# Air Quality & Greenhouse Gas Assessment
# of
# Proposed Online Auction Facilities
## 6190 Bradshaw Road
## Sacramento County, California

***December 18, 2024***

***Prepared for:***

**Bar None Auction**
**4751 Power Inn Road Suite A**
**Sacramento, CA 95826**
**Tel: (916) 383-2000**
**Email: jseidel@barnoneauction.com**

***Prepared by:***

Marc Papineau
Environmental Service
5789 Gold Creek Drive
Castro Valley, CA 94552
TEL: (510)881-8574

ES Project Number: 2024-017

# Table of Contents

EXECUTIVE SUMMARY ..... viii
1.0 INTRODUCTION ..... 1
1.1 PROJECT LOCATION ..... 1
1.2 PROJECT DESCRIPTION ..... 1
1.3 CONSTRUCTION ACTIVITIES AND PHASING ..... 3
2.0 REGULATORY SETTING ..... 3
2.1 AIR QUALITY ..... 3
2.1.1 Air Pollutants of Concern ..... 3
2.1.1.1 Criteria Pollutants ..... 3
2.1.1.2 Toxic Air Contaminants ..... 6
2.1.2 Federal Air Quality Regulations ..... 7
2.1.2.1 Federal Clean Air Act ..... 7
2.1.3 California Air Quality Regulations ..... 7
2.1.3.1 California Clean Air Act ..... 7
2.1.3.2 State Implementation Plan ..... 7
2.1.3.3 California Energy Code ..... 8
2.1.4 Local Regulations ..... 8
2.1.4.1 Sacramento Metropolitan Air Quality Management District ..... 8
Air Quality Plans ..... 8
Rules and Regulations ..... 8
2.1.4.2 Sacramento County General Plan Air Quality Element ..... 9
2.2 GREENHOUSE GASES ..... 10
2.2.1 Climate Change Overview ..... 10
2.2.2 Kinds of Greenhouse Gases ..... 10
2.2.3 Federal Greenhouse Gas Regulations ..... 12
2.2.3.1 Federal Clean Air Act ..... 12
2.2.3.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards ..... 12
2.2.4 California Greenhouse Gas Regulations ..... 12
2.2.4.1 California Building Energy Efficiency Standards ..... 12
2.2.4.2 California Green Building Standards ..... 13
2.2.4.3 Executive Order S-3-05 ..... 13
2.2.4.4 Assembly Bill 32 – Global Warming Solution Act of 2006 ..... 13
2.2.4.5 Executive Order B-30-15 ..... 14
2.2.4.6 Senate Bill 32 ..... 14
2.2.4.7 Assembly Bill 197 ..... 14

# Table of Contents


2.2.4.8 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases ..... 14
2.2.4.9 Assembly Bill 341 ..... 14
2.2.4.10 Executive Order S-01-07 ..... 15
2.2.4.11 Senate Bill 350 ..... 15
2.2.4.12 Senate Bill 375 ..... 15
2.2.4.13 Senate Bill 100 ..... 15
2.2.5 Executive Order N-79-20 ..... 16
2.2.6 Assembly Bill 1279 ..... 16
2.2.7 Senate Bill 905 ..... 16
2.2.7.1 California Air Resources Board: Scoping Plan ..... 16
2.2.8 Regional GHG Policies and Plans ..... 17
2.2.8.1 Sacramento Area Council of Governments ..... 17
2.2.8.2 County of Sacramento ..... 17
3.0 EXISTING CONDITIONS ..... 17
3.1 SURROUNDING LAND USES ..... 17
3.2 SENSITIVE RECEPTORS ..... 18
3.3 CLIMATE AND METEOROLOGY ..... 18
3.4 EXISTING AIR QUALITY ..... 19
3.4.1 Criteria Pollutants ..... 19
3.4.1.1 Attainment Designations ..... 19
3.4.1.2 Monitored Air Quality ..... 19
3.4.2 Greenhouse Gases ..... 19
3.4.2.1 Worldwide GHG Emission Inventory ..... 19
3.4.2.2 California GHG Inventory ..... 19
3.4.2.3 Sacramento County GHG Emissions Inventory ..... 21
4.0 METHODS AND EVALUATION CRITERIA ..... 22
4.1 EMISSION ESTIMATION METHODS ..... 22
4.1.1 Construction Emissions ..... 22
4.1.1.1 Construction Activities ..... 22
4.1.1.2 Construction Off-Road Equipment ..... 23
4.1.1.3 Construction On-Road Trips ..... 24
4.1.1.4 Construction Architectural Coatings ..... 24
4.1.2 Operations Emissions ..... 24
4.1.2.1 Area Sources ..... 24
4.1.2.2 Energy Sources ..... 24
4.1.2.3 Vehicular (Mobile) Sources ..... 24

# Table of Contents


4.1.2.4 Solid Waste Sources ..... 25
4.1.2.5 Water Sources ..... 25
4.2 HEALTH RISK ASSESSMENT METHODS ..... 26
4.2.1 TAC Emissions ..... 26
4.2.2 Screening-Level Health Risk Assessment ..... 27
4.2.2.3 Source Characteristics ..... 27
4.2.2.4 Meteorological Data ..... 29
4.2.2.5 Surface, Profile, Source, and Receptor Data ..... 30
4.2.3 Risk Screening Estimates ..... 30
4.3 THRESHOLDS OF SIGNIFICANT EFFECT ..... 31
4.3.1 Air Quality ..... 31
4.3.2 Greenhouse Gases ..... 33
5.0 Air Quality Impact Analysis ..... 34
5.1 ISSUE 1: CONSISTENCY WITH AIR QUALITY PLAN ..... 34
5.1.1 Evaluation Criteria ..... 34
5.1.2 Evaluation of Effect ..... 34
5.1.3 Mitigation Measures ..... 34
5.2 ISSUE 2: CUMULATIVELY CONSIDERABLE NET INCREASE OF NONATTAINMENT POLLUTANTS ..... 34
5.2.1 Evaluation Criteria ..... 34
5.2.1.1 Construction ..... 35
5.2.1.2 Operations ..... 35
5.2.2 Evaluation of Effects ..... 36
5.2.3 Mitigation Measures ..... 36
5.3 ISSUE 3: IMPACTS TO SENSITIVE RECEPTORS ..... 37
5.3.1 Evaluation Criteria ..... 37
5.3.2 Evaluation of Effects ..... 38
5.3.3 Mitigation Measures ..... 39
5.4 ISSUE 4: OTHER EMISSIONS (*E.G.*, THOSE LEADING TO ODORS) ..... 39
5.4.1 Evaluation Criteria ..... 39
5.4.2 Evaluation of Effects ..... 39
5.4.3 Mitigation Measures ..... 40
6.0 GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS ..... 41
6.1 ISSUE 1: GREENHOUSE GAS EMISSIONS ..... 41
6.1.1 Evaluation Criteria ..... 41
6.1.2 Evaluation of Project Effects ..... 41
6.1.2.1 Construction Emissions of GHGs ..... 41

# Table of Contents

6.1.2.2 Operations Emissions of GHGs ..... 41
6.1.3 Mitigation Measures ..... 42
6.2 ISSUE 2: CONFLICT WITH PLANS ADOPTED TO REDUCE GHG EMISSIONS ..... 42
6.2.1 Evaluation Criteria ..... 42
6.2.2 Evaluation of Project Effects ..... 43
6.2.3 Mitigation Measures ..... 43
7.0 PREPARER ..... 44
8.0 REFERENCES ..... 45

# Acronyms and Abbreviations

| | |
|---|---|
| AAQS | Ambient Air Quality Standards |
| AB | Assembly Bill |
| ADMRT | Air Dispersion Modeling and Risk Tool |
| ADT | average daily number of trips |
| AERMET | meteorological dataset used in the AERMOD model |
| AERMOD | U.S. EPA Gaussian air dispersion model |
| APCD | Air Pollution Control District |
| APN | Assessor's Parcel Number |
| AQMD | Air Quality Management District |
| AR6 | IPCC Sixth Assessment Report on Climate Change |
| ARB | California Air Resources Board |
| AST | above-ground storage tank |
| bhp | brake horsepower |
| BMPs | Best Management Practices |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod2022 | California Emissions Estimator Model 2022 |
| CalEPA | California Environmental Protection Agency |
| CALGreen | California Green Building Standards Code |
| CAP | Climate Action Plan |
| CAPCOA | California Air Pollution Control Officers Association |
| CCR | California Code of Regulations |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| $CH_4$ | methane |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| COP26 | 2021 United Nations Climate Change Conference |
| COPD | Chronic obstructive pulmonary disease |
| County | Sacramento County |
| CY | cubic yard |
| DICE | diesel internal combustion engine |
| DPM | diesel particulate matter |
| EMFAC2021 | mobile source emission factor model 2021 |
| EO | Executive Order |
| °F | degrees Fahrenheit |
| g | gram |
| g/bhp-hr | gram per brake horsepower-hour |
| GDF | gasoline dispensing facility |
| GHG | greenhouse gas |
| GWP | global warming potential |
| $\mu g/m^3$ | microgram per cubic meter |
| HARP | Hotspots Analysis and Reporting Program |
| HI | Hazard Index |
| HRA | health risk assessment |
| HRSA | health risk screening-level assessment |

## Acronyms and Abbreviations (*continued*)

| | |
|---|---|
| IDLEX | idling exhaust emissions or emission factors |
| IPCC | Intergovernmental Panel on Climate Change |
| IUR | Inhalation Unit Risk, (same as Unit Risk Factor, URF) |
| km | 1000 meters or 1 kilometer |
| µm | one-millionth of a meter, 1 micrometer, or 1 micron |
| LCFS | Low Carbon Fuel Standard |
| MEIR | Maximally Exposed Individual Resident |
| MEIW | Maximally Exposed Individual Worker |
| MERV | Maximum Efficiency Reporting Value |
| mph | mile per hour |
| MPO | Metropolitan Planning Organization |
| MT | metric tons |
| MMT | million metric tons |
| MTP/SCS | Metropolitan Transportation Plan/Sustainable Communities Strategy |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NED | National Elevation Dataset |
| NHTSA | National Highway Traffic Safety Administration |
| $NO_2$ | nitrogen dioxide |
| NOAA | National Oceanic and Atmospheric Administration |
| $NO_X$ | nitrogen oxides |
| $O_3$ | ozone |
| OEHHA | Office of Environmental Health Hazard Assessment |
| PM | particulate matter |
| $PM_{10}$ | particulate matter 10 microns or less in diameter |
| $PM_{2.5}$ | particulate matter 2.5 microns or less in diameter |
| ppb | part per billion |
| ppm | part per million |
| REL | Reference Exposure Limit |
| ROG | reactive organic gas |
| RTP | Regional Transportation Plan |
| RUNEX | running exhaust emissions |
| SACOG | Sacramento Area Council of Governments |
| SB | Senate Bill |
| SCS | Sustainable Communities Strategy |
| SF | square feet |
| SFNA | Sacramento Federal Nonattainment Area |
| SIP | State Implementation Plan |
| SMAQMD | Sacramento Metropolitan Air Quality Management District |
| $SO_2$ | sulfur dioxide |
| $SO_X$ | sulfur oxides |
| SR 99 | State Route 99 |
| STREX | cold start exhaust emission |
| SVAB | Sacramento Valley Air Basin |
| TAC | toxic air contaminant |
| TRU | transport refrigeration unit |
| UNFCCC | United Nations Framework Convention on Climate Change |
| URF | Unit Risk Factor (same as Inhalation Unit Risk, IUR) |

## Acronyms and Abbreviations (*continued*)

| | |
|---|---|
| USEPA | U.S. Environmental Protection Agency |
| USGS | U.S. Geological Survey |
| UTM | Universal Transverse Mercator |
| veh-mi | vehicle mile |
| VMT | vehicle miles of travel |
| VOC | volatile organic compound |
| WRCC | Western Regional Climate Center |
| µg/m$^3$ | micrograms per cubic meter |

# EXECUTIVE SUMMARY

The proposed project consists of a 46.88-acre online auction facilities proposed at 6190 Bradshaw Road in unincorporated south Sacramento County, California (Figure ES-1). Facilities would be used by Bar None Auction. Bar None Auction is online auction enterprise which specializes in resale of agricultural and light construction equipment, warehouse forklifts, and recreational vehicles. The project site is located in the northwestern corner of Elder Creek Road and Bradshaw Road. The project site is designated by the Sacramento County Assessor as parcels APN 063-0130-019, APN 063-0130-006, and APN 063-0130-022.

Figure ES-1 shows the general layout of key project elements. As shown in Figure ES-1, proposed building improvements would be concentrated in the northeastern corner of the site, all within the 25.99-acre parcel (APN 063-0130-019). The proposed administrative office, warehouse/shop, and surface parking lot for 236 vehicles would be located on 7.5 acres in the eastern part of APN 063-0139-019. Adjoining the shop would be a wash rack and the proposed gasoline and diesel above ground storage tanks—concrete-encased ConVaults or similar.

Construction would occur during 2025-2026. Construction would include site preparation, grading and trenching for utilities, aggregate-surfaced storage yard preparation, building construction, paving, and painting. Import of aggregate (*i.e.*, gravel, base rock), asphalt, and concrete are included.

Construction and operations emissions of air pollutants and GHGs were estimated using a widely applied model called CalEEMod2022, the California Emission Estimator Model. Quantities of air pollutants were all found to be well below applicable thresholds of significant effect published by Sacramento Metropolitan Air Quality Management District (SMAQMD or Sac Metro AQMD) for evaluating local projects.

The Sacramento Federal Nonattainment Area (SFNA) is a non-attainment area for ground-level ozone and airborne particulate $PM_{2.5}$. For the construction of land development projects, the Sac Metro AQMD's thresholds for airborne particulate matter ($PM_{2.5}$ and $PM_{10}$) are set at zero. During construction, projects subject to environmental review are expected to implement basic construction Best Management Practices (BMPs), Enhanced On-Site Exhaust Controls, and Enhanced Fugitive PM (Dust) Controls, to minimize emissions of NOx, which is an ozone and PM precursor, and PM. The recommended BMPs in accordance with these District policies are included as mitigation measure MM-1. Sacramento County as lead agency is advised to add these emission control practices as Conditions of Approval.

For the continuing operations at land development projects, the Sac Metro AQMD's emission threshold limits for airborne particulate matter ($PM_{2.5}$ and $PM_{10}$) also are set initially at zero. To qualify for the non-zero threshold of significant effect, implementation of Best Available Control Technologies (BACT) applies to stationary source operational emissions. The proposed project includes non-commercial fuel dispensing with aboveground fuel storage tanks (ASTs). Fuel dispensing will require an Authority to Construct and a Permit to Operate from the Sac Metro AQMD. District Rules 448 and 449 will apply as the proposed ASTs have capacities of 500-gallons (gasoline) and 2,500-gallons (diesel).

District Rule 448 (Gasoline Transfer into Stationary Storage Containers) controls VOC emissions from the transfer of gasoline from delivery vessels into storage tanks, known as "Phase I transfers." District Rule 449 (Transfer of Gasoline into Vehicle Fuel Tanks) controls VOC emissions from the transfer of gasoline from the storage tanks into vehicle fuel tanks, also known as "Phase II transfers." According to the SMAQMD BACT Clearinghouse, California ARB-certified Phase I transfer systems have 98 percent control efficiency and ARB-certified Phase II transfer systems have 95 percent control efficiency. Such systems conform to BACT.

Nuisance odor, dust, and diesel exhaust health effects generally depend on emissions in combination with other factors such as prevailing wind direction and separation distance between adjoining land uses and

the project site. For this evaluation, the nearest schools and residential land uses around the project site were considered as potential sensitive receptors and were plotted to evaluate separation distances from the project site (see Figures 1 and 2).

The nearest public or private schools were determined to be located over 2,500 feet from the project site's nearest perimeter (see Figure 1). The nearest residential receptors were determined to be located on parcels adjoining the project site or within 500 feet of the project site's perimeter. The four (4) residential receptors so located are identified as 6060 and 6072 Bradshaw Road and 9591 and 9651 Elder Creek Road. Two (2) additional residential receptors are located between 500 and 1,000 feet from the project site's nearest perimeter. These are the residents located at 6211 and 6215 Bradshaw Road.

For these four residences, separation distances to the shop and refueling area are substantially longer than distances to the project site's perimeter, owing to the locations of the shop and refueling area and buffer land or setback on the project site. The houses at 6060 and 6072 Bradshaw Road, located approximately 460–480 feet from the refueling area, are labeled R1 and R2 in Figure ES-1. The houses at 6211 and 6215 Elder Creek Road are located approximately 1,900 feet from the refueling area.

The proposed gasoline AST for gasoline storage and dispensing must be permitted and meet the requirements for Standing Loss Control, Phase I Enhanced Vapor Recovery (EVR), and Phase II EVR. Owners/Operators must apply for and obtain an Authority to Construct and Permit to Operate from SMAQMD. This will substantially reduce health risk from TACs (*e.g.*, benzene) associated with gasoline dispensing.

