City of
SACRAMENTO
Community Development

300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Help Line: 916-264-5011
CityofSacramento.org/dsd

MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Bell Avenue Warehouses Project (P19-015) The proposed project is located on a vacant 20.8-acre site at 1690 Bell Avenue, in the City of Sacramento, Sacramento County (APN: 238-0050-011-0000). This project consists of a request to Construct two (2) spec warehouse buildings totaling 339,549 square feet on a 20.8-acre site in the M-1-SPD (Light Industrial - McClellan Heights/Parker Homes Special Planning District) zone and Del Paso Heights Design Review District and a Rezone of the existing zoning from R-1A-SPD (Single-Unit or Duplex Dwelling - McClellan Heights/Parker Homes Special Planning District) to M-1-SPD (Light Industrial - McClellan Heights/Parker Homes Special Planning District). Requires City Council-level entitlement review.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m.

Environmental Services Manager, City of Sacramento, California, a municipal corporation

By: Scott Johnson

Date: 11-4-19

Bell Avenue Warehouses Project
P19-015

Initial Study/Proposed Mitigated Negative Declaration

PREPARED FOR THE
CITY OF SACRAMENTO

PREPARED BY RANEY PLANNING & MANAGEMENT, INC.
SACRAMENTO, CALIFORNIA

NOVEMBER 2019

BELL AVENUE WAREHOUSES PROJECT (P19-015)

INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION FOR ANTICIPATED SUBSEQUENT PROJECTS UNDER THE 2035 GENERAL PLAN EIR

This IS/MND/Mitigated Negative Declaration (IS/MND) has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

ORGANIZATION OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This IS/MND is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this IS/MND was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the proposed project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the 2035 General Plan EIR.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that were consulted in the preparation of the IS/MND.

APPENDICES: Appends technical information that was referenced as attached in the preparation of the IS/MND.

SECTION I - BACKGROUND

Project Name and File Number:	Bell Avenue Warehouses Project (P19-015)
Project Location:	1690 Bell Avenue Sacramento, CA 95838 Assessor's Parcel Numbers (APNs) 238-0050-011, and -012
Project Applicant:	Troy Estacio Buzz Oates 555 Capital Mall, Suite 900 Sacramento, CA 95814 (916) 379-3800 troyestacio@buzzoates.com
Project Planner:	Jose Quintanilla, Assistant Planner City of Sacramento Community Development Department Sacramento, CA 95811 jquintanilla@cityofsacramento.org
Environmental Planner:	Ron Bess, Assistant Planner (916) 808-8272 Rbess@cityofsacramento.org
Date Initial Study Completed:	November 2019

This IS/MND was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 15000 *et seq*.). The Lead Agency is the City of Sacramento.

The City has prepared the attached IS/MND to review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2035 General Plan Master EIR to determine its adequacy for the project and identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance (see CEQA Guidelines Sections 15177 and 15178). The IS/MND identifies new significant effects as well as mitigation measures that would reduce each such effect to a less-than-significant level. A Mitigated Negative Declaration is the appropriate CEQA document (CEQA Guidelines Section 15178(b)).

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. The mitigation monitoring plan for the 2035 General Plan, which provides references to applicable General Plan policies that reduce the environmental effects of development that may occur consistent with the 2035 General Plan, is included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60. The resolution is available on the City's website at:

http://www.cityofsacramento.org/Community-Development/Resources/Online-Library/2035--General-Plan
The analysis contained in this IS/MND incorporates by reference the general discussion portions of the 2035 General Plan Master EIR. (CEQA Guidelines Section 15150(a)). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811, and on the City's web site at:

http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

All technical environmental studies utilized in preparation of this IS/MND are available for review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, California.

The City will circulate a Notice of Availability/Notice of Intent (NOA/NOI) that confirms the City's intention to adopt the Mitigated Negative Declaration, and provides dates for public comment. The NOA/NOI will be available on the City's web site set forth above.

Please send written responses to:

Ron Bess Assistant Planner
Community Development Department
City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811
Direct Line: (916) 808-8272
Rbess@cityofsacramento.org

SECTION II - PROJECT DESCRIPTION

Introduction

This section of the IS/MND provides a description of the Bell Avenue Warehouses Project (proposed project) and includes background, location, existing conditions, surrounding land uses, and project components.

Project Location

The project site consists of two vacant parcels totaling approximately 21 acres located south of Bell Avenue, generally between Raley Boulevard and Pinell Street, in the City of Sacramento, California (APNs 238-0050-011 and -012) (see Figure 1). The project site is situated approximately six miles northeast of downtown Sacramento.

Existing Conditions and Surrounding Land Uses

The project site is currently vacant and highly disturbed due to regular disking for weed abatement. The western parcel, identified as APN 238-0050-011, is zoned Light Industrial/Special Planning District (M-1-SPD) and the eastern parcel, identified as APN 238-0050-012, is zoned Single-Unit or Duplex Dwelling (R-1A-SPD). The Sacramento 2035 General Plan designates the project site Employment Center Low Rise.

The project site is bordered to the south and southwest by single-family residential development and to the east by the Village Green Mobile Home Park (see Figure 2). The Bell Avenue Elementary School is located approximately 480 feet east of the project site beyond the single-family residences. Commercial development exists adjacent to the northwestern portion of the project site and light industrial development exists to the north, across Bell Avenue.

The project site is located within the McClellan Heights/Parker Homes Special Planning District of the North Sacramento Community Plan area. The North Sacramento Community Plan area is located in the northeastern part of the City of Sacramento and encompasses approximately 13 square miles.[1] Consistent with the 2035 General Plan, the North Sacramento Community Plan designates the project site as Employment Center Low Rise. The North Sacramento Community Plan area includes unique policies that are intended to supplement those contained in the 2035 General Plan.

Project Description

The proposed project would include development of the project site with two warehouse structures totaling approximately 339,549 square feet (sf) as well as various other site improvements related to internal vehicle circulation, stormwater management, and landscaping (see Figure 3). The warehouse situated in the eastern parcel, identified as Building A, would be approximately 259,749 sf and contain two depressed loading docks on the western face of the building. The warehouse on the western parcel, identified as Building B, would be approximately 79,800 sf and contain two depressed loading docks on the western face of the building. On-site parking would be provided by 277 proposed parking spaces. The various project components are discussed in the following sections.

[1] City of Sacramento. *North Sacramento Community Plan.* March 2015.

Figure 1
Regional Project Location

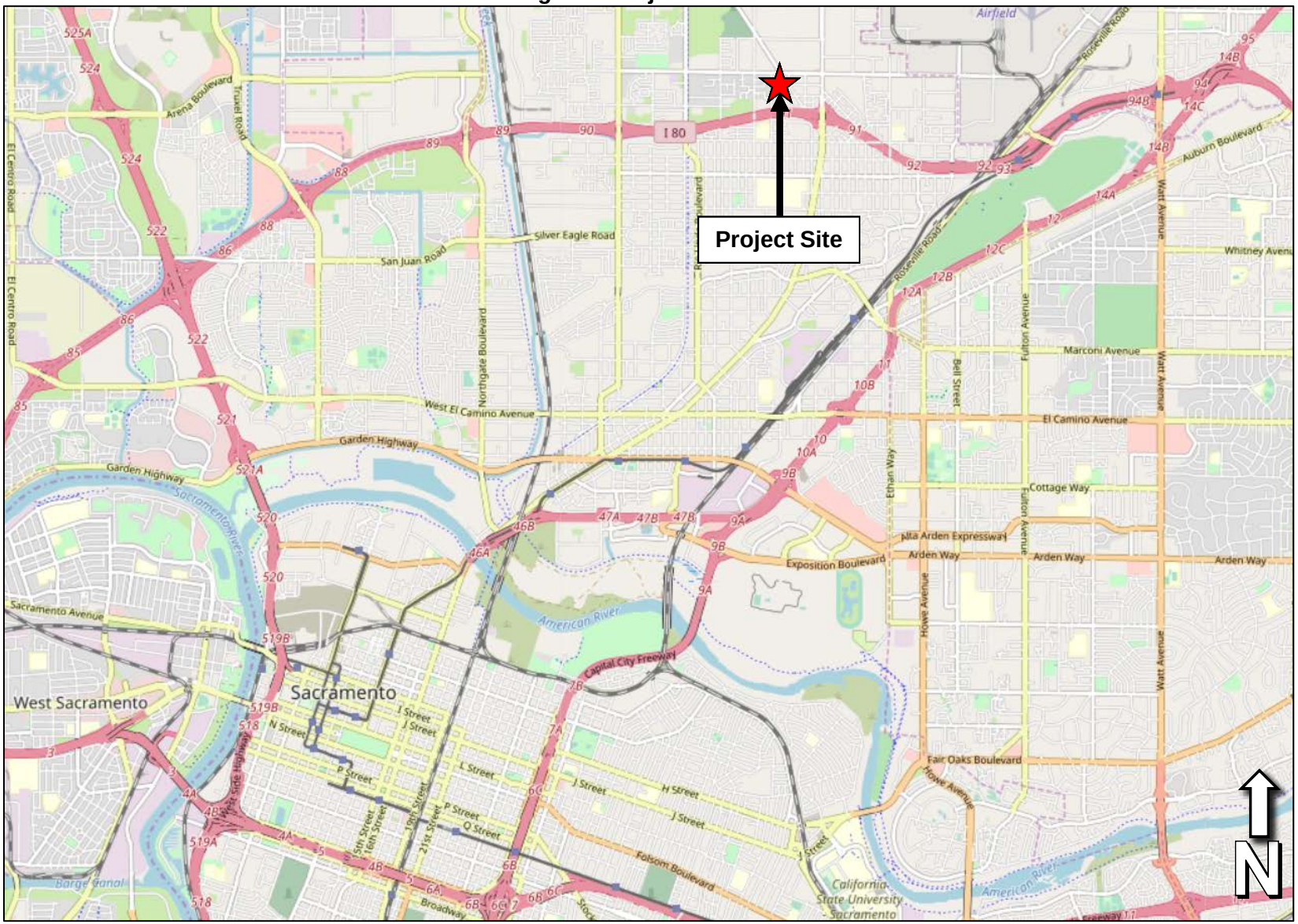
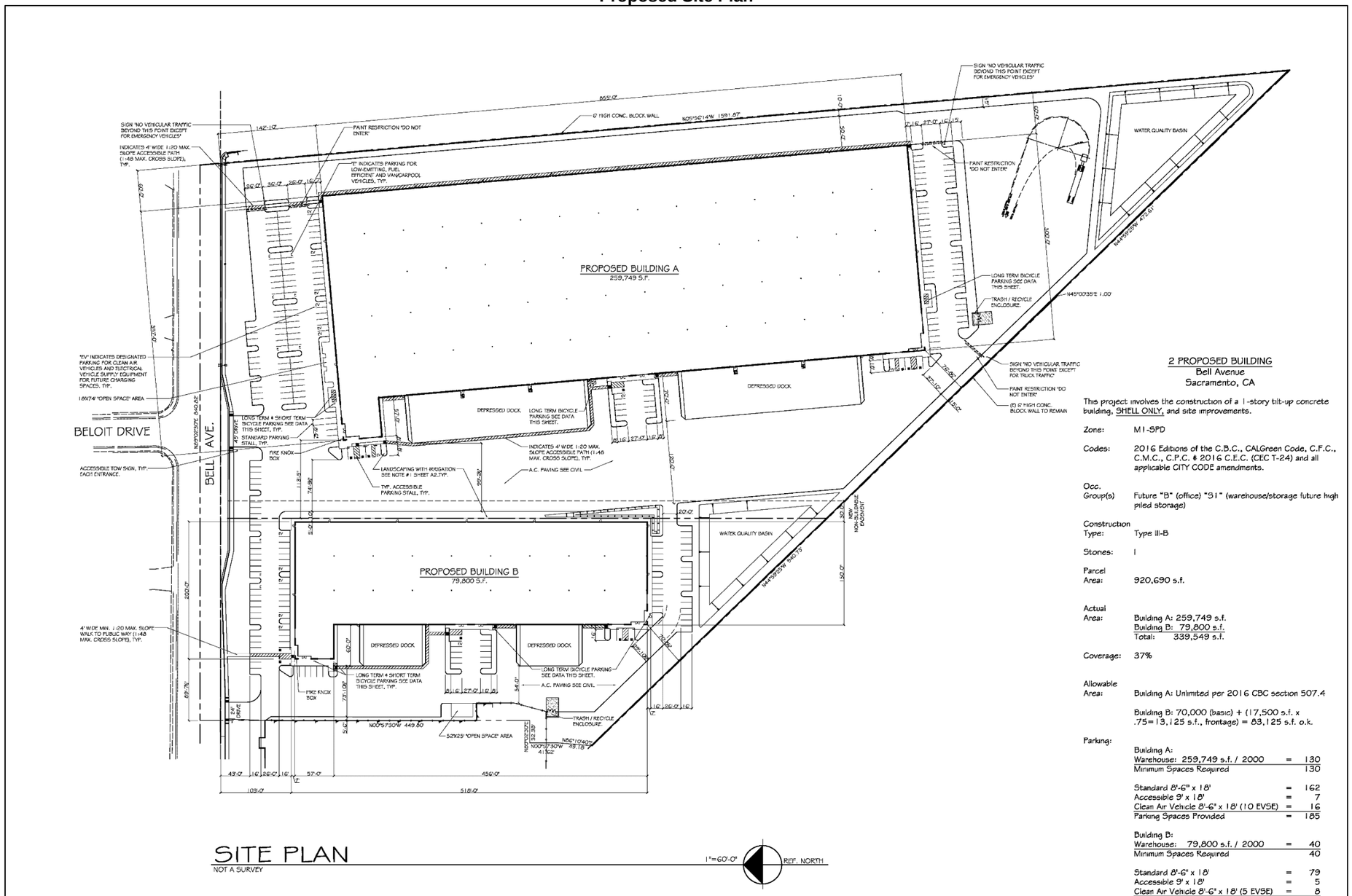


Figure 2
Aerial Vicinity Map

Figure 3
Proposed Site Plan



SITE PLAN
NOT A SURVEY

1"=60'-0" REF. NORTH

2 PROPOSED BUILDING
Bell Avenue
Sacramento, CA

This project involves the construction of a 1-story tilt-up concrete building, SHELL ONLY, and site improvements.

Zone:	M1-SPD
Codes:	2016 Editions of the C.B.C., CALGreen Code, C.F.C., C.M.C., C.P.C. & 2016 C.E.C. (CEC T-24) and all applicable CITY CODE amendments.
Occ. Group(s)	Future "B" (office) "S1" (warehouse/storage future high piled storage)
Construction Type:	Type III-B
Stories:	1
Parcel Area:	920,690 s.f.
Actual Area:	Building A: 259,749 s.f. Building B: 79,800 s.f. Total: 339,549 s.f.
Coverage:	37%
Allowable Area:	Building A: Unlimited per 2016 CBC section 507.4 Building B: 70,000 (basic) + (117,500 s.f. x .75=13,125 s.f., frontage) = 83,125 s.f. o.k.
Parking:	Building A: Warehouse: 259,749 s.f. / 2000 = 130 Minimum Spaces Required 130 Standard 8'-6" x 18' = 162 Accessible 9' x 18' = 7 Clean Air Vehicle 8'-6" x 18' (10 EVSE) = 16 Parking Spaces Provided = 185 Building B: Warehouse: 79,800 s.f. / 2000 = 40 Minimum Spaces Required 40 Standard 8'-6" x 18' = 79 Accessible 9' x 18' = 5 Clean Air Vehicle 8'-6" x 18' (5 EVSE) = 8 Parking Spaces Provided = 92
Bicycle Parking:	Building A: Provide 11, 2-bicycle lockers (22 total bicycles) Building B: Provide 4, 2-bicycle lockers (8 total bicycles) See site plan.

Rezone

The City of Sacramento zoning currently designates portions of each parcel as R-1A-SPD within the McClellan Heights/Parker Homes Special Planning District. The R-1A zone permits single-unit or duplex dwellings and the purpose of the Special Planning District is to establish procedures for the Planning and Design Commission and City Council to regulate properties under multiple ownership that are in need of general physical and economic improvement, or have special environmental features that standard land use, zoning, and other regulations cannot fully address.[2] The construction of the proposed warehouse structures associated with the proposed project would not be permitted under the current R-1A-SPD zoning. Thus, the proposed project would require a rezone from R-1-A-SPD to M-1-SPD in order to accommodate the construction of the proposed structures. The existing zoning of M-1-SPD within the northern portions of both parcels would be retained with implementation of the project. The proposed rezone to M-1-SPD is consistent with the 2035 General Plan designation of Employment Center Low Rise.

Site Access and Parking

Regional access to the project site area would be provided by Interstate 80 (I-80), which is located approximately 850 feet south of the project site. Primary site access would be provided from Bell Avenue by two proposed driveways along the northern frontage of the project site. A 24-foot driveway, located at the northwest corner of the site, would provide access to the loading and parking areas associated with Building B and a 45-foot driveway, located in the northern portion of the site, would provide access to the loading and parking areas associated with Building A. Implementation of the project would include roadway frontage improvements along Bell Avenue to accommodate the foregoing site access points.

The proposed project would include a total of 277 paved parking spaces including 12 spaces compliant with the Americans with Disabilities Act (ADA), and 24 clean air vehicle spaces. Parking for Building A would consist of 185 paved spaces situated along the northern and southern portions of the building as well as along the western building face. Parking for Building B would consist of 92 paved spaces situated along the northern, southern, and western portions of the building. Per the City's Code, portions of the proposed parking areas not used specifically for the purposes of vehicle maneuvering and loading would be subject to tree shading requirements.

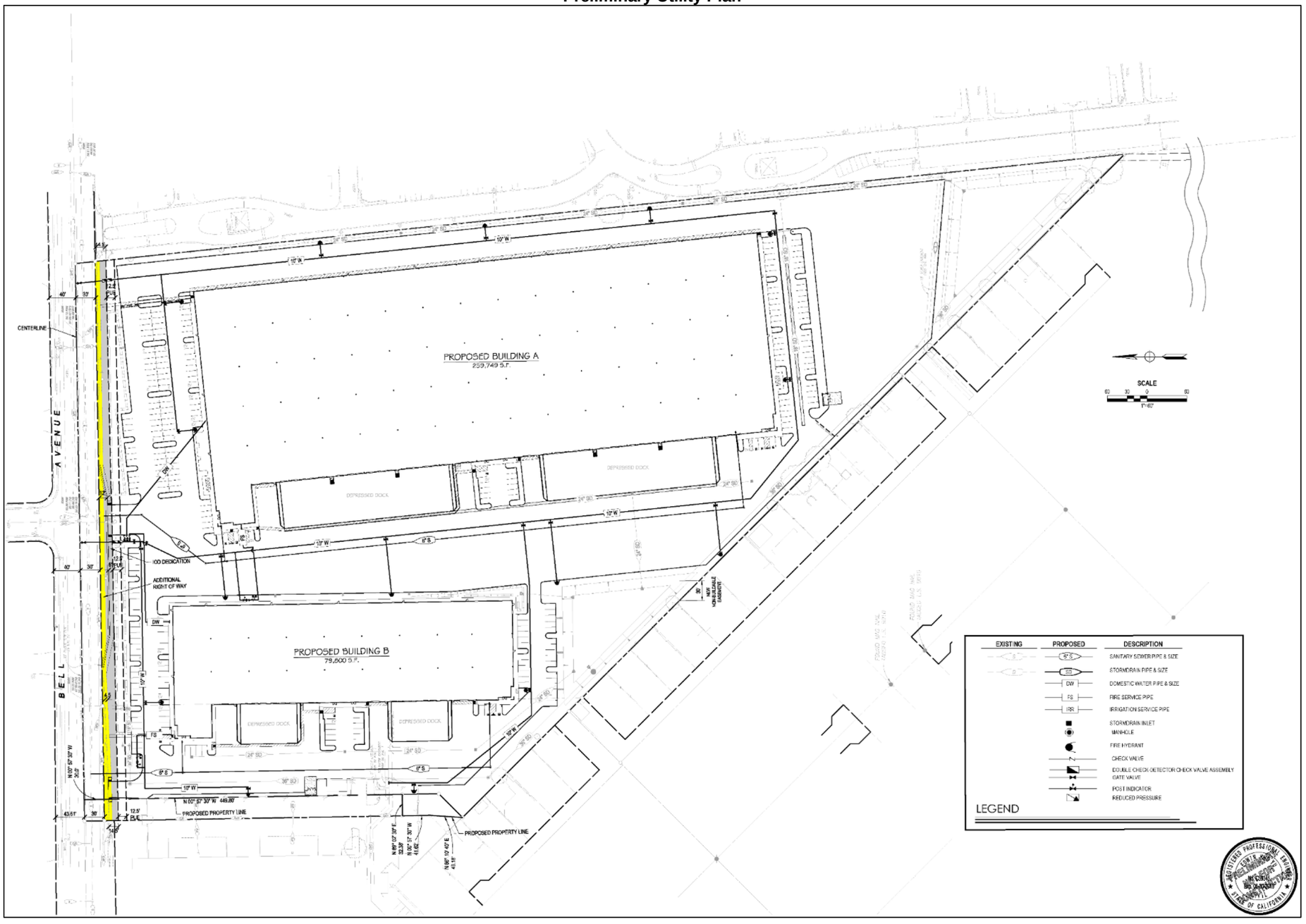
Utilities

A 15- to 18-inch sanitary sewer line and two water lines, ranging in size from 12 to 18 inches, exist within the Bell Avenue right-of-way (ROW) to the north of the project site. Implementation of the proposed project would include connection of the proposed warehouse structures to the existing utility infrastructure within the Bell Avenue ROW. In addition, fire service lines would be routed within the proposed drive aisles and connect to proposed hydrants throughout the project site (see Figure 4).

Stormwater generated by the impervious surfaces associated with the proposed project would be directed to two proposed water quality basins within the project site. The water quality basins would be located to the south of each proposed building. Following retention in the water quality basins, stormwater would be directed to the City's existing 30-inch stormwater drain line located within the Bell Avenue ROW.

[2] City of Sacramento. *Planning and Development Code.* Accessed October 2019.

Figure 4
Preliminary Utility Plan



Project Approvals

The project includes the following entitlement approvals from the City of Sacramento:

- Approval of Initial Study/Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan;
- Rezone for the eastern parcel from R-1A-SPD to M-1-SPD; and
- Approval of Site Plan and Design Review.

SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES, AND ENERGY

Introduction

CEQA requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable General Plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan, however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the IS/MND identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and energy, and the effect of the proposed project on these resources.

Discussion

Land Use and Planning

The proposed project would include construction of two warehouse buildings and associated site improvements such as parking, internal circulation, stormwater drainage features, and landscaping. The project site parcels are zoned M-1-SPD and R-1A-SPD in the McClellan Heights/Parker Homes Special Planning District. The project site is designated Employment Center Low Rise by the 2035 General Plan, which allows for employment generating uses that generally do not produce loud noise or noxious odor. Examples of permitted uses are industrial or manufacturing, office flex-space, residential and commercial flex-space, office uses, retail, and

public or quasi-public special uses. The project is consistent with the City of Sacramento 2035 General Plan, and North Sacramento Community Plan land use designations. The project would not modify the existing land use designation of the site; however, the project would require a zoning amendment to change the designation of the southern portion of both parcels from R-1A-SPD to M-1-SPD, in order to accommodate the proposed warehouse structures. Such a change would establish consistency between the land use designations for the entire project site within the 2035 General Plan as well as the North Sacramento Community Plan and the existing zoning designations for the southern portion of the site. Because the project site is designated as Employment Center Low Rise by the 2035 General Plan, development of the site for employment-based uses, rather than residential uses, was analyzed in the City's 2035 General Plan Master EIR. Therefore, the proposed project would be consistent with the type and intensity of uses analyzed for the site in the 2035 General Plan Master EIR.

The project site is an infill development location, and is within an existing built out urban area; therefore, the project would not physically divide an established community. The proposed project site is not currently included in any habitat conservation plan or natural community conservation plan.

Population and Housing

The proposed project site is located within a developed area of the northeastern portion of Sacramento, approximately six miles northeast of downtown Sacramento. Surrounding land uses include single-family residential, commercial, and light industrial uses. An elementary school is located approximately 480 feet from the western edge of the project site. The proposed project would include the construction of two warehouse structures totaling approximately 339,549 sf and associated site improvements, resulting in a floor to area ratio of approximately 0.36. The project is consistent with the type and intensity of use contemplated in the City's General Plan, and was analyzed in the associated Master EIR. The physical impacts associated with the implementation of the proposed project are addressed throughout this IS/MND. The proposed project site is currently vacant and highly disturbed. Implementation of the proposed project would not displace substantial numbers of existing housing units or people and construction or replacement of housing elsewhere would not be required for the project.

Although the southern portions of both parcels within the project site are currently zoned R-1A-SPD, which allows for development of residential uses, development of the southern portions of the project site for residential uses would conflict with the existing land use designation within the 2035 General Plan. Because development of the site for residential uses was not anticipated in the 2035 General Plan, the 2035 General Plan Master EIR did not analyze potential impacts from such uses of the site. Thus, while the proposed project includes a request to rezone the southern portions of both parcels, the proposed rezone would ensure that development of the project site conforms with the land uses within the 2035 General Plan.

Agriculture and Forest Resources

The proposed project site is located within an urbanized area, which includes surrounding residential, commercial, and light industrial development. Agricultural activities do not currently occur within the vicinity of the project site. In addition, the area does not include land that is designated as Prime Farmland, nor is the land under a Williamson Act contract. Therefore, the proposed project would have no impact on agricultural resources.

Energy

The buildings associated with the proposed project would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes goals (see 2035 General Plan Energy Resources Goal U 6.1.1) and related policies to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers, and recruitment of businesses that research and promote energy conservation and efficiency.

The Master EIR discussed energy conservation and relevant General Plan policies in Section 6.3 (page 6-3). The discussion concluded that with implementation of the General Plan policies and energy regulation (e.g., Title 24), development allowed in the General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy.

The Master EIR concluded that implementation of State regulations, coordination with energy providers, and implementation of General Plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level. The proposed project would be consistent with the type and intensity of development anticipated for the site in the General Plan, and meet the energy efficiency standards required by Title 24; therefore, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
1. AESTHETICS Would the proposal: A) Create a source of glare that would cause a public hazard or annoyance?			X
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?			X
C) Substantially degrade the existing visual character of the site or its surroundings?			X

Environmental Setting

The proposed project is located south of Bell Avenue, generally between Raley Boulevard and Pinell Street, within the North Sacramento Community Plan's McClellan Heights/Parker Homes neighborhood. The project site is bordered to the south, southwest, and east by single-family residential development, and to the west by commercial development (Moto Amore, All Green Electronics Recycling, Transtar Industries). Light industrial warehouses are located to the north of the site across Bell Avenue. The site is currently vacant and regularly disked for weed abatement. As such, the project site has been highly disturbed.

Public views of the project site include views from motorists, bicyclists, and pedestrians traveling on Bell Avenue along the northern project frontage and Village Green Drive along the eastern project frontage. Private views of the site would include those from the single family-development to the southwest and east. Given that the project site is currently vacant, sources of light and glare do not exist on the site.

The Department of Transportation (Caltrans) manages the State Scenic Highway System which provides guidance and assists local government agencies with the process to officially designate scenic highways. According to Caltrans, designated scenic highways are not located in proximity to the project site. Given the vacant and highly disturbed nature of the site, the project site does not contain scenic resources, is not located in an area designated as a scenic resource or vista and is not visible from any State Scenic Highways.[3]

Standards of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the CEQA Guidelines, thresholds of significance adopted by the City in applicable General Plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the proposed project would:

- Create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors; or
- Substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource.

[3] California Department of Transportation. *California Scenic Highway Mapping System, Sacramento County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed January 2019.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR described the existing visual conditions in the City of Sacramento, and the potential changes to those conditions that could result from development consistent with the 2035 General Plan. See Master EIR, Chapter 4.13, Visual Resources.

The Master EIR identified potential impacts for light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

Answers to Checklist Questions

Questions A and B

According to the Master EIR, the City of Sacramento is mostly built out, and a large amount of widespread, ambient light from urban uses already exists. New development permitted under the 2035 General Plan would add sources of light that are similar to the existing urban light sources from any of the following: exterior building lighting, new street lighting, parking lot lights, and headlights of vehicular traffic. Sensitive land uses would generally be residential uses, especially single- and multi-family residential uses. As such, the single-family development located to the east and southwest of the site would be considered sensitive receptors to project-generated light and glare. Potential new sources of light associated with development and operation of the proposed project would be similar to adjacent commercial and light industrial uses to the north and west of the project site respectively. Such sources would likely include, but not be limited to, building lighting, drive aisle lighting, vehicle headlights, and glare from reflective surfaces such as vehicle windshields and building windows.

The City's 2035 General Plan encourages infill development within the City. Infill development would serve to concentrate growth within those areas of the City that are currently well-lit, and lighting resulting from infill development under the General Plan would be similar to the existing character of urban lighting. Given that the proposed project would be consistent with the project site's existing Employment Center Low Rise land use designation, introduction of new sources of light and glare to the site has been previously addressed in the Master EIR. Furthermore, new development allowed under the 2035 General Plan would be subject to General Plan policies, building codes, and design review, all of which would ensure that new sources of light within the project site would be properly designed so as not to result in substantial increases in light or spillover of light into adjacent parcels. The Visual Resources section of the Master EIR addresses lighting and glare standards for development projects. Policy ER 7.1.3: Lighting requires the City to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. In addition, Policy ER 7.1.4: Reflective Glass prohibits new development from resulting in any of the following: (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors; (2) using mirrored glass; (3) using black glass that exceeds 25 percent of any surface of a building; (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building; and (5) using exposed concrete that exceeds 50 percent of any building. The proposed project would be required to comply with the aforementioned General Plan policies, which would be ensured through the Site Plan and Design Review process.

Based on the above, while the proposed project would introduce new sources of light and glare to the project site, the type and intensity of light and glare would be similar to that of the surrounding commercial developments and would be consistent with what has been anticipated

for the site per the 2035 General Plan and analyzed in the Master EIR. The proposed project would comply with all applicable General Plan policies related to minimizing light and glare, and compliance with such policies would be ensured during the design review for the project. Therefore, the proposed project would have ***no additional significant environmental effects*** related to sources of glare.

Question C

The City of Sacramento is primarily built out; however, new development associated with the 2035 General Plan could result in changes to important scenic resources as seen from visually sensitive locations. As described above under "Standards of Significance" important existing scenic resources include major natural open space features such as the American River and Sacramento River, including associated parkways. Another important scenic resource is the State Capitol (as defined by the Capitol View Protection Ordinance). Other potential important scenic resources include important historic structures listed on the Sacramento Register of Historic and Cultural Resources, California and/or National Registers.

Visually-sensitive public locations include viewpoints where a change to the visibility of an important scenic resource, or a visual change to the resource itself, would affect the general public. Visually-sensitive public locations include public plazas, trails, parks, parkways, or designated, publicly available and important scenic corridors (e.g., Capitol View Protection Corridor).

Policy ER 7.1.1 is designed to guide the City to avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. In addition, Policy ER 7.1.2, states that the City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. With adherence to these policies, buildout of the 2035 General Plan would not substantially alter views of important scenic resources from visually sensitive areas. According to the Master EIR, with buildout of the 2035 General Plan, impacts related to interference with important existing scenic resources or degrading views of important existing scenic resources, as seen from a visually sensitive, public location would be less than significant.

The proposed project is not located in the vicinity of any significant visual resources such as the American River, Sacramento River, State Capitol, or public trails. Thus, the proposed project would not result in any impacts related to changing the visual character of such resources. The nearest public park outside of a school is Five Star Park, approximately 110 feet to the south of the project site. Views of the project site are largely obscured by intervening residential structures and accessory uses between the project site and the park. Thus, implementation of the proposed project would not significantly alter views from Five Star Park. Other parks, such as Main Avenue Park, Mama Marks Park, and Robla Community Park are located in the project region, but none of the foregoing parks afford views of the project site.

The project site is currently vacant and has been disturbed through regular disking for weed abatement. The 2035 General Plan designates the site as Employment Center Low Rise which permits employment generating uses that generally do not produce loud noise or noxious odors; acceptable uses include industrial or manufacturing uses, office space, retail and service uses, and public or quasi-public uses. The construction of two industrial warehouse buildings associated with the proposed project would be consistent with the permitted land use designation for the site and compatible with existing commercial and industrial uses located to the west and north of the site.

Therefore, the proposed project would not contribute to the degradation of the visual character of the site and surrounding areas.

Furthermore, City staff would conduct Site Plan and Design Review prior to implementation of the proposed project. As noted in Chapter 17.808 of the Sacramento City Code, the purpose of Site Plan and Design Review is to ensure that the physical aspects of development projects are consistent with the General Plan and any other applicable specific plans or design guidelines, that projects are high quality and compatible with surrounding development, among other considerations. Accordingly, Site Plan and Design Review for the proposed project would ensure that the proposed development would not result in a substantial degradation in the existing visual character of the project site.

Therefore, potential impacts to the visual character of the site and its surroundings associated with development of the site with light industrial uses have been previously analyzed in the Master EIR, and the proposed project would have ***no additional significant environmental effects*** beyond what was anticipated for the site in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would have no additional project-specific environmental effects relating to Aesthetics. Therefore, implementation of the proposed project would result in ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
2. AIR QUALITY *Would the proposal:* A) Result in construction emissions of NO_x above 85 pounds per day?		X	
B) Result in operational emissions of NO_x or ROG above 65 pounds per day?			X
C) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X	
D) Result in any increase in PM_{10} concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year?			X
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?		X	
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?		X	
H) Conflict with the Climate Action Plan?			X

Environmental Setting

The environmental setting for the proposed project, including the existing climate and meteorological conditions, existing air quality conditions, and greenhouse gas (GHG) emissions, is discussed below.

Climate and Meteorology

The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is approximately 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the “Delta breeze” that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and

the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

Air Quality Conditions

The SVAB is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Federal and State air quality standards have been established for six common air pollutants, known as criteria pollutants, because the criteria air pollutants could be detrimental to human health and the environment. The criteria pollutants include particulate matter, ground-level ozone, carbon monoxide (CO), sulfur oxides, nitrogen oxides, and lead. At the federal level, Sacramento County is designated as severe nonattainment for the 8-hour ozone standard, nonattainment for the 24-hour $PM_{2.5}$ standard, and attainment or unclassified for all other criteria pollutants. At the State level, the area is designated as a serious nonattainment area for the 1-hour ozone standard, nonattainment for the 8-hour ozone standard, nonattainment for the particulate matter 10 microns in diameter (PM_{10}) and particulate matter 2.5 microns in diameter ($PM_{2.5}$) standards, and attainment or unclassified for all other State standards.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficultly of attaining federal and State Ambient Air Quality Standards (AAQS). Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. In order to help public agencies evaluate air quality impacts, the SMAQMD has developed the *Guide to Air Quality Assessment in Sacramento County*.[4] The SMAQMD's guide includes recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors, as the area is under nonattainment for the federal and State ozone AAQS. The SMAQMD's guide also includes screening criteria for localized CO emissions and thresholds for new stationary sources of toxic air contaminants (TACs).

In addition to criteria air pollutants, TACs are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Public exposure to TACs can result from emissions from normal operations as well as accidental releases. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which

[4] Sacramento Metropolitan Air Quality Management District. *Guide to Air Quality Assessment in Sacramento County*. May 2018. Available at: http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools. Accessed March 2019.

typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death.

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by the California Air Resources Board (CARB). Earth disturbance activity could result in the release of NOA to the air. NOA is located in many parts of California and is commonly associated with ultramafic rocks. According to mapping prepared by the California Geological Survey, the only area within Sacramento County that is likely to contain NOA is eastern Sacramento County. The project site is not located in an area identified as likely to contain NOA.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors to the project site would be the single-family residences bordering the southwestern and eastern project site boundaries. In addition, the Bell Avenue Elementary School is located approximately 480 east of the project site.

Greenhouse Gas (GHG) Emissions

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

A number of regulations currently exist related to GHG emissions, predominantly Assembly Bill (AB) 32, Executive Order S-3-05, and Senate Bill (SB) 32. AB 32 sets forth a statewide GHG emissions reduction target of 1990 levels by 2020. Executive Order S-3-05 sets forth a transitional reduction target of 2000 levels by 2010, the same target as AB 32 of 1990 levels by 2020, and further builds upon the AB 32 target by requiring a reduction to 80 percent below 1990 levels by 2050. SB 32 also builds upon AB 32 and sets forth a transitional reduction target of 40 percent below 1990 levels by 2030. In order to implement the statewide GHG emissions reduction targets, local jurisdictions are encouraged to prepare and adopt area-specific GHG reduction plans and/or thresholds of significance for GHG emissions.

The City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP into Appendix B, General Plan CAP Policies and Programs, of the General Plan Update. Appendix B includes all citywide policies and programs that are supportive of reducing GHG emissions.

Standards of Significance

For purposes of this IS/MND, air quality impacts may be considered significant if construction and/or

implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO_x above 85 pounds per day;
- Operational emissions of NO_x or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM_{10} concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

- TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

A project is considered to have a significant effect relating to GHG emissions if the project fails to satisfy the requirements of the City's CAP.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan Environmental Resources Element were identified as mitigating potential effects of development that could occur under the 2035 General Plan. Accordingly, Policy ER 6.1.1 calls for the City to work with the CARB and the SMAQMD to meet State and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TACs as a potential effect of implementation of the 2035 General Plan. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and impose appropriate conditions on projects to protect public health and safety, as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR found that GHG emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11, and ER 6.1.15. The 2035 General Plan incorporates the

GHG reduction strategy of the 2012 CAP, which demonstrates compliance mechanisms for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.9 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emissions reduction goals. Policy ER 6.1.8 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emissions reductions goal. The discussion of GHG emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this IS/MND (CEQA Guidelines Section 15150).

The Master EIR identified numerous policies included in the 2035 General Plan that addressed GHG emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 et seq.

Answers to Checklist Questions

Question A

In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, the SMAQMD has established recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors (i.e., reactive organic compounds [ROG] and oxides of nitrogen [NO_X], as the area is under nonattainment for ozone. The SMAQMD's recommended thresholds of significance for ROG and NO_X are in units of pounds per day (lbs/day) and are presented in Table 1.

Table 1
SMAQMD Thresholds of Significance for Ozone Precursors

Pollutant	Construction Thresholds	Operational Thresholds
NO_X	85 lbs/day	65 lbs/day
ROG	-	65 lbs/day

Source: Sacramento Metropolitan Air Quality Management District, SMAQMD Thresholds of Significance Table, May 2015, available at: http://www.airquality.org/ceqa/CH2ThresholdsTables5-2015.pdf, accessed March 2019.

In order to determine whether the proposed project would result in ozone emissions in excess of the applicable thresholds of significance presented above, the proposed project's construction-related and operational emissions have been estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 software – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. Accordingly, vehicle trip generation rates within the model were updated based on estimates prepared for the project by Kimley Horn[5] In addition, the following assumptions were applied to the model:

- Construction was assumed to commence in April 2020 and the proposed project would be fully operational by 2021;
- An average daily trip rate of 4.96 trips per day per 1,000 sf (ksf) was assumed, based on information provided by Kimley Horn for the proposed project; and

5 Kimley Horn. *Traffic Impact Study 1690 Bell Avenue Shell*. August 16, 2019.

- Approximately 19,900 cubic yards (CY) of soil export would be required.

The results of the proposed project's emissions estimates were compared to the thresholds of significance above in order to determine the associated level of impact. All CalEEMod modeling results are included as Appendix A to this IS/MND.

Construction Emissions

During construction of the proposed project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Because construction equipment emits relatively low levels of ROG and because ROG emissions from other construction processes (e.g., asphalt paving, architectural coatings) are typically regulated by SMAQMD, SMAQMD has not adopted a construction emissions threshold for ROG. The SMAQMD has, however, adopted a construction emissions threshold for NO_X, as shown in Table 1, above.

According to the CalEEMod results, the proposed project is estimated to result in maximum daily construction emissions of NO_X as shown in Table 2.

Table 2
Maximum Unmitigated Project Construction NO_X Emissions

Pollutant	Project Emissions (lbs/day)	SMAQMD Threshold of Significance (lbs/day)
NO_X	122.11	85
Source: CalEEMod, June 2019 (see Appendix A).		

As shown in the table, the proposed project's maximum unmitigated construction-related NO_X emissions would exceed the applicable threshold of significance of 85 lbs/day. It should be noted that all projects under the jurisdiction of SMAQMD are required to comply with all applicable SMAQMD rules and regulations (a complete list of current rules is available at www.airquality.org/rules). Rules and regulations related to construction include, but are not limited to, Rule 201 (General Permit Requirements), Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter), Rule 414 (Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 British Thermal Units per Hour), Rule 417 (Wood Burning Appliances), Rule 442 (Architectural Coatings), Rule 453 (Cutback and Emulsified Asphalt Paving Materials), Rule 460 (Adhesives and Sealants), Rule 902 (Asbestos) and California Code of Regulations (CCR) requirements related to the registration of portable equipment and anti-idling. Furthermore, all projects are required to implement SMAQMD's Basic Construction Emission Control Practices (BCECP). Compliance with SMAQMD rules and regulations and BCECP would ensure that construction emissions are minimized to the extent practicable.

Based on the above, the proposed project would result in construction emissions of NO_X above 85 pounds per day, but the *effect can be mitigated to a less-than-significant* level. Implementation of Mitigation Measure 2-1 would reduce the impact to a less-than-significant level. Accordingly, with implementation of Mitigation Measure 2-1, construction of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Question B

Operation of the proposed project would result in various sources of emissions including emissions related to natural gas combustion for heating mechanisms, landscape maintenance equipment exhaust, and mobile sources. Emissions from mobile sources, such as future vehicle trips to and from the project site, would make up the majority of the emissions related to project operations.

The proposed project's estimated operational emissions are presented in Table 3. As shown in the table, the proposed project would not result in operational emissions of NO_X or ROG above the 65 lbs/day SMAQMD threshold of significance. Considering that the proposed project would not result in a project-specific impact related to operational emissions of criteria pollutants, operation of the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Table 3
Maximum Project Operational NO_X and ROG Emissions

Pollutant	Project Emissions (lbs/day)	SMAQMD Thresholds of Significance (lbs/day)
NO_X	16.09	65
ROG	12.20	65

Source: CalEEMod, June 2019 (see Appendix A).

Question C

SMAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of SMAQMD's planning efforts, according to the SMAQMD Guide, by exceeding the SMAQMD's project-level thresholds for construction or operational emissions, a project could contribute to the region's nonattainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the SMAQMD's air quality planning efforts.

As discussed above and below, the proposed project would result in construction and operational emissions below all applicable SMAQMD thresholds of significance with the exception of construction-related emissions of NO_X. Because construction-related emissions would exceed the SMAQMD's threshold for construction related emissions of NO_X, implementation of the proposed project would have the potential to violate an air quality standard or contribute substantially to an existing or projected air quality violation; however, the *effect can be mitigated to a less-than-significant* level. Following implementation of Mitigation Measure 2-1, construction related emissions of NO_X would be reduced below the SMAQMD's thresholds for such emissions. Therefore, following implementation of Mitigation Measure 2-1, the proposed project would not be considered to contribute to the region's nonattainment status for ozone or PM emissions and would not conflict with or obstruct implementation of the SMAQMD's air quality planning efforts. Accordingly, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR would result from implementation of the proposed project.

Question D

As the region is designated nonattainment for PM_{10} and $PM_{2.5}$, SMAQMD has adopted mass emissions thresholds of significance for PM_{10} and $PM_{2.5}$, which are presented in Table 4.

Table 4
SMAQMD Thresholds of Significance for PM_{10} and $PM_{2.5}$

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)	Operational Thresholds (tons/yr)
PM_{10}	80	80	14.6
$PM_{2.5}$	82	82	15

Source: SMAQMD, May 2015.

To apply the construction thresholds presented in Table 4, projects must implement all feasible SMAQMD Best Management Practices (BMPs) related to dust control. The control of fugitive dust during construction is required by SMAQMD Rule 403, and enforced by SMAQMD staff. The BMPs for dust control include the following:

- 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 miles per hour (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 either by shutting equipment off when not in use or reducing the 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;
- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. For more information contact CARB at 877-593-6677, doors@arb.ca.gov, or www.arb.ca.gov/doors/compliance_cert1.html.; and
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Compliance with the foregoing measures is required per Rule 403, and project construction is assumed to include compliance with the foregoing measures. Consequently, the project PM emissions are assessed in comparison to the thresholds presented in Table 4 above.

In order to determine whether the proposed project would result in PM emissions in excess of the applicable thresholds of significance presented above, the proposed project's construction and operational PM_{10} and $PM_{2.5}$ emissions have been estimated using CalEEMod. According to the CalEEMod results, the proposed project would result in PM_{10} and $PM_{2.5}$ emissions as shown in Table 5. As presented in the table, the proposed project's estimated emissions of PM_{10} and $PM_{2.5}$ would be well below the applicable SMAQMD thresholds of significance.

Table 5
Maximum Unmitigated Project Emissions of PM_{10} and $PM_{2.5}$

Pollutant	Project Construction Emissions (lbs/day)	Construction Thresholds (lbs/day)	Project Operational Emissions (lbs/day)	Operational Thresholds (lbs/day)	Project Operational Emissions (tons/yr)	Operational Thresholds (tons/yr)
PM_{10}	20.40	80	9.35	80	1.65	14.6
$PM_{2.5}$	11.99	82	2.74	82	0.49	15

Source: CalEEMod, June 2019 (see Appendix A).

Based on the above, the proposed project is not expected to result in PM_{10} and $PM_{2.5}$ concentrations in excess of SMAQMD's thresholds of significance, and impacts would be less than significant. Considering that the proposed project would not result in a project-specific impact related to emissions of PM, operation of the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Questions E

Localized concentrations of carbon monoxide (CO) are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the proposed project would be expected to increase local CO concentrations. Concentrations of CO approaching the ambient air quality standards are only expected where background levels are high, and traffic volumes and congestion levels are high. The SMAQMD's preliminary screening methodology for localized CO emissions provides a conservative indication of whether project-generated vehicle trips would result in the generation of CO emissions that exceed the applicable threshold of significance. The first tier of SMAQMD's recommended screening criteria for localized CO states that a project would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the project would not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

Even if a project would result in either of the above, under the SMAQMD's second tier of localized CO screening criteria, if all of the following criteria are met, the project would still result in a less-than-significant impact to air quality for localized CO:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air would be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

As discussed in further detail in the Transportation and Circulation section of this IS/MND, and according to the Traffic Impact Study prepared by Kimley Horn for the proposed project,[6] the proposed project is expected to generate approximately 1,686 total daily vehicle trips, with 238 trips during the AM peak hour and 214 trips during the PM peak hour. Implementation of the

[6] Kimley Horn. *Traffic Impact Study: 1690 Bell Avenue Shell*. August 16, 2019.

proposed project would result in deterioration of intersection LOS to an unacceptable level of E at the intersection of Bell Avenue and Beloit Drive. However, as further discussed in the Transportation and Circulation section of this IS/MND, the controlling approach operating at LOS E is within the project site where project-related trips leave the site. The remaining intersection approaches would operate at acceptable levels. Furthermore, the intersection would not experience more than 31,600 vehicles per hour following implementation of the project site, and air mixing is not inhibited in the project site. Consequently, implementation of the proposed project is not anticipated to result in impacts related to localized CO concentrations.

Questions F and G

The proposed project involves the construction and operation of two warehouse buildings totaling approximately 339,549 sf, thus, the proposed project would not introduce new sensitive receptors to the area. The existing residences and elementary school in proximity to the project site would be considered sensitive receptors to any pollutants potentially emitted during construction or operation of the proposed project.

TAC Emissions

The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook)[7] provides recommendations for separating sensitive land uses from land uses typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, chrome platers, dry cleaners, and gasoline dispensing facilities. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Implementation of the proposed project would result in in the use of diesel-powered construction equipment as well as heavy-duty diesel vehicles during project operations. Considering the anticipated use of diesel engines within the project site, and the proximity of the site to existing residences and a nearby school, the potential for the proposed project to result in impacts related to exposure of sensitive receptors to substantial concentrations of TACs was analyzed for construction and operation of the proposed project.

TAC emissions occurring during construction and operations of the proposed project would originate primarily from mobile sources. For instance, off-road equipment used during project construction, such as back hoes, pavers, or graders, would move throughout the project site, and operated at varying locations within the project site during building construction. Similarly, heavy-duty vehicles used during project operations would move within the project site to access loading docks at each proposed structure. Consequently, sources of TAC emissions resulting from implementation of the proposed project would be considered mobile-sourced, as opposed to stationary sources, such as stationary generators. SMAQMD has not established quantitative thresholds of significance for construction-related TAC emissions or mobile-sourced TAC emissions. However, SMAQMD has established a quantitative threshold for stationary sources of TACs. For stationary sources of TACs, the SMAQMD has determined that an increase in cancer risk of 10 cases per 1 million people would constitute a significant impact. Considering the absence of specific thresholds applicable to construction activity or mobile-sourced TACs resulting from the use of heavy-duty diesel trucks on-site, the SMAQMD's threshold for health risks for stationary sources is applied to health risks from project implementation, which would constitute a conservative approach to analysis.

[7] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

It should be noted that Sections 2449 and 2485 of Title 13 of the California Code of Regulations limits idling of heavy-duty trucks to five minutes. Unless specifically exempted in Sections 2449 and 2485, all diesel-powered equipment and heavy-duty trucks would be subject to the idling limitations, which would reduce the emission of DPM during both project construction and operations.

As noted previously, operation of construction equipment and heavy-duty diesel trucks within the project site would result in emissions of DPM. DPM is the solid material in diesel exhaust, more than 90 percent of such material is less than one micrometer in diameter, and, thus, DPM is a subset of the $PM_{2.5}$ category of pollutants. The $PM_{2.5}$ associated with short-term construction activities resulting from implementation of the proposed project using the construction assumptions presented under questions 'a' and 'b', at the maximally exposed sensitive receptor nearest to the site, has been estimated using the American Meteorological Society/Environmental Protection Agency (AMS/EPA) Regulatory Model (AERMOD) dispersion model. The associated cancer risk and non-cancer hazard index were calculated using the CARB's Hotspot Analysis Reporting Program Version 2 (HARP 2) Risk Assessment Standalone Tool (RAST), which calculates the cancer and non-cancer health impacts using the risk assessment guidelines of the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments.[8] The modeling was performed in accordance with the USEPA's User's Guide for the AMS/EPA Regulatory Model – AERMOD[9] and the 2015 OEHHA Guidance Manual.

While the $PM_{2.5}$ concentrations were estimated based on construction assumptions, the $PM_{2.5}$ emission rate for heavy-duty vehicles within the project site was estimated based on information from the CARB's emissions factor (EMFAC) web database.[10] The estimated emissions factors were combined with trip generation rates and trip distribution rates provided by Kimley Horn for the proposed project. The estimated cancer risk as well as non-cancer hazard indexes for unmitigated project construction are presented in Table 6, while operational cancer risk and hazard indexes are presented in Table 7. It should be noted that the Bell Avenue Elementary School exists approximately 480 feet to the east of the project site. Consequently, health risks related to construction and operations of the project were considered for receptors that live nearby the project site and work or attend school at the Bell Avenue Elementary School.

Table 6
Maximum Unmitigated Cancer Risk and Hazard Index Associated with Project Construction DPM

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
Construction	10.51	0.00	0.01
Thresholds of Significance	*10*	*1.0*	*1.0*
Exceed Thresholds?	**YES**	**NO**	**NO**

Sources: AERMOD, and HARP 2 RAST, June 2019 (see Appendix A).

8 Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments* [pg. 8-18]. February 2015.

9 U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

10 California Air Resources Board. *EMFAC Web Database*. Available at: https://www.arb.ca.gov/emfac/. Accessed August 2019.

Table 7 Maximum Unmitigated Cancer Risk and Hazard Index Associated with Project Operational DPM			
	Cancer Risk (per million persons)	**Acute Hazard Index**	**Chronic Hazard Index**
Operations	1.80	0.00	0.00
Thresholds of Significance	*10*	*1.0*	*1.0*
Exceed Thresholds?	**NO**	**NO**	**NO**
Sources: AERMOD, and HARP 2 RAST, July 2019 (see Appendix A).			

As shown in Table 6 and Table 7, implementation of the proposed project would not result in acute or chronic hazards in excess of the SMAQMD's standards. Furthermore, project operations would not result in substantial cancer risk to nearby residents or students. However, as shown in Table 6, project construction would have the potential to result in cancer risks in excess of SMAQMD's 10 cases per million threshold.

Based on the above, construction of the proposed project could result in exposure of nearby receptors to health risks in excess of SMAQMD standards.

Conclusion

As discussed above, the proposed project would not result in the emission of substantial concentrations of localized CO. Although project operations would not be anticipated to result in emission of substantial amounts of the TAC DPM, project construction would have the potential to result in cancer risks for nearby residents or students in excess of the SMAQMD's standards. Exposure of nearby receptors to substantial concentrations of DPM could result in a significant impact, but the *effect can be mitigated to less than significant*. Implementation of Mitigation Measure 2-1 would reduce the $PM_{2.5}$ emissions resulting from project construction, which would result in reduced health risks to nearby residents. Following implementation of Mitigation Measure 2-1, health risks to nearby residents from project construction would be below SMAQMD's thresholds of significance. In addition, emissions during project operations have been shown to be below SMAQMD's thresholds. Therefore, the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Question H

Emissions from proposed project operations were quantified using CalEEMod as described above. Based on the modeling, the proposed project would result in approximately 3,717.70 metric tons of CO_2 equivalent per year. SMAQMD has identified thresholds of significance for agencies without adopted GHG reduction plans[11]; however, projects within Sacramento City limits would be required to adhere to reduction targets, strategies, and specific actions for reducing GHG Emissions set forth by the adopted Climate Action Plan (CAP). Consequently, the City of Sacramento does not assess potential impacts related to GHG emissions on the basis of total emissions of GHGs. Rather, the City of Sacramento has integrated a CAP into the City's General Plan, and, thus, potential impacts related to climate change from development within the City are assessed based on the project's compliance with the City's adopted General Plan CAP Policies and Programs set forth in Appendix B of the General Plan Update. The majority of the policies and programs set forth in Appendix B are citywide efforts in support of reducing overall citywide emissions of GHG. However, various policies related to new development within the City would

[11] Sacramento Metropolitan Air Quality Management District. *CEQA Guide.* May 2018

directly apply to the proposed project. The project's general consistency with City policies that would reduce GHG emissions from buildout of the City's General Plan is discussed below.

Goal LU 2.5, Policy LU 2.5.1, and Policy LU 2.7.6 require that new urban developments should be well-connected, minimize barriers between uses, and create pedestrian-scaled, walkable areas. The proposed project would include a network of accessible pedestrian paths within the project site and connecting to existing sidewalks along Bell Avenue. In addition, future employees would be provided with convenient access to the existing bike lanes along the project frontage at Bell Avenue, and a total of 30 bicycle lockers would be provided on-site for use by future employees. Thus, the proposed project would comply with Goal LU 2.5 and Policy LU 2.5.1. The project site is surrounded by existing urban development and would be considered infill development. Policy LU 1.1.4 and LU 1.1.5 seek to support infill development within the City; thus, the project would comply with both policies. In compliance with Policy LU 2.6.1 and LU 4.1.1, the project would introduce new industrial development in proximity to existing residential developments, which could allow for shorter commute trip lengths as future employees could reside in close proximity to the project site.

The proposed project would be constructed in compliance with the California Building Standards Code (CBSC), which includes the California Building Energy Efficiency Standards and the California Green Building Code. The CBSC, and the foregoing standards and codes, increase the sustainability of new development through requiring energy efficiency and sustainable design practices (Policy ER 6.1.7). Such sustainable design would support the City's Policy U 6.1.5, which states that energy consumption per capita should be reduced as compared to the year 2005.

Policy ER 6.1.2 directs the City to review proposed development and incorporate feasible measures that reduce construction emissions for ROG, NO_X, and other pollutants. As discussed under Question A above, the proposed project would be required to adhere to Mitigation Measure 2-1, which would reduce emissions of ROG and NO_X to a less-than-significant level. Thus, following implementation of Mitigation Measure 2-1, emissions related to construction of the proposed project would be in compliance with SMAQMD's thresholds of significance and Policy ER 6.1.2.

The Master EIR concluded that buildout of the City's General Plan would not result in a conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The proposed project would be consistent with the City's General Plan land use designation for the site as well as the policies discussed above that are intended to reduce GHG emissions from buildout of the City's General Plan. Thus, GHG emissions from operation of the proposed project were previously addressed as part of the analysis in the Master EIR. Considering the project's consistency with the City's General Plan and the general consistency with the City's General Plan policies intended to reduce GHG emissions, the foregoing annual emissions related to operations of the proposed project have been previously addressed, and the proposed project would not conflict with the City's CAP. Consequently, the proposed project would result in a less-than-significant impact. Considering that the proposed project would not result in a project-specific impact related to compliance with the City's CAP, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

Implementation of the following mitigation measure would reduce construction related emissions of NO_X to a *less-than-significant* level as shown in Table 8. In addition, the following mitigation measure would result in reduced health risks during project construction as shown in Table 9.

Consequently, project impacts related to the exposure of sensitive receptors to substantial pollutant concentrations would be reduced to a *less-than-significant* level.

Table 8
Maximum Mitigated Project Construction NO_X Emissions

Pollutant	Project Emissions (lbs/day)	SMAQMD Threshold of Significance (lbs/day)
NO_X	85	85

Source: CalEEMod, June 2019 (see Appendix A).

Table 9
Maximum Mitigated Cancer Risk and Hazard Index Associated with Project Construction DPM

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
Construction	9.90	0.00	0.00
Thresholds of Significance	*10*	*1.0*	*1.0*
Exceed Thresholds?	**NO**	**NO**	**NO**

Sources: AERMOD, and HARP 2 RAST, June 2019 (see Appendix A).

2-1 *Prior to approval of any grading plans, the project applicant shall demonstrate that emissions from all off-road diesel-powered equipment to be used in the construction of the project (including owned, leased, and subcontractor equipment) shall not exceed 0.1107 tons of $PM_{2.5}$ per year of construction and 85 pounds per day of NO_X. SMAQMD's Construction Mitigation Tool, or another method deemed acceptable by the City, may be used to calculate the anticipated emissions resulting from construction of the proposed project. Emissions estimates for project construction shall be submitted for review and approval to the City of Sacramento Planning Division.*

SMAQMD's Construction Mitigation Tool requires the user to input the type and number of pieces of equipment used, as well as the total amount of time the equipment would be used for each day and throughout the entire construction period. During the course of project construction, should the project contractor determine that changes to the anticipated equipment list are needed, an update to SMAQMD's Construction Mitigation Tool shall be submitted to the City demonstrating that the proposed changes to equipment usage would not result in project construction emitting in excess of 0.1107 tons of $PM_{2.5}$ per year and 85 pounds per day of NO_X.

In addition, all off-road equipment working at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to 5 minutes or less in accordance with the Off-Road Diesel Fueled Fleet Regulation as required by CARB.

Portable equipment over 50 horsepower must have either a valid District Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.

Findings

Implementation of Mitigation Measure 2-1 would serve the dual purposes of reducing construction-related NO_X emissions and construction-related $PM_{2.5}$ emissions. Mitigation Measure 2-1 would be sufficient to ensure that all additional significant environmental effects of the proposed project relating to Air Quality would be reduced to a less-than-significant level. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
3. BIOLOGICAL RESOURCES Would the proposal: A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?			X
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?		X	
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?		X	

Environmental Setting

The following discussion is largely based on a Biological Assessment prepared for the proposed project by Sycamore Environmental Consultants, Inc. In September 2019.[12]

The project site is located on two parcels totaling approximately 21 acres in an urbanized area surrounded by existing development. The site has historically been used for agricultural production of row crops; however, the site is currently vacant and regularly disked for weed abatement. The proposed project would include the construction of two warehouse buildings totaling approximately 339,549 sf and associated site improvements such as depressed loading docks, paved parking areas, landscaping features, and on-site stormwater quality basins.

Although the majority of the City is developed with residential, commercial, and other urban development, valuable plant and wildlife habitat still exists. The natural plant and wildlife habitats are located primarily along the City boundaries in the northern, southern and eastern portions of the City, but also occur along river and stream corridors and on a number of undeveloped parcels. Habitats that are present in the City include annual grasslands, riparian woodlands, oak woodlands, riverine, ponds, freshwater marshes, seasonal wetlands, and vernal pools. The plant and wildlife habitats on-site and their general locations are discussed briefly below.

Special-Status Species

Special-status species are plants and animals in the following categories:

- Listed or proposed for listing as threatened or endangered under federal Endangered Species Act (ESA) or candidates for possible future listing (FWS 2013);
- Listed or candidates for listing by the state of California as threatened or endangered under the California Endangered Species Act (CESA);
- Listed as Fully Protected under the California Fish and Game Code;

[12] Sycamore Environmental Consultants, Inc. *Biological Assessment for the Bell Avenue Warehouses Project*. September 2019.

- Animals identified by California Department of Fish and Wildlife (CDFW) as species of special concern;
- Taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
    - CRPR 1A Plants presumed to be extinct in California;
    - CRPR 1B Plants that are rare, threatened, or endangered in California and elsewhere;
    - CRPR 2 Plants that are rare, threatened, or endangered in California but more common elsewhere;
    - CRPR 3 Plants about which more information is needed (a review list); and
    - CRPR 4 Plants of limited distribution (a watch list).

A locally significant species is a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125[c]) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

A search of the CDFW Natural Diversity Database (CNDDB) was performed by Sycamore Environmental Consultants on August 27, 2019 for federal-listed species within the project site quadrangle as well as the eight surrounding quadrangles (i.e., Taylor Monument, Rio Linda, Citrus Heights, Sacramento West, Sacramento East, Carmichael, Pleasant Grove, Davis, and Elk Grove). In addition to the search of the CNDDB, Sycamore Environmental Consultants searched the California Native Plant Society (CNPS) inventory of rare and endangered plants for known occurrences of federal-listed plants in the same search area as used for the CNDDB.

The foregoing database searches focused on federally-listed species; in an effort to augment the data provided by Sycamore Environmental Consultants, Raney Planning & Management conducted an additional query of the CNDDB to determine the likelihood that non-federally listed special-status species could occur within the project area. The CNDDB queries conducted by Raney identified 17 special-status plant species and 29 special-status wildlife species within the nine-quadrangle search area.

It should be noted that the California Fish and Game Code §3503 protects most birds and their nests. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) also protects most birds and their nests, including most non-migratory birds in California. Birds protected by the MBTA have the potential to nest in the existing trees located along the southern and eastern boundary of the project site.

Special-Status Plant Species

Of the 17 special-status plant species identified, ten species were eliminated from further consideration due to the habitat requirements (i.e., riparian, wetland, alkali scalds, and/or forest habitats) which are not present on the project site. With regard to the remaining species, the project site has been disturbed through previous agricultural activities, and is regularly disked to prevent weed growth. Due to the frequent past and present disturbance of the project site, as well as the developed nature of much of the surrounding area, special-status plants are not likely to occur on-site. Sycamore Environmental Consulting confirmed the absence of special-status plants during a botanical survey of the project site on April 25, 2019.

Special-Status Wildlife Species

Of the 29 special-status wildlife species identified, 23 species were eliminated from further consideration due to habitat requirements (i.e., aquatic, wetland, forest, elderberry bushes, and/or coastal habitats) which are not present on the project site. As noted above, the site is currently highly disturbed through regular disking and is surrounded by existing development. Despite the disturbed and urban nature of the site and its surroundings, the site may contain marginal habitat for the remaining six species: vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot, burrowing owl, Swainson's hawk, and white-tailed kite.

Waters and Wetlands

Reconnaissance-level surveys of wetlands and waters on the project site were conducted by Sycamore Environmental Consultants on August 10 and 17, 2005, December 20, 2018, January 3, 2019, and February 7 and 23, 2019. Data points were taken using the current U.S. Army Corps of Engineers (USACE) three-parameter test based (Regulatory No. 200400779) on vegetation, soil characteristics, and hydrology indicators. Based on the site surveys, Sycamore Environmental Consultants concluded that the project site includes 0.46 acre of vernal pools and 0.41 acre of seasonal wetland, for a combined total of 0.87 acre.

Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

Answers to Checklist Questions

Question A

The use, handling, and storage of hazardous materials is regulated by both the Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA). Cal/OSHA is responsible for developing and enforcing workplace safety regulations. At the local level, the Sacramento Environmental Management Department regulates hazardous materials within Sacramento County, including chemical storage containers, businesses that use hazardous materials, and hazardous waste management.

The proposed project consists of the construction of two warehouse buildings and associated site improvements such as depressed loading docks, on-site drainage infrastructure, and landscaping features. Operations associated with the proposed project would be typical of other warehouses in the City, and would be governed by the uses permitted for the site per the City's Code and General Plan. The project site is designated Employment Center Low Rise by the 2035 General Plan and would require approval of a rezone for the southern portion of the project site from R-1A-SPD to M-1-SPD. Per Section 17.220.110 of the Sacramento City Code, the M-1-SPD

designation allows for residential, commercial and institutional, and industrial and agricultural uses such as those associated with the proposed project.

It should be noted that the use and storage of hazardous materials is regulated by Section 8.64 of the Sacramento City Code. Section 8.64.040 establishes regulation related to the designation of hazardous materials and requires that a hazardous material disclosure form be submitted within 15 days by any person using or handling a hazardous material. In addition, the routine transport, use, and disposal of hazardous materials are regulated by existing federal, state, and local regulations. For instance, the Sacramento County Environmental Management Department requires businesses handling sufficient quantities of hazardous materials to submit a Hazardous Materials Business Plan and obtain permitting. Thus, the proposed project would not involve the use, production, disposal, or handling of materials that could pose a hazard to plant or animal populations in the area; therefore, the proposed project would result in a less-than-significant impact and implementation of the project would result in ***no additional significant environmental effects*** beyond what was previously anticipated in the Master EIR.

Question B

The proposed project would include the construction of two warehouse buildings on the approximately 21-acre vacant site. Two new site access points would be constructed along the northern project frontage with Bell Avenue. Given the highly disturbed and vacant nature of the site, the proposed project would not result in the removal of any on-site trees or substantial shrubs.

In compliance with General Plan Policy Environmental Resources (ER) 2.1.10, Sycamore Environmental Consultants conducted habitat assessments of the project site, including protocol-level surveys discussed below. The completion of habitat surveys fulfills the requirement of ER 2.1.10 that such surveys be completed. Policy ER 2.1.10 requirements related to potential mitigation are discussed in further depth below.

Special-Status Species

As noted above, special-status plant species are not likely to occur on-site, and were not observed during a botanical survey of the site conducted by Sycamore Environmental Consultants. Thus, the proposed development would not result in adverse effects to special-status plants.

As further discussed in question C below the project site contains both vernal pool and seasonal wetland habitats. Such aquatic resources can provide habitat for certain special-status branchiopods, such as the vernal pool fairy shrimp and the vernal pool tadpole shrimp. To determine the presence or absence of special-status branchiopods on-site, dry season soil samples taken from on-site aquatic features in 2004 and 2018 were analyzed. The results of the analysis indicated that special-status branchiopod species were not present on the project site. In addition, two series of wet season surveys were performed between October 2004 and April 2005 and between December 2018 and April 2019. Special-status branchiopods were not identified during the wet season sampling. Sycamore Environmental Consultants concluded that the frequent disking and history of disturbance of the site likely damaged or destroyed any special-status branchiopod eggs within the project site, rendering the on-site habitat unsuitable for either species. Considering the demonstrated absence of special-status branchiopods from the project site, implementation of the proposed project, including grading and development of the project site, would not affect either the vernal pool fairy shrimp and the vernal pool tadpole shrimp.[13]

[13] Sycamore Environmental Consultants, Inc. *Biological Assessment for the Bell Avenue Warehouses Project*. September 2019.

Another species that uses vernal pool habitats is the western spadefoot, which use vernal pools for breeding and egg-laying. Although the project site contains vernal pool habitat, the history of frequent disturbance of the project site renders the on-site vernal pools as unsuitable habitat for the species. Consequently, western spadefoots are not anticipated to occur within the project site and implementation of the proposed project would not result in impacts to the species.

The existing on-site grassland may provide marginal foraging habitat for species such as Swainson's hawk and white-tailed kite. The project site does not contain a substantial number of trees; however, some ornamental trees are located along the eastern and southern boundaries of the project site. Considering the low stature of the existing trees, none of the trees along the project site boundary are considered suitable nesting habitat for Swainson's hawk or white-tailed kite. However, trees exist within the project vicinity that could be used by either species for nesting. Should either species nest in proximity to the project site, implementation of the proposed project would result in loss of foraging habitat for the species. It should be noted that while nesting habitat is protected for both species, only Swainson's hawk foraging habitat is considered protected. Without a pre-construction survey of the project site, the presence or absence of white-tailed kite and/or Swainson's hawk cannot be determined with certainty.

Should ground squirrel burrows exist within the project site, the project site could provide nesting and foraging habitat for burrowing owl. However, considering that the project site is frequently disked, ground squirrel burrows and burrowing owls are unlikely to exist within the project site. Nevertheless, without a pre-construction survey of the project site, the presence or absence of burrowing owls cannot be determined with certainty.

In addition to the bird species discussed above, the project site could provide foraging or nesting habitat for birds protected under the MBTA. The grassland areas of the project site could provide nesting habitat for MBTA protected ground nesting birds, while the trees and shrubs along the project perimeter could provide nesting habitat for MBTA protected species.

Implementation of the proposed project would involve ground disturbing activities that would result in the conversion of grassland habitat to urbanized uses and may involve the removal of trees and shrubs along the perimeter of the project site. Moreover, should MBTA protected or special-status species nest in shrubs or trees in proximity to the project site, implementation of the proposed project could result in adverse effects to such species.

Conclusion

In the absence of preconstruction surveys, implementation of the proposed project could result in a potentially significant impact on burrowing owl, white-tailed kite, Swainson's hawk, and other nesting birds protected by the MBTA, but the *effect can be mitigated to less than significant*. As such, the proposed project would be required to implement Mitigation Measures 3-1 through 3-5 to reduce impacts resulting from implementation of the proposed project on special-status species to a less-than-significant level. Mitigation Measures 3-1 through 3-5 would fulfill the requirements of General Plan Policy ER 2.1.10 related to mitigating potential impacts to special-status species in compliance with state and federal laws. Therefore, with implementation of mitigation measures, the proposed project would result on ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Question C

Sycamore Environmental Consultants determined that the project site contains 0.41 acres of seasonal wetlands and 0.46 acres of vernal pools for a total of 0.87 acres of aquatic resources

on-site. The proposed project would result in the fill of all existing on-site aquatic resources,[14] which could potentially affect other species of special concern to agencies or natural resource organizations. General Plan Policy ER 2.1.6 directs the City to preserve and protect wetland resources, including vernal pools and other seasonal wetlands to the extent feasible. Where protection of such resources is not feasible Policy ER 2.1.6 requires that mitigation be implemented in compliance with State and federal regulations. In addition, the City is directed to require either on- or off-site permanent preservation of equivalent amounts of wetland habitat to ensure no-net-loss of value and/or function of wetland habitats. Because the proposed project would involve fill of the existing vernal pools and seasonal wetlands within the project site, the project could conflict with General Plan Policy ER 2.1.6. However, with implementation of Mitigation Measure 3-4, the *effect can be mitigated to less than significant*. Implementation of Mitigation Measure 3-4 would reduce the proposed project's impact to a less-than-significant level and ensure compliance with General Plan Policy 2.1.6 by requiring that the project comply with existing USACE guidance which requires that compensatory mitigation be purchased resulting in no net loss of wetlands. By ensuring that the loss of on-site wetlands is fully compensated through the purchase of equivalent amounts of preservation or creation credits, Mitigation Measure 3-4 ensures that the proposed project would comply with General Plan Policy 2.1.6 and that the proposed project would result in ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Biological Resources to *less-than-significant* levels.

Western Burrowing Owl

3-1 The project applicant shall implement the following measure to avoid or minimize impacts to western burrowing owl:

- *Within 14 days prior to any ground disturbing activities for each phase of construction, the project applicant shall retain a qualified biologist to conduct a preconstruction survey of the site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012 (or subsequent applicable), CDFW Staff Report on Burrowing Owl Mitigation. The qualified biologist shall be familiar with burrowing owl identification, behavior, and biology, and shall meet the minimum qualifications described in the 2012 CDFW Staff Report. If the survey does not identify any nesting burrowing owls on the site, further mitigation is not required for that phase unless activity ceases for a period in excess of 14 days in which case the survey requirements and obligations shall be repeated. The results of the survey shall be submitted to the City's Community Development Department.*
- *If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures at least equal to the 2012 (or subsequent applicable) CDFW Staff Report, as determined by the qualified biologist.*

[14] Sycamore Environmental Consultants, Inc. *Biological Assessment for the Bell Avenue Warehouses Project*. September 2019.

- *During the breeding season (February 1 through August 31), the following measures will be implemented:*
    - *Disturbance-free buffers will be established around the active burrow. During the peak of the breeding season, between April 1 and August 15, a minimum of a 500-foot buffer will be maintained. Between August 16 and March 31, a minimum of a 150-foot buffer will be maintained. The qualified biologist (as defined above) will determine, in consultation with the City of Sacramento Planning Division and CDFW, if the buffer should be increased or decreased based on site conditions, breeding status, and non-project-related disturbance at the time of construction.*
    - *Monitoring of the active burrow will be conducted by the qualified biologist during construction on a weekly basis to verify that no disturbance is occurring.*
    - *After the qualified biologist determines that the young have fledged and are foraging independently, or that breeding attempts were not successful, the owls may be excluded in accordance with the non-breeding season measures below. Daily monitoring will be conducted for one week prior to exclusion to verify the status of owls at the burrow.*
- *During the non-breeding season (September 1 to January 31), owls occupying burrows that cannot be avoided will be passively excluded consistent with Appendix E of the 2012 CDFW Staff Report:*
    - *Within 24 hours prior to installation of one-way doors, a survey will be conducted to verify the status of burrowing owls on the site.*
    - *Passive exclusion will be conducted using one-way doors on all burrows suitable for burrowing owl occupation.*
    - *One-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation.*
    - *While the one-way doors are in place, the qualified biologist will visit the site twice daily to monitor for evidence that owls are inside and are unable to escape. If owls are trapped, the device shall be reset and another 48-hour period shall begin.*
    - *After a minimum of 48 hours, the one-way doors will be removed and the burrows will be excavated using hand tools to prevent reoccupation. The use of a pipe is recommended to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow.*
    - *After the owls have been excluded, the excavated burrow locations will be surveyed a minimum of three times over two weeks to detect burrowing owls if they return. The site will be managed to prevent reoccupation of burrowing owls (e.g., disking, grading, manually collapsing burrows) until development is complete.*
    - *If burrowing owls are found outside the project site during preconstruction surveys, the qualified biologist shall evaluate the potential for disturbance. Passive exclusion of burrowing owls shall be avoided to the maximum extent feasible where no ground disturbance will occur. In cases where ground disturbance occurs within the no-disturbance buffer of an occupied burrow, the qualified biologist shall determine in consultation with the City of Sacramento*

Planning Division and CDFW whether reduced buffers, additional monitoring, or passive exclusion is appropriate.

3-2 *If active burrowing owl dens are present and the project would impact active dens, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at least equal to the 2012 (or subsequent applicable), CDFW Staff Report. Such mitigation shall include the permanent protection of land, which is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. In determining the location and amount of acreage required for permanent protection, the project applicant, in conjunction with the City of Sacramento Community Development Department, shall seek lands that include the same types of vegetation communities and fossorial mammal populations found in the lost foraging habitat, with a preference given to lands that are adjacent to, or reasonably proximate to, the lost foraging lands. Such lands shall provide for nesting, foraging, and dispersal comparable to, or better than, the lost foraging land. The minimum amount of acreage for preservation shall be 6.5 acres per nesting pair or unpaired resident bird. Additional lands may be required as determined pursuant to the then current standards/best practices for mitigation acreage as determined by the City of Sacramento Community Development Department in consultation with CDFW.*

Swainson's Hawk

3-3 *Within 14 days prior to the commencement of construction and/or maintenance activities during the nesting season for Swainson's hawk (between February 15 and September 1) a targeted Swainson's hawk nest survey shall be conducted of all accessible areas within 0.25 mile of the proposed construction area. If active Swainson's hawk nests are found within 0.25 mile of a construction site, construction shall cease within 0.25 mile of the nest until a qualified biologist determines that the young have fledged or the determination is made that the nesting attempt has failed. If the applicant desires to work within 0.25 mile of the nest, the applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced. The project applicant, the project biologist, the City, and CDFW shall collectively determine the nest avoidance buffer, and what (if any) nest monitoring is necessary. If an active Swainson's hawk nest is found within the project site prior to construction and is in a tree that is proposed for removal, then the project applicant shall either wait until fledging is complete (with agreed-upon construction buffers in place) or obtain an Incidental Take Permit. The results of the survey shall be submitted to the Sacramento Community Development Department.*

3-4 *Prior to initiation of ground disturbing activity for the project, a qualified biologist shall conduct a review of Swainson's hawk nest data available in the CNDDB and contact the CDFW to determine the most up-to-date Swainson's hawk nesting information for the project area. If desired by the project applicant, the biologist may further conduct a survey of the identified nests to determine the presence or absence of Swainson's hawks. The biologist shall provide the City with a summary of findings of Swainson's hawk nesting activity within 10 miles of the Project Area. If the biologist determines that the project site is within 10 miles of an active Swainson's hawk nest (where an active nest is defined as a nest with documented*

Swainson's hawk uses within the past five years), the applicant shall mitigate for the loss of suitable Swainson's hawk foraging habitat by implementing one of the following measures as applicable:

- *If an active nest is identified within one mile of the project site: One acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*
- *If an active nest is identified within five miles (but greater than one mile) of the project site: 0.75 acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*
- *If an active nest is identified within 10 miles (but greater than five miles) of the project site: 0.5 acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*

Results of the nesting survey, as well as proof of purchase of mitigation credits as required per the above mitigation options, shall be provided to the Sacramento Community Development Department for review and approval prior to initiation of ground disturbance for any portion of the project site.

White-Tailed Kite, Other Raptors and Other Birds Protected by the MBTA or the California Fish and Game Code

3-5 *If construction is to begin during the nesting season of February 1 through August 31, then a preconstruction survey for protecting nesting birds shall be conducted by a qualified biologist. If a 15-day lapse in construction work occur during the nesting season, then another preconstruction survey shall be conducted prior to the resumption of work. Results of the preconstruction surveys shall then be submitted to the City of Sacramento Planning Division for review.*

The preconstruction survey shall be conducted within 15 days prior to the start of construction. The survey shall cover the project site and areas within 500 feet for birds of prey, and within 100 feet for other bird nests. Private and inaccessible areas shall be surveyed from accessible public areas with binoculars. If no active nests of a bird of prey, MBTA bird, or other CDFW protected bird is found, then no further avoidance and minimization measures are required. If active nests are found, they shall be avoided and protected as follows:

- *If a bird of prey nest is found, a 250-foot-radius Environmental Sensitive Area (ESA) shall be established around the nest.*
- *If an active nest of another (non-bird of prey) bird is found, a 50-foot-radius ESA shall be established around the nest.*

Construction activity shall not be allowed in an ESA until the biologist determines that either: 1) the nest is no longer active; 2) monitoring determines a small ESA buffer will protect the active nest; or 3) monitoring determines that no disturbance to the nest is occurring. Construction buffers may be reduced in size or removed

entirely if the qualifies biologist determines that construction activities will not disturb nesting activities or contribute to nest abandonment.

Loss of Aquatic Features

3-6 *Prior to issuance of a grading permit, the developer shall submit a wetland mitigation and monitoring plan to the City:*

- *The mitigation plan shall be prepared in accordance with the requirements of the USACE's Regulatory Guidance Letter (RGL 02-02) for compensatory wetland mitigation and the Mitigation and Monitoring Proposal Guidelines (Corps, 30 December 2004).*
- *The mitigation plan shall describe how the jurisdictional wetlands in the grading plan area shall be mitigated. Mitigation may include the purchase of wetland mitigation credits at a USACE approved mitigation bank.*
- *A copy of the bill of sale for the purchase of wetland mitigation credits shall be submitted to the City.*

Findings

Implementation of Mitigation Measures 3-1 through 3-5 would ensure that pre-construction surveys are conducted to determine the presence or absence of special-status species within the project site. Contingent upon the findings of the pre-construction surveys, further steps may be necessary to ensure that project implementation would not result in impacts to special status species, as discussed in Mitigation Measures 3-1 through 3-5. Additionally, Mitigation Measure 3-6 would ensure that loss of on-site wetlands is properly mitigated in accordance with USACE's guidance. Thus, all additional significant environmental effects of the proposed project relating to Biological Resources can be mitigated to less-than-significant levels, and implementation of the proposed project would result in ***no additional significant environmental effects*** beyond what has been previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
4. CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?			X
B) Directly or indirectly destroy a unique paleontological resource?			X

Environmental Setting

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the City. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 General Plan Background Report, are located within close proximity to the Sacramento and American rivers and other watercourses.

The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today. The project site is located over 3.5 miles away from the American River; thus, archaeological or paleontological resources related to the American River are unlikely to be found in the project area. The 2035 General Plan Background Report also defines moderate sensitivity areas, which are areas such as creeks, other watercourses, and high spots near waterways where the discovery of villages is unlikely, but campsites or special use sites may have existed. Moderate areas are often disturbed by siltation, or development; however, discovery of new archaeological resources is still possible. The project site is in proximity to Arden Creek and Magpie Creek.

Standards of Significance

For purposes of this IS/MND, cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource; or
- A substantial adverse change in the significance of such resources.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General Plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR

2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort (Policy HCR 2.1.15).

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources (Impacts 4.4-1, 2).

Answers to Checklist Questions

The following discussion is based on a Cultural Resources Survey for the project site performed by Solano Archaeological Services (SAS). On January 30, 2019, a records search was conducted by staff at the North Central Information Center (NCIC), to research previous sites and surveys within 0.5-mile of the project site. The results of the search determined that previously recorded prehistoric or historic resources have not been identified within the project site. However, eight cultural resources, primarily historic-era residential buildings from the 20th century, were located within 0.5-mile of the project site. The NCIC further noted that previous cultural studies have not been conducted within the project site. On February 11, 2019, SAS conducted an intensive pedestrian survey of the project site by walking 50-foot transects.

Questions A and B

The approximately 21-acre project site is currently vacant, regularly disked for weed abatement, and has historically been used for agricultural purposes. The proposed project would include the construction of two warehouse structures totaling approximately 339,549 sf and associated site improvements such as depressed loading docks, paved parking areas, landscaping features, and on-site drainage infrastructure. As noted above, recent records searches of the NCIC have demonstrated that the project site does not contain any known historical or archaeological resources. Intensive pedestrian surveys of the project site conducted by SAS did not identify any evidence of surface or subsurface historic or prehistoric features. However, the presence of historic-era features in the vicinity and prehistoric sites in the general region suggests that comparable sites or features could be present in surface and subsurface contexts in the project site. The predominant historic theme of the project area is agriculture, ranching, transportation, and land reclamation, all of which could result in deposit of resources. However, in the professional opinion of SAS, such activities typically result in deposits and occurrences that can be seen on the ground surface. Because the intensive site surveys conducted by SAS did not identify any resources, the probability of encountering such resources during project implementation is considered low.

Based on the above, implementation of the proposed project would not cause a substantial adverse change in the significance of a historical resource, nor would it directly or indirectly destroy a unique paleontological resource. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what has been previously analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

Implementation of the proposed project would result in ***no additional significant environmental effects*** related to Cultural Resources.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
5. GEOLOGY AND SOILS A) Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?			X

Environmental Setting

Seismicity

The Sacramento 2035 General Plan Master EIR identifies all of the City of Sacramento as being subject to potential damage from earthquake ground shaking at a maximum intensity of VII on the Modified Mercalli scale (SGP Master EIR, Table 6.5-6). The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento; the Great Valley fault, located 26 miles from Sacramento; Concord-Green Valley Fault, located approximately 38 miles from Sacramento; and the Hunting Creek-Berryessa Fault, located 38 miles from Sacramento. The Foothills Fault System is considered capable of generating an earthquake with a Richter-Scale magnitude of 6.5; the Great Valley Fault is capable of generating an earthquake with a magnitude of 6.8; the Concord-Green Valley fault is capable of generating an earthquake with a magnitude 6.9, and the Hunting Creek-Berryessa Fault could generate a 6.9 magnitude earthquake. A major earthquake on any of these faults could cause strong ground shaking in the project area.

Topography

Terrain in the City of Sacramento features very little relief and the potential for slope instability within the City is minor due to the relatively flat topography of the area. The project site is relatively level with no major changes in grade.

Regional Geology

The project site lies near the southern end of the Sacramento Valley portion of the Great Valley Geomorphic Province. The Great Valley is bordered to the north by the Cascade and the Klamath Ranges, to the west by the Coast Ranges, to the east by the Sierra Nevada Mountain Range, and to the south by the transverse ranges. The valley formed by tilting of Sierran Block with the western side dropping to form the valley and the eastern side being uplifted to the form the Sierra Nevada Mountain Range. The valley is characterized by a thick sequence of sediments derived from erosion of the adjacent Sierra Nevada Mountain Range to the east and the Coast Range to the west. These sedimentary rocks are mainly Cretaceous in age. The depths of the sediments vary from a thin veneer at the edges of the valley to depths in excess of 50,000 feet near the western edge of the valley. In the vicinity of the project site, these sediments are approximately 15,000 feet deep.

Project Site Soils

The project site is underlain by San Joaquin loam and Urban land. San Joaquin loam soil typically occurs on the eastern side of the Sacramento and San Joaquin Valleys. The San Joaquin loam soil is moderately well-drained and has very slow infiltration rates. Urban land is widespread and found throughout the City of Sacramento. Urban land soils are moderately well-drained and have moderate infiltration rates.

Standards of Significance

For the purposes of this IS/MND, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the City. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level. Policy EC 1.1.1 requires regular review of the City's seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

Answers to Checklist Questions

Question A

Geologic Hazards

The project site is not located on or in the vicinity of an Alquist-Priolo Fault Zone; therefore, the potential for fault rupture on the proposed project site is considered to be low. The project site is located in an area of the City of Sacramento that is topographically flat. Seismically-induced landslides or landslides induced by soil failure typically occur on slopes with gradients of 30 percent or higher. According to the Background Report for the City's 2035 General Plan and the Natural Resources Conservation Service's (NRCS) Web Soil Survey,[15] the existing on-site soils range from 0 to three percent slopes. Considering the proposed project site is topographically flat, the potential for seismically-induced or soil failure landslides does not exist.

Soil liquefaction is a phenomenon primarily associated with the saturated soil layers located close to the ground surface. The soils lose strength during ground shaking generated by seismic events. Due to the loss of strength, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant number of fines (minute silt and clay fraction) may also liquefy. According to the NRCS, soils at the project site include 0 to three percent slopes. The proposed project site is not located within a State-Designated Seismic Hazard Zone for liquefaction. Thus, the potential for the project site to experience geologic or seismic hazards related to liquefaction or fault rupture is low.

[15] United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed September 23, 2019.

It should further be noted that as part of the building permit process, a Geotechnical Investigation is required to be submitted with the building permit application and implemented via the building plan review process prior to issuance of the building permit. The Geotechnical Investigation would include site-specific recommendations for general construction procedures; site clearing; site preparation and sub-excavation; engineered fill construction; utility trench backfill; foundation design; interior floor slab support; floor slab moisture penetration resistance; exterior flatwork; pavement design; construction testing and observation; and review of final plans and specifications to ensure that the recommendations within the investigation are implemented as part of the proposed project.

The proposed project would be required to be consistent with the City of Sacramento Building Code; and, therefore would comply with the CBSC as the City implements the CBSC through the building permit process. The CBSC provides minimum standards for building design in the State of California. Chapter 16 of the CBSC (Structural Design Requirements) includes regulations and building standards governing seismically-resistant construction and construction techniques to protect people and property from hazards associated with excavation cave-ins and falling debris/construction materials. Chapter 18 of the CBC provides regulations regarding site excavations, foundations, retaining walls, and grading, including, but not limited to, requirements for seismically-resistant design, foundation investigation, stable cut and fill slopes, and excavation, shoring, and trenching. The CBSC also defines different building regions in California and ranks them according to their seismic hazard potential. Seismic Zone 1 has the least seismic potential and Zone 4 has the highest seismic potential. The City of Sacramento is in Seismic Zone 3; accordingly, the proposed project would be required to comply with all design standards applicable to Seismic Zone 3.

Consistent with the conclusions of the Master EIR, implementation of the Sacramento City Code, which requires preparation and implementation of a site-specific Geotechnical Investigation and compliance with the CBSC, would ensure that the proposed project would include protections against possible seismic hazards.

Soil Hazards

The proposed project would require grading and excavation during the construction period and would, therefore, require a Grading and Erosion and Sediment Control Plan to be submitted and approved per Chapter 15.88 of the City's Code. Chapter 15.88 of the City's Code (Grading and Erosion and Sediment Control) is used to regulate grading on property within the City of Sacramento to safeguard life, limb, health, property and the public welfare; to avoid pollution of watercourses with nutrients, sediments, or other materials generated by surface runoff from construction activities; to comply with the City's National Pollution Discharge Elimination System (NPDES) Permit; and, to ensure graded sites within the City comply with all applicable City standards and ordinances.

As discussed previously, a Geotechnical Investigation would be required prior to implementation of the proposed project. The Geotechnical Investigation would include a description of existing soil conditions, identification of any potential building hazards related to existing soil conditions, and recommendation of methods to reduce such hazards in compliance with the requirements of the CBSC and Chapter 15.88 of the City's Code.

Furthermore, as discussed above, liquefiable soils are not anticipated to pose a risk to the proposed structures. According to the NRCS, the project site is not located in an area subject to risk from expansive soils. Thus, proposed structures would not pose a hazard due to the presence of expansive soils

The proposed project would not include the use of septic tanks or alternative wastewater disposal systems; therefore, impacts would not occur due to inadequate soils being able to support such wastewater storage/disposal systems.

Conclusion

The proposed project is consistent with the City's 2035 General Plan, and, as discussed in the Master EIR, the policies included in the City's 2035 General Plan as well as the requirements of the CBSC and the City's Code would ensure that development in compliance with the City's 2035 General Plan would not result in significant impacts related to seismic or soil hazards. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what has been previously analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would be consistent with the type and intensity of uses anticipated for the site in the 2035 General Plan Master EIR. Implementation of the proposed project would result in ***no additional significant environmental effects*** related to Geology and Soils.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
6. HAZARDS Would the project: A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?			X
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?			X
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?			X

Environmental Setting

The City of Sacramento Fire Department is the first responder for fire, accident, and hazardous materials emergencies in the project area. The Department maintains two Hazardous Materials (HazMat) Teams at fire stations in the project region; Truck 5 is stationed downtown at 8th and Broadway, and Truck 20 at Arden Way and Del Paso Boulevard. The HazMat Teams respond to hazardous materials incidents. All members of the HazMat Teams are trained in accordance with National Fire Protection Association standards and are certified by the California Specialized Training Institute as Hazardous Materials Specialists. The teams would be expected to respond to any hazardous materials release at the project site or in the vicinity of the project site.

The project site is currently vacant and has historically been used for agricultural purposes. Agricultural activities include the use of machinery and chemical applications to control pests. Gasoline, and diesel fuel, oil and lubricant storage, handling and use are common on farms. Storage, handling, and use of herbicides and pesticides are also a common practice in agricultural production areas. The history of hazardous materials use in the project area was investigated and reported in the Phase 1 Environmental Site Assessment Report prepared for the site by Bole & Associates on November 26, 2018.[16]

Standards of Significance

For the purposes of this IS/MND, an impact is considered significant if the proposed project would:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

[16] Bole and Associates. *Phase I Environmental Site Assessment*. November 26, 2018.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards (see Chapter 4.6). Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the General Plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2035 General Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

Answers to Checklist Questions

A Phase I Environmental Site Assessment (Phase I) for the project site was conducted by Bole & Associates on November 26, 2018. The purpose of the Phase I was to identify the presence or likely presence of hazardous substances or petroleum products which could be released into the environment known as recognized environmental conditions (RECs) within the project site. The following discussion details the findings of the Phase I.

Question A

According to the Phase I, the project site has been historically used for agricultural production of row crops and does not have a history or permanent structures, roads, or other site improvements. A site visit performed by Bole & Associates determined that the project site does not contain hazardous material in any appreciable quantity. In addition, signs of petroleum products, underground storage tanks (USTs), stained soils, abandoned wells, or other potentially hazardous materials were not noted during the site visit. The project site is not included on a list of hazardous materials sites compiles by the County pursuant to Government Code 65962.5. In addition, known contaminated soils do not occur on the project site, according to the Department of Toxic Substances Control. It should be noted that although RECs do not exist within the project site, the project site is located within an area subject to restrictions on the use of groundwater due to the proximity of the site to McClellan Air Force Base. The proposed project would not include the construction or operation of groundwater wells, and groundwater contamination related to McClellan Air Force Base is not considered to be an REC at the site.

The proposed project would include the construction of two warehouse structures with depressed loading docks as well as associated site improvements that would include paved parking areas, stormwater drainage, and landscaping features. Grading and construction activities associated with the proposed project would disturb an approximately 22-acre area. Although the project would include disturbance of the entire project site, because RECs do not exist within the site, construction of the proposed structures would not have the potential to result in impacts related to the disturbance or upset of hazardous materials

Based on the above, the construction activities associated with the proposed project would not result in the exposure of construction workers or other sensitive receptors to contaminated soils and ***no additional significant environmental impacts*** beyond what was previously analyzed in the Master EIR would occur.

Question B

The Master EIR determined that buildout of the 2035 General Plan could necessitate demolition of existing structures which could potentially result in the exposure of construction workers or other sensitive receptors to hazardous substances such as asbestos or lead-based paints. The project site is currently vacant and has been historically used for agricultural use. Thus, demolition of existing structures would not be necessary during implementation of the proposed project. Because the proposed project would not include demolition of an existing on-site structure, the potential to expose construction workers and nearby sensitive receptors to asbestos-containing materials is low, and the proposed project would result in ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Question C

The proposed project would not be expected to require any on-site dewatering activities. The proposed project would include grading and construction activities in an approximately 22-acre area. Grading and excavation depths typically range from 0 to 36 inches for site grading and up to eight feet for utility trenches. Groundwater would not be anticipated to be encountered at the aforementioned depths. Thus, the proposed project would have a less-than-significant impact related to exposing construction workers and pedestrians to contaminated groundwater and implementation of the proposed project would result in ***no additional significant environmental effects*** beyond what has been previously analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

Considering the above, the project site does is not subject to any RECs, and the proposed project would not have the potential to result in impacts related to Hazards. The proposed project would be consistent with the type and intensity of uses anticipated for the site under the City's 2035 General Plan. Thus, implementation of the proposed project would result in ***no additional significant environmental effects***.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
7. HYDROLOGY AND WATER QUALITY Would the project:			
A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?			X
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?			X

Environmental Setting

The project site is located in a developed area of Sacramento, approximately 3.5 miles north of the American River. The site is currently vacant and does not contain any impervious surface. As a result, stormwater runoff is handled by existing City stormwater infrastructure located within the Bell Avenue ROW.

The City of Sacramento's Grading Ordinance requires that development projects comply with the requirements of the City's Stormwater Quality Improvement Plan (SQIP). The SQIP outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management Program. The Program is based on the NPDES municipal stormwater discharge permit. The comprehensive Program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. In addition, before the onset of any construction activities, where the disturbed area is one acre or more in size, projects are required to obtain coverage under the NPDES General Construction Permit and include erosion and sediment control plans. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. Measures that reduce or eliminate post-construction-related water quality problems range from source controls, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. The City's SQIP and the *Stormwater Quality Design Manual for the Sacramento Region* (Sacramento Stormwater Quality Partnership 2014) include BMPs to be implemented to mitigate impacts from new development and redevelopment projects, as well as requirements for low impact development (LID) standards.

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRMs) that delineate flood hazard zones for communities. The project site is designated by FIRM *Community Panel Number 06067C0068H*[17] as being located within an area designated as Zone X. Zone X is an area of minimal flood hazard, outside of the special flood hazard area and higher than the elevation of the 0.2-percent annual chance flood.

Section 13.08.145 of the Sacramento City Code (Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities) requires that when a property would contribute drainage to the storm drain system or combined sewer

[17] Federal Emergency Management Agency. *Flood Insurance Rate Map Community Panel Number 06067C0068H* June 16, 2012.

system, all stormwater and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that an increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property does not occur. Wastewater treatment would be provided by the Sacramento Regional County Sanitation District (SRCSD). In order to connect with the SRCSD wastewater conveyance and treatment system, developers must pay impact fees.

Standards of Significance

For purposes of this IS/MND, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan Master EIR:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board (SWRCB), due to increases in sediments and other contaminants generated by construction and/or development of the proposed project; or
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.7 of the Master EIR evaluates the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 4.7-1, 4.7-2), and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

Answers to Checklist Questions

Question A

The proposed project has the potential to degrade water quality during both construction and operations. Further details regarding the potential effects are provided below.

Construction

Construction activities associated with the proposed project would create the potential to degrade water quality from increased sedimentation and increased discharge (increased flow and volume of runoff) associated with stormwater runoff. Disturbance of site soils would increase the potential for erosion from stormwater to occur. The SWRCB adopted a statewide general NPDES permit for stormwater discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2010-0014-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The proposed project would include

disturbance of the entire 22-acre project site, and, thus, would be subject to the foregoing regulations.

The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This General Construction Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutant to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect stormwater inlets would require the developer to implement BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance).

It should be noted that the proposed project would include fill of on-site wetlands during grading of the project site. Potential impacts to on-site wetlands are discussed in further depth in Section 3, Biological Resources, of this IS/MND. The on-site wetlands are seasonal and hydrologically isolate; therefore, fill of the on-site wetlands would not result in impacts to water quality in the project area.

Conformance with City regulations and permit requirements along with implementation of BMPs would ensure that construction activities associated with the proposed project would result in a less-than-significant impact related to water quality.

Operation

Development of the site with the proposed warehouse buildings and paved parking areas would decrease the amount of pervious surfaces and increase the amount of impervious surfaces within the site. Section 13.16 of the City's Code requires that post-development flow of the site must be equal or less than pre-development conditions. Accordingly, stormwater generated by the impervious surfaces associated with the proposed project would be directed to the two stormwater quality basins within the project site. Following retention in the stormwater quality basins, stormwater would be directed to the City's existing 30-inch stormwater drain line located within the Bell Avenue ROW. The stormwater quality basins would be considered LIDs, which would be designed in compliance with the City's MS4 permit requirements.

As a standard Condition of Approval (COA) for development projects in the City, the City's Department of Utilities requires preparation and submittal of project-specific drainage studies. With submittal of the required drainage study, the Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. It should be noted that the proposed project would comply with Section 13.08.145, Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Code, which requires the following:

> When property that contributes drainage to the storm drain system or combined sewer system is improved or developed, all stormwater and surface runoff drainage impacts resulting from the improvement or development shall be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property.

Conclusion

Design of the proposed project and conformance with City and state regulations would ensure that a substantial degradation to water quality or violation of any water quality objectives due to increases in sediments and other contaminants generated by construction and/or development of the proposed project would not occur. The design of the proposed project provides for containment of all runoff water associated with the site through the use of on-site stormwater quality basins; therefore, discharge of runoff to surface waters or groundwater would not result from the proposed project. Furthermore, the proposed project would comply with LID treatments associated with the City's MS4 permit such as augmenting water supplies through multi-benefit, green infrastructure projects that infiltrate runoff to recharge groundwater and capture runoff for direct onsite reuse. The proposed project's impacts related to substantial degradation of water quality or violation of any water quality objectives set by the SWRCB, due to increases in sediments and other contaminants generated by construction and/or development of the proposed project, would be less than significant. Considering that the proposed project would not result in a project-specific impact related to the degradation of water quality during construction, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Question B

A floodplain is an area that is inundated during a flood event and is often physically discernable as a broad, flat area created by historical floods. According to FEMA's Flood Insurance Rate Map, the project site is located within Zone X. Zone X is an area of minimal flood hazard, outside of the special flood hazard area and higher than the elevation of the 0.2-percent annual chance flood. As such, the proposed project would not place housing or structures within a 100-year flood hazard area, and impacts related to flooding would be considered less than significant. Considering that the proposed project would not result in a project-specific impact related to the exposure of future residents or structures to flooding, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would have no additional project-specific environmental effects relating to Hydrology and Water Quality. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
8. NOISE Would the project: A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?			X
B) Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project?			X
C) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?		X	
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?			X
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?			X
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?			X

Environmental Setting

The analysis presented in the following section is primarily based on information from the project-specific Environmental Noise and Vibration Assessment prepared by Bollard Acoustical Consultants, Inc.[18]

Noise

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard by the human ear. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz). Discussing sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference defined as 0 dB. Other sound pressures are compared to the reference pressure and the logarithm is taken to keep the numbers in practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. A strong correlation exists between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound level has become the standard tool of environmental noise

[18] Bollard Acoustical Consultants, Inc. *Environmental Noise and Vibration Assessment*. September 12, 2019.

assessment for community exposures. All sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL), and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted L_{50}, represents the noise level which is exceeded 50 percent of the hour. In other words, half of the hour ambient conditions are higher than the L_{50} and the other half are lower than the L_{50}.

The L_{dn} is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, L_{dn} tends to disguise short-term variation in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors.

Another common descriptor is the CNEL. The CNEL is similar to the L_{dn}, except CNEL has an additional weighting factor. Both average noise energy over a 24-hour period. The CNEL applies a +5 dB weighting to events that occur between 7:00 PM and 10:00 PM, in addition to the +10 dB weighting between 10:00 PM and 7:00 AM associated with L_{dn}.

The ambient noise environment within the immediate project vicinity is defined primarily by noise from traffic on Bell Avenue, and by distant I-80 traffic. To generally quantify existing ambient noise levels in the project vicinity, Bollard Acoustical Consultants conducted two long-term (24-hour) ambient noise surveys January 10, 2019. The noise survey locations are shown on Figure 1, identified as Sites LT-1 and LT-2.

Vibration

Vibration is like noise in that vibration involves a source, a transmission path, and a receiver. While vibration is related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and a frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement. Vibration magnitude is measured in vibration decibels (VdB) relative to a reference level of 1 micro-inch per second peak particle velocity (ppv), the human threshold of perception. The background vibration level in residential areas is usually 50 VdB or lower. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible. The range of environmental interest is typically from 50 VdB to 90 VdB (or 0.12 inch per second ppv), the latter being the general threshold where structural damage can begin to occur in fragile buildings.

Figure 5
Noise Monitoring and Nearby Uses

During a site visit on January 9, 2019, Bollard Acoustical Consultants determined that vibration levels at the site and in the immediate vicinity of the site were below the threshold of perception. Therefore, the existing vibration environment in the immediate project vicinity is considered to be negligible.

Standards of Significance

For purposes of this IS/MND, impacts due to noise may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies:

- Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

In addition to the foregoing standards the Environmental Constraints (EC) Chapter establishes the following policy related to the incremental increase in noise:

- **EC 3.1.2 Exterior Incremental Noise Standards.** The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in Table EC 2 [Table 10 of this IS/MND], to the extent feasible.

Chapter 8.68, Noise Control, of the Sacramento City Code sets limits for exterior noise levels on designated residential property and interior noise levels pertaining to multiple dwelling units (reproduced below in Table 11). The ordinance states that exterior noise shall not exceed 55 dB during any cumulative 30-minute period in any hour during the day (7 AM to 10 PM) and 50 dB during any cumulative 30-minute period in any hour during the night (10 PM to 7 AM). The ordinance sets somewhat higher noise limits for time intervals of shorter duration; however, noise in residential areas must never exceed 75 dB during the day and 70 dB at night.

Table 10
Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dBA)

Residences and Buildings Where People Normally Sleep[a]		Institutional Land Uses with Primarily Daytime and Evening Uses[b]	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Notes:
[a] This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance
[b] This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Source: Federal Transit Administration, Transit Noise Impact and Vibration Assessment, May 2006

Table 11
Noise Standards for Agricultural and Residential Property

Noise Metric	Cumulative Period	Standards (dB) Day (7 AM to 10 PM) / Night (10 PM to 7 AM)
Exterior Noise Standards[1,3]		
L_{50}	30 min/hr	55 / 50
L_{25}	15 min/hr	60 / 55
L_{08}	5 min/hr	65 / 60
L_{02}	1 min/hr	70 / 65
L_{max}	Never to exceed	75 / 70
Interior Noise Standards[2,4]		
L_{08}	5 min/hr	45
L_{02}	1 min/hr	50
L_{max}	Any period of time	55

Notes:
[1] Noise created over the designated period at any location may not cause the noise levels on a designated agricultural or residential property to exceed these standards.
[5] Noise created over the designated period in an apartment, condominium, townhouse, duplex, or multiple dwelling units may not cause the noise level in a neighboring unit to exceed these standards.
[3] Exterior noise limits must be reduced by 5 dBA for impulsive or simple tone noises, or for noises consisting of speech or music.
[4] If the ambient level exceeds the fifth noise level category for exterior noise standards, the maximum ambient noise level shall be the noise limit for the category.

Source: Sacramento City Code. Chapter 8.68, Noise Control.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community. New noise sources include vehicular traffic, aircraft, railways, light rail and stationary sources. The General Plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of

development envisioned in the 2035 General Plan. See Policy EC 3.1.8, which requires new mixed-use, commercial and industrial development to mitigate the effects of noise from operations on adjoining sensitive land use, and Policy 3.1.9, which calls for the City to limit hours of operations for parks and active recreation areas to minimize disturbance to nearby residences. Notwithstanding application of the General Plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable.

Answers to Checklist Questions

Questions A and B

The proposed project includes development of 339,549 sf of industrial warehouse space, and subsequent operation of two warehouse structures with associated on- and off-site vehicle traffic. The potential for the project to result in exceedance of the City's exterior or interior noise levels at nearby receptors is assessed in relation to the project's potential to result in increased traffic noise, increased noise related to heavy-duty truck circulation within the project site, and on-site heavy-duty trucks backing up and coupling/decoupling from trailers.

Increases in Existing (2019) Traffic Noise Levels Due to the Proposed Project

Based on the Traffic Impact Study prepared for the proposed project by Kimley-Horn, Bollard Acoustical Consultants prepared an analysis of existing traffic noise levels with and without project-related vehicle trips. Table 12 presents the noise levels, in L_{dn}, at a standard distance of 100 feet from the centerlines of the roadways in the project vicinity. Noise levels are presented under existing conditions, as well as existing plus project conditions. Where the project results in an increase in ambient noise levels due to increased vehicle traffic, the incremental increase in traffic noise is compared against the allowable noise increments presented in Table 10.

As shown in Table 12, traffic generated by project operations would not result in an increase in traffic noise volumes on the local roadway network in excess of the City's allowable noise increments presented in Table 10. As a result, off-site traffic noise impacts resulting from implementation of the proposed project would be considered less than significant.

Noise Related to On-site Activities

Noise generated by trucks arriving and departing the site, backing into the loading bays, and trailer coupling/decoupling, would be the primary noise source associated with the proposed project. Once the trucks are docked at the loading bays, the trucks would be loaded and unloaded from within the buildings, so outside loading/unloading activities would not occur, and noise generated by such activities would be contained within the buildings. Mechanical equipment (such as heating, ventilation, and air conditioning systems) noise would either be housed in an equipment room or located on the roof of the building and shielded by screen walls. Thus, mechanical equipment is not considered likely to result in substantial amounts of noise off-site.

Considering the above, the following discussions focus on noise generated from heavy-duty trucks moving within the site, and trucks coupling/decoupling with trailers.

Table 12
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases Existing Conditions

Intersection	Segment	Direction	Traffic Noise Level at 100 feet, dB L_{dn}			Substantial Increase?
			Existing	Existing Plus Project	Increase	
Bell Avenue / Raley Boulevard	1	North	64.6	64.6	0.0	No
	2	South	67.2	67.6	0.4	No
	3	East	62.6	63.4	0.8	No
	4	West	63.4	63.5	0.1	No
Bell Avenue / Beloit Drive	5	North	52.2	52.3	0.1	No
	6	South	N/A*	50.5	-	No
	7	East	61.0	61.0	0.0	No
	8	West	62.6	63.2	0.6	No
Bell Avenue / Pinell Street	9	North	38.7	38.7	-	No
	10	South	54.2	54.3	0.1	No
	11	East	59.4	59.4	0.0	No
	12	West	60.6	60.7	0.1	No
I-80 WB Ramps / Raley Boulevard	13	North	66.4	66.7	0.3	No
	14	South	65.9	66.1	0.2	No
	15	East	61.0	61.5	0.5	No
	16	West	60.9	61.0	0.1	No
I-80 EB Ramps / Raley Boulevard	17	North	65.9	66.1	0.2	No
	18	South	64.0	64.1	0.1	No
	19	East	58.8	58.8	0.0	No
	20	West	61.6	61.9	0.3	No
Bell Avenue / Project Driveway	21	North	52.2	N/A*	-	No
	22	South	N/A*	49.4	-	No
	23	East	61.0	61.1	0.1	No
	24	West	62.6	63.2	0.6	No

Note: N/A* = Roadway segments for which no traffic data was provided or would not exist without project.

Source: Bollard Acoustical Consultants, Inc. 2019.

On-site Heavy-Duty Truck Circulation Noise

The proposed project would include construction of two access points from Bell Avenue into the project site. Building A would be constructed with 32 loading bays, while Building B would feature 19. For the purposes of this analysis, trucks entering the project site were anticipated to be uniformly distributed between the loading bay areas in both buildings.

As shown in Table 11 the City of Sacramento Code noise level standards are graduated depending on the duration of the intruding noise source. Because on-site heavy truck circulation could occur throughout the course of an hour (i.e., in excess of 30 minutes), the applicable noise level descriptor for on-site circulation would be the median noise level metric (L50). Thus, Bollard Acoustical Consultants estimated the total number of daily heavy-duty truck trips as well as the number of truck trips during a typical busy hour of operations to assess compliance with the L_{50}-based standard. Based on the number of proposed loading docks, Building A was anticipated to experience approximately 45 total daily trips while Building B would experience 27. Using the estimated total daily trips, the average number of trucks leaving or arriving at Buildings A and B during any given hour

would be approximately 2 (1.9) and 1 (1.1), respectively. For a conservative estimate of project noise generation, the assumption was made that as many as eight trips would occur during any given hour at either of the two buildings.

Heavy truck arrivals and departures, and on-site truck circulation, will occur at low speeds. To quantify the noise generation of slow-moving trucks, Bollard Acoustical Consultants used reference measurements taken at the west El Camino truck stop in Sacramento, California. The passby measurements were conducted at a reference distance of 50 feet at a location suitable for isolation of individual passby events.

The results of the heavy truck measurements indicated that maximum noise levels ranged from 69 to 77 dB L_{max}, with a mean of 74 dB L_{max}. Truck passby levels measured in terms of Sound Exposure Levels (SEL) ranged from 77 to 85 dB, with a mean of 83 dB SEL.

Based on a conservative estimate of eight trips per hour, and an SEL of 83 dB per passby, the hourly average noise level generated by on-site circulation computes to 56 dB L_{eq} at a reference distance of 50 feet from the passby route. Median (L_{50}) heavy truck passby noise levels would be approximately five dB less than hourly average noise levels (L_{eq}). Therefore, on-site heavy truck passby noise levels would be approximately 51 dB L_{50} at a distance of 50 feet.

The distances from the nearest residential property lines to the on-site truck circulation routes of Buildings A and B vary. Assuming standard spherical spreading loss (-6 dB per doubling of distance), on-site heavy truck circulation noise exposure at the nearest residential property lines was calculated and the results of those calculations are presented in Table 13.

Table 13
Predicted On-Site Truck Circulation Noise Levels at Nearest Residential Property Lines

Receiver[1]	Nearest Truck Lane	Distance from Nearest Truck Lane (feet)[2]	Predicted Median Noise Level, L_{50} (dB)[3,4]
R-1	Building B	90	41
R-2	Building A	75	42
R-3	Building A	640	25
Applicable City of Sacramento Noise Level Standard (Day/Night) L_{50} DB			*55/50*

Notes:
1 Receptor locations identified on Figure 5.
2 Distances measured from the nearest on-site circulation route to the nearest receiver property line.
3 Predicted on-site truck circulation noise levels at Receivers R-1 and R-2 take into consideration the shielding that would be provided by the existing eight-foot tall CMU property line noise barrier, and have been conservatively adjusted by -7 dB. In order to account for the effectiveness of the property line barrier, predicted noise levels were assessed at a point five feet into the receiving parcel. Figure 5 illustrates the location of the existing noise barrier.
4 Because the project building would break line of sight of the on-site circulation truck lane at Receiver R-3, predicted on-site truck circulation noise levels at Receiver R-3 have been conservatively adjusted by -10 dB to account for this screening.

Source: Bollard Acoustical Consultants, Inc. 2019

As shown in Table 13, noise from on-site heavy-duty truck circulation noise levels would be between 25 to 42 dB L_{50} at the nearest residential property lines, which would be below the City of Sacramento Code standards for exterior median noise levels of 55 dB and 50

dB L_{50} for daytime and nighttime hours, respectively. Furthermore, the predicted median noise level exposure due to onsite heavy truck circulation is below measured ambient median daytime and nighttime noise levels in the project vicinity (Sites LT-1 and LT-2). As a result, on-site heavy-duty truck circulation noise impacts associated with the proposed project would be less than significant.

On-site Heavy-Duty Truck Backing and Trailer Coupling/Decoupling Noise

In addition to noise generated by on-site circulation, noise would also be generated during brief periods of trucks backing into loading bays (backup beepers), and trailer coupling/decoupling. Bollard Acoustical Consultants assumed that heavy trucks would not be permitted to idle while on-site, and that refrigerator trucks (if applicable), would be plugged into loading bay power.

The City of Sacramento Code noise level standards are graduated depending on the duration of the intruding noise source (Table 11). Because on-site heavy truck backing and coupling could occur throughout the course of an hour (i.e., in excess of 30 minutes), the applicable noise level descriptor for on-site truck backing and coupling would be the median noise level metric (L_{50}).

To quantify the noise generated by backup warning devices and trailer coupling/decoupling, Bollard Acoustical Consultants conducted noise level measurements of a similar distribution facility in Patterson California over a 46-hour period beginning Wednesday, August 26, 2015. The noise level results from the Patterson facility indicated that the measured average noise levels for the entire monitoring period was 54 dB L_{eq} and 71 dB L_{max} at a distance of 100 feet from the effective noise center of the truck backing, coupling and decoupling area. Median (L_{50}) heavy truck backing and coupling noise levels would be approximately 5 dB less than hourly average noise levels (L_{eq}). Therefore, on-site heavy truck backing and coupling noise levels would be approximately 49 dB L_{50} at a distance of 50 feet. Assuming standard spherical spreading loss (-6 dB per doubling of distance), truck backing, coupling and decoupling noise exposure at the nearest residential property lines was calculated and the results of those calculations are presented in Table 14. The results presented in Table 14 take into consideration the shielding provided by the existing eight-foot tall solid noise barrier shown in Figure 5.

As indicated in Table 14, noise from heavy-duty trucks backing and trailer coupling/decoupling would range from 23 to 36 dB L_{50} at the property lines of the nearest residential uses. Such noise levels would be below the City of Sacramento Code standards for exterior median noise levels of 55 dB and 50 dB L_{50} for daytime and nighttime hours, respectively. Furthermore, the predicted median noise level exposure due to heavy truck loading bay activities is below measured ambient median daytime and nighttime noise levels in the project vicinity (Sites LT-1 and LT-2). As a result, onsite heavy truck backing and trailer coupling/decoupling noise impacts associated with the proposed project are identified as being less than significant.

Table 14
Predicted On-Site Truck Backing and Coupling Noise at Nearest Residential Property Lines

Receiver[1]	Nearest Truck Lane	Distance from Center of Nearest Docking Bay Area (feet)[2]	Predicted Median Noise Level, L_{50} (dB)[3,4]
R-1	Building B	265	34
R-2	Building A	205	36
R-3	Building A	660	23
Applicable City of Sacramento Noise Level Standard (Day/Night) L_{50} DB			*55/50*

Notes:
1 Receptor locations identified on Figure 5.
2 Distances measured from the center of the nearest docking bay areas to the nearest receiver property line.
3 Predicted on-site truck circulation noise levels at Receivers R-1 and R-2 take into consideration the shielding that would be provided by the existing eight-foot tall CMU property line noise barrier, and have been conservatively adjusted by -7 dB. In order to account for the effectiveness of the property line barrier, predicted noise levels were assessed at a point five feet into the receiving parcel. Figure 5 illustrates the location of the existing noise barrier.
4 Because the project building would break line of sight of the nearest docking bay area at Receiver R-3, predicted on-site truck circulation noise levels at Receiver R-3 have been conservatively adjusted by -10 dB to account for this screening.

Source: Bollard Acoustical Consultants, Inc. 2019

Conclusion

Considering the above, project operations would not result in increases in off-site traffic noise in excess of the City's standards. On-site activities related to heavy-duty truck circulation, backing, and trailer coupling/uncoupling would not result in exceedances of the City's L_{50} standards for daytime or nighttime hours. Furthermore, buildout of the project site was previously considered in the Master EIR. The proposed project would be consistent with the General Plan land use designation for the site, and, thus, potential noise increases resulting from buildout of the project site have been previously analyzed and the proposed project would not be anticipated to result in increased noise levels beyond the levels previously analyzed in the Master EIR. Consequently, project-related noise would not result in the exposure of interior or exterior spaces to noise levels in excess of the City's standards beyond what was previously analyzed in the Master EIR and ***no additional significant environmental effects*** would result.

Question C

Construction phases of the proposed project would add to the noise environment in the immediate project vicinity. Activities associated with construction of the proposed project would have the potential to generate noise levels ranging from 55 to 90 dB at a distance of 50 feet.

The nearest noise-sensitive land uses to the project site (residences to the south) are located approximately 20 feet from construction activities which would occur on the project site. At that distance, maximum noise levels from project construction would be expected to be approximately 63 dB to 98 dB L_{max}. After consideration of the shielding provided by the existing eight-foot tall solid property line noise barrier, maximum noise levels from project construction are expected to range from approximately 56 dB to 91 dB L_{max} at the aforementioned residential uses to the south. Although noise levels between 56 dB and 91 dB would generally fall within the range of measured maximum noise levels in the project vicinity (Sites LT-1 and LT-2), the possibility exists that a

portion of the project construction equipment could result in a substantial short-term increase over ambient maximum noise levels measured by Bollard Acoustical Consultants.

The City of Sacramento's Noise Ordinance of the City Code exempts construction activities from the noise standards, provided that they take place between the hours of 7:00 AM and 6:00 PM, Monday through Saturday, and 9:00 AM and 6:00 PM Sundays and holidays. Although construction activities associated with the proposed project could result in infrequent periods of high noise levels, the noise would not occur for sustained periods of time and would only occur during City permitted construction noise hours.

Based on the above, the proposed project has the potential to result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance; however, such *effects can be mitigated to less than significant*. Implementation of Mitigation Measure 8-1 would reduce the above impact related to noise generation to a less-than-significant level. Therefore, implementation of the proposed project, with implementation of Mitigation Measure 8-1, would result in ***no additional significant environmental effects*** beyond what was analyzed by the Master EIR.

Questions D through F

For structural damage, the California Department of Transportation (Caltrans) uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec PPV), for buildings structurally sound and designed to modern engineering standards; 0.2 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern; and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened.[19] Accordingly, the City uses a threshold of significance for vibration levels of 0.5 in/sec PPV for residential and commercial areas, and 0.2 in/sec PPV for historic buildings and archaeological sites.

Both project construction and operations are analyzed below for potential impacts related to vibration.

Vibration Generated by Project Construction Activities

During project construction heavy equipment would be used for grading excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of the construction. The nearest structure to the project site is located approximately 25 feet away. The range of vibration source levels for construction equipment commonly used in similar projects are shown in Table 15. The vibration levels depicted in Table 15 are representative of measurements at a distance of 25 feet from the equipment source.

Because vibration levels generated by the type of construction equipment which will be required for this project dissipate very rapidly with distance, vibration levels at the nearest residences are expected to be below 0.1 inches/second peak particle velocity at nearby residences over the course of project construction activities. Peak particle velocities below 0.1 inches/second would be well below the City's thresholds for damage to structures, and, as a result, construction of the proposed project would result in a less-than-significant impact.

[19] California Department of Transportation. *Transportation and Construction Vibration Guidance Manual*. September 2013.

Table 15 Vibration Source Levels for Construction Equipment		
Equipment	**PPV at 25 Feet (in/sec)**	**Approximate RMS LV[1] at 25 Feet**
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58
Note: [1] RMS velocity in (VdB) re 1 micro-inch/second *Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual. 2018*		

Vibration Generated by On-Site Project Operations

The proposed project would include operations involving delivery truck loading and unloading activities, mechanical equipment, and delivery truck circulation. In the professional opinion of Bollard Acoustical Consultants, operations associated with limited loading dock operations, such as the proposed project, do not generate appreciable vibration, either from loading and unloading activity or from the use of mechanical equipment. Furthermore, the project does not include the use of any known stationary equipment that could result in appreciable vibrations. Although the use of heavy-duty trucks can result in vibrations, the level of vibration from typical heavy-duty truck circulation rarely generates vibration amplitudes high enough to cause structure or cosmetic damage. Accordingly, impacts related to vibrations during project operations would be less than significant.

Conclusion

Based on the above, the proposed project would not expose any residential or commercial areas, or historic buildings or archaeological sites to excessive vibration levels, and the project's impact would be less than significant. Considering that the proposed project would not result in a project-specific impact related to the exposure of future residents or structures to vibration levels exceeding the City's standards, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Noise to *less-than-significant* levels.

8-1 *Prior to issuance of a grading permit, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the project plans and specifications, subject to review and approval by the City Planning Division. The project applicant shall demonstrate, to the satisfaction of the City that the project complies with the following:*

- *Construction activities shall only take place between the hours of 7:00 AM and 6:00 PM Monday through Saturday and 9:00 AM and 6:00 PM Sundays and holidays.*

- *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.*
- *Electrically powered equipment shall be used instead of pneumatic or internal combustion-powered equipment, where feasible.*
- *Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.*
- *Project area and site access road speed limits shall be established and enforced during the construction period.*
- *Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.*
- *The use of noise-producing signals, including horns, whistles, alarms and bells shall be for safety warning purposes only. A noise complaint coordinator shall be retained amongst the construction crew to be responsible for responding to any local complaints about construction noise. When a complaint is received, the coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint and shall implement reasonable measures to resolve the compliant, as deemed acceptable by the City.*

Findings

Implementation of the above Mitigation Measure would reduce project-related construction noise to a less-than-significant level. Considering that the proposed project would not result in any significant impacts related to operational noise or vibrations, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
9. PUBLIC SERVICES A) Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?			X

Environmental Setting

The project site is located in the northeastern portion of the City of Sacramento, approximately six miles northeast from the downtown core of the City, and is served with fire protection, police protection, and parks by the City of Sacramento.

The Sacramento Fire Department (SFD) provides fire protection services to the entire City and some small areas just outside the City boundaries within the County limits. SFD provides fire protection and emergency medical services to the project area. First-response service is provided by Station 17, located at 1311 Bell Avenue approximately 0.75-mile west of the project site; and Station 18, located at 746 North Market Street approximately 2.9 miles west of the site.

Police protection services are provided by the Sacramento Police Department (SPD) for areas within the City. The SPD provides law enforcement protection to the proposed project site from the SPD located at 300 Richards Boulevard, with is approximately 5.25 miles southwest of the project site. In addition to the SPD and Sheriff's Department, the California Highway Patrol and the Regional Transit Police Department provide police protection within the City of Sacramento. The nearest SPD station to the project site is the 3550 Marysville Boulevard station, location approximately 1.0 miles southwest.

The project site is within the Robla School District. The Robla School District serves approximately 2,500 students through five elementary schools and one preschool. The nearest school is Bell Avenue Elementary School, which is located approximately 480 feet west of the project site across from adjacent single-family residential development.

The City of Sacramento Department of Youth, Parks and Community Enrichment (YPCE) oversees more than 4,300 acres of parkland, and manages more than 218 parks within the City. The project site is located approximately 110 feet north of Five Star Park, 0.6-mile southeast of Main Avenue Park, 1.17 miles northeast of Mama Marks Park, and 1.47 west of Robla Community Park.

Standards of Significance

For the purposes of this IS/MND, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries and emergency services (Chapter 4.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects of development that could occur under the General Plan would be less than significant.

General Plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

Answers to Checklist Questions

Question A

The Master EIR discusses the potential for impacts to public services as a result of increased development and population in the City of Sacramento. The Master EIR analyzes the 2035 General Plan policies related to law enforcement service, fire protection service, educational service, and library service, to determine if adequate public services will exist as development and population in the City increases. Individual projects developed in the City of Sacramento would be required to comply with the public service policies presented in the 2035 General Plan.

According to the Master EIR, implementation of the 2035 General Plan public service policies by individual projects would ensure that adequate public services are available in the City of Sacramento as development and population increases. The proposed project would be consistent with the type and intensity of development anticipated for the site in the 2035 General Plan. Therefore, based on the analysis in the Master EIR, the proposed project would not impact public services nor would the proposed project require the development of new public service facilities beyond what was anticipated in the 2035 General Plan.

The SPD provides law enforcement protection to the project site from the Rooney Station located at 300 Richards Boulevard. According to the Master EIR, the SPD currently has adequate staffing and response times to serve the proposed project during construction activities and operation. Surrounding residential, commercial, and industrial development is currently served by the SPD and the proposed project would include generally similar uses. Additionally, the project applicant would be required to pay development fees for City of Sacramento law enforcement services. Thus, the project would not substantially increase the need for police services beyond what has been previously anticipated in the 2035 General Plan and analyzed in the Master EIR.

The project site is served by the SFD from Station 17, located at 1311 Bell Avenue, approximately 0.75-mile west of the project site. According to the Master EIR, the SFD currently has staffing and response times to adequately serve the proposed project site. The project would include the construction of two new warehouse structures totaling 339,549 sf, as well as associated loading docks and parking areas. The project would not include the development of residential units that would increase population in the service area of the SFD. The project applicant would be required

to incorporate design features such as sprinkler systems, adequate fire flow and flow duration, fire resistance rated construction materials, portable fire extinguishers, fire alarm and detection systems, smoke control systems, lighted exit signs, fire doors, to comply with the most current California Fire Code regulations. Additionally, the project applicant would be required to pay development fees for fire protection service for City of Sacramento fire services. Based on the type of development that would occur as part of the project, new fire stations would not be required to be developed nor would existing fire stations need to be expanded.

Considering the information above, the proposed project would not generate new residents in an area that would require law enforcement and fire service facilities to be expanded or new facilities to be built beyond what is described in the Master EIR. The proposed project would not directly generate new students in the area; therefore, existing educational facilities in the Robla School District would not need to be expanded nor would new facilities need to be developed. The proposed project would not generate residents that would increase the use of the Sacramento Public Library system. Therefore, existing library facilities would not need to be expanded nor would new facilities need to be built to accommodate implementation of the proposed project. Thus, increased demand on public services resulting from implementation of the proposed project would be consistent with what was planned for in the City's 2035 General Plan and analyzed in the Master EIR. The proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would have no additional project-specific environmental effects relating to Public Services. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
10. RECREATION Would the project: A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?			X
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?			X

Environmental Setting

The City of Sacramento Department of Youth, Parks and Community Enrichment maintains all parks and recreational facilities within the City of Sacramento. The Department of YPCE classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and, 3) regional parks. Neighborhood parks are typically less than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Community Parks are generally 10 to 60 acres and serve an area of approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and are developed with a wide range of improvements not usually found in local neighborhood and community parks. As noted in the City's General Plan Background Report, the City currently contains 226 developed and undeveloped park sites, 88 miles of off-street bikeways and trails, 21 lakes/ponds or beaches, over 20 aquatic facilities, and extensive recreation facilities in the City parks. The developed park sites comprise 218 total parks with an area of 4,300 acres of parkland.

Residential and non-residential projects that are built in the City of Sacramento are required to pay a park development impact fee per Chapter 18.44 of the Sacramento City Code. The fees collected pursuant to Chapter 18.44 are primarily used to finance the construction of neighborhood and community park facilities.

Standards of Significance

For purposes of this IS/MND, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The General Plan identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). New residential development will be required to dedicate land, pay in-lieu fees or otherwise contribute a

fair share to the acquisition and development of parks and recreation facilities (Policy ERC 2.2.5). Impacts were considered less than significant after application of the applicable policies (Impacts 4.9-1 and 4.9-2).

Answers to Checklist Questions

Questions A and B

The Master EIR analyzed potential impacts to parks and recreational facilities with implementation of future projects, including the proposed project. Policies were included in the 2035 General Plan to ensure that future residential and non-residential development would not impact existing parks and recreational facilities and to ensure that adequate park and recreational facilities are provided to the residents of Sacramento. The Master EIR concluded that, with implementation of the policies in the 2035 General Plan, future development would not have a significant impact on park and recreational facilities. The proposed project is consistent with the land use designations of the 2035 General Plan, and, as a result, increased demand on parks and recreational facilities from development of the project were generally anticipated in the Master EIR. Therefore, the proposed project would not accelerate substantial deterioration of existing parks and recreational facilities, nor would the proposed project require the construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

The proposed project consists of construction and operation of two warehouse structures totaling approximately 339,549 sf. The project would not include the development of residential units and would, therefore, not generate an increase in residents that would use parks and recreational facilities in the City. In addition, the project would not cause or accelerate substantial physical deterioration of existing area parks or recreational facilities, or create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

It should be noted that the project applicant would be required to pay a City park development impact fees prior to issuance of a building permit for the project. The City would determine the required park development impact fee at the time of submittal of building permit applications. Payment of development fees would ensure that a less-than-significant impact would occur regarding recreation infrastructure. Considering that the proposed project would not result in a project-specific impact related to recreation, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would have no additional project-specific environmental effects relating to Recreation. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
11. TRANSPORTATION AND CIRCULATION Would the project:			
A) Roadway segments: degrade peak period level of service (LOS) from A, B, C or D (without the project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.			X
B) Intersections: degrade peak period level of service from A, B, C or D (without project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more?			X
C) Freeway facilities: off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?			X
D) Transit: adversely affect public transit operations or fail to adequately provide for access to public transit?			X
E) Bicycle facilities: adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?			X
F) Pedestrian: adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?			X

Environmental Setting

The proposed project is located in the northeastern portion of Sacramento, north of I-80, within the North Sacramento Area Plan boundaries. The project site is bounded by Bell Avenue to the north, single-family residential to the east, south, and southeast, and commercial development to the west. I-80 is an eight-lane freeway that provides regional access to the project site. Primary access to I-80 is located approximately 0.2-mile west of the project site and provided by way of an interchange with Raley Boulevard.

Kimley Horn prepared a Traffic Impact Study for the proposed project to analyze potential impacts on the surrounding roadway network resulting from implementation of the proposed project.[20]

[20] Kimley Horn. *Traffic Impact Study 1690 Bel Avenue Shell*. August 16, 2019.

The study area analyzed in Traffic Impact Study is presented in Figure 6, and the following intersections within the study area were evaluated:

1. Bell Avenue at Raley Boulevard;
2. Bell Avenue at Beloit Drive;
3. Bell Avenue at Pinell Street;
4. Raley Boulevard at I-80 Westbound (WB) Ramps;
5. Raley Boulevard at I-80 Eastbound (EB) Ramps; and
6. Bell Avenue at Project Driveway (plus project conditions only).

The foregoing intersections were analyzed under the following scenarios:

A. Existing (2019) Conditions;
B. Existing (2019) Plus Proposed Project Conditions;
C. Existing (2019) Plus Capital Improvement Program (CIP) Projects Conditions; and
D. Existing (2019) Plus CIP Projects plus Proposed Project Conditions.

In preparing the above analyses, Kimley Horn provided descriptions of the major roadways in the project area:

- Bell Avenue is an east-west arterial bordering the northern edge of the project site. Bell Avenue connects the residential areas to the west of the site with the industrial areas to the east. Along the project frontage, Bell Avenue has two lanes in each direction. As part of the City's CIP, the City will be reducing travel lanes along Bell Avenue to one lane in each direction in the vicinity of the project. Construction of the lane reduction project is expected to begin in 2021. There are currently sidewalks and Class II bicycle facilities along the project frontage.
- Raley Boulevard is a north-south arterial west of the project site. To the south, Raley Boulevard roadway provides connectivity to I-80, south of which Raley Boulevard is renamed to Marysville Boulevard. Between Bell Avenue and I-80, two travel lanes in each direction and a two-way left-turn lane are provided. There are currently sidewalks along Raley Boulevard.
- I-80 is an east-west freeway south of the project site. I-80 is a four-lane interstate facility with an interchange at Raley Boulevard in the vicinity of the project site.

Analysis of the aforementioned intersections and roadways uses the concept of Level of Service (LOS). The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Table 16 presents the existing (2019) LOS at all study intersections.

Figure 6
Area of Study

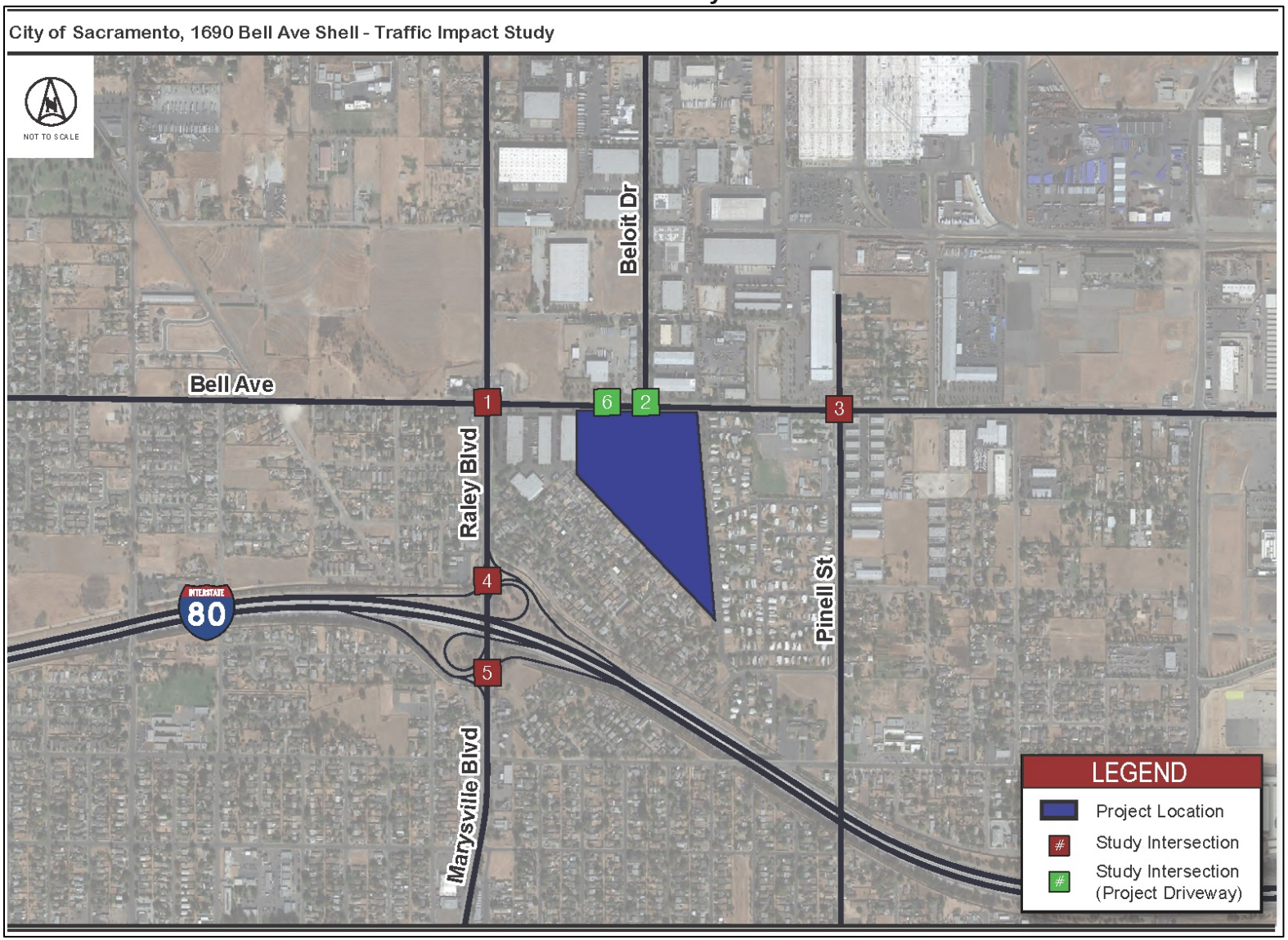


Table 16
Existing (2019) Intersection LOS

ID	Intersection	Control	Peak Hour	Existing (2019)	
				Delay	LOS
1	Bell Avenue at Raley Boulevard	Signal	AM	40.7	D
			PM	34.4	C
2	Bell Avenue at Beloit Drive	SSSC*	AM	2.7 (17.0 SB)	C
			PM	2.0 (12.2 SB)	B
3	Bell Avenue at Pinell Street	AWSC	AM	11.2	B
			PM	9.5	A
4	Raley Boulevard at I-80 Westbound Ramps	Signal	AM	4.9	A
			PM	4.9	A
5	Raley Boulevard at I-80 Eastbound Ramps	Signal	AM	6.4	A
			PM	5.6	A

Note:
* Side Street Sop Controlled (SSSC) intersections are reported with the intersection delay followed by the worst approach delay. The reported LOS corresponds to the worst approach.

Source: Kimley Horn, 2019.

Project Trip Generation

The number of trips anticipated to be generated by proposed project was approximated using data included in the *Trip Generation Manual, 10th Edition*, published by the Institute of Transportation Engineers (ITE). As a portion of the project site is proposed to be rezoned to an M-1-SPD zone which permits various manufacturing, industrial, and warehousing uses, the trips generated by the project are summarized for five (5) land uses, including General Light Industrial (ITE Code 110), Industrial Park (ITE Code 130), Manufacturing (ITE Code 140), Warehousing (ITE Code 150), and High-Cube Transload and Short-Term Storage Warehouse (ITE Code 154). The trips generated by the proposed project are presented in Table 17.

As shown in Table 17, the General Light Industrial land use produces the most trips for all time periods except for the PM peak-hour, during which the Manufacturing land use produces the most trips. The existing General Plan designation of the parcel for which the proposed project would be located on allows for any of the land uses included in Table 17. However, the General Light Industrial land use represents the most conservative option, thus the General Light Industrial land use is selected for analysis. Based on the General Light Industrial trip generation, the proposed project is estimated to generate 1,686 new daily trips, with 238 and 214 trips occurring during the AM and PM peak-hours, respectively.

Table 17
Project Trip Generation

Land Use (ITE)	Size (1,000 sf)	Trips						
		Total Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
General Light Industrial (110)	339.549	1,686	209	29	238	28	186	214
Industrial Park (130)		1,146	110	26	136	29	107	136
Manufacturing (140)		1,336	162	49	211	70	157	227
Warehousing (150)		584	51	15	66	19	50	69
High-Cube Transload and Short-Term Storage Warehouse (154)		476	21	6	27	10	24	34

Source: Kimley Horn, 2019.

Public Transit System

Sacramento Regional Transit District (RT) provides transit service in the greater Sacramento metropolitan area. The nearest transit stops to the proposed project are located along Grand Avenue, roughly one mile away from the project site. The stops are served by RT Routes 15 and 86 as shown in Figure 7.

Existing/Planned Pedestrian and Bicycle Facilities

As noted above, there are existing sidewalks along both Raley Boulevard and Bell Avenue. The segment of Bell Avenue that encompasses the proposed project frontage has existing sidewalks on both sides of the roadway. Conversely, gaps exist in the sidewalks along Raley Boulevard that lead to lack of connectivity. Additionally, a sidewalk does not exist on Bell Avenue just east of Pinell Street. The City's *Pedestrian Master Plan*[21] identifies Bell Avenue east of Beloit Avenue as a Sidewalk Project Priority Area. Streetlights exist along the project frontage.

Class II bicycle lanes exist along both sides of Bell Avenue between Raley Boulevard and Pinell Street (see Figure 8). In addition, Class II bicycle routes exist along Pinell Street, in the vicinity of the proposed project. According to the City's *Bicycle Master Plan*[22], on-street bicycle facilities are proposed along Raley Boulevard between Bell Avenue and I-80, and along Bell Avenue, west of Raley Boulevard and east of Astoria Street. The addition of such facilities will improve the connectivity of the bicycle network in the vicinity of the proposed project.

[21] City of Sacramento, Department of Transportation. *Pedestrian Master Plan*. September 2006.
[22] City of Sacramento. *Bicycle Master Plan*. August 2016.

Figure 7
Area Transit

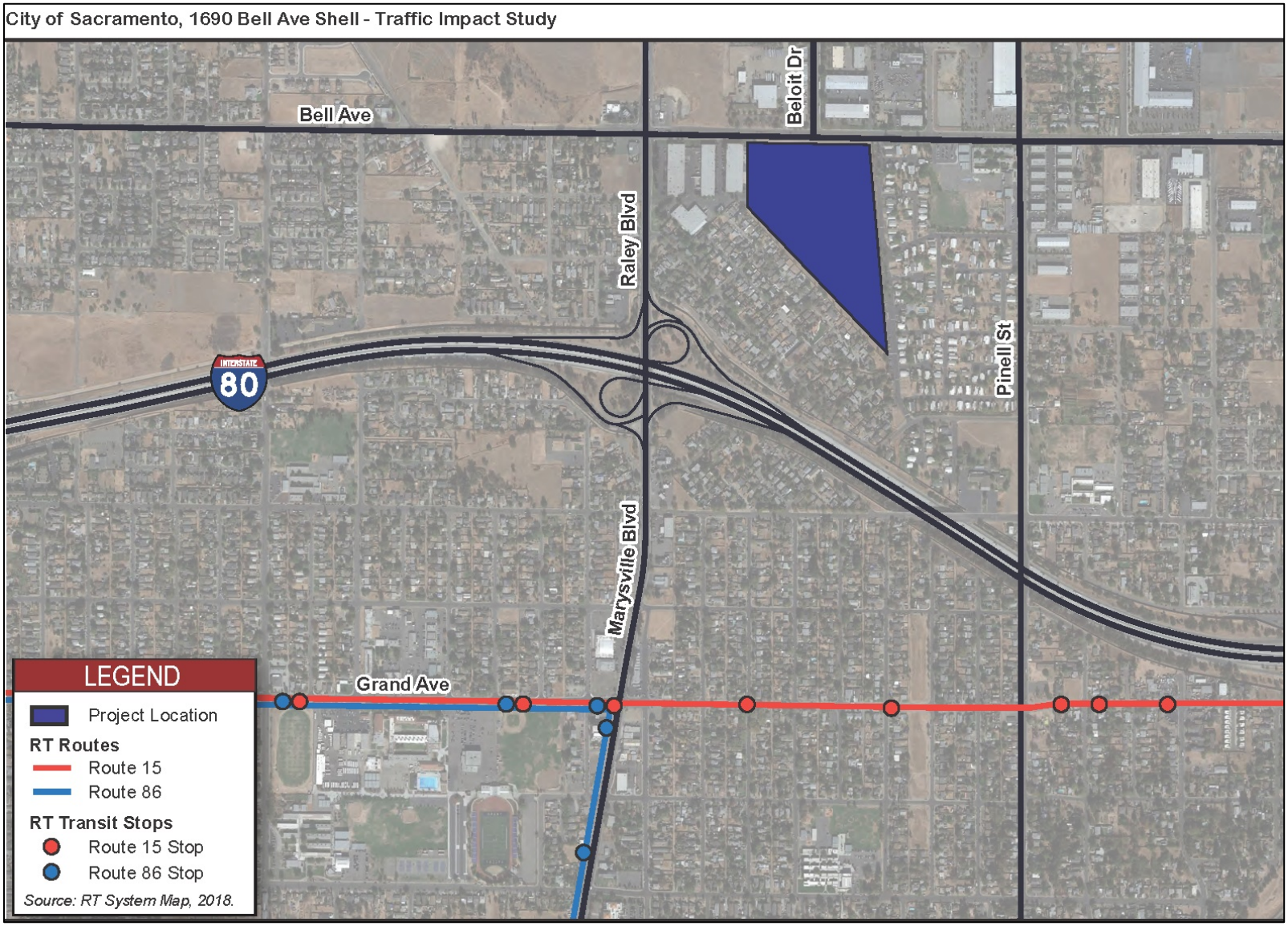
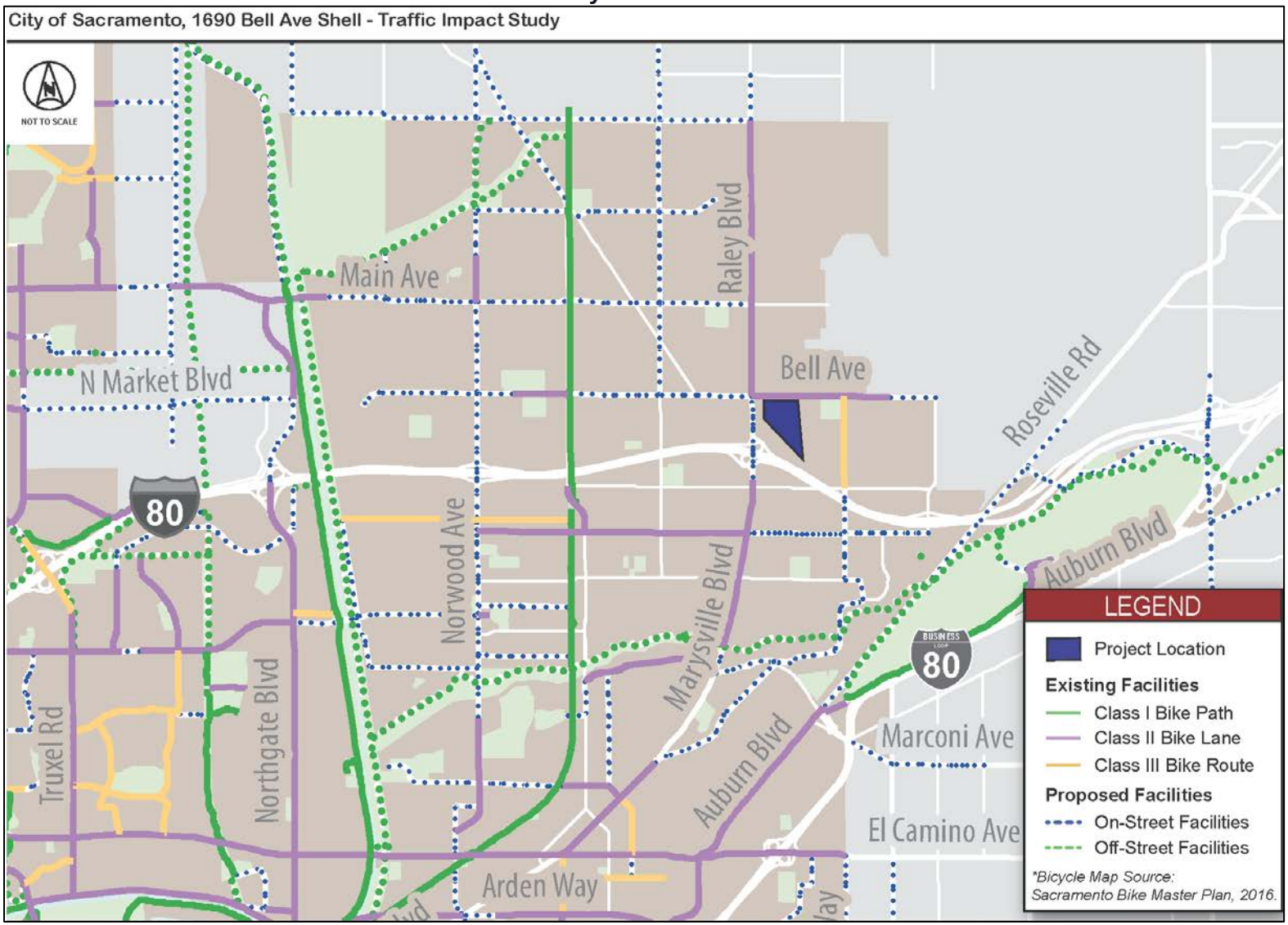


Figure 8
Area Bicycle Infrastructure



Standards of Significance

For purposes of this IS/MND, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan Master EIR:

Roadway Segments

- The traffic generated by a project degrades peak period level of service (LOS) from A, B, C or D (without the project) to E or F (with project); or
- The LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

- The traffic generated by a project degrades peak period level of service from A, B, C or D (without project) to E or F (with project); or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

In accordance with General Plan Policy M 1.2.2, the following LOS thresholds apply to the study intersection:

1. Bell Avenue and Raley Boulevard – LOS F (Raley Boulevard)
2. Bell Avenue and Beloit Drive – LOS D (City Base Standard)
3. Bell Avenue and Pinell Street – LOS D (City Base Standard)
4. Raley Boulevard and I-80 WB Ramp – LOS F (Raley Boulevard)
5. Raley Boulevard and I-80 EB Ramp – LOS F (Raley Boulevard)
6. Bell Avenue and Project Driveway – LOS D (City Base Standard)

Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

Transit

- Adversely affect public transit operations; or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths; or

- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths; or
- Fail to adequately provide for access by pedestrians.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Transportation and circulation were discussed in the Master EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian and aviation components. The analysis included consideration of roadway capacity and identification of levels of service, and effects of the 2035 General Plan on the public transportation system. Provisions of the 2035 General Plan that provide substantial guidance include Mobility Goal 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), identification of level of service standards (Policy M 1.2.2), support for state highway expansion and management consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) (Policy M 1.5.6) and development that encourages walking and biking (Policy LU 4.2.1).

While the General Plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that General Plan development would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities, and Impact 4.12-4 (freeway segments).

Answers to Checklist Questions

Questions A through C

As noted previously, potential traffic impacts resulting from implementation of the proposed project were evaluated under existing conditions and existing conditions plus CIP projects. The results of both analysis scenarios are presented below.

Existing (2019) Conditions

Potential impacts from project implementation were first analyzed under existing conditions, without consideration to planned CIP projects for Bell Avenue. As indicated in Table 18 all study intersections operate at acceptable LOS, in the AM and PM peak-hours, with and without the proposed project. Although operation of the proposed project would result in degradation of the AM peak hour LOS at Bell Avenue and Raley Boulevard from D without the proposed project to E with the proposed project, the LOS standard for the intersection is LOS F, and, as a result, the project would not degrade intersection operations to unacceptable conditions.

Table 18
Existing (2019) and Existing (2019) Plus Proposed Project Intersection LOS

ID	Intersection	Control	Peak Hour	Existing (2019)		Existing (2019) Plus Proposed Project	
				Delay	LOS	Delay	LOS
1	Bell Avenue at Raley Boulevard	Signal	AM	40.7	D	57.4	E
			PM	34.4	C	51.8	D
2	Bell Avenue at Beloit Drive/Project Driveway	SSSC	AM	2.7 (17.0 SB)	C	3.2 (28.7 NB)	D
			PM	2.0 (12.2 SB)	B	4.4 (20.7 NB)	C
3	Bell Avenue at Pinell Street	AWSC	AM	11.2	B	11.2	B
			PM	9.5	A	9.5	A
4	Raley Boulevard at I-80 WB Ramps	Signal	AM	4.9	A	4.7	A
			PM	4.9	A	4.9	A
5	Raley Boulevard at I-80 EB Ramps	Signal	AM	6.4	A	7.0	A
			PM	5.6	A	5.6	A
6	Bell Avenue at Project Driveway	SSSC	AM	Does not exist in this Condition		0.2 (20.9 NB)	C
			PM			1.0 (15.7 NB)	C

Note: **Bolded** represents unacceptable conditions

* Side Street Stop Controlled (SSSC) Intersections are reported with the intersection delay followed by the worst approach's delay. The reported LOS corresponds to the worst approach.

Source: Kimley Horn, 2019.

Existing (2019) Conditions with CIP

Bell Avenue is part of a planned streetscape project that is anticipated to reduce travel lanes along Bell Avenue in the vicinity of the proposed project. The CIP project would reduce the travel lanes along Bell Avenue from two lanes in each direction to one lane in each direction with a two-way left-turn lane (TWLTL) in the median of the roadway. Intersection geometry at Intersections #1, #2, and #3 would also be modified as a result of the CIP project, and the modified geometry is shown in Figure 9. As indicated in Table 19, the study intersections operate between LOS A and F with and without the addition of proposed project traffic during the AM and PM peak-hours. It should be noted that the City of Sacramento's LOS standard for the intersection of Bell Avenue and Raley Boulevard is F.

As shown in Table 19, addition of project-related traffic to the intersection of Bell Avenue and Beloit Drive/Project Driveway would degrade intersection operations from an acceptable LOS C to an unacceptable LOS E. As noted in the table, the intersection of Bell Avenue and Beloit Drive/Project Driveway is a SSSC intersection, and the LOS presented for the intersection corresponds with the worst approach. In the case of the intersection of Bell Avenue and Beloit Drive/Project Driveway, the worst approach is for the on-site approach lane, and only vehicles leaving the project site would experience the LOS E. Because the controlling delay measurement if for the on-site approach lane, operation of the intersection of Bell Avenue and Beloit Drive/Project Driveway are not considered to trigger a significant impact that requires mitigation. The remaining study intersections are shown to satisfy the City's LOS requirement for the study area by operating at acceptable LOS during the weekday peak hours.

Figure 9
Intersection Geometry With CIP

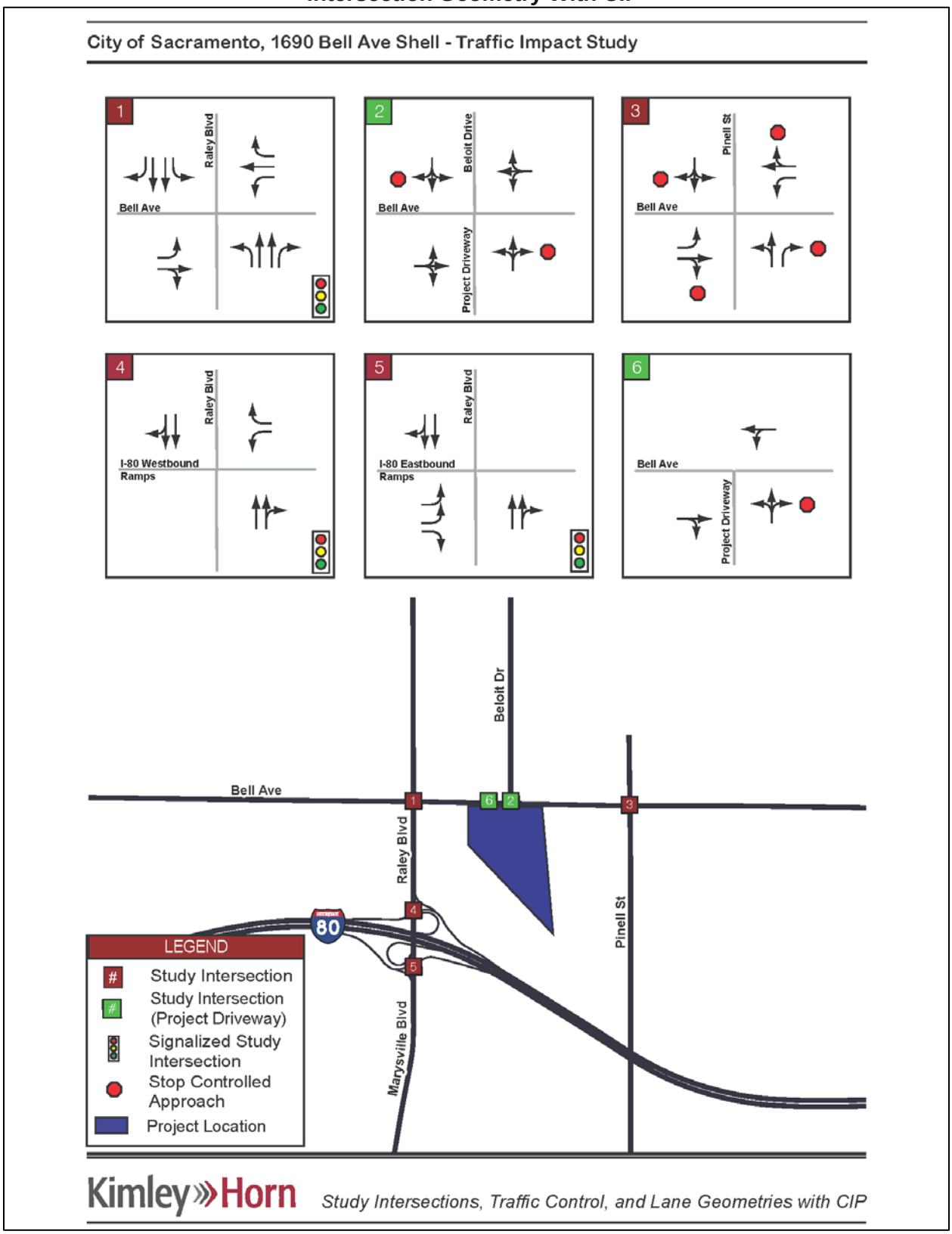


Table 19
Existing (2019) with CIP and Existing (2019) with CIP Plus Proposed Project Intersection LOS

ID	Intersection	Control	Peak Hour	Existing (2019) with CIP		Existing (2019) with CIP Plus Proposed Project	
				Delay	LOS	Delay	LOS
1	Bell Avenue at Raley Boulevard	Signal	AM	87.5	F	105.5	F
			PM	51.6	D	72.3	E
2	Bell Avenue at Beloit Drive/Project Driveway	SSSC	AM	2.4 (16.5 SB)	C	4.3 (39.9 NB)	E
			PM	2.0 (12.6 SB)	B	5.7 (29.8 NB)	D
3	Bell Avenue at Pinell Street	AWSC	AM	17.2	C	17.6	C
			PM	11.7	B	11.8	B
4	Raley Boulevard at I-80 WB Ramps	Signal	AM	4.9	A	4.7	A
			PM	4.9	A	4.8	A
5	Raley Boulevard at I-80 EB Ramps	Signal	AM	6.4	A	7.0	A
			PM	5.6	A	5.6	A
6	Bell Avenue at Project Driveway	SSSC	AM	Does not exist in this Condition		0.2 (16.6 NB)	C
			PM			0.9 (14.9 NB)	B

Note: **Bolded** represents unacceptable conditions
* Side Street Stop Controlled (SSSC) Intersections are reported with the intersection delay followed by the worst approach's delay. The reported LOS corresponds to the worst approach.

Source: Kimley Horn, 2019.

Cumulative Conditions

The proposed project is consistent with the land use designations within the City's 2035 General Plan. The City's Master EIR analyzed potential impacts related to cumulative development within the City based on the land use designations within the City's 2035 General Plan. Thus, additional trips resulting from implementation of the proposed project have been generally anticipated in the City's Master EIR, and the project would not result in any new or substantially more severe impacts than what was analyzed in the Master EIR.

Project Access

As part of their analysis of potential traffic impacts, Kimley Horn prepared an analysis of site access. Following the analysis prepared by Kimley Horn, the project design was updated to address the issues raised in the Traffic Impact Study. The following section describes the issues identified by Kimley Horn prior to the preparation of updated site plans. It should be noted that the project analyzed within this IS/MND is the updated project following implementation of the site access recommendations from Kimley Horn.

As originally proposed, the project included an entrance on the eastern portion of the project frontage to Bell Avenue. Kimley Horn recommended the elimination of the easternmost driveway. The easternmost proposed driveway would be off-set from an existing driveway across the street, which would conflict with City design standards. The proposed easternmost project driveway location would create sight distance issues for vehicles exiting at the existing off-site driveways, as well as safety concerns with vehicles turning southbound left from Beloit Drive to eastbound Bell Avenue. A right- in/right-out only driveway in the same location would not be able to function safely due to the Two Way Left Turn Lane (TWLTL) proposed as part of the CIP for Bell Avenue. Effectively enforcing the right-in/right-out restriction would require a physical barrier, which would recreate unsafe situations and restrict for vehicles utilizing the TWLTL at the existing driveways.

The minimum required throat depths (MRTD) for the project driveways along Bell Avenue are 120-feet and 50-feet for Intersection #2 and Intersection #6, respectively. To achieve the MRTD for the driveway at Intersection #2, the available throat depth should be increased by 66-feet to achieve the required 120-foot throat depth.

Kimley Horn recommends installation of "Keep Clear" striping to preserve access to the two proposed on-site drive aisles to reduce the MRTD at Intersection #2. Kimley Horn further recommends the installation of striping to direct trucks to the loading docks. Finally, Kimley Horn recommends the installation of signage indicating that trucks may only enter at Intersection #2.

As the proposed driveways would experience left turns, which is not compliant with the current street standard, Kimley Horn recommends modification of the Bell Avenue segment adjacent to the project site to comply with street design guidelines. These changes would be anticipated to occur prior to the completion of the CIP along Bell Avenue, thus these conditions are labeled as "Interim CIP" Conditions. Under "Interim CIP" Conditions, it is recommended to transition Bell Avenue from a four-lane arterial to a three-lane arterial for the segment adjacent to the project site to accommodate a TWLTL and turn pockets, and continue to the east as a three-lane arterial. Additional restriping at the Bell Avenue & Pinell Street (Intersection #3) will be required to accommodate the recommended lane configuration, to the satisfaction of the City of Sacramento. The three-lane configuration would consist of two eastbound lanes and one westbound lane. The recommended turn pocket length is 150 feet for the westbound left turn pocket and 200 feet for the eastbound left turn pocket. Under "Interim CIP" Conditions, the westernmost project driveway (Intersection #6) and the driveway across from Beloit Drive (Intersection #2) would allow all movements.

A deceleration lane is recommended for the driveway opposite Beloit Drive due to the anticipated truck traffic at this driveway. The deceleration lane should at least be 150-feet long with a 50-foot taper per City of Sacramento street design standards. The traffic analysis does not recommend a deceleration lane for the westernmost driveway as this driveway is intended to accommodate passenger cars only.

It should be noted that the foregoing analysis of project access has been provided for informational purposes only.

Conclusion

Although the project would result in unacceptable operating conditions at the intersection of Bell Avenue and the project driveway, because the unacceptable condition would occur within the project site and would only affect project-related vehicles, the City has determined that the operating conditions do not represent a conflict with the City's established LOS standards. Thus, the proposed project would not conflict with the City's established minimum LOS policies under Existing (2019) Plus Project or Existing (2019) with CIP Plus Project conditions. The proposed project is consistent with the 2035 General Plan designations for the project site, and potential impacts from development of the site for such uses has been previously analyzed in the City's Master EIR. As a result, the proposed project would result in vehicle trips consistent with what was has been anticipated for buildout of the project site and ***no additional significant environmental effects*** would occur with implementation of the proposed project.

Question D

As stated above, Sacramento Regional Transit Routes 15 and 86 provide transit opportunities in the vicinity of the project site. The project is not anticipated to add noticeable transit demand;

however, any demand added to the transit system could be adequately accommodated by the existing/planned transit system and has been anticipated in the 2035 General Plan and Master EIR. Consequently, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Question E and F

Bicycle and pedestrian facilities exist in the project vicinity, as discussed in the Environmental Setting section above, and the project would not result in removal of any existing bicycle or pedestrian facilities. The project would include provision of on-site bicycle parking facilities and pedestrian walkways would be constructed throughout the project site. Although the project is not anticipated to result in substantial increases in pedestrian or bicycle traffic in the area any increases in such resulting from implementation of the proposed project have been planned for in the 2035 General Plan and analyzed in the Master EIR. Consequently, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would be consistent with the land use designations within the 2035 General Plan, and potential impacts relating from development of the project site for such uses has been previously analyzed in the Master EIR. As discussed above, implementation of the proposed project is not anticipated to result in significant environmental effects relating to Transportation and Circulation. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
12. UTILITIES AND SERVICE SYSTEMS Would the project: A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?			X
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?			X

Environmental Setting

The project site's existing utilities and service systems are discussed below.

Wastewater Service

The proposed project would be provided wastewater collection and treatment services by the City of Sacramento and the Sacramento Regional County Sanitation District (SRCSD). The City of Sacramento provides wastewater collection for approximately two-thirds of the area within the City limits. Although portions of the City's central sewer system are a combined sewer and stormwater system, the project site is located in an area with separate sewer and storm drain system. Once collected in the City's system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to SRWWTP located near Elk Grove. The SRWWTP is permitted to treat an average dry weather flow (ADWF) of 181 million gallons per day (mgd). According to the Regional Water Quality Control Board's 2016 wastewater discharge permit for SRCSD's SRWWTP, the average dry weather flow at the time was approximately 119 mgd. Expansion of the SRWWTP was previously proposed; however, due to slow growth and potential reclamation, the SRCSD decided not to expand the plant at that time. Sewage treated by the SRCSD at the Sacramento Regional Wastewater Treatment Plant is then discharged into the Sacramento River.

Wastewater generated in the project area is collected in the City's system through a series of sewer pipes and pump stations or through gravity flow. Once collected in the City's system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to the Sacramento Regional Wastewater Treatment Plant. The City's Department of Utilities is responsible for providing and maintaining water, sewer collection, storm drainage, and flood control services for residents and businesses within the city limits.

The proposed project would include construction of sanitary sewer lines that would be routed throughout the site and connected to all proposed structures. The proposed sanitary sewer lines would direct wastewater to the existing 15- and 18-inch sanitary sewer infrastructure within the Bell Avenue ROW.

Water Supply Service

Water service for the proposed project would be provided by the City of Sacramento. The City of Sacramento uses surface water from the Sacramento and American rivers to meet the majority of the City's water demands. To meet the City's water demand, the City uses surface water from the Sacramento and American rivers, and groundwater pumped from the North American and

South American Subbasins. The City's 2015 UWMP asserts that the City has a current total of 275,917 acre-feet per year (AFY) in water supplies during dry years and expects this total to increase to 294,419 AFY by 2035. The total City retail water demand in 2015 was 84,835 AFY and is expected to increase to 149,213 AFY in 2035. The proposed project site would include placement of water lines throughout the project site that would connect to an existing 12-inch water main located within Bell Avenue along the site's northern boundary. In addition to the water lines placed for domestic uses, separate water lines would be routed throughout the site and connected to the nine on-site fire hydrants to provide fire service access to water.

Solid Waste Service

The City of Sacramento does not provide commercial solid waste collection services. Rather, commercial garbage, recycling or yard waste services are provided by a franchised hauler authorized by the Sacramento Solid Waste Authority to collect commercial garbage and commingled recycling within the City. Kiefer Landfill, located at 12701 Kiefer Boulevard in Sloughhouse, California, is the primary location for the disposal of waste by the City of Sacramento. According to the Master EIR, the landfill is permitted to accept up to 10,815 tons per day and the current peak and average daily disposal is much, much lower than the permitted amount. The landfill is anticipated to be capable of adequately serving the area, including the anticipated population growth, until the year 2065. Solid waste collected at residential uses in the area is currently disposed of at the Kiefer Landfill.

Standards of Significance

For the purposes of this IS/MND, an impact would be considered significant if the project resulted in the following:

- Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments; or
- Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1) but the Master EIR concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and which could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

Answers to Checklist Questions

Questions A and B

The proposed project site is undeveloped and is not currently served with utilities or service systems; however, the project site is located adjacent to existing development. Thus, all urban utilities and services are available to the proposed development.

Wastewater

The City of Sacramento is responsible for sewer collection in the project area. Buildout capacity of the City's service area was anticipated in the 2035 General Plan. As such, City has anticipated the need for wastewater services in the project area and requires development impact fees to support buildout demand of their service area (including the project site). The City's pipelines eventually flow to the SRCSD, where wastewater is treated. The SRCSD would be able to provide sufficient wastewater services and conveyance to serve full buildout of the City, including the project area, per the 2035 Master EIR. The proposed project would be consistent with the existing General Plan land use designations for the site. The General Plan land use designations for the City are the basis for wastewater demand estimation and infrastructure planning within the City. Because the project is consistent with the City's General Plan increased demand from development of the project site for the proposed uses has been generally anticipated. Therefore, adequate capacity exists to serve the project site's demands. As part of the COAs for the proposed project, the City's Department of Utilities will require preparation of a sewer study for the project. The sewer study will be required to demonstrate the project's compliance with city requirements related to sewer service, and will be submitted for review and approval to the City's Department of Utilities. Preparation and review of the sewer study will ensure that development of the project would include provision of adequate wastewater infrastructure to support the proposed project.

Water Supply

The City of Sacramento is responsible for providing and maintaining water for the project site. The Urban Water Management Plan analyzes the water supply, water demand, and water shortage contingency planning for the City's service area, which would include the project site. According to the City's Urban Water Management Plan, under all drought conditions, the City possesses sufficient water supply entitlements to meet the demands of the City's customers up to the year 2035.[23] The proposed project is consistent with land use and zoning designations and would not generate an increase in demand from what has already been anticipated in the Master EIR. As such, adequate capacity is expected to be available to serve the proposed project's water demands. As part of the COAs for the proposed project, the City's Department of Utilities will require preparation of a water study for the project. The water study will be required to demonstrate the project's compliance with city requirements related to water service, and will be submitted for review and approval to the City's Department of Utilities. Preparation and review of the water study will ensure that development of the project would include provision of adequate water infrastructure to support the proposed project.

Solid Waste

Solid waste from surrounding developments are currently being transferred to Kiefer Landfill for disposal. The 2035 General Plan Master EIR concluded that adequate capacity at local landfills

[23] City of Sacramento. *2015 Urban Water Management Plan.* June 2016.

exists for full buildout of the general plan. The proposed project is consistent with what is anticipated for the site, and the associated increase in solid waste disposal needs was considered in the 2035 General Plan Master EIR analysis. The proposed project would not generate an increase in solid waste from what has been anticipated in the Master EIR. As such, adequate capacity would be expected to be available to serve the proposed project's solid waste disposal needs.

Conclusion

Because adequate capacity exists to serve the project's demands in addition to existing commitments, and construction of new utilities or expansion of existing facilities would not be required, the proposed project would result in a less-than-significant impact. Considering that the proposed project would not result in a project-specific impact related to utilities and service systems, the proposed project would result in ***no additional significant environmental effects*** beyond the effects analyzed in the Master EIR.

Mitigation Measures

None required.

Findings

The proposed project would have no additional project-specific environmental effects relating to Utilities and Service Systems. Therefore, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
13. TRIBAL CULTURAL RESOURCES Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: A) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?		X	
B) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X	

Environmental Setting

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the City. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 General Plan Background Report, are located within close proximity to the Sacramento and American rivers and other watercourses.

The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today; however, all such areas are outside of the immediate project vicinity. The project is located over 3.5 miles away from the American River, and, thus, tribal cultural resources related to the American River are unlikely to be found in the project area. The 2035 General Plan Background Report also defines moderate sensitivity areas, which are areas such as creeks, other watercourses, and high spots near waterways where the discovery of villages is unlikely, but campsites or special use sites may have existed. Moderate areas are often disturbed by siltation, or development; however, discovery of new tribal cultural resources is still possible.

Standards of Significance

For purposes of this IS/MND, tribal cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in a substantial adverse change in the significance of a tribal cultural resource that is:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General Plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort. (Policy HCR 2.1.15)

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources. (Impacts 4.4-1, 2)

Answers to Checklist Questions

As discussed in Section 4, Cultural Resources, of this IS/MND, a Cultural Resources Survey was prepared for the project site by SAS. The results of the search determined that previously recorded prehistoric or historic resourced have not been identified within the project site. Although historic era resources have been identified in the project area, tribal cultural resources were not identified in literature reviews of the project vicinity or in pedestrian surveys of the project site. In compliance with AB 52 (Public Resources Code Section 21080.3.1), the City of Sacramento sent notification for requests for consultation on April 11, 2019 to the traditionally and culturally affiliated California Native American tribes that had previously requested, in writing, to receive such notice. United Auburn Indian Community of the Auburn Rancheria (UAIC) and Wilton Rancheria both responded and requested consultation. Consultation was closed with the UAIC on May 3, 2019 and with the Wilton Rancheria on May 9, 2019.

Questions A and B

Cultural resources are generally defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. SAS contacted the Native American Heritage Commission (NAHC), which reported that a culturally significant property was known to present within or near the project site, and that the UAIC should be contacted regarding the finding. The NAHC also recommended contacting eight other tribes from the region. On February 19, 2019 SAS sent contact letters to all nine of the identified tribes, and follow-up emails were sent to each tribe on March 4th and 11th. A representative of the UAIC informed SAS that the NAHC reported culturally significant property was approximately one-half mile to the southwest of the project site, but that the UAIC would prefer to visit the project site during agency consultation with the City. As noted above, the City

consulted with the UAIC and the Wilton Rancheria. Consultation with bot tribes was closed in May of 2019.

As discussed previously, SAS conducted a pedestrian survey of the project site, but did not identify any surficial tribal cultural resources or evidence of subsurface resources. Based on the survey results and given the disturbed nature of the project site, surficial tribal cultural resources would not likely be found on-site during grading and construction. However, unknown resources below the surface could be encountered during grading and excavation. Therefore, the proposed project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074, but the *effect can be mitigated to less than significant*. Implementation of Mitigation Measures 13-1 through 13-3 would reduce the impact to a less-than-significant level. Thus, with implementation of Mitigation Measures 13-1 through 13-3, implementation of the proposed project would have ***no additional significant environmental effects*** beyond what was previously analyzed in the Master EIR.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Cultural Resources to a *less-than-significant* level.

13-1 ***Conduct Cultural Resources Sensitivity and Awareness Training Prior to Ground-Disturbing Activities***

The City shall require the applicant/contractor to provide a cultural and tribal cultural resources sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training will be developed in coordination with interested culturally affiliated Native American Tribes. The training will be conducted in coordination with qualified cultural resources specialists. The City may invite Native American Representatives from interested culturally affiliated Native American Tribes to participate. The training shall be conducted before any construction activities begins on the project site. The program will include relevant information regarding sensitive tribal cultural resources and archaeological resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations.

The worker cultural resources sensitivity and awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and who to contact if any potential Tribal Cultural Resources or archaeological resources or artifacts are encountered.

The program will emphasize the requirement for confidentiality and culturally-appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

13-2 ***In the Event that Tribal Cultural Resources are Discovered During Construction, Implement Procedures to Evaluate Tribal Cultural Resources and Implement Avoidance and Minimization Measures to Avoid Significant Impact.***

If archaeological resources, or tribal cultural resources, are encountered in the project area during construction, the following performance standards shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of tribal cultural resources:

- *Each resource will be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes.*

If a tribal cultural resource is determined to be eligible for listing on the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

i. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

ii. Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:

1. *Protect the cultural character and integrity of the resource.*
2. *Protect the traditional use of the resource.*
1. *Protect the confidentiality of the resource.*
2. *Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.*
3. *Rebury the resource in place.*
4. *Protect the resource.*

Avoidance and preservation in place is the preferred manner of mitigating impacts to tribal cultural resources and archaeological resources and will be accomplished, if feasible, by several alternative means, including:

- *Planning construction to avoid tribal cultural resources, archaeological sites and/ or other resources; incorporating sites within parks, green-space or other open space; covering archaeological sites; deeding a site to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.*
- *Recommendations for avoidance of Tribal Cultural Resources and Native American archaeological sites will be reviewed by the City representative, interested culturally affiliated Native American Tribes and other appropriate*

agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project area to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or modification or realignment to avoid highly significant features within a cultural resource.

- *Native American Representatives from interested culturally affiliated Native American Tribes will be allowed to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.*
- *If the discovered resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100 foot buffer area, before construction restarts. The boundary of a Tribal Cultural Resource or a Native American archaeological site will be determined in consultation with interested culturally affiliated Native American Tribes and such Tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American Representatives from interested culturally affiliated Native American Tribes.*
- *The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area".*
- *Native American Representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long term management of any discovered Tribal Cultural Resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within Tribal Cultural Resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.*

To implement these avoidance and minimization standards, the following procedures shall be followed in the event of the discovery of a tribal cultural resource:

- *If any tribal archaeological resources or Native American materials, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or Native American architectural remains or articulated or disarticulated human remains are discovered on the project site, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural resources),and the construction contractor shall immediately notify the project's City representative.*
- *The City shall coordinate the investigation of the find with a qualified (meeting the Secretary of the Interior's Qualification Standards for Archaeology) archaeologist approved by the City and with one or more interested culturally affiliated Native American Tribes that respond to the*

City's invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American Tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

- *The City shall consider management recommendations for tribal cultural resources, including Native American archaeological resources, that are deemed appropriate, including resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by the City to be necessary and feasible to avoid or minimize significant impacts to the cultural resources. These measures may include inviting an interested culturally affiliated Native American Tribe to monitor ground-disturbing activities whenever work is occurring within 100 feet of the location of a discovered Tribal Cultural Resource or Native American archaeological site.*
- *If an adverse impact to tribal cultural resources, including Native American archaeological resources, occurs then consultation with interested culturally affiliated Tribes regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 shall occur, in order to identify mitigation for the impact.*

13-3 ***Implement Procedures in the Event of the Inadvertent Discovery of Native American Human Remains.***

If an inadvertent discovery of Native American human remains is made at any time during project-related construction activities or project planning, the City will implement the procedures listed above in Mitigation Measure 2. The following performance standards shall be met prior to implementing or continuing actions such as construction, that may result in damage to or destruction of human remains: In accordance with the California Health and Safety Code, if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the burial and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains.

The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the California Health and Safety Code Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

Findings

All additional significant environmental effects of the proposed project relating to Tribal Cultural Resources can be mitigated to a less-than-significant level. Therefore, implementation of the proposed project would result in ***no additional significant environmental effects***.

MANDATORY FINDINGS OF SIGNIFICANCE

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
14. MANDATORY FINDINGS OF SIGNIFICANCE A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
B.) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

Answers to Checklist Questions

Question A

With implementation of project-specific mitigation measures, the proposed project would not adversely impact sensitive natural communities or special-status animals. However, a small potential exists for previously undiscovered tribal cultural resources and/or human remains to be unearthed during demolition and site grading activities. The proposed project would implement and comply with applicable Sacramento 2035 General Plan policies, as discussed throughout this IS/MND. With implementation of the mitigation measures required by this IS/MND, compliance with City of Sacramento 2035 General Plan policies, and application of standard BMPs during construction, development of the proposed project would not result in any of the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, the proposed project's impact would be less than significant and ***no additional significant environmental effects*** would occur with implementation of the proposed project.

Question B

The proposed project includes the development of two warehouse structures totaling 339,549 sf on a 22-acre project site. The proposed project is consistent with the 2035 General Plan land use designation for the site and, thus, the proposed project was generally anticipated by the City per the 2035 General Plan. As such, the proposed project was included in the cumulative analysis of City buildout in the Master EIR. Applicable policies from the 2035 General Plan would be implemented as part of the proposed project, as well as the project-specific mitigation measures included in this IS/MND, to reduce the proposed project's contribution to potentially cumulative impacts. The potential impacts of the proposed project would be individually limited and would not be cumulatively considerable. As demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level with implementation of project-specific mitigation measures and compliance with applicable 2035 General Plan policies. When viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, development of the proposed project would not contribute to cumulative impacts in the City of Sacramento and ***no additional significant environmental effects*** would occur with implementation of the proposed project.

Question C

As described throughout this IS/MND, implementation of the proposed project could result in temporary impacts related to air quality, biological resources, noise during the construction period, and tribal cultural resources. In particular, the mitigation measures related to air quality and noise during the construction period are intended to protect public health. In addition to the project-specific mitigation measures within this IS/MND, the proposed project would be required to implement all applicable policies of the 2035 General Plan. Implementation of all such mitigation measures and policies would reduce any potential direct or indirect impacts that could occur to human beings or various resources and, as demonstrated in this IS/MND, all impacts would be reduced to less-than-significant levels. Therefore, the proposed project's impact would be less than significant and ***no additional significant environmental effects*** would occur with implementation of the proposed project.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by the proposed project.

	Aesthetics	X	Noise
X	Air Quality		Public Services
X	Biological Resources		Recreation
	Cultural Resources		Transportation/Circulation
	Geology and Soils	X	Tribal Cultural Resources
	Hydrology and Water Quality		Utilities and Service Systems
	Hazards		

SECTION V - DETERMINATION

On the basis of the IS/MND:

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the proposed project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))

Signature

November 4, 2019

Date

Ron Bess, Assistant Planner

Printed Name

REFERENCES CITED

It should be noted that all of the technical reports used for the purposes of the analysis throughout this IS/MND are available upon request at the City of Sacramento Community Development Department located at 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. The following documents are referenced information sources used for the analysis within this IS/MND:

Bole and Associates. *Phase I Environmental Site Assessment*. November 26, 2018.

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Sycamore Environmental Consultants, Inc. *Biological Assessment for the Bell Avenue Warehouses Project*. September 2019.

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U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

APPENDIX A

Bell Avenue
CalEEMod
Unmitigated Outputs

Bell Avenue Warehouses Project

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	339.55	1000sqft	21.10	339,550.00	0
Parking Lot	275.00	Space	2.47	110,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	422.58	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Co2 Intensity Factor Based on SMUD RPS Calculator

Land Use - Applicant Provided Infomation

Construction Phase - Applicant Provided Information

Grading - Appliant Provided Information

Vehicle Trips - Per KD Anderson Trip Generation Forecast

Energy Use -

Mobile Land Use Mitigation -

Bell Avenue Warehouses Project - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	215.00
tblConstructionPhase	NumDays	370.00	215.00
tblConstructionPhase	NumDays	35.00	10.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	12/28/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	11/2/2021	11/19/2020
tblConstructionPhase	PhaseEndDate	6/2/2020	4/13/2020
tblConstructionPhase	PhaseEndDate	11/30/2021	4/18/2020
tblConstructionPhase	PhaseEndDate	4/14/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	12/1/2021	5/3/2020
tblConstructionPhase	PhaseStartDate	6/3/2020	4/19/2020
tblConstructionPhase	PhaseStartDate	4/15/2020	4/4/2020
tblConstructionPhase	PhaseStartDate	11/3/2021	4/14/2020
tblGrading	AcresOfGrading	25.00	20.00
tblGrading	MaterialExported	0.00	19,900.00
tblLandUse	LotAcreage	7.79	21.10
tblProjectCharacteristics	CO2IntensityFactor	590.31	422.58
tblVehicleTrips	ST_TR	1.32	4.96
tblVehicleTrips	SU_TR	0.68	4.96
tblVehicleTrips	WD_TR	6.97	4.96

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	2.0095	3.9049	3.2464	8.3500e-003	0.3178	0.1553	0.4731	0.1001	0.1464	0.2465	0.0000	756.9658	756.9658	0.0961	0.0000	759.3687
Maximum	**2.0095**	**3.9049**	**3.2464**	**8.3500e-003**	**0.3178**	**0.1553**	**0.4731**	**0.1001**	**0.1464**	**0.2465**	**0.0000**	**756.9658**	**756.9658**	**0.0961**	**0.0000**	**759.3687**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	2.0095	3.9048	3.2464	8.3500e-003	0.3178	0.1553	0.4731	0.1001	0.1464	0.2465	0.0000	756.9654	756.9654	0.0961	0.0000	759.3684
Maximum	**2.0095**	**3.9048**	**3.2464**	**8.3500e-003**	**0.3178**	**0.1553**	**0.4731**	**0.1001**	**0.1464**	**0.2465**	**0.0000**	**756.9654**	**756.9654**	**0.0961**	**0.0000**	**759.3684**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2020**	**6-30-2020**	2.3707	2.3707
2	**7-1-2020**	**9-30-2020**	2.2042	2.2042
		Highest	2.3707	2.3707

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4929	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163
Energy	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	1,644.2301	1,644.2301	0.0807	0.0260	1,654.0052
Mobile	0.5458	2.3933	6.6649	0.0205	1.7375	0.0183	1.7558	0.4659	0.0172	0.4831	0.0000	1,883.0995	1,883.0995	0.0914	0.0000	1,885.3855
Waste						0.0000	0.0000		0.0000	0.0000	85.4673	0.0000	85.4673	5.0510	0.0000	211.7417
Water						0.0000	0.0000		0.0000	0.0000	27.7808	74.9922	102.7731	0.1008	0.0615	123.6129
Total	**2.1042**	**2.9894**	**7.1735**	**0.0241**	**1.7375**	**0.0637**	**1.8011**	**0.4659**	**0.0625**	**0.5284**	**113.2481**	**3,602.3370**	**3,715.5852**	**5.3240**	**0.0875**	**3,874.7616**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4929	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163
Energy	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	1,644.2301	1,644.2301	0.0807	0.0260	1,654.0052
Mobile	0.5279	2.2666	6.2114	0.0188	1.5843	0.0169	1.6012	0.4248	0.0158	0.4407	0.0000	1,726.1978	1,726.1978	0.0850	0.0000	1,728.3221
Waste						0.0000	0.0000		0.0000	0.0000	85.4673	0.0000	85.4673	5.0510	0.0000	211.7417
Water						0.0000	0.0000		0.0000	0.0000	27.7808	74.9922	102.7731	0.1008	0.0615	123.6129
Total	**2.0863**	**2.8627**	**6.7200**	**0.0224**	**1.5843**	**0.0622**	**1.6465**	**0.4248**	**0.0612**	**0.4860**	**113.2481**	**3,445.4353**	**3,558.6835**	**5.3175**	**0.0875**	**3,717.6981**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.85**	**4.24**	**6.32**	**7.10**	**8.82**	**2.23**	**8.58**	**8.82**	**2.13**	**8.02**	**0.00**	**4.36**	**4.22**	**0.12**	**0.00**	**4.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2020	4/3/2020	7	3	
2	Paving	Paving	4/14/2020	4/18/2020	7	5	
3	Building Construction	Building Construction	4/19/2020	11/19/2020	7	215	
4	Grading	Grading	4/4/2020	4/13/2020	7	10	
5	Architectural Coating	Architectural Coating	5/3/2020	12/3/2020	7	215	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 509,325; Non-Residential Outdoor: 169,775; Striped Parking Area: 6,600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,488.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1100e-003	0.0636	0.0323	6.0000e-005		3.3000e-003	3.3000e-003		3.0300e-003	3.0300e-003	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0552
Total	**6.1100e-003**	**0.0636**	**0.0323**	**6.0000e-005**	**0.0271**	**3.3000e-003**	**0.0304**	**0.0149**	**3.0300e-003**	**0.0179**	**0.0000**	**5.0146**	**5.0146**	**1.6200e-003**	**0.0000**	**5.0552**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.5000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1757	0.1757	0.0000	0.0000	0.1758
Total	**1.0000e-004**	**7.0000e-005**	**7.5000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1757**	**0.1757**	**0.0000**	**0.0000**	**0.1758**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1100e-003	0.0636	0.0323	6.0000e-005		3.3000e-003	3.3000e-003		3.0300e-003	3.0300e-003	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0551
Total	**6.1100e-003**	**0.0636**	**0.0323**	**6.0000e-005**	**0.0271**	**3.3000e-003**	**0.0304**	**0.0149**	**3.0300e-003**	**0.0179**	**0.0000**	**5.0146**	**5.0146**	**1.6200e-003**	**0.0000**	**5.0551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.5000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1757	0.1757	0.0000	0.0000	0.1758
Total	**1.0000e-004**	**7.0000e-005**	**7.5000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1757**	**0.1757**	**0.0000**	**0.0000**	**0.1758**

3.3 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3900e-003	0.0352	0.0366	6.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	5.0071	5.0071	1.6200e-003	0.0000	5.0475
Paving	3.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.6300e-003**	**0.0352**	**0.0366**	**6.0000e-005**		**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**5.0071**	**5.0071**	**1.6200e-003**	**0.0000**	**5.0475**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.0400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2440	0.2440	1.0000e-005	0.0000	0.2442
Total	**1.4000e-004**	**9.0000e-005**	**1.0400e-003**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2440**	**0.2440**	**1.0000e-005**	**0.0000**	**0.2442**

3.3 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3900e-003	0.0352	0.0366	6.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	5.0071	5.0071	1.6200e-003	0.0000	5.0475
Paving	3.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.6300e-003**	**0.0352**	**0.0366**	**6.0000e-005**		**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**5.0071**	**5.0071**	**1.6200e-003**	**0.0000**	**5.0475**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.0400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2440	0.2440	1.0000e-005	0.0000	0.2442
Total	**1.4000e-004**	**9.0000e-005**	**1.0400e-003**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2440**	**0.2440**	**1.0000e-005**	**0.0000**	**0.2442**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2279	2.0625	1.8112	2.8900e-003		0.1201	0.1201		0.1129	0.1129	0.0000	248.9807	248.9807	0.0607	0.0000	250.4993
Total	**0.2279**	**2.0625**	**1.8112**	**2.8900e-003**		**0.1201**	**0.1201**		**0.1129**	**0.1129**	**0.0000**	**248.9807**	**248.9807**	**0.0607**	**0.0000**	**250.4993**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0305	0.8921	0.2488	1.9600e-003	0.0465	4.6200e-003	0.0511	0.0134	4.4200e-003	0.0179	0.0000	188.2260	188.2260	0.0111	0.0000	188.5046
Worker	0.0756	0.0513	0.5624	1.4600e-003	0.1492	1.0700e-003	0.1503	0.0397	9.9000e-004	0.0407	0.0000	132.2133	132.2133	3.7400e-003	0.0000	132.3067
Total	**0.1061**	**0.9434**	**0.8112**	**3.4200e-003**	**0.1957**	**5.6900e-003**	**0.2014**	**0.0531**	**5.4100e-003**	**0.0585**	**0.0000**	**320.4392**	**320.4392**	**0.0149**	**0.0000**	**320.8113**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2279	2.0625	1.8112	2.8900e-003		0.1201	0.1201		0.1129	0.1129	0.0000	248.9804	248.9804	0.0607	0.0000	250.4990
Total	**0.2279**	**2.0625**	**1.8112**	**2.8900e-003**		**0.1201**	**0.1201**		**0.1129**	**0.1129**	**0.0000**	**248.9804**	**248.9804**	**0.0607**	**0.0000**	**250.4990**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0305	0.8921	0.2488	1.9600e-003	0.0465	4.6200e-003	0.0511	0.0134	4.4200e-003	0.0179	0.0000	188.2260	188.2260	0.0111	0.0000	188.5046
Worker	0.0756	0.0513	0.5624	1.4600e-003	0.1492	1.0700e-003	0.1503	0.0397	9.9000e-004	0.0407	0.0000	132.2133	132.2133	3.7400e-003	0.0000	132.3067
Total	**0.1061**	**0.9434**	**0.8112**	**3.4200e-003**	**0.1957**	**5.6900e-003**	**0.2014**	**0.0531**	**5.4100e-003**	**0.0585**	**0.0000**	**320.4392**	**320.4392**	**0.0149**	**0.0000**	**320.8113**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0428	0.0000	0.0428	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.2510	0.1598	3.1000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	27.2422	27.2422	8.8100e-003	0.0000	27.4624
Total	**0.0223**	**0.2510**	**0.1598**	**3.1000e-004**	**0.0428**	**0.0109**	**0.0536**	**0.0180**	**0.0100**	**0.0280**	**0.0000**	**27.2422**	**27.2422**	**8.8100e-003**	**0.0000**	**27.4624**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5600e-003	0.3574	0.0808	9.8000e-004	0.0210	1.2800e-003	0.0223	5.7600e-003	1.2200e-003	6.9900e-003	0.0000	95.1815	95.1815	5.5300e-003	0.0000	95.3199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.5000e-004	2.7700e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6507	0.6507	2.0000e-005	0.0000	0.6512
Total	**9.9300e-003**	**0.3577**	**0.0835**	**9.9000e-004**	**0.0217**	**1.2900e-003**	**0.0230**	**5.9600e-003**	**1.2200e-003**	**7.1900e-003**	**0.0000**	**95.8323**	**95.8323**	**5.5500e-003**	**0.0000**	**95.9711**

3.5 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0428	0.0000	0.0428	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.2510	0.1598	3.1000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	27.2421	27.2421	8.8100e-003	0.0000	27.4624
Total	**0.0223**	**0.2510**	**0.1598**	**3.1000e-004**	**0.0428**	**0.0109**	**0.0536**	**0.0180**	**0.0100**	**0.0280**	**0.0000**	**27.2421**	**27.2421**	**8.8100e-003**	**0.0000**	**27.4624**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5600e-003	0.3574	0.0808	9.8000e-004	0.0210	1.2800e-003	0.0223	5.7600e-003	1.2200e-003	6.9900e-003	0.0000	95.1815	95.1815	5.5300e-003	0.0000	95.3199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.5000e-004	2.7700e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6507	0.6507	2.0000e-005	0.0000	0.6512
Total	**9.9300e-003**	**0.3577**	**0.0835**	**9.9000e-004**	**0.0217**	**1.2900e-003**	**0.0230**	**5.9600e-003**	**1.2200e-003**	**7.1900e-003**	**0.0000**	**95.8323**	**95.8323**	**5.5500e-003**	**0.0000**	**95.9711**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5891					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0260	0.1810	0.1969	3.2000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	27.4475	27.4475	2.1300e-003	0.0000	27.5006
Total	**1.6151**	**0.1810**	**0.1969**	**3.2000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**27.4475**	**27.4475**	**2.1300e-003**	**0.0000**	**27.5006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0152	0.0103	0.1131	2.9000e-004	0.0300	2.2000e-004	0.0302	7.9800e-003	2.0000e-004	8.1800e-003	0.0000	26.5826	26.5826	7.5000e-004	0.0000	26.6014
Total	**0.0152**	**0.0103**	**0.1131**	**2.9000e-004**	**0.0300**	**2.2000e-004**	**0.0302**	**7.9800e-003**	**2.0000e-004**	**8.1800e-003**	**0.0000**	**26.5826**	**26.5826**	**7.5000e-004**	**0.0000**	**26.6014**

3.6 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5891					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0260	0.1810	0.1969	3.2000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	27.4475	27.4475	2.1300e-003	0.0000	27.5006
Total	**1.6151**	**0.1810**	**0.1969**	**3.2000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**27.4475**	**27.4475**	**2.1300e-003**	**0.0000**	**27.5006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0152	0.0103	0.1131	2.9000e-004	0.0300	2.2000e-004	0.0302	7.9800e-003	2.0000e-004	8.1800e-003	0.0000	26.5826	26.5826	7.5000e-004	0.0000	26.6014
Total	**0.0152**	**0.0103**	**0.1131**	**2.9000e-004**	**0.0300**	**2.2000e-004**	**0.0302**	**7.9800e-003**	**2.0000e-004**	**8.1800e-003**	**0.0000**	**26.5826**	**26.5826**	**7.5000e-004**	**0.0000**	**26.6014**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5279	2.2666	6.2114	0.0188	1.5843	0.0169	1.6012	0.4248	0.0158	0.4407	0.0000	1,726.1978	1,726.1978	0.0850	0.0000	1,728.3221
Unmitigated	0.5458	2.3933	6.6649	0.0205	1.7375	0.0183	1.7558	0.4659	0.0172	0.4831	0.0000	1,883.0995	1,883.0995	0.0914	0.0000	1,885.3855

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
General Light Industry	1,684.17	1,684.17	1684.17	4,657,987	4,247,361
Total	1,684.17	1,684.17	1,684.17	4,657,987	4,247,361

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Light Industry	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	995.3643	995.3643	0.0683	0.0141	1,001.2835
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	995.3643	995.3643	0.0683	0.0141	1,001.2835
NaturalGas Mitigated	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	648.8658	648.8658	0.0124	0.0119	652.7217
NaturalGas Unmitigated	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	648.8658	648.8658	0.0124	0.0119	652.7217

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.21593e+007	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	648.8658	648.8658	0.0124	0.0119	652.7217
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0656**	**0.5960**	**0.5007**	**3.5800e-003**		**0.0453**	**0.0453**		**0.0453**	**0.0453**	**0.0000**	**648.8658**	**648.8658**	**0.0124**	**0.0119**	**652.7217**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.21593e+007	0.0656	0.5960	0.5007	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	648.8658	648.8658	0.0124	0.0119	652.7217
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0656**	**0.5960**	**0.5007**	**3.5800e-003**		**0.0453**	**0.0453**		**0.0453**	**0.0453**	**0.0000**	**648.8658**	**648.8658**	**0.0124**	**0.0119**	**652.7217**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	5.15437e+006	987.9846	0.0678	0.0140	993.8600
Parking Lot	38500	7.3796	5.1000e-004	1.0000e-004	7.4235
Total		**995.3643**	**0.0683**	**0.0141**	**1,001.2835**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	5.15437e+006	987.9846	0.0678	0.0140	993.8600
Parking Lot	38500	7.3796	5.1000e-004	1.0000e-004	7.4235
Total		**995.3643**	**0.0683**	**0.0141**	**1,001.2835**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4929	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163
Unmitigated	1.4929	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1589					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3332					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.4000e-004	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163
Total	**1.4929**	**7.0000e-005**	**7.8700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0153**	**0.0153**	**4.0000e-005**	**0.0000**	**0.0163**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1589					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3332					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.4000e-004	7.0000e-005	7.8700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0153	0.0153	4.0000e-005	0.0000	0.0163
Total	**1.4929**	**7.0000e-005**	**7.8700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0153**	**0.0153**	**4.0000e-005**	**0.0000**	**0.0163**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	102.7731	0.1008	0.0615	123.6129
Unmitigated	102.7731	0.1008	0.0615	123.6129

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	78.5209 / 0	102.7731	0.1008	0.0615	123.6129
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**102.7731**	**0.1008**	**0.0615**	**123.6129**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	78.5209 / 0	102.7731	0.1008	0.0615	123.6129
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**102.7731**	**0.1008**	**0.0615**	**123.6129**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	85.4673	5.0510	0.0000	211.7417
Unmitigated	85.4673	5.0510	0.0000	211.7417

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	421.04	85.4673	5.0510	0.0000	211.7417
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**85.4673**	**5.0510**	**0.0000**	**211.7417**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	421.04	85.4673	5.0510	0.0000	211.7417
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**85.4673**	**5.0510**	**0.0000**	**211.7417**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bell Avenue Warehouses Project

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	339.55	1000sqft	21.10	339,550.00	0
Parking Lot	275.00	Space	2.47	110,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	422.58	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Co2 Intensity Factor Based on SMUD RPS Calculator

Land Use - Applicant Provided Infomation

Construction Phase - Applicant Provided Information

Grading - Appliant Provided Information

Vehicle Trips - Per KD Anderson Trip Generation Forecast

Energy Use -

Mobile Land Use Mitigation -

Bell Avenue Warehouses Project - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	215.00
tblConstructionPhase	NumDays	370.00	215.00
tblConstructionPhase	NumDays	35.00	10.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	12/28/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	11/2/2021	11/19/2020
tblConstructionPhase	PhaseEndDate	6/2/2020	4/13/2020
tblConstructionPhase	PhaseEndDate	11/30/2021	4/18/2020
tblConstructionPhase	PhaseEndDate	4/14/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	12/1/2021	5/3/2020
tblConstructionPhase	PhaseStartDate	6/3/2020	4/19/2020
tblConstructionPhase	PhaseStartDate	4/15/2020	4/4/2020
tblConstructionPhase	PhaseStartDate	11/3/2021	4/14/2020
tblGrading	AcresOfGrading	25.00	20.00
tblGrading	MaterialExported	0.00	19,900.00
tblLandUse	LotAcreage	7.79	21.10
tblProjectCharacteristics	CO2IntensityFactor	590.31	422.58
tblVehicleTrips	ST_TR	1.32	4.96
tblVehicleTrips	SU_TR	0.68	4.96
tblVehicleTrips	WD_TR	6.97	4.96

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	18.4023	119.2755	48.3700	0.2607	18.2032	2.4273	20.4016	9.9670	2.2423	11.9895	0.0000	27,284.7491	27,284.7491	3.1443	0.0000	27,363.3570
Maximum	**18.4023**	**119.2755**	**48.3700**	**0.2607**	**18.2032**	**2.4273**	**20.4016**	**9.9670**	**2.2423**	**11.9895**	**0.0000**	**27,284.7491**	**27,284.7491**	**3.1443**	**0.0000**	**27,363.3570**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	18.4023	119.2755	48.3700	0.2607	18.2032	2.4273	20.4016	9.9670	2.2423	11.9895	0.0000	27,284.7490	27,284.7490	3.1443	0.0000	27,363.3570
Maximum	**18.4023**	**119.2755**	**48.3700**	**0.2607**	**18.2032**	**2.4273**	**20.4016**	**9.9670**	**2.2423**	**11.9895**	**0.0000**	**27,284.7490**	**27,284.7490**	**3.1443**	**0.0000**	**27,363.3570**

Bell Avenue Warehouses Project - Sacramento County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Energy	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Mobile	3.7575	12.5817	41.3573	0.1220	9.8825	0.1003	9.9829	2.6424	0.0939	2.7363		12,343.2029	12,343.2029	0.5714		12,357.4868
Total	**12.2988**	**15.8483**	**44.1637**	**0.1416**	**9.8825**	**0.3488**	**10.2313**	**2.6424**	**0.3424**	**2.9847**		**16,262.5270**	**16,262.5270**	**0.6468**	**0.0719**	**16,300.1095**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Energy	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Mobile	3.6540	11.9380	38.3260	0.1118	9.0114	0.0925	9.1039	2.4094	0.0866	2.4960		11,312.1938	11,312.1938	0.5297		11,325.4357
Total	**12.1952**	**15.2046**	**41.1324**	**0.1314**	**9.0114**	**0.3410**	**9.3523**	**2.4094**	**0.3351**	**2.7445**		**15,231.5179**	**15,231.5179**	**0.6052**	**0.0719**	**15,268.0585**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.84**	**4.06**	**6.86**	**7.20**	**8.82**	**2.24**	**8.59**	**8.82**	**2.14**	**8.05**	**0.00**	**6.34**	**6.34**	**6.44**	**0.00**	**6.33**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2020	4/3/2020	7	3	
2	Paving	Paving	4/14/2020	4/18/2020	7	5	
3	Building Construction	Building Construction	4/19/2020	11/19/2020	7	215	
4	Grading	Grading	4/4/2020	4/13/2020	7	10	
5	Architectural Coating	Architectural Coating	5/3/2020	12/3/2020	7	215	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 509,325; Non-Residential Outdoor: 169,775; Striped Parking Area: 6,600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,488.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0776	0.0412	0.5877	1.4400e-003	0.1369	9.5000e-004	0.1379	0.0363	8.8000e-004	0.0372		142.8323	142.8323	4.0900e-003		142.9346
Total	**0.0776**	**0.0412**	**0.5877**	**1.4400e-003**	**0.1369**	**9.5000e-004**	**0.1379**	**0.0363**	**8.8000e-004**	**0.0372**		**142.8323**	**142.8323**	**4.0900e-003**		**142.9346**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0776	0.0412	0.5877	1.4400e-003	0.1369	9.5000e-004	0.1379	0.0363	8.8000e-004	0.0372		142.8323	142.8323	4.0900e-003		142.9346
Total	**0.0776**	**0.0412**	**0.5877**	**1.4400e-003**	**0.1369**	**9.5000e-004**	**0.1379**	**0.0363**	**8.8000e-004**	**0.0372**		**142.8323**	**142.8323**	**4.0900e-003**		**142.9346**

3.3 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.2943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6508**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0647	0.0343	0.4898	1.2000e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

3.3 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.2943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6508**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0647	0.0343	0.4898	1.2000e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2791	8.1255	2.1839	0.0184	0.4453	0.0424	0.4877	0.1282	0.0405	0.1687		1,951.0502	1,951.0502	0.1106		1,953.8140
Worker	0.8150	0.4325	6.1709	0.0151	1.4377	0.0100	1.4477	0.3814	9.2100e-003	0.3906		1,499.7395	1,499.7395	0.0430		1,500.8137
Total	**1.0940**	**8.5580**	**8.3548**	**0.0335**	**1.8831**	**0.0524**	**1.9354**	**0.5095**	**0.0497**	**0.5593**		**3,450.7896**	**3,450.7896**	**0.1535**		**3,454.6277**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2791	8.1255	2.1839	0.0184	0.4453	0.0424	0.4877	0.1282	0.0405	0.1687		1,951.0502	1,951.0502	0.1106		1,953.8140
Worker	0.8150	0.4325	6.1709	0.0151	1.4377	0.0100	1.4477	0.3814	9.2100e-003	0.3906		1,499.7395	1,499.7395	0.0430		1,500.8137
Total	**1.0940**	**8.5580**	**8.3548**	**0.0335**	**1.8831**	**0.0524**	**1.9354**	**0.5095**	**0.0497**	**0.5593**		**3,450.7896**	**3,450.7896**	**0.1535**		**3,454.6277**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.5546	0.0000	8.5546	3.6016	0.0000	3.6016			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.5546**	**2.1739**	**10.7285**	**3.6016**	**2.0000**	**5.6016**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8900	69.0322	15.7587	0.1972	4.3284	0.2523	4.5807	1.1846	0.2414	1.4260		21,120.1812	21,120.1812	1.1974		21,150.1150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0862	0.0458	0.6530	1.5900e-003	0.1521	1.0600e-003	0.1532	0.0404	9.7000e-004	0.0413		158.7026	158.7026	4.5500e-003		158.8163
Total	**1.9762**	**69.0780**	**16.4117**	**0.1987**	**4.4806**	**0.2534**	**4.7339**	**1.2250**	**0.2424**	**1.4673**		**21,278.8838**	**21,278.8838**	**1.2019**		**21,308.9313**

3.5 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.5546	0.0000	8.5546	3.6016	0.0000	3.6016			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.5546**	**2.1739**	**10.7285**	**3.6016**	**2.0000**	**5.6016**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8900	69.0322	15.7587	0.1972	4.3284	0.2523	4.5807	1.1846	0.2414	1.4260		21,120.1812	21,120.1812	1.1974		21,150.1150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0862	0.0458	0.6530	1.5900e-003	0.1521	1.0600e-003	0.1532	0.0404	9.7000e-004	0.0413		158.7026	158.7026	4.5500e-003		158.8163
Total	**1.9762**	**69.0780**	**16.4117**	**0.1987**	**4.4806**	**0.2534**	**4.7339**	**1.2250**	**0.2424**	**1.4673**		**21,278.8838**	**21,278.8838**	**1.2019**		**21,308.9313**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.7824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**15.0246**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1639	0.0870	1.2407	3.0300e-003	0.2891	2.0100e-003	0.2911	0.0767	1.8500e-003	0.0785		301.5349	301.5349	8.6400e-003		301.7509
Total	**0.1639**	**0.0870**	**1.2407**	**3.0300e-003**	**0.2891**	**2.0100e-003**	**0.2911**	**0.0767**	**1.8500e-003**	**0.0785**		**301.5349**	**301.5349**	**8.6400e-003**		**301.7509**

3.6 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.7824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**15.0246**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1639	0.0870	1.2407	3.0300e-003	0.2891	2.0100e-003	0.2911	0.0767	1.8500e-003	0.0785		301.5349	301.5349	8.6400e-003		301.7509
Total	**0.1639**	**0.0870**	**1.2407**	**3.0300e-003**	**0.2891**	**2.0100e-003**	**0.2911**	**0.0767**	**1.8500e-003**	**0.0785**		**301.5349**	**301.5349**	**8.6400e-003**		**301.7509**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6540	11.9380	38.3260	0.1118	9.0114	0.0925	9.1039	2.4094	0.0866	2.4960		11,312.1938	11,312.1938	0.5297		11,325.4357
Unmitigated	3.7575	12.5817	41.3573	0.1220	9.8825	0.1003	9.9829	2.6424	0.0939	2.7363		12,343.2029	12,343.2029	0.5714		12,357.4868

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
General Light Industry	1,684.17	1,684.17	1684.17	4,657,987	4,247,361
Total	1,684.17	1,684.17	1,684.17	4,657,987	4,247,361

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Light Industry	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
NaturalGas Unmitigated	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	33313.1	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3593**	**3.2660**	**2.7434**	**0.0196**		**0.2482**	**0.2482**		**0.2482**	**0.2482**		**3,919.1895**	**3,919.1895**	**0.0751**	**0.0719**	**3,942.4793**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	33.3131	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3593**	**3.2660**	**2.7434**	**0.0196**		**0.2482**	**0.2482**		**0.2482**	**0.2482**		**3,919.1895**	**3,919.1895**	**0.0751**	**0.0719**	**3,942.4793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Unmitigated	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3053					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8800e-003	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Total	**8.1820**	**5.8000e-004**	**0.0630**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1345**	**0.1345**	**3.6000e-004**		**0.1434**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3053					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8800e-003	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Total	**8.1820**	**5.8000e-004**	**0.0630**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1345**	**0.1345**	**3.6000e-004**		**0.1434**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bell Avenue Warehouses Project

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	339.55	1000sqft	21.10	339,550.00	0
Parking Lot	275.00	Space	2.47	110,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	422.58	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Co2 Intensity Factor Based on SMUD RPS Calculator

Land Use - Applicant Provided Infomation

Construction Phase - Applicant Provided Information

Grading - Appliant Provided Information

Vehicle Trips - Per KD Anderson Trip Generation Forecast

Energy Use -

Mobile Land Use Mitigation -

Bell Avenue Warehouses Project - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	215.00
tblConstructionPhase	NumDays	370.00	215.00
tblConstructionPhase	NumDays	35.00	10.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	12/28/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	11/2/2021	11/19/2020
tblConstructionPhase	PhaseEndDate	6/2/2020	4/13/2020
tblConstructionPhase	PhaseEndDate	11/30/2021	4/18/2020
tblConstructionPhase	PhaseEndDate	4/14/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	12/1/2021	5/3/2020
tblConstructionPhase	PhaseStartDate	6/3/2020	4/19/2020
tblConstructionPhase	PhaseStartDate	4/15/2020	4/4/2020
tblConstructionPhase	PhaseStartDate	11/3/2021	4/14/2020
tblGrading	AcresOfGrading	25.00	20.00
tblGrading	MaterialExported	0.00	19,900.00
tblLandUse	LotAcreage	7.79	21.10
tblProjectCharacteristics	CO2IntensityFactor	590.31	422.58
tblVehicleTrips	ST_TR	1.32	4.96
tblVehicleTrips	SU_TR	0.68	4.96
tblVehicleTrips	WD_TR	6.97	4.96

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	18.3391	122.1058	49.3803	0.2575	18.2032	2.4357	20.4016	9.9670	2.2504	11.9895	0.0000	26,941.0340	26,941.0340	3.1990	0.0000	27,021.0094
Maximum	**18.3391**	**122.1058**	**49.3803**	**0.2575**	**18.2032**	**2.4357**	**20.4016**	**9.9670**	**2.2504**	**11.9895**	**0.0000**	**26,941.0340**	**26,941.0340**	**3.1990**	**0.0000**	**27,021.0094**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	18.3391	122.1058	49.3803	0.2575	18.2032	2.4357	20.4016	9.9670	2.2504	11.9895	0.0000	26,941.0339	26,941.0339	3.1990	0.0000	27,021.0094
Maximum	**18.3391**	**122.1058**	**49.3803**	**0.2575**	**18.2032**	**2.4357**	**20.4016**	**9.9670**	**2.2504**	**11.9895**	**0.0000**	**26,941.0339**	**26,941.0339**	**3.1990**	**0.0000**	**27,021.0094**

Bell Avenue Warehouses Project - Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Energy	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Mobile	2.8502	13.5558	37.8594	0.1100	9.8825	0.1016	9.9842	2.6424	0.0952	2.7375		11,147.0522	11,147.0522	0.5627		11,161.1189
Total	**11.3915**	**16.8224**	**40.6659**	**0.1296**	**9.8825**	**0.3501**	**10.2326**	**2.6424**	**0.3436**	**2.9860**		**15,066.3762**	**15,066.3762**	**0.6382**	**0.0719**	**15,103.7416**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Energy	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Mobile	2.7515	12.8236	35.4305	0.1009	9.0114	0.0938	9.1051	2.4094	0.0878	2.4973		10,216.9515	10,216.9515	0.5239		10,230.0492
Total	**11.2927**	**16.0902**	**38.2369**	**0.1205**	**9.0114**	**0.3422**	**9.3536**	**2.4094**	**0.3363**	**2.7457**		**14,136.2755**	**14,136.2755**	**0.5994**	**0.0719**	**14,172.6719**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.87**	**4.35**	**5.97**	**7.08**	**8.82**	**2.23**	**8.59**	**8.82**	**2.13**	**8.05**	**0.00**	**6.17**	**6.17**	**6.07**	**0.00**	**6.16**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2020	4/3/2020	7	3	
2	Paving	Paving	4/14/2020	4/18/2020	7	5	
3	Building Construction	Building Construction	4/19/2020	11/19/2020	7	215	
4	Grading	Grading	4/4/2020	4/13/2020	7	10	
5	Architectural Coating	Architectural Coating	5/3/2020	12/3/2020	7	215	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 509,325; Non-Residential Outdoor: 169,775; Striped Parking Area: 6,600 (Architectural Coating – sqft)

OffRoad Equipment

Bell Avenue Warehouses Project - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,488.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	189.00	74.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0714	0.0509	0.5032	1.2600e-003	0.1369	9.5000e-004	0.1379	0.0363	8.8000e-004	0.0372		125.4399	125.4399	3.6100e-003		125.5301
Total	**0.0714**	**0.0509**	**0.5032**	**1.2600e-003**	**0.1369**	**9.5000e-004**	**0.1379**	**0.0363**	**8.8000e-004**	**0.0372**		**125.4399**	**125.4399**	**3.6100e-003**		**125.5301**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0714	0.0509	0.5032	1.2600e-003	0.1369	9.5000e-004	0.1379	0.0363	8.8000e-004	0.0372		125.4399	125.4399	3.6100e-003		125.5301
Total	**0.0714**	**0.0509**	**0.5032**	**1.2600e-003**	**0.1369**	**9.5000e-004**	**0.1379**	**0.0363**	**8.8000e-004**	**0.0372**		**125.4399**	**125.4399**	**3.6100e-003**		**125.5301**

3.3 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.2943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6508**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0595	0.0424	0.4194	1.0500e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0595**	**0.0424**	**0.4194**	**1.0500e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**104.5333**	**104.5333**	**3.0100e-003**		**104.6084**

3.3 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.2943					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6508**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0595	0.0424	0.4194	1.0500e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0595**	**0.0424**	**0.4194**	**1.0500e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**104.5333**	**104.5333**	**3.0100e-003**		**104.6084**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2939	8.2915	2.5122	0.0180	0.4453	0.0438	0.4891	0.1282	0.0419	0.1700		1,901.1510	1,901.1510	0.1196		1,904.1421
Worker	0.7499	0.5344	5.2838	0.0132	1.4377	0.0100	1.4477	0.3814	9.2100e-003	0.3906		1,317.1193	1,317.1193	0.0379		1,318.0661
Total	**1.0439**	**8.8258**	**7.7960**	**0.0312**	**1.8831**	**0.0538**	**1.9368**	**0.5095**	**0.0511**	**0.5606**		**3,218.2703**	**3,218.2703**	**0.1575**		**3,222.2082**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2939	8.2915	2.5122	0.0180	0.4453	0.0438	0.4891	0.1282	0.0419	0.1700		1,901.1510	1,901.1510	0.1196		1,904.1421
Worker	0.7499	0.5344	5.2838	0.0132	1.4377	0.0100	1.4477	0.3814	9.2100e-003	0.3906		1,317.1193	1,317.1193	0.0379		1,318.0661
Total	**1.0439**	**8.8258**	**7.7960**	**0.0312**	**1.8831**	**0.0538**	**1.9368**	**0.5095**	**0.0511**	**0.5606**		**3,218.2703**	**3,218.2703**	**0.1575**		**3,222.2082**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.5546	0.0000	8.5546	3.6016	0.0000	3.6016			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.5546**	**2.1739**	**10.7285**	**3.6016**	**2.0000**	**5.6016**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9501	71.8517	16.8629	0.1941	4.3284	0.2607	4.5891	1.1846	0.2494	1.4340		20,795.7910	20,795.7910	1.2526		20,827.1058
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0794	0.0565	0.5591	1.4000e-003	0.1521	1.0600e-003	0.1532	0.0404	9.7000e-004	0.0413		139.3777	139.3777	4.0100e-003		139.4779
Total	**2.0295**	**71.9083**	**17.4220**	**0.1955**	**4.4806**	**0.2618**	**4.7423**	**1.2250**	**0.2504**	**1.4753**		**20,935.1687**	**20,935.1687**	**1.2566**		**20,966.5837**

3.5 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.5546	0.0000	8.5546	3.6016	0.0000	3.6016			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.5546**	**2.1739**	**10.7285**	**3.6016**	**2.0000**	**5.6016**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9501	71.8517	16.8629	0.1941	4.3284	0.2607	4.5891	1.1846	0.2494	1.4340		20,795.7910	20,795.7910	1.2526		20,827.1058
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0794	0.0565	0.5591	1.4000e-003	0.1521	1.0600e-003	0.1532	0.0404	9.7000e-004	0.0413		139.3777	139.3777	4.0100e-003		139.4779
Total	**2.0295**	**71.9083**	**17.4220**	**0.1955**	**4.4806**	**0.2618**	**4.7423**	**1.2250**	**0.2504**	**1.4753**		**20,935.1687**	**20,935.1687**	**1.2566**		**20,966.5837**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.7824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**15.0246**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1508	0.1074	1.0624	2.6600e-003	0.2891	2.0100e-003	0.2911	0.0767	1.8500e-003	0.0785		264.8176	264.8176	7.6100e-003		265.0080
Total	**0.1508**	**0.1074**	**1.0624**	**2.6600e-003**	**0.2891**	**2.0100e-003**	**0.2911**	**0.0767**	**1.8500e-003**	**0.0785**		**264.8176**	**264.8176**	**7.6100e-003**		**265.0080**

3.6 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.7824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**15.0246**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1508	0.1074	1.0624	2.6600e-003	0.2891	2.0100e-003	0.2911	0.0767	1.8500e-003	0.0785		264.8176	264.8176	7.6100e-003		265.0080
Total	**0.1508**	**0.1074**	**1.0624**	**2.6600e-003**	**0.2891**	**2.0100e-003**	**0.2911**	**0.0767**	**1.8500e-003**	**0.0785**		**264.8176**	**264.8176**	**7.6100e-003**		**265.0080**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7515	12.8236	35.4305	0.1009	9.0114	0.0938	9.1051	2.4094	0.0878	2.4973		10,216.9515	10,216.9515	0.5239		10,230.0492
Unmitigated	2.8502	13.5558	37.8594	0.1100	9.8825	0.1016	9.9842	2.6424	0.0952	2.7375		11,147.0522	11,147.0522	0.5627		11,161.1189

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
General Light Industry	1,684.17	1,684.17	1684.17	4,657,987	4,247,361
Total	1,684.17	1,684.17	1,684.17	4,657,987	4,247,361

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Light Industry	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
NaturalGas Unmitigated	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	33313.1	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3593**	**3.2660**	**2.7434**	**0.0196**		**0.2482**	**0.2482**		**0.2482**	**0.2482**		**3,919.1895**	**3,919.1895**	**0.0751**	**0.0719**	**3,942.4793**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	33.3131	0.3593	3.2660	2.7434	0.0196		0.2482	0.2482		0.2482	0.2482		3,919.1895	3,919.1895	0.0751	0.0719	3,942.4793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3593**	**3.2660**	**2.7434**	**0.0196**		**0.2482**	**0.2482**		**0.2482**	**0.2482**		**3,919.1895**	**3,919.1895**	**0.0751**	**0.0719**	**3,942.4793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Unmitigated	8.1820	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3053					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8800e-003	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Total	**8.1820**	**5.8000e-004**	**0.0630**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1345**	**0.1345**	**3.6000e-004**		**0.1434**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3053					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8800e-003	5.8000e-004	0.0630	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1345	0.1345	3.6000e-004		0.1434
Total	**8.1820**	**5.8000e-004**	**0.0630**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1345**	**0.1345**	**3.6000e-004**		**0.1434**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bell Avenue Warehouses Project

Sacramento County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	2.60300E-002	1.81010E-001	1.96880E-001	3.20000E-004	1.19300E-002	1.19300E-002	0.00000E+000	2.74475E+001	2.74475E+001	2.13000E-003	0.00000E+000	2.75006E+001
Cranes	4.26500E-002	5.07140E-001	1.98980E-001	5.40000E-004	2.09100E-002	1.92300E-002	0.00000E+000	4.76827E+001	4.76827E+001	1.54200E-002	0.00000E+000	4.80682E+001
Excavators	2.45000E-003	2.41300E-002	3.26800E-002	5.00000E-005	1.17000E-003	1.08000E-003	0.00000E+000	4.53700E+000	4.53700E+000	1.47000E-003	0.00000E+000	4.57368E+000
Forklifts	4.64400E-002	4.18440E-001	3.80640E-001	4.90000E-004	3.11700E-002	2.86800E-002	0.00000E+000	4.33090E+001	4.33090E+001	1.40100E-002	0.00000E+000	4.36591E+001
Generator Sets	4.29000E-002	3.73950E-001	3.98350E-001	7.10000E-004	2.11000E-002	2.11000E-002	0.00000E+000	6.07598E+001	6.07598E+001	3.42000E-003	0.00000E+000	6.08453E+001
Graders	2.38000E-003	3.16300E-002	9.07000E-003	3.00000E-005	1.01000E-003	9.30000E-004	0.00000E+000	2.91532E+000	2.91532E+000	9.40000E-004	0.00000E+000	2.93889E+000
Pavers	1.31000E-003	1.40500E-002	1.44900E-002	2.00000E-005	6.80000E-004	6.30000E-004	0.00000E+000	2.06508E+000	2.06508E+000	6.70000E-004	0.00000E+000	2.08178E+000
Paving Equipment	1.04000E-003	1.07100E-002	1.26700E-002	2.00000E-005	5.40000E-004	4.90000E-004	0.00000E+000	1.78955E+000	1.78955E+000	5.80000E-004	0.00000E+000	1.80402E+000
Rollers	1.04000E-003	1.04100E-002	9.47000E-003	1.00000E-005	6.60000E-004	6.10000E-004	0.00000E+000	1.15243E+000	1.15243E+000	3.70000E-004	0.00000E+000	1.16174E+000
Rubber Tired Dozers	1.02600E-002	1.07660E-001	3.92500E-002	8.00000E-005	5.27000E-003	4.85000E-003	0.00000E+000	7.13025E+000	7.13025E+000	2.31000E-003	0.00000E+000	7.18790E+000
Scrapers	9.93000E-003	1.17520E-001	7.45900E-002	1.50000E-004	4.58000E-003	4.22000E-003	0.00000E+000	1.33085E+001	1.33085E+001	4.30000E-003	0.00000E+000	1.34161E+001
Tractors/Loaders/ Backhoes	6.24700E-002	6.27730E-001	6.79780E-001	9.30000E-004	3.96900E-002	3.65200E-002	0.00000E+000	8.13612E+001	8.13612E+001	2.63100E-002	0.00000E+000	8.20191E+001
Welders	3.67700E-002	1.68920E-001	1.89950E-001	2.70000E-004	9.34000E-003	9.34000E-003	0.00000E+000	2.02337E+001	2.02337E+001	2.99000E-003	0.00000E+000	2.03085E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	2.60300E-002	1.81010E-001	1.96880E-001	3.20000E-004	1.19300E-002	1.19300E-002	0.00000E+000	2.74475E+001	2.74475E+001	2.13000E-003	0.00000E+000	2.75006E+001
Cranes	4.26500E-002	5.07140E-001	1.98980E-001	5.40000E-004	2.09100E-002	1.92300E-002	0.00000E+000	4.76826E+001	4.76826E+001	1.54200E-002	0.00000E+000	4.80682E+001
Excavators	2.45000E-003	2.41300E-002	3.26800E-002	5.00000E-005	1.17000E-003	1.08000E-003	0.00000E+000	4.53699E+000	4.53699E+000	1.47000E-003	0.00000E+000	4.57368E+000
Forklifts	4.64400E-002	4.18440E-001	3.80630E-001	4.90000E-004	3.11700E-002	2.86800E-002	0.00000E+000	4.33089E+001	4.33089E+001	1.40100E-002	0.00000E+000	4.36591E+001
Generator Sets	4.29000E-002	3.73950E-001	3.98350E-001	7.10000E-004	2.11000E-002	2.11000E-002	0.00000E+000	6.07597E+001	6.07597E+001	3.42000E-003	0.00000E+000	6.08453E+001
Graders	2.38000E-003	3.16300E-002	9.07000E-003	3.00000E-005	1.01000E-003	9.30000E-004	0.00000E+000	2.91532E+000	2.91532E+000	9.40000E-004	0.00000E+000	2.93889E+000
Pavers	1.31000E-003	1.40500E-002	1.44900E-002	2.00000E-005	6.80000E-004	6.30000E-004	0.00000E+000	2.06508E+000	2.06508E+000	6.70000E-004	0.00000E+000	2.08177E+000
Paving Equipment	1.04000E-003	1.07100E-002	1.26700E-002	2.00000E-005	5.40000E-004	4.90000E-004	0.00000E+000	1.78955E+000	1.78955E+000	5.80000E-004	0.00000E+000	1.80402E+000
Rollers	1.04000E-003	1.04100E-002	9.47000E-003	1.00000E-005	6.60000E-004	6.10000E-004	0.00000E+000	1.15242E+000	1.15242E+000	3.70000E-004	0.00000E+000	1.16174E+000
Rubber Tired Dozers	1.02600E-002	1.07660E-001	3.92500E-002	8.00000E-005	5.27000E-003	4.85000E-003	0.00000E+000	7.13024E+000	7.13024E+000	2.31000E-003	0.00000E+000	7.18789E+000
Scrapers	9.93000E-003	1.17520E-001	7.45900E-002	1.50000E-004	4.58000E-003	4.22000E-003	0.00000E+000	1.33085E+001	1.33085E+001	4.30000E-003	0.00000E+000	1.34161E+001
Tractors/Loaders/Backhoes	6.24700E-002	6.27730E-001	6.79780E-001	9.30000E-004	3.96900E-002	3.65200E-002	0.00000E+000	8.13611E+001	8.13611E+001	2.63100E-002	0.00000E+000	8.20190E+001
Welders	3.67700E-002	1.68920E-001	1.89950E-001	2.70000E-004	9.34000E-003	9.34000E-003	0.00000E+000	2.02337E+001	2.02337E+001	2.99000E-003	0.00000E+000	2.03085E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.09300E-006	1.09300E-006	0.00000E+000	0.00000E+000	1.45451E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.04860E-006	1.04860E-006	0.00000E+000	0.00000E+000	1.24823E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.20410E-006	2.20410E-006	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	2.62715E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15450E-006	1.15450E-006	0.00000E+000	0.00000E+000	1.14524E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15208E-006	1.15208E-006	0.00000E+000	0.00000E+000	1.15046E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.80358E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.67732E-006	8.67732E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.40248E-006	1.40248E-006	0.00000E+000	0.00000E+000	1.39123E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.50279E-006	1.50279E-006	0.00000E+000	0.00000E+000	7.45371E-007
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10618E-006	1.10618E-006	0.00000E+000	0.00000E+000	1.21923E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.48267E-006	1.48267E-006	0.00000E+000	0.00000E+000	1.47721E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.03	0.01	0.03	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.20	0.05	0.20	0.05	0.00	0.00
Grading	Fugitive Dust	0.04	0.02	0.04	0.02	0.00	0.00
Grading	Roads	0.02	0.01	0.02	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.03	0.01	0.03	0.01	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	3.28	5.29	6.80	8.35	7.75	7.75	0.00	8.33	8.33	7.08	0.00	8.33
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.06	0.25		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.07	0.80		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.07			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.09			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.09			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Bell Avenue
AERMOD
Operations Outputs

AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Bell Avenue (Operations)
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	PM25 H1H
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	C:\Users\jbyrne\Desktop\SACINT~1\724839\724839.SFC
ME	PROFFILE	Profile met file	C:\Users\jbyrne\Desktop\SACINT~1\724839\724839.PFL
ME	SURFDATA	Surf met data info.	93225 2009 SMF
ME	UAIRDATA	U-Air met data info.	23230 2009
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	7
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
DOCKB	AREA	BldgB Loading	636952.2	4278694.7	0	2.E-09	(g/s-m**2)	5
DOCKA1	AREA	Bldg A Dock 1	637058.5	4278695.3	0	3.E-09	(g/s-m**2)	5
4JWC30A4	AREA	Bldg A Dock 1	637061.9	4278580.4	0	3.E-09	(g/s-m**2)	5
LINE1	LINE		636680.2	4278324	0	1.596568E-10	(g/s-m**2)	5
LINE2	LINE		636692.8	4278823	0	0.000000000079496052	(g/s-m**2)	5
LINE3	LINE		636697.8	4278823.4	0	0.000000000024578997	(g/s-m**2)	5
LINE4	LINE		636701.7	4278820.1	0	0.000000000956240009	(g/s-m**2)	0
LINE5	LINE		636700.8	4278302.8	0	0.000000000137353216	(g/s-m**2)	5
LINE6	LINE		637271.5	4278058.7	0	0.000000000177396434	(g/s-m**2)	5
LINE7	LINE		637507.6	4278210.1	0	0.000000000120509056	(g/s-m**2)	5
LINE8	LINE		637504.4	4278806.5	0	0.000000000044495651	(g/s-m**2)	5
LINE9	LINE		637503.6	4278806.5	0	0.000000000112475119	(g/s-m**2)	5
LINE10	LINE		637065.9	4278815.7	0	0.000000001108969928	(g/s-m**2)	5
LINE13	LINE		636962.5	4278817.8	0	0.000000000833058251	(g/s-m**2)	5
LINE11	LINE		637059.7	4278815.7	0	0.000000001547874297	(g/s-m**2)	5
LINE12	LINE		637065.9	4278716.5	0	0.000000016525348367	(g/s-m**2)	5

Rectangular Area Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	X Length	Y Length	Angle	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s-m**2)	(m)	(m)	(m)	(deg)	(m)
DOCKB	BldgB Loading	636952.2	4278694.7	0	2.E-09	5	21.7	53.8	0	2.33
DOCKA1	Bldg A Dock 1	637058.5	4278695.3	0	3.E-09	5	20.9	51.9	0.7	2.33
4JWC30A4	Bldg A Dock 1	637061.9	4278580.4	0	3.E-09	5	20.9	51.9	0.7	2.33

EPA Line Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	End X	End Y	Width	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s-m**2)	(m)	(m)	(m)	(m)	(m)
LINE1		636680.2	4278324	0	1.596568E-10	5	54	2.33	636258.7	4278366
LINE2		636692.8	4278823	0	0.000000000079496052	5	15	2.33	636354.9	4278825

LINE3		636697.8	4278823.4	0	0.000000000024578997	5	19	2.33	636699.9	4279002
LINE4		636701.7	4278820.1	0	0.000000000956240009	0	21	0	636700.2	4278304
LINE5		636700.8	4278302.8	0	0.000000000137353216	5	17	2.33	636702.6	4278047
LINE6		637271.5	4278058.7	0	0.000000000177396434	5	54	2.33	636709	4278321
LINE7		637507.6	4278210.1	0	0.000000000120509056	5	12	2.33	637504.4	4278802
LINE8		637504.4	4278806.5	0	0.000000000044495651	5	13	2.33	637765.8	4278806
LINE9		637503.6	4278806.5	0	0.000000000112475119	5	18	2.33	637062.5	4278816
LINE10		637065.9	4278815.7	0	0.000000001108969928	5	20	2.33	636704	4278822
LINE13		636962.5	4278817.8	0	0.000000000833058251	5	13.7	2.33	636961.5	4278705
LINE11		637059.7	4278815.7	0	0.000000001547874297	5	24	2.33	637065.9	4278716
LINE12		637065.9	4278716.5	0	0.000000016525348367	5	24	2.33	637073.2	4278607

BREEZE AERMOD Model Results

Max. Annual (5 YEARS) Results of Pollutant: PM25 (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	0.00208	636687.00	4278538.60	0.00	0.00	1.80	DC	
	2ND	0.00208	636687.00	4278533.60	0.00	0.00	1.80	DC	
	3RD	0.00208	636687.00	4278528.60	0.00	0.00	1.80	DC	
	4TH	0.00208	636687.00	4278543.60	0.00	0.00	1.80	DC	
	5TH	0.00208	636687.00	4278548.60	0.00	0.00	1.80	DC	
	6TH	0.00208	636687.00	4278633.60	0.00	0.00	1.80	DC	
	7TH	0.00208	636687.00	4278638.60	0.00	0.00	1.80	DC	
	8TH	0.00208	636687.00	4278628.60	0.00	0.00	1.80	DC	
	9TH	0.00208	636687.00	4278643.60	0.00	0.00	1.80	DC	
	10TH	0.00208	636687.00	4278623.60	0.00	0.00	1.80	DC	

Highest Results of Pollutant: PM25

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	0.10601	ug/m**3	11021207	637060.00	4278493.40	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
5	Warning Message(s)
9582	Informational Message(s)
43872	Hours Were Processed
7971	Calm Hours Identified
1611	Missing Hours Identified (3.67 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description
WARNING	CO	W276	Special proc for 1h-NO2/SO2 24hPM25 NAAQS disabled PM25 H1H
WARNING	CO	W363	Multiyr 24h/Ann PM25 processing not applicable for PM25 H1H
WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE

WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE
WARNING	MX	W481	Data Remaining After End of Year. Number of Hours= 48

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Bell Avenue
AERMOD
Unmitigated Construction Outputs

AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Bell Avenue
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	PM25 H1H
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	C:\USERS\JBYRNE\DESKTOP\SACINT~1\724839\724839.SFC
ME	PROFFILE	Profile met file	C:\USERS\JBYRNE\DESKTOP\SACINT~1\724839\724839.PFL
ME	SURFDATA	Surf met data info.	93225 2009 SMF
ME	UAIRDATA	U-Air met data info.	23230 2009
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	7
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
DUFE8IS0	VOLUME	Construction	637164.5	4278464.2	0	0.000421787	(g/s)	5
DUFE8IS2	VOLUME	Construction	637100.8	4278527.8	0	0.000421787	(g/s)	5
DUFE8IS3	VOLUME	Construction	637164.5	4278527.8	0	0.000421787	(g/s)	5
DUFE8IS4	VOLUME	Construction	637037.2	4278591.5	0	0.000421787	(g/s)	5
DUFE8IS5	VOLUME	Construction	637100.8	4278591.5	0	0.000421787	(g/s)	5
DUFE8IS6	VOLUME	Construction	637164.5	4278591.5	0	0.000421787	(g/s)	5
DUFE8IS7	VOLUME	Construction	636973.6	4278655.1	0	0.000421787	(g/s)	5
DUFE8IS8	VOLUME	Construction	637037.2	4278655.1	0	0.000421787	(g/s)	5
DUFE8IS9	VOLUME	Construction	637100.8	4278655.1	0	0.000421787	(g/s)	5
DUFE8ISA	VOLUME	Construction	637164.5	4278655.1	0	0.000421787	(g/s)	5
DUFE8ISB	VOLUME	Construction	636973.6	4278718.7	0	0.000421787	(g/s)	5
DUFE8ISC	VOLUME	Construction	637037.2	4278718.7	0	0.000421787	(g/s)	5
DUFE8ISD	VOLUME	Construction	637100.8	4278718.7	0	0.000421787	(g/s)	5
DUFE8ISE	VOLUME	Construction	637164.5	4278718.7	0	0.000421787	(g/s)	5
DUFE8ISF	VOLUME	Construction	636973.6	4278782.3	0	0.000421787	(g/s)	5
DUFE8ISG	VOLUME	Construction	637037.2	4278782.3	0	0.000421787	(g/s)	5
DUFE8ISH	VOLUME	Construction	637100.8	4278782.3	0	0.000421787	(g/s)	5
DUFE8ISI	VOLUME	Construction	637164.5	4278782.3	0	0.000421787	(g/s)	5

Volume Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	Init. Lat. Dim.	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s)	(m)	(m)	(m)
DUFE8IS0	Construction	637164.5	4278464.2	0	0.000421787	5	29.59	1
DUFE8IS2	Construction	637100.8	4278527.8	0	0.000421787	5	29.59	1
DUFE8IS3	Construction	637164.5	4278527.8	0	0.000421787	5	29.59	1
DUFE8IS4	Construction	637037.2	4278591.5	0	0.000421787	5	29.59	1
DUFE8IS5	Construction	637100.8	4278591.5	0	0.000421787	5	29.59	1
DUFE8IS6	Construction	637164.5	4278591.5	0	0.000421787	5	29.59	1
DUFE8IS7	Construction	636973.6	4278655.1	0	0.000421787	5	29.59	1
DUFE8IS8	Construction	637037.2	4278655.1	0	0.000421787	5	29.59	1
DUFE8IS9	Construction	637100.8	4278655.1	0	0.000421787	5	29.59	1
DUFE8ISA	Construction	637164.5	4278655.1	0	0.000421787	5	29.59	1
DUFE8ISB	Construction	636973.6	4278718.7	0	0.000421787	5	29.59	1

DUFE8ISC	Construction	637037.2	4278718.7	0	0.000421787	5	29.59	1
DUFE8ISD	Construction	637100.8	4278718.7	0	0.000421787	5	29.59	1
DUFE8ISE	Construction	637164.5	4278718.7	0	0.000421787	5	29.59	1
DUFE8ISF	Construction	636973.6	4278782.3	0	0.000421787	5	29.59	1
DUFE8ISG	Construction	637037.2	4278782.3	0	0.000421787	5	29.59	1
DUFE8ISH	Construction	637100.8	4278782.3	0	0.000421787	5	29.59	1
DUFE8ISI	Construction	637164.5	4278782.3	0	0.000421787	5	29.59	1

BREEZE AERMOD Model Results

Max. Annual (5 YEARS) Results of Pollutant: PM25 (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	0.05909	637222.60	4278561.30	0.00	0.00	1.80	DC	
	2ND	0.05899	637222.60	4278621.30	0.00	0.00	1.80	DC	
	3RD	0.05889	637222.60	4278626.30	0.00	0.00	1.80	DC	
	4TH	0.05888	637222.60	4278556.30	0.00	0.00	1.80	DC	
	5TH	0.05505	637222.60	4278686.30	0.00	0.00	1.80	DC	
	6TH	0.05494	637035.00	4278523.40	0.00	0.00	1.80	DC	
	7TH	0.05477	637212.60	4278611.30	0.00	0.00	1.80	DC	
	8TH	0.05466	637227.60	4278576.30	0.00	0.00	1.80	DC	
	9TH	0.05455	637095.00	4278463.40	0.00	0.00	1.80	DC	
	10TH	0.05452	637227.60	4278571.30	0.00	0.00	1.80	DC	

Highest Results of Pollutant: PM25

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	3.43337	ug/m**3	12011408	637232.60	4278441.30	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
5	Warning Message(s)
9582	Informational Message(s)
43872	Hours Were Processed
7971	Calm Hours Identified
1611	Missing Hours Identified (3.67 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description
WARNING	CO	W276	Special proc for 1h-NO2/SO2 24hPM25 NAAQS disabled PM25 H1H
WARNING	CO	W363	Multiyr 24h/Ann PM25 processing not applicable for PM25 H1H
WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE

WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE
WARNING	MX	W481	Data Remaining After End of Year. Number of Hours= 48

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Bell Avenue
AERMOD
Mitigated Construction Outputs

AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Bell Avenue (Mitigated)
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	PM25 H1H
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	C:\Users\jbyrne\Desktop\SACINT~1\724839\724839.SFC
ME	PROFFILE	Profile met file	C:\Users\jbyrne\Desktop\SACINT~1\724839\724839.PFL
ME	SURFDATA	Surf met data info.	93225 2009 SMF
ME	UAIRDATA	U-Air met data info.	23230 2009
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	7
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
DUFE8IS0	VOLUME	Construction	637164.5	4278464.2	0	0.000397378	(g/s)	5
DUFE8IS2	VOLUME	Construction	637100.8	4278527.8	0	0.000397378	(g/s)	5
DUFE8IS3	VOLUME	Construction	637164.5	4278527.8	0	0.000397378	(g/s)	5
DUFE8IS4	VOLUME	Construction	637037.2	4278591.5	0	0.000397378	(g/s)	5
DUFE8IS5	VOLUME	Construction	637100.8	4278591.5	0	0.000397378	(g/s)	5
DUFE8IS6	VOLUME	Construction	637164.5	4278591.5	0	0.000397378	(g/s)	5
DUFE8IS7	VOLUME	Construction	636973.6	4278655.1	0	0.000397378	(g/s)	5
DUFE8IS8	VOLUME	Construction	637037.2	4278655.1	0	0.000397378	(g/s)	5
DUFE8IS9	VOLUME	Construction	637100.8	4278655.1	0	0.000397378	(g/s)	5
DUFE8ISA	VOLUME	Construction	637164.5	4278655.1	0	0.000397378	(g/s)	5
DUFE8ISB	VOLUME	Construction	636973.6	4278718.7	0	0.000397378	(g/s)	5
DUFE8ISC	VOLUME	Construction	637037.2	4278718.7	0	0.000397378	(g/s)	5
DUFE8ISD	VOLUME	Construction	637100.8	4278718.7	0	0.000397378	(g/s)	5
DUFE8ISE	VOLUME	Construction	637164.5	4278718.7	0	0.000397378	(g/s)	5
DUFE8ISF	VOLUME	Construction	636973.6	4278782.3	0	0.000397378	(g/s)	5
DUFE8ISG	VOLUME	Construction	637037.2	4278782.3	0	0.000397378	(g/s)	5
DUFE8ISH	VOLUME	Construction	637100.8	4278782.3	0	0.000397378	(g/s)	5
DUFE8ISI	VOLUME	Construction	637164.5	4278782.3	0	0.000397378	(g/s)	5

Volume Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	Init. Lat. Dim.	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s)	(m)	(m)	(m)
DUFE8IS0	Construction	637164.5	4278464.2	0	0.000397378	5	29.59	1
DUFE8IS2	Construction	637100.8	4278527.8	0	0.000397378	5	29.59	1
DUFE8IS3	Construction	637164.5	4278527.8	0	0.000397378	5	29.59	1
DUFE8IS4	Construction	637037.2	4278591.5	0	0.000397378	5	29.59	1
DUFE8IS5	Construction	637100.8	4278591.5	0	0.000397378	5	29.59	1
DUFE8IS6	Construction	637164.5	4278591.5	0	0.000397378	5	29.59	1
DUFE8IS7	Construction	636973.6	4278655.1	0	0.000397378	5	29.59	1
DUFE8IS8	Construction	637037.2	4278655.1	0	0.000397378	5	29.59	1
DUFE8IS9	Construction	637100.8	4278655.1	0	0.000397378	5	29.59	1
DUFE8ISA	Construction	637164.5	4278655.1	0	0.000397378	5	29.59	1
DUFE8ISB	Construction	636973.6	4278718.7	0	0.000397378	5	29.59	1

DUFE8ISC	Construction	637037.2	4278718.7	0	0.000397378	5	29.59	1
DUFE8ISD	Construction	637100.8	4278718.7	0	0.000397378	5	29.59	1
DUFE8ISE	Construction	637164.5	4278718.7	0	0.000397378	5	29.59	1
DUFE8ISF	Construction	636973.6	4278782.3	0	0.000397378	5	29.59	1
DUFE8ISG	Construction	637037.2	4278782.3	0	0.000397378	5	29.59	1
DUFE8ISH	Construction	637100.8	4278782.3	0	0.000397378	5	29.59	1
DUFE8ISI	Construction	637164.5	4278782.3	0	0.000397378	5	29.59	1

BREEZE AERMOD Model Results

Max. Annual (5 YEARS) Results of Pollutant: PM25 (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	0.05567	637222.60	4278561.30	0.00	0.00	1.80	DC	
	2ND	0.05557	637222.60	4278621.30	0.00	0.00	1.80	DC	
	3RD	0.05549	637222.60	4278626.30	0.00	0.00	1.80	DC	
	4TH	0.05548	637222.60	4278556.30	0.00	0.00	1.80	DC	
	5TH	0.05186	637222.60	4278686.30	0.00	0.00	1.80	DC	
	6TH	0.05176	637035.00	4278523.40	0.00	0.00	1.80	DC	
	7TH	0.05160	637212.60	4278611.30	0.00	0.00	1.80	DC	
	8TH	0.05149	637227.60	4278576.30	0.00	0.00	1.80	DC	
	9TH	0.05140	637095.00	4278463.40	0.00	0.00	1.80	DC	
	10TH	0.05136	637227.60	4278571.30	0.00	0.00	1.80	DC	

Highest Results of Pollutant: PM25

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	3.23468	ug/m**3	12011408	637232.60	4278441.30	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
5	Warning Message(s)
9582	Informational Message(s)
43872	Hours Were Processed
7971	Calm Hours Identified
1611	Missing Hours Identified (3.67 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description
WARNING	CO	W276	Special proc for 1h-NO2/SO2 24hPM25 NAAQS disabled PM25 H1H
WARNING	CO	W363	Multiyr 24h/Ann PM25 processing not applicable for PM25 H1H
WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE

WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE
WARNING	MX	W481	Data Remaining After End of Year. Number of Hours= 48

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Bell Avenue
Health Risk Assessment
HARP
Operations Outputs

*HARP - HRACalc v19044 7/9/2019 4:41:40 PM - Cancer Risk - Input File: C:\Users\jbyrne\Desktop\Bell Avenue HARP\BellAveOperationsHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
1			9901	DieselExhPM	0.00208	1.80E-06	30YrCancerDerived_Inh_FAH16to70	*	1.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION		0.00E+00	0.00E+00	0.00E+00

1		9901	DieselExhPM	0.00208	0.10601	0	0	0

*HARP - HRACalc v19044 7/9/2019 4:41:40 PM - Acute Risk - Input File: C:\Users\jbyrne\Desktop\Bell Avenue HARP\BellAveOperationsHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL
1			9901	DieselExhPM	0.10601	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1	2	3	4	5	6	7	8	9	10
POL	POLABBREV	InhalationCancerURF	InhalationCancerSlopeFactor	OralCancerSlopeFactor	AcuteREL	InhalationChronicREL	OralChronicREL	IsMultipathway	AcuteCV_
9901	DieselExhPM	0.0003	1.1			5		FALSE	FALSE

10	11	12	13	14	15	16	17	18	19
AcuteCV_	AcuteCNS_	AcuteIMMUN_	AcuteKIDNEY_	AcuteGILV_	AcuteREPRO_DEVEL_	AcuteRESP_	AcuteSKIN_	AcuteEYE_	AcuteBONE_TEETH_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

20	21	22	23	24	25	26	27	28	29
AcuteENDO_	AcuteBLOOD_	AcuteODOR_	AcuteGENERAL_	InhalationChronicCV_	InhalationChronicCNS_	InhalationChronicIMMUN_	InhalationChronicKIDNEY_	InhalationChronicGILV_	InhalationChronicREPRO_DEVEL_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

30	31	32	33	34	35	36	37	38	39
InhalationChronicRESP_	InhalationChronicSKIN_	InhalationChronicEYE_	InhalationChronicBONE_TEETH_	InhalationChronicENDO_	InhalationChronicBLOOD_	InhalationChronicODOR_	InhalationChronicGENERAL_	OralChronicCV_	OralChronicCNS_
TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

40	41	42	43	44	45	46	47	48	49
OralChronicIMMUN_	OralChronicKIDNEY_	OralChronicGILV_	OralChronicREPRO_DEVEL_	OralChronicRESP_	OralChronicSKIN_	OralChronicEYE_	OralChronicBONE_TEETH_	OralChronicENDO_	OralChronicBLOOD_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

50	51	52	53	54	55	56	57	58	59
OralChronicODOR_	OralChronicGENERAL_	PathwayInhalation	PathwayDrinking	PathwayFood	PathwayCrop	PathwayExposed	PathwayLeafy	PathwayProtected	PathwayRoot
FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

60	61	62	63	64	65	66	67	68	69
PathwayDairy	PathwayMeatEggs	PathwaySoilIngestion	PathwayFish	PathwayDermal	PathwayMothersMilk	SoilUptakeFactorLeafy	SoilUptakeFactorExposed	SoilUptakeFactorProtected	SoilUptakeFactorRoot
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				

70	71	72	73	74	75	76	77	78	79
FoodTcoMilk	FoodTcoEgg	FoodTcoChicken	FoodTcoBeef	FoodTcoPig	HalfLifeInSoil	GRAF	FishBCF	MolWtCorrection	DermalAbsorptionFactor
								1	

80	81	82	83	84	85	86	87	88	89
InhalationChronicREL_8HR	InhalationChronicCV_8HR	InhalationChronicCNS_8HR	InhalationChronicIMMUN_8HR	InhalationChronicKIDNEY_8HR	InhalationChronicGILV_8HR	InhalationChronicREPRO_DEVEL_8HR	InhalationChronicRESP_8HR	InhalationChronicSKIN_8HR	InhalationChronicEYE_8HR
	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

90	91	92	93	94	95	96	97
InhalationChronicBONE_TEETH_8HR	InhalationChronicENDO_8HR	InhalationChronicBLOOD_8HR	InhalationChronicODOR_8HR	InhalationChronicGENERAL_8HR	Tco_InhMM	Tco_OralMM	RChem_Group_HV
FALSE	FALSE	FALSE	FALSE	FALSE			

HARP2 - HRACalc (dated 19044) 7/9/2019 4:41:40 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home

3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****

TIER 2 SETTINGS
Tier2 not used.

****

Calculating cancer risk
Cancer risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\BellAveOperationsCancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\BellAveOperationsNCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\BellAveOperationsNCAcuteRisk.csv
HRA ran successfully

Bell Avenue
Health Risk Assessment
HARP
Unmitigated Construction
Outputs

*HARP - HRACalc v17023 6/24/2019 2:49:43 PM - Cancer Risk - Input File: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
1	Construction		9901	DieselExhPM	0.05909	1.05E-05	1YrCancerDerived_Inh_FAH16to70	*	1.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION		0.00E+00	0.00E+00	0.00E+00

1	Construction	9901	DieselExhPM	0.05909	3.43337	0	0	0

*HARP - HRACalc v17023 6/24/2019 2:49:43 PM - Acute Risk - Input File: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL
1	Construction		9901	DieselExhPM	3.43337	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v17023 6/24/2019 2:49:43 PM - Chronic Risk - Input File: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	DETAILS	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	WATER_DOSE	FISH_DOSE	CROP_DOSE	BEEF_DOSE	DAIRY_DOSE	PIG_DOSE	CHICKEN_DOSE	EGG_DOSE	1ST_DRIVER	2ND_DRIVER	3RD_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
1	Construction		9901	DieselExhPM	0.05909	NonCancerChronicDerived_Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION			0.00E+00	0.00E+00	0.00E+00

1	2	3	4	5	6	7	8	9	10
POL	POLABBREV	InhalationCancerURF	InhalationCancerSlopeFactor	OralCancerSlopeFactor	AcuteREL	InhalationChronicREL	OralChronicREL	IsMultipathway	AcuteCV_
9901	DieselExhPM	0.0003	1.1			5		FALSE	FALSE

10	11	12	13	14	15	16	17	18	19
AcuteCV_	AcuteCNS_	AcuteIMMUN_	AcuteKIDNEY_	AcuteGILV_	AcuteREPRO_DEVEL_	AcuteRESP_	AcuteSKIN_	AcuteEYE_	AcuteBONE_TEETH_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

20	21	22	23	24	25	26	27	28	29
AcuteEND(	AcuteBLOOD_	AcuteODOR_	AcuteGENERAL_	InhalationChronicCV_	InhalationChronicCNS_	InhalationChronicIMMUN_	InhalationChronicKIDNEY_	InhalationChronicGILV_	InhalationChronicREPRO_DEVEL_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

30	31	32	33	34	35	36	37	38	39
Inhalation(	InhalationChronicSKIN_	InhalationChronicEYE_	InhalationChronicBONE_TEETH_	InhalationChronicENDO_	InhalationChronicBLOOD_	InhalationChronicODOR_	InhalationChronicGENERAL_	OralChronicCV_	OralChronicCNS_
TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

40	41	42	43	44	45	46	47	48	49
OralChroni	OralChronicKIDNEY_	OralChronicGILV_	OralChronicREPRO_DEVEL_	OralChronicRESP_	OralChronicSKIN_	OralChronicEYE_	OralChronicBONE_TEETH_	OralChronicENDO_	OralChronicBLOOD_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

50	51	52	53	54	55	56	57	58	59
OralChroni	OralChronicGENERAL_	PathwayInhalation	PathwayDrinking	PathwayFood	PathwayCrop	PathwayExposed	PathwayLeafy	PathwayProtected	PathwayRoot
FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

60	61	62	63	64	65	66	67	68	69
PathwayDa	PathwayMeatEggs	PathwaySoilIngestion	PathwayFish	PathwayDermal	PathwayMothersMilk	SoilUptakeFactorLeafy	SoilUptakeFactorExposed	SoilUptakeFactorProtected	SoilUptakeFactorRoot
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				

70	71	72	73	74	75	76	77	78	79
FoodTcoM	FoodTcoEgg	FoodTcoChicken	FoodTcoBeef	FoodTcoPig	HalfLifeInSoil	GRAF	FishBCF	MolWtCorrection	DermalAbsorptionFactor
								1	

80	81	82	83	84	85	86	87	88	89
Inhalation(	InhalationChronicCV_8HR	InhalationChronicCNS_8HR	InhalationChronicIMMUN_8HR	InhalationChronicKIDNEY_8HR	InhalationChronicGILV_8HR	InhalationChronicREPRO_DEVEL_8HR	InhalationChronicRESP_8HR	InhalationChronicSKIN_8HR	InhalationChronicEYE_8HR
	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

90	91	92	93	94	95	96	97
Inhalation(	InhalationChronicENDO_8HR	InhalationChronicBLOOD_8HR	InhalationChronicODOR_8HR	InhalationChronicGENERAL_8HR	Tco_InhMM	Tco_OralMM	RChem_Group_HV
FALSE	FALSE	FALSE	FALSE	FALSE			

HARP2 - HRACalc (dated 17023) 6/24/2019 2:49:43 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed
Calculating cancer risk
Cancer risk saved to: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionCancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionNCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\jbyrne\Desktop\HARP2\Bell Ave\Construction\Bell Ave ConstructionNCAcuteRisk.csv
HRA ran successfully

Bell Avenue
Health Risk Assessment
HARP
Mitigated Construction
Outputs

*HARP - HRACalc v19044 10/25/2019 2:04:08 PM - Cancer Risk - Input File: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER	PASTURE_CONC	FISH_CONC	WATER_CONC
1			9901	DieselExhPM	0.05567	9.90E-06	1YrCancerDerived_Inh_FAH16to70	*	9.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION		0.00E+00	0.00E+00	0.00E+00

1		9901	DieselExhPM	0.05567	3.23468	0	0	0

*HARP - HRACalc v19044 10/25/2019 2:04:08 PM - Acute Risk - Input File: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL
1			9901	DieselExhPM	3.23468	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v19044 10/25/2019 2:04:08 PM - Chronic Risk - Input File: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEE	ENDO	BLOOD	ODOR	GENERAL	DETAILS	INH CONC	SOIL DOSE	DERMAL DOSE	MMILK DOSE	WATER DOSE	FISH DOSE	CROP DOSE	BEEF DOSE	DAIRY DOSE	PIG DOSE	CHICKEN DOSE	EGG DOSE	1ST DRIVER	2ND DRIVER	3RD DRIVER	PASTURE CONC	FISH CONC	WATER CONC
1			9901	DieselExhPM	0.05567	NonCancerChronicDerived	Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION			0.00E+00	0.00E+00	0.00E+00

1	2	3	4	5	6	7	8	9	10
POL	POLABBREV	InhalationCancerURF	InhalationCancerSlopeFactor	OralCancerSlopeFactor	AcuteREL	InhalationChronicREL	OralChronicREL	IsMultipathway	AcuteCV_
9901	DieselExhPM	0.0003	1.1			5		FALSE	FALSE

10	11	12	13	14	15	16	17	18	19
AcuteCV_	AcuteCNS_	AcuteIMMUN_	AcuteKIDNEY_	AcuteGILV_	AcuteREPRO_DEVEL_	AcuteRESP_	AcuteSKIN_	AcuteEYE_	AcuteBONE_TEETH_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

20	21	22	23	24	25	26	27	28	29
AcuteENDO_	AcuteBLOOD_	AcuteODOR_	AcuteGENERAL_	InhalationChronicCV_	InhalationChronicCNS_	InhalationChronicIMMUN_	InhalationChronicKIDNEY_	InhalationChronicGILV_	InhalationChronicREPRO_DEVEL_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

30	31	32	33	34	35	36	37	38	39
InhalationChronicRESP_	InhalationChronicSKIN_	InhalationChronicEYE_	InhalationChronicBONE_TEETH_	InhalationChronicENDO_	InhalationChronicBLOOD_	InhalationChronicODOR_	InhalationChronicGENERAL_	OralChronicCV_	OralChronicCNS_
TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

40	41	42	43	44	45	46	47	48	49
OralChronicIMMUN_	OralChronicKIDNEY_	OralChronicGILV_	OralChronicREPRO_DEVEL_	OralChronicRESP_	OralChronicSKIN_	OralChronicEYE_	OralChronicBONE_TEETH_	OralChronicENDO_	OralChronicBLOOD_
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

50	51	52	53	54	55	56	57	58	59
OralChronicODOR_	OralChronicGENERAL_	PathwayInhalation	PathwayDrinking	PathwayFood	PathwayCrop	PathwayExposed	PathwayLeafy	PathwayProtected	PathwayRoot
FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

60	61	62	63	64	65	66	67	68	69
PathwayDairy	PathwayMeatEggs	PathwaySoilIngestion	PathwayFish	PathwayDermal	PathwayMothersMilk	SoilUptakeFactorLeafy	SoilUptakeFactorExposed	SoilUptakeFactorProtected	SoilUptakeFactorRoot
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				

70	71	72	73	74	75	76	77	78	79
FoodTcoMilk	FoodTcoEgg	FoodTcoChicken	FoodTcoBeef	FoodTcoPig	HalfLifeInSoil	GRAF	FishBCF	MolWtCorrection	DermalAbsorptionFactor
								1	

80	81	82	83	84	85	86	87	88	89
InhalationChronicREL_8HR	InhalationChronicCV_8HR	InhalationChronicCNS_8HR	InhalationChronicIMMUN_8HR	InhalationChronicKIDNEY_8HR	InhalationChronicGILV_8HR	InhalationChronicREPRO_DEVEL_8HR	InhalationChronicRESP_8HR	InhalationChronicSKIN_8HR	InhalationChronicEYE_8HR
	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

90	91	92	93	94	95	96	97
InhalationChronicBONE_TEETH_8HR	InhalationChronicENDO_8HR	InhalationChronicBLOOD_8HR	InhalationChronicODOR_8HR	InhalationChronicGENERAL_8HR	Tco_InhMM	Tco_OralMM	RChem_Group_HV
FALSE	FALSE	FALSE	FALSE	FALSE			

HARP2 - HRACalc (dated 19044) 10/25/2019 2:04:08 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed
Calculating cancer risk
Cancer risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxCancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxNCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\jbyrne\Desktop\Bell Avenue HARP\Max construction\BellAveConstructionMaxNCAcuteRisk.csv
HRA ran successfully