

Appendix D
Greenhouse Gas Emissions Assessment

Greenhouse Gas Emissions Assessment
Ashley Expansion Project
City of Colton, California



Prepared by:

Kimley-Horn and Associates, Inc.

3880 Lemon Street, Suite 420

Riverside, California 92501

Contact: *Mr. Alex Pohlman*

951.543.9868

December 2022

TABLE OF CONTENTS

1	INTRODUCTION	
1.1	Project Location.....	1
1.2	Project Description	1
2	ENVIRONMENTAL SETTING	
2.1	Greenhouse Gases and Climate Change	6
3	REGULATORY SETTING	
3.1	Federal.....	8
3.2	State of California.....	10
3.3	Regional.....	17
3.4	Local.....	19
4	SIGNIFICANCE CRITERIA AND METHODOLOGY	
4.1	Thresholds and Significant Criteria.....	22
4.2	Methodology	22
5	POTENTIAL GREENHOUSE GAS IMPACTS AND MITIGATION	
5.1	Greenhouse Gas Emissions	24
5.2	Greenhouse Gas Reduction Plan Compliance	25
6	REFERENCES	
	References.....	27
TABLES		
Table 1	Description of Greenhouse Gases.....	7
Table 2	Construction-Related Greenhouse Gas Emissions	24
Table 3	Project Greenhouse Gas Emissions	25
EXHIBITS		
Exhibit 1	Regional Location Map.....	3
Exhibit 2	Local Vicinity Map	4
Exhibit 3	Conceptual Site Plan.....	5
APPENDIX		
Appendix A: Air Quality and Greenhouse Gas Emissions Modeling Data		

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CPP	Clean Power Plan
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH ₄	Methane
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MTCO ₂ e	million tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF ₃	nitrogen trifluoride
N ₂ O	nitrous oxide
PFC	Perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Government
Sf	square foot
SF ₆	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Ashley Expansion Project (“Project” or “proposed Project”). The purpose of this GHG Emissions Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

1.1 Project Location and Setting

The Project site is located along Ashley Way, in the City of Colton (City), County of San Bernardino, California, on Assessor Parcel Numbers (APNs) 0276-131-92 and 0276-131-90. The Project is generally located in the eastern portion of the City, west of Interstate 215 (I-215), east of East Cooley Drive, approximately 0.43 miles south of Interstate 10 (I-10), and north of commercial and vacant land. Refer to [Exhibit 1, Regional Location Map](#) and [Exhibit 2, Local Vicinity Map](#).

The Project site is an approximately 8.56-acre site composed of two parcels. The Project site consists of two existing buildings located at 855 Ashley Way (southern building) and 755 Ashley Way (northern building) and is bounded by light industrial uses and East Cooley Drive to the north and west; Ashley Way, undeveloped land, and commercial uses to the south; and Ashley Way, I-215, and single-family residential uses to the east.

The Project site at the is zoned as General Commercial (C-2) at the 855 Ashley Way Building Lot and Light Industrial (M-1) at the 755 Ashley Way Building Lot. The 855 Ashley Way Building Lot has a General Plan land use designation of General Commercial and the 755 Ashley Way Building Lot has a General Plan land use designation of Light Industrial. The Project site is also located within the Business District Sign (BDS) Overlay.

1.2 Project Description

The proposed Project includes a 35,000 square foot addition to the existing 855 Ashley Way building which would result in a new total building area of 100,154 square feet. The Project would also require a lot line adjustment and partial demolition of two service bays at 755 Ashley Way. The 855 and 755 Ashley Way combined lot area is approximately 8.56 acres. Both buildings on the Project site are owned and operated by the Project Applicant. Refer to [Exhibit 3, Conceptual Site Plan](#).

Site Access

Vehicular egress and ingress to the Project site would occur via four driveways, one existing 30-foot-wide ingress and egress driveway on Ashley Way; one existing ingress and egress driveway on Ashley Way, south of the existing building at 855 Ashley Way; and two proposed driveways via Ashley way. Both existing buildings would have a shared parking and access agreement.

Parking

The partial parking lot demolition/revisions would shift two existing site access aisles to accommodate the new parking layout. The Project would provide 363 parking spaces which also includes 17 compact parking spaces and eight handicap-accessible parking spaces.

Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a period of approximately 12 months.



Source: Google Maps

Exhibit 1: Regional Location Map
City of Colton
Ashley Expansion Project



Not to Scale

Kimley»Horn



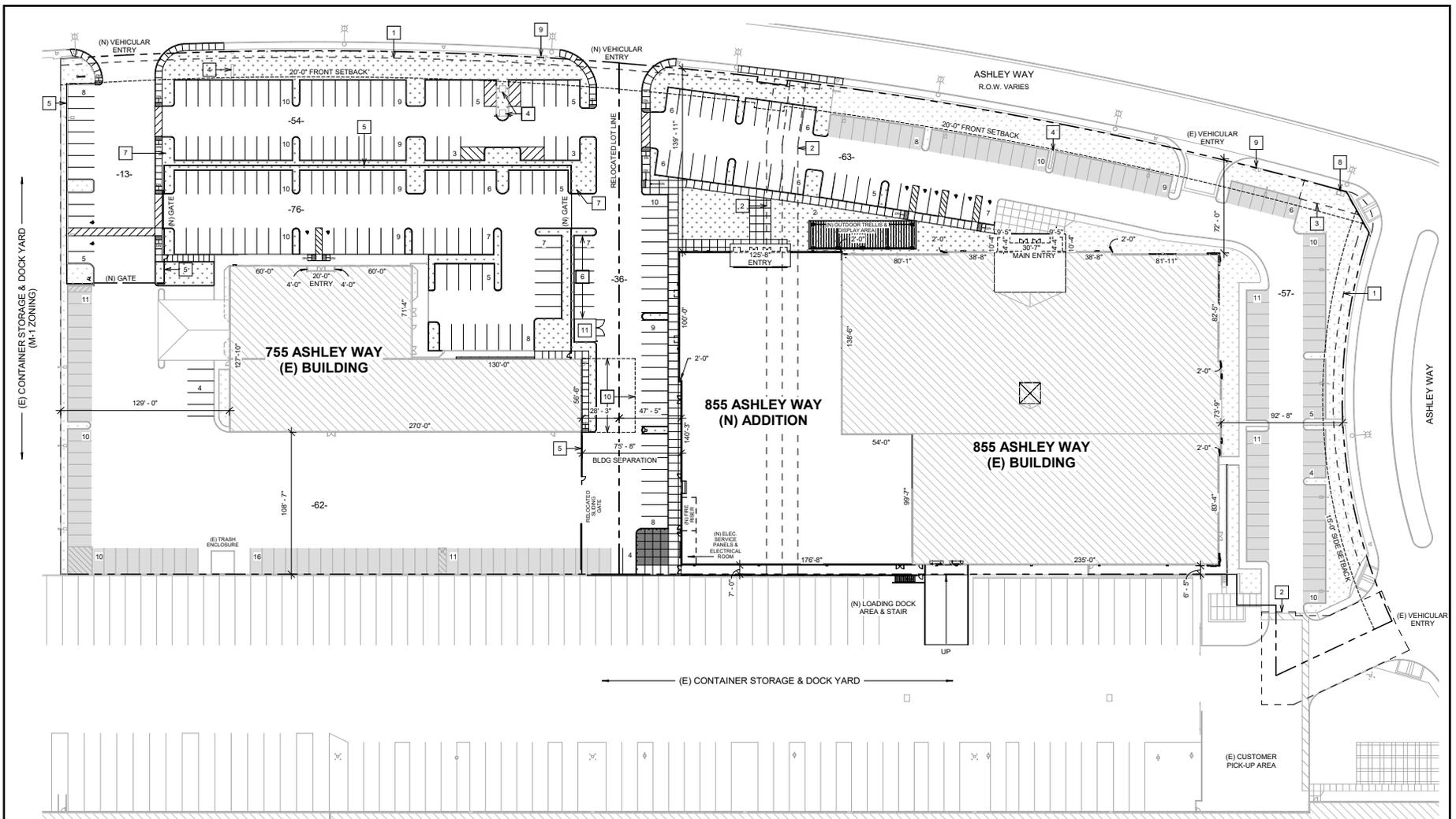
Source: San Bernardino County Parcel Viewer