Two risk screening models, which were developed by ARB and CAPCOA, were applied to evaluate potential health effects of the proposed project. GDF Risk Assessment Screening Look-up Tool, Version 1.0, February 18, 2022, incorporate ARB's emission factors for gasoline bulk loading, refueling, tank breathing, spillage, and hose permeation. It incorporate results of AERMOD dispersion modeling, OEHHA adopted IURs and chronic RELs. AERMOD is USEPA's Gaussian air dispersion model. As a screening tool, the GDF Risk Assessment Screening Look-up Tool yields conservatively high estimates of health risk from gasoline dispensing. To evaluate health risk related to running diesel engines, the California ARB and CAPCOA developed another screening tool named the Diesel Internal Combustion Engine (DICE) Tool. The DICE Tool version 23312 incorporates AERMOD modeling of DPM concentrations, using AERMET wind and stability profile and land surface profile, in conjunction with PM10 exhaust emission rates and OEHHA health risk calculations. DICE was applied to Auction Yard diesel emissions including engine runups and transport traffic. Engine runups refer to brief startups of for-auction equipment engines in the Auction Yard by Bar None mechanics. Transport traffic collectively refers to drop-off and pick-up of auction items in the Auction Yard by prospective sellers and successful bidders.

Application of ARB's GDF health risk lookup tool for gasoline dispensing facilities shows that the added lifetime cancer risk would be 2 in 100 million, or lower, and acute Hazard Index (HI) near zero at the off-site nearest receptors.[1] Application ARB's DICE model for diesel internal combustion engines shows that diesel particulates emitted during yard operations, including transport traffic and engine runups, could contribute up to 0.9 per one million added lifetime cancer risk. Thresholds of significant effect adopted by SMAQMD are 1 in ten million added lifetime cancer risk[2] and acute HI of 1, or higher. Health effects of the proposed project, therefore, would be less-than-significant.

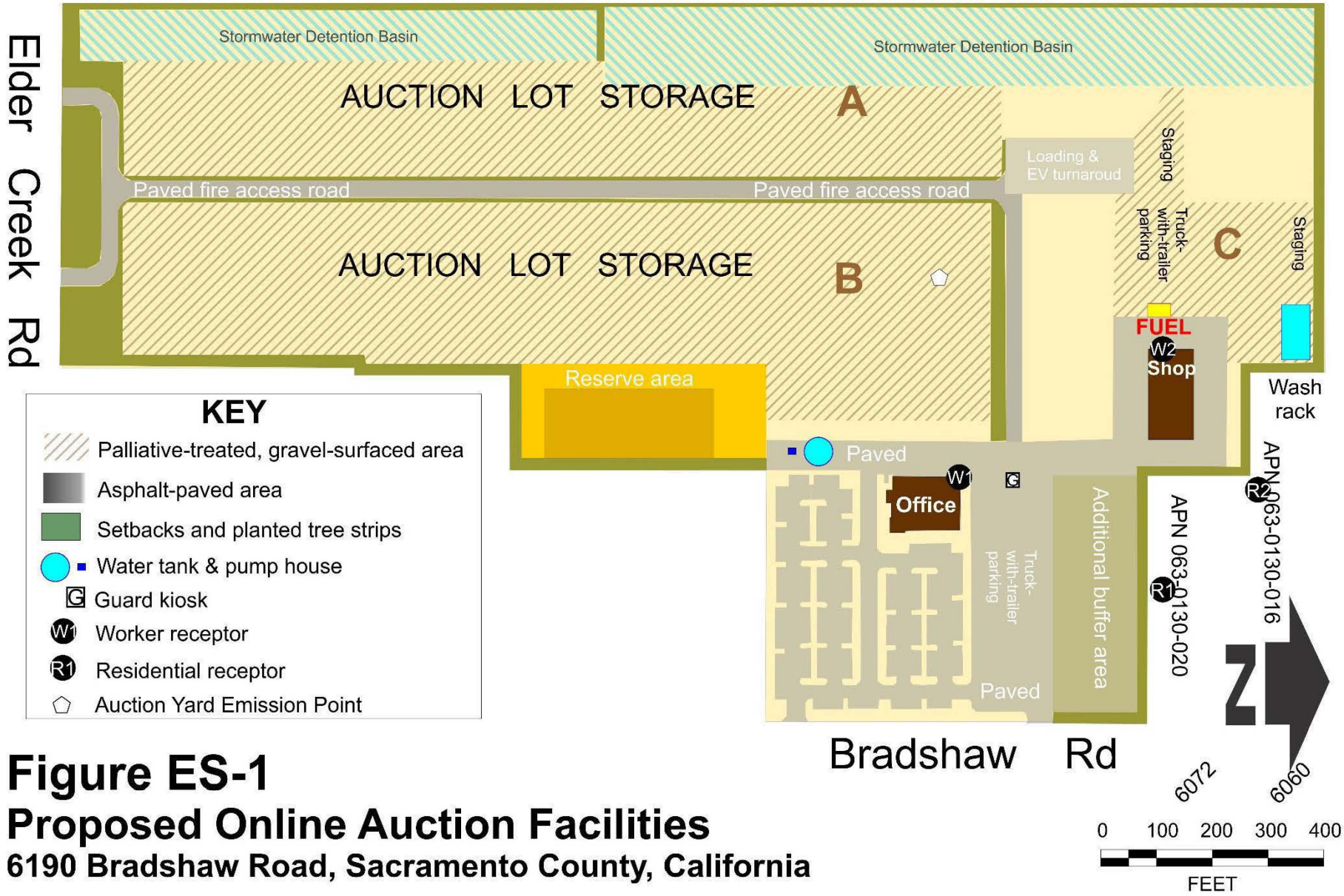
---

1 This is consistent with Table G1 in ARB's *Gasoline Service Station Industrywide Risk Assessment Technical Guidance*, dated February 18, 2022, which shows 0.43 in one million risk per million gallons annual gasoline throughput and a separation distance of 120 meters (390 feet). Adjusted to 6,000 gallons per year, the added lifetime cancer risk is approximately 0.3 in 100 million.

2 For stationary sources, the SMAQMD has set an added lifetime cancer risk threshold of significant effect of 10 in one million.

**Table ES-1**
**BAR NONE AUCTION PROPOSED PROJECT ELEMENTS**
**6190 Bradshaw Road, Sacramento County, CA**

| Project Element | Area | | Notes |
|---|---|---|---|
| | square feet | acres | |
| **Asphalt-paved area** | | | |
| Surface parking lot | 182,928 | 4.20 | Excludes landscaping, curbs & flatwork |
| Fire/Emergency Vehicle access road | 77,995 | 1.79 | An EV turnaround also is provided. |
| Apron behind office and shop | 94,950 | 2.18 | |
| Loading dock | 23,341 | 0.54 | |
| Total paved area | 379,214 | 8.71 | |
| **Gravel-surfaced area** | | | |
| Area A (for-auction item storage) | 293,399 | 6.74 | West side of fire access road (APN 063-0130-006) |
| Area B (for-auction item storage) | 484,093 | 11.11 | East side of fire access road (APN 063-0130-022) |
| Area C (Wash rack, fuel, & staging areas) | 102,113 | 2.34 | Next to the shop, wash rack, and ASTs |
| Unspecified areas | 175,481 | 4.03 | Generally, these are areas located next to or between areas having specified uses as called out in the Site Plan. |
| Total gravel-surfaced area | 1,055,086 | 24.22 | Labeled Auction Lot Storage A and B in Figure ES-1. |
| **Detention basins** | 265,657 | 6.10 | |
| **Future expansion area** | 73,667 | 1.69 | 87,442 sf with setbacks included, labeled Reserve Area in Figure ES-1. |
| **Setbacks & tree planting strips** | 166,126 | 3.81 | This area was estimated as follows:<br>1. Along the fire access road, 8-foot wide tree planting strips on both sides or a single 16-foot wide tree planting strip on one side.<br>2. Along the project site's perimeter, setbacks of 20-foot width generally.<br>3. Specifically along the Elder Creek Road frontage, a setback of 110-foot width. |
| **Additional unsurfaced buffer** | 65,057 | 1.49 | North of the proposed surface parking lot, an area provides 170 feet of buffer distance from the property line shared with 6072 Bradshaw Road. The added buffer area is in addition to 20-foot perimeter setbacks. |
| **ROW dedication** | 37,286 | 0.86 | If widening strips are required for Elder Creek Road or Bradshaw Road |
| **GRAND TOTAL** | 2,042,093 | 46.88 | 100% |




# Figure ES-1
## Proposed Online Auction Facilities
### 6190 Bradshaw Road, Sacramento County, California

# 1.0 INTRODUCTION

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts during construction and operation of a proposed Online Auction Facility to be located at 6190 Bradshaw Road, Sacramento County, California. This report has been prepared to support environmental review in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code [PRC] §21000 *et seq.*); State CEQA Guidelines (California Code of Regulations [CCR], Title 14, §15000 *et seq.*).

## 1.1 PROJECT LOCATION

The project site is located in the northwestern corner of the Bradshaw Road and Elder Creek Road in unincorporated Sacramento County. See Figure 1 and Figure 2. The project site is located outside the South Sacramento-Florin Community. The approximately 47-acre project site consists of Assessor Parcel Numbers (APNs) APN 063-0130-019 (25.59 acres), APN 063-0130-022 (11.21 acres), and APN 063-0130-006 (9.68 acres).

## 1.2 PROJECT DESCRIPTION

The proposal is to build facilities at 6190 Bradshaw Road needed to support Bar None Auction operations. Bar None Auction is an online construction, agriculture, and warehouse equipment auction business. Bar None Auction currently operates from nearby facilities located at 4517 Power Inn Road, Building A.

Figure ES-1 illustrates a simplified site development plan. Based upon the submittal site plan, Sheet A1.0 dated April 19, 2024, the proposed project would include the following elements listed below and tabulated in Table ES-1:

- Administrative office building, 21,510 square feet (11,899 square feet on the ground level and 9,611 on the second level)
- Shop building, 12,800 square feet
- Water tank 200,000–250,000 gallon (50 foot diameter, 17 feet tall) and ancillary pump house
- Guard kiosk
- Above ground 2,500-gallon diesel and 500-gallon gasoline fuel storage tanks
- Wash rack
- Paved all-weather fire access road from Elder Creek Road
- Paved surface parking for 236 cars and additional paved area for trucks with trailers,
- Paved loading dock and fire vehicle turnaround
- Paved way/apron around the shop building, guard kiosk, and in back of the office building
- Gravel-surfaced areas for storage of for-auction equipment generally are located on the southern parcels (APN 063-0130-006, and APN 063-0130-022)
- Gravel-surfaced area by the shop for truck trailer parking, staging, wash rack, and fueling
- Two (2) stormwater detention basins
- Customer patio
- Privacy CMU wall
- Landscaping and setbacks
- Reserve land for potential future use

**Grading** — The proposed grading zone covers most of the 46.88-acre site. Construction of the two buildings and surface parking lot is concentrated in the northeastern corner of the proposed site, which is the eastern 7.5 acres of APN 063-0139-019. The proposed administrative office and surface parking lot would have 510 feet of frontage along Bradshaw Road of the 680 feet of potential parcel frontage.

**Building floor area** — The proposed floor area includes 21,510 square feet in the 2-story administrative office building, with 11,899 square feet on the ground level and 9,611 square feet on the second level, and 12,800 square feet in the shop.

**Pavement** — The proposed project would add approximately 8.71 acres of asphalt pavement in total. Asphalt-paved parking stalls and aisles in the front along Bradshaw Road would cover 4.20 acres of the 8.71 acres. Additional pavement behind the office building, around guard kiosk and shop, and in the proposed loading area would cover 2.72 acres of the 8.71 acres. Pavement for the proposed all-weather fire access road from Elder Creek Road to the future office building would cover 1.79 acres of the 8.71 acres.

**Wash rack and above-ground fuel tanks** — Outside the shop at the north end of the project site, the proposed project would have above ground 2,500-gallon diesel and 500-gallon gasoline fuel storage tanks for non-retail use. The ASTs would be concrete encased ConVault or equivalent. The wash rack would be used for washing for-sale auction equipment.

**Gravel-surfaced areas for storage of for-sale equipment, staging, wash rack apron, and truck trailer parking next to the shop** — The proposed project would have approximately 24 acres of palliative-treated, gravel-surfaced areas for for-auction equipment storage and staging. Travel on the gravel areas would be infrequent as they are intended primarily for "storage" meaning parked equipment. Much of the storage area for for-auction equipment would be located on the southern parcels (APN 063-0130-006 and APN 063-0130-022). A 1.95-acre gravel-surfaced area next to the shop would be used for staging (loading/unloading), truck trailer parking, and an apron around the wash rack and ASTs.

Gravel-surfaced areas will be treated with linseed or soybean oil and water or other palliative for dust control. Linseed and soybean oils are examples of dust palliatives. Periodic reapplication of linseed oil, soybean oil, or alternative will be performed to assure that dust is minimized.

**Stormwater detention basins** — The proposed project would have approximately 6.10 acres of stormwater detention basins. The basins would be located along the western perimeter of the project site, providing buffer along that west side (see Figure ES-1).

**Future expansion area** — Approximately 2 acres, including setbacks, would be reserved for potential future use. This potential expansion area adjoins the surface parking and water tank and is located approximately 200 feet south of the proposed administrative office building. It is labeled "Reserve Area" in Figure ES-1.

**Setbacks and tree planting strips** — The proposed project could accommodate approximately 3.8 acres of setbacks and tree planting strips. This area was estimated as follows:

1. Along the fire access road, 8-foot wide tree planting strips on both sides or a single 16-foot wide tree planting strip on one side.
2. Along the east and north perimeter, setbacks of 20-foot width generally.
3. Along the Elder Creek Road frontage, a setback of 110-foot width.

**Additional buffer area** — North of the proposed surface parking lot, a 1.49-acre area provides 170 feet of buffer distance from the property line shared with 6072 Bradshaw Road. The added buffer area is in addition to 20-foot perimeter setbacks generally around the site's perimeter.

## 1.3 CONSTRUCTION ACTIVITIES AND PHASING

Construction of the project is anticipated to begin as early as April 2025 and could be finished in October 2026. Project construction activities would consist of limited demolition (no structural demolition), site preparation, grading, constructionof aggregate-surfaced areas and paved areas (*i.e.*, emergency vehicle access road and parking lot, painting and striping of parking lot lines. Detailed construction activity and equipment assumptions are discussed in Section 4.1 and CalEEMod2022 output is provided in Appendix A.

# 2.0 REGULATORY SETTING

## 2.1 AIR QUALITY

The project site is located within the Sacramento County portion of the Sacramento Valley Air Basin (SVAB). The Sacramento region has been designated nonattainment for two out of the six criteria air pollutants, namely ozone and fine particulate matter ($PM_{2.5}$). Consequently, air quality plans focus on these two air pollutants. Table 1 provides details regarding the region's attainment status.

The Sacramento region currently meets the National Ambient Air Quality Standard (NAAQS) for the remaining criteria pollutants: Carbon monoxide, lead, nitrogen dioxide, sulfur dioxide and coarse particulate matter ($PM_{10}$). Maintenance plans for carbon monoxide and $PM_{10}$ are still required.

The federal Clean Air Act (CAA) requires plans to identify how nonattainment areas will attain the NAAQS by the attainment date. Key elements of these plans include emission inventories, emission control strategies and rules, motor vehicle emission budgets, air quality data analyses, modeling and air quality trends. USEPA reviews air quality plans to assure conformity with the requirements of the CAA. In addition to attainment planning, Sac Metro AQMD (SMAQMD) enforces stationary source rules and other rules for reducing emissions of air pollutants.

### 2.1.1 Air Pollutants of Concern

#### 2.1.1.1 Criteria Pollutants

Criteria air pollutants include the following compounds:

- Ozone ($O_3$)
- Carbon monoxide (CO)
- Nitrogen dioxide ($NO_2$)
- Particulate matter (PM), which is further subdivided:
  - Coarse PM, 10 micrometers or less in diameter ($PM_{10}$)
  - Fine PM, 2.5 micrometers or less in diameter ($PM_{2.5}$)
- Sulfur dioxide ($SO_2$)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere. $PM_{10}$ and $PM_{2.5}$ can be both primary and secondary air pollutants. Principal precursor to ozone are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs]) and nitrogen oxides ($NO_x$).

The primary state and federal ambient air quality standards listed in Table 2 are intended to avoid adverse health effects.

# Table 1
## SACRAMENTO COUNTY ATTAINMENT STATUS
**October 2024**

| Federal & State of California Criteria Pollutant Standards | | | |
|---|---|---|---|
| **NAAQS** | **Attainment Status** | **California** | **Attainment Status** |
| **Ozone ($O_3$)** | | **Ozone ($O_3$)** | |
| 1979: 0.12 ppm (1-hour) | Non-attainment (Severe) | 1988: 0.09 ppm (1-hour) | Nonattainment |
| 1997: 0.08 ppm (8-hour) | Non-attainment (Severe) | | |
| 2008: 0.075 ppm (8-hour) | Non-attainment (Severe) | | |
| 2015: 0.070 ppm (8-hour) | Non-attainment (Serious) | 0.07 ppm (8-hour)-2005[3] | Nonattainment |
| **Nitrogen Dioxide ($NO_2$)** | | **Nitrogen Dioxide ($NO_2$)** | |
| 2010: 0.053 ppm (ann. avg) | Unclassified—Attainment (2012) | 0.030 ppm (ann. avg) | |
| 2010: 0.100 ppm (1-hour) | Unclassified—Attainment (2012) | 0.18 ppm (1-hour) | Attainment (2012) |
| **Carbon Monoxide (CO)** | | **Carbon Monoxide (CO)** | |
| 2011: 35 ppm (1-hour) | Attainment | 20 ppm (1-hour) | Attainment |
| 2011: 9 ppm (8-hour) | Attainment | 9 ppm (8-hour) | Attainment |
| **Particulate Matter ($PM_{10}$)** | | **Particulate Matter ($PM_{10}$)** | |
| 2012: 150 µg/m³ (24-hour) | Attainment-Maintenance Moderate (2013)5 | 50 µg/m³ (24-hour) | Nonattainment |
| | | 20 µg/m³ (annual avg) | Nonattainment |
| **Particulate Matter ($PM_{2.5}$)** | | **Particulate Matter ($PM_{2.5}$)** | |
| 2006: 35 µg/m³ (24-hour) | Non-attainment (Moderate) | | |
| 2012: 12 µg/m³ (annual avg) | Attainment | 12 µg/m³ (annual avg) | Attainment |
| 2024: 9 µg/m³ (annual avg) | To be determined | | |

**NOTES:**
NAAQS National Ambient Air Quality Standard promulgated under the federal Clean Air Act.

1 Previous 1-hour ozone NAAQS non-attainment areas are no longer subject to the revoked 1-hour NAAQS as of June 15, 2005.

