2.10 Global Climate Change

This section replaces, in full, **Section 3.8** from the previously circulated Draft EIR (March 2015) for the proposed Project. The section number was modified to reflect the change in the proposed Project's pre-mitigation significance determination, as compared to that reported in the March 2015 Draft EIR.

This section analyzes the potential global climate change impacts resulting from the proposed Project's greenhouse gas (GHG) emissions. Specifically, the section discusses the scientific, regulatory and policy developments surrounding global climate change; provides a quantitative inventory of the GHG emissions that would result from Project implementation; evaluates the significance of the Project's GHG emissions; and, identifies feasible mitigation to mitigate the Project's impacts. The analysis presented in this section is based on the "Global Climate Change Evaluation for the Otay Ranch Resort Village Specific Plan" (GCC Report, SRA, March 2019), as included in **Appendix C-2** of this EIR, and other information sources that are cited and described herein.

This section quantifies and analyzes the significance of GHG emissions from the proposed Project's one-time construction and vegetation change-associated activities, and annual operational activities. The operational activities that would generate GHG emissions include area sources (e.g., landscaping equipment and fireplaces); the consumption of electricity and natural gas by residences and non-residential buildings; the treatment and distribution of water; the handling of solid waste; and, the use of vehicles for transportation-related purposes.

The GHG emissions estimates for the proposed Project presented in this section were calculated using the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2). CalEEMod provides a CEQA-oriented platform to calculate both construction and operational emissions from land use development projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with multiple air districts across the State of California, including the San Diego Air Pollution Control District (SDAPCD). Numerous lead agencies in the State, including the County of San Diego, utilize CalEEMod to estimate GHG emissions in accordance with CEQA Guidelines Section 15064.4(a)(1) and (c).

The significance criteria used in this section to evaluate the proposed Project's GHG emissions are taken from Section VIII, Greenhouse Gas Emissions, of Appendix G of the CEQA Guidelines. The analysis is informed by various provisions of the State CEQA Guidelines, including CEQA Guidelines Section 15064.4, titled "Determining the Significance of Impacts from Greenhouse Gas Emissions," and Section 15126.4(c), titled "Mitigation Measures Related to Greenhouse Gas Emissions."

Without mitigation, the proposed Project's GHG emissions would result in a potentially significant impact due to the Project's incremental contribution to the cumulative issue of global climate change. As illustrated by the Project-specific emissions inventory data presented in this section, the Project would result in an increase in GHG emissions, as compared to the existing environmental setting. However, with implementation of the eight (8) mitigation measures recommended in this section, the proposed Project's GHG emissions would be reduced to net zero,

thereby supporting a determination that the Project would not change the existing environmental setting. Because the proposed Project, with mitigation, would result in no net increase in GHG emissions, the proposed Project would not result in a significant impact to global climate change and would not make a cumulatively considerable contribution to global climate change.

The Program EIR for the Otay Ranch General Development Plan/Otay Subregional Plan (Otay Ranch GDP/SRP), certified in 1993, provided a program-level analysis of the existing conditions and potential impacts related to air quality for the entire Otay Ranch area, including the Project site. Although that EIR did not expressly address impacts on global climate change or increases in GHG emissions, in response to identified significant impacts in other environmental resource areas, the County adopted numerous mitigation measures that not only reduced the identified significant impacts in those resource areas, but also result in co-benefits in the area of global climate change by reducing the amount of GHG emissions that would be generated by the proposed Project. Further, since the 1993 Otay Ranch GDP/SRP approvals, development of the Project site under the Otay Ranch GDP/SRP has been incorporated into regional planning documents, including those that consider GHG emissions, such as the County's General Plan and the San Diego Association of Government's (SANDAG)'s San Diego Forward: The Regional Plan. The proposed Project would not increase the land use density or intensity development parameters on the Project site relative to the approved Otay Ranch GDP/SRP land use.

2.10.1 Existing Conditions

2.10.1.1 *Global Climate Change*

Global climate change refers to changes in average climatic conditions on the Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global climate change may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land. Human-caused emissions of GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect[20] and have led to a trend of unnatural warming of Earth's climate, known as global climate change or global warming.

California law defines GHGs as any of the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and sulfur hexafluoride (NF_3) (Health & Safety Code, §38505(g)). CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity, and are the three GHGs estimated by CalEEMod.

Climate change is a global problem; and, GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern.

[20] GHGs allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

Global Warming Potentials and Sources of GHGs

The California Air Resources Board (ARB) annually prepares a GHG inventory that identifies and quantifies statewide anthropogenic GHG emissions and sinks. The current inventory covers the years 1990 to 2016, and is summarized in **Table 2.10-1**, State of California GHG Emissions by Sector. The inventory is divided into nine broad sectors and categories: Agriculture, Commercial, Electricity Generation, Forestry, Industrial, Residential, Transportation, Solvents and Chemicals, and Forestry Sinks.

GHGs have varying global warming potentials (GWP) (i.e., the potential of a gas or aerosol to trap heat in the atmosphere). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include CH_4, which has a GWP of 25, and N_2O, which has a GWP of 298. (The GWP values used in this section are sourced to the Fourth Assessment Report ~~(~~[2007]~~)~~ of the Intergovernmental Panel on Climate Change.) When accounting for GHGs, emissions are expressed in terms of CO_2 equivalents (CO_2e), are typically quantified in metric tons (MT) or millions of metric tons (MMT), and are shown as MMT CO_2e.

Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline, and wood). CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure, and cattle farming. Human-caused sources of N_2O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses.

2.10.1.2 *Regulatory Setting*

Federal Action

Clean Air Act

In *Massachusetts v. Environmental Protection Agency* (2007) 549 U.S. 497, the U.S. Supreme Court held that the U.S. Environmental Protection Agency (USEPA) has authority under the Clean Air Act to regulate CO_2 emissions if those emissions pose an endangerment to the public health or welfare.

In 2009, the USEPA issued an "endangerment finding" under the Clean Air Act, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG emissions. These findings provide the basis for adopting national regulations to mandate GHG emission reductions under the Clean Air Act.

To date, the USEPA has exercised its authority to regulate mobile sources that reduce GHG emissions via the control of vehicle manufacturers, as discussed immediately below.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 in 2007 directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the same federal agencies to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021.

In 2018, the USEPA and NHTSA proposed to amend certain existing fuel economy and GHG emissions standards for passenger cars and light trucks and establish new standards, covering model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2–3 percent of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of one degree Celsius by 2100. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 federal proposal are speculative at this time. (This conclusion remains accurate after considering the USEPA and NHTSA's adoption of the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program," as adopted by those agencies in September 2019. Based on the ARB's evaluation in the document titled "EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One" (dated November 20, 2019), the GHG implications of the federal rulemaking are not yet known.)

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. In August 2016, the USEPA and NHTSA finalized the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles with model year 2018 and later.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising 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;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing mpg targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and to create a separate fuel economy standard for trucks.

Additional provisions of this Act address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

State Action

Executive Orders and Legislation Establishing Overarching State Climate Policies

Executive Order S-3-05

In 2005, former Governor Schwarzenegger signed Executive Order S-3-05, which established the following GHG emission reduction goals for California: (1) by 2010, reduce GHG emissions to 2000 levels; (2) by 2020, reduce GHG emissions to 1990 levels; and (3) by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, was enacted after considerable study and expert testimony before the Legislature. The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020 (Health & Safety Code, §38550). In order to achieve this reduction mandate, AB 32 requires the ARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.

In response to the adoption of AB 32, in 2007, the ARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline. The ARB's adoption of this limit is in accordance with Health & Safety Code section 38550.

Further, in 2008, the ARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in accordance with Health & Safety Code section 38561. The *Scoping Plan* establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020.

In 2014, the ARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*).[21] The stated purpose of the *First Update* is to "highlight California's success to date in reducing its GHG emissions and 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."[22] The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32. The *First Update* also noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.[23]

In conjunction with the *First Update*, the ARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[24] Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on the ARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[25] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

In December 2017, the ARB adopted *California's 2017 Climate Change Scoping Plan* (*2017 Scoping Plan*). The *2017 Scoping Plan* addresses the statewide emissions reduction target established pursuant to Senate Bill (SB) 32 and Executive Order B-30-15, as discussed below. The *2017 Scoping Plan* includes continuation of the Cap-and-Trade Program through 2030, and incorporates a Mobile Source Strategy (also developed by the ARB) that is intended to increase zero emission vehicle fleet penetration and establish a more stringent Low Carbon Fuel Standard target by 2030.

[21] Health & Safety Code section 38561(h) requires the ARB to update the Scoping Plan every five years.
[22] ARB, First Update (May 2014), p. 4.
[23] Id. at p. 34.
[24] Id. at p. 6.
[25] Id. at p. 32.

When discussing project-level GHG emissions reduction actions and thresholds in the *2017 Scoping Plan*, the ARB states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development."[26] However, the ARB also recognizes that "[a]chieving net zero … may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."[27] To the extent that a project's CEQA analysis recommends mitigation to reduce GHG emissions, the ARB "recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally."[28]

2015 State of the State Address

In his January 2015 inaugural address, Governor Brown identified key climate change strategy pillars, including: (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing the amount of electricity derived from renewable sources from one-third to 50 percent; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests and wetlands so they can store carbon; and (6) periodically updating the State's climate adaptation strategy. As discussed below, the second and third pillars have been codified via legislation (SB 350).

Executive Order B-30-15

In April 2015, Governor Brown signed Executive Order B-30-15, which established the following GHG emission reduction goal for California: by 2030, reduce GHG emissions to 40 percent below 1990 levels. This Executive Order also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in Executive Order S-3-05 (see discussion above). Additionally, the Executive Order directed the ARB to update its Scoping Plan (see discussion above) to address the 2030 goal.

2016 State of the State Address

In his January 2016 inaugural address, Governor Brown identified a statewide goal to bring per capita GHGs down to two tons per person. The origin of this goal is the Global Climate Leadership Memorandum of Understanding (Under 2 MOU), which established limiting global warming to less than two degrees Celsius as the guiding principle for the reduction of GHG emissions by 2050. The parties to the Under 2 MOU have agreed to pursue emissions reductions consistent with a trajectory of 80 to 95 percent below 1990 levels by 2050 and/or achieve a per capita annual

[26] ARB, 2017 Scoping Plan (November 2017), p. 101.

[27] Id. at p. 102.

[28] Id. at p. 102.

emissions goal of less than two metric tons by 2050. The Under 2 MOU has been signed or endorsed by 127 jurisdictions (including California) that represent 27 countries and six continents.