Exhibit 2: Local Vicinity Map
 City of Colton
Ashley Expansion Project



Not to Scale

Kimley»Horn



PROPOSED LOT SIZES		(10% REDUCTION ALLOWED BY AHJ) = - 40 SPACES	LANDSCAPE AREA	
855 ASHLEY WAY LOT =	220,482 SF (~5.06 ACRES)	TOTAL REQUIRED PARKING = 360 SPACES	COMBINED LOT AREA =	372,817 SF (~8.56 ACRES)
755 ASHLEY WAY LOT =	152,335 SF (~3.50 ACRES)		REQUIRED LANDSCAPE AREA =	55,923 SF
COMBINED LOT AREA =	372,817 SF (~8.56 ACRES)	TOTAL PARKING PROVIDED = 363 SPACES	(15% OF LOT AREA)	
PARKING CALCULATIONS		COMPACT PARKING SPACES ALLOWED = 72 SPACES MAX (20% OF REQUIRED PARKING)	TOTAL LANDSCAPE AREA PROVIDED = 49,904 SF (13.4% OF LOT AREA)	
(E) BUILDING AREA =	65,154 SF	COMPACT PARKING SPACES PROVIDED = 17 SPACES		
(N) ADDITION AREA =	35,000 SF	ACCESSIBLE PARKING REQUIRED = 8 SPACES (2% OF TOTAL REQUIRED PARKING)		
TOTAL BUILDING AREA =	100,154 SF	ACCESSIBLE PARKING PROVIDED = 8 SPACES		
REQUIRED PARKING = (1/250 SF PARKING RATIO)	400 SPACES			

Source: Architecture Design Collaborative. (2022). Proposed Site Plan

Exhibit 3: Conceptual Site Plan

City of Colton

Ashley Expansion Project



Not to Scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Greenhouse Gases and Climate Change

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere.¹ Table 1: Description of Greenhouse Gases describes the primary GHGs attributed to global climate change, including their physical properties.

¹ Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles*. In: *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.

Greenhouse Gas	Description
Carbon Dioxide (CO ₂)	CO ₂ is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO ₂ is variable because it is readily exchanged in the atmosphere. CO ₂ is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N ₂ O)	N ₂ O is largely attributable to agricultural practices and soil management. Primary human-related sources of N ₂ O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N ₂ O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. The Global Warming Potential of N ₂ O is 298.
Methane (CH ₄)	CH ₄ , a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH ₄ include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH ₄ is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF ₆)	SF ₆ is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF ₆ is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF ₃)	NF ₃ was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.
Source: Compiled from U.S. EPA, <i>Overview of Greenhouse Gases</i> , April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, <i>Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016</i> , 2018; Intergovernmental Panel on Climate Change, <i>Climate Change 2007: The Physical Science Basis</i> , 2007; National Research Council, <i>Advancing the Science of Climate Change</i> , 2010; U.S. EPA, <i>Methane and Nitrous Oxide Emission from Natural Sources</i> , April 2010.	

3 REGULATORY SETTING

3.1 Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency's (U.S. EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the U.S. EPA's assessment of the scientific evidence that form the basis for the U.S. EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the U.S. EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the 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 U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the U.S. EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the U.S. EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks. It should be noted that the U.S. EPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 mpg), canceling any future strengthening (currently 54.5 mpg by 2026).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the U.S. EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the U.S. EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baseline.

In August 2016, the U.S. EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.²

On September 27, 2019, the U.S. EPA and the NHTSA published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program.” (84 Fed. Reg. 51,310 (Sept. 27, 2019).)³ The SAFE Rule (Part One) revoked California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the U.S. EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO₂ emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration has repealed SAFE Rule Part One, effective January 28, 2022 and is reconsidering Part Two.

In December 2021, the U.S. EPA finalized federal GHG emissions standards for passenger cars and light trucks for Model Years 2023 through 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and are based on sound science and grounded in a

² U.S. EPA and NHTSA, *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles – Phase 2*, 2016. Available at: <https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf>. Accessed: October 2022.

³ U.S. EPA and NHTSA, Federal Register, Vol. 84, No. 188, *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program*, September 27, 2019. Available at: <https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf>. Accessed: October 2022.

rigorous assessment of current and future technologies. The updated standards will result in avoiding more than 3 billion tons of GHG emissions through 2050.⁴

3.2 State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO₂ equivalents (CO₂e) in the world and produced 369 million gross metric tons of carbon dioxide equivalent (MMTCO₂e) in 2020.⁵ The transportation sector is the State's largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the legislation's major provisions.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verifying statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

California Air Resource Board Scoping Plan

CARB adopted the Scoping Plan to achieve AB 32 goals. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual")⁶. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role

⁴ U.S. EPA, *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*, 2021. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions>. Accessed: October 2022.