2 Sacramento Metro AQMD ozone 8-hour design value is 0.076 ppm (2021-2023).

3 In April 2005, the California ARB approved a new 8-hour standard of 70 ppb and retained the 1-hour standard of 90 ppb.

4 The original NAAQS for CO was established in 1971. U.S. EPA reviewed both the 1-hour and 8-hour standards and decided to retain these standards in 2011.

5 U.S. EPA issued Determination of Attainment on May 5, 2017 (82 FR 21711); however, Sacramento's federal $PM_{2.5}$ Nonattainment Area has not yet been re-designated to an Attainment Area.

**SOURCE:** SMAQMD, 2024
https://www.airquality.org/Air-Quality-Health/Air-Quality-Pollutants-and-Standards

## Table 2
## PARTIAL LIST OF APPLICABLE AMBIENT AIR QUALITY STANDARDS
## Relevant in the Sacramento Metropolitan Area

| Air Pollutant | California | | Federal | | Comments |
|---|---|---|---|---|---|
| | Standard | Status | Standard | Status | |
| **Ozone (O3)** | 0.09 ppm (1-hour) | N | revoked (1-hour) | A (2004) | Federal attainment or non-attainment refers to the designation of an area that has met or not met the NAAQS. Air quality plans are intended to meet first the NAAQS. |
| | | | 0.084 ppm (8-hour) | **N** | |
| | | | 0.075 ppm[1] (8-hour) | **N** (2012)[2] | |
| | 0.070 ppm (8-hour) | N | 0.070 ppm (8-hour) | **N** | |
| **Carbon Monoxide** | 9.0 ppm (8-hour) | A | 9 ppm (8-hour) | A ('98, '05) | 8-hour refers to the concentration measured continuously during eight consecutive hours. |
| | 20 ppm (1-hour) | A | 35 ppm (1-hour) | A | |
| **Particulate Matter ($PM_{10}$)** | 50 µg/m³ (24-hour) | N | 150 µg/m³ (24-hour) | A | $PM_{10}$ refers to particle sizes less than 10 microns in diameter. Ten microns equals 1 hundredth of one millimeter. |
| | 20 µg/m³ (annual)[3] | N | revoked (annual) | --- | |
| **Fine Particulate Matter ($PM_{2.5}$)** | None (24-hour) | -- | 35 µg/m³ (24-hour) | **N** (2009)[4] | $PM_{2.5}$ refers to smaller particle sizes. 2.5 microns equals 2.5 thousandths of one millimeter. |
| | 12 µg/m³ (annual)[3] | N | 12 µg/m³ (annual) | A (2012)[5] | |
| **Sulfur Dioxide** | 0.25 ppm (1-hour) | A | 0.075 ppm (1-hour) | A | U.S. EPA established a new 1-hour $SO_2$ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. |
| | --- | --- | 0.030 ppm (annual) | A | |

**Notes**:
NAAQS National Ambient Air Quality Standard A attainment area N non-attainment area
( ) year of U.S. EPA rule-making or effective date U/A unclassifiable/attainment

1. The 2015 8-hour ozone NAAQS is 0.070 ppm, the previous 8-hour ozone 2008 NAAQS is 0.075 ppm, and the previous 8-hour ozone 1997 NAAQS was 0.084 ppm.
2. The SMAQMD is designated a non-attainment area for 8-hour ozone 2008 NAAQS, effective July 20, 2012.
3. California ARB established new annual standards for $PM_{2.5}$ and $PM_{10}$ in June 2002.
4. The planning region is classified by U.S EPA as non-attainment for the $PM_{2.5}$ 2006 NAAQS (35 µg/m³).
5. The planning region was classified by U.S EPA as non-attainment for the $PM_{2.5}$ 2012 NAAQS (12 µg/m³).

**Sources**: U.S. EPA GreenBook; SMAQMD Federal Planning web page
http://www.airquality.org/air-quality-health/air-quality-plans/federal-planning

**Ground-level Ozone**

Ground-level ozone is a strong irritant that can cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. It can also cause or exacerbate other health problems:

- Aggravated respiratory disease such as emphysema, bronchitis, and asthma
- Damage to deep portions of the lungs, even after symptoms such as coughing or a sore throat disappear
- Wheezing, chest pain, dry throat, headache, or nausea
- Reduced resistance to infection
- Increased fatigue
- Weakened athletic performance

**Particulate Matter**

Particulate matter variably contains one or more of soot, smoke, metals, nitrates, sulfates, dust, water, and tire rubber. It can be directly emitted, as in smoke from a fire, or it can form in the atmosphere from reactions of gases forming particulate sulfates ad nitrates. Particles size is directly linked to potential for causing health problems, smaller particles being more adverse.

Fine particulates, known as $PM_{2.5}$, pose the greatest threat because they may pass deep into the lungs and even enter the bloodstream affecting both heart and lungs. Fin particulates can cause or exacerbate the following health problems:

- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing
- Aggravated asthma, chronic obstructive pulmonary disease (COPD), bronchitis, and emphysema
- Development of chronic respiratory disease in children
- Development of chronic bronchitis
- Irregular heartbeat
- Nonfatal heart attacks
- Premature death in people with heart or lung disease

### 2.1.1.2 Toxic Air Contaminants

The Health and Safety Code (§39655, subd.(a).) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under California law, the California Environmental Protection Agency (CalEPA), acting through the ARB, is authorized to identify an airborne substance as a TAC if it determines the substance is may cause or contribute to an increase in mortality or an increase in serious illness,or that may pose a present or potential hazard to human health.

Diesel engines emit a mixture of air pollutants, including both gases and soot or solid particulate matter (PM). PM in diesel exhaust is referred to as diesel particulate matter (DPM). Approximately 90 percent of DPM is substantially smaller than 1 micrometer in aerodynamic diameter. Virtually all DPM is less than 2.5 μm in diameter. Because of their extremely small sizes, DPM can be inhaled and eventually trapped inthe bronchial and alveolar regions of the lung. In 1998, ARB identified DPM as a TAC based upon published evidence of a relation between diesel exhaust exposure and lung cancer and other adverse health effects such as bronchitis. DPM has had a noteworthy adverse health effect on California's population. It is estimated that about70 percent of total known cancer risk related to airborne toxins in California is attributable to DPM (ARB, 2023b).

## 2.1.2 Federal Air Quality Regulations

### 2.1.2.1 Federal Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the public. The USEPA is responsible for enforcing the federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPAestablished both primary and secondary standards for several criteria pollutants. Table 2, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," "maintenance," or "unclassified" for each criteria air pollutant, based on whether the NAAQS have been achieved. Upon attainment of a standard for which an area was previously designated nonattainment, the area will be classified as a maintenance area. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The project site is located within the Sacramento County portion of the SVAB and, as such, is in the SFNA, an area designated as a federal nonattainment area for certain pollutants that are regulated under the CAA Sacramento County is designated as nonattainment for the federal 8- hour ozone standard and $PM_{2.5}$ standards. Sacramento County is designated as attainment or unclassified for all other criteria pollutant NAAQS.

## 2.1.3 California Air Quality Regulations

### 2.1.3.1 California Clean Air Act

ARB, a part of the CalEPA, is responsible for thecoordination and administration of both federal and state air pollution control programs within California, including setting the California Ambient Air Quality Standards (CAAQS). ARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. ARB establishes emissions standards for motor vehicles sold in California, consumerproducts (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercialequipment. It also sets fuel specifications to further reduce vehicular emissions.

In addition to primary and secondary AAQS, the state has established a set of episode criteria for ozone, CO, $NO_2$, $SO_2$, and PM. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that threaten public health. Table 3, above, lists the state attainment status of Sacramento County for the criteria pollutants. Under state designation, Sacramento County is currently in nonattainment for ozone (1-hour and 8-hour) and $PM_{10}$, and attainment or unclassified for all other criteria pollutant CAAQS.

### 2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs

(*e.g.*, monitoring, modeling, permitting), district rules, state regulations and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. State law makes ARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to ARB for review and approval. ARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all the items that are included in the California SIP (ARB, 2023c). At any one time, several California submittals are pending USEPA approval.

#### 2.1.3.3 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typicallyfor space and water heating) result in emission of GHGs. The California Energy Code is discussed in further detail in Section 2.2.4.

### 2.1.4 Local Regulations

#### 2.1.4.1 Sacramento Metropolitan Air Quality Management District

The SMAQMDworks directly with the Sacramento Area Council of Governments (SACOG), County transportation commissions, and local governments and cooperates actively with all federal and state governmentagencies. The SMAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

**Air Quality Plans**

The Sacramento Federal Nonattainment Area (SFNA) exceeds the ozone maximum 8-hour average concentration of 0.070 parts per million (ppm). The Sacramento Regional 2015 National Ambient Air Quality Standard 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2023 Ozone Plan) addresses the CAA planning requirements associated with the "severe" nonattainment classification. The SFNA air districts and ARB held public hearings to consider this Plan in fall 2023. SFNA air districts adopted and submitted the 2023 Ozone Plan to ARB. After a public hearing in October 2023, ARB adopted and submitted the 2023 Ozone Plan to USEPA. The SFNA air districts have requested a classification of "severe" with attainment deadline of August 2033.

SMAQMD and other Sacramento region air districts also have submitted a $PM_{2.5}$ Implementation / Maintenance Plan andRe-Designation Requests to fulfill CAA requirements to re-designate the region from nonattainment to attainment of the $PM_{2.5}$ NAAQS.

**Rules and Regulations**

The following rules promulgated by the SMAQMD would be applicable to construction and/or operation of the project.

**Rule 301 – Authority to Construct & Permit to Operate**: Provides fee schedule for stationary containers (e.g., fuel storage tanks) in parts 308.6 and 308.7. Tanks over 250 gallons require the issuance of authorities to construct and permits tooperate. Permit renewal fees including fee per ton of annual ROG emission is described in Part 301.2.

**Rule 402 – Nuisance**: Prohibits the discharge of such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public (SMAQMD, 1977).

**Rule 403 – Fugitive Dust**: Requires actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions, including emissions from construction activities. (SMAQMD, 1977).

**Rule 442 – Architectural Coating**: Establishes VOC limits for architectural coatings (e.g., paints, stains, preservatives). Building interior and exterior paint is limited to a maximum VOC content of 50 grams perliter for flat coatings and 100 grams per liter for non-flat coatings (SMAQMD 2015).

**Rule 448 – Gasoline Transfer into Stationary Storage Containers**: Rule applies to gasoline ASTs and USTs.

**Rule 449 – Transfer of Gasoline into Vehicle Fuel Tanks**: Rule require control technology to reduce emissions of ROG.

#### 2.1.4.2 Sacramento County General Plan Air Quality Element

The Sacramento County General Plan Air Quality Element contains the following policies relevant to the consideration of project effects (Sacramento County, amended 2022):

**AQ-3** Buffers and/or other appropriate exposure reduction measures shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The California Air Resources Board's "Strategiesto Reduce Air Pollution Exposure Near High Volume Roadways" Technical Advisory and SMAQMD's "Mobile Sources Air Toxics Protocol" or applicable AQMD guidance shall be utilized when establishing these exposure reduction measures.

**AQ-4** Developments which meet or exceed thresholds of significance for ozone precursor pollutants, and/or GHG as adopted by the SMAQMD, shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan and/or a Greenhouse Gas Reduction Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the SMAQMD.

**AQ-11** Encourage contractors operating in the county to procure and to operate low-emission vehicles, and to seek low emission fleet status for their off-road equipment. AQ-16 Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in anyone-hour period.

**AQ-17** Promote optimal air quality benefits through energy conservation measures in new development.

**AQ-20** Promote Cool Community strategies to cool the urban heat island, reduce energy use and ozone formation, and maximize air quality benefits by encouraging four main strategies including, but not limited to: plant trees, selective use of vegetation for landscaping, install cool roofing, and install cool pavements.

**AQ-22** Reduce greenhouse gas emissions from County operations as well as private development.

## 2.2 GREENHOUSE GASES

### 2.2.1 Climate Change Overview

Climate change refers to changes in climate patterns induced by anthropogenic emissions of greenhouse gases (GHGs). GHGs such as carbon dioxide and water vapor occur naturally in the environment and lend to a habitable environment by retaining infrared radiation, thus moderating the temperature of Earth's lower atmosphere. Since the beginning of industrialization *circa*1850s, man's added emissions of carbon dioxide, methane, nitrous oxide, and other gases having global warming potential (GWP) have altered the radiative balance, resulting in ocean acidification, polar ice melt, changes in ocean currents, and climate change.

Anthropogenic GHG emissions result from (1) combustion of fossil fuels for motorized transport, electrical power generation, residential and commercial heating, manufacturing, and other activities; (2) agricultural activity; and (3) solid waste decomposition. Conversion of open lands to settled urban area and deforestation have reduced natural sequestration of carbon dioxide by plants, as forests and grasslands act as carbon sinks. Owing to anthropogenic emissions and persistence of Carbon dioxide in the atmosphere, carbon dioxide levels first monitored at the Mauna Loa Observatory, Hawaii, by Dr. Charles Keeling have increased to 420 ppmv today from 315 ppmv in 1958.

GHG emissions from human activities are the most significant driver of observed climate change since the (United Nations Intergovernmental Panel on Climate Change IPCC, AR6, 2023). A partial list of the human-induced effects according to AR6 follows:

- It is very likely that GHG emissions were the main driver of warming of the troposphere (*i.e.*, the lower atmosphere).
- It is virtually certain that the temperature of the upper oceans (0-700m) has warmed globally since the 1970s and extremely likely that human influence is the main driver.
- Human influence is very likely the main driver of the decrease in Arctic sea ice and the global retreat of glaciers since the 1990s.
- It is virtually certain that human-caused $CO_2$ emissions are the main driver of current acidification of open oceans.
- It is virtually certain that air temperature extremes have widened and "heatwaves" have become more frequent across many land regions since the 1950s.

### 2.2.2 Kinds of Greenhouse Gases

GHGs targeted under California's Assembly Bill (AB) 32 include carbon dioxide ($CO_2$), methane ($CH_4$),nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$).

**Carbon Dioxide.** $CO_2$ is the second most abundant GHG after water vapor and the primary anthropogenic GHG. Natural sources include outgassing from the ocean, decomposing vegetation, venting volcanoes, naturally occurring wildfires, and thawing of karst tundra. Anthropogenic sources of $CO_2$ include combustion of fossil fuels (*i.e.*, coal, oil, natural gas) and cement production.

The atmospheric $CO_2$ concentration rose to 315 ppmv in 1958 from a pre-industrial level of 280 ppmv. As of 2023, the $CO_2$ concentration had risen to approximately 420 ppmv (National Oceanic and Atmospheric Administration [NOAA], 2024). In the week of December 1-7, 2024, the level is 425 ppmv.[3]

[3] NOAA, 2024. https://gml.noaa.gov/ccgg/trends/weekly.html

**Methane.** $CH_4$ is the main component of natural gas. A natural source of methane is the decay of organic matter. Other sources include decay of organic waste in landfills, fermentation of manure, and digestion by ruminants (*e.g.*, cattle, sheep, and goats).

**Nitrous Oxide**. $N_2O$ is produced by both natural and human-related sources. The primary source is agriculture, including application of synthetic and organic fertilizers, manure management, and burning of crop stubble. In California, agriculture accounts for over 50 percent of the statewide total $N_2O$ emissions.

GHGs have atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to accumulate in the atmosphere. Global warming potential (GWP) is an index of the relative contribution of a greenhouse gas to global warming, considering both how much the gas absorbs infrared radiation and its lifetime in the atmosphere compared to $CO_2$. $CO_2$ has a GWP of 1. A gas with a GWP of 10 over 100 years has 10× the radiative forcing effect of $CO_2$ over 100 years. $CO_2$ equivalent, written as $CO_2e$, is the weighted sum of emissions of various greenhouse gases, where the weighting factors are the GWPs of the GHGs. GWPs of selected GHGs are summarized in Table 4.

**Table 4**
**ATMOSPHERIC LIFETIMES AND GLOBAL WARMING POTENTIALS**

| Greenhouse Gas | Atmospheric Lifetime (years) | Global Warming Potential IPCC AR6 2024 |
|---|---|---|
| Carbon Dioxide ($CO_2$) | 50-200 | 1 |
| Methane ($CH_4$)-nonfossil, biogenic | 12 | 27.0 |
| Methane ($CH_4$)-fossil related | 12 | 29.8 |
| Nitrous Oxide ($N_2O$) | 114 | 273 |

**Notes:**
IPCC = Intergovernmental Panel on Climate Change
GWP = global warming potential relative to $CO_2$
**Source:** GHGProtocol.org, 2024, based upon IPCC AR6.
https://ghgprotocol.org/sites/default/files/2024-08/Global-Warming-Potential-Values%20%28August%202024%29.pdf

### 2.2.3 Federal Greenhouse Gas Regulations

#### 2.2.3.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in Massachusetts v. U.S. Environmental Protection Agency that $CO_2$ is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including $CO_2$, $CH_4$, $N_2O$, HFC, PFC, and $SF_6$) threaten the public health and welfare of the American people (USEPA 2023b). This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National HighwayTraffic Safety Administration (NHTSA).