Senate Bill 32, and Assembly Bill 197

Enacted in 2016, SB 32 codifies the 2030 emissions reduction goal of Executive Order B-30-15 by requiring the ARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030.

SB 32 was coupled with a companion bill: AB 197. Designed to improve the transparency of the ARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies and investments related to climate change. AB 197 also requires the ARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Executive Order B-55-18

As issued in September 2018, Executive Order B-55-18 establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and not later than 2045, and achieve and maintain net negative emissions thereafter." This executive order directs the ARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Energy-Related Sources

Renewable Portfolio Standard

California's Renewable Portfolio Standard requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. Further, as amended in 2015 by SB 350, retail sellers of electric services must increase procurement from eligible renewable energy resources to 40 percent of total retail sales by 2024, 45 percent of total retail sales by 2027, and 50 percent of total retail sales by 2030. As most recently amended in 2018 by SB 100, implementation of the Renewable Portfolio Standard has been accelerated. Under SB 100, retail sellers of electric services must increase procurement from eligible renewable energy resources to 44 percent of total retail sales by 2024, 52 percent of total retail sales by 2027, and 60 percent of total retail sales by 2030. SB 100 also established a new policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales by December 31, 2045.

Building Energy Efficiency Standards (Title 24)

Title 24, Part 6, of the California Code of Regulations regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and

possible incorporation of new energy efficiency technologies and methods. The California Energy Commission's (CEC) 2016 Building Energy Efficiency Standards became effective on January 1, 2017. The 2019 Building Energy Efficiency Standards will continue to improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 Standards have been adopted and ~~will become~~became effective on January 1, 2020.

The California Public Utilities Commission, CEC, and the ARB also have a shared, established goal of achieving Zero Net Energy (ZNE) for new construction in California. The ZNE goal generally means that new buildings must use a combination of improved efficiency and renewable energy generation to meet 100 percent of their annual energy need, as specifically defined by the CEC:

> "A ZNE Code Building is one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building, at the level of a single 'project' seeking development entitlements and building code permits, measured using the [CEC]'s Time Dependent Valuation (TDV) metric. A ZNE Code Building meets an Energy Use Intensity value designated in the Building Energy Efficiency Standards by building type and climate zone that reflect best practices for highly efficient buildings."[29]

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) are commonly referred to as CALGreen, and establish voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The mandatory standards require the following:

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance;
- Sixty five (65) percent of construction and demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and,
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

[29] CEC, 2015 Integrated Energy Policy Report (2015), p. 41.

CALGreen is periodically amended; and, the 2016 standards became effective on January 1, 2017. The CALGreen 2019 standards will continue to improve upon the 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CALGreen 2019 standards ~~will go~~went into effect on January 1, 2020.

Appliance Energy Efficiency Standards (Title 20)

The CEC periodically amends and enforces Appliance Efficiency Regulations contained in Title 20 of the California Code of Regulations. The regulations establish water and energy efficiency standards for both federally-regulated appliances and non-federally regulated appliances. The most current Appliance Efficiency Regulations, dated January 2017, cover 23 categories of appliances (e.g., refrigerators; plumbing fixtures; dishwashers; clothes washer and dryers; televisions) and apply to appliances offered for sale in California.

Mobile Sources

Pavley Standards

AB 1493 required the ARB to adopt regulations to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks for model years 2009–2016, which are often times referred to as the "Pavley I" standards. The ARB obtained a waiver from the USEPA that allows for implementation of these regulations notwithstanding possible federal preemption concerns.

Low Carbon Fuel Standard

Executive Order S-1-07 requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by the ARB by 2020.[30] In 2009, the ARB approved the Low Carbon Fuel Standard regulations, which became fully effective in April 2010. The regulations were subsequently re-adopted in September 2015 in response to related litigation. In 2018, the ARB amended the Low Carbon Fuel Standard regulations, establishing a new target for 2030. The 2018 amendments target a 20 percent reduction in the average fuel carbon intensity for transportation fuels from a 2010 baseline by 2030.

Advanced Clean Cars Program

In 2012, the ARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. (This program is sometimes referred to as "Pavley II.") The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs.

[30] Carbon intensity is a measure of the GHG emissions associated with the various production, distribution and use steps in the "lifecycle" of a transportation fuel.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) coordinates land use planning, regional transportation plans, and funding priorities to reduce GHG emissions from passenger vehicles through better-integrated regional transportation, land use, and housing planning that provides easier access to jobs, services, public transit, and active transportation options.[31] SB 375 specifically requires the Metropolitan Planning Organization (MPO) relevant to the Project area (here, ~~the San Diego Association of Governments [~~SANDAG~~]~~) to include a Sustainable Communities Strategy in its Regional Transportation Plan that will achieve GHG emission reduction targets set by the ARB by reducing ~~vehicle miles traveled~~VMT from light-duty vehicles through the development of more compact, complete, and efficient communities.

For the area under SANDAG's jurisdiction, including the Project site, the ARB initially adopted regional targets for reduction of mobile source-related GHG emissions by 7 percent for 2020 and by 13 percent for 2035. These targets are expressed by the ARB as a percent change in per capita GHG emissions relative to 2005 levels.

In 2018, the ARB adopted updated SB 375 targets. Effective October 1, 2018, the targets for the SANDAG region are now a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction in emissions per capita by 2035. These updated targets will apply to SANDAG's next, prospective planning cycle. At that time, SANDAG will review all the general plan changes that have occurred in cities and counties within its regional area and account for those changes in its Sustainable Community Strategy.

Pursuant to Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it.

Zero Emission Vehicles

Zero emission vehicles (ZEVs) include plug-in electric vehicles (EVs), such as battery ~~electric vehicles~~EVs and plug-in hybrid ~~electric vehicles~~EVs, and hydrogen fuel cell ~~electric vehicles~~EVs.

In 2012, Governor Brown issued Executive Order B-16-2012, which calls for the increased penetration of ZEVs into California's vehicle fleet in order to help California achieve a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of that statewide target for the transportation sector, the Executive Order also calls upon the ARB, CEC and the California Public Utilities Commission to establish benchmarks that will: (1) allow over 1.5 million ZEVs to be on California roadways by 2025, and (2) provide the State's residents with easy access to ZEV infrastructure.

[31] ARB, First Update (May 2014), pp. 49-50.

In its *First Update*, the ARB recognized that the light-duty vehicle fleet "will need to become largely electrified by 2050 in order to meet California's emission reduction goals."[32] Accordingly, the ARB's ACC program – summarized above – requires about 15 percent of new cars sold in California in 2025 to be a plug-in hybrid, battery electric or fuel cell vehicle.[33] Further, one of the elements of SB 350 (2015) – the Clean Energy and Pollution Reduction Act – establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the State's 2030 and 2050 reduction targets (see Public Utilities Code section 740.12). The ARB's *2017 Scoping Plan* also identified, as an element of its framework to achieve the statewide 2030 emissions reduction target codified by SB 32, the objective to put 4.2 million zero emission and plug-in hybrid light-duty ~~electric vehicles~~EVs on the road by 2030.

In 2018, Governor Brown issued Executive Order B-48-18, which served to launch an eight-year initiative to accelerate the sale of ZEVs through a mix of rebate programs and infrastructure improvements. The Executive Order also sets a new ZEV target of five million EVs in California by 2030. The Executive Order includes funding for multiple state agencies, including the CEC (in order to increase charging infrastructure) and the ARB (in order to provide rebates for the purchase of new ZEVs and incentives for low-income customers).

The proliferation of ~~zero emission vehicles~~ZEVs is being supported in multiple ways. For example, California is incentivizing the purchase of ZEVs through implementation of the Clean Vehicle Rebate Project (CVRP), which is administered by a non-profit organization (The Center for Sustainable Energy) for the ARB and currently subsidizes the purchase of passenger near-zero and zero ~~emission vehicles~~EVs. Additionally, CALGreen requires new residential and non-residential construction to be pre-wired to facilitate the future installation and use of ~~electric vehicle~~EV chargers (see Section 4.106.4 and Section 5.106.5.3 of 2016 CALGreen Standards for the residential and non-residential pre-wiring requirements, respectively). As a final example, in January 2017, San Diego Gas & Electric Company (SDG&E) applied to the California Public Utilities Commission for authority to implement numerous programs intended to accelerate the electrification of the transportation sector. SDG&E's application includes, but is not limited to, proposals to: (i) install up to 90,000 charging stations at single-family homes throughout the company's service area; (ii) install charging infrastructure at various park-and-ride locations; (iii) provide incentives for electric taxis and shuttles; and, (iv) provide educational programs and financial incentives for the sale of ~~electric vehicles~~EVs.

Also of note is AB 1236 (2015), as enacted in California's Planning and Zoning Law, which requires local land use jurisdictions to approve applications for the installation of ~~electric vehicle~~EV charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for ~~electric vehicle~~EV charging stations, as

[32] Id. at p. 48.

[33] Id. at p. 47.

specified. Prior to this statutory deadline, in August 2016, the County Board of Supervisors adopted Ordinance No. 10437 (N.S.) adding a section to its County Code related to the expedited processing of ~~electric vehicle~~EV charging stations permits consistent with AB 1236.

Water Sources

In response to an ongoing drought in California, Executive Order B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The Executive Order includes specific directives that set strict limits on water usage in the State, and many of the directives have since become permanent water-efficiency standards and requirements. In response to this Executive Order, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Solid Waste Sources

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50 percent of all solid waste on and after January 1, 2000; and (3) diversion of 75 percent of all solid waste on or after 2020, and annually thereafter. The California Department of Resources Recycling and Recovery (CalRecycle) is required to develop strategies, including source reduction, recycling, and composting activities, to achieve the 2020 goal.

CalRecycle published a discussion document, entitled *California's New Goal: 75 Percent Recycling,* which identified concepts that would assist the State in reaching the 75 percent goal by 2020. Subsequently, in August 2015, CalRecycle released the *AB 341 Report to the Legislature*, which identifies five priority strategies for achievement of the 75 percent goal: (1) moving organics out of landfills; (2) expanding recycling/manufacturing infrastructure; (3) exploring new approaches for State and local funding of sustainable waste management programs; (4) promoting State procurement of post-consumer recycled content products; and, (5) promoting extended producer responsibility.

Local Action

San Diego Forward

In October 2015, and in accordance with the requirements established by SB 375 (discussed above), SANDAG adopted *San Diego Forward: The Regional Plan*. The plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl."

In December 2015, the ARB accepted SANDAG's GHG emissions quantification determination for the *San Diego Forward* plan and found that it would meet the regional reduction targets adopted by the ARB in furtherance of SB 375 (see ARB Executive Order G-15-075).