⁵ California Air Resources Board, *Current California GHG Emissions Inventory Data, 2000-2020 GHG inventory (2022 Edition)*, <https://ww2.arb.ca.gov/ghg-inventory-data>, accessed December 2022.

⁶ CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

of a cap-and-trade program⁷. Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key Scoping Plan elements include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.
- The California Sustainable Freight Action Plan was developed in 2016 and provides a vision for California's transition to a more efficient, more economically competitive, and less polluting freight transport system. This transition of California's freight transport system is essential to supporting the State's economic development in coming decades while reducing pollution.
- CARB's Mobile Source Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The mobile Source Strategy includes increasing zero emissions (ZE) buses and trucks.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 MMTCO₂e to 545 MMTCO₂e. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California

⁷ The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. By 2016, California had reduced GHG emissions below 1990 levels, achieving AB 32's 2020 goal four years ahead of schedule.

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment.⁸ The Second Update sets forth CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions. The Second Update was approved by CARB's Governing Board on December 14, 2017.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet AB 32's GHG reduction goals. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the U.S. EPA's denial of an implementation waiver. The U.S. EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for passenger vehicle and light duty truck model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new passenger vehicles are anticipated to emit 34 percent fewer CO₂e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (Emission Performance Standards)

SB 1368, which is AB 32's companion bill, directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368

⁸ California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 9, 2018.

limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO₂ per megawatt-hour.

SB 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. This goal was accelerated with SB 107, which changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SB X1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements Executive Order B-30-15's goals. The SB 350 objectives are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 45 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

AB 1346 (Air Pollution: Small Off-Road Engines)

Signed into Law in October 2021, AB 1346 requires CARB, to adopt cost-effective and technologically feasible regulations to prohibit engine exhaust and evaporative emissions from new small off-road engines, consistent with federal law, by July 1, 2022. The bill requires CARB to identify and, to the extent feasible, make available funding for commercial rebates or similar incentive funding as part of any updates to existing applicable funding program guidelines to local air pollution control districts and air quality management districts to implement to support the transition to zero-emission small off-road equipment operations.

AB 1279 (Carbon Neutrality)

Signed on September 16, 2022, AB 1279 established the goal to achieve net-zero GHG emissions no later than 2045 and net negative thereafter. The bill establishes a goal toward at least an 85% reduction target for anthropogenic GHG emissions below statewide emissions limit from Section 36550 of the California Health and Safety Code.

SB 1020 (100 Percent Clean Electric Grid)

Signed on September 16, 2022, SB 1020 provides additional goals for the path to the 2045 goal of 100 percent clean electricity retail sales. It creates a target of 90 percent clean electricity retail sales by 2035 and 95 percent clean electricity retail sales by 2040.

SB 905 (Capturing and Removing Carbon Pollution)

Signed on September 16, 2022, SB 905 establishes regulatory framework and policies that involve carbon removal, carbon capture, utilization, and sequestration. It also prohibits the injecting of concentrated carbon dioxide fluid into a Class II injection well for the purpose of enhanced oil recovery.

AB 1757 (Nature-Based Solutions)

Signed on September 16, 2022, AB 1757 requires state agencies to develop a range of targets for natural carbon sequestration and nature-based climate solutions that reduce GHG emissions to meet the 2030, 2038, and 2045 goals which would be integrated into a scoping plan addressing natural and working lands.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S-01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission (CEC), CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO₂e (MMTCO₂e). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG

emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Executive Order N-79-20. Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment “requiring increasing volumes” of new zero emission vehicles (ZEVs) “towards the target of 100 percent.” The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California’s energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards. California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC adopted the 2022 Energy Code on August 11, 2021, which was subsequently approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code

Title 24 California Green Building Standards Code. The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage

or require additional measures in the five green building topics. The latest update to the CALGreen Code went into effect January 1, 2020 (2019 CALGreen). The 2019 CALGreen standards improve upon the previous standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The new 2019 CALGreen standards require residential buildings are required to be solar ready through solar panels (refer to Section 110.10 in the 2019 Building Energy Efficiency Standards for more details). The CEC adopted the 2022 CALGreen Code, which will go into effect on January 1, 2023.

CARB Advanced Clean Truck Regulation. CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission “last-mile” delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- **Zero-Emission Truck Sales:** Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
- **Company and Fleet Reporting:** Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

3.3 REGIONAL

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (SCAQMD) formed a GHG California Environmental Quality Act (CEQA) Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. This working group was formed to assist SCAQMD’s efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research, CARB, the Attorney General’s Office, a variety of city and county planning departments in the SCAB, various utilities such as sanitation and power companies throughout the SCAB, industry groups, and environmental and professional organizations. The Working Group has proposed a tiered approach to evaluating GHG emissions for development projects where SCAQMD is not the lead agency, wherein projects are evaluated sequentially through a series of “tiers” to determine whether the project is likely to result in a potentially significant impact due to GHG emissions.

With the tiered approach, a project is compared against the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are

consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. The SCAQMD has adopted a threshold of 10,000 MTCO₂e per year for industrial projects and a 3,000 MTCO₂e threshold was proposed for non-industrial projects but has not been adopted. During Working Group Meeting #7 it was explained that this threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution. The Working Group indicated that the 10,000 MTCO₂e per year threshold applies to both emissions from construction and operational phases plus indirect emissions (electricity, water use, etc.). The SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, SCAQMD initially outlined that a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third option. Under the Tier 4 third option, a project would be excluded if it was below an efficiency-based threshold of 4.8 MTCO₂e per service population per year. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

Tier 3 Screening Thresholds

When the tiered approach is applied to a proposed project, and the project is found not to comply with Tier 1 or Tier 2, the project's emissions are compared against a screening threshold, as described above, for Tier 3. The screening threshold formally adopted by SCAQMD is an "interim" screening threshold for stationary source industrial projects where the SCAQMD is the lead agency under CEQA. The threshold was termed "interim" because, at the time, SCAQMD anticipated that CARB would be adopting a statewide significance threshold that would inform and provide guidance to SCAQMD in its adoption of a final threshold. However, no statewide threshold was ever adopted, and the interim threshold remains in effect.

For projects for which SCAQMD is not a lead agency, no screening thresholds have been formally adopted. However, the SCAQMD Working Group has recommended a threshold of 10,000 MTCO₂e/year for industrial projects and 3,000 MTCO₂e/year for residential and commercial projects. SCAQMD determined that these thresholds would "capture" 90 percent of GHG emissions from these sectors, "capture" meaning that 90 percent of total emissions from all new projects would be subject to some type of CEQA analysis (i.e., found potentially significant).⁹

Southern California Association of Governments

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The

⁹ SCAQMD, "Staff Report: Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans," December 5, 2008, Attachment E: "Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold," October 2008, p. 3-2.

strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

3.4 Local

City of Colton General Plan

The City of Colton General Plan (Colton GP) Land Use Element contains the following goals and policies pertaining to air quality:

Goal LU 4: Incorporate green building and other sustainable building practices into development projects.

