits aimed to reduce waste and increase recycling and composting. The proposed project would not interfere with such policymaking.
W-4: Facilitate CalRecycle and the State Air Resources Board's (ARB) implementation of the Landfill Methane Capture Strategy by requiring landfills to capture methane to the greatest extent feasible.	<b>Not Applicable.</b> This strategy calls for the County to facilitate landfill recapture of methane gas. The proposed project would not interfere with such policymaking.
<b>Water Conservation</b>	
WC-1: Work with the Agricultural Water Conservation Committee of the Solano Water Advisory Commission to promote efficient irrigation and agricultural water management	<b>Potentially Consistent.</b> The proposed project includes high efficiency irrigation systems discussed above.
WC-2: Work with Solano County water providers, including representatives for well users that share water	<b>Potentially Consistent.</b> The proposed project does not include any wells. The proposed project would not

Actions and Strategies	Consistency Analysis <sup>/a/</sup>
with their neighbors for residential water use, to expand and promote outreach programs and incentives for water conservation.	interfere with such policymaking.
WC-3: Increase water-efficiency requirements for major (>2,500 square feet) landscape projects in new construction and remodels.	<b>Potentially Consistent.</b> The proposed project includes high efficiency irrigation systems discussed above.
WC-M1: Reduce water use in County buildings and landscape irrigation.	<b>Not Applicable.</b> This strategy calls for the County to reduce water use in County buildings. The proposed project would not interfere with such policymaking.

Source: County of Solano, Climate Action Plan, June 2011.

As shown in **Table 4.4-4**, the proposed project would not conflict with any policies listed in the Solano County CAP. As a result, the proposed project would be consistent with the most applicable plan for reducing GHG emissions. This impact is considered less than significant.

### Consistency with Plan Bay Area

Plan Bay Area is the Bay Area’s RTP/SCS which discusses how the Bay Area will grow over the following two decades, identifying transportation and land use strategies to enable more sustainable, equitable, and economically vibrant growth. **Table 4.4-5**, analyzes the project’s consistency with Plan Bay Area’s final adopted goals and performance targets. While the goals and targets do not all directly address reducing GHG emissions, the plan aims to achieve state mandated targets such as reducing CO<sub>2</sub> emissions from cars and light-duty trucks as well as include sufficient housing for the region’s projected population growth.

**Table 4.4-5**  
**Project Consistency with Plan Bay Area**

Goals and Targets	Consistency Analysis <sup>/a/</sup>
<i>Climate Protection</i>	
Reduce per-capita CO <sub>2</sub> emissions from cars and light-duty trucks by 15%	<b>Inconsistent</b> VMT is generally used as the metric to determine emissions from cars and light duty trucks. <b>Because</b> the City does not have a VMT threshold, an information analysis was provided in the transportation section. The informational analysis <b>determined</b> the project would not reduce cars and light duty trucks by 15% even with TDM strategies, Therefore, the project would be inconsistent with this policy.

Goals and Targets	Consistency Analysis <sup>/a/</sup>
<b><i>Adequate Housing</i></b>	
House 100% of the region’s projected growth by income level without displacing current low-income residents and with no increase in in-commuters over the Plan baseline year.	<b>Potentially Consistent:</b> This goal aims to house the region’s projected growth, while not displacing current low-income residents. The project includes 270 rental apartments and does not demolish any existing housing that could potentially displace low-income residents.
<b><i>Healthy and Safe Communities</i></b>	
Reduce adverse health impacts associated with air quality, road safety, and physical inactivity by 10%.	<b>Potentially Consistent:</b> This strategy aims to reduce adverse health impacts that are associated with air quality, road safety, and physical inactivity. The project would not alter vehicle circulation patterns in the area and would include three vehicle access points to enter and exit the site. Pedestrian paths would also provide safe access to building areas and connect to the existing sidewalks along Business Center Drive.
<b><i>Open Space and Agricultural Preservation</i></b>	
Direct all non-agricultural development within the urban footprint (existing urban footprint and UGBs).	<b>Potentially Consistent:</b> This strategy aims to direct development within the existing urban footprint. The project is located in an area that is relatively developed and located within the City of Fairfield’s Urban Limit Line.
<b><i>Equitable Access</i></b>	
Decrease the share of lower-income residents’ household income consumed by transportation and housing by 10%.	<b>Not Applicable:</b> This strategy aims to decrease lower-income residents’ household income consumed by transportation and housing. The project would not interfere with such policymaking.
Increase the share of affordable housing in PDAs, TPAs, or high-opportunity areas by 15%.	<b>Not Applicable:</b> This goal looks to increase the amount of affordable housing that is located within PDAs, TPAs, or high opportunity areas. The project is not located in a PDA or TPA, but it would not interfere with other developments within PDAs, TPAs, or high opportunity areas. Therefore, the project would not conflict with this policy.
Do not increase the share of low- and moderate-income renter households in PDAs, TPAs, or high-opportunity areas that are at risk of displacement.	<b>Not Applicable:</b> This goal aims to reduce displacement of low- and moderate-income renter households in PDAs, TPAs, or high-opportunity areas. The project is not located in a PDA or TPA, but it would not interfere with other developments within PDAs, TPAs, or high opportunity areas. Therefore, the project would not conflict with this policy.
<b><i>Economic Vitality</i></b>	
Increase by 20% the share of jobs accessible within 30 minutes by auto or within 45 minutes by transit in congested conditions.	<b>Potentially Consistent:</b> This goal sets a target to increase the share of accessible jobs that are closer to residents. The project includes a commercial space that will potentially increase the share of accessible jobs during congested conditions.

Goals and Targets	Consistency Analysis <sup>/a/</sup>
Increase by 35% the number of jobs in predominantly middle-wage industries.	<b>Not Applicable:</b> This goal targets an increase in middle-wage industries. The commercial component of this project may provide some percentage of middle-wage jobs, though it is unknown whether it will increase these jobs by 35%. In addition, the project does not interfere with such policymaking.
Reduce per-capita delay on the Regional Freight Network by 20%.	<b>Not Applicable:</b> This strategy calls for the reduction of per-capita delay on the region’s major freeway corridors. The project would not interfere with such policies.
<b>Transportation System Effectiveness</b>	
Increase non-auto mode share by 10%	<b>Not Applicable:</b> The goal looks to increase non-auto mode share. The project would not interfere with such policies and, furthermore, the project includes indirect means of increasing non-auto mode share, such as installing bicycle storage areas and having commercial uses for residents to potentially shop at.
Reduce vehicle operating and maintenance costs due to pavement conditions by 100%	<b>Not Applicable:</b> This strategy aims to improve road conditions in order to reduce vehicle operating and maintenance costs. The project would not interfere with such policies.
Reduce per-rider transit delay due to aged infrastructure by 100%	<b>Not Applicable:</b> This goal looks to reduce delays for transit riders. The project is not located in a TPA and would not interfere with such policies.

Source: Metropolitan Transportation Commission and Association of Bay Area Governments, Plan Bay Area 2040, July 2017.

As shown in **Table 4.4-5**, the proposed project would likely be consistent with the policies listed in Plan Bay Area overall. As a result, the proposed project would likely be consistent with the region’s plan for reducing GHG emissions and impacts would be less than significant.

**Mitigation Measures:** No mitigation measures are required.

#### 4.4.6 CUMULATIVE IMPACTS AND MITIGATION MEASURES

As stated above, GHG analysis is cumulative in nature, therefore the analysis above serves as the cumulative analysis.

#### 4.4.5 REFERENCES

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