General Plan Update

The County's General Plan Update (County of San Diego 2011b) includes smart growth and land use planning principles designed to reduce vehicle miles travelled (VMT) and result in a reduction in GHG emissions. As discussed in the General Plan Update, climate change and GHG reduction policies are addressed in plans and programs in multiple elements of the General Plan. The strategies for reduction of GHG emissions in the General Plan Update are as follows:

- Strategy A-1: Reduce vehicle trips generated, gasoline/energy consumption, and greenhouse gas emissions.
- Strategy A-2: Reduce non-renewable electrical and natural gas energy consumption and generation (energy efficiency).
- Strategy A-3: Increase generation and use of renewable energy sources.
- Strategy A-4: Reduce water consumption.
- Strategy A-5: Reduce and maximize reuse of solid wastes.
- Strategy A-6: Promote carbon dioxide consuming landscapes.
- Strategy A-7: Maximize preservation of open spaces, natural areas, and agricultural lands.

The General Plan Update also includes climate adaptation strategies to deal with potential adverse effects of climate change. The climate adaptation strategies include the following:

- Strategy B-1: Reduce risk from wildfire, flooding, and other hazards resulting from climate change.
- Strategy B-2: Conserve and improve water supply due to shortages from climate change.
- Strategy B-3: Promote agricultural lands for local food production.
- Strategy B-4: Provide education and leadership.

Finally, the Conservation and Open Space Element includes policies that are designed to reduce the emissions of criteria air quality pollutants, emissions of GHGs, and energy use in buildings and infrastructure, while promoting the use of renewable energy sources, conservation, and other methods of efficiency.

- General Plan Goal COS-1, Inter-Connected Preserve System
- General Plan Goal COS-2, Sustainability of the Natural Environment
- General Plan Goal COS-14, Sustainable Land Development
- General Plan Goal COS-15, Sustainable Architecture and Buildings
- General Plan Goal COS-16, Sustainable Mobility
- General Plan Goal COS-17, Sustainable Solid Waste Management
- General Plan Goal COS-18, Sustainable Energy
- General Plan Goal COS-19, Sustainable Water Supply
- General Plan Goal COS-20, Governance and Administration

Climate Action Plan

In February 2018, the County's Board of Supervisors adopted a Climate Action Plan (CAP) that serves as a guide to reduce GHG emissions in the unincorporated communities of San Diego County. The adopted CAP includes six chapters: (1) Introduction; (2) Greenhouse Gas Emissions Inventory, Projections, and Reduction Targets; (3) Greenhouse Gas Reduction Strategies and Measures; (4) Climate Change Vulnerability, Resiliency, and Adaptation; (5) Implementation and Monitoring; and, (6) Public Outreach and Engagement. The CAP sets the following County-specific GHG reduction targets: by 2020, a 2 percent reduction from 2014 levels; by 2030, a 40 percent reduction from 2014 levels; and, by 2050, a 77 percent reduction from 2014 levels. The CAP is designed to achieve those targets through the implementation of multiple strategies and measures applicable to five general categories of GHG emission sources: (1) Built Environment and Transportation; (2) Energy; (3) Solid Waste; (4) Water and Wastewater; and, (5) Agriculture and Conservation.

In March 2018, lawsuits were filed by numerous environmental organizations and a business entity challenging the County's adoption of the CAP. In December 2018, the San Diego Superior Court ruled that the County failed to comply with CEQA when adopting the CAP, and directed the County to set aside the approvals of the CAP and the related certification of the Supplemental EIR. In January 2019, the County decided to proceed with an appeal of the trial court's decision, and that appeal is still pending at the time of the publication of this document.

Of relevance to this analysis, the CAP was adopted following issuance of the Notice of Preparation for the proposed Project's EIR. In light of the temporal relationship between the CAP's development and this EIR, and because litigation over the CAP was reasonably foreseeable and imminent based on prior challenges, this EIR does not rely upon or use the CAP or otherwise streamline its environmental analysis based on the CAP. Instead, the EIR uses significance thresholds derived from Appendix G of the CEQA Guidelines, and is informed by CEQA Guidelines Section 15064.4. Notably, CEQA Guidelines Section 15064.4 does not require that the County have an adopted or judicially-validated CAP in place in order to analyze, determine, and mitigate the effects of the proposed Project's GHG emissions.

While the CAP's streamlining tools are not used in this analysis, it is noted that – under the County's CAP-related *Guidelines for Determining Significance: Climate Change* and *Appendix A: Final Climate Action Plan Consistency Review Checklist* (*CAP Consistency Checklist*) – the proposed Project would be consistent with the growth projections and land use assumptions made in the CAP. This consistency determination stems from the fact that the Project proposes development that does not exceed the land use density and intensity of that assigned to the Project site under the Otay Ranch GDP/SRP approvals issued in 1993. Because the proposed Project would not result in a more GHG intensive project than that allowed by existing land use designations (see **Appendix ~~XX~~ C-25 ~~(~~**[Otay Ranch Resort Village GHG Emissions – Alternative B]~~)~~ of this EIR, which compares the GHG emissions of the proposed Project to those associated with the existing Otay Ranch GDP/SRP land use), the proposed Project would not be required to achieve net zero GHG emissions under the CAP's implementing framework, but would need to

implement each of the design-related reduction measures contained in the CAP Consistency Checklist.

Carbon Markets

Carbon markets – both regulatory and voluntary – are a venue for the buying, selling and trading of carbon credits.

California Cap-and-Trade Program

In October 2011, the ARB approved the Cap-and-Trade Program (Cal. Code Regs., tit. 17, §§ 95800-96022) pursuant to AB 32, with compliance obligations that became effective in 2013 for large electric power and industrial plants, and in 2015 for fuel distributors (including transportation fuel and natural gas). California's Cap-and-Trade Program regulates the emissions of these GHG emitters, which are responsible for about 85 percent of the State's total GHG emissions inventory. As described by the ARB:

> "Cap-and-trade is a market based regulation that is designed to reduce [GHGs] from multiple sources. Cap-and-trade sets a firm limit or cap on GHGs and minimize[s] the compliance costs of achieving AB 32 goals. The cap will decline approximately 3 percent each year beginning in 2013. Trading creates incentives to reduce GHGs below allowable levels through investments in clean technologies. With a carbon market, a price on carbon is established for GHGs. Market forces spur technological innovation and investments in clean energy. Cap-and-trade is an environmentally effective and economically efficient response to climate change."[34]

In the Cap-and-Trade Program, the State regulates the quantity of emissions by determining, in advance, how many allowances to issue — i.e., setting the "cap." Each allowance is essentially a permit issued by the State authorizing a certain quantity of GHG emissions. There are only a finite number of allowances, ensuring that covered entities may only lawfully emit a certain quantity of GHGs. If a covered entity wishes to emit carbon, it must obtain allowances to authorize those emissions.

Notably, entities regulated by the Cap-and-Trade Program have direct operational control of the long-term GHG emissions from the source profile, whereas land use developers do not have continuing control and authority over many (if not all) of the sources (e.g., homeowners decide when to turn appliances on and off; business owners decide their hours of operation). It also is noted that covered entities (e.g., fuel refineries) regulated by the Cap-and-Trade Program are not required to achieve a net zero GHG emissions level. Rather, such entities are subject to a declining GHG emissions cap that gradually and incrementally reduces emissions from the regulated emissions-generating activities. Covered entities are permitted to emit a certain, positive quantity of GHG emissions.

[34] ARB, Cap-and-Trade Program webpage at http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm.

Importantly, the Cap-and-Trade Program has been designed to provide a firm cap, ensuring that the 2020 statewide emissions limit identified by the ARB will *not* be exceeded.[35] Thus, for the emission sources covered by the Program, which are nearly all of the sources associated with land use development projects (see **Table 2.10-2**, Land Use-Related GHG Emissions Sources Covered by Cap-and-Trade Program, below), compliance with AB 32's 2020 mandate is assured by the Cap-and-Trade Program.[36]

Voluntary Markets

Like a stock or equity that represents a unit of ownership in a company, a carbon credit represents a unit of GHG emissions reductions. Each credit is essentially a certification that a certain quantity of GHG emissions has~~ve~~ been or will be avoided, prevented, or sequestered.

A carbon credit "project" may receive carbon credits for specific reductions in GHG emissions that occur as a result of a specific project activity. Examples of project activities that generate carbon credits include, but are not limited to, forest management and reforestation, the capture and destruction of methane emissions from livestock and landfills, improvements to the built environment such as the installation of pool covers and solar photovoltaic energy, or clean-burning cook stove replacement projects. [37] A project can only receive offset credits if the project developer demonstrates what is known as the "environmental integrity" of the project.

> The most common and generally accepted way for project applicants to demonstrate the environmental integrity of an offset project is by complying with an established, standards-based "protocol." A "protocol" is a method of measuring emission reductions. A standards-based protocol accomplishes that fundamental goal by establishing the baseline emissions condition for a given activity and then providing the project developer a specific, defined methodology to quantify and verify emissions reductions that occur over and above that baseline condition. For example, a livestock project may not receive carbon credits for the operation of a biogas system at a farm if the farm is otherwise obligated by law or other legally binding mandate to operate the biogas control system. If a farm or feedlot had to operate a biogas control system as a condition of a permit to operate issued by a local air district or other permitting authority, the farm could not receive any offset credits for the emissions captured by the system. This is because of the concept of "additionality" discussed below, whereby an

[35] ARB, Scoping Plan (December 2008), pp. 30-31.

[36] San Joaquin Valley Air Pollution Control District (SJVAPCD), APR – 2025, CEQA Determinations of Significance for Projects Subject to [ARB]'s GHG Cap-and-Trade Regulation (June 2014) ["all GHG emission increases resulting from the combustion of any fuel produced, imported and/or delivered in California are mitigated under Cap-and-Trade … Therefore, GHG emission increases caused by fuel use (other than jet fuels) are determined to have a less than significant impact on global climate change under CEQA"].

South Coast Air Quality Management District (SCAQMD) has taken a similar position on stationary source projects under its permitting jurisdiction; see, e.g., the Final Negative Declaration (2014) for the Ultramar Inc. Wilmington Refinery Cogeneration Project (SCH No. 2012041014) and the Draft EIR (2015) for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project (SCH No. 2014121014).