Policy LU 4.1: Require that new development projects reflect the principles of Traditional Neighborhood Development: walkable street patterns, pedestrian amenities, access to transit, a mix of complementary uses, comfortable and accessible open spaces a range of housing types and densities, and quality design.

Policy LU 4.2: Facilitate the use of green building standards and Leadership in Energy and Environmental Design or similar programs in both private and public projects.

Policy LU 4.3: Promote sustainable building practices that go beyond the requirement of Title 24 of the California Administrative Code and encourage energy-efficient design elements.

Policy LU 4.4: Support sustainable building practices that integrate building materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction, and operation of the built environment.

Policy LU 4.5: Promote adoptive reuse of existing buildings as an alternative to new construction.

Policy LU 4.6: Require that land divisions and development projects incorporate designs and practices that respect natural site features and provide for groundwater recharge.

Goal LU 5: Reduce use of energy resources citywide, with a key goal of reducing the City's carbon footprint.

Policy LU 5.1: Require the incorporation of energy conservation features into the design of all new construction and site development, as required by State law and local regulations.

Policy LU 5.2: Provide incentives, as funding opportunities become available, for the installation of energy conservation features in existing multi-family residential and commercial developments, including technical assistance and possible low interest loans.

Policy LU 5.3: Educate the public using a variety of outreach channels regarding the need for energy conservation, techniques which can be employed, and systems which are available.

- Policy LU 5.4:** Support the ongoing efforts of the ARB to implement AB32 and SB375, and fully follow any new AB32 and SB375-related regulations.
- Policy LU 5.5:** Develop and implement GHG emissions reduction measures, including discrete, early-action GHG reducing measures that are technologically feasible and cost effective.
- Policy LU 5.6:** Require detailed air quality and climate change analyses for all applications that have the potential to adversely affect air quality and incorporate the analyses into applicable CEQA documents. Projects with the potential to generate significant levels of air pollutants and GHGs, such as manufacturing facilities and site development operations, shall be required to incorporate mitigation into their design and operation, and to utilize the most advanced technological methods feasible.
- Policy LU 5.7:** Work with SCAQMD and SCAG to implement the AQMP and Regional Transportation Plan/Sustainable Communities Strategy, with the objective of meeting federal and state air quality standards for all pollutants. To ensure that new measures can be practically enforced in the region, participate in future amendments and updates of the AQMP.

City of Colton Municipal Code

The Colton Municipal Code (CMC) contains the following policies for air quality that would apply to the Project:

§ 18.42.060–Smoke

CMC § 18.42.060 states “No operation or activity is permitted to have operations which emit excessive smoke, fumes or dust or which exceed the requirements, or levels, as specified by the SCAQMD.”

§ 18.42.070–Odors

CMC § 18.42.070 states “All activities shall be operated so as not to emit matter causing unpleasant odors which are perceptible by the average person at or beyond any lot line of the lot containing the activities.”

§ 18.42.080 - Air Quality

CMC § 18.42.080 states “No operation or activity shall cause the emission of any smoke, fly ash, dust, fumes, vapors, gases or other forms of air pollution which can cause damage to health, animals, vegetation, or other forms of property, or which can cause excessive soiling on any other lot. No emission shall be permitted, which exceeds the requirements of the SCAQMD or the requirements of any air quality plan adopted by the City.”

City of Colton Climate Action Plan

The City adopted its Climate Action Plan (CAP) on November 3, 2015. The CAP presents the 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 participated in the San Bernardino County Regional GHG Reduction Plan (Plan) which presents the collective results of all local efforts to reduce GHG emissions consistent with Statewide GHG targets expressed in AB 32, the “Global Warming Solutions Act of 2006,” and SB 375. The CAP builds on the regional work and refines it to provide City-

specific information and to develop the local implementation plan for City-selected GHG reduction measures. The CAP identifies how the GHG reduction measures will be implemented and monitored by the City to ensure that progress is being made toward the GHG reduction target.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Thresholds and significant criteria

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The State CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions.¹⁰

4.2 Methodology

Global climate change is, by definition, a cumulative impact of GHG emissions. Therefore, there is no project-level analysis. The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from human activities which almost doubled between 1970 and 2010 from approximately 27 gigatonnes (Gt) of CO₂/year to nearly 49 GtCO₂/year.¹¹ As such, the geographic extent of climate change and GHG emissions cumulative impact discussion is worldwide.

Construction

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod). Details of the modeling assumptions and emission factors are provided in [Appendix A: Air Quality and Greenhouse Gas Emissions Modeling Data](#). For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The Project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The Project's construction is anticipated to occur over a duration of approximately 12 months, beginning as early as October 2022.

¹⁰ 14 California Code of Regulations, Section 15064.4a

¹¹ Intergovernmental Panel on Climate Change, *Climate Change 2014 Mitigation of Climate Change Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2014.

Operations

The Project's operational GHG emissions would be generated by vehicular traffic, off-road equipment, area sources (e.g., landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste. These emissions categories are discussed below.

- **Area Sources.** Area source emissions occur from hearths, architectural coatings, landscaping equipment, and consumer products. The Project involves general commercial and light industrial uses and would not include hearths. Landscaping and consumer products would be limited. Negligible quantities of consumer products (i.e., personal care products, home, lawn, and garden products, disinfectants, sanitizers, polishes, cosmetics, and floor finishes) would be used. Additionally, the primary emissions from architectural coatings are volatile organic compounds, which are relatively insignificant as direct GHG emissions.
- **Energy Consumption.** Energy consumption consists of emissions from project consumption of electricity and natural gas. Primary uses of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Energy emissions are calculated based on consumption rates and emissions factors in CalEEMod.
- **Solid Waste.** Solid waste releases GHG emissions in the form of methane when these materials decompose. Solid waste emissions are calculated based on generation rates and emissions factors in CalEEMod.
- **Water and Wastewater.** Project GHG emissions would be generated from energy consumption associated with water and wastewater conveyance and treatment. No changes were made to the default water usage consumption rates or emissions factors.
- **Mobile Sources.** Mobile sources are emissions from motor vehicles. The Project generated traffic was obtained from the Project's Traffic Study prepared by Kimley-horn and Associates (November 2022). Project trip generation from the Traffic Study is based on the following Institute of Transportation Engineers (ITE) land use category:
 - ITE Land Use 869: Discount Home Furnishing Superstore, (35.000 thousand square feet, 700 total daily vehicle trips).

