

## MEMORANDUM

**DATE:** April 14, 2023

**To:** Kristine Simmons, Rich Development Enterprises, LLC

**FROM:** Ronald Brugger, Senior Air Quality Specialist

**SUBJECT:** Greenhouse Gas Emissions Memorandum for the proposed Multi-tenant Commercial Project in Victorville, California

### INTRODUCTION

This greenhouse gas (GHG) emissions impact analysis for the proposed Multi-tenant Commercial Project in Victorville, San Bernardino County, California (project) has been prepared using methods and assumptions recommended in the Mojave Desert Air Quality Management District's (MDAQMD) *California Environmental Quality Act (CEQA) Air Quality Handbook* (MDAQMD 2020). This analysis includes a description of existing regulatory framework and an assessment of project features related to GHG emissions.

### PROJECT LOCATION

The 2.361-acre project site is located on the northeast corner of the intersection of Palmdale Road and Cantina Street in Victorville, CA. The project's land use is designated as Commercial. The project site is comprised of two parcels (Assessor's Parcel Numbers 3103-561-11 and 3103-561-12). Figure 1 shows the project location (all figures are in Attachment A).

### PROJECT DESCRIPTION

The proposed project would construct a 3,600-square-foot (sf) car wash and a 1,000 sf coffee shop with associated parking. One parking space would be a level 3 charging station and another three spaces would be prepared for future EV chargers. The coffee shop would have two lanes for drive-thru service. Figure 2 shows the site plan.

### REGIONAL CLIMATE AND AIR QUALITY

The project site is located in the Mojave Desert Air Basin, which is an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the Basin are out of the west and southwest. These prevailing winds are due to the proximity of the Basin to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are

channeled through the Basin. The Basin is separated from the Southern California coastal and central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer, the Basin is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The Basin is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The Basin averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The Basin is classified as a dry hot desert climate, with portions classified as dry very hot desert, to indicate that at least 3 months have maximum average temperatures over 100.4 degrees Fahrenheit (°F).

Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific Ocean collide with rising heated air from desert areas, resulting in brief, high intensity thunderstorms that can cause high winds and localized flash flooding. During the fall and winter months, strong, dry Santa Ana winds from the northeast can cause rapid temperature variations of significant magnitude.

### **Description of Global Climate Change and Its Sources**

Earth's natural warming process is known as the "greenhouse effect." This greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiated heat from escaping, thus warming Earth's atmosphere. GHGs keep the average surface temperature of the Earth to approximately 60°F. However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences (IPCC 2007).

Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (Pew Center 2006). While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change (GCC) is evidenced in changes to global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, extreme weather events, and ocean acidification (IPCC 2007).

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. While climate change may increase the concentration of ground-level ozone, the magnitude of the

effect and, therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would exacerbate air quality. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (California Department of Public Health 2014). However, if higher temperatures are accompanied by wetter, rather than drier, conditions, the rains would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus reducing the pollution associated with wildfires. GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human induced GCC are the following:<sup>1</sup>

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF<sub>6</sub>)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which can cause global warming. Although GHGs produced by human activities include naturally occurring GHGs (e.g., CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O), some gases (e.g., HFCs, PFCs, and SF<sub>6</sub>) are completely new to the atmosphere. Water vapor is a GHG, but it is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term “GHGs” will refer collectively to the six gases identified in the bulleted list provided above.

These GHGs vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO<sub>2</sub>, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO<sub>2</sub> over a specified time period. For example, N<sub>2</sub>O is from 265 to 310 times more potent at contributing to global warming than CO<sub>2</sub>. GHG emissions are typically measured in terms of metric tons of CO<sub>2</sub> equivalents (MT CO<sub>2</sub>e). Table C identifies the GWP for the three GHGs analyzed in this report. The EPA and CARB use GWP values from the 2007 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4). The IPCC has published the 2021 IPCC Sixth Assessment Report (AR6) with updated GWP values.

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<sup>1</sup> The greenhouse gases listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

**Table A: Global Warming Potential for Selected Greenhouse Gases**

Pollutant	AR4 Values	AR6 Values
Carbon Dioxide (CO <sub>2</sub> )	1 (by definition)	1 (by definition)
Methane (CH <sub>4</sub> )	25	29.8 ± 11
Nitrous Oxide (N <sub>2</sub> O)	298	273 ± 30

Sources: *California's 2017 Climate Change Scoping Plan* (CARB 2017), IPCC Sixth Assessment Report (2021).

<sup>1</sup> The EPA and CARB use global warming potential values from the IPCC Fourth Assessment Report (2007).

AR4 = 2007 IPCC Fourth Assessment Report

AR6 = 2021 IPCC Sixth Assessment Report

CARB = California Air Resources Board

EPA = United States Environmental Protection Agency

IPCC = Intergovernmental Panel on Climate Change

## Regulatory Framework

### Federal Regulations

On April 2, 2007 the United States Supreme Court ruled that the EPA has the authority to regulate CO<sub>2</sub> emissions under the Clean Air Act (CAA). On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) constitute a threat to public health and welfare and that the combined emissions from motor vehicles cause and contribute to GCC.

### State Agencies

**California Air Resources Board.** In 1967, the State Legislature established CARB. The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a statewide GHG emissions limit and set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

In 2016, the Legislature passed, and Governor Jerry Brown signed, Senate Bill (SB) 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order (EO) B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million (ppm) CO<sub>2</sub>e and reduce the likelihood of catastrophic impacts from climate change. The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions.

In December 2017, CARB adopted "California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target" (CARB 2017) that describes the actions the State will take to achieve the SB 32 climate goal of reducing GHG emissions at least 40 percent below 1990 levels by 2030. The 2017 Scoping Plan includes input from a range of State agencies and is the result of a 2-year development process, including extensive public and stakeholder outreach, designed to ensure that California's climate and air quality efforts continue to improve public health

and drive development of a more sustainable economy. It outlines an approach that cuts across economic sectors to combine GHG reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. The 2017 Scoping Plan reflects the direction from the Legislature on the Cap-and-Trade Program, as described in AB 398, the need to extend key existing emissions reductions programs, and acknowledges the parallel actions required under AB 617 to strengthen monitoring and reduce air pollution at the community level.

The actions identified in the 2017 Scoping Plan can reduce overall GHG emissions in California and deliver strong policy signals that will continue to drive investment and certainty in a low-carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the original Scoping Plan and the 2014 Scoping Plan, while also identifying new, technologically feasible 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.

Although the 2017 Scoping Plan does not impose any specific mandates or policies that specifically apply to individual development projects such as the proposed project, the Scoping Plan encourages local municipalities to update building codes and establish sustainable development practices for accommodating future growth. Key policies that involve the residential and commercial building sectors that are indirectly applicable to the proposed project include the implementation of SB 275 (promoting infill development and high-density housing in high quality transit areas), implementing green building practices (i.e., the California Green Building Standards Code), energy efficiency and water conservation policies, and waste diversion efforts.

**Senate Bill 97 and CEQA Guidelines.** In August 2007, the Legislature adopted SB 97, requiring the Office of Planning and Research (OPR) to prepare and transmit new California Environmental Quality Act (CEQA) guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the California Natural Resources Agency. OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009, and the CEQA Guidelines amendments were adopted on December 30, 2009 and became effective on March 18, 2010.

The CEQA Guidelines amendments do not specify a threshold of significance for GHG emissions or prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis but rely on the lead agencies in making their own significance determinations based upon substantial evidence. The CEQA Guidelines amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The CEQA Guidelines amendments require a lead agency to make a good-faith effort based on the extent possible on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The CEQA Guidelines amendments give discretion to the lead agency whether to (1) use a model or methodology to quantify GHG emissions resulting from a project and which model or methodology to use and/or (2) rely on a qualitative analysis or performance-based standards. The California Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32.

**California Green Building Standards.** The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The first edition of the CALGreen Code was released in 2008 and contained only voluntary standards. The 2019 CALGreen Code was updated in 2019, became effective on January 1, 2020, and applies to non-residential and residential developments. The CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, function at their maximum efficiency.

### **Regional Air Quality Planning Framework**

The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA for the Basin. SCAG is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a regional planning agency and a forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality.

On September 3, 2020, the Regional Council of SCAG adopted Connect SoCal, also known as the *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (a.k.a., 2020–2045 RTP/SCS). The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal embodies a collective vision for the region’s future and is developed with input from local governments, county transportation commissions (CTCs), tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura.