On June 30, 2022, the U.S. Supreme Court decision published in West Virginia v. U.S. Environmental Protection Agency overturned the USEPA's Clean Power Plan rule, which cited Section 111(d) of the CAA for authority to set limits on $CO_2$ emissions from existing coal- and natural-gas-fired power plants. The June 30, 2022 decision does not overturn the April 2, 2007 decision; however, it may limit the USEPA's authority to develop rules limiting GHG emissions without clear congressional authorization.

#### 2.2.3.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. In March 2022, the agencies finalized standards for model years 2024 through 2026 and established an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026.

### 2.2.4 California Greenhouse Gas Regulations

#### 2.2.4.1 California Building Energy Efficiency Standards

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space or water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Title 24 standards became effective on January 1, 2023. The 2022 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. New for the 2022 Title 24 standards are non-residential on-site photovoltaic (solar panels) electricity generation requirements (California Energy Commission [CEC] 2022).

The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards—the energy budgets—that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

#### 2.2.4.2 California Green Building Standards

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for all nonresidential buildings (including industrial buildings) and residential buildings for which no other state agency has the authority to adopt green building standards. The 2022 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings became effective on January 1, 2023 (California Building Standards Commission [CBSC] 2022).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. CALGreen contains two levels of voluntary measures (Tier 1 and Tier 2) which go beyond minimum State code requirements. Categories of Tier 1 and Tier 2 measures include: EV designated parking; EV charging infrastructure; cool roofs; efficient outdoor lighting; dock door seals; potable water use reductions; recycled building material content; and resilient flooring.

#### 2.2.4.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 declared that California is vulnerable to climate change, increased temperatures, reduced snowpack in the Sierra Nevada, and potential rise in sea levels. To reduce impacts of climate change, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010,to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

#### 2.2.4.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB32, requires that ARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. ARB is directed by AB32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

#### 2.2.4.5 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California's emission reduction target of 40 percent below 1990 levels by 2030 will make it possibleto reach the goal established by EO S-3-05 of reducing emissions by 80 percent under 1990 levels by 2050.

#### 2.2.4.6 Senate Bill 32

Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize ARB to achieve a statewide GHG emissionreduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuingefforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

#### 2.2.4.7 Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that ARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over ARB through the addition of two legislatively appointed members to the ARB Board and the establishment a legislative committee to make recommendations about ARB programs to the legislature.

#### 2.2.4.8 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that ARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, ARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. In January 2012, ARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (ARB 2023d).

#### 2.2.4.9 Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012, and went into effect on July 1, 2012.

#### 2.2.4.10 Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs ARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. ARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. ARB is therefore continuing to implement the LCFS statewide.

#### 2.2.4.11 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce GHG emissions, and increase the use of clean energy.

#### 2.2.4.12 Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, ARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, ARB established these targets for 2020 and 2035 for each region covered by one of the State's Metropolitan Planning Organizations (MPOs). ARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. ARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

#### 2.2.4.13 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sales of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

### 2.2.5 Executive Order N-79-20

EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for the implementation of zero emissions vehicles in California: first, 100 percent of in-state sales of newpassenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the state will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment willbe zero emissions by 2035 where feasible.

### 2.2.6 Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, the California Climate Crisis Act, declares the policy of the State to achieve net zero GHG emissions as soon as possible, but no later than2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels.
AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of $CO_2$ from the atmosphere (carbon capture), and an almost complete transition away from fossil fuels.

### 2.2.7 Senate Bill 905

Approved by Governor Newsom on September 16, 2022, SB 905, Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program, requires ARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and $CO_2$ removal technologies and facilitate the capture and sequestration of $CO_2$ from those technologies, where appropriate. SB 905 is an integral part of achieving the state policies mandated in AB 1279.

#### 2.2.7.1 California Air Resources Board: Scoping Plan

The Scoping Plan is a strategy ARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across California's society and economy to reduce emissions and reach climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percentbelow business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emission targets. The 2013 Scoping Plan assessed progresstoward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants (SLCPs). The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by atleast 40 percent below 1990 levels by 2030. On December 15, 2022, ARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in SLCPs; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (ARB, 2022).

### 2.2.8 Regional GHG Policies and Plans

#### 2.2.8.1 Sacramento Area Council of Governments

As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), SACOG developed the 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce VMT. The 2023 Federal MTP carries forward the projects, programs, and policies included in the 2020 MTP/SCS, while development of the 2025 Blueprint continues. The 2023 Federal MTP maintains the regional growth forecast of the 2020 plan but will add four additional years of growth to 2044. Adoption of the next iteration of the plan whose outlook horizon is 2050 has been extended to fall 2025.

#### 2.2.8.2 County of Sacramento

The Sacramento County Climate Action Plan (CAP) was approved by the Board of Supervisors on November 6, 2024. The CAP is a plan to reduce greenhouse gas (GHG) emissions and adapt to climate change. The plan includes strategies to meet the state's 2030 and 2045 GHG reduction targets within the unincorporated area of the County. The County has developed this Climate Action Plan (CAP) to provide a roadmap for reduce GHG impacts from implementing the *Sacramento County General Plan 2005-2030* (General Plan), and establish GHG emissions reduction measures and actions to achieve the County's share of GHG emission reduction in the unincorporated communities and County operations.

# 3.0 EXISTING CONDITIONS

## 3.1 SURROUNDING LAND USES

The project site is located in rural area just outside the South Sacramento-Florin community boundary (see Figure 1). The Elk Grove Unified School District (USD) school locator and Sacramento City USD school finder were used to identify schools nearest the project site. Sierra Enterprise Elementary School is located approximately 1.5 miles from the project site. The Elk Grove USD Adult and Community Education Center is located 3.8 miles from the project site, and Florin Elementary School is located 4 miles from the project site. Rosemont High School is located 1.9 miles from the project site. In addition to these public schools in the Elk Grove USD, Bethany Bible School is a private for-paid-tuition school located 0.6 mile northwest of the Property (see Figure 1).

The nearest residential receptors were determined to be located on parcels adjoining the project site or within 500 feet of the project site's perimeter. Four (4) residential receptors so located are identified as 6060 and 6072 Bradshaw Road and 9591 and 9651 Elder Creek Road. Not included is 6201 Bradshaw Road, which has been converted to commercial use with paved and striped parking in the front yard. Two (2) additional residential receptors are located between 500 and 1,000 feet from the project site. These are the residents located at 6211 and 6215 Bradshaw Road (see Figure 2).

Asphalt, concrete, and base rock or other backfill (*e.g.*, gravel, Class II Base rock) for the proposed project could be obtained locally. Teichert Aggregates - Perkins (Aggregates & asphaltic concrete) is located at 8760 Keifer Boulevard, approximately 5 miles one-way to or from the project site. Recycling or disposal also would be performed locally. The Florin Perkins Public Disposal & GreenWaste site is a landfill and recycling facility located at 4201 Florin Perkins Road, Sacramento. The Florin Perkins Public Disposal & GreenWaste site is only 6 mile from the project site.

## 3.2 SENSITIVE RECEPTORS

California ARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified sensitive receptors as the persons most likely to be affected by air pollution (ARB, 2005; OEHHA 2015). These include the following groups:

- elderly persons over 65;
- children under 14;
- infants (including in utero in the third trimester of pregnancy); and,
- persons with cardiovascular and chronic respiratory diseases such as asthma or chronic obstructive pulmonary disease (*e.g.*, emphysema, bronchitis).

Some land uses are considered sensitive to air pollution as the groups likely to be present are sensitive receptors. Examples of sensitive land uses are residences, nursing homes, schools, hospitals, and daycare facilities.

There are no schools, preschools, or daycare facilities near the project site. The nearest school is located outside a 2,500 foot distance measure from the outer boundary of the project site (see Figure 1). Existing sensitive receptors closest to the project site are single-family residences located at 6060 and 6072 Bradshaw Road. The house located at 6072 Bradshaw Road adjoins the project site. Additional nearby houses on parcels adjoining the project site are located at the southern end at 9591 and 9651 Elder Creek Road. Locations of these and additional residences are illustrated in Figure 2.

## 3.3 CLIMATE AND METEOROLOGY

The Central Valley, California's extensive inland valley, is bounded by the Cascade Range to the north, the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coast Ranges and San Francisco Bay to the west. The Central Valley has two lobes: Sacramento Valley and San Joaquin Valley. The Sacramento Valley comprises approximately one-third of the Central Valley and the San Joaquin Valley two-thirds. Near the project site, these areas are further divided as the Broader Sacramento Area and Upper San Joaquin Valley. The project site is located near the confluence of the Sacramento-San Joaquin Delta, Broader Sacramento Area, and Upper San Joaquin Valley.

Coupled with this topography which directs air flow, the pressure gradient from coastal San Francisco to inland Las Vegas drives much of the observed wind patterns. Typical summer flow is through the Carquinez Strait and across the Delta, toward the northwest up the Sacramento Valley, or toward the southeast down the San Joaquin Valley. Near the project site at the junction with the Delta, surface daytime winds May-September blow from the south-southeast or southeast, which is from the Delta.

October-November is transitional period when large high-pressure cells over the valley and reduced inland heating weaken the pressure gradient and air flow through the Carquinez Strait. Periods of calm jump to 18-19 percent in October-November from 2-10 percent in summer. In winter, December-February, surface winds are more variable with down-valley winds from the northwest or up-valley winds from the southeast on substantial numbers of observations. March-April is another transitional period, still weakly influenced by the coastal-to-desert pressure gradient and valley heating. By April, the summer pattern of daytime windflow from the southwest across the Delta is beginning to emerge.

The ozone season (May-October) in the Sacramento Valley is characterized by wind flow from the southwest through the Carquinez Strait and across the Delta. Downslope drainage winds (katabatic winds) and radiational surface inversions at night may retard transport of ozone and its precursors out of the valley. Eddies created at both ends of the Central Valley, the Sacramento Eddy at the northern end and Fresno Eddy at the southern end, may recirculate air and delay removal of air pollution by ventilation.

During April through September, the predominant daytime wind flow near the project site is wind from the southwest and south-southwest, as observed at Sacramento Mather Airfield, approximately 2.2 miles northeast of the project site (Iowa Environmental Mesonet [IEM], 2024). From October through March, daytime wind flow near the project site includes substantial time with winds from the northwest or southeast. Precipitation occurs mostly during November-March.

## 3.4 EXISTING AIR QUALITY

### 3.4.1 Criteria Pollutants

#### 3.4.1.1 Attainment Designations

Attainment designations are discussed in Section 2.1 and Table 1. Sacramento County is a federal nonattainment area for 8-hour ozone and $PM_{2.5}$. Sacramento County is also a state nonattainment area for 1-hour and 8-hour ozone and $PM_{10}$.

#### 3.4.1.2 Monitored Air Quality

The SMAQMD maintains monitoring stations to measure ambient concentrations of pollutants in the county. Table 5 presents a summary of the ambient pollutant concentrations monitored at Sacramento-Elk Grove Bruceville Road and Sloughhouse air monitoring stations. As shown in Table 5, ozone levels appear to be decreasing over the 3-year period and $PM_{2.5}$ levels appear erratic.

### 3.4.2 Greenhouse Gases

#### 3.4.2.1 Worldwide GHG Emission Inventory

In 2023, total GHG emissions worldwide were estimated at 53 billion metric tons of carbon dioxide equivalent (GT $CO_2e$). By country, China (30 percent), the U.S. (11 percent), and India (7.8 percent) contributed the largest portions of global GHG emissions.

#### 3.4.2.2 California GHG Inventory

California ARB prepares statewide GHG emission inventories. Table 6 presents the year 2017 and year 2022 statewide inventories by sector. Five (5) sectors of GHG-emitting activities are agriculture & forestry, commercial & residential, electricity generation, industrial, and transportation, Plus biogenic emissions of GHGs. Statewide GHG emissions are quantified in millions of metric tons (MMT).

**Table 5**
**AIR QUALITY MONITORING DATA**
**Elk Grove Bruceville Road and Sloughhouse Monitoring Stations**

| Pollutant Standard | 2021 | 2022 | 2023 |
|---|---|---|---|
| ***Ozone ($O_3$)*** | | | |
| ***Elk Grove Bruceville Road*** | | | |
| Maximum concentration 1-hour period (ppm) | 0.105 | 0.091 | 0.069 |
| Maximum concentration 8-hour period (ppm) | 0.080 | 0.074 | 0.056 |
| Days above 1-hour state standard (>0.09 ppm) | 2 | 0 | 0 |
| Days above 8-hour state/federal standard (>0.070 ppm) | 5 | 1 | 0 |
| ***Fine Particulate Matter ($PM_{2.5}$)*** | | | |
| **Sloughhouse** | | | |
| Maximum 24-hour concentration (µg/m$^3$) | 190.4 | 26.2 | 31.9 |
| Measured Days above 24-hour federal standard (>35 µg/m$^3$) | * | 0 | 0 |
| Annual average (µg/m$^3$) | 8.8 | 5.7 | 6.0 |
| **Elk Grove Bruceville Road** | | | |
| Maximum 24-hour concentration (µg/m$^3$) | 67.6 | 29.3 | 37.1 |
| Measured Days above 24-hour federal standard (>35 µg/m$^3$) | * | * | * |
| Annual average (µg/m$^3$) | * | * | 6.3 |

**Source:** ARB, 2024 https://www.arb.ca.gov/adam/select8/sc8display.php
**Notes:**
ppb = parts per billion; ppm = parts per million; µg/m$^3$ = micrograms per cubic meter, * = insufficient data available.

**Table 6**
**CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR**

| Sector | 2017 (MMT $CO_2e$) | 2022 (MMT $CO_2e$) |
|---|---|---|
| Transportation | 170.5 (38%) | 143.6 (34%) |
| Industrial | 92.8 (21%) | 83.8 (19%) |
| Electricity In-State Generation & Imports | 64.5 (14%) | 59.8 (13%) |
| Commercial & Residential | 50.8 | 54.1 |
| Agriculture & Forestry | 31.6 | 29.8 |
| Biogenic Sources | 38.4 | 49.4 |
| **TOTAL** | **448.6** | **420.5** |

**Source:** ARB, 2024
**Notes:**
MMT $CO_2e$ = million metric tons carbon dioxide equivalent

As shown in Table 6, statewide GHG emissions totaled 448 MMT $CO_2e$ in 2000, 442.2 MMT $CO_2e$ in 2017 and 420 MMT $CO_2e$ in 2022. Transportation-related emissionsconsistently contribute the most GHG emissions, followed by electricity generation and industrial emissions (ARB, 2024).

#### 3.4.2.3 Sacramento County GHG Emissions Inventory

A GHG emissions inventory for unincorporated communities of Sacramento County was presented as part of the County of Sacramento Climate Action Plan, draft July 2024. The 2021 emissions inventory is shown below in Table 7. On-road vehicles contributed most of the unincorporated area GHG emission with 34 percent of the total (Sacramento County, 2024).

**Table 7**
**SACRAMENTO COUNTY GREENHOUSE GAS**
**UNINCORPORATED AREA EMISSIONS BY SECTOR**

| Sector | 2021 (MT $CO_2e$) |
|---|---|
| On-Road Vehicles | 1,844,200 (44%) |
| Residential Building Energy | 878,300 (21%) |
| Commercial/Industrial Building Energy | 555,600 (13%) |
| High-GWP Gasses | 317,800 (7.6%) |
| Agriculture | 266,500 |
| Solid Waste | 156,700 |
| Off-Road Vehicles | 107,200 |
| Water and Wastewater | 33,300 |
| **TOTAL** | **4,159,600** |

**Source:** Sacramento County, *County of Sacramento Climate Action Plan*, 2024
**Notes:**
MT = metric tons; $CO_2e$ = carbon dioxide equivalent

# 4.0 METHODS AND EVALUATION CRITERIA

## 4.1 EMISSION ESTIMATION METHODS

Emissions criteria air pollutant, ozone precursors, and GHGs were estimated using the California Emissions Estimator Model (CalEEMod2022). CalEEMod2022 is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod2022 was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California ARB and air quality management and air pollution control districts. The calculation methodology is described the CalEEMod User's Guide (CAPCOA 2022). Default and project-specific assumptions are presented in the model-generated reports.

CalEEMod2022 can estimate emissions of criteria air pollutants, ozone precursors, and greenhouse gas for a variety of land uses, including residential, office, and warehouse development. It has built-in knowledge base of trip generation rates, EMFAC2021 emissions factors for on-road vehicles, area sources (e.g., fireplaces, woodstoves, landscape maintenance equipment, and consumer products), energy use (electricity and natural gas used for space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, and solid waste disposal. It has a built-in knowledge base of construction equipment and their emission rates for equipment used to build a residential, office, and warehouse development. Emissions are estimated based upon land use information input into the model by the model user.

While the model has an extensive knowledge base, the knowledge base is finite and does not cover every kind of facility. For this application of CalEEMod2022 to the proposed Online Auction Yard, the Auction Yard land use category, vehicle trip rates, trip length, and vehicle mix were custom added in the model, based upon information for the existing facility on Power Inn Road. The CalEEMod2022 report is included in Appendix A.

For this application, two emission sources including gasoline dispensing and diesel engine runups, which are included in the description of the proposed project, could not be custom added into CalEEMod2022. For these two sources, Excel workbooks were used to supplement the CalEEMod2022 estimates.

### 4.1.1 Construction Emissions

CalEEMod2022 was applied to estimate unmitigated construction emissions.

#### 4.1.1.1 Construction Activities

Construction emissions were estimated based on an estimated earliest potential construction start date in April 2025 and end date in October 2026. Land use categories were augmented as necessary better to represent construction of paved areas and the aggregate-surfaced Auction Yard.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coatings (including painting of the office and warehouse/shop and striping in the parking lot). Construction was assumed to occur fivedays per week with equipment operating up to eight hours per day. The expected construction schedule is presented in Table 8.

**Table 8**
**ANTICIPATED CONSTRUCTION SCHEDULE**

| Construction Activity | Construction Period Start | Construction Period End | Number of Work Days |
|---|---|---|---|
| Demolition | 4-14-2025 | 4-25-2025 | 10 |
| Site Preparation | 4-28-2025 | 5-23-2025 | 20 |
| Grading | 5-26-2025 | 6-27-2025 | 25 |
| Aggregate Surface | 6-30-2025 | 8-1-2025 | 25 |
| Building Construction | 6-30-2025 | 7-24-2026 | 280 |
| Paving | 7-27-2026 | 8-28-2026 | 25 |
| Architectural Coating | 8-31-2026 | 10-20-2026 | 25 |
| Source: CalEEMod2022 | | | |

#### 4.1.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Table 9 presents a summary of the modeled equipment.

**Table 9**
**CONSTRUCTION EQUIPMENT**

| Equipment | Horsepower | Load Factor | Number | Hours/Day |
|---|---|---|---|---|
| ***Demolition*** | | | | |
| Concrete/Industrial Saws | 33 | 0.73 | 1 | 8 |
| Excavators | 36 | 0.38 | 3 | 8 |
| Rubber-Tired Dozers | 367 | 0.40 | 2 | 8 |
| ***Site Preparation*** | | | | |
| Tractors/Loaders/Backhoes | 367 | 0.40 | 3 | 8 |
| Rubber Tired Dozers | 84 | 0.37 | 4 | 8 |
| ***Grading*** | | | | |
| Excavators | 36 | 0.38 | 2 | 8 |
| Graders | 148 | 0.41 | 1 | 8 |
| Rubber Tired Dozers | 367 | 0.40 | 1 | 8 |
| Scrapers | 423 | 0.48 | 2 | 8 |
| Tractors/Loaders/Backhoes | 84 | 0.37 | 2 | 8 |
| ***Aggregate Surface*** | | | | |
| Excavators | 36 | 0.38 | 2 | 8 |
| Graders | 148 | 0.41 | 1 | 8 |
| Rubber Tired Dozers | 367 | 0.40 | 1 | 8 |
| Scrapers | 423 | 0.48 | 2 | 8 |
| Tractors/Loaders/Backhoes | 84 | 0.37 | 2 | 8 |
| ***Building Construction*** | | | | |
| Cranes | 367 | 0.29 | 1 | 7 |
| Forklifts | 82 | 0.20 | 3 | 8 |
| Generator Sets | 14 | 0.74 | 1 | 8 |
| Tractors/Loaders/Backhoes | 84 | 0.37 | 2 | 7 |
| Welders | 46 | 0.45 | 1 | 8 |
| Cement & Mortar Mixers | 10 | 0.56 | 1 | 5 |
| Skid Steer Loaders | 71 | 0.37 | 1 | 4 |
| Aerial Lifts | 46 | 0.31 | 2 | 8 |
| ***Paving*** | | | | |
| Pavers | 81 | 0.42 | 2 | 8 |
| Paving Equipment | 89 | 0.36 | 2 | 8 |
| Rollers | 36 | 0.38 | 2 | 8 |
| ***Architectural Coating*** | | | | |
| Air Compressors | 37 | 0.48 | 1 | 6 |
| Aerial Lifts | 46 | 0.31 | 2 | 8 |
| Source: CalEEMod2022 | | | | |

#### 4.1.1.3 Construction On-Road Trips

Worker commute trips were modeled based upon CalEEMod2022 defaults. Vendor trips were added. CalEEMod2022 default worker and vendor trip distances were applied.

Importing aggregate for the Auction Yard would necessitate material hauling. Material hauling volumes or tonnage were added and haul trip lengths were specified by the model user.

#### 4.1.1.4 Construction Architectural Coatings

Proposed buildings and parking area stripes would necessitate painting. VOC contents applied for paints were the CalEEMod2022 default values for Sacramento Metro AQMD.

### 4.1.2 Operations Emissions

Operations emissions for the proposed project were estimated using CalEEMod2022 and Excel workbook. Operations sources of emissions include mobile, area, energy, transportation, water use, and solid waste.

#### 4.1.2.1 Area Sources

Area sources include recurring emissions from landscaping equipment, consumer products, and the re-painting for maintenance. Emissions from area sources were estimated using the CalEEMod2022 default values.

#### 4.1.2.2 Energy Sources

Development within the project site would use electricity for lighting, heating, and cooling. Some electricity generation entails the combustion of fossil fuels (*e.g.*, natural gas). A building's electricity use is associated with the off-site or indirect emission of GHGs at the power plants generating electricity. Energy use for the buildings was estimated using CalEEMod2022 defaults.

#### 4.1.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related vehicle miles traveled (VMT; calculated in the model from trip generation and trip lengths). Mobile sources in CalEEMod2022 were connected to three land use categories: Office, Warehouse/Shop ("Non-Rail Warehouse"), and Auction Yard ("Other Non-Asphalt Surfaces"). Terms in parentheses are as they appear in CalEEMod2022.

Trips for the proposed Office and Warehouse/Shop were estimated using CalEEMod2022model defaults including the CalEEMod default vehicle mix, trip lengths, etc.

For the Auction Yard ("Other Non-Asphalt Surfaces"), trip rates, trip lengths, and vehicle mix were customized by the model user to capture the retail aspect of the proposed project. For-sale auction items would be dropped off in the Auction Yard by prospective sellers. Purchased items would be picked up in the Auction Yard by successful bidders. This traffic collectively is termed here as "transport traffic." Mobile source activity to and from the Auction Yard is synonymous with areawide transport traffic, and this areawide portion of transport emissions was estimated using CalEEMod2022.

Estimates of In-Yard and Near-Yard transport traffic emissions were supplemented by Excel workbook

calculation. The number of trips, trip lengths In-Yard, and trop lengths Near-Yard were applied to estimate vehicle miles of travel. In-Yard transport travel speed was selected as 5 mph. Near-Yard transport travel speed was selected as 15 mph. EMFAC2021 emission factors and the transport vehicle mix were applied to calculate annual tons, maximum daily pounds, and average daily pounds of In-Yard and Near-Yard transport traffic emissions.

#### 4.1.2.4 Solid Waste Sources

Disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod2022 estimates GHG emissions associated with disposal of solid waste into landfills. Solid waste-related emissions of GHGs were modeled using CalEEMod2022 default assumptions.

#### 4.1.2.5 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water. Water use and wastewater generation were modeled using CalEEMod2022 defaults.

## 4.2 HEALTH RISK ASSESSMENT METHODS

A health risk screening-level assessment (HRSA) was prepared to analyze potential health risks to nearby sensitive receptors and off-site workers from the emission of DPM during operation of the proposed Auction Yard and facilities in accordance with applicable portions of the OEHHA's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). HRSA modeling inputs and outputs are included in the appendices.

### 4.2.1 TAC Emissions

TAC emissions analyzed in the HRSA include diesel particulate matter (DPM), benzene, ethylbenzene, naphthalene, and additional volatile constituents of gasoline. Consistent with OEHHA guidance, DPM benzene, ethylbenzene, and naphthalene are considered as carcinogens. DPM emissions would result from diesel internal combustion engines and their exhaust. Benzene, ethylbenzene, and naphthalene emissions would result from proposed on-site, non-retail gasoline dispensing.

Emissions of DPM from transport vehicles driving through the parking lot, loading area, and auction yard were calculated using EMFAC2021 vehicle exhaust emission rates and Excel. Trip-making for transport of auction merchandise is related to monthly auction sales, as auctions would occur once each month. On a recurring monthly basis, auction volume is approximately 2,500 items per month based upon information from the Applicant. In Excel, the numbers of trips and kinds of vehicles needed to carry 2,500 items per month were estimated. Drop-off of for-auction items were assumed to occur on 15 days per month. Pick-ups of purchased auction items were assumed to occur on 5 days per month, also based upon information from the Applicant.

With the estimated monthly trip-making, transport vehicle mix, EMFAC2021 emission factors for 5-mph on-site travel speed, and a 0.35-mile on-site travel distance were applied to estimate on-site running emissions in the Auction Yard. $PM_{2.5}$ exhaust emission from diesel-powered vehicles are equated to DPM emission.

Emissions of DPM from transport vehicles off site at distance from the project site were estimated using CalEEMod2022. The number of transport trips, the transport vehicle mix, and 20-mile trip length were applied in CalEEMod2022 to estimate off-site transport emissions. In CalEEMod2022, transport emissions are related to trip making in the land use category labeled "Other Non-Asphalt Surfaces," which is a 24.2-acre area corresponding to the Auction Yard.

Emissions of volatile organic compounds (VOCs) such as benzene from gasoline dispensing near the proposed warehouse/shop were calculated in general accordance with ARB's gasoline dispensing facility (GDF) emission factors (ARB, 2013).[4] These same factors are used internally in the 2022 ARB & CAPCOA Gasoline Service Station Industrywide Risk Assessment Lookup Tool and Variable Met Risk Assessment Tool.

DPM emission from project-related transport traffic is expected to be at its peak in the first full year of operations, 2027. DPM emission subsequently is expected to decrease gradually during the lifespan of the project, as older diesel-powered transport vehicles are replaced newer trucks and zero-emission electric trucks.

[4] https://ww2.arb.ca.gov/gasoline-dispensing-facility-emission-factors

ARB's EMFAC2021 v1.0.2 emissions factors relate tripends and vehicle miles of travel (VMT) to the proposed project's mobile source emissions. The year 2027 was selected as the first full year of project operations. Transport vehicles traveling on Bradshaw Roads or Elder Creek Road near the project site were assumed to be traveling at 15 mph. Transport vehicles circulating on the project site were assumed to be traveling at 5 mph. Idling emissions, based upon idling emission factors (IDLEX) in EMFAC2021, are included in CalEEMod2022 model results.

### 4.2.2 Screening-Level Health Risk Assessment

#### 4.2.2.1 Gasoline Dispensing

The proposed project includes one (1) 500-gallon gasoline above-ground storage tank (AST). Gasoline dispensing is associated with emissions of volatile organic substances including benzene, ethylbenzene, naphthalene, and other TACs. Emissions from tanks arise from bulk transfer ("tank loading"), pressure driven losses ("breathing"), refueling, spillage during refueling, and dispenser hose permeation.

To assist air districts and others evaluate health risk related to gasoline dispensing, the California Air Resources Board (ARB) and the California Air Pollution Control Officer's Association (CAPCOA) have developed standardized Technical Guidance. The Technical Guidance includes two tools created for screening-level health risk assessments of gasoline dispensing facilities (GDF). The two GDF risk assessment screening tools are identified below:

- GDF Risk Assessment Screening Look-up Tool, Version 1.0, February 18, 2022
- GDF Risk Assessment Screening Variable Met Tool, Version 1.0

Both tools incorporate ARB's emission factors for gasoline bulk loading, refueling, tank breathing, spillage, and hose permeation. Both incorporate results of AERMOD dispersion modeling, OEHHA adopted IURs and chronic RELs. AERMOD is USEPA's Gaussian air dispersion model. Both tools yield conservatively high estimates of health risk from gasoline dispensing. The Variable Met Tool additionally enables user input of AERMET meteorological profile and surface files, dispensing hours, and optional custom receptor distances.

#### 4.2.2.2 Auction Yard

The proposed project includes a 24.2-acre auction yard and in addition a paved parking lot and emergency vehicle access road. The auction yard will be associated with transport traffic and engine runups, some of which will be diesel engine-powered. Transport traffic refers to trips in vehicles being used to bring for-auction items to the yard or pick up purchased items from the yard. An engine runup refers to relatively short operation of an engine in the yard to asses to its condition. DPM will be emitted in the yard from both transport traffic and engine runups.

To assist air districts and others evaluate health risk related to running diesel engines, the California ARB and CAPCOA have developed a tool named the Diesel Internal Combustion Engine (DICE) Tool. The DICE Tool version 23312 incorporates AERMOD modeling of DPM concentrations, using AERMET wind and stability profile and land surface profile, in conjunction with PM10 exhaust emission rates and OEHHA health risk calculations.

#### 4.2.2.3 Source Characteristics

The proposed project would operate approximately 9 hours per day, Monday-Friday, 8 a.m.-5 p.m. Monthly, on every second Saturday of the month, an online auction would be held. Pick-up of purchased merchandise generally would be required during the week following an auction. Drop-off of for-auction items generally would occur in the 15-weekday window preceding an auction. There would not be any

traffic during evening (7 p.m.-10 p.m.) or nighttime (10 p.m.-7 a.m.). This information is based upon information from the Applicant regarding current operations of Bar None Auction.

Emissions of TACs, including benzene from the gasoline AST and DPM from transport vehicle and engine runup exhaust, would vary during business hours. Most TAC emission would occur during business hours. The volume of transport vehicles entering and leaving the project site would vary during the month. Maximum daily transport traffic would occur each month during the 5-weekday pick-up window.

Transport traffic would enter from Bradshaw Road and would pass a Guard Station security checkpoint. Merchandise drop-off and pick-up would be a self-serve system with instruction from the office about where to offload or load items. Unlike gasoline dispensing emissions of TACs, which would occur near the AST, transport and engine runup emissions of TACs would be dispersed across the Auction Yard and internal road. Most engine runups would be performed in one of Auction Storage Yards A or B. Occasionally, after a tuneup or maintenance, an engine may be runup at the shop.

To be conservative in the screening of potential health effects, all Auction Yard emissions of DPM, including engine runup and transport emissions of DPM, were assumed to be emitted from a point located at the northern end of Auction Storage Lot B. This point (see Figure ES-1) is located directly upwind of the nearest residences. During a substantial portion of hours 7 a.m.-5 p.m. in the warm season months May through September, winds are from the southwest. Figure 4 shows that daytime winds from the southwest, south-southwest, or west-southwest predominate during May through September. Wind from the southwest would convey DPM emitted at the designated point directly toward the residences located at 6060 and 6072 Bradshaw Road. During October through April, daytime winds from other directions are more prevalent, including winds from the northwest and southeast (see Figure 4). Winds from the northwest and southeast would tend to carry DPM emitted in the Auction Yard away from the nearest residences.

**AST**: 500-gallon capacity
**Retail**: No
**Annual throughput**: 6,000 gallons per year

**Comparison 1997 AST and 2022 UST**
**Gasoline Storage Tank Emission Factors**

| Tank operation or source | AST 1997 Emission Factors Phase I & Phase II EVR (lbs TOG/1000 gallons) | UST 2022 Emission Factors Phase I & Phase II EVR (lbs TOG/1000 gallons) |
|---|---|---|
| Loading | 0.42 | 0.15 |
| Breathing | 0.053 | 0.024 |
| Refueling | 0.63 | 0.089 |
| Spillage | 0.42 | 0.24 |
| Hose permeation | --- | 0.009 |
| **TOTAL** | **1.52** | **0.512** |

**Source:** CAPCOA, 1997; CAPCOA and ARB, 2022.

**Annual transport vehicle miles:** 20,558
**Transport vehicle speed:** 5 mph
**Source height:** 1 meter
**Transport vehicle mix:**

| LDA | | LDT1 | | LDT2 | | LHD1 | | LHD2 | | MDV | | MHDT | | HHDT | | ALL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29.4% | | 2.4% | | 9.9% | | 16.7% | | 14.2% | | 24.9% | | 1.2% | | 1.3% | | 100.0% | |
| D | G | D | G | D | G | D | G | D | G | D | G | D | G | D | G | D | G |
| 2% | 98% | 0 | 100 | 6% | 94% | 50% | 50% | 50% | 50% | 80% | 20% | 100 | 0% | 100 | 0% | 39% | 61% |

**Notes:**
D diesel fuel
G gasoline
LDA light duty auto
LDT1, LDT2 pickup trucks
LHD light heavy duty
MDV medium duty vehicle
MHD medium heavy duty
HHD heavy duty (tractor trailers)

**Annual number of runups:** 2,880
**Runup minutes per year:** 37,440
**Runup equipment and engines sizes:**

| In inventory? | Monthly number of | NonRoad Equipment | Engine Characteristics | | | |
|---|---|---|---|---|---|---|
| | | | Fuel | Tier | HP typical (bhp) | HP range (bhp) |
| ☐ | 0 | Excavators | Diesel | Average | 36 | 25–49.9 |
| ☒ | 5 | Graders | Diesel | Average | 148 | 100–174.9 |
| ☐ | 0 | Rubber Tired Dozers | Diesel | Average | 367 | 300–599.9 |
| ☐ | 0 | Scrapers | Diesel | Average | 423 | 300–599.9 |
| ☒ | 20 | Tractors/Loaders/Backhoes | Diesel | Average | 64 | 50–74.9 |
| ☒ | 20 | Tractors/Loaders/Backhoes | Diesel | Average | 84 | 75–99.9 |
| ☐ | 0 | Cranes | Diesel | Average | 367 | 300–599.9 |
| ☒ | 20 | Forklifts | Diesel | Average | 82 | 75–99.9 |
| ☒ | 30 | Generator Sets | Diesel | Average | 14 | 0–24.9 |
| ☒ | 30 | Welders | Diesel | Average | 46 | 25–49.9 |
| ☒ | 15 | Industrial saw | Diesel | Average | 33 | 25–49.9 |
| ☒ | 20 | Cement & mortar mixers | Diesel | Average | 4 | 0–24.9 |
| ☒ | 10 | Rollers | Diesel | Average | 36 | 25–49.9 |
| ☒ | 20 | Air compressors | Diesel | Average | 37 | 25–49.9 |
| ☒ | 30 | Pumps | Diesel | Average | 11 | 0–24.9 |
| ☒ | 20 | Aerial lifts | Diesel | Average | 46 | 25–49.9 |
| ☒ | 5 | Skid steer loader | Diesel | Average | 71 | 50–74.9 |

#### 4.2.2.4 Meteorological Data

The SMAQMD provides pre-processed meteorological data with vertical profile and surface files (*e.g.*, temperature, wind speed, wind direction, humidity, barometric pressure). The *.PFL and *.SFC files are suitable for use with AERMOD. Data developed by SMAQMD from the Sacramento Executive Airport meteorological station, located approximately 8 miles west of the project site, is representative of conditions in the project vicinity. The Sacramento Executive Airport set includes 5 years of data collected between 2014 to 2018 (SMAQMD, 2024).