[37] For a list of the protocols and methodologies developed by the Climate Action Reserve, for example, please see https://www.climateactionreserve.org/how/protocols/ and https://climateforward.org/program/methodologies/.

offset project must generate reductions in addition to those otherwise anticipated as part of the baseline condition.[38]

Offset credits are issued by a neutral, third-party "registry" (e.g., Climate Action Reserve, American Carbon Registry, and Verra [previously, the Verified Carbon Standard]) that has undertaken the responsibility of certifying that the emissions reductions have occurred. In what is known as the "voluntary market," registries review projects and issue recognized offset credits. As described in **Global Response R1: Carbon Offsets**, these registries review offset projects to determine their eligibility for generating carbon credits by determining whether the projects result in real, permanent, quantifiable, verifiable, enforceable and additional emission reductions in accordance with the protocols described in the prior paragraph. Prior to issuance of carbon credits, registries generally require offset projects to undertake the following steps: (i) apply to list the offset project with the registry; (ii) subject the offset project to review and verification by an independent, qualified third party; (iii) apply to the registry for issuance of carbon credits in accordance with registry requirements; and, (iv) retire the carbon credits to ensure the permanency of reduction and avoid duplicative use. This process is thoroughly articulated in program manuals issued by the registries that complement the project-specific protocols that must be adhered to in order to assure environmental integrity.[39]

Traditionally, carbon credits represented the past reduction of GHG – i.e., the credits reflected the measured, historical reduction of emissions from a completed offset project. However, with the Climate Action Reserve's more recent launch of the "Climate Forward" program, that reserve is now pursuing opportunities to develop and approve standardized, conservative quantification methodologies for assessing forecasted emission reductions from GHG reduction projects that can be converted into credits.[40] The Climate Action Reserve's focus on developing protocols and methodologies for both completed reductions and forecasted reductions is designed to harness the environmental innovation that numerous entities are pursuing in response to the adverse consequences of a changing climate.[41]

Under CEQA Guidelines Section 15126.4(c)(3)-(4), a project's GHG emissions can be reduced by "[o]ff-site measures, including offsets that are not otherwise required" and "[m]easures that sequester greenhouse gases." Therefore, the CEQA Guidelines allow projects to reduce GHG

[38] Information on additionality also is available, for example, on the Climate Action Reserve's "Criteria for Protocol Development" webpage at https://www.climateactionreserve.org/how/future-protocol-development/criteria/. As explained therein, the Climate Action Reserve "will not develop protocols for project activities that are implemented regularly under 'business as usual' circumstances" and "no project type is eligible under the Reserve's program if the project activity is required by law (federal, state or local)."

[39] See generally American Carbon Registry, "The American Carbon Registry Standard" (July 2019) available at https://americancarbonregistry.org/carbon-accounting/standards-methodologies/american-carbon-registry-standard; Climate Action Reserve, "Program Manual" (Nov. 12, 2019) available at https://www.climateactionreserve.org/how/program/program-manual/; VCS, "VCS Program Guide" (Sept. 19, 2019) available at https://verra.org/project/vcs-program/rules-and-requirements/.

[40] The Climate Action Reserve's "Climate Forward Program Manual" (March 2, 2020) is available at https://climateforward.org/program/program-and-project-forms/.

[41] Please see https://climateforward.org/about/ for additional information regarding the Climate Action Reserve's "Climate Forward" program.

emissions by relying on voluntary market offsets that are not otherwise required, as well as other off-site and sequestration measures that result in GHG reductions.

Relatedly, in the *2017 Scoping Plan*, the ARB stated that, "Where further project design or regional investments are infeasible or not proven to be effective, it may be appropriate and feasible to mitigate project emissions through purchasing and retiring carbon credits."[42] The ARB also has approved AB 900 "environmental leadership" projects, which are provided certain CEQA streamlining benefits, based on determinations that such projects can use carbon offsets to achieve GHG neutrality, as required by Public Resources Code Section 21183(c). (For additional information on the ARB's review of the offset proposals for AB 900 projects, please see **Appendix ~~XX~~ C-26** (Survey of Locational Performance Standards Used by AB 900 Projects) of this EIR.)

Information regarding the use of offsets in the context of CEQA also is available in Section IX of the State-approved "Newhall Ranch Greenhouse Gas Reduction Plan." Section IX of that Plan outlines various protocols and standards that should be followed in order for a registry and the offsets it issues to qualify as effective CEQA mitigation. (A copy of the "Newhall Ranch Greenhouse Gas Reduction Plan" is located in **Appendix ~~XX~~ C-27** of this EIR.)

2.10.1.3 *Current and Projected Impacts of Global Warming*

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns.

There is a general scientific consensus that global climate change will increase the frequency of heat extremes, heat waves, and heavy precipitation events. Other likely direct effects include an increase in the areas affected by drought and by floods, an increase in tropical cyclone activity, a rise in sea level, and recession of polar ice caps. Global temperature increases, therefore, may have significant negative impacts on ecosystems, natural resources, and human health. Ecosystem structure and biodiversity would be compromised by temperature increases and associated climatic and hydrological disturbances. The availability and quality of potable water resources also may be compromised by increased salinization of groundwater due to sea-level rises, decreased supply in semi-arid and arid locations, and poorer water quality arising from increased water temperatures and more frequent floods and droughts. These impacts on freshwater systems, in addition to the effects of increased drought and flood frequencies, can reduce crop productivity and the food supply.

In addition to compromising food and water resources, there are other means through which climatic changes associated with global warming can affect human health and welfare. Warmer temperatures can cause more ground-level ozone, a pollutant that causes eye irritation and respiratory problems. Ranges of infectious diseases will likely increase and some areas are expected to face greater incidences of illness and mortality associated with increased flooding and drought events.

[42] Appendix B of the *2017 Scoping Plan* provides that CEQA lead agencies should consider: (1) requiring projects to purchase carbon credits from credible offset registries, and (2) encouraging projects to select local and California-only carbon credits, where available.

According to the ARB, some of the potential California-specific impacts of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. To protect the State's public health and safety, resources, and economy, the California Natural Resources Agency (CNRA) — in coordination with other state agencies — updated the *2009 California Climate Adaptation Strategy* in the *Safeguarding California: Reducing Climate Risk* plan. The final *Safeguarding California* plan is dated July 2014, and provides policy guidance for state decision makers relative to climate risks in nine sectors: agriculture; biodiversity and habitat; emergency management; energy; forestry; ocean and coastal ecosystems and resources; public health; transportation; and water. It also identifies policies for reducing GHG emissions and accelerating the transition to a clean-energy economy through reductions in emissions, readiness, and continued research. Subsequent to the 2014 issuance of the *Safeguarding California* plan, CNRA released the *Safeguarding California: Implementation Action Plans* in 2016, a document that shows how California is acting to convert the recommendations contained in the *Safeguarding California* plan into action. Most recently, in January 2018, CNRA released the *Safeguarding California Plan: 2018 Update*, the purpose of which is to communicate current and needed actions from the State to build further resiliency to the effects of climate change.

2.10.1.4 *Project Site*

Based on the Project site's current conditions and the absence of development, existing GHG emissions are negligible and assumed to be zero. (As discussed in Section 1.4 (Environmental Setting) of this EIR, the Project site is currently vacant, with vegetation consisting of native coastal sage scrub and grassland habitats.)

2.10.2 Analysis of Project Effects and Determination as to Significance

2.10.2.1 *Appendix G Guidelines for the Determination of Significance*

A significant global climate change impact would occur if implementation of the proposed Project would do the following:

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

Rationale for Selection of Guidelines

As background, SB 97, enacted in 2007, expressly recognized the need to analyze GHG emissions as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and CNRA to adopt, amendments to the CEQA Guidelines to address the analysis and mitigation of GHG emissions. (Pub. Resources Code, §21083.05.) In 2010, a series of CEQA Guidelines amendments were adopted to fulfill SB 97 requirements, including revisions to Appendix G of the CEQA Guidelines. The Appendix G revisions included two questions related to GHG emissions, which were intended to satisfy the Legislative directive in Public Resources

Code Section 21083.05 that the effects of GHG emissions be analyzed under CEQA. (The continued utilization of Appendix G, as set forth above, accords to the analytical framework set forth in the Project's Draft EIR ([March 2015]).)

Section 15064.4 of the CEQA Guidelines was added as one of the amendments addressing GHG emissions. As most recently amended in December 2018, Section 15064.4 states that the "determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4(b)(1)-(3) further states that, "a lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment: (1) [t]he extent to which a project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) [w]hether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and, (3) [t]he 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 greenhouse gas emissions."

Recognizing that GHG emissions contribute to the cumulative impact condition of global climate change, Section 15064(h)(1) of the CEQA Guidelines is also applicable. Section 15064(h)(1) states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." A cumulative impact may be significant when the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of other past, current, and reasonably foreseeable probable future projects. However, as provided in CEQA Guidelines Section 15130(a)(3), "[a] project's contribution is less than cumulatively considerable if the project is required to implement…its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." Further, "[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable" (CEQA Guidelines Section 15064(h)(4)).

Finally, Section 15064(h)(3) of the CEQA Guidelines is pertinent. Section 15064(h)(3) states that: "[a] lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program…that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located."

2.10.2.2 *Emission Sources and Modeling*

GHG emissions associated with the proposed Project were estimated for seven categories of emissions: (1) construction; (2) carbon sequestration; (3) area sources (including fireplace use and landscaping); (4) energy use, including electricity and natural gas usage; (6) water consumption; (6) transportation; and, (7) solid waste.

The emissions inventory modeling estimated the Project's operational emissions in its build-out year (2030). In addition, the modeling estimated the Project's operational emissions under two types of conditions: (1) unmitigated conditions, as established by the statewide framework of existing regulatory standards and initiatives and environmental design considerations with quantifiable emission reduction benefits (referred to below as the unmitigated Project); and, (2) mitigated conditions, as established by the suite of mitigation measures recommended in this section (referred to below as the mitigated Project).

The proposed Project's GHG emissions were calculated using Version 2016.3.2 of CalEEMod, with adjustments to account for site- and Project- specific conditions, as further described in **Appendix C-2** to this EIR. The proposed Project's emissions inventory is based on information, methodologies and modeling tools available at the time of the publication of this document. This analytical platform is conservative and is expected to over-estimate the proposed Project's emissions inventory in its build-out year and beyond because: (i) the emissions reduction benefits of all regulatory compliance measures and design features are not readily quantifiable, and (ii) California's state, regional and local agencies are expected to adopt additional regulations and programs that secure GHG emissions in furtherance of the State's climate policies.

2.10.2.3 *Regulatory Compliance Measures and Project Design Features*

The following is a summary of the regulatory compliance measures that would apply to and be implemented by the proposed Project, all of which would reduce GHG emissions. The emission reduction benefits of these regulatory compliance measures were incorporated into the Project's emissions inventory.

- **Pavley I Standards and Advanced Clean Cars Program** – the Pavley and ACC standards serve to reduce the GHG emissions associated with Project-related mobile sources, such as passenger vehicles and light-duty trucks.
- **60 Percent Renewable Portfolio Standard** – the RPS serves to reduce the GHG emissions associated with Project-related electricity consumption.
- **2016 Title 24 Building Energy Efficiency Standards** – the building standards serve to reduce the GHG emissions associated with Project-related electricity and natural gas consumption.
- **2016 CALGreen Standards** (low-flow fixtures only) – the building standards serve to reduce the GHG emissions associated with Project-related electricity and natural gas consumption.
- **California Integrated Waste Management Act** – the solid waste diversion standards serve to reduce the GHG emissions associated with Project-related transport and handling of solid waste.

The emission reduction benefits of other regulatory compliance measures were not incorporated into the Project's emissions inventory due to uncertainties regarding the precise quantity of emission reductions that would result (e.g., dedicated circuits for electric vehicle plug-in facilities/stations in residential garages and non-residential areas per the 2016 CALGreen Standards; 20 percent reduction in carbon intensity of transportation fuels pursuant to the Low Carbon Fuel Standard regulations; the USEPA and NHTSA's fuel economy and GHG standards

for medium- and heavy-duty trucks). For additional information regarding the incorporation of regulatory compliance measures into the GHG emissions inventory data presented in this section, please see Table ES-2 in **Appendix C-2** of this EIR.

Table 2.10-3, Environmental Design Considerations to Reduce GHG Emissions, provides a summary of the specific environmental design considerations (EDCs) that would be implemented by the proposed Project as conditions of approval of the Specific Plan and Tentative Maps, all of which would serve to reduce Project-related GHG emissions. As illustrated in **Table 2.10-3**, the EDCs include a commitment to utilize only natural gas fireplaces in the on-site residences, thereby eliminating the potential for wood-burning fireplaces; the provision of curbside recycling; and, the implementation of a site-specific Water Conservation Plan that will serve to achieve measurable reductions in outdoor water consumption.

2.10.2.4 *Impact Analysis*

Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

Given the site's vacant condition, existing uses within the Project site emit approximately zero (0) metric tons of CO_2e per year. As shown in **Table 2.10-4**, Summary of Project GHG Emissions, the proposed Project would emit about 37,973 MT CO_2e that are attributable to construction-related activities and approximately ~~33,791~~38,476 MT CO_2e per year that are attributable to operational activities, after accounting for the quantifiable effects of regulatory compliance measures and EDCs (but not mitigation measures). As such, the unmitigated, proposed Project would increase the existing emissions level by approximately 33,791 MT CO_2e per year during its operational phase and contribute, on a one-time basis, ~~37,973~~38,476 MT CO_2e that are attributable to construction-related activities.

While the Project would result in an obvious change to the existing GHG emissions from the Project site, there is no scientific or regulatory consensus regarding what particular quantity of GHG emissions is considered significant, and there remains no applicable, adopted numeric threshold for assessing the significance of a project's individual emissions as a direct impact.[43] Further, it should be noted that "AB 32 demonstrates California's commitment to reducing GHG emissions and the state's associated contribution to climate change, without intent to limit population or economic growth within the state."[44] As a result, there are negative policy implications arising from the utilization of a uniform numeric threshold because of its potential to conflict with projected population and economic growth. CEQA is not a policy tool to control

[43] SMAQMD, CEQA Guide (December 2016), p. 6-10 [the air district has "recognize[d] that … there is no known level of emissions that determines if a single project will substantially impact overall GHG emission levels in the atmosphere"]; SJVAPCD, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (December 2009), p. 3 [the air district has concluded that "existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change"].

[44] SMAQMD, CEQA Guide (December 2016), p. 6-10.

population or economic growth, and, the future residents and occupants of development enabled by this Project would exist and live somewhere else even if this Project were not approved.[45]

Nonetheless, in an effort to ensure a conservative analysis, this section concludes that the Project's increase in GHG emissions may have a potentially significant impact on the environment (see CEQA Guidelines §15064.4(b)(1)).

With implementation of the eight mitigation measures recommended below in **Section 2.10.5**, the Project's mitigated emissions would be reduced to zero MT CO_2e per year as shown in **Table 2.10-4**. The mitigation measures would reduce Project-related GHG emissions to zero by reducing the Project's total quantity of vehicle miles traveled through the implementation of transportation demand management strategies; increasing the efficiency of energy consumption in the Project's built environment through the implementation of green building design strategies; and, securing carbon offsets from credible registries that issue credits for GHG emissions-reducing projects with high environmental integrity.

As such, because the recommended mitigation measures would ensure that the Project would result in no net increase in GHG emissions as compared to the existing environmental setting (see CEQA Guidelines §15064.4(b)(1)), the mitigated Project would not generate GHG emissions that may have a significant impact on the environment and the Project's GHG emissions would be reduced to a less-than-significant level.

Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing GHG Emissions

The proposed Project, without mitigation, potentially may conflict with plans, policies or regulations adopted to reduce GHG emissions because the Project would result in an incremental increase in existing GHG emissions levels. However, because the Project would not increase net GHG emissions above existing levels, following implementation of the EDCs and eight recommended mitigation measures, the mitigated Project would not conflict with any local or state plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The following provides additional discussion of plans, policies, and regulations adopted for the purpose of reducing GHG emissions and the determination that the Project does not conflict with such plans, policies, or regulations.

County of San Diego General Plan

As discussed further in **Section 3.3**, Land Use, and **Appendix B** of this EIR, the proposed Project is consistent with the County's General Plan Conservation and Open Space Policies that are designed to reduce the emissions of criteria air quality pollutants, emissions of GHGs, and energy

[45] CAPCOA, CEQA & Climate Change (January 2008), p. 73 ["[A] land development project, such as a specific plan, does not necessarily create 'new' emitters of GHG, but would theoretically accommodate a greater number of residents in the state. Some of the residents that would move to the project could already be California residents, while some may be from out of state (or would 'take the place' of in-state residents who 'vacate' their current residences to move to the new project). Some also may be associated with new births over deaths (net population growth) in the state. The out-of-state residents would be contributing new emissions in a statewide context, but would not necessarily be generating new emissions in a global context."].

use in buildings and infrastructure, while promoting the use of renewable energy sources, conservation, and other methods of efficiency. The following discussion highlights the Project's consistency with applicable General Plan Goals:

- The Project is consistent with General Plan Goals COS-1, Inter-Connected Preserve System, and COS-2, Sustainability of the Natural Environment, through its preservation of open space.
- The Project is consistent with General Plan Goal COS-14, Sustainable Land Development, through its mix of on-site uses, integration into the Otay Ranch master-planned community, proximity to neighboring communities located within the City of Chula Vista and unincorporated County areas, and use of various design strategies to achieve green building objectives (see, e.g., **M-GCC-2** through **M-GCC-5**).
- The Project is consistent with General Plan Goal COS-15, Sustainable Architecture and Buildings, through its use of various design strategies to achieve green building objectives (see, e.g., **M-GCC-2** through **M-GCC-5**).
- The Project is consistent with General Plan Goal COS-16, Sustainable Mobility, by utilizing a suite of transportation demand management strategies to facilitate the selection of more sustainable transportation modes, and by installing ZEV charging infrastructure (see **Table 2.10-3**, and **M-GCC-1** and **M-GCC-6**).
- The Project is consistent with General Plan Goal COS-17, Sustainable Solid Waste Management, because it will require Project-wide recycling for the single-family and multi-family homes, resort, school, and commercial/retail establishments.
- The Project is consistent with General Plan Goal COS-18, Sustainable Energy, because it will achieve Zero Net Energy standards in its single-family homes, use other strategies to reduce its demand for electricity and natural gas, and providing charging infrastructure for ZEVs (see, e.g., **M-GCC-2** through **M-GCC-6**).
- The Project is consistent with General Plan Goal COS-19, Sustainable Water Supply, by utilizing low-flow fixtures in accordance with the 2016 CALGreen Standards and implementing its site-specific Water Conservation Plan, which will serve to reduce outdoor water consumption by 30 percent.
- The Project is consistent with General Plan Goal COS-20, Governance and Administration, because it would reduce GHG emissions contributing to global climate change by meeting or exceeding the statewide reduction targets established by AB 32 and SB 32, neither of which require that new development achieve a net zero emissions level. The Project demonstrates consistency with this Goal by using a portfolio of on- and off-site emission reduction tools, which maximize on-site opportunities before utilizing feasible and effecting off-site opportunities for GHG reduction. (Please see **Appendix ~~XX~~ E-1** (Otay Ranch Resort Village Alternative H General Plan Amendment Report) of this EIR for additional information regarding the County's interpretation of Goal COS-20, and the proposed Project's consistency with same.)

SANDAG's *San Diego Forward* Plan

At the regional level, SANDAG's Sustainable Communities Strategy (a component of the *San Diego Forward* plan) is an applicable plan adopted for the purpose of reducing GHGs in

accordance with the 2020 and 2035 emission reduction targets adopted by the ARB for the San Diego region pursuant to SB 375.

For purposes of SB 375's underlying policy goals, it is important to recognize that the proposed Project is part of the planned and approved Otay Ranch GDP/SRP. This master plan, approved in 1993 as a joint planning effort by the City of Chula Vista and the County of San Diego, encompasses 23,000 acres arranged in a series of Villages to be developed over a 50-year period. The Otay Ranch vision and plan contains a balanced mix of residential, commercial, civic, recreational and public facilities, along with an 11,000+ acre open space preserve, all of which – when viewed from an integrated perspective – reduce the amount of vehicle miles traveled and corresponding GHG emissions.

The Otay Ranch GDP/SRP anticipated future transit lines being extending through Otay Ranch and required the dedication of right-of-way to accommodate light rail. Ultimately, the planned transit was converted to Bus Rapid Transit (BRT) that operates within the rights of way dedicated by Otay Ranch projects. This pre-planning has allowed SANDAG to identify no less than five transit stops as part of the South Bay BRT. Those stations include the Heritage, Lomas Verdes, Santa Venitia, Otay Ranch, and Millenia Stations. Further, SANDAG has conceptual plans for a "Mobility Hub" at the Otay Ranch Station, which could include an enhanced transit waiting area, passenger loading zones, walkways, crossings, bikeways, bike parking, dedicated transit land, NEV, EV charging, and smart parking (http://www.sdforward.com/fwddoc/mobipdfs/OtayRanch-Profile-SketchUp.pdf).

The portion of Otay Ranch located within the City of Chula Vista is in closer proximity to employment centers, transit, and other regional amenities. For example, between 2012 and 2018, the City of Chula Vista issued a number of approvals related to Otay Ranch Village 8 West, Village 9, and the University and Innovation District. These approvals authorize development of a major urban and employment center in eastern Otay Ranch, as planned for by the Otay Ranch GDP/SRP.

- Chula Vista University and Innovation District (SCH No. 2013071077) – approximately 10 million square feet of non-residential uses; 20,000 full-time equivalent (FTE) student university; 8,000 jobs
- Otay Ranch Regional Technology Park (SCH No. 2004081066) – approximately 2.2 million square feet of industrial/office
- Otay Ranch Eastern Urban Center (SCH No. 2007041074) – approximately 3.5 million square feet of non-residential floor area, including 2 million square feet of office in a business district
- Otay Ranch Village 9 (SCH No. 2004081066) – approximately 1,500,000 square feet of office/commercial
- Otay Ranch Village 8 West (SCH No. 20010062093) – approximately 300,000 square feet of office/commercial

These new employment-generating uses are complemented by the existing job centers in the South Bay Region, including the Sweetwater Union High School District (which operates 13 high schools); Chula Vista Elementary School District; Southwestern College; Sharp Chula Vista Medical Center; Scripps Mercy Hospital; and, a number of retail centers, including the Otay Ranch Town Center.

In addition to being part of a larger master-planned community that is an element of the region's planned forecast for accommodating anticipated population growth, the proposed Project itself also contains a balanced mix of uses, including resident-serving commercial, retail and office uses, a 10.3-acre community park and 18.3 acres of neighborhood parks, an elementary school site, a fire station site, and a resort with up to 200 rooms and related amenities. The Project's mix of uses allows for the Project to internally capture approximately 19.4 percent of all vehicle trips (i.e., these trips remain within the boundaries of the Project site), with an approximate trip length of one mile in each direction. (See **Section 2.9** [Transportation and Traffic] and **Appendix C-12** to the EIR for additional information on the Project's internal trip capture rate.) Further, the Project's mix of land uses, including residential in conjunction with the retail, parks, and school, is coupled with an integrated pathway and trail plan and traffic calming features along internal streets and roads that promote a pedestrian experience for the Project's residents and visitors and facilitate non-vehicular travel, consistent with SB 375. The Project site also is located approximately one-quarter mile east of the City of Chula Vista, and in close proximity to San Miguel Ranch, Rolling Hills Ranch, and Eastlake. Finally, the Project's Transportation Demand Management strategies (see **M-GCC-1**) are estimated to achieve an approximately 4.97 percent reduction in vehicle miles traveled (see Appendix B (Chen Ryan) within Appendix C-2)).

For all of these reasons, the Project would not conflict with SANDAG's implementation of the *San Diego Forward* plan or attainment of its SB 375 reduction targets in 2020 and 2035.

Consistency with SB 32 and S-3-05

As discussed above:

- **SB 32** establishes a reduction target to reduce statewide GHG emissions to at least 40 percent below 1990 levels by 2030.
- **Executive Order S-3-05** establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

This discussion evaluates whether the GHG emissions trajectory after Project completion would impede the attainment of the 2030 and 2050 GHG reduction goals.

To begin, the ARB has addressed the progress with regard to both the 2030 and 2050 goals. It states in the *First Update* to the *Scoping Plan* that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (ARB 2014b, p. ES2). With regard to the 2050 target for reducing GHG emissions to 80 percent below 1990 levels, the *First Update* states the following:

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to

> reduce emissions to 80 percent below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, the ARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the *2017 Scoping Plan*, which states:

> This Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.[46]

As mentioned above, when discussing project-level GHG emissions reduction actions and thresholds for CEQA in the *2017 Scoping Plan*, the ARB states "[a]chieving no net additional increase in GHG emissions … is an appropriate overall objective for new development."[47] Therefore, the Project would not interfere with implementation of any of the above-described GHG reduction goals for 2030 or 2050 because, with implementation of mitigation, the Project achieves carbon neutrality (i.e., a net zero emissions level), thereby resulting in *no* net increase in GHG emissions relative to existing environmental conditions.

2.10.3 Cumulative Impact Analysis

Although the Project would emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHGs from more than one project and many sources in the atmosphere that may combine and result in global climate change.[48] Indeed, in the context of CEQA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[49]

This approach is consistent with the supporting documentation published by the CNRA when promulgating the SB 97-related CEQA amendments, which indicated that the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact. The CNRA similarly advised that an environmental document must analyze the

[46] ARB, 2017 Scoping Plan (November 2017), p. 6.

[47] Id. at p. 101.

[48] OPR has concurred with the general scientific consensus that "climate change is ultimately a cumulative impact." OPR, Technical Advisory—CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review (June 2008), p. 6. See also ARB, First Update (May 2014), p. 33 ["Ultimately, climate change is affected by cumulative emissions."].

[49] CAPCOA, CEQA & Climate Change (January 2008), p. 35. See also SMAQMD (December 2016), CEQA Guide, p. 6-1 [the air district has concluded that "from the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative"]; SJVAPCD, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (December 2009), p. 4 [the air district has concluded that the "effects of project specific GHG emissions are cumulative"].

incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable. CEQA Guidelines Section 15064.4(b) confirms as much: "In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change." The analysis presented here conservatively treats any increase in GHG emissions as a cumulatively considerable impact of the proposed Project.

The State has established mandates, via AB 32 and SB 32, to reduce cumulative statewide emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030, even though statewide population and commerce is predicted to continue to expand. To achieve these reduction targets, the ARB is working with other state agencies to establish and implement the necessary regulatory framework to reduce GHG emissions levels to 1990 levels. And, the regulatory compliance measures, EDCs, and mitigation measures discussed in this section would represent a break from "business-as-usual" and support efforts to secure the State's attainment of the AB 32 and SB 32 reduction mandates.

As discussed above, with mitigation, the Project would result in no net increase in GHG emissions. Additionally, the Project would not conflict with SANDAG's *San Diego Forward* plan because, as mentioned above, it is located within an area that has been slated for long-term growth ever since the County of San Diego's 1993 approval of the Otay Ranch GDP/SRP, and incorporates various strategies that serve to capture vehicle trips internal to the Project site and reduce vehicle miles traveled. In light of the foregoing, the Project's contribution to the cumulative impact of global climate change would be less than significant with mitigation.

2.10.4 Significance of Impacts Prior to Mitigation

Based on the analyses above, the proposed Project would have the following significant impact prior to mitigation:

Impact GCC-1: Prior to the application of recommended mitigation measures, the Project's GHG emissions would be potentially significant and potentially conflict with plans and policies designed to reduce GHG emissions due to the increase in GHG emissions as compared to the existing environmental setting.

2.10.5 Mitigation

In order to reduce the proposed Project's GHG emissions to below the level of significance, the following eight mitigation measures are recommended for adoption by the County of San Diego in the event it decides to certify the Project's EIR and issue the requested Project approvals and entitlements. If adopted by the County, the mitigation measures will be implemented and enforced through a CEQA-mandated Mitigation Monitoring and Reporting Program. These mitigation measures have been developed in accordance with CEQA Guidelines Section 15126.4(c), and secure feasible emission reductions through the implementation of a mix of: (i) on-site design strategies to reduce emissions from building-related energy consumption and vehicles, and (ii) off-site strategies that generate carbon offset credits.

M-GCC-1 Transportation Demand Management Strategies for Residents, Students, Resort Guests and Employees.

Prior to the issuance of any grading permits, the Project applicant (or its designee) shall, to the satisfaction of San Diego County Planning & Development Services Department ~~(PDS)~~, demonstrate that the Project shall: (i) provide a comprehensive trails network designed to provide safe bicycle and pedestrian access between the various development areas within the site and various recreational trails and multi-modal facilities accessing the site; (ii) provide bicycle racks along main travel corridors, adjacent to commercial development areas, and at public parks and open spaces; and, (iii) implement traffic calming features throughout the roadway network on the Project site to reduce motor vehicle speed and encourage walking and biking.

Prior to the issuance of any residential building permits, the Project ~~applicant~~ Applicants (or ~~its~~ their designee) shall, to the satisfaction of San Diego County Planning & Development Services Department~~PDS~~, demonstrate that the Project shall: (i) provide to residents information for residents regarding transit options on a quarterly basis in HOA newsletters, and as part of a "new resident" information packet; (ii) provide and promote information regarding SANDAG's iCommute program for residents; and, (iii) encourage formal/informal networks among residents that arrange carpools for ongoing or occasional trips for commute or non-commute purposes.

Prior to the issuance of any residential building permits, the Project ~~applicant~~ Applicants (or ~~its~~ their designee) shall demonstrate, to the satisfaction of San Diego County Planning & Development Services Department~~PDS~~, that the Project shall establish provide a School Pool match program to help parents to transport students to off-site public or private schools, and shall implement a walking school bus program for elementary school students traveling to the on-site elementary school.

Prior to the issuance of any residential and non-residential building permits, the Project ~~applicant~~ Applicant (or ~~its~~ their designee) shall demonstrate, to the satisfaction of San Diego County Planning & Development Services Department~~PDS~~, that the Project shall provide and promote information regarding SANDAG's iCommute program for commuters and on-site businesses.

Prior to issuance of any resort-related building permits, the Project applicant (or its designee) shall demonstrate, to the satisfaction of the San Diego County Planning & Development Services Department, that the Project's resort operator shall implement a bike-sharing program for resort guests.

M-GCC-2 High-Efficiency Lighting in Multi-Family Homes and Non-Residential Buildings

Prior to the issuance of building permits for multi-family residences and non-residential buildings, the Project ~~applicant~~ Applicants (or ~~its~~ their designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, that the Project shall utilize high-efficiency (light emitting diode [LED] or equivalent) interior lighting in the multi-family residences and non-residential buildings that utilizes 15 percent less energy than otherwise permitted by the 2016 Building Energy Efficiency Standards.

M-GCC-3 EnergyStar Appliances in Multi-Family Homes and Non-Residential Buildings

Prior to the issuance of building permits for multi-family residences and non-residential buildings, the Project A~~a~~pplicants (or ~~its~~their designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, that the Project shall install EnergyStar appliances in the multi-family residences and non-residential buildings. The required EnergyStar appliances include clothes washers, dishwashers, fans and refrigerators.

M-GCC-4 Zero Net Energy Single-Family Homes

Prior to the issuance of building permits for single-family residences, the Project ~~applicant~~ Applicants (or their~~its~~ designee) shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to San Diego County Planning & Development Services Department for review and approval. The ZNE Report shall demonstrate that the single-family residential development within the Project site subject to application of Title 24, Part 6, of the California Code of Regulations has been designed and shall be constructed to achieve ZNE, as defined by the California Energy Commission, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation or greenhouse gas emissions savings.

A ZNE Report may, but is not required to:

- Evaluate multiple single-family residences.
- Rely upon aggregated or community-based strategies to support its determination that the subject buildings are designed to achieve ZNE. For example, shortfalls in renewable energy generation for one or more buildings may be offset with excess renewable generation from one or more other buildings, or off-site renewable energy generation. As such, a ZNE Report could determine a building is designed to achieve ZNE based on aggregated or

community-based strategies even if the building on its own may not be designed to achieve ZNE.

- Make reasonable assumptions about the estimated electricity and natural gas loads and energy efficiencies of the subject buildings.

M-GCC-5 Beyond Code Efficiencies in Multi-Family Homes and Non-Residential Buildings

Prior to the issuance of building permits for multi-family residences and non-residential buildings, the Project applicant (or its designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, that the Project's multi-family residences and non-residential buildings are designed to improve building energy efficiency by 10 percent over the 2016 Building Energy Efficiency Standards. As part of this demonstration, the building plans and related application materials shall confirm that attached multi-family residences will be designed and constructed without wood-burning or natural gas-burning fireplaces.

M-GCC-6 Zero Emission Vehicle Charging Infrastructure

Prior to the issuance of residential building permits, the Project applicant (or its designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, the installation of : (a) dedicated 208/240 branch circuits in each garage of every residential unit, and (b) one Level 2 electric vehicle (EV) charging station in the garage in half of all residential units.

Prior to the issuance of non-residential building permits, the Project ~~applicant~~ Applicant (or ~~its~~ their designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, the installation of an additional ten (10) Level 2 EV charging stations within the non-residential parking areas located on the Project site, as well as an additional ten (10) Level 2 EV charging stations for vehicles utilizing public street parking spaces on street blocks located adjacent to non-residential development areas.

M-GCC-7 Carbon Offsets – Construction Emissions

As to construction emissions, the Project ~~applicant~~ Applicant (or ~~its~~ their designee) shall provide ~~purchase and retire~~ carbon offsets in a quantity sufficient to offset 100 percent of the Project's construction emissions (including sequestration loss from vegetation removal) consistent with the performance standards and requirements set forth below.

First, "carbon offset" shall mean an instrument, credit or other certification verifying the reduction of GHG emissions issued by any of the following: (i) the Climate Action Reserve, the American Carbon Registry, and Verra (previously, the Verified Carbon Standard); or, (ii) any registry approved by the California Air Resources Board to act as a registry under the State's cap-and-trade program.

Second, any carbon offset utilized to reduce the Project's GHG emissions shall be a carbon offset that represents the past or forecasted reduction or sequestration of 1 MT Co_2e ~~one metric tonne of carbon dioxide equivalent~~ that is "not otherwise required" (CEQA Guidelines §15126.4(c)(3)). By requiring that the offset is "not otherwise required," the offset shall represent GHG reduction or sequestration additional to any GHG emission reduction otherwise required by law or regulation, and any other GHG emission reduction that otherwise would occur (Health & Saf. Code, §38562(d)(2)).

Third, as to construction and vegetation removal GHG emissions, prior to the County's issuance of the Project's first grading permit, the Project ~~applicant~~ Applicants (or ~~its~~ their designee) shall provide evidence to the satisfaction of the San Diego County PDS that the Project applicant (or their~~its~~ designee) has ~~purchased and~~ retired carbon offsets in a quantity sufficient to offset 100 percent of the construction and vegetation removal GHG emissions (an estimated total of ~~37,973~~38,476 MT CO_2e) generated by the Project, as identified in the Project's certified EIR. In making such a determination, the Director of the Planning & Development Services Department ~~(PDS)~~ shall require the Project ~~applicant~~ Applicants (or their~~its~~ designee) to provide ~~an attestation or similar~~ documentation from the selected registry(ies) that a sufficient quantity of carbon offsets meeting the standards set forth in this measure have been ~~purchased and~~ retired, thereby demonstrating that the necessary emission reductions are realized. The documentation shall identify the registry-assigned serial number associated with each retired carbon offset; the referenced serial numbers are used by registries to ensure that each metric ton of reduction meets the requirements identified in the applicable protocol and is counted and retired only once. The documentation also shall identify the locational attributes of the carbon offsets in order to allow San Diego County Planning & Development Services Department to track and monitor the implementation of the geographic priority provision set forth below.

Fourth, the ~~purchased~~ carbon offsets used to reduce construction and vegetation removal GHG emissions shall achieve real, permanent, quantifiable, verifiable, and enforceable reductions (Health & Saf. Code, §38562(d)(1)).

Fifth, all carbon offsets required to reduce the Project's construction and vegetation removal emissions shall be associated with reduction activities that are geographically prioritized according to the following locational attributes: (1) off-site, unincorporated areas of the County of San Diego; (2) off-site, incorporated areas of the County of San Diego; (3) off-site areas within the State of California; (4) off-site areas within the United States; and, (5) off-site, international areas. As

listed, geographic priorities would focus first on local reduction options (including projects and programs that would reduce GHG emissions) to ensure that reduction efforts achieved locally would provide cross-over, co-benefits to other environmental resource areas.

The Director of the Planning & Development Services ~~PDS~~ shall issue a written determination that offsets ~~are unavailable and/or~~ fail to meet the feasibility definition and factors set forth ~~defined~~ in CEQA Guidelines Section 15364 in a higher priority geographic category before allowing the Project applicant or its designee to use offsets from the next lower priority category. In making such a determination, the Director of the Planning & Development Services ~~PDS~~ shall consider information available at the time each Project-related grading permit request is submitted, including but not limited to:

- The availability of in-County and in-State emission reduction opportunities, including funding and partnership opportunities with the County, other public agencies, or environmental initiatives with demonstrated integrity, where such reduction opportunities use methodologies and protocols approved by a specified registry (see "First" paragraph above for the definition of such registries);
- The geographic attributes of carbon offsets that are listed for purchase and retirement;
- The temporal attributes of carbon offsets that are listed for purchase and retirement;
- The pricing attributes of carbon offsets that are listed for purchase and retirement; and/or,
- Any other information deemed relevant to the evaluation, such as periodicals and reports addressing the availability of carbon offsets.

Sixth, over the course of the construction period, the Project applicant (or its designee) shall submit annual reports to San Diego Planning & Development Services ~~PDS~~ that identify the quantity of emission reductions required by this mitigation measure, as well as the carbon offsets retired to achieve compliance with this measure. The annual reports shall identify the locational attributes of the carbon offsets in order to allow Planning & Development Services ~~PDS~~ to track and monitor the implementation of the geographic priority provision. Such tabulation and tracking shall be to the satisfaction of the Director of the Planning & Development Services~~PDS~~.

M-GCC-8 Carbon Offsets – Operational Emissions

As to operational emissions, the Project applicant (or its designee) shall provide~~purchase and retire~~ carbon offsets sufficient to offset, for a 30-year period, the operational GHG emissions from that incremental amount of development to net zero, consistent with the performance standards and requirements set forth below.

First, "carbon offset" shall have the same meaning as set forth in M-GCC-7.

Second, any carbon offset utilized to reduce the Project's GHG emissions shall be a carbon offset that represents the past or forecasted reduction or sequestration of 1 MT CO_{2e} ~~one metric tonne of carbon dioxide~~ equivalent that is "not otherwise required" (CEQA Guidelines §15126.4(c)(3)). By requiring that the offset is "not otherwise required," the offset shall represent GHG reduction or sequestration additional to any GHG emission reduction otherwise required by law or regulation, and any other GHG emission reduction that otherwise would occur (Health & Saf. Code, §38562(d)(2)).

Third, because the Project will be built in phases over approximately eleven years, which influences both the quantity of operational GHG emissions and the level of reduction required to achieve net zero GHG emissions, the Project applicant (or its designee) shall utilize one of the two following compliance options to secure the necessary carbon offsets, as allowed in CEQA Guidelines Section 15126.4(c)(3):

(1) Prior to the issuance of the first building permit, the Project applicant (or its designee) shall provide evidence to the San Diego County Planning & Development Services Department ~~(PDS)~~ that ~~is~~ it has obtained carbon offsets in the amount of 28,625 MT CO_2e per year multiplied by 30 years.

(2) Prior to the issuance of each increment of building permits for the phased development of the Project, the Project ~~applicant~~ Applicants (or ~~its~~ their designee) shall provide evidence to Planning & Development Services Department ~~PDS~~ that it has obtained the amount of carbon offsets required for the increment of development being permitted for a 30-year period. The amount of carbon offsets required shall be based on and include operational GHG emissions as identified in the certified EIR. The application(s) for permit issuance shall include, as attachments, emissions calculation worksheets that identify the emissions reduction obligation of the increment of development being permitted and tracking tables that identify any previous carbon offsets ~~purchased~~ retired, as well as the amount of carbon offsets anticipated to be associated with the unbuilt, unpermitted portion(s) of the Project. Such application materials shall be to the satisfaction of the Director of Planning & Development Services Department~~PDS~~.

The Director of Planning & Development Services shall require the Project applicant (or its designee) to provide documentation from the selected registry(ies) that a sufficient quantity of carbon offsets under option (1) or (2) meeting the standards set forth in this measure have been retired, thereby demonstrating that the necessary emission reductions are realized.~~Evidence of compliance with option (1) or (2) shall consist of documentation from the selected registry(ies) illustrating the retirement of carbon offsets meeting the standards set forth in this measure in a~~

~~quantity equal to the GHG emission reductions that need to be realized~~. The documentation shall identify the registry-assigned serial number associated with each retired carbon offset; the referenced serial numbers are used by registries to ensure that each metric ton of reduction meets the requirements identified in the applicable protocol and is counted and retired only one. The documentation also shall identify the locational attributes of the carbon offsets in order to allow San Diego County Planning & Development Services Department ~~PDS~~ to track and monitor the implementation of the geographic priority provision set forth below.

Fourth, the ~~purchased~~ carbon offsets used to reduce operational GHG emissions shall achieve real, permanent, quantifiable, verifiable, and enforceable reductions (Health & Saf. Code, §38562(d)(1)).

Fifth, as new federal, state and local regulations are adopted or technological advancements occur, the quantity of emission reductions needed to demonstrate achievement of the net zero emissions level may decrease. Therefore, the amount of carbon offsets needed may be reduced if the Project ~~applicant~~ Applicants (or their~~ts~~ designee) can demonstrate, with substantial evidence, that changes in regulation or law, or other increased technological efficiencies have reduced the total MT CO_2e emitted by the Project. As described further in the following paragraph, any modification to the emissions reduction value stated herein shall require approval from the County's Board of Supervisors, as considered pursuant to a noticed public hearing process that accords with applicable legal requirements, including those set forth in CEQA for the post-approval modification of mitigation implementation parameters.