### **Mojave Desert Air Quality Management District**

MDAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, MDAQMD, a regional agency, works directly with SCAG, county transportation commissions, and local governments, and cooperates actively with State and federal government agencies. MDAQMD develops air quality-related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

### **Regional Air Quality Management Plan**

The MDAQMD and SCAG are responsible for formulating and implementing the air quality attainment plan (AQAP) for the Basin. The following SIP and AQAP are the currently approved plans for the Basin region:

- 2006 8hr Ozone RACT SIP Analysis
- 2014 Supplement to 2006 8hr Ozone RACT SIP Analysis
- Ozone Attainment Plan 2008 (Western Mojave Desert Non-attainment Area)
- 2015 8-Hour RACT SIP Analysis
- 2015 Federal Negative Declaration (8 hr Ozone Standard) for Nineteen CTG Categories

## Local Regulations

### *City of Victorville Climate Action Plan*

The City of Victorville adopted their *City of Victorville Climate Action Plan* (CAP) in September 2015 (Victorville 2015). This CAP presents the greenhouse gas (GHG) inventories, identifies the effectiveness of California initiatives to reduce GHG emissions, and identifies local measures that were selected by the City to reduce GHG emissions under the City's jurisdictional control to achieve the City's identified GHG reduction target. The City of Victorville participated in the San Bernardino County *Regional Greenhouse Gas Reduction Plan* which presents the collective results of all local efforts to reduce GHG emissions consistent with statewide GHG targets expressed in AB 32 and SB 375. Victorville used the technical information within the San Bernardino County *Regional Greenhouse Gas Reduction Plan* in the development of the CAP.

### *City of Victorville GHG Screening Tables*

The purpose of the City's GHG Screening Tables (one for residential and one for commercial and industrial projects) are to provide guidance in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated into development projects. The analysis, methodology, and significance determination are based upon San Bernardino County's *Greenhouse Gas Emissions Reduction Plan Update*, which includes GHG reduction targets for years 2020 and 2030 and the goals and policies to reach those targets.

The Screening Tables have a range of point values assigned for each project design aspect incorporated into a project as a project design feature or mitigation. Projects that garner at least 100 points are considered to be consistent with the reduction quantities anticipated in the DRP, and thus, would be determined to have a less than significant individual and cumulative impact on GHG emissions per the CEQA Guidelines.

The Screening Tables use a base level of efficiency that corresponds to the California Building Energy Efficiency Standards for Residential and Non-residential Buildings (Title 24, Part 6) that became effective January 1, 2020. These are the Statewide minimum requirements of efficiency that are currently in effect. The project will be built to meet the newer standards that became effective January 1, 2022.

## PROJECT ASSESSMENT

Table B shows the Victorville GHG Screening Table and the points the project achieves with project features.

**Table B: Victorville GHG Screening Table - Commercial/Industrial Project**

Feature	Description	Assigned Point Values	Project Points
<b>Reduction Measure PS E3: Commercial/Industrial Energy Efficiency Development</b>			
<b>Building Envelope</b>			
Insulation	2019 baseline (walls R-16; roof/attic R-32) Modestly Enhanced Insulation (walls R-15, roof/attic R-38) Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) Greatly Enhanced Insulation (spray foam insulated walls R-18 or higher, roof/attic R-38 or higher)	0 points 9 points 11 points 12 points	11
Windows	2019 Baseline Windows (0.3 U-factor, 0.23 solar heat gain coefficient [SHGC]) Enhanced Window Insulation (0.28 U-factor, 0.22 SHGC) Enhanced Window Insulation (0.28 U-factor, 0.22 SHGC) Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	0 points 4 points 4 points 5 points	4
Cool Roof	2019 Standard (none) Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	0 points 7 points 7 points 8 points	7
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage. Air barrier applied to exterior walls, caulking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent) Blower Door HERS Verified Envelope Leakage or equivalent	0 points 7 points 6 points	7
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls. Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials) Enhanced Thermal Mass (20% of floor or 20% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	2 points 14 points	2
Building Envelope Performance Standard	Projects that have not been designed to a level of detail to know the specific attributes of the building envelope can use this option in committing to one of the following performance standards Modestly Enhanced Building Envelope (5% > Title 24) Enhanced Building Envelope (15% > Title 24) Greatly Enhanced Building Envelope (20% > Title 24)	TBD TBD TBD	
<b>Indoor Space Efficiencies Commercial</b>			
Heating/ Cooling	Minimum Duct Insulation (R-6 required) Enhanced Duct Insulation (R-8) Enhanced Duct Insulation (R-8)	0 points 5 points	5



Distribution System	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	5 points 6 points	
Space Heating/ Cooling Equipment	2019 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF) Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF) High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF) Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF)	0 points 4 points 5 points 7 points	5
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings	TBD TBD	
Water Heaters	2019 Minimum Efficiency (0.57 Energy Factor) Improved Efficiency Water Heater (0.675 Energy Factor) High Efficiency Water Heater (0.72 Energy Factor) Very High Efficiency Water Heater (0.92 Energy Factor) Solar Pre-heat System (0.2 Net Solar Fraction) Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	0 points 8 points 10 points 11 points 2 points 5 points	11
Daylighting	All peripheral rooms within the customer areas have at least one window All rooms within the customer areas have daylight (through use of windows, solar tubes, skylights, etc.) such that each room has at least 800 lumens of light during a sunny day All rooms daylighted	0 points 1 point 1 point	1
Artificial Lighting	2019 Minimum (required) Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15–40-watt fixtures, 60 lumens/watt for fixtures >40watt) High Efficiency Lights (50% of in-unit fixtures are high efficacy) Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	0 points 5 points 7 points 8 points	8
Appliances	EnergyStar Commercial Refrigerator (new) Energy Star Commercial Dish Washer (new) Energy Star Commercial Cloths Washing Machine (new)	2 points 2 points 2 points	2
Indoor Space Performance Standard	Projects that have not been designed to a level of detail to know the specific attributes of the interior design of the buildings can use this option in committing to one of the following performance standards Modestly Enhanced Interior and appliances (5% > Title 24) Enhanced Interior and appliances (15% > Title 24) Greatly Enhanced Interior and appliances (20% > Title 24)	TBD TBD TBD	
<b>Miscellaneous Commercial/Industrial Building Efficiencies</b>			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	4 points	4
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6 Points	6
Other	This allows innovation by the applicant to provide design features that increases the energy efficiency of the project not provided in the table. Engineering data will be required documenting the energy efficiency of innovative designs and point values given based	TBD	

	upon the proven efficiency beyond Title 24 Energy Efficiency Standards.		
Existing Commercial building Retrofits	<p>The applicant may wish to provide energy efficiency retrofit projects to existing Commercial dwelling units to further the point value of their project. Retrofitting existing Commercial dwelling units within the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case-by-case basis and must have the approval of the Escondido Planning Department. The decision to allow applicants to ability to participate in this program will be evaluated based upon, but not limited to the following:</p> <p>Will the energy efficiency retrofit project benefit low income or disadvantaged residents?</p> <p>Does the energy efficiency retrofit project fit within the overall assumptions in Reduction Measure R2E3?</p> <p>Does the energy efficiency retrofit project provide co-benefits important to the City?</p> <p>Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project.</p>	TBD	
<b>Reduction Measure PS E2: New Commercial/Industrial Renewable Energy</b>			
Photovoltaic	<p>Solar Photovoltaic panels installed on commercial buildings or in collective arrangements within a commercial development such that the total power provided augments:</p> <p>30 percent of the power needs of the project</p> <p>40 percent of the power needs of the project</p> <p>50 percent of the power needs of the project</p> <p>60 percent of the power needs of the project</p> <p>70 percent of the power needs of the project</p> <p>80 percent of the power needs of the project</p> <p>90 percent of the power needs of the project</p> <p>100 percent of the power needs of the project</p>	<p>8 points</p> <p>12 points</p> <p>16 points</p> <p>19 points</p> <p>23 points</p> <p>26 points</p> <p>30 points</p> <p>34 points</p>	
Wind turbines	<p>Some areas of the City lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature. Wind turbines as part of the commercial development such that the total power provided augments:</p> <p>30 percent of the power needs of the project</p> <p>40 percent of the power needs of the project</p> <p>50 percent of the power needs of the project</p> <p>60 percent of the power needs of the project</p> <p>70 percent of the power needs of the project</p> <p>80 percent of the power needs of the project</p> <p>90 percent of the power needs of the project</p> <p>100 percent of the power needs of the project</p>	<p>8 points</p> <p>12 points</p> <p>16 points</p> <p>19 points</p> <p>23 points</p> <p>26 points</p> <p>30 points</p> <p>34 points</p>	
Off-site renewable energy project	<p>The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing Commercial that will help implement R2 E4, or existing commercial/industrial that will help implement R2 E7. These off-site renewable energy retrofit project proposals will be determined on a case-by-case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate.</p> <p>Point values will be determined based upon the energy generated by the proposal.</p>	TBD	

Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.	TBD	
<b>Reduction Measure PS W2: Water Use Reduction Initiative</b>			
<b>Irrigation and Landscaping</b>			
Water Efficient Landscaping	Eliminate conventional turf from landscaping Only moderate water using plants Only low water using plants Only California Native landscape that requires no or only supplemental irrigation	0 points 2 points 3 points 5 points	3
Water Efficient irrigation systems	Low precipitation spray heads < .75"/hr or drip irrigation Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	1 point 3 points	3
Recycled Water	Recycled water connection (purple pipe) to irrigation system on site	5 points	
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	
Storm water Reuse Systems	Innovative on-site stormwater collection, filtration and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based upon design and engineering data documenting the water savings.	TBD	
<b>Potable Water Commercial</b>			
Showers	Water Efficient Showerheads (2.0 gpm)	2 points	
Toilets	Water Efficient Toilets/Urinals (1.5gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3 points 3 points	6
Faucets	Water Efficient faucets (1.28gpm)	2 points	2
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	2 points	
Commercial Laundry Washers	EPA Water Efficient laundry (15% water savings) EPA High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	2 points 4 points	4
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings.	TBD	
Potable Water Performance Standard	Projects that have not been designed to a level of detail to know the specific attributes design can use this in committing to a potable water efficiency	TBD	
<b>Reduction Measure: Land Use Based Trips and VMT Reduction</b>			
Mixed Use Commercial	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed-use projects will be		

	determined based upon a Transportation Impact Analysis (TIA) demonstrating trip reductions and/or reductions in vehicle miles traveled. Suggested ranges: Mixes of land uses that complement one another in a way that reduces the need for vehicle, determined based upon a Transportation Impact Analysis (2-28 points) Increased destination accessibility other than transit (1-18 points) Increased transit accessibility (1-28 points) Infill location that reduces vehicle trips or VMT beyond the specified measures	TBD TBD TBD TBD TBD	
Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled. Preferential parking Synchronize signals Connect signals to existing ITS	TBD 1 point 1 point 3 points	
<b>Reduction Measure: Bicycle Master Plan Development</b>			
Bicycle Infrastructure	Provide bicycle paths within project boundaries. Provide bicycle path linkages between project site and other land uses. Provide bicycle path linkages between project site and transit.	1 point 2 points 5 points	2
Cars	Level 2 240 volt AC Fast Chargers Level 3 480 volt DC Rapid Chargers	5 points 8 points	
Trucks	<b>Medium &amp; Heavy Duty Electric Truck Chargers</b> Level 1 AC Chargers for EV Medium Duty Truck Level 1 AC Chargers for EV Class 8 (Heavy Duty) Truck Level 2 AC Chargers for EV Medium Duty Truck Level 2 AC Chargers for EV Class 8 (Heavy Duty) Truck Level 3 DC Chargers for EV Class 8 (Heavy Duty) Truck	3 points 5 points 8 points 12 points 16 points	8
<b>Total Points from Commercial/Industrial Project:</b>			<b>101</b>

Source: City of Victorville Department of Development and Project Plans

## CONCLUSION

As shown in Table B the project would achieve 101 points based on the point values assigned for the project features that have been incorporated into the design. These points exceed the minimum 100 points needed for screening purposes. Therefore, the project would be considered consistent with the City's GHG-reduction strategy. Projects that garner at least 100 points are considered to be consistent with the reduction quantities anticipated in the DRP, and thus, would be determined to have a less than significant individual and cumulative impact on GHG emissions per the CEQA Guidelines.

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Attachment: A – Figures

# ATTACHMENT A

## FIGURES