The project site is located in a sparsely developed part of the County; therefore, rural dispersion coefficients were selected in the DICE Tool. Using rural dispersion coefficients generally is conservative (health protective). In urban areas, urban heat island effects reduce the frequency of stable air (Pasquill classes D, E, and F).

An annual wind rose for the Sacramento Executive Airport shows an average speed of 6.7 mph prevailing from the southwest and south-southwest approximately 20 percent of hourly observations during 1970-2024 (IEM, 2024). Hourly observations used for this wind rose span daytime, evening, and nighttime hours. Inspection of monthly daytime (7 a.m.-5 p.m.) wind roses also shows prevailing daytime wind is from the southwest and south-southwest, especially during the warm summer months May-September.

Mather Air Field is an additional source of wind data, relevant because Mather is only 2.2 miles northeast of the project site. Based upon Mather Air Field and Sacramento Executive Airport data, wind conditions at these two stations are similar. Twelve monthly wind roses developed from Mather Air Field data for daytime (7 a.m.-5 p.m.) hours are shown in Figure 4.

Inspection of additional wind roses for nighttime hours (10 p.m. to 7 a.m.) shows that prevailing winds from the southeast occur at nighttime in both summer and winter. Daytime winds from the southeast prevail only during December–March and at night. In the daytime hours during May-September winds from the southwest and south-southwest prevail.

#### 4.2.2.5 Surface, Profile, Source, and Receptor Data

The GDF Risk Screening Tool for estimating health risks posed by gasoline dispensing is an Excel workbook based upon AERMOD modeling performed by California ARB. Model results, downwind TAC concentrations, were used by ARB to develop risk look-up tables. The GDF Risk Screening Variable Met Tool further enables the GDF Risk Screening Tool user to specify AERMET meteorological surface (*.SFC) and profile (*.PFL) files and facility operating hours. Receptor distance from gasoline dispensing, annual gasoline throughput, and tank emission control classification are input by the GDF Risk Screening Tool user. These inputs are applied in the Excel workbook to locate the relevant look-up table and place in the look-up table (*i.e.*, source-receptor separation distance) that corresponds to estimated risk for the facility and receptor location being evaluated.

The DICE Risk Screening Tool for estimating health risks posed by diesel exhaust particulates also is based upon the AERMOD Gaussian air dispersion model. DICE requires AERMET meteorological surface (*.SFC) and profile (*.PFL) files in addition to emission characteristics (*e.g.*, emission rate, annual hours of operation, stack height and diameter, exhaust flow rate and velocity,). Residential and worker distances from the source are input by the DICE Risk Screening Tool user to estimate risk for the facility and receptors being evaluated. In addition to displaying risks at the user-specified source-receptor separation distances for nearest resident and worker, the DICE Risk Screening Tool outputs a chart of risks for source-receptor separation distances from 10 m to 4,850 m in 10-m increments.

### 4.2.3 Risk Screening Estimates

Adverse health effects resulting from localized concentrations of TACs such as benzene, ethylbenzene, naphthalene, and DPM were estimated using the risk screening tools. The risk screening tools estimate TAC concentrations and then estimate health risks using OEHHA-guidance including exposure duration, REL, cancer potency and inhalation unit risk (IUR).

Per the OEHHA Manual, an exposure duration (ED) of 30 years is applied I the risk screening tools to evaluate long-term individual resident risk impacts. While school-aged children will not be at home 24/7 it

is conservative not to adjust time-at-home. The default time-at-home was left unchanged. The OEHHA-recommended daily breathing rate (DBR), rate also was unchanged. Receptor height ("flagpole" height) typically is 0.0 or 1.2 meters in health risk assessments because it is conservative. In DICE, the default receptor height is 0.0 m, and this height was not adjusted.

Added lifetime cancer risk from retail gasoline dispensing drops off rapidly as a receptor moves farther from the source. An average retail gas station dispenses approximately 1 million gallons of gasoline each year. For a single retail service station, added lifetime cancer risk drops by about 50 percent from 10 to 20 meters (source-receiver separation distance), and drops to less than 1 chance per million at approximately 60 to 70 meters (ARB, 2022). Given this practical information from ARB, it is not surprising that added lifetime cancer risk for a gasoline storage tank sited 50 to 80 m from the nearest property line, and with an annual gasoline throughput of only 6,000 gallons per year, does not have potential for causing a significant adverse health impact to any off-site receptors.

DICE and GDF Risk Screening Tool inputs and outputs are included in Appendix A to this report.

## 4.3 THRESHOLDS OF SIGNIFICANT EFFECT

### 4.3.1 Air Quality

Thresholds used to evaluate potential air quality and odor impacts are based on applicable criteria in the State's CEQA Guidelines. A significant air quality and/or odor impact could occur if the implementation of the proposed project would:

1. Conflict with or obstruct implementation of the 2023 Ozone Plan, or applicable portions ofthe State Implementation Plan (SIP); or
2. Result in a cumulatively considerable net increase of any criteria air pollutant for which SacramentoCounty is non-attainment under an applicable NAAQS or CAAQS; or
3. Expose sensitive receptors to substantial pollutant concentrations; or
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that threshold criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SMAQMD has established thresholds of significant effect to assess the regional and local impacts of project-related air pollutant emissions. The thresholds are updated periodically by SMAQMD to represent the most current technical information and attainment status in Sacramento County.

Table 10, *SMAQMD Thresholds of Significance*, presents the most current thresholds of significant effect, including emission thresholds for short-term construction and long-term operations; incremental or added lifetime cancer risk; and maximum ambient concentrations. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality (SMAQMD 2020b).

**Table 10**
**SMAQMD THRESHOLDS OF SIGNIFICANT EFFECT**

| Air Pollutant | Construction | Operations |
|---|---|---|
| **Mass Daily Thresholds (pounds per day)** | | |
| ROG | 85 | 65 |
| $NO_X$ | None | 65 |
| $PM_{10}$ | Zero or 80[1] | Zero or 80[1] |
| $PM_{2.5}$ | Zero or 82[2] | Zero or 82[2] |
| **Toxic Air Contaminants** | | |
| TACs | Maximum Incremental Cancer Risk ≥ 10 in 1 million<br>Chronic & Acute Hazard Index ≥ 1.0 (project increment) | |
| **Ambient Air Quality for Criteria Pollutants** | | |
| CO | 1-hour average ≥ 20.0 ppm (23 $mg/m^3$)<br>8-hour average ≥ 9.0 ppm (10 $mg/m^3$) | |
| $NO_2$ | 1-hour average ≥ 0.18 ppm(399 $\mu g/m^3$)<br>Annual average ≥ 0.03 ppm (57 $\mu g/m^3$) | |
| $SO_2$ | 1-hour average ≥ 0.075 ppm (665 $\mu g/m^3$)<br>24-hour average ≥ 0.04 ppm (105 $\mu g/m^3$) | |
| Lead | 1.5 $\mu g/m^3$ 30-day average | |
| Visibility Reducing Particles | Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent | |
| Sulfates | 25 $\mu g/m^3$ 24-hour standard | |
| $H_2S$ | 0.03 ppm (42 $\mu g/m^3$) 1-hour standard<br>0.01 ppm (26 $\mu g/m^3$) 24-hour standard | |
| Vinyl Chloride | 0.01 ppm (26 $\mu g/m^3$) 24-hour standard | |
| **Greenhouse Gas Thresholds (metric tons per year)** | | |
| | **Construction** | **Operations** |
| GHG (MT $CO_2e$) | 1,100 metric tons/year | Demonstrate consistency with the Climate Change Scoping Plan by implementing applicable Best Management Practices (BMPs), or equivalent on-site or off-site mitigation.<br>All projects must implement tier 1 BMP 1 & BMP2 (below) or equivalent on-site or off-site mitigation:<br>BMP 1- Projects shall be designed and constructed without natural gas infrastructure.<br>BMP 2- Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready. |

**Source:** SMAQMD, 2024
**Notes:**
$PM_{10}$ thresholds are zero (0) unless all feasible Best Available Control Practices/Best Management Practices are applied, in which case the threshold is 80 lbs per day and 14.6 tons/year.
$PM_{2.5}$ thresholds are zero (0) unless all feasible Best Available Control Practices/Best Management Practices are applied, in which case the thresholds are 82 lbs per day and 15 tons/year.
ROG = reactive organic gases; $NO_X$ = nitrogen oxides; CO = carbon monoxide; $PM_{10}$ = respirable particulate matter10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; $SO_X$ = sulfur oxides;TACs = toxic air contaminants; GHG = greenhouse gas emissions; MT/yr = metric tons per year; $CO_2e$ = carbon dioxide equivalent; $NO_2$ = nitrogen dioxide; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

### 4.3.2 Greenhouse Gases

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

(1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or,

(2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Determination of significance of the effect is governed by CEQA Guidelines 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." CEQA Guidelines 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amountof greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to … use a quantitative model or qualitative model." In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider whether GHG emissions exceed a threshold of significant effect that the lead agency determines to apply to the project.

The SMAQMD has developed thresholds of significant effect for GHG emissions, which lead agencies can apply to weigh the significance of a project's impact. In developing the thresholds, SMAQMD considered their effect in relation to the County's meeting the State GHG reduction mandates for the year 2030 and beyond, including the State of California's 2045 net zero GHG emissions goal mandated by AB 1279. Justification of SMAQMD's GHG emissions thresholds is presented in Greenhouse Gas Thresholds for Sacramento County (SMAQMD, 2020c).

The SMAQMD recommends a construction-phase GHG emissions threshold of 1,100 MT $CO_2e$ per year. For operations of all development projects, the SMAQMD recommends implementation of Tier 1 Best Management Practices (BMPs) BMP1 and BMP2. Projects that do not implement the Tier 1 Best Management Practices must conduct additional calculations to determine excess GHG emissions and implement either on-site or off-site measures to provide equivalent mitigation (SMAQMD 2020c):

- BMP 1 - Projects shall be designed and constructed without natural gas infrastructure.
- BMP 2 - Projects shall meet the current CALGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

For projects which exceed 1,100 MT $CO_2e$ per year operational screening level emissions, the SMAQMD requires implementation of Tier 2 BMP3 (see Table 10).

Therefore, consistent with CEQA Guidelines 15064.4, the GHG analysis for the proposed online auction facility project relies upon thresholds developed based upon exercise of careful judgement and believed to be appropriate in the context applicable policy. SMAQMD has identified two GHG emissions sources where the proposed project can assist in meeting the 2045 net zero GHG emission goal. BMP 1 require that the proposed project office and warehouse/shop should exclude use of natural gas. BMP 2 requires that the proposed project either augment the number of electric vehicle-ready charging stations beyond minimum requirement or else provide an equivalent offset (*e.g.*, by means of solar power). These project level actions would be consistent with areas of focus identified in ARB's 2022 Scoping Plan.

# 5.0 Air Quality Impact Analysis

This section evaluates potential impacts related to air pollutant emissions resulting from implementation of the proposed project. CalEEMod2022 emission estimates and screening-level risk assessment were completed as part of this analysis. CalEEMod2022, DICE Risk Screening Tool and GDF Risk Lookup results are included as appendices of this report.

## 5.1 ISSUE 1: CONSISTENCY WITH AIR QUALITY PLAN

### 5.1.1 Evaluation Criteria

In accordance with SMAQMD's CEQA guidance, construction-generated $NO_x$, $PM_{10}$, and $PM_{2.5}$, and operational-generated ROG and $NO_x$ (ozone precursors) are used to determine consistency with the 2023 Sacramento Plan for Attainment of the 2015 70-ppb 8-Hour Ozone Standard (2023 Ozone Plan). The guidance states as follows:

> *By exceeding the District's mass emission thresholds for operational emissions of ROG, $NO_x$, $PM_{10}$, or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of the District's air quality planning efforts.*

However, to be considered consistent with the 2023 Ozone Plan and the District's other air quality planning efforts to attain the ambient PM standards, a project must minimize emissions of ROG through BACT and minimize emissions of $PM_{10}$ and $PM_{2.5}$ through BACT and/or *all feasible* BMPs.

### 5.1.2 Evaluation of Effect

As shown in Section 5.2, below, the project's construction-generated emissions of $NO_x$, $PM_{10}$, and $PM_{2.5}$ and operations-generated emissions $NO_x$ would not exceed SMAQMD threshold limits. ROG emissions from the proposed fuel storage tanks and dispensers would be subject to SMAQMD Authority to Construct and Permit to Operate and BACT. Provided further that BMPs are implemented to minimize PM emissions to the extent practicable, the project would not conflict with or obstruct implementation of SMAQMD's 2023 Ozone Plan or its other air quality planning efforts; therefore, with the required controls and feasible BMPs, the impact of the proposed project would be less-than-significant.

### 5.1.3 Mitigation Measures

The lead agency should require annotation on project drawings that fuel ASTs and dispensers are subject to SMAQMD rule and permitting authority.

## 5.2 ISSUE 2: CUMULATIVELY CONSIDERABLE NET INCREASE OF NONATTAINMENT POLLUTANTS

### 5.2.1 Evaluation Criteria

The proposed project would generate criteria air pollutants and ozone precursors during construction and during operation. To assess whether the proposed project's emissions would have a cumulatively considerable effect upon air pollutants for which the region is designated a nonattainment area, emissions were quantified using CalEEMod2022 and were compared to the applicable thresholds adopted by SMAQMD.

#### 5.2.1.1 Construction

The project's construction emissions were estimated using the CalEEMod2022 model described in Section 4.1.1. Model outputs are provided in Appendix A to this report. CalEEMod2022 estimates are presented in terms of maximum pounds per day for criteria air pollutant and ozone precursors (see Table 11). Construction emissions in Table 11 represent the uncontrolled case without reduction by Basic Construction Emission Control Practices (also known as Best Management Practices or BMPs).

**Table 11**
**MAXIMUM DAILY CONSTRUCTION EMISSIONS**

| Period | Air Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | ROG | NOx | CO | SOx | $PM_{10\ tot}$ ($PM_{10}$ exh) | $PM_{2.5\ tot}$ ($PM_{2.5}$ exh |
| **Winter — Daily Maximum** | | | | | | |
| 2025 (pounds per day) | 1.26 | 11.7 | 14.7 | 0.03 | 1.64 (0.43) | 0.54 (0.39) |
| 2026 (pounds per day) | 25.6 | 11.2 | 14.5 | 0.03 | 1.59 (0.38) | 0.49 (0.35) |
| **Summer — Daily Maximum** | | | | | | |
| 2025 (pounds per day) | 4.77 | 55.0 | 49.7 | 0.13 | 22.3 (1.8) | 11.5 (1.67) |
| 2026 (pounds per day) | 25.6 | 11.2 | 14.7 | 0.03 | 1.59 (0.38) | 0.49 (0.35) |
| **Maximum Daily Emissions** | **25.6** | **55.0** | **49.7** | **0.13** | **22.3** | **11.5** |
| *Maximum daily threshold limit* | *None* | *85* | *None* | *None* | *Zero or 80* | *Zero or 82* |
| ***Less than threshold Limit?*** | ***N/A*** | ***Yes*** | ***N/A*** | ***N/A*** | ***Yes*** | ***Yes*** |

**Source:** CalEEMod2022; current thresholds SMAQMD, 2024
ROG = reactive organic gas; $NO_X$ = nitrogen oxides; CO = carbon monoxide; $SO_X$ = sulfur oxides;
$PM_{10}$ = particles 10 microns or smaller; $PM_{2.5}$ = particles 2.5 microns or smaller
$PM_{10}$ thresholds are zero (0) unless all feasible Best Available Control Practices/Best Management Practices are applied, in which case the threshold is 80 lbs per day and 14.6 tons/year.
$PM_{2.5}$ thresholds are zero (0) unless all feasible Best Available Control Practices/Best Management Practices are applied, in which case the thresholds are 82 lbs per day and 15 tons/year.

As shown in Table 11, construction emissions of criteria pollutants and ozone precursors would not approach or exceed the SMAQMD threshold limits. However, BCECPs are required by SMAQMD to minimize construction PM, without which project construction PM emissions would be considered to be cumulatively substantial. SMAQMD recommends lead agencies add these BCECPs as Conditions of Approval for all projects. Mitigation Measure MM-1 would require implementation of the SMAQMD's recommended BCECPs.

#### 5.2.1.2 Operations

Table 12 presents maximum daily operations emissions compared to the SMAQMD threshold limits. CalEEMod2022 model outputs are provided in Appendix A to this report.

As shown in Table 12, operation of the proposed project would include one stationary source of ROG—fuel dispensing—and, in addition, would include off-site mobile source, transport, and engine runup emissions. These sources of recurring operations emissions would not exceed the SMAQMD threshold limits provided that BMP1 and BMP2, or equivalent, are implemented to minimize PM emissions. SMAQMD considers any operations emissions of PM to be significant unless the applicable BMPs and BACT for the fuel tanks and dispensing are implemented.

**Table 12**
**MAXIMUM DAILY OPERATIONS EMISSIONS**

| Source | Air Pollutant (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10\,tot}$ | $PM_{2.5\,tot}$ |
| Office, warehouse/shop, and transport | 2.67 | 1.28 | 11.5 | 0.020 | 1.72 | 0.46 |
| In-Yard and Near-Yard Transport | 0.13 | 0.65 | 2.01 | 0.008 | 17.1 | 1.73 |
| Engine runups | 0.13 | 1.13 | 1.45 | 0.002 | 0.041 | 0.038 |
| Fuel dispensing | 0.33 | -- | -- | -- | -- | -- |
| Total Daily Project Emissions[1] | **3.26** | **3.06** | **15** | **0.030** | **18.9** | **2.23** |
| *Maximum Daily Threshold Limit* | *65* | *65* | *None* | *None* | Zero or *80* | *Zero or 82* |
| ***Less than threshold limit?*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** |

**Source:** CalEEMod2022; Thresholds SMAQMD, 2024.
[1] Total may not sum due to rounding.
ROG = reactive organic gas; $NO_X$ = nitrogen oxides; CO = carbon monoxide; $SO_X$ = sulfur oxides;
$PM_{10\,tot}$= total particulate matter 10 microns or less in diameter; $PM_{2.5\,tot}$= total particulate matter 2.5 microns or less in diameter
$PM_{10\,exh}$ = exhaust particulate matter 10 microns or less in diameter; $PM_{2.5\,exh}$ = exhaust particulate matter 2.5 microns or smaller aerodynamic diameter
PM10 tot = total particulate matter 10 microns or less in diameter; PM2.5 tot = total particulate matter 2.5 microns or smaller aerodynamic diameter

A substantial source of $PM_{10}$ and $PM_{2.5}$ would be fugitive dust from transport traffic in the Auction Yard, which would have a gravel surface. PM emissions present in Table 12 represent the uncontrolled case based upon ARB's unmitigated emission rates for unpaved roads. These unmitigated rates are 2 lbs per vehicle mile for $PM_{10\,dust}$ and 0.2 pounds per vehicle mile for $PM_{2.5\,dust}$.

### 5.2.2 Evaluation of Effects

Construction would result in a short-term addition to regional emissions of $PM_{10}$ and $PM_{2.5}$. The SMAQMD considers construction PM emissions to be cumulatively significant unless the BCECPs are implemented. Therefore, mitigation measure MM-1 would be required to enforce implementation of the SMAQMD-recommended construction BCECPs.

Recurring operations emissions would not approach the SMAQMD's adopted threshold limits. For ozone precursors ROG and NOx, estimated emission are 5 percent of the threshold limits. Mitigation of operations emissions is not warranted.

### 5.2.3 Mitigation Measures

The following mitigation measures are necessary to reduce particulate matter (fugitive dust) emissions during project construction.

**MM-1** **Basic Construction Emissions Control Practices.** The following Basic Construction Emissions Control Practices are considered feasible for controlling fugitive dust from a construction site. Control of fugitive dust is required by SMAQMD Rule 403 and enforced by SMAQMD staff. Before issuing grading or construction permits the County shall verify the following measures are specified on construction contracts and/or construction drawings.

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.

- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

- Limit vehicle speeds on unpaved roads to 15 mph.

- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

- Minimize idling time by either shutting equipment off when not in use or reducing time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

## 5.3 ISSUE 3: IMPACTS TO SENSITIVE RECEPTORS

### 5.3.1 Evaluation Criteria

Evaluation criteria include the ambient air quality standards for criteria air pollutants and health risk criteria such as added lifetime cancer risk and health hazard index (HI). For added cancer risk, the threshold limit is 10 in one million. For non-cancer HI, the threshold limit is 1. These criteria and their threshold limits apply both to project construction and project operations

The main health concerns are potential long-term effects, which can be expressed quantitatively in terms of added lifetime cancer risk and chronic HI. These potential effects typically are associated with project operations rather than project construction. The 18-month construction period is relatively short compared to 10- to 30-year residencies. In view of the fact that construction activities would be short-lived and would occur for short periods at various locations throughout the 47-acre project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial $PM_{10}$, $PM_{2.5}$, or DPM concentrations.

Furthermore, inspection of the CalEEMod2022 output for construction-phase emissions of PM shows that 85 percent of PM would be emitted in 2025 during Site Preparation, Grading, and work on the Aggregate-Surfaced Yard. Most of the construction-phase PM emissions would be fugitive dust from the native soil and aggregate materials as opposed to PM emissions from diesel-powered construction equipment exhaust. Much of the estimated construction dust PM and some exhaust PM would be mitigated by implementation of mitigation measure MM-1.

According to the SMAQMD, land use development operations typically do not have a potential to expose sensitive receptors to substantial air pollutant concentrations. The reason is that most emissions related to land development are mobile source emissions which occur on roads and highways and, therefore, are dispersed over wide areas (SMAQMD, 2020). For most projects, therefore, SMAQMD does not expect that criteria air pollutants added by project operations typically could result in exposures of nearby sensitive receptors to substantial air pollutant levels.

In this regard, however, the proposed project is not typical. The proposed project would include non-retail gasoline dispensing from a 500-gallon AST at a very low annual throughput of approximately 6,000 gallons per year. The proposed project would have monthly short-duration engine runups of diesel engines in the Auction Yard. Based upon experience at its existing Power Inn Road facility, the Applicant estimated that the number of engine runups would be approximately 200 to 300 engine runups per month. Finally, the Auction Yard itself would generate recurring transport traffic for seller drop-off and bidder pick-up of auction items.

Relevant health concerns are the potential long-term effects caused by project operations emissions of TACs related to gasoline dispensing, engine runups, and monthly transport traffic. These have been evaluated in terms of added lifetime cancer risk and chronic HI. The dose of TAC to which receptors could be exposed is the primary factor used to estimate health risk. Dose is a function of a TAC's concentration in the air, frequency and duration of exposure. Added lifetime cancer risk and chronic HI were evaluated based upon screening tools developed by ARB and CAPCOA using the OEHHA guidance. OEHHA guidance assumptions regarding exposure duration (typically 30 years for individual residents) and the potency or Inhalation Unit Risk of each relevant TAC are integrated into the DICE and GDF screening tools.

### 5.3.2 Evaluation of Effects

Project operations would generate In-Yard and Near-Yard emissions of DPM 1) from transport vehicles dropping off or picking up auction merchandise and 2) from engine runups in the Yard. Project operations also would generate emissions of volatile TACs such a benzene and ethylbenzene emitted during gasoline dispensing and loading. To evaluate potential impacts to sensitive receptors from operations emissions of DPM, benzene, and ethylbenzene, a screening-level health risk assessment was completed using the DICE and GDF risk screening tools developed by ARB and CAPCOA.

Based upon conservative application of the GDF screening tool, added lifetime cancer risk and chronic HI resulting from gasoline dispensing were found to be *de minimis* at the nearest sensitive receptors. In applying the GDF risk screening tool, the proposed 6,000-gallon per year annual gasoline throughput was multiplied by ×3 to 18,000 gallons per year. This was to account for the differential between AST and UST emissions rates, which for ASTs have not been updated by CAPCOA since 1997. The ×3 factor conforms the screening level analysis to 1997 AST aggregate TOG emission rate (see Section 4.2.2.2).

DPM is classified as a likely carcinogen by OEHHA; therefore, the driving health consequence of exposure to airborne DPM is added lifetime cancer risk. The term "incremental" or "increased" risk is sometimes substituted for "added" risk, and they mean the same. For context, a typical added cancer risk from all TACs in the ambient air for an individual living in Southern California was approximately 454 in one million in 2018 (Maestas *et al.*, 2024).

Risk is an abstract concept. Added lifetime risk is meant to be added to other baseline risk and represents an increment or, in other words, the project's contribution for a given exposure. As individuals vary widely in their baseline exposures and susceptibility, outcomes also vary widely. Added lifetime cancer risk estimates do not mean, and should not be interpreted to mean, that any individual necessarily will or will not develop cancer.

The maximum estimated incremental health effects due to exposure to the proposed Auction Yard DPM emissions for the Maximally Exposed Individual Resident (MEIR) and Maximally Exposed Individual Worker (MEIW) are presented in Table 13.

**Table 13**
**PROJECT CONTRIBUTIONS TO**
**ADDED LIFETIME CANCER RISK AND CHRONIC HEALTH EFFECTS**

| Receptor ID | Description | Source-Receptor Separation Distance (m) | Added Lifetime Cancer Risk (chances per million) | Non-Cancer Chronic Hazard Index (unitless) |
|---|---|---|---|---|
| **Yard engine runups and transport travel** | | | | |
| R1 | Off-site resident | 210 | 0.9 | 0 |
| R2 | Off-site resident | 240 | 0.8 | 0 |
| W1 | On-site office | 108 | 0.2 | 0 |
| W2 | On-site shop | 120 | 0.2 | 0 |
| **Gasoline dispensing** | | | | |
| R1 | Off-site resident | 150 | 0.01 | 0 |
| R2 | Off-site resident | 105 | 0.01 | 0 |
| W1 | On-site office worker | 135 | 0.00 | 0 |
| W2 | On-site shop worker | 17 | 0.02 | 0 |
| **Maximum combined health risk** | | | | |
| MEIR R1 | Off-site resident | 210 (yard),150 (fuel) | 0.91 | 0 |
| MEIW W2 | On-site shop worker | 120 (yard), 17 (fuel) | 0.22 | 0 |
| | | ***Threshold Limits*** | *10 in one million* | *1* |
| | | ***Less than threshold limit?*** | ***Yes*** | ***Yes*** |

**Sources:**

DICE Risk Tool with yard engine runups and transport travel

GDF Risk Lookup Tool with 18,000 gallon annual gasoline throughput, maximum 100 gallons/hour dispensing, and 500 gallons per hour loading.

Receptor location are shown in Figure ES-1 and Figure 2. The MEIR is labeled as R1, and the MEIW is labeled as W2. These estimates are conservative (*i.e.*, health protective) as the model lookup tables (GDF risk tool) and AERMOD estimates (DICE risk tool) of potential TAC exposures are high. This is intentional in ARB's and CAPCOA's development of the risk screening tools.

As shown in Table 13, added lifetime cancer risks would not exceed the SMAQMD threshold limit of 10 in one million and the chronic hazard indices would not exceed the SMAQMD threshold limit of 1. Project operations would not expose sensitive receptors to substantial DPM, benzene, ethylbenzene, or other volatile TAC concentrations; therefore, the impact is less-than-significant.

### 5.3.3 Mitigation Measures

Impacts would be less than significant; therefore, mitigation measures are not warranted.

## 5.4 ISSUE 4: OTHER EMISSIONS (*E.G.*, THOSE LEADING TO ODORS)

### 5.4.1 Evaluation Criteria

There are no particular evaluation criteria for odorous emissions. SMAQMD has a nuisance regulation, Rule 402, which prohibits the following:

> *...discharge of such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.*

### 5.4.2 Evaluation of Effects

The proposed project would not include any of the uses commonly associated with potential for odor

nuisance. According to SMAQMD, land uses which could potentially have significant odor impacts include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants.

During project construction, odors from diesel exhaust, laying of hot asphalt pavement, and painting could be emitted. Odorous emissions would disperse rapidly downwind from the project site and, therefore, would not be expected to affect a substantial number of people.

Project operations would include fuel dispensing. In view of the emission controls required by rule, odors affecting off-site receptors are not expected.

Implementation of the proposed project, therefore, would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people, and the impact of construction and operations odor sources would be less-than-significant.

### 5.4.3 Mitigation Measures

Impacts would be less-than-significant; therefore, mitigation measures are not warranted.

# 6.0 GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

This section evaluates potential impacts of the project related to the generation of GHG emissions. Complete CalEEMod2022 modeling results are included as Appendix A of this report.

## 6.1 ISSUE 1: GREENHOUSE GAS EMISSIONS

### 6.1.1 Evaluation Criteria

SMAQMD has adopted a threshold limit of 1,100 MT CO2e for project construction. However, SMAQMD does not have an adopted GHG threshold limit for recurring operations emission of GHGs. Instead, SMAQMD requires all projects to implement the Tier 1 GHG reduction BMPs. SMAQMD's Tier 1 GHG reduction BMP 1 calls for no installation of natural gas infrastructure or appliances (*e.g.*, furnaces for heating or hot water). SMAQMD's Tier 1 GHG reduction BMP 2 calls for installation of EV-ready parking stalls or equivalent on-site or off-site measures. The objective is to curb future emissions of GHGs consistent with the Scoping Plan.

### 6.1.2 Evaluation of Project Effects

#### 6.1.2.1 Construction Emissions of GHGs

Project construction GHG emissions were estimated using the CalEEMod2022 model as described in Section 4.1.1. CalEEMod2022 output files are included in Appendix A to this report. Emission modeling shows that short-term construction of the project would emit 723 MT $CO_2e$, total during 2025 and 2026. In 2025, the year of maximum annual project construction emissions, maximum $CO_2e$ emitted would be 513 MT CO2e. This would not approach or exceed the SMAQMD construction GHG threshold limit of 1,100 MT $CO_2e$ per year.

#### 6.1.2.2 Operations Emissions of GHGs

The proposed project includes operation of two new buildings and an auction yard. GHG emissions from project operations were estimated using CalEEMod2022 and were supplemented using an Excel workbook. Supplementation was necessary to estimate emissions as CO2e from transport traffic and engine runups, as described in Section 4.1.2. Estimated annual operations emissions of GHGs in 2027, the first full year of operation, would be 449 MT CO2e. Project operations emissions of GHGs are presented in Table 15. CalEEMod2022 output files are included in Appendix A.

For project operations, GHG reduction measures BMP 1 and BMP 2, or equivalent on-site or off-site measures, would apply. With implementation of such measures, the effect of the proposed project would be less-than-significant.

**Table 15**
**OPERATIONS GHG EMISSIONS**

| Emission Source | 2027 Emissions (MT $CO_2e$) |
|---|---|
| Mobile, Area, Energy/Water/Waste, and Maintenance | 401 |
| Engine Runups | 2.4 |
| In-Yard and Near-Yard Transport | 45.2 |
| Gasoline Dispensing | <0.1 |
| **Total Annual Project Emissions[1]** | **449** |
| **SMAQMD Screening Criteria** | All projects must implement BMP 1 & BMP2 (below) or equivalent on-site or off-site mitigation:<br>BMP 1 Projects shall be designed and constructed without natural gas infrastructure.<br>BMP 2 Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be EV-ready. |

**Sources:** CalEEMod2022 (Mobile, Area, Energy/Water/Waste, and Maintenance) and Excel workbook (Engine Runups, In-Yard and Near-Yard Transport, and Gasoline Dispensing)
**Notes:**
[1] Totals may not sum due to rounding.
GHG = greenhouse gas; MT $CO_2e$ = metric tons carbon dioxide equivalent
EV = electric vehicle

### 6.1.3 Mitigation Measures

Mitigation measures are be required to reduce recurring emissions of GHGs from project operations and conform the proposed project to SMAQMD's policy. County planning staff will require mitigation measure MM-2 as follows:

MM-2 BMP 1. The project will be construction without installation of natural gas service lines or stub ups.

BMP 2. In lieu of BMP 2, the project will be constructed with a roof-mounted solar panel array sized to provide electricity for a portion of on-site needs (e.g., water pumping, office lighting, and parking lot lighting). The intent of this measure is to provide an equivalent reduction as could be obtained by on-site EV charging with BMP 2.

## 6.2 ISSUE 2: CONFLICT WITH PLANS ADOPTED TO REDUCE GHG EMISSIONS

### 6.2.1 Evaluation Criteria

Numerous State plans, policies, and regulations have been adopted for the purpose of reducing statewide GHG emissions. Key California policies include AB 32, SB 32, and AB 1279. AB 32 aims to reduce GHG emissions to 1990 levels by 2020. SB 32 requires further reductions of40 percent below 1990 levels by 2030. AB 1279 sets a state goal of net zero GHG emissions by 2045.

To achieve these progressive goals, statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard (LCFS),and regulations requiring an increasing fraction of electric power to be generated from renewable sources are being implemented statewide.

Relevant plans also include ARB's 2022 Scoping Plan and SACOG's 2020 MTP/SCS. These plans aim to reduce recurring GHG emissions and dependency on fossil fuels and meet key statewide GHG emission reduction targets.

### 6.2.2 Evaluation of Project Effects

As the proposed project is a replacement facility, its effect upon regional employment growth and VMT would be *de minimis*. The proposed project would not induce residential growth in the County or region. In addition, the proposed project would not add substantially to regional VMT; therefore, the effect of the proposed project on region's annual VMT would not be in conflict with SACOG's 2020 MTP/SCS or obstruct implementation of the SACOG's 2020 MTP/SCS.

With implementation of mitigation measure MM-2 the proposed project would be consistent with SMAQMD policy and ARB's 2022 Scoping Plan. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs, including ARB's 2022 Scoping Plan and SACOG's 2020 MTP/SCS. Therefore, the effect of the proposed project would be less-than-significant.

### 6.2.3 Mitigation Measures

With implementation of mitigation measure MM-2, the effect of the proposed project would be less-than-significant; therefore, additional mitigation measures are not warranted.

# 7.0 PREPARER

Marc Papineau Senior Air Quality Scientist, Project Manager

Environmental Service
5789 Gold Creek Drive
Castro Valley, CA 94552

# 8.0 REFERENCES

California Air Resources Board (ARB), 2024. *Overview: Diesel Exhaust and Health*, web page visited November 2024. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health

California ARB, 2024. *State Implementation Plan Background,* web page visited November 2024. https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/about

California ARB, 2024. *Clean Car Standards – Pavley, Assembly Bill 1493*, web page visited November 2024. https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley

California ARB, 2024. *California Ambient Air Quality Standard*s, accessed October 2024. https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards

California ARB, 2024. A*DAM: Air Quality Data Statistics - Top 4 Summary*, web page accessed October 2024. https://www.arb.ca.gov/adam/topfour/topfour1.php

California ARB, 2024. *Area Designations for Sulfur Dioxide ($SO_2$), web page visited October 2024*. https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations/federal-area-designations/sulfur-dioxide

California ARB, 2024. AB 2588 Air Toxics "Hot Spots" Emission Inventory Guidelines, Appendix E: Requirements for Smaller Facilities, web page visited October 2024. https://www.arb.ca.gov/ab2588/2588guid.htm

California ARB, 2024. A*ssembly Bill 32 Greenhouse Gas Emissions Inventory for 2000-2022—by Sector and Activity*, updated September 20, 2024. https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-ghg_inventory_sector_sum_00-22.xlsx

California ARB and California Air Pollution Control Officers Association (CAPCOA), 2024. *Diesel Internal Combustion Engine Risk Tool User Guide*, July 2024, (30 pp.). https://ww2.arb.ca.gov/sites/default/files/classic/ab2588/DICE%20Tool%20User%20Guide.pdf

California ARB, 2023. *In-Use Off-Road Diesel Vehicle Regulation: 2022 Off-Road Amendment Fact Sheets*, effective October 1, 2023. https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation/about

California ARB, 2023. *In-Use Off-Road Diesel Vehicle Regulation: Overview of Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation*, last updated August 23, 2023. https://ww2.arb.ca.gov/resources/fact-sheets/overview-amendments-use-road-diesel-fueled-fleets-regulation

California ARB, 2022. *2022 Scoping Plan for Achieving Carbon Neutrality, update December 2022, (299 pp.).* https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf

California ARB, 2022. *Gasoline Service Station Industrywide Risk Assessment Supplemental Policy Guidance Document*, July 21, 2022, (50 pp.). https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_Gas_Station_IWG_Supplemental_%20Policy_Guidance.pdf

California ARB, 2022. EMFAC2021 On-Road Emission Factor Model v1.0.2, May 2, 2022. https://ww2.arb.ca.gov/our-work/programs/msei/emfac2021-model-and-documentation

California ARB, 2022. *Gasoline Service Station Industrywide Risk Assessment Technical Guidance*, February 18, 2022, (203 pp.). https://ww2.arb.ca.gov/sites/default/files/2022-03/Draft%202022%20Gas%20Station%20IWG%20-%20Technical%20Guidance_ADA%20Compliant.pdf

California ARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*, July 23, 2015, (56 pp.). https://ww2.arb.ca.gov/sites/default/files/classic/toxics/rma/rmgssat.pdf

California ARB, 2022. *Gasoline Service Station Industrywide Risk Assessment Technical Guidance*, February 18, 2022, (203 pp.). https://ww2.arb.ca.gov/sites/default/files/2022-03/Draft%202022%20Gas%20Station%20IWG%20-%20Technical%20Guidance_ADA%20Compliant.pdf

California ARB, 2020. Heavy Duty Diesel DEC Installation & Maintenance, web page updated June 23, 2020. https://www.arb.ca.gov/msprog/decsinstall/faq.htm#2

California ARB, 2012. *Miscellaneous Process Methodologies – 7.10 Unpaved Road Dust, Non-Farm Roads*, revised and updated, December 2012, (11 pp.). https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-10_2012.pdf

California ARB, 1997. *Miscellaneous Process Methodologies – 7.13 Windblown Dust – Unpaved Roads*, updated August 1997, (9 pp.). https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-13.pdf

California ARB, 1997. Miscellaneous Process Methodologies, and Section 7.8, Road Construction Dust, updated August 1997, (9 pp.). http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-8.pdf

California Air Pollution Control Officers Association (CAPCOA), 2022. *User's Guide for CalEEMod 2022 Version 2022.1*, April 2022, (77 pp.). https://www.caleemod.com/documents/user-guide/01_User%20Guide.pdf

CAPCOA, 2017. *User's Guide for CalEEMod Version 2022.1*, Appendix A: Key Terms and Definitions, April 2022, (12 pp.). https://www.caleemod.com/documents/handbook/appendices/appendix_a.pdf

CAPCOA, 2022 User's *Guide for CalEEMod Version 2022.1*, Appendix C: Emission Factors and Data Tables, April 2022 (101 pp.). https://www.caleemod.com/documents/handbook/appendices/appendix_c.pdf

CAPCOA, 1997. *Gasoline Service Station Industrywide Risk Assessment Guidelines*, November 1997, (120 pp.). https://ww2.arb.ca.gov/sites/default/files/classic/ab2588/rrap-iwra/gasiwra.pdf

California, State of, 2023. *2022 California Green Building Standards Code*, Title 24, Part 11 (CalGreen), Appendix A5 Nonresidential Voluntary Measures, with July 2024 Supplement, effective January 1, 2023. https://codes.iccsafe.org/content/CAGBC2022P1/appendix-a5-nonresidential-voluntary-measures

Cal/EPA, Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program: Guidance Manual for Preparation of Health Risk Assessments,* Risk Assessment Guidelines, February 2015, (231 pp.). https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

California Energy Commission (CEC), 2024. *2022 California Commercial End-Use Survey (CEUS)*, Final Report, CEC-200-2023-017, February 2024 (131 pp.). https://www.energy.ca.gov/sites/default/files/2024-02/2022%20CEUS%20Final%20Report_ada.pdf

Intergovernmental Panel on Climate Change (IPCC), 2023. *AR6 Synthesis Report: Climate Change 2023*, March 2023. https://www.ipcc.ch/report/sixth-assessment-report-cycle/

Iowa State University, Iowa Environmental Mesonet, 2024. Custom Wind Rose Plots for Sacramento – Mather (Station ID BHCC1). https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?network=CA_DCP&station=BHCC1

Maestas, Melissa May, *et al.*, 2024. *Trends in air toxics cancer risk in Southern California, 1998-2018*, Environ. Res.: Health, Vol. 2, No. 2, March 11, 2024, (15 pp.). https://iopscience.iop.org/article/10.1088/2752-5309/ad2f09

NOAA, 2024. Trends in Atmospheric Carbon Dioxide ($CO_2$). https://gml.noaa.gov/ccgg/trends/weekly.html

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program: Guidance Manual for Preparation of Health Risk Assessments*, February 2015, (231 pp.). https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Perkins, Williams & Cotterill, 2024. BNA Site Plan, Sheet A1.0, dated April 19, 2024 (1 p.). https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2023-00290

Perkins, Williams & Cotterill, 2024. BNA Landscape Site Plan, Sheet L1.0, dated April 23, 2024 (2 pp.). https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2023-00290

Propper, Ralph et al., 2015. *Ambient and Emission Trends of Toxic Air Contaminants in California*, Environmental Science & Technology, Vol. 49, No. 19, October 6, 2015, pp. 11245-11990). https://pubs.acs.org/doi/epdf/10.1021/acs.est.5b02766?ref=article_openPDF

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2024. CEQA Guidance and Tools, updated through July 2022. http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools

SMAQMD, 2023. *Sacramento Regional 2015 NAAQS 8-Hour Ozone Attainment & Reasonable Further Progress Plan*, October 17, 2023, (611 pp.) https://www.airquality.org/ProgramCoordination/Documents/Sacramento%20Regional%202015%20NAAQS%208%20Hour%20Ozone%20Attainment%20and%20Reasonable%20Further%20Progress%20Plan.pdf

SMAQMD, 2018. *Wintertime Air Toxics from Wood Smoke in Sacramento*, prepared by Sonoma Technology, Inc., for Sac Met AQMD, February 26, 2018, (169 pp.). http://www.airquality.org/ProgramCoordination/Documents/Wintertime%20Air%20Toxics%20from%20Wood%20Smoke%20in%20Sacramento_Final%20Report.pdf

SMAQMD, 2015. *Triennial Report and Air Quality Plan Revision*, May 28, 2015, (126 pp.). http://www.airquality.org/ProgramCoordination/Documents/11)%20%202015TriennialReportandProgressRevision.pdf

SMAQMD, 2014. Regulatory Advisory Aboveground Gasoline Storage Tanks Subject to 2008 AST Vapor Recovery Regulation, February 28, 2014, (6 pp.).

https://www.airquality.org/StationarySources/Documents/adv%2010-14%20ARB%20AST.pdf

SMAQMD, 2013. *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area*, October 24, 2013, (183 pp.). https://www.airquality.org/ProgramCoordination/Documents/PM2.5%20Imp%20and%20Redesignation%202013.pdf

SMAQMD, 2009. Rule 448 Gasoline Transfer into Storage Containers and Rule 449 Transfer of Gasoline into Vehicle Fuel Tanks, Staff Report, January 23, 2009, (41 pp.). http://www.airquality.org/ProgramCoordination/Documents/Rules448-449%20StaffReport%20012309.pdf

South Coast AQMD, 2007. Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Stations, January 2007, (pp. 16). https://www.aqmd.gov/docs/default-source/planning/risk-assessment/gas_station_hra.pdf?sfvrsn=0

Sutley, Nancy H. (Chair), Council on Environmental Quality (CEQ), 2010. *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, February 18, 2010, (12 pp.). https://ceq.doe.gov/docs/ceq-regulations-and-guidance/20100218-nepa-consideration-effects-ghg-draft-guidance.pdf

Sacramento, County of, 2024. *Sacramento County 2021 GHG Inventory*, corrected final, April 2024, (40 pp.). https://green.saccounty.net/Documents/2021_GHG_Inventory_Corrected_Final_Clean_April_2024.pdf

Sacramento County, Office of Planning and Environmental Review, 2024. *County of Sacramento General Plan of 2005-2030*, as amended through October 25, 2022. https://planning.saccounty.gov/PlansandProjectsIn-Progress/pages/generalplan.aspx

Sacramento County, Office of Planning and Environmental Review, 2024. *County of Sacramento General Plan of 2005-2030, Air Quality Element*, amended October 25, 2024, (14 pp.). https://planning.saccounty.gov/PlansandProjectsIn-Progress/Documents/General Plan Amendments/5. Air Quality Element – Amended 10-25-2022.pdf

Sacramento County, 2024. *Sacramento County Climate Action Plan*, July 2024, (473 pp.). https://planning.saccounty.gov/PlansandProjectsIn-Progress/Documents/Climate Action Plan/SEIR Documents/SactoCo.CAP_wApdcs_071224.pdf

U.S. Environmental Protection Agency (U.S. EPA), 2024. Federal Register Notices Related to Carbon Monoxide (1971) Designations and Classifications, data current as of September 30, 2024. https://www3.epa.gov/airquality/greenbook/cfrnrpt2.html#CO.1990.sacramentohttps://www.govinfo.gov/link/fr/70/71776

U.S. Environmental Protection Agency (U.S. EPA), 2024. Green Book 8-Hour Ozone (2015) Attainment Area Information, area designations and/or boundaries revised effective July 14, 2021, and area boundaries revised effective December 30, 2021. https://www.epa.gov/green-book/green-book-8-hour-ozone-2015-area-information

U.S. EPA, 2024. Greenbook 8-Hour Ozone (2015) Designated Area/State Information, data current as of September 30, 2024. https://www3.epa.gov/airquality/greenbook/jbtc.html

U.S. EPA, 2024. 2021-2023 Ozone Design Values, final, June 4, 2024. https://www.epa.gov/system/files/documents/2024-06/o3_designvalues_2021_2023_final_06_04_24.xlsx

U.S. EPA, 2024. Green Book PM-2.5 (2012) Designated Area/State Information, data current as of September 30, 2024. https://www3.epa.gov/airquality/greenbook/kbtc.html

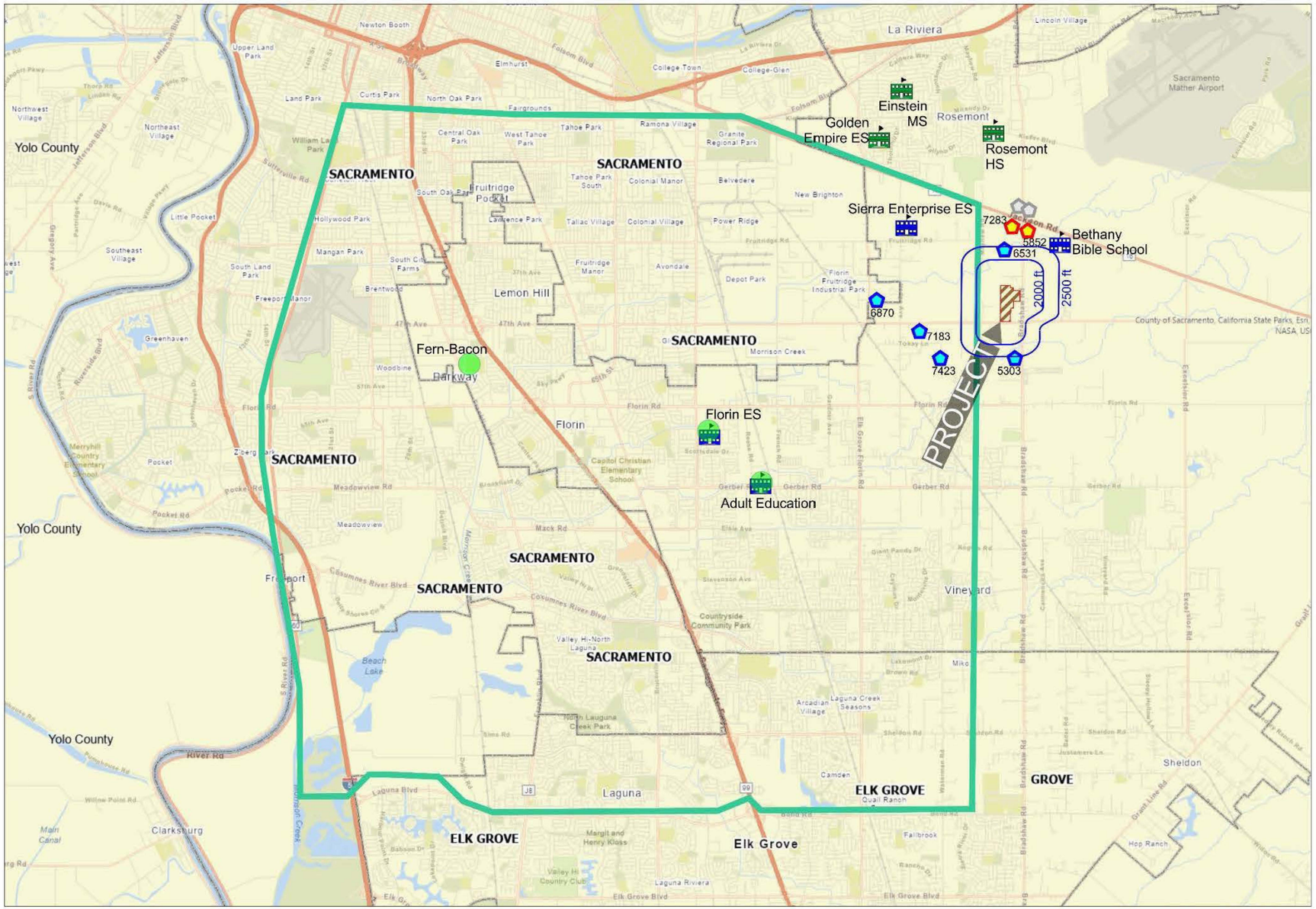
U.S. EPA, 2024. Green Book PM-2.5 (2006) Designated Area/State Information, data current as of September 30, 2024. https://www3.epa.gov/airquality/greenbook/rbtc.html

U.S. EPA, 2014. *Reducing Urban Heat Islands: Compendium of Strategies*, Cool Pavements, Draft, (40 pp.). https://www.epa.gov/sites/production/files/2014-06/documents/coolpavescompendium.pdf

U.S. EPA, 2005. *Emission Facts: Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel*, EPA 420-F-05-001, February 2005, (3 pp.).

U.S. EPA, 2002. *Health Assessment Document for Diesel Engine Exhaust*, EPA/600/8-90/057F, May 2002, (669 pp.). https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=29060

Yuh-Lang Lin and I-Chun Jao, 1995. *A Numerical Study of Flow Circulations in the Central Valley of California and Formation Mechanisms of the Fresno Eddy*, Monthly Weather Review, Vol. 123/No. 11, November 1, 1995 (pp. 3227–3239). https://doi.org/10.1175/1520-0493(1995)123<3227:ANSOFC>2.0.CO;2




# Figure 1
## South Sacramento-Florin Community Map

6190 Bradshaw Rd.
Sacramento County
California

### KEY

- Updated 2024 South Sacramento-Florin Community Boundary
- Bar None Auction Proposed Project Site
- Community $PM_{2.5}$ Air Monitors
- Schools
- 5852 — Service station facility ID #
- Former service station
- 6870 — Concrete plant facility ID #