Specifically, if the Project applicant elects to process a "true-up" exercise subsequent to the County's certification of the Final EIR and approval of the Project, the Project applicant shall provide an operational GHG emissions inventory of the ~~P~~proposed Project's operational emissions for the "true up" operational conditions, including emissions from mobile sources, energy, area sources, water consumption, and solid waste. Subject to the satisfaction of the Board of Supervisors, these calculations shall be conducted using a County-approved model and/or methodology and must validate the continuing adequacy of modeling inputs used in the EIR that are not proposed to be altered as part of the "true-up" exercise. The inclusion of the validation requirement ensures that any updated operational GHG emissions inventories for the Project fully account for then-existing information that is relevant to the emissions modeling.

The "true up" operational GHG emissions inventory, if conducted, will be provided in the form of a Project-specific Updated Emissions Inventory and Offset Report to the County's Board of Supervisors ~~(or its designee)~~ prior to the issuance of building permits for the next build-out phase. The subject technical documentation shall be prepared by a County-approved, qualified air quality and greenhouse gas technical specialist.

In all instances, substantial evidence must confirm that any reduction to the total carbon offsets value as identified in the certified Final EIR for the Project is consistent with the Project commitment to achieve and maintain carbon neutrality (i.e., net zero emissions) for the 30-year life of the Project.

Sixth, all carbon offsets required to reduce the Project's operational emissions shall be associated with reduction activities that are geographically prioritized according to the following locational attributes: (1) off-site, unincorporated areas of the County of San Diego; (2) off-site, incorporated areas of the County of San Diego; (3) off-site areas within the State of California; (4) off-site areas within the United States; and, (5) off-site, international areas. As listed, geographic priorities would focus first on local reduction options (including projects and programs that would reduce GHG emissions) to ensure that reduction efforts achieved locally would provide cross-over, co-benefits to other environmental resource areas.

The Director of the Planning & Development Services Department ~~PDS~~ shall issue a written determination that offsets ~~are unavailable and/or~~ fail to meet the feasibility definition and factors set forth ~~defined~~ in CEQA Guidelines Section 15364 in a higher priority geographic category before allowing the Project applicant or its designee to use offsets from the next lower priority category. In making such a determination, the Director of the Planning & Development Services Department ~~PDS~~ shall consider information available at the time each Project-related building~~grading~~ permit request is submitted, including but not limited to:

- The availability of in-County and in-State emission reduction opportunities, including funding and partnership opportunities with the County, other public agencies, or environmental initiatives with demonstrated integrity, where such reduction opportunities use methodologies and protocols approved by a specified registry (see "First" paragraph above for the definition of such registries);
- The geographic attributes of carbon offsets that are listed for purchase and retirement;
- The temporal attributes of carbon offsets that are listed for purchase and retirement;
- The pricing attributes of carbon offsets that are listed for purchase and retirement; and/or,
- Any other information deemed relevant to the evaluation, such as periodicals and reports addressing the availability of carbon offsets.

2.10.6 Conclusion

As previously noted, the ARB's *2017 Scoping Plan* states that "[a]chieving no net additional increase in GHG emissions … is an appropriate overall objective" for project-level CEQA analysis, but also recognizes that such a standard may not be appropriate or feasible for every

development project.[50] As such, the *2017 Scoping Plan* also states that the "inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."[51] Further, the California Supreme Court, in *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, recognized that there are multiple pathways to compliance under CEQA for a lead agency to analyze the significance of a project's GHG emissions.

In this case, the proposed Project feasibly can achieve no net increase in GHG emissions through implementation of mitigation measures **M-GCC-1** through **M-GCC-8**. The Project will utilize a suite of EDCs and mitigation measures that reduce GHG emissions through on-site strategies targeted to the Project's built environment and transportation sources,[52] and secure additional, necessary emission reductions through off-site, offset projects. The proposed Project also would be consistent with applicable goals and policies of the County's General Plan and would not conflict with SANDAG's *San Diego Forward* plan, as development on the Project site has been anticipated for more than twenty years by the County and regional planning agencies, like SANDAG, and as the Project incorporates various strategies that serve to capture vehicle trips internal to the Project site and reduce vehicle miles traveled. In sum, Project impacts would be less than significant with mitigation.

[50] ARB, 2017 Scoping Plan (November 2017), pp. 101-102.

[51] Id. at p. 102.

[52] For information purposes, it is noted that M-GCC-4's requirement to design Zero Net Energy single-family residences encompasses the same types of efficiencies associated with high-efficiency lighting and EnergyStar appliances called for by M-GCC-2 and M-GCC-3, respectively, for the Project's multi-family residences and non-residential buildings.

Table 2.10-1
State of California GHG Emissions by Sector

Sector	Total 1990 Emissions (MMT CO_2e)	Percent of Total 1990 Emissions	Total 2016 Emissions (MMT CO_2e)	Percent of Total 2016 Emissions
Agriculture	23.4	5%	33.84	8%
Commercial	14.4	3%	15.15	3%
Electricity Generation	110.6	26%	68.58	16%
Forestry (excluding sinks)	0.2	<1%	N/A	N/A
Industrial	103.0	24%	89.61	21%
Residential	29.7	7%	24.2	6%
Transportation	150.7	35%	169.38	39%
High-GWP Gases	N/A	N/A	19.78	5%
Recycling and Waste	N/A	N/A	8.81	2%
Forestry Sinks	(6.7)	N/A	N/A	N/A
Total	425.3	100%	429.4	100%

N/A – data not provided
Source: *California Greenhouse Gas Emission Inventory – 2018 Edition, available at https://www.arb.ca.gov/cc/inventory/data/data.htm.*

Table 2.10-2
Land Use-Related GHG Emissions Sources Covered by Cap-and-Trade Program

Emissions Sources Associated with Land Use Development	GHG Emissions Source Examples	Covered by Cap-and-Trade?
Area Sources	Fuel combustion by landscaping equipment	Yes (gasoline and diesel fuel suppliers)
Energy Use	Natural gas combustion (e.g., stoves and water heaters)	Yes (natural gas suppliers)
	Fuel combustion at utilities for electricity production used in building energy use	Yes (electrical generators)
Water Use	Production of electricity to supply and treat water	Yes (electrical generators)
	Methane generated by wastewater treatment	Yes (wastewater treatment facilities)
Waste Disposal	Methane generated by waste disposal	Yes (landfills)
Traffic	Fuel combustion in car and trucks	Yes (gasoline and diesel fuel suppliers)
Construction	Fuel combustion in construction equipment	Yes (gasoline and diesel fuel suppliers)
Vegetation	Carbon sequestration lost due to vegetation loss	No

Table 2.10-3
Environmental Design Considerations to Reduce GHG Emissions

Strategy to Reduce GHG Emissions	Description	Emission Reduction	Basis for Emission Reduction
Building Design			
Natural Gas Fireplaces	The Project's residences would only utilize natural gas fireplaces; no wood burning fireplaces would be installed.	88% reduction in area source emissions.	CalEEMod
Solid Waste			
Curbside Recycling	The Project's residences and non-residential development would be served by curbside recycling in furtherance of the California Integrated Waste Management Act, the statewide policy goals of AB 341, and the County's General Plan and Strategic Plan to Reduce Waste. Additionally, the Project would comply with the reduction, re-use, and recycling requirements contained in the County's Recycling and Construction and Demolition Debris Recycling Ordinances.	None taken; however, the strategy would be consistent with state and local diversion rate goals.	Not Applicable
Water Conservation			
Water Conservation Plan	The Project includes a Water Conservation Plan that will reduce outdoor water usage by 30%, when compared to existing outdoor water usage for typical residential homes. The Water Conservation Plan will require compliance with the County's Water Conservation in Landscaping Ordinance (Model Landscape Ordinance) for all outdoor landscapes in the Project, including common areas, public spaces, parkways, medians, parking lots, parks, and all builder or homeowner installed private front and backyard landscaping. As such, the Water Conservation Plan goes beyond the County's Ordinance by applying to all landscaping installed in the Project. Consistent with the County's Model Landscape Ordinance, the Water Conservation Plan requires the use of a water allocation-based approach to landscape zones, use of drought-tolerant, low-water usage native plants, high-efficiency weather- or evapotranspiration-based irrigation controllers, soil moisture sensors, and drip emitters, soaker hose, or equivalent high-efficiency drip irrigation, and limitations on the use of natural turf in residential development to no more than 30% of the outdoor open space.	30% reduction in Project outdoor water use.	Water Conservation Plan

Table 2.10-4
Summary of Project GHG Emissions

Emission Source	Annual Emissions (MT CO_2e per year)	
	Unmitigated	**Mitigated**
Construction Emissions		
Construction Activities	~~37,695~~38,198	~~37,695~~38,198
Sequestration Loss	4,077	4,077
Sequestration Gain	-3,799	-3,799
Construction Carbon Offsets (M-GCC-7)	N/A	~~-37,973~~-38,476
Construction Total	~~37,973~~38,476	0
Operational Emissions		
Area Sources	586	586
Energy Use (M-GCC-2 through M-GCC-5)	7,831	3,868
Water Consumption	543	543
Solid Waste Handling	590	590
Vehicles (M-GCC-1)	24,241	23,038
Operational Carbon Offsets (M-GCC-8)	N/A	-28,625
Operational Total	33,791	0
Potentially Significant?	**Yes**	**No**

*Notes: 1)*The "Unmitigated" emissions inventory data accounts for the existing regulatory compliance measures and on-site environmental design considerations discussed in Section 2.10~~3.8.2.3~~ above. The "Mitigated" emissions inventory data accounts for those same existing regulatory compliance measures and environmental design considerations, as well as implementation of **M-GCC-1** through **M-GCC-8** discussed above. As illustrated in Section 2.10.5, **M-GCC-1** through **M-GCC-6** would reduce GHG emissions through implementation of on-site reduction strategies that primarily target emissions from Vehicles and Energy Use – see parentheticals in table. (Conservatively, no emissions reduction value has been assigned to **M-GCC-6** due to estimation complexities. However, the mitigation strategy provides important infrastructure-level support for the State's ZEV deployment objectives.) Following application of all feasible on-site reduction strategies (as delineated by the EDCs and on-site mitigation measures), **M-GCC-7** and **M-GCC-8** require use of carbon offsets to reduce the balance of Project-related emissions to net zero.

2) These mitigated measures include the implementation of the proposed environmental design consideration.