The Project would generate 700 daily trips, which includes 20 trips (13 inbound and 7 outbound) during the AM peak hour and 55 trips (29 inbound and 26 outbound) during the PM peak hour. Passenger car/employee commute trip lengths use CalEEMod default lengths for projects in San Bernardino County.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Greenhouse Gas Emissions

Threshold 5.1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

Project construction activities would generate direct CO₂, N₂O, and CH₄ emissions from construction equipment, transport of materials, and construction workers commuting to and from the Project site. Total GHG emissions generated during all construction phases were combined and are presented in [Table 2: Construction-Related Greenhouse Gas Emissions](#).

Category	MTCO ₂ e
2022 Construction	85
2023 Construction	527
Total Construction	612
30-Year Amortized Construction	20.4

Source: CalEEMod version 2020.4.0. Refer to [Appendix A](#) for model outputs.

As indicated in [Table 2](#), the Project would result in the generation of approximately 20.4 MTCO₂e over the course of construction. Construction GHG emissions are typically summed and amortized over a 30-year period, then added to the operational emissions.¹² The amortized Project construction emissions would be 20.4 MTCO₂e per year. Once construction is complete, construction-related GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions would occur over the Project's lifetime. GHG emissions would result from direct emissions such as Project generated vehicular traffic, on-site combustion of natural gas, and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, the emissions associated with solid waste generated from the Project, and any fugitive refrigerants from air conditioning or refrigerators.

The Project's operational GHG emissions are provided in [Table 3: Project Greenhouse Gas Emissions](#). As shown in [Table 3](#), the Project would generate approximately 655.1 MTCO₂e annually from both construction and operations and the Project. Project-related GHG emissions would not exceed the City's 3,000 MTCO₂e per year threshold. Therefore, Project impacts would be less than significant, and no mitigation measures are required.

¹² The amortization period is 30 years per the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, August 26, 2009).

Emissions Source	MTCO₂e per Year
Construction Amortized Over 30 Years	20.4
Area Source	0
Energy	80.97
Mobile	348.03
Waste	195.2
Water and Wastewater	10.5
Total	655.1
<i>City of Colton Project Threshold</i>	<i>3,000</i>
Exceeds Threshold?	No
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.	

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.2 Greenhouse Gas Reduction Plan Compliance

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

The City of Colton has a Climate Action Plan (CAP) that has a goal to reduce its community GHG emissions to a level that is 15 percent below its 2008 GHG emissions level by 2020.¹³ The City has exceeded this goal through a combination of State and County reduction measures, but the CAP also includes various local measures to further reduce GHG emissions. The CAP identifies a series of local measures to help guide the City in the areas of building energy, transportation, solid waste management, wastewater treatment, and water conveyance to further reduce community wide GHG emissions. Measures that are applicable to the Project include meeting the City's waste diversion goal consistent with CALGreen, reducing the amount of water, energy, and fuels consumed, and demonstrating energy efficiency in new development. As noted above, the Project includes a 35,000 square foot addition to the existing 855 Ashley Way building. Project emissions have been quantified above and would not exceed the applicable GHG threshold. As the Project has existing general commercial and light industrial uses currently occurring on the site, the Project would not conflict with the CAP's measures.

Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan provides a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as the cap-and-trade program, and an AB 32 implementation fee to fund the program. The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the SB 32 2030 target. Although a number of these

¹³ City of Colton, *Colton Climate Action Plan*, 2015.

measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

Because the Project is limited to general commercial and light industrial uses that currently occurs on the site, the Scoping Plan's recommended measures are not directly applicable. In other words, there are no specific actions or measures to incorporate into the Project in order to comply with the Scoping Plan. However, Project would be indirectly reduced through the implementation of various Scoping Plan measures, such as the low carbon fuel standard, vehicle emissions standards, building energy efficiency standards, market-based mechanisms (such as the cap-and-trade program) and the Renewable Portfolio Standard. Therefore, the Project would not conflict with the Scoping Plan's recommended measures and, as such, would not impede implementation of the Scoping Plan. As such, impacts related to consistency with the Scoping Plan would be less than significant.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the proposed Project would benefit from the implementation of current and potential future regulations (e.g., improvements in vehicle emissions, SB 100/renewable electricity portfolio improvements, etc.) enacted to meet an 80 percent reduction below 1990 levels by 2050.

The Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for reducing the emissions of GHGs because the Project would generate low levels of GHGs, and would not impede implementation of the Scoping Plan, or conflict with the policies of the Scoping Plan. Therefore, the impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, August 2010.
2. California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, 2017.
3. California Air Resources Board, *EMFAC2021 Volume III Technical Document*, March 21, 2021.
4. City of Colton, *Colton General Plan (Model Air Quality Element)*, 1991.
5. City of Colton, *Colton Climate Action Plan*, 2015.
6. City of Colton, *Colton General Plan (Model Air Quality Element)*, 1991.
7. City of Colton, *Municipal Code*, 2019.
8. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
9. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
10. National Research Council, *Advancing the Science of Climate Change*, 2010.
11. San Bernardino County Transportation Authority, *San Bernardino County Regional Greenhouse Gas Reduction Plan*, March 2014.
12. State of California, *Code of Regulations Section 15065.5a*, 2018.
13. Southern California Association of Governments, *Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy)*, 2020.
14. South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.
15. South Coast Air Quality Management District, *High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results*, June 2014.
16. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #8*, 2009.
17. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, 2009.
18. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15*, 2010.
19. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.
20. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.
21. U.S. EPA, *Overview of Greenhouse Gases*, 2018.

Appendix A

Greenhouse Gas Emissions Data

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Ashely Furniture Expansion Project
San Bernardino-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Home Improvement Superstore	35.00	1000sqft	0.80	35,000.00	0
Parking Lot	17.68	1000sqft	0.41	17,675.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - This is based on the Constrcution Schedule and Phasing
- Grading -
- Demolition -
- Vehicle Trips - Traffic Study - $700/35 = 20$
- Area Coating - SCAQMD Rule 1113
- Construction Off-road Equipment Mitigation - SCAQMD Rule 403
- Mobile Land Use Mitigation -
- Mobile Commute Mitigation -
- Area Mitigation - SCAQMD Rule 1113

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water Mitigation - Cal Green Building Code

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	NumDays	200.00	153.00
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	4.00	153.00
tblConstructionPhase	NumDays	10.00	195.00
tblConstructionPhase	NumDays	2.00	109.00
tblConstructionPhase	PhaseEndDate	9/11/2023	6/1/2023
tblConstructionPhase	PhaseEndDate	8/14/2023	10/1/2023
tblConstructionPhase	PhaseEndDate	10/28/2022	12/31/2022
tblConstructionPhase	PhaseEndDate	11/7/2022	8/2/2023
tblConstructionPhase	PhaseEndDate	8/28/2023	10/1/2023
tblConstructionPhase	PhaseEndDate	11/1/2022	6/1/2023
tblConstructionPhase	PhaseStartDate	8/29/2023	5/1/2023
tblConstructionPhase	PhaseStartDate	11/8/2022	3/1/2023
tblConstructionPhase	PhaseStartDate	11/2/2022	1/1/2023
tblConstructionPhase	PhaseStartDate	8/15/2023	1/1/2023
tblConstructionPhase	PhaseStartDate	10/29/2022	1/1/2023
tblVehicleTrips	ST_TR	56.72	20.00
tblVehicleTrips	SU_TR	55.80	20.00
tblVehicleTrips	WD_TR	30.74	20.00

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0572	0.5698	0.4758	9.4000e-004	0.0507	0.0275	0.0782	8.6200e-003	0.0257	0.0344	0.0000	83.6443	83.6443	0.0181	1.9200e-003	84.6681
2023	0.5253	3.3391	3.0117	6.0500e-003	0.9311	0.1446	1.0756	0.4385	0.1350	0.5735	0.0000	523.2116	523.2116	0.1328	2.7000e-003	527.3349
Maximum	0.5253	3.3391	3.0117	6.0500e-003	0.9311	0.1446	1.0756	0.4385	0.1350	0.5735	0.0000	523.2116	523.2116	0.1328	2.7000e-003	527.3349

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0572	0.5698	0.4758	9.4000e-004	0.0241	0.0275	0.0516	4.5300e-003	0.0257	0.0303	0.0000	83.6442	83.6442	0.0181	1.9200e-003	84.6680
2023	0.5253	3.3391	3.0117	6.0500e-003	0.3886	0.1446	0.5332	0.1779	0.1350	0.3129	0.0000	523.2110	523.2110	0.1328	2.7000e-003	527.3343
Maximum	0.5253	3.3391	3.0117	6.0500e-003	0.3886	0.1446	0.5332	0.1779	0.1350	0.3129	0.0000	523.2110	523.2110	0.1328	2.7000e-003	527.3343

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	57.96	0.00	49.31	59.19	0.00	43.54	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2022	12-31-2022	0.6338	0.6338
2	1-1-2023	3-31-2023	1.3229	1.3229
3	4-1-2023	6-30-2023	1.6621	1.6621
4	7-1-2023	9-30-2023	0.8653	0.8653
		Highest	1.6621	1.6621

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003
Energy	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	80.5602	80.5602	6.5300e-003	8.6000e-004	80.9791
Mobile	0.2701	0.3197	2.0489	3.6800e-003	0.3613	3.1800e-003	0.3645	0.0965	2.9700e-003	0.0995	0.0000	340.9382	340.9382	0.0284	0.0214	348.0336
Waste						0.0000	0.0000		0.0000	0.0000	78.7849	0.0000	78.7849	4.6561	0.0000	195.1861
Water						0.0000	0.0000		0.0000	0.0000	0.8225	9.1175	9.9400	0.0853	2.0900e-003	12.6934
Total	0.4066	0.3235	2.0528	3.7000e-003	0.3613	3.4700e-003	0.3648	0.0965	3.2600e-003	0.0998	79.6073	430.6172	510.2246	4.7762	0.0244	636.8936

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003
Energy	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	80.5602	80.5602	6.5300e-003	8.6000e-004	80.9791
Mobile	0.2701	0.3197	2.0489	3.6800e-003	0.3613	3.1800e-003	0.3645	0.0965	2.9700e-003	0.0995	0.0000	340.9382	340.9382	0.0284	0.0214	348.0336
Waste						0.0000	0.0000		0.0000	0.0000	78.7849	0.0000	78.7849	4.6561	0.0000	195.1861
Water						0.0000	0.0000		0.0000	0.0000	0.6580	7.7292	8.3872	0.0682	1.6700e-003	10.5921
Total	0.4066	0.3235	2.0528	3.7000e-003	0.3613	3.4700e-003	0.3648	0.0965	3.2600e-003	0.0998	79.4428	429.2289	508.6717	4.7592	0.0240	634.7924

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.32	0.30	0.36	1.72	0.33

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2022	12/31/2022	5	65	
2	Site Preparation	Site Preparation	1/1/2023	6/1/2023	5	109	
3	Grading	Grading	1/1/2023	8/2/2023	5	153	

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	3/1/2023	10/1/2023	5	153
5	Paving	Paving	1/1/2023	10/1/2023	5	195
6	Architectural Coating	Architectural Coating	5/1/2023	6/1/2023	5	24

Acres of Grading (Site Preparation Phase): 102.19

Acres of Grading (Grading Phase): 153

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 52,500; Non-Residential Outdoor: 17,500; Striped Parking Area: 1,061 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	394.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	19.00	9.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0426	0.0000	0.0426	6.4500e-003	0.0000	6.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0549	0.5402	0.4537	7.8000e-004		0.0272	0.0272		0.0254	0.0254	0.0000	68.5025	68.5025	0.0175	0.0000	68.9389
Total	0.0549	0.5402	0.4537	7.8000e-004	0.0426	0.0272	0.0699	6.4500e-003	0.0254	0.0319	0.0000	68.5025	68.5025	0.0175	0.0000	68.9389

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3000e-004	0.0284	7.0700e-003	1.2000e-004	3.3900e-003	2.8000e-004	3.6800e-003	9.3000e-004	2.7000e-004	1.2000e-003	0.0000	11.4497	11.4497	4.9000e-004	1.8100e-003	12.0026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	1.2500e-003	0.0150	4.0000e-005	4.6300e-003	2.0000e-005	4.6600e-003	1.2300e-003	2.0000e-005	1.2500e-003	0.0000	3.6921	3.6921	1.1000e-004	1.1000e-004	3.7266
Total	2.3200e-003	0.0296	0.0220	1.6000e-004	8.0200e-003	3.0000e-004	8.3400e-003	2.1600e-003	2.9000e-004	2.4500e-003	0.0000	15.1418	15.1418	6.0000e-004	1.9200e-003	15.7292

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0166	0.0000	0.0166	2.5200e-003	0.0000	2.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0549	0.5402	0.4537	7.8000e-004		0.0272	0.0272		0.0254	0.0254	0.0000	68.5024	68.5024	0.0175	0.0000	68.9388
Total	0.0549	0.5402	0.4537	7.8000e-004	0.0166	0.0272	0.0439	2.5200e-003	0.0254	0.0280	0.0000	68.5024	68.5024	0.0175	0.0000	68.9388

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3000e-004	0.0284	7.0700e-003	1.2000e-004	3.1600e-003	2.8000e-004	3.4500e-003	8.8000e-004	2.7000e-004	1.1500e-003	0.0000	11.4497	11.4497	4.9000e-004	1.8100e-003	12.0026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	1.2500e-003	0.0150	4.0000e-005	4.2700e-003	2.0000e-005	4.3000e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.6921	3.6921	1.1000e-004	1.1000e-004	3.7266
Total	2.3200e-003	0.0296	0.0220	1.6000e-004	7.4300e-003	3.0000e-004	7.7500e-003	2.0200e-003	2.9000e-004	2.3100e-003	0.0000	15.1418	15.1418	6.0000e-004	1.9200e-003	15.7292

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3414	0.0000	0.3414	0.1637	0.0000	0.1637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0618	0.6772	0.3620	9.4000e-004		0.0277	0.0277		0.0254	0.0254	0.0000	82.3725	82.3725	0.0266	0.0000	83.0385
Total	0.0618	0.6772	0.3620	9.4000e-004	0.3414	0.0277	0.3690	0.1637	0.0254	0.1892	0.0000	82.3725	82.3725	0.0266	0.0000	83.0385

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5200e-003	1.1300e-003	0.0142	4.0000e-005	4.7800e-003	2.0000e-005	4.8000e-003	1.2700e-003	2.0000e-005	1.2900e-003	0.0000	3.6875	3.6875	1.0000e-004	1.0000e-004	3.7201
Total	1.5200e-003	1.1300e-003	0.0142	4.0000e-005	4.7800e-003	2.0000e-005	4.8000e-003	1.2700e-003	2.0000e-005	1.2900e-003	0.0000	3.6875	3.6875	1.0000e-004	1.0000e-004	3.7201

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1331	0.0000	0.1331	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0618	0.6772	0.3620	9.4000e-004		0.0277	0.0277		0.0254	0.0254	0.0000	82.3724	82.3724	0.0266	0.0000	83.0384
Total	0.0618	0.6772	0.3620	9.4000e-004	0.1331	0.0277	0.1608	0.0639	0.0254	0.0893	0.0000	82.3724	82.3724	0.0266	0.0000	83.0384

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5200e-003	1.1300e-003	0.0142	4.0000e-005	4.4100e-003	2.0000e-005	4.4300e-003	1.1800e-003	2.0000e-005	1.2000e-003	0.0000	3.6875	3.6875	1.0000e-004	1.0000e-004	3.7201
Total	1.5200e-003	1.1300e-003	0.0142	4.0000e-005	4.4100e-003	2.0000e-005	4.4300e-003	1.1800e-003	2.0000e-005	1.2000e-003	0.0000	3.6875	3.6875	1.0000e-004	1.0000e-004	3.7201

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5418	0.0000	0.5418	0.2620	0.0000	0.2620	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1020	1.1068	0.6658	1.5800e-003		0.0462	0.0462		0.0425	0.0425	0.0000	138.4949	138.4949	0.0448	0.0000	139.6147
Total	0.1020	1.1068	0.6658	1.5800e-003	0.5418	0.0462	0.5881	0.2620	0.0425	0.3045	0.0000	138.4949	138.4949	0.0448	0.0000	139.6147

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6600e-003	1.9900e-003	0.0248	7.0000e-005	8.3900e-003	4.0000e-005	8.4300e-003	2.2300e-003	4.0000e-005	2.2700e-003	0.0000	6.4700	6.4700	1.7000e-004	1.8000e-004	6.5273
Total	2.6600e-003	1.9900e-003	0.0248	7.0000e-005	8.3900e-003	4.0000e-005	8.4300e-003	2.2300e-003	4.0000e-005	2.2700e-003	0.0000	6.4700	6.4700	1.7000e-004	1.8000e-004	6.5273

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2113	0.0000	0.2113	0.1022	0.0000	0.1022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1020	1.1068	0.6658	1.5800e-003		0.0462	0.0462		0.0425	0.0425	0.0000	138.4948	138.4948	0.0448	0.0000	139.6146
Total	0.1020	1.1068	0.6658	1.5800e-003	0.2113	0.0462	0.2575	0.1022	0.0425	0.1447	0.0000	138.4948	138.4948	0.0448	0.0000	139.6146

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6600e-003	1.9900e-003	0.0248	7.0000e-005	7.7300e-003	4.0000e-005	7.7800e-003	2.0700e-003	4.0000e-005	2.1100e-003	0.0000	6.4700	6.4700	1.7000e-004	1.8000e-004	6.5273
Total	2.6600e-003	1.9900e-003	0.0248	7.0000e-005	7.7300e-003	4.0000e-005	7.7800e-003	2.0700e-003	4.0000e-005	2.1100e-003	0.0000	6.4700	6.4700	1.7000e-004	1.8000e-004	6.5273

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1165	0.8958	0.9648	1.6900e-003		0.0394	0.0394		0.0380	0.0380	0.0000	138.9233	138.9233	0.0236	0.0000	139.5131
Total	0.1165	0.8958	0.9648	1.6900e-003		0.0394	0.0394		0.0380	0.0380	0.0000	138.9233	138.9233	0.0236	0.0000	139.5131

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8000e-004	0.0254	0.0103	1.2000e-004	4.3400e-003	1.8000e-004	4.5200e-003	1.2500e-003	1.7000e-004	1.4300e-003	0.0000	11.9994	11.9994	3.1000e-004	1.7700e-003	12.5356
Worker	5.0600e-003	3.7800e-003	0.0472	1.3000e-004	0.0159	8.0000e-005	0.0160	4.2300e-003	7.0000e-005	4.3100e-003	0.0000	12.2930	12.2930	3.3000e-004	3.4000e-004	12.4018
Total	5.8400e-003	0.0292	0.0575	2.5000e-004	0.0203	2.6000e-004	0.0205	5.4800e-003	2.4000e-004	5.7400e-003	0.0000	24.2924	24.2924	6.4000e-004	2.1100e-003	24.9375

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1165	0.8958	0.9648	1.6900e-003		0.0394	0.0394		0.0380	0.0380	0.0000	138.9232	138.9232	0.0236	0.0000	139.5129
Total	0.1165	0.8958	0.9648	1.6900e-003		0.0394	0.0394		0.0380	0.0380	0.0000	138.9232	138.9232	0.0236	0.0000	139.5129

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8000e-004	0.0254	0.0103	1.2000e-004	4.0700e-003	1.8000e-004	4.2500e-003	1.1900e-003	1.7000e-004	1.3600e-003	0.0000	11.9994	11.9994	3.1000e-004	1.7700e-003	12.5356
Worker	5.0600e-003	3.7800e-003	0.0472	1.3000e-004	0.0147	8.0000e-005	0.0148	3.9300e-003	7.0000e-005	4.0000e-003	0.0000	12.2930	12.2930	3.3000e-004	3.4000e-004	12.4018
Total	5.8400e-003	0.0292	0.0575	2.5000e-004	0.0188	2.6000e-004	0.0190	5.1200e-003	2.4000e-004	5.3600e-003	0.0000	24.2924	24.2924	6.4000e-004	2.1100e-003	24.9375

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0629	0.6080	0.8582	1.3200e-003		0.0301	0.0301		0.0278	0.0278	0.0000	114.7812	114.7812	0.0364	0.0000	115.6908
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0634	0.6080	0.8582	1.3200e-003		0.0301	0.0301		0.0278	0.0278	0.0000	114.7812	114.7812	0.0364	0.0000	115.6908

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4100e-003	3.2900e-003	0.0411	1.2000e-004	0.0139	7.0000e-005	0.0140	3.6900e-003	6.0000e-005	3.7600e-003	0.0000	10.7199	10.7199	2.8000e-004	2.9000e-004	10.8148
Total	4.4100e-003	3.2900e-003	0.0411	1.2000e-004	0.0139	7.0000e-005	0.0140	3.6900e-003	6.0000e-005	3.7600e-003	0.0000	10.7199	10.7199	2.8000e-004	2.9000e-004	10.8148

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0629	0.6080	0.8582	1.3200e-003		0.0301	0.0301		0.0278	0.0278	0.0000	114.7810	114.7810	0.0364	0.0000	115.6907
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0634	0.6080	0.8582	1.3200e-003		0.0301	0.0301		0.0278	0.0278	0.0000	114.7810	114.7810	0.0364	0.0000	115.6907

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4100e-003	3.2900e-003	0.0411	1.2000e-004	0.0128	7.0000e-005	0.0129	3.4200e-003	6.0000e-005	3.4900e-003	0.0000	10.7199	10.7199	2.8000e-004	2.9000e-004	10.8148
Total	4.4100e-003	3.2900e-003	0.0411	1.2000e-004	0.0128	7.0000e-005	0.0129	3.4200e-003	6.0000e-005	3.4900e-003	0.0000	10.7199	10.7199	2.8000e-004	2.9000e-004	10.8148

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1647					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3000e-003	0.0156	0.0217	4.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	3.0639	3.0639	1.8000e-004	0.0000	3.0685
Total	0.1670	0.0156	0.0217	4.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	3.0639	3.0639	1.8000e-004	0.0000	3.0685

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.5600e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4060	0.4060	1.0000e-005	1.0000e-005	0.4096
Total	1.7000e-004	1.2000e-004	1.5600e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4060	0.4060	1.0000e-005	1.0000e-005	0.4096

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1647					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3000e-003	0.0156	0.0217	4.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	3.0639	3.0639	1.8000e-004	0.0000	3.0685
Total	0.1670	0.0156	0.0217	4.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	3.0639	3.0639	1.8000e-004	0.0000	3.0685

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.5600e-003	0.0000	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4060	0.4060	1.0000e-005	1.0000e-005	0.4096
Total	1.7000e-004	1.2000e-004	1.5600e-003	0.0000	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4060	0.4060	1.0000e-005	1.0000e-005	0.4096

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2701	0.3197	2.0489	3.6800e-003	0.3613	3.1800e-003	0.3645	0.0965	2.9700e-003	0.0995	0.0000	340.9382	340.9382	0.0284	0.0214	348.0336
Unmitigated	0.2701	0.3197	2.0489	3.6800e-003	0.3613	3.1800e-003	0.3645	0.0965	2.9700e-003	0.0995	0.0000	340.9382	340.9382	0.0284	0.0214	348.0336

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	700.00	700.00	700.00	958,177	958,177
Parking Lot	0.00	0.00	0.00		
Total	700.00	700.00	700.00	958,177	958,177

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Home Improvement Superstore	16.60	8.40	6.90	23.40	57.60	19.00	32	20	48
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.4512	76.4512	6.4500e-003	7.8000e-004	76.8456
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.4512	76.4512	6.4500e-003	7.8000e-004	76.8456
NaturalGas Mitigated	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334
NaturalGas Unmitigated	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement Superstore	77000	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement Superstore	77000	4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.2000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1090	4.1090	8.0000e-005	8.0000e-005	4.1334

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement Superstore	424900	75.3541	6.3600e-003	7.7000e-004	75.7429
Parking Lot	6186.25	1.0971	9.0000e-005	1.0000e-005	1.1028
Total		76.4512	6.4500e-003	7.8000e-004	76.8456

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement Superstore	424900	75.3541	6.3600e-003	7.7000e-004	75.7429
Parking Lot	6186.25	1.0971	9.0000e-005	1.0000e-005	1.1028
Total		76.4512	6.4500e-003	7.8000e-004	76.8456

6.0 Area Detail

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003
Unmitigated	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.3600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1276					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003
Total	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.3600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1276					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003
Total	0.1360	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3100e-003	1.3100e-003	0.0000	0.0000	1.3900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3872	0.0682	1.6700e-003	10.5921
Unmitigated	9.9400	0.0853	2.0900e-003	12.6934

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement Superstore	2.59254 / 1.58898	9.9400	0.0853	2.0900e-003	12.6934
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		9.9400	0.0853	2.0900e-003	12.6934

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement Superstore	2.07403 / 1.49205	8.3872	0.0682	1.6700e-003	10.5921
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		8.3872	0.0682	1.6700e-003	10.5921

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	78.7849	4.6561	0.0000	195.1861
Unmitigated	78.7849	4.6561	0.0000	195.1861

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	388.12	78.7849	4.6561	0.0000	195.1861
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		78.7849	4.6561	0.0000	195.1861

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	388.12	78.7849	4.6561	0.0000	195.1861
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		78.7849	4.6561	0.0000	195.1861

9.0 Operational Offroad

Ashely Furniture Expansion